



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1107825  
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: \_\_\_\_\_



1107825

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:  Yes  No

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

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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# RITCHIE

EXPLORATION, INC.  
Wichita, Kansas

## #1 Baker 13CD

1780' FSL & 830' FEL

130' N & 160' E of SW NE SE Section 13-17S-35W

Wichita County, Kansas

API# 15-203-20187-0000

Elevation: 3135' GL: 3143' KB

Sample Tops			Ref. Well
Anhydrite	2438'	+705	-12
B/Anhydrite	2458'	+685	-14
Stotler	3620'	-477	-12
Heebner	4005'	-862	-12
Toronto	4022'	-879	-14
Lansing	4051'	-908	-12
Muncie	4234'	-1091	-11
LKC "H"	4245'	-1102	-13
Stark	4341'	-1198	-17
Hush.	4388'	-1245	-16
BKC	4438'	-1295	-20
Marmaton	4462'	-1319	-15
Altamont	4486'	-1343	-14
Pawnee	4564'	-1421	-11
Myrick	4606'	-1463	-16
Fort Scott	4618'	-1475	-11
Cherokee Shale	4645'	-1502	-11
Johnson	4759'	-1616	-15
Morrow Shale	4794'	-1651	-20
Mississippian	4883'	-1740	-19
RTD	4999'	-1856	



**CONSOLIDATED**  
Oil Well Services, LLC

TICKET NUMBER 37224  
LOCATION Oakley  
FOREMAN Fuzzy

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

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
10-8-12	7173	Baker 13CD #1	13	17	35w	Wichita
CUSTOMER Ritchie Exploration			Spartan W-24 190 W-2425 4w W-24			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			463	Cory D		
STATE			528	Jordan L		
ZIP CODE			T-127			

JOB TYPE Port Collar HOLE SIZE \_\_\_\_\_ HOLE DEPTH \_\_\_\_\_ CASING SIZE & WEIGHT \_\_\_\_\_  
CASING DEPTH \_\_\_\_\_ DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER P-collars 2388  
SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT In CASING \_\_\_\_\_  
DISPLACEMENT 13.8 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting on Ma Plains workover Rig up. Test closed  
Tool @ 1200'. Establish circulation. Mix 430gk 60/40 69 seal  
114' flossal with 500' cottonseed hulls. Displace 13 BBL close  
Tool press to 1200'. Wash pump and lines. Run 4 JTs and  
reverse to clean with 30 BBL water.  
Cement did circulate to pit.

Thanks Fuzzy & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401B	1	PUMP CHARGE	1695 <sup>00</sup>	1695 <sup>00</sup>
5406	45	MILEAGE	5 <sup>00</sup>	225 <sup>00</sup>
5407A	18.5 TON	Ton mileage Delivery	162	1390 <sup>00</sup>
1131	430gk	60/40 pos	15 <sup>10</sup>	6493 <sup>00</sup>
1118B	2219#	Bentonite	.25	554 <sup>75</sup>
1107	108#	flossal	2 <sup>82</sup>	304 <sup>56</sup>
1105	500#	cottonseed hulls	.55	275 <sup>00</sup>
		subtotal		10937 <sup>81</sup>
		less 1090		1093.78
		subtotal		9844.03
		SALES TAX		569.76
		ESTIMATED TOTAL		10413.79

Ravin 3737

AUTHORIZATION Guy Rowe 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.

R 253605



**CONSOLIDATED**  
Oil Well Services, LLC S

TICKET NUMBER 37183  
LOCATION Oakley, KS  
FOREMAN Kelly Gabe  
Walt Dingel

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

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
10-2-12	7173	Baker 13 CD #1	13	175	35 <sup>W</sup>	Wichita
CUSTOMER <u>Ritchie Expl</u>			SEARCHED <u>W TOCD</u>			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			<u>line</u>	<u>530</u>	<u>Wes f</u>	
STATE			<u>6 N 146</u>	<u>409</u>	<u>COYD</u>	
ZIP CODE			<u>N into</u>		<u>Travis Williams</u>	<u>Ride along</u>

