

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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REMIT TO
 RR 1 BOX 90 D
 HOXIE, KS 67740

SCHIPPERS OIL FIELD SERVICE L.L.C.

NO 000621

DATE	SEC.	RANGE/TWP.	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
					COUNTY	STATE
LEASE			WELL#			

CONTRACTOR	OWNER			
TYPE OF JOB				
HOLE SIZE	T.D.	CEMENT		
CASING SIZE	DEPTH	AMOUNT ORDERED		
TUBING SIZE	DEPTH			
DRILL PIPE	DEPTH			
TOOL	DEPTH			
PRES. MAX	MINIMUM	COMMON		
DISPLACEMENT	SHOE JOINT	POZMIX		
CEMENT LEFT IN CSG.		GEL		
PERFS		CHLORIDE		
		ASC		
EQUIPMENT				
PUMP TRUCK				
#				
BULK TRUCK				
#				
BULK TRUCK				
#				
		HANDLING		
		MILEAGE		
				TOTAL

REMARKS	SERVICE		
	DEPT OF JOB		
	PUMP TRUCK CHARGE		
	EXTRA FOOTAGE		
	MILEAGE		
	MANIFOLD		
			TOTAL

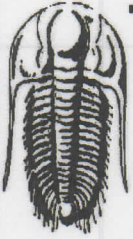
CHARGES TO:	
STREET	STATE
CITY	ZIP

To: Schippers Oil Field Services L.L.C.
 You are hereby requested to rent cementing equipment and furnish staff 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 "TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT	
	@
	@
	@
	@
	@
	TOTAL
TAX	
TOTAL CHARGE	
DISCOUNT (IF PAID IN 20 DAYS)	

SIGNATURE

PRINTED NAME



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dan Haffner
 RR 2 Boxx 49
 Hoxie KS 67740-9524
 ATTN: Dan Haffner, Bruce A

8-9s-27w Sheridan,KS
Niermeier #1-8
 Job Ticket: 63518 **DST#: 2**
 Test Start: 2018.03.07 @ 06:26:00

GENERAL INFORMATION:

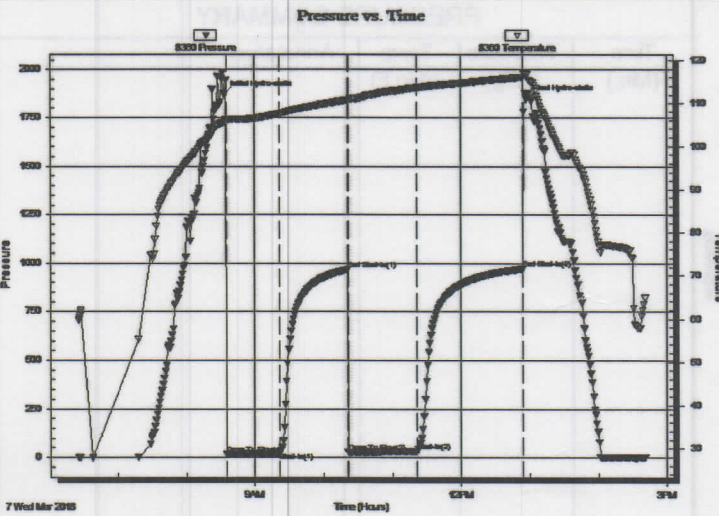
Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:35:25
 Time Test Ended: 14:40:39
 Interval: **3864.00 ft (KB) To 3890.00 ft (KB) (TVD)**
 Total Depth: 3890.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 77
 Reference Elevations: 2704.00 ft (KB)
 2697.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8360

Inside

Press@RunDepth: 33.26 psig @ 3866.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.03.07 End Date: 2018.03.07 Last Calib.: 2018.03.07
 Start Time: 06:26:00 End Time: 14:40:39 Time On Btm: 2018.03.07 @ 08:33:25
 Time Off Btm: 2018.03.07 @ 12:56:54

TEST COMMENT: 45-IFP-weak blow thru-out 1/2" to 1 3/4" blow
 60-ISIP-no blow back
 60-FFP-surface blow thru-out
 90-FSIP-no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.00	105.55	Initial Hydro-static
2	16.10	105.55	Open To Flow (1)
49	24.46	107.52	Shut-In(1)
108	966.66	110.78	End Shut-In(1)
108	27.27	110.51	Open To Flow (2)
168	33.26	113.64	Shut-In(2)
261	971.30	116.15	End Shut-In(2)
264	1848.71	116.86	Final Hydro-static

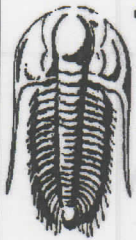
Recovery

Length (ft)	Description	Volume (bbl)
40.00	Mud w/show of oil in tool	0.20

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dan Haffner
RR 2 Boxx 49
Hoxie KS 67740-9524
ATTN: Dan Haffner, Bruce A

8-9s-27w Sheridan,KS
Niermeier #1-8
Job Ticket: 63520 **DST#: 4**
Test Start: 2018.03.10 @ 11:30:46

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:00:11
Time Test Ended: 17:54:25
Interval: 3980.00 ft (KB) To 4042.00 ft (KB) (TVD)
Total Depth: 4439.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)
Tester: Ray Schwager
Unit No: 77
Reference Elevations: 2704.00 ft (KB)
2697.00 ft (CF)
KB to GR/CF: 7.00 ft

