



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1155709
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

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

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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



1155709

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 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				

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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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#1 Don Selenke

600' FSL & 1140' FEL

60' S & 150' W of W/2 SE SE Section 22-13S-31W

Gove County, Kansas

API# 15-063-22103-0000

Elevation: 2879' GL, 2884' KB

Sample Tops			Ref. Well
Anhydrite	2367'	+517	+3
B/Anhydrite	2387'	+497	+5
Stotler	3541'	-657	+11
Heebner	3896'	-1012	+10
Lansing	3936'	-1052	+12
Muncie Shale	4089'	-1205	+14
Stark Shale	4180'	-1296	+9
Hush	4218'	-1334	+12
BKC	4252'	-1368	+16
Marmaton	4276'	-1392	+21
Altamont	4302'	-1418	+28
Pawnee	4378'	-1494	+17
Myrick	4408'	-1524	+19
Fort Scott	4428'	-1544	+20
Cherokee Shale	4456'	-1572	+19
Johnson	4498'	-1614	+22
B/Johnson	4516'	-1632	+21
Morrow Sand	4522'	-1638	+28
Mississippian	4544'	-1660	+17
RTD	4670'	-1786	



PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

258355

TICKET NUMBER 39352
LOCATION Oakley, MO
FOREMAN Miles Shaw
Walt Dinzel

FIELD TICKET & TREATMENT REPORT

CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
4-25-13	7173	Don Selepke #1	22	135	31W	Gove
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
Ritchie Exploration			399	Damon M		
MAILING ADDRESS			516	M. H. P		
CITY	STATE	ZIP CODE				

JOB TYPE Long String HOLE SIZE 7 7/8 HOLE DEPTH 4671' CASING SIZE & WEIGHT 5 1/2" 15.5 #
 CASING DEPTH 4667.48' DRILL PIPE _____ TUBING _____ OTHER 2326'
 SLURRY WEIGHT 14.2 SLURRY VOL 1.42 WATER gal/sk _____ CEMENT LEFT IN CASING 21'
 DISPLACEMENT 111665 DISPLACEMENT PSI 200 MIX PSI 1500 RATE _____

REMARKS: Safety meeting and rig up on well drilling Rig Co. float equipment
Turbolizers @ 1, 3, 6, 12, 14, 17, 54, 56. Baskets on bottom at 11, 55, 67, 86, 94
Port collar tool on top of joint 55 @ 2326' Run casing to bottom circulate hr.
Pump 5 bbls water seal mud flush shale water mix 200 sacks OWC with 5 #
Wolsal 1/2 CDI 26 down casing. Shut down. Cleared pump & lines released plug
at 13 above 11 bbls water with 200 psi left plug and @ 1500 psi insert held.
Mix 30545 RH

Thanks Miles & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	31.75 ⁰⁰	31.75 ⁰⁰
5406	20	MILEAGE	5.25	105.00
5407	1081 TONS	Ton mileage delivery min	430.00	430.00
1126	230 SACS	OWC cement	23.70	5451.00
110A	1150 #	Wolsal	.56	644.00
1137	57 #	CDI 26	10.20	581.40
11446	500	Mud flush	1.00	500.00
4104	5	5 1/2" Baskets	290	1450.00
4136	8	5 1/2" Turbolizers	86.00	688.00
4203	1	5 1/2" Guide Shoe	202.75	202.75
4228	1	5 1/2" AFU Insert	159.75	159.75
4285	1	5 1/2" Port Collar tool	2178.75	2178.75
		Subtotal		15565.65
		less 10% discount		15565.67
		Subtotal		14009.08
		SALES TAX		858.94
		ESTIMATED TOTAL		14868.02

completed

Ravin 9737

AUTHORIZATION Thomas Shaw TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

ALLIED OIL & GAS SERVICES, LLC 060155

Federal Tax I.D. # 20-8651476

EMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Dakley 14

DATE <u>4/15/13</u>	SEC. <u>22</u>	TWP. <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30p</u>	JOB FINISH <u>3:00p</u>
BASE <u>Salt Lake</u>	WELL.# <u>1</u>	LOCATION <u>Dakley 115 SE 1/4 S 314E</u>			COUNTY <u>Cove</u>	STATE <u>TX</u>	
OLD OR NEW (Circle one)							