JOB TYPE Prod HOLE SIZE 7 7/8 HOLE DEPTH 5000 CASING SIZE & WEIGHT 5 1/2 15.5 #  
CASING DEPTH 4985 DRILL PIPE \_\_\_\_\_ TUBING PC TOP # 58 OTHER PC @ 2392'  
SLURRY WEIGHT 138 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT IN CASING 20.5' shoe  
DISPLACEMENT 118 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: safety meeting, ran float equip on JT #5 cent. 1, 3, 5, 7, 9, 13  
57, 59, 76 baskets, 10, 58, 77 PC top # 58 ran pipe to bottom  
circulated for 1 hr, pumped 5 bbl water mud flush, 5 bbl water  
mixed 30 sks in batches, mixed 195 sks out ~~of casing~~, 5# Kaseal  
1/4 AF 1% CDI-26, 1/8 61% Defoamer, clear Pump Lines, release Plug + Displace  
115 BBL H<sub>2</sub>O @ 900#, Landed Plug @ 1200#, release Pressure Flat Hold

Thank You  
Kelly - Watt + crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3020.00	3020.00
5406	40	MILEAGE	5.00	200.00
1126	225 SKS	OWC	22.55	5073.75
110A	1125 #	Kol-seal	.56	630.00
1137	53 #	CDI-26	9.69	513.57
1146	25 #	CAF-38 defoamer	9.72	243.00
5407A	10, 57	Ton Mileage delivery	1.67	706.40
4203	1	5 1/2 Guide shoe (I)	193.00	193.00
4228B	1	5 1/2 AF4 insert (I)	206.00	206.00
4136	9	Turbolizer (I) 5 1/2"	72.00	648.00
4104	3	5 1/2 basket (w)	276.00	828.00
4285	1	5 1/2 Portcollar (I)	2075.00	2075.00
11446	500 gal	mud flush	1.00	500.00
				14,836.72
		Less 10% Disc		- 1,483.67
				13,353.05
		SALES TAX		815.00
		ESTIMATED TOTAL		14,168.05

Ravin 3737

AUTHORIZATION [Signature] TITLE PRODUCTION FOREMAN DATE 10/2/12

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

[Signature] 253377

# ALLIED OIL & GAS SERVICES, LLC # 056315

Federal Tax I.D.# 20-5976804

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

SERVICE POINT:

*Dakota*

DATE <i>9-17-12</i>	SEC. <i>13</i>	TWP. <i>17</i>	RANGE <i>35</i>	CALLED OUT	ON LOCATION <i>8:30pm</i>	JOB START <i>7:30pm</i>	JOB FINISH <i>1:00pm</i>
LEASE # <i>#1 Baker</i>	WELL # <i>130D</i>	LOCATION <i>South City 12W (Colins)</i>			COUNTY <i>Drehta</i>	STATE <i>KS</i>	
OLD OR NEW (Circle one)				<i>6N 14W North</i>			

CONTRACTOR <i>Duke #2</i>	OWNER <i>same</i>
TYPE OF JOB <i>Surface</i>	
HOLE SIZE <i>12 1/4"</i>	T.D. <i>235</i>
CASING SIZE <i>8 3/8"</i>	DEPTH <i>231.25</i>
PUBING SIZE	DEPTH
DRILL PIP	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOBT JOINT
CEMENT LEFT IN CSG. <i>15'</i>	
PERFS.	
DISPLACEMENT <i>13.8466</i>	

COMMON	<i>175 sks</i>	@	<i>12.90</i>	<i>2257.50</i>
POZMIX		@		
OIL	<i>35 sk</i>	@	<i>23.40</i>	<i>819.00</i>
CHLORIDE	<i>6 sk</i>	@	<i>6.40</i>	<i>38.40</i>
ASC		@		

EQUIPMENT				
PUMP TRUCK # <i>431</i>	CEMENTER <i>Lakona G. Wautz</i>			
	HELPER <i>Dane Retzlaff</i>			
BULK TRUCK # <i>404</i>	DRIVER <i>Smur-Garcia (ms)</i>			
BULK TRUCK #	DRIVER			
HANDLING	<i>182.94893</i>	@	<i>2.48</i>	<i>453.82</i>
MILBAGE	<i>2.04 km x 55</i>	@	<i>89.50</i>	<i>182.00</i>
				TOTAL <i>5516.18</i>

REMARKS:  
*Start cement 175 sks*  
*Displace with water*  
*Cement did circulate*  
*Thank you*

*561.60*

SERVICE

DEPTH OF JOB	<i>231.25'</i>			
PUMP TRUCK CHARGE		@	<i>1512.75</i>	
EXTRA FOOTAGE		@		
MILBAGE	<i>6.5</i>	@	<i>7.70</i>	<i>50.50</i>
MANIFOLD	<i>lead</i>	@	<i>275.00</i>	
<i>L.O. Mileage</i>	<i>6.5</i>	@	<i>4.40</i>	<i>28.60</i>

CHARGE TO: *Ritchie Exploration*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL *2573.95*

PLUG & FLOAT EQUIPMENT

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cement 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.