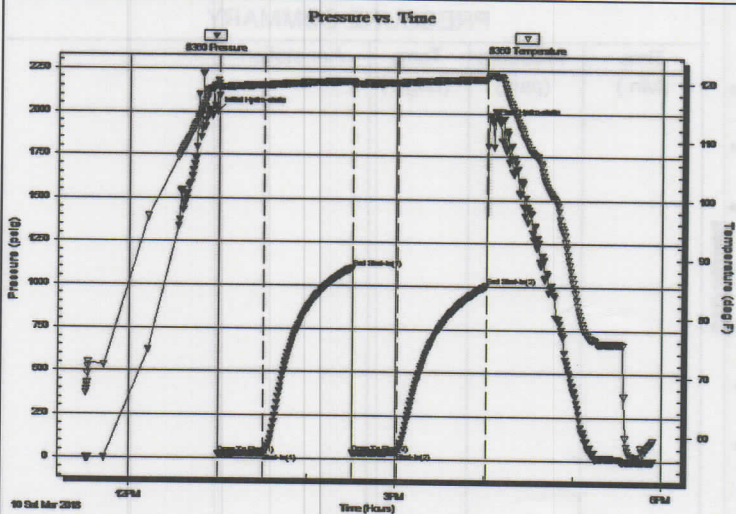
Serial #: 8360

Inside

Press@RunDepth: 42.20 psig @ 3990.00 ft (KB)
Start Date: 2018.03.10 End Date: 2018.03.10
Start Time: 11:30:46 End Time: 17:54:25

Capacity: 8000.00 psig
Last Calib.: 2018.03.10
Time On Btm: 2018.03.10 @ 12:58:26
Time Off Btm: 2018.03.10 @ 16:04:55

TEST COMMENT: 30-IFP-weak blow thru-out 1/4" to 1" blow
60-ISIP-no blow
30-FFP-no blow
60-FSIP-no blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.02	119.21	Initial Hydro-static
2	24.42	118.75	Open To Flow (1)
33	32.75	119.30	Shut-In(1)
92	1100.15	120.00	End Shut-In(1)
93	35.49	119.53	Open To Flow (2)
123	42.20	119.81	Shut-In(2)
183	1004.70	120.54	End Shut-In(2)
187	1950.35	121.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

* Recovery from multiple tests

Gas Rates

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

Schippers Oilfield Services LLC

1255 E HWY 24
Hoxie, KS 67740

Phone # 785-675-8974
Fax # 785-675-9938

sosllc@ruraltel.net

Invoice

Date 3/7/2018
Invoice # 621

Bill To
Dan Haffner RR 2 Hoxie KS 67740

Ship To

P.O. # NEIERMEIER 1-8
Terms Net 30

Ship Date 3/7/2018
Due Date 4/6/2018
Other

Item	Description	Qty	Price	Amount
Cement	Common	180	18.00	3,240.00
Gel			22.00	22.00
chloride	calcium chloride	10	52.00	520.00
Handling of mater...	per sack	193	2.10	405.30
Mileage and labor		12	15.44	185.28
PUMP TRUCK CHA...	TRI-PLEX PUMP CHARGE		1,050.00	1,050.00
PUMP TRUCK MILE...	TO AND FROM LOCATION	12	6.00	72.00

20% discount if paid in 20 days

Subtotal	\$5,494.58
Sales Tax (8.5%)	\$321.47
Total	\$5,816.05
Payments/Credits	\$0.00
Balance Due	\$5,816.05

Schippers Oilfield Services LLC

Well Name: Niermeier 1-8
 Surface Location: Sec. 08 - T09S - R27 W
 Bottom Location:
 API: 15-179-21443-00-00
 License Number: 32593
 Spud Date: 3/2/2018 Time: 7:00 AM
 Region: Mid Continent
 Drilling Completed: 3/10/2018 Time: 1:00 AM
 Surface Coordinates: 1815' FSL & 575' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2697.00ft
 K.B. Elevation: 2704.00ft
 Logged Interval: 3400.00ft To: 0.00ft
 Total Depth: 4439.00ft
 Formation: Lansing-Kansas City
 Drilling Fluid Type: Chemical/Fresh Water Gel

LOGGED BY

Ard Consulting Services
Bruce B. Ard

6000 10th Street
 Great Bend, KS 67530

Company: A.C.S. - Ard Consulting Services
 Address: 6000 10th Street
 Great Bend, KS
 67530
 Phone Nbr: 620-357-1849
 Logged By: Geologist

Name: Bruce B. Ard - KPG # 220

OPERATOR

Company: Dan Haffner
 Address: RR # 2 P.O.Box 49
 Hoxie, Ks
 67740
 Contact Geologist: Bruce B. Ard
 Contact Phone Nbr: 620-357-1849
 Well Name: Niermeier 1-8
 Location: Sec. 08 - T09S - R27 W
 API: 15-179-21443-00-00
 Pool: Sheridan County
 State: Kansas
 Field: Wildcatt
 Country: USA

CONTRACTOR

Contractor: STP Drilling Company
 Rig #: 1
 Rig Type: mud rotary
 Spud Date: 3/2/2018 Time: 7:00 AM
 TD Date: 3/10/2018 Time: 1:00 AM
 Rig Release: Time:

ELEVATIONS

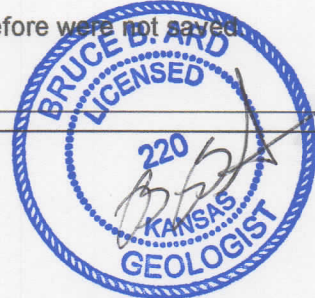
K.B. Elevation: 2704.00ft
 K.B. to Ground: 7.00ft
 Ground Elevation: 2697.00ft

NOTES

After review of the Open Hole Logs, DST results and Geological Report, it was recommended and agreed upon by all interested parties to cease drilling of the Niermeier 1-8 test well to abandon as a dry hole.