CONTRACTOR WNL
 TYPE OF JOB Salt Lake
 JOLE SIZE 1244 T.D. 220
 CASING SIZE 8 5/8 DEPTH 210
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 RES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 12.05

OWNER
 CEMENT
 AMOUNT ORDERED 155 con 390cc
2079 gal

COMMON	<u>155</u>	@ <u>1790</u>	<u>277450</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>2340</u>	<u>7020</u>
CHLORIDE	<u>6</u>	@ <u>6400</u>	<u>38400</u>
ASC		@	
HANDLING	<u>167.598 CF</u>	@ <u>2.48</u>	<u>415.64</u>
MILEAGE	<u>2.648 mi</u>	@ <u>156</u>	<u>412.88</u>
TOTAL			<u>4061.28</u>

EQUIPMENT
 PUMP TRUCK CEMENTER Alan Ryan
 HELPER Wayne McGibghy
 TRUCK DRIVER Garrett Hoeft
 DRIVER

REMARKS:
100% 100% mix cement
Displace cement spurt in
Cement did circulate
T. Mark et al
Alan, Wayne, Austin

CHARGE TO: Ritchie Exp
 STREET
 CITY STATE ZIP

SERVICE

DEPTH OF JOB	<u>220'</u>	
PUMP TRUCK CHARGE	<u>1510.25</u>	
EXTRA FOOTAGE	@	
MILEAGE <u>2.6 miles</u>	@ <u>156</u>	<u>412.88</u>
MANIFOLD	@	
<u>170 vehicle 21</u>	@ <u>4.40</u>	<u>725.20</u>
TOTAL <u>2641.35</u>		

PLUG & FLOAT EQUIPMENT
 @
 @
 @
 @
 @
 TOTAL

I, Jason Peterson, of Allied Oil & Gas Services, 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 one to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (if Any)
 TOTAL CHARGES 6,103.33
 DISCOUNT 1,403.76 IF PAID IN 30 DAYS
4,699.56 Net.

PRINTED NAME Jason Peterson
 SIGNATURE [Signature]

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

August 19, 2013

John Niernberger
Ritchie Exploration, Inc.
8100 E 22ND ST N # 700
BOX 783188
WICHITA, KS 67278-3188

Re: ACO1
API 15-063-22103-00-00
Don Selenke 1
SE/4 Sec.22-13S-31W
Gove 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,
John Niernberger

HEADER

WellSight Systems

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

Well Name: #1 DON SELENKE
Location: sec 22 - twp 13S - rge 31W GOVE COUNTY
License Number: API #15-063-22,103 Region: KANSAS
Spud Date: 15 APR 2013 Drilling Completed: 25 APR 2013
Surface Coordinates: 600' FSL & 1,140' FEL
60' S & 150' W of W2 - SE - SE
Bottom Hole deviation surveys: 0.5 degree @ 220, 1.0 degree @ 3,977,
Coordinates: 1.0 degree @ 4,670
Ground Elevation (ft): 2,879 K.B. Elevation (ft): 2,884
Logged Interval (ft): 3,500 To: 4,670 Total Depth (ft): 4,670
Formation: WABAUNSEE to MISSISSIPPIAN
Type of Drilling Fluid: CHEMICAL; displace @ 3,358
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

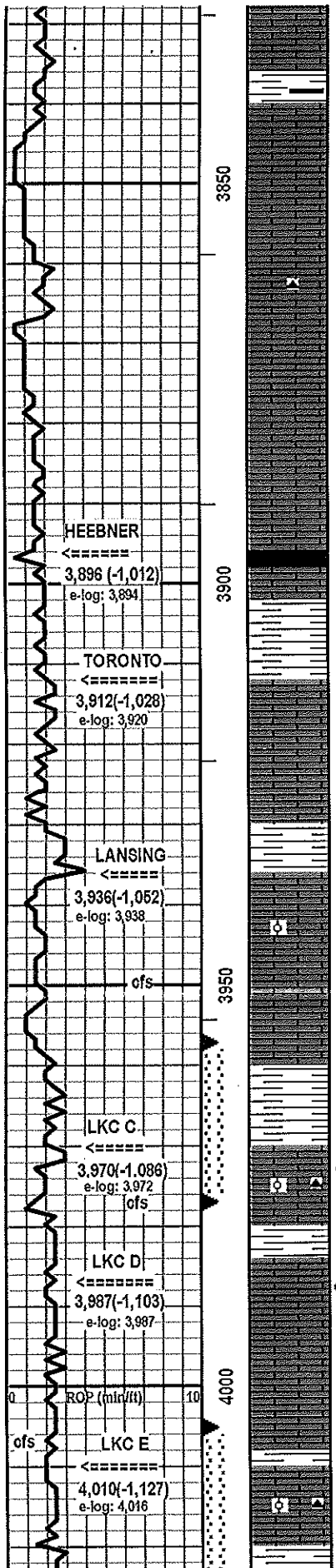
Company: Ritchie Exploration, Inc. lic. # 4,767
Address: P.O. Box 783188
Wichita, Kansas 67278-3188