<i>Wooden plug</i>	@	<i>102.64</i>
	@	
	@	
	@	
	@	
		TOTAL <i>102.64</i>

PRINTED NAME *Dion Vasquez*

SIGNATURE *Dion Vasquez*

SALES TAX (If Any) *306.21*

TOTAL CHARGES *8,197.57*

DISCOUNT *1967.71* IF PAID IN 30 DAYS

*2470*

# Adam Eldani Geo-Log/Report

## WellSight Systems

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

Measured Depth Log

Well Name: #1 Baker 13CD

Location: SEC 13- twp 17S- rge 35W "WICHITA COUNTY"

License Number: API 15-203-20187

Region: KANSAS

Spud Date: 09/17/2012

Drilling Completed: 10/02/2012

Surface Coordinates: 1780' FSL 830' FEL 130'N 160'E of SW NE SE

Bottom Hole Deviation Surveys are detailed through out the Geo-Report.

Coordinates:

Ground Elevation (ft): 3135'

K.B. Elevation (ft): 3143'

Logged Interval (ft): 3500' To: 4999'

Total Depth (ft): 4999'

Formation: Mississippian

Type of Drilling Fluid: Mud-Co Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: Ritchie Exploration Inc. (drilled by DUKE #2)

Address: 8100 E. 22nd ST. N. #700

Wichita, KS, 67278-3188

### GEOLOGIST

Name: Adam M.A. Eldani

Company: Ritchie Exploration Inc.

Address: 8100 E. 22nd ST. N. #700

Wichita, KS, 67278-3188

## TOPS & DRILL REPORT

TOPS:

E-LOG:

SAMPLE TOPS:

ANHY: 2438'+705	ANHY: 2436'+707
B/ANHY: 2458'+685	B/ANHY: 2455'+688
STOTLER: 3620'-477	STOTLER: 3619'-476
HEEBNER: 4005'-862	HEEBNER: 4002'-859
LANSING: 4051'-908	LANSING: 4048'-905
MUNCIE: 4234'-1091	MUNCIE: 4234'-1091
STARK: 4341'-1198	STARK: 4337'-1194
ALTAMONT: 4486'-1343	ALTAMONT: 4490'-1347
PAWNEE: 4564'-1421	PAWNEE: 4570'-1427
CHEROKEE: 4645'-1502	CHEROKEE: 4642'-1499
MISS: 4854'-1711	MISS: 4854'-1711

### DAILY MORNING DRILLING REPORT

9/17 SPUD  
9/18 747'  
9/19 2131'  
9/20 3103'  
9/21 3686'  
9/22 4054'  
9/23 4090'  
9/24 4177'  
9/25 4270'  
9/26 4307'  
9/27 4393'  
9/28 4494'  
9/29 4530'  
9/30 4648'  
10/1 4905'  
10/2 4999'

### Misc. Info.

All DST's info. are NEAR the correct log depth.

RIG: DUKE DRILLING RIG #2  
DRILLPIPE: 4-1/2" XH

TOOLPUSHER: Dion Vasquez  
MUD: MUDCO (Tony Maestas)  
GAS DETECTOR: NONE  
DRILL STEM TESTS: SUPERIOR TESTING  
LOGS: NABORS

OFFICE: MIKE ENGELBREC GHT  
FIELD: SCOTT BOEH



## Comments

SURFACE Casing: 8 5/8" @ 231'

Well Log Surveys BY NABORS: Compensated Density/ Neutron Log, & Dual Induction.

STRUCTURALLY, THIS WELL RAN LOWER TO OFFSET, ALL SHOWS WERE TESTED.

After evaluation of DST's and Electric Logs, 5 1/2" Production casing was set on the #1 BAKER 13CD for further testing for commercial quantities of oil and gas.

SAMPLES WILL BE DEPOSITED WITH KANSAS GEOLOGICAL SURVEY.








































































RESPECTFULLY SUBMITTED

Adam M. A. Eldani
























### ROCK TYPES