The drilling samples were not requested by the Kansas Geological Survey and therefore were not saved.

Respectfully Submitted, Bruce B. Ard - KPG # 220



Dan Haffner
 DAILY DRILLING REPORT

DATE	7:00 AM DEPTH	Last 24 Hour Operations
3/5/2018	3427	call depth @ 3200, displaced @ 3269, drilling ahead, Howard @ 3538, Topeka @ 3590, Heebner @ 3803, Toronto @ 3821, cfs @ 3833, Lansing @ 3832, cfs @ 3854, samples warrant test
3/6/2018	3854	short trip 35 stands, CTCH, drop survey, strap out for DST #1, make up tool, TIH w/tool, testing wait 6.5 hrs on wind, TOH w/tool, break down tool, TIH, CTCH
3/7/2018	3890	resume drilling, C zone @ 3871, cfs @ 3866, D zone @ 3883, cfs @ 3890, samples warrant test, TOH for DST #2, make up tool, TIH w/tool, testing, TOH w/tool, break down tool, TIH, CTCH, resume drilling, E/F zone @ 3905, cfs @ 3910, G zone @ 3923, Muncie Creek @ 3954, H zone @ 3956, cfs @ 3973
3/8/2018	4042	I zone @ 3996, cfs @ 3996, J zone @ 4014, cfs @ 4012, K zone @ 4034, cfs @ 4042, snls warrant

Scale 1:240 Imperial

Well Name: Niermeier 1-8
 Surface Location: Sec. 08 - T09S - R27 W
 Bottom Location:
 API: 15-179-21443-00-00
 License Number: 32593
 Spud Date: 3/2/2018
 Region: Mid Continent
 Drilling Completed: 3/10/2018
 Surface Coordinates: 1815' FSL & 575' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2697.00ft
 K.B. Elevation: 2704.00ft
 Logged Interval: 3400.00ft
 Total Depth: 4439.00ft
 Formation: Lansing-Kansas City
 Drilling Fluid Type: Chemical/Fresh Water Gel

Time: 7:00 AM
 Time: 1:00 AM
 To: 0.00ft

LOGGED BY

Ard Consulting Services
Bruce B. Ard

6000 10th Street
 Great Bend, KS 67530

Company: A.C.S. - Ard Consulting Services
 Address: 6000 10th Street
 Great Bend, KS
 67530
 Phone Nbr: 620-357-1849
 Logged By: Geologist

Name: Bruce B. Ard - KPG # 220

OPERATOR

Company: Dan Haffner
 Address: RR # 2 P.O.Box 49
 Hoxie, Ks
 67740
 Contact Geologist: Bruce B. Ard
 Contact Phone Nbr: 620-357-1849
 Well Name: Niermeier 1-8
 Location: Sec. 08 - T09S - R27 W
 API: 15-179-21443-00-00
 Pool: Sheridan County
 State: Kansas
 Field: Wildcatt
 Country: USA

CONTRACTOR

Contractor: STP Drilling Company
 Rig #: 1
 Rig Type: mud rotary
 Spud Date: 3/2/2018
 TD Date: 3/10/2018
 Rig Release:
 Time: 7:00 AM
 Time: 1:00 AM
 Time:

ELEVATIONS

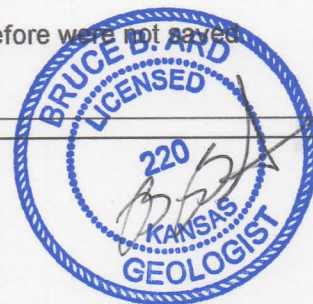
K.B. Elevation: 2704.00ft
 K.B. to Ground: 7.00ft
 Ground Elevation: 2697.00ft

NOTES

After review of the Open Hole Logs, DST results and Geological Report, it was recommended and agreed upon by all interested parties to cease drilling of the Niermeier 1-8 test well to abandon as a dry hole.

The drilling samples were not requested by the Kansas Geological Survey and therefore were not saved.

Respectfully Submitted, Bruce B. Ard - KPG # 220



Dan Haffner
 DAILY DRILLING REPORT

DATE	7:00 AM DEPTH	Last 24 Hour Operations
3/5/2018	3427	call depth @ 3200, displaced @ 3269, drilling ahead, Howard @ 3538, Topeka @ 3590, Heebner @ 3803, Toronto @ 3821, cfs @ 3833, Lansing @ 3832, cfs @ 3854, samples warrant test