GEOLOGIST

Name: Ted Jochems, Jr.
Company: Consulting Geologist
Address: 212 North Market ste 517
Wichita, Kansas 67202

COMMENTS

CONTRACTOR: W W Drilling, rig #6
(Jason Richeson, toolpusher)
MUD: Mud-Co (Reid Atkins)
DRILL STEM TESTS: Trilobite Testing (Brandon Turley)
ELECTRIC LOGS: Nabors Services (Mitch Rupp)
DIL, CDL/CNL
SURFACE CASING: 8.625" @ 220
PRODUCTION CASING: 5.5" run to Mississippian



LS: lt gry, microxtln, cal floodd, loc abt relict forams. no vis por. NS

SH: gry to blk, argil, loc micae, loc carb.

LS: gry, microxtln, wkly cal floodd. no vis por. NS

LS: wht, chalky, mushy. poor vis por. NS

LS: tan to lt gry, microxtln, wkly cal floodd, loc chalky, loc ool. poor vis por. NS

LS: pale gry to wht, microxtln, cal floodd, loc silofd to cht (lt gry, cryptxtln, sil vnits, fusulinids & other relict fossls). v poor vis por. NS

LS: wht to tan, crypt-microxtln, pelletal, loc v chalky (mushy), relict fossls (incl bivalves). poor vis por. NS

LS: tan, microxtln, chalky, loc wkly cal floodd, relict fossls. poor vis por. brn stns & flakes (no odor, no cut, VSSG on brk), NSO

SH: blk, carb, micae, calc.

LS: lt brn, microxtln, cal floodd. no vis por. minor brn stns (no odor, no cut), NSO

SH: gry, argil, silty, plant fragments.

LS: gry, microxtln, cal floodd, chalky partings, wk cal crusts. no vis por. NS

LS: off wht to pale gry, microxtln, cal floodd, loc chalky, loc sil. no/poor vis por. NS

SH: red-brn > lt grn, earthy hematite, silty.

LS: wht to pale gry, microxtln, chalky, loc cal floodd, loc ool, wk cal crusts, fusulinids, relict bivalves, specular hematite. poor vis por, scarce isolated vugs. 1 pc w/ wk brn stn (no odor, no cut), NSO

LS: pale gry, microxtln, cal floodd, chalky partings, minor py, loc silofd to cht (pale gry, cryptxtln, fossl). no intxln por, minor isolated vugs. 1 pc w/ brn stn on fracture (no odor, no cut), NSO

SH: gry & red-brn, argil, earthy hematite, loc sl silty.

LS: pale gry, lt brn & tan, microxtln, cal floodd, loc ool, pyr, loc druzy cal & wk cal crusts, loc sil, chalky @ base. poor intxln por, loc fair Intool por. fair SO (dk brn, no odor, good flash cut, patchy to satd brn dry stn, VSSG)

SH: grn & red-brn, loc silty mixed oxidation: abt py & earthy hmt.

LS: wht to crm, microxtln, cal floodd, chalk partings, loc relict grainst. poor vis por. minor brn stns (no odor, no cut). some questionable show pos @ top (?cavings?)

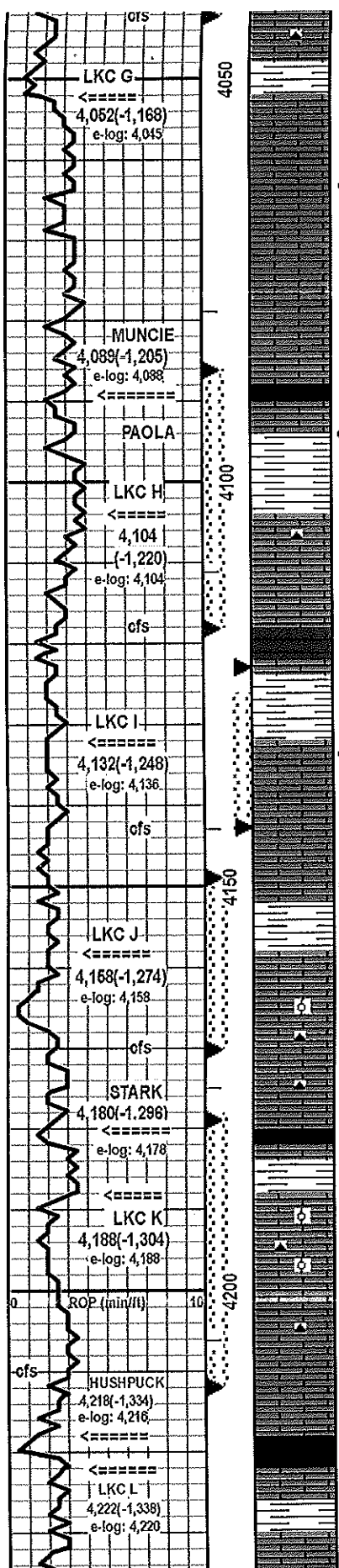
LS: crm to lt gry, microxtln, cal floodd, wk cal crusts & druzy cal. no intxln por, scarce isolated vugs. minor brn stns (no odor, no cut, scarce patchy brn dry stn), 1 pc poss v wk SO (v slow wk cut, patchy brn dry stn), NSFO

SH: grn & red-brn, loc silty, earthy hematite.

LS: lt brn & lt gry, microxtln, cal floodd, loc ool, cal crusts, druzy cal, loc silofd to cht (orange, brn & wht, crypt-microxtln, fossl, hematite, sil vnits). no intxln por, poor-fair vug por. SSO (minute dk brn drplts, wk odor, good cut, patchy to satd brn dry stn, SSG)

DST #1
3,957 - 3,977
REC 93' GO, 248' MCW
SIP 1,137 - 1,122#
details above

DST #2
4,005 - 4,042
REC 794' GO, 992' MCGO, 186'
MWCGO, 1,322' GIP
SIP 1,188 - 1,177#
details above



LS: gry, microxtln, cal floodd, pyr, loc silcfd to cht (gry, cryptxtln). no vis por. NS
 SH: gry, red-brn & maroon, silty, earthy hematite.

LS: orm to pale gry, microxtln (loc vfgr-fgr), cal floodd, chalky partings, minor relict fossils. no vis por. NS
 LS: orm to pale gry, micro-fgr xtln, cal floodd, chalky partings, minor druzi cal. no/poor vis por. scarce brn stns (no odor, no cut, 1 pc w/ v wk brn dry stn), NSO(?)

LS: lt gry, microxtln, cal floodd, chalky partings, cal crusts, minor druzi cal, loc relict forams, loc pelletal. no vis por. NS

LS: gry, micro-vfgr xtln, cal floodd, wk cal crusts. no vis por. NS

SH: blk, carb, micae, cal inclusions.
 LS: dk brn, micro-vfgr xtln, cal floodd, dns, abt druzi cal, cal crusts, rare relict fossils, rare dk gry cht. no vis por. brn stns & flakes (fnt odor, no cut, brn dry stn), ?SSO?
 SH: grn, gry & red-brn, argil, micae, loc silty, earthy hmt.
 LS: tan & lt gry, microxtln, cal flood, wk cal crusts, loc chalky, druzi cal, loc fossl, rare py, loc silcfd to cht (tan, microxtln, xlsent). no/poor vis por (loc fair in druzi cal). brn stn & SO in druzi cal (fnt odor, v wk to good cut, patchy lt brn dry stn, VSSG)

DOL: tan, vfgr xtln, suor, v few pes. v poor vis por. NS
 SH: grn & red-brn (loc mottled) & gry, silty, rarely micae, loc rock granules, mixed oxidatn: py & earthy hematite.