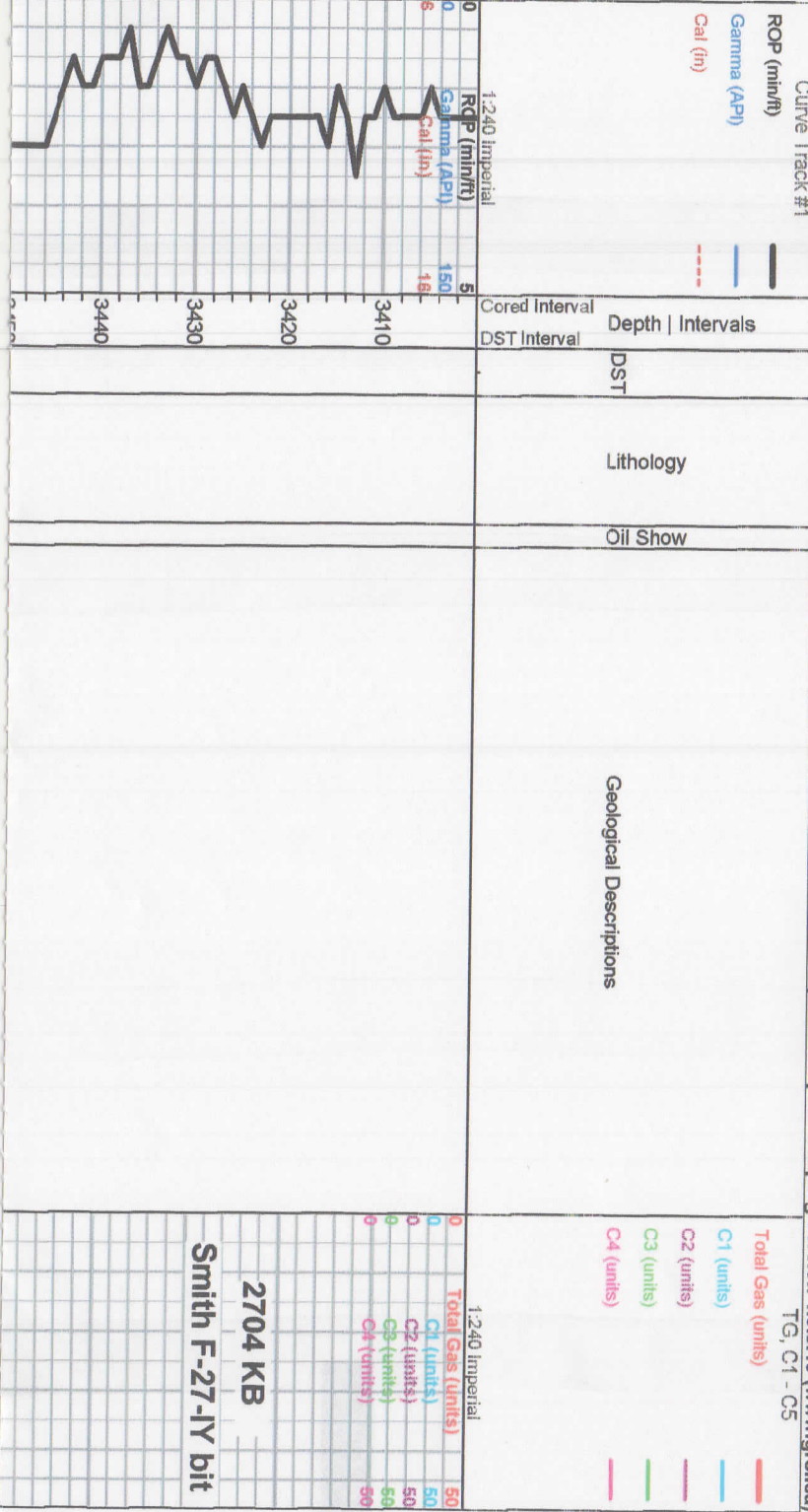
3/6/2018	3854	short trip 35 stands, CTCH, drop survey, strap out for DST #1, make up tool, TIH w/tool, testing wait 6.5 hrs on wind, TOH w/tool, break down tool, TIH, CTCH
3/7/2018	3890	resume drilling, C zone @ 3871, cfs @ 3886, D zone @ 3883, cfs @ 3890, samples warrant test, TOH for DST #2, make up tool, TIH w/tool, testing, TOH w/tool, break down tool, TIH, CTCH, resume drilling, EIF zone @ 3905, cfs @ 3910, G zone @ 3923, Muncie Creek @ 3954, H zone @ 3956, cfs @ 3973
3/8/2018	4042	I zone @ 3996, cfs @ 3996, J zone @ 4014, cfs @ 4012, K zone @ 4034, cfs @ 4042, spils warrant test, short trip, CTCH, TOH for DST #3, make up tool, TIH w/tool, testing, misturn, TOH w/tool, break down tool, TIH, CTCH resume drilling, L zone @ 4058, BKC @ 4070, Pleasanton @ 4078, cfs @ 4091
3/9/2018	4168	Mammaton @ 4100, Upper Pawnee @ 4188, Lower Pawnee @ 4226, Ft Scott @ 4285, Cherokee Sh @ 4312, Mississippian 4369
3/10/2018	4439	RTD @ 4439, cfs & log, short trip, CTCH, drop survey, TOH for Electrical logs, rig up loggers logging, rig down loggers, evaluate Electrical logs, after evaluation of Electrical logs, DST results and Geological report, it was recommended and agreed upon by all interested parties to cease drilling operations to plug and abandon the Niemeier 1-8 test well as a dry hole, tear down off location, return to Great Bend Ks office to prepare and complete final Geological Report for distribution to all parties
3/11/2018		final Geological Report completed and distributed to all interested parties