LS: brn & lt gry microxtln, cal floodd, druzi cal, cal crusts, rarely sil. no matrix por, loc good vug por in druzi cal. VSSO (minute brn drpls, no odor, fair cut, patchy brn dry stn)
 LS: off wht to pale gry, micro-vfgr xtln, cal floodd + rextld, chalky partings, cal crusts, druzi cal, relict fossils, minor py. grainstn (fossil, sil) @ base of unit. poor matrix por, fair in druzi cal. SSO (minute drpls, fair odor, good cut, patchy lt brn dry stn, rare FO, SSG)
 SH: grn, gry & red-brn, argil, loc silty, py, earthy hematite, plant fragments, loc calc w/ rock granules.

LS: orm to tan, microxtln, rextlzd + cal floodd, chalky partings, loc ool & ooc (lt gry & lt brn, vfgr matr), vfgr - fgr druzi cal, loc sil (gry, ool). fair ooc & druzi por. SSO (brn, wk odor, fair - good cut, minor FO, VSSG, patchy to satd brn dry stn)

LS: gry, microxtln, cal floodd, cal crusts, chalky partings, pyr, minor gry cht (cryptxtln). no/poor vis por. NS
 SH: blk, carb, micae, cal inclusions.
 LS: dk brn, microxtln, hvly cal floodd, cal crusts. NVP NS
 SH: grn, gry & red-brn, argil, py, earthy hematite (mxd oxidatn).
 LS: off wht, tan & brn, mgr ool, druzi cal, loc chalky, loc sil. fair-good intgran por. GSO (brn, good odor, good flash cut, FO in tray, SSG, patchy to satd brn dry stn)
 LS: lt gry (tan @ base intv), microxtln, cal floodd, fgr-mgr druzi cal, cal crusts, scarce py, loc silcfd to cht (wht, lt gry & gry, crypt - micro xtln, opa, fossl, wht xenoliths). no intxln por, fair druzi por. SO (brn, good odor, scarce FO in tray, patchy to satd brn dry stn)

LS: off wht, microxtln, rextlzd, chalky, loc cal floodd, rare py. poor vis por. rare brn stns (no odor), NSO
 SH: blk, carb, micae, minor cal inclusions, rare nodules.
 LS: dk brn, microxtln, hvly cal floodd, cal crusts, loc mealy NVP NS
 SH: gry, grn & red-brn, argil, silty, loc sdy, earthy hmt.

LS: gry & off wht, micro (loc vfgr) xtln, cal floodd, loc v chalky, cal crusts, relict forams (?ool?) & bivalves, rare py. no/poor vis por.

vis 53 wt 9.1 lcm 2#

strap @ 4,042
 board 4,048.04
 strap 4,040.87
 board 7.17' long <== NOTE BUST

DST #3
 4,086 - 4,118
 REC 80' GOCM, 60' MWCGO
 SIP 1,161 - 1,166#
 details above

DST #4
 4,123 - 4,143
 REC 134' WCM 186' SW
 SIP 1,062 - 1,026#
 details above

ofs before connection.

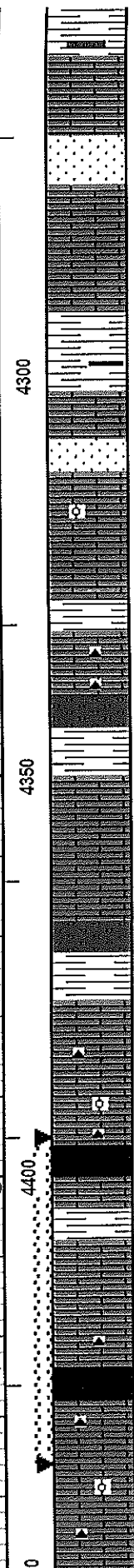
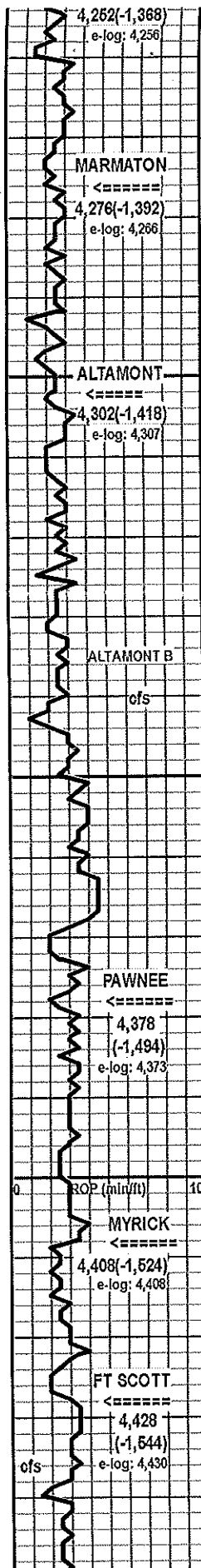
DST #5
 4,149 - 4,170
 REC 212' MCW
 SIP 1,068 - 1,057#
 details above