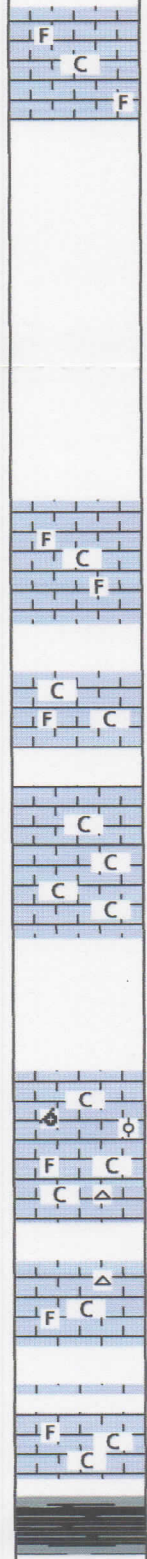
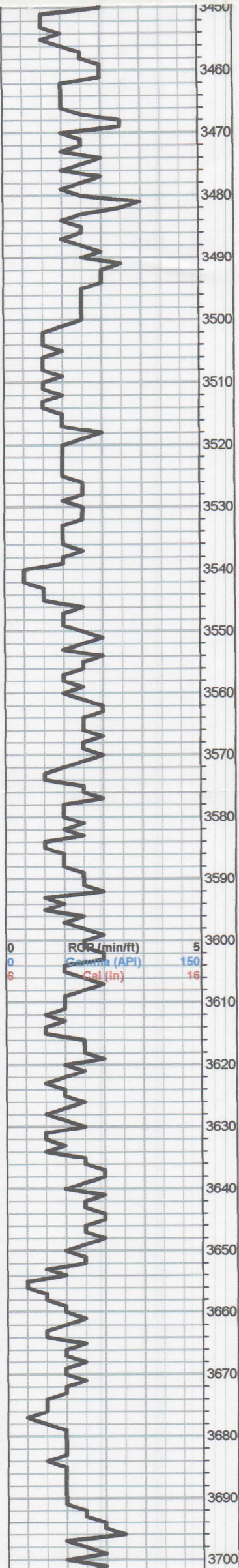
Dan Hafner

WELL COMPARISON SHEET

DRELLING WELL				COMPARISON WELL				COMPARISON WELL				COMPARISON WELL			
Dan Hafner - Niemeier 1-8 1815 PAL & 678 PAL 290.08 - TOH3 - R27W				Rains & Williamson - Niemeier A-1 NC - 8W - SE 5738 KB				Dan Hafner - Hafner 1-7 231V PAL & 1098 FEL 2995 KB				Niemeier #1 32 - 3W 2578 KB			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Sample	Structural Relationship	Log	Sub-Sea	Sample	Structural Relationship	Log	Sub-Sea	Sample	Structural Relationship	
Ashyville	2347	287	2904	400	2003	402	-5	-2	2301	394	3	6	2355	410	-10
Base Anhydrite	2340	394	2339	985	2340	388	-4	-3	2335	380	4	5	2307	372	-7
Howard	3538	204	3536	402	3552	-544	10	12	3534	469	5	7			
Topeka	3650	288	3688	-824	3602	-894	8	10	3584	-869	3	6			
Hedden	3803	-1098	3801	-1027	3812	-1104	6	7	3795	-1100	1	3	3779	-1100	1
Toronto	5821	-1157	5819	-1115	5804	-1128	9	11	5818	-1121	4	8	5800	-1121	4
Laneing	3832	-1128	3830	-1128	3847	-1138	11	13	3832	-1137	9	11	3815	-1140	12
Munroe Creek	3854	-1260	3867	-1263	3900	-1262	2	-1	3847	-1262	2	-1			
Base Kansas City	4570	-1098	4088	-1994	4075	-1927	1	3	4061	-1998	0	2			
Pleasanton	4278	-1874	4075	-1871	4065	-1873	-1	2	4065	-1873	-1	2			
Mammaton	4130	-1098	4088	-1885	4061	-1885	0	1	4061	-1885	0	1			
Upper Pawnee	4138	-1494	4136	-1481	4178	-1451	-3	0	4178	-1451	-3	0			
Lower Pawnee	4226	-1622	4225	-1621	4218	-1523	1	2	4218	-1523	1	2			
Fort Scott	4285	-1581	4288	-1822	4276	-1655	2	1	4276	-1655	2	1			
Cherokee	4312	-1808	4310	-1808	4303	-1805	0	2	4303	-1805	0	2			
Miscellaneous Chrt	4388	-1895	4388	-1882	4388	-1881	-7	4	4388	-1881	-7	4			
Miscellaneous Lm	4426	-1868	4400	-1888	4420	-1735	-7	4	4420	-1735	-7	4			
Total Depth	4439	-1735	4458	-1724	4651	-1873			4623	-1944					

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.gstri.ca)





Howard

limestone, lt crm-gry, dse, sli chlky, sli rex, xtaln, sli fos, pvls por, ns noted

Topeka

limestone, lt crm-gry to crm-wht, dse, sli chlky, sli rex, sli fos, pscatt pp por, ? trc dos

limestone, lt gry to gry-wht, dse, incr wht chlk, xtaln to sli rex, sli fos, pvls por, ns noted

same, incr fxtaln, rex, wht chlk, incr dk gry sh

limestone, lt crm, dse, incr chlky, fxtaln, sli rex, scatt pp por, ns noted

limestone, lt crm, dse, sli chlky, fxtaln, sli rex, sli ooc/oom, pvls scatt por, ns noted

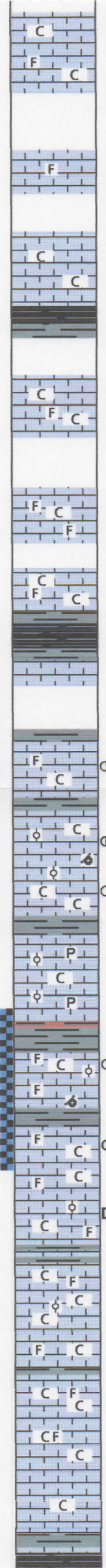
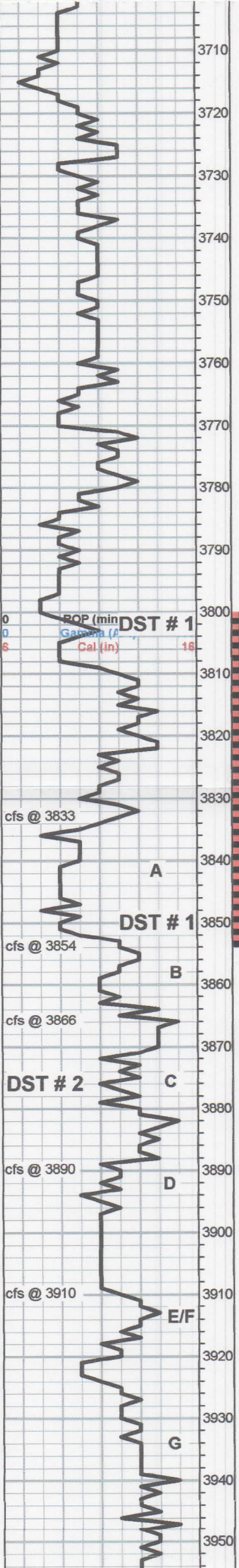
limestone, lt crm-wht, dse, chlky, sli rex, sli fos, incr wht chlk, wht opq chert, ns noted

limestone, influx lt crm, dse, rex, sucr to gran text, sli fos, lt gry trans chert, less chlk, ns noted

limestone aa, incr wht chlk, few dk gry sh

dk gry to blk carb sh

0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	50



limestone, lt gry-wht, dse, sli chlky, sli rex, trc fos, pvis por, ns noted

limestone aa w/ some sli sdy, silty/shly, sli pyr, pvis por, ns noted

limestone, lt crm, dse, xtaln, sli rex, sli fos, pvis por, ns noted

incr vcs, gm, rd, gry

limestone, lt gry-wht to wht, dse, sli chlky, fgran text to sli rex, pvis por, ns noted

limestone, lt gry-crm, dse, chlky, sli rex, trc fos, scatt vis por, ns

limestone, lt crm, dse, sli chlky, sli rex, sli fos, pscatt por, ns noted

limestone aa, incr wht chl

Heebner
sh, blk, carb

Toronto
limestone, lt gry-crm, dse, sli chlky, sli rex, sli fos, pscatt pp por, scatt spotty stn, w/brkn, sli fo specks & ft odor

Lansing
limestone, lt gry-wht to wht, dse, sli chlky, rex, ool/ool, fvis ool/ool por, stn & fo vis in por, incr brn, sli gassy fo & odor w/brkn, sli sheen & odor in cup

limestone, lt gry-crm to crm-wht, dse, fxtaln, sli rex, pvis por, lg influx wht chl, ? trc stn, nsfo noted

Resume drilling @ 0030 hrs on 03-07-2018

limestone, lt gry-wht, dse, sli chlky, xtaln to fxtaln, sli rex, few rex gry ool, sli trc pyritic, pvis por, ns noted

limestone aa, & lt gry-crm, dse, sli chlky, xtaln sli rex, trc ool, trc pyritic, pvis por, ns noted

limestone, lt gry-crm-wht, dse, chlky, xtaln, sli rex, sli fos/ool, scatt pfos/ool & sm scatt vugs, dk brn hvy to sli tarry oil, hvy fo, few specks brn fo & ft odor w/brkn

limestone, lt gry-wht, dse, rex, fos/ool, fair vis fos/ool por w/stn & fo vis in por, incr lt brn fo, sli gassy, & odor w/brkn, trc sheen in cup

Resume drilling @ 1730 hrs on 03-07-2018

limestone, lt crm-wht to lt crm-gry, dse, sli chlky, xtaln to fxtaln, trc scatt fos matl, very few spls w/dk brn-blk tarry to asphaltic stn, vpvis por

limestone, lt crm-gry-wht, dse, sli incr chl, fxtaln, sli rex, trc fos/ool, vp to nvis por, ns noted

limestone aa, sli darker & incr chl, ns noted

limestone, lt crm-wht to gry-wht, dse, sli chlky, xtaln to sli rex, trc fos, pvis por, ns noted

limestone, lt crm-wht, dse, chlky, xtaln to fxtaln, rex sli fos, pscatt vis por, ns noted

limestone, lt crm-wht & lt gry-wht, vdse, fxtaln, chert like, vp to nvis por, ns noted

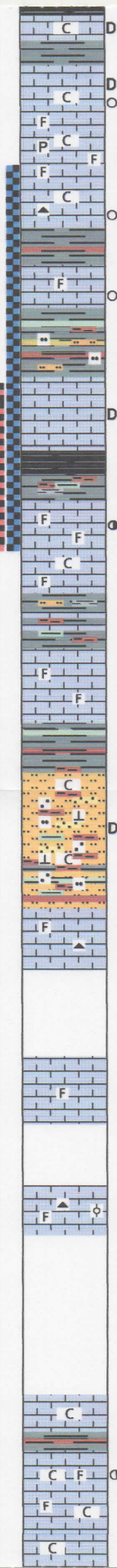
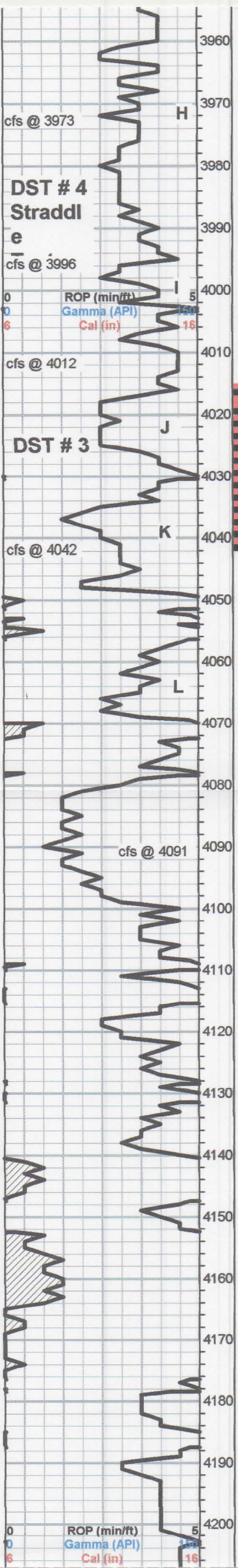
same, less chl