DST #6
 4,178 - 4,210
 REC 1,765' GO, 120' GOCM
 SIP 1,051 - 1,054#
 details above

vis 60 wt 9.2 lcm 2# before dst
 vis down; run in premix after dst

vis 40 wt 9.0+ lcm 2#

add premix.



SH: grn, gry & red-brn, earthy hematite, argil, silty, py, rock granules, stringers of SLTST (grn, argil loc sdy, v poor por, NS)

LS: gry & brn, microxtln (loc vgr xtl), cal floodd, cal crusts, soarce druzy cal (mgr), minor relict forams. no vis por. tr wk brn stns (no odor, no cut), NSO

SS: gry to brn, vgr gran, rndd, cal cmt, minor rndd rock grns (tr mgr), plant fragments. v poor por. NS

LS: off wht, tan & pale gry, microxtln, cal floodd, chalky partings, minor cal crusts & druzy cal, relict forams & bivalves. no/poor vis por. NS

LS: off wht to brn, microxtln, cal floodd, chalky partings, wk cal crusts, rare cht (tan, cryptxtln). no/poor vis por. rare brn stn (no odor, no cut), NSO

SH: gry, grn & red-brn, argil, earthy hematite, loc micae, loc sdy, rare py, loc blk & carb.

LS: off wht to tan, microxtln, cal floodd, chalky partings, cal crusts, druzy cal. no/poor vis por. NS

SS: gry vgr gran, cal cmt, rndd, cal crusts, plant fragments. v poor por. NS

LS: off wht, gry, brn & tan, microxtln, cal floodd, chalky partings, loc ool, cal crusts, loc earthy hematite & limonite stn. no/poor vis por. tr brn stn (no odor, no cut), NSO

SH: gry, grn & red-brn, argil, silty, earthy hematite, tr py.

LS: off wht to tan, microxtln, cal floodd, chalky partings, cal crusts, loc abt forams, minor earthy hmt, abt silicfn to cht (off wht, tan & orange, cryptxtln, xlsent, rare bryozoans). no/poor vis por. rare wk brn stns (no odor, no cut, VSSG on brk), NSO

SLTST: gry-grn, argil, v friable, plant fragments. NVP NS

SH: grn, gry & red-brn, argil, silty, earthy hmt, loc micae.

LS: crm & gry, microxtln, cal floodd, chalky partings, minor cal crusts, loc silicfd to cht (tan & gry, cryptxtln, xlsent). v poor por. NS

LS: gry, micro-vgr xtl, wkly cal floodd, sandd, v poor por. NS

LS: crm, microxtln, sl cal floodd, chalky. poor vis por. NS

SLTST: gry, v argil, v friable. poor vis por. NS

SH: gry, grn & red-brn, argil, micae, minor earthy hematite & yel limonite stn.

LS: wht, microxtln, wkly cal floodd, chalky, loc silicfd to cht (wht, opa, fossil). v poor vis por. NS

LS: brn & gry, microxtln, cal floodd, cal crusts, druzy cal, loc ool, abt silicfn to cht (brn & gry, cryptxtln). NVP NS

SH: blk, carb, micae, cal inclusions.

LS: dk brn, microxtln, hvty cal floodd, wk cal crusts, loc mealy loc silicfd to cht (dk brn, cryptxtln, fossil). no vis por. NS

SH: grn > red-brn, argil, minor earthy hematite.

LS: crm, microxtln, rextlzd, chalky, druzy cal, cal crusts, loc silicfd to cht (wht, brn, gry & blue, cryptxtln, fossil). poor vis matrix por, poor-fair druzy por. few pcs VSSO (amber, no odor, wk-fair cut, patchy-satd brn dry stn.

SH: blk, carb, micae, cal inclusions.