Muncie Creek

0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	90

DST #1.JPG
DST #1 3800-3854
Times: 15-60-15-90
IF: BOB 30" - weak return for 30 min
FF: BOB 90" - weak return for 15 min
Rec: 350 ft MW - 35/65%
1650 ft water - 68K ppm
2000 ft Total Fluid
IFP: 364-652# ISIP: 1010#
FFP: 703-928# FSIP: 1009#
Dev survey: 1 deg
Pipe strap: 1.59 ft long

DST#2.JPG
DST #2 3864-3890
Times: 45-60-60-90
IF: built to 1.75" in 45 min no return
FF: 1/4" - died to surf in 60" no return
Rec: 40 ft Mud with show in tool
IFP: 16-24# ISIP: 966
FFP: 27-33# FSIP: 971



limestone, lt gry-wht, dse, sli chlky, fxtaln, sli rex, vp vis por, trc asph stn

limestone, lt gry-wht to gry-crm, dse, sli chlky, fxtaln, sli rex, trc fos, pvls scatt pp por, ? trc spotty stn & few scatt asph stn, nsfo noted w/brkn, no odor

limestone, lt gry-wht, dse, sli chlky, fxtaln, sli rex, sli fos, sli pyr, pvls por, ns noted

limestone, lt gry-wht, vdse, fxtaln, rex, trc chert, vpvis por, ? trc stn, nsfo noted

limestone, lt crm to crm-gry, dse, frex, xtaln, trc fos, pvls por, ? trc stn, nsfo noted

influx rd, mar brn, gry, grn sh, some silty, brn-rd wash

limestone, lt crm-wht, dse, rex, fxtaln, trc fos, vpvis por, few scatt blk tarry to do stn, nsfo noted or odor w/brkn

blk carb sh abdt vcs

limestone, vlt beige, dse, fine rex, fos, matl, vfpp por, some sli larger fos por vis, very fine brn fo specks vis in por, fair to large incr of lt brn, sli gassy fo w/brkn, ft odor

Resume drilling @ 1945 hrs on 03-08-2018

limestone aa, becoming less fos, less por, fxtaln, most ns, sli chlky

incr vcs & silt

limestone, lt crm, dse, xtaln, sli rex, sli fos, vpvis por, ns noted

same aa

Base Kansas City

Pleasanton

abdt vcs & rd silts, sli sdy, mostly calc & chlky silts, rdish-brn, only few sli sdy/calc, lt gry matl, vsli blk asph stn, nsfo, also rd/pk gummy/sticky silts, few cleaner gry sdy silts w/sh inclusions, vis sd is clear, rmded, f-md grains

Marmaton

limestone, lt gry, dse, xtaln, rex, some sli fos, few org chert inclu, pscatt por, ns noted

limestone, lt crm-gry, dse, fxtaln, sli rex, trc fos, vpvis por, ns noted

limestone, wht-lt gry, stained redish brn by silt, dse, chlky, rex, coarse xtaln, ool/fos, scatt yel chert, scatt por, ns noted

limestone, lt gry to gry-wht, dse, sli chlky, rex, xtaln, ool, vpvis por, ns noted

Upper Pawnee

limestone, lt crm-gry, dse, chlky, fxtaln, rex, trc fos, vpvis fine pp por, some lt scatt stn w/dk brn fo specks, sli incr w/brkn

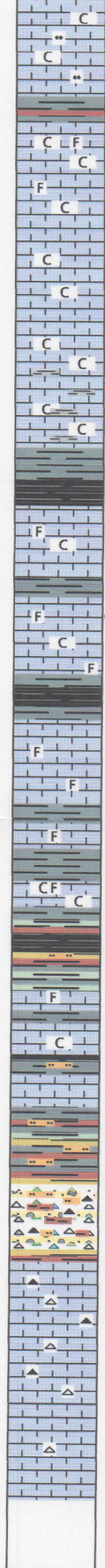
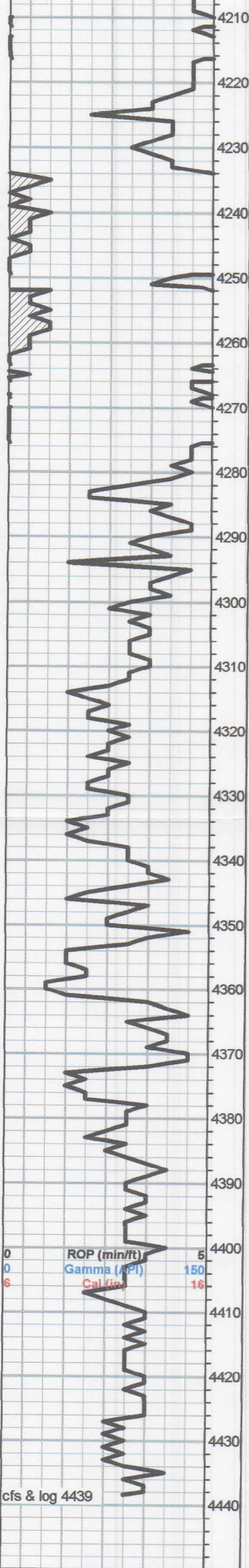
limestone, gry to lt gry, dse, chlky, fxtaln, sli rex, vp to no vis por, ns noted