LS: gry to off wht, microxtln, cal floodd, chalky partings, cal crusts, minor py, loc silicfd to cht (gry & wht, cryptxtln, xenoliths, relict fossils). no/poor por. brn & blk stns & flakes, subtle SSO (no odor, no cut, 3 drpits FO, wk patchy brn dry stn, VSSG)

LS: brn & off wht, microxtln, mildly cal floodd, loc rextlzd & chalky, loc ool, wk cal crusts, rare py, loc silicfd to cht (brn & lt gry, microxtln, fossil). no/poor vis por. NS

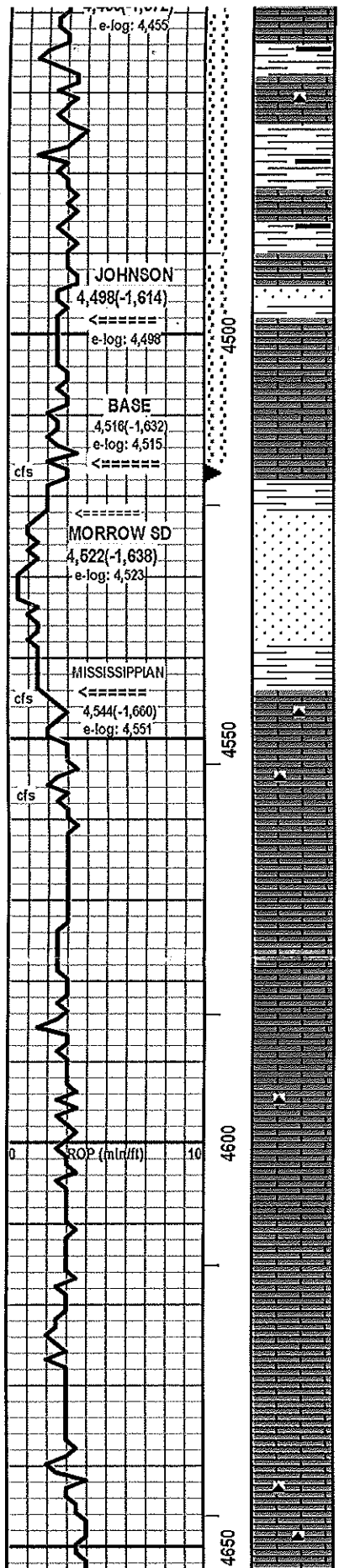
run in treated pick-up mud

vis 66 wt 9.1 lcm 3#

vis 64 wt 9.2 lcm 2#

DST #7
4,395 - 4,436
REC 244' MCGO
SIP 884 - 884#
details above

16 stand short trip before dst



LS: crm to tan, microxtln, wkly rextlzd & chalky, loc cal floodd, druzi cal, cal crusts. poor vis por. NS
 SH: gry & grn > red-brn, argil, silty, tr py, rock granules, minor earthy hmt, loc blk & carb w/ granules.

LS: lt gry to lt brn, micro-vfgr xtln, cal floodd, cal crusts, pyr, loc pellets, tr cht (lt brn, cryptxtln, fossi). no vis por. NS

SH: gry & grn > red-brn, argil, silty, loc micao, minor py & earthy hmt, loc blk & carb w/ rock granules.

LS: lt gry & lt brn, microxtln, cal floodd, cal crusts, pyr. NVP NS

SH: gry & grn, argil, silty, pyr, loc blk & carb.

LS: lt gry & lt brn, microxtln, cal floodd, loc chalky, pyr. NVP NS
 SS: gry, vfgr-fgr gran, rndd, 20% cht grns, cal cmt, glauc, sl pyr, ?fish scales?. few clusters found; loose sd in tray poor vis por. NS

LS: brn to dk brn, microxtln, cal floodd, loc hummocky, chalky partings, cal crusts, vfgr-mgr druzi cal, minor relict fossils. no matrix por, fair-gd vug & druzi por. GSO (brn, dk brn & blk drplts, gd odor, gd cut, FO in tray, VSSG, patchy to satd brn dry stn)

gry, chalkier & much less showy in lower part of unit.

SH: dove gry & grn, argil, minor limonite stn, rock granules.