DST#4.JPG
DST #4 Straddle 3980-4042
Times: 30-60-30-60
IF: weak 1/4" thruout open no return
FF: no blow - no return
Rec: 10 ft Mud
IFP: 24-32# ISIP: 1100#
FFP: 35-42# FSIP: 1004#

0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	50

DST#3.JPG
DST #3 4015-4042
IF: weak 1/4" to 3/4" - lost packer seat - reset would not hold - TOH
IFP: 21-25# - approx 4 min
Rec: 350 ft Mud
no shows in tool, no wtr or shows in grind out

0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50



same

same, limestone becoming silty, incr rd & gry sh

Lower Pawnee

limestone, lt crm to lt crm-gry, dse, chlky, rex, xtaln, sli fos, scatt pp por, sli spotty stn, few fo specks vis, sli incr fo & ft odor w/brkn

limestone, lt gry-crm-wht, dse, sli chlky, sli rex, fxtaln, vp vis por, ns noted

limestone, lt & dk gry, dse, incr chlky, fxtaln, sli rex, vp to no vis por, ns noted

limestone aa, incr dk gry, dse, chlky, fxtaln, sli rex, vp to nvis por, ns noted, incr gry calc sh

lg influx dk gry-blk sh

Ft Scott

limestone, dk crm-gry & lt crm-gry, dse, sli chlky, xtaln, rex, sli fos, pscatt pp por w/dk stn, few fo specks vis, sli incr fo, ft odor w/brkn

limestone, lt crm-gry & lt gry-wht, dse, sli chlky, fxtaln to xtaln, rex, fos, scatt pp & sm fos por, lt stn & brn fo specks vis in por, incr fo w/brkn, trc gas, ft odor & sli sheen in cup

Cherokee

limestone, lt crm-gry to gry-crm, dse, xtaln, sli rex to rex, sli fos, pvls por, ns noted

lt crm-gry, dse, limestone aa, ns noted

limestone, lt gry-wht, dse, chlky, xtaln, sli rex, sli fos, pscatt por, ns noted

influx rd, grn, gry, yel, mar sh & silts, sli rd wash

limestone, lt gry-wht & lt crm-gry, dse, sli chlky, xtaln, sli rex, pvls por, ns noted

limestone, wht & lt gry, dse, fxtaln, sli rex, vp to nvis por, ns

abdt vcs & silts aa, rd wash

Mississippian Chert

lg influx cherts, org, yel, beige, wht, opaque, shrp, silty, rd wash

Mississippian Limestone

limestone, wht to lt crm-gry, dse, coarse xtaln, chlky, sli rex, sli fos, sli chert, lt beige opq, ? trc stn, nsfo noted

limestone, sli dolomitic, lt gry-beige, dse, sli chlky, sli rex, fxtaln, pvls por, ns noted, lt gry trans & wht chert

limestone, less dolomitic, wht, dse, fxtaln, sli rex, incr wht chlky, less chert, pvls por, ns noted

Rotary Total Depth

0	C3 (units)	50
0	C4 (units)	56
0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dan Haffner
RR 2 Boxx 49
Hoxie KS 67740-9524

8-9s-27w Sheridan,KS

Niermeier #1-8

Job Ticket: 63519

DST#: 3

ATTN: Dan Haffner, Bruce A

Test Start: 2018.03.08 @ 12:20:17

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:16:12

Time Test Ended: 16:25:27

Interval: **4015.00 ft (KB) To 4042.00 ft (KB) (TVD)**

Total Depth: 4042.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Reference Elevations: 2704.00 ft (KB)

2697.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8360

Inside

Press@RunDepth: psig @ 4016.00 ft (KB)

Start Date: 2018.03.08 End Date:

Start Time: 12:20:17 End Time: 2018.03.08 16:25:27

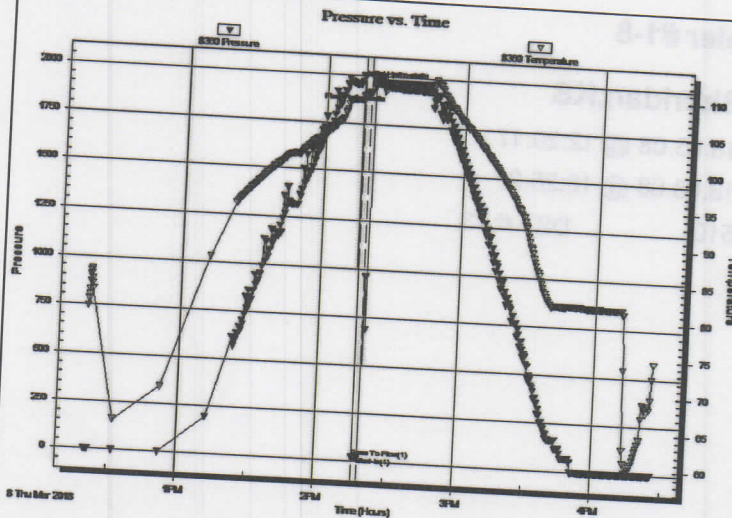
Capacity: 8000.00 psig

Last Calib.: 2018.03.08

Time On Btm: 2018.03.08 @ 14:13:27

Time Off Btm: 2018.03.08 @ 14:27:42

TEST COMMENT: 10-IFP-w k blow , 1/4" to 3/4" blow at start, lost packer seat, Reset , Would not hold



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1955.78	108.37	Initial Hydro-static
3	21.08	108.41	Open To Flow (1)
6	25.46	109.26	Shut-In(1)
15	1944.75	110.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
350.00	Mud	3.82

* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc

Ref. No: 63519

Printed: 2018.03.13 @ 15:01:33