SS: wht, vfgr-fgr tr mgr, rndd qtz grns (1% hvy mins), sl cmt (rarely quartzitic & blocky), loc friable, loc chalky, rarely pale brn-gry (no odor, no cut), minor limonite stn, minor glauc. poor vis por. NS
 Inor mgr (less well sorted) @ base.

SH: gry, grn, lime grn, maroon & red-brn, argil, earthy hematite, limonite stn, loc silty.

LS: crm to tan, microxtln, cal floodd + chalky, relict forams (?ool?), loc silfcd to cht (orange, red, crm & brn, cryptxtln, hematite pseudomorphs after py). v poor por. 1 pc w/ blk stn in fracture (no odor, no cut), NSO

LS: crm to tan, microxtln, chalky, loc wkly cal floodd, sandd, loc relict forams (?ool?), wk cal overgrths. v poor vis por. rare wk brn stn (no odor, no cut), NSO

LS: crm, microxtln, cal floodd, loc chalky, sandd, loc relict grainst texture, relict forams. v poor vis por. minor brn stns (no odor, no cut, NSO

LS: lt gry-brn, crypt-microxtln, cal floodd, loc v chalky w/ relict fossils, cal overgrths. no / poor vis por. tr stns (no odor, no out), NSO see note =====>

LS: brn, gry-brn, crypt-microxtln, cal floodd, loc v chalky, wk cal crusts, rare py, rare yel limonite stn, rare glauc, loc silfcd to cht (orange, brn & olr, cryptxtln, hematite stns). no/poor vis por. NS

LS: crm to tan, microxtln, wkly rextlzd, chalky, loc cal floodd, relict forams, sl sandd. poor vis por. tr brn stns (no odor, no out), NSO

LS: off wht, tan & pale gry, microxtln, wkly rextlzd, chalky, loc wkly cal floodd, relict forams, minor cht (olr & orange, cryptxtln, xlsent). poor vis por. NS

LS: wht to off wht, microxtln, sl rextlzd, v chalky, sandd, tr relict forams. v poor vis por. NS see note =====>

LS: tan to lt brn to brn, microxtln, variably cal floodd, loc chalky, loc relict forams (?ool?). no/poor vis por. NS

LS: crm to lt brn, microxtln, cal floodd, chalky partings, minor cal crusts, loc abt relict forams (?ool?), loc silfcd to cht (smoky gry, crypt-microxtln, loc xlsent). no/ poor vis por. rare brn stns (no

DST #8
 4,463 - 4,517
 REC 434' GO, 310' MCGO, 372' GOCM
 SIP 966 - 974#
 details above

cfs interval may have cut into underlying Morrow Sand (wht, vfgr)

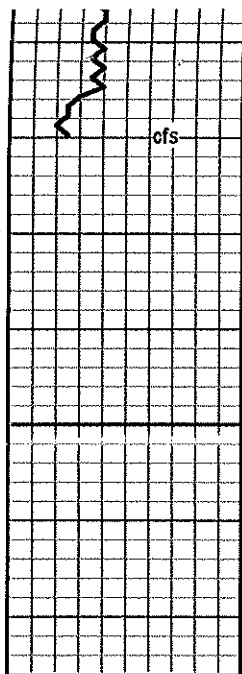
?reworked Mississippian?

=====> 1 drplt of v dk brn FO in tray: assumed to be from nearby showy Johnson zone caving. no other FO or shows.

vis 53 wt 9.2 lcm 2#

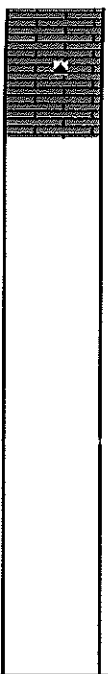
=====> no apparent SS development; no clusters other than tr Morrow sd cavings, no loose sand in tray (sample catcher using sieve). 3-4 pos of cht w/ wk glauc coatings (?Morrow cavings?).

vis 54 wt 9.3 lcm 2#



efs

4700



odor, no cut), NSO

LS: tan to lt gry, microxtin, rextlzd, chalky, loc cal floodd, abt dk gry pellets (>60% of rock), loc mariy. poor vis por. tr brn stns (no odor, no cut), NSO

RTD 4,670
LTD 4,671

Ritchie Exploration, Inc.
#1 Don Selenke
600' FSL & 1,140' FEL
seo 22 - twp 13S - rge 31W
Gove County, Kansas

abt sh cavings.

short trip before log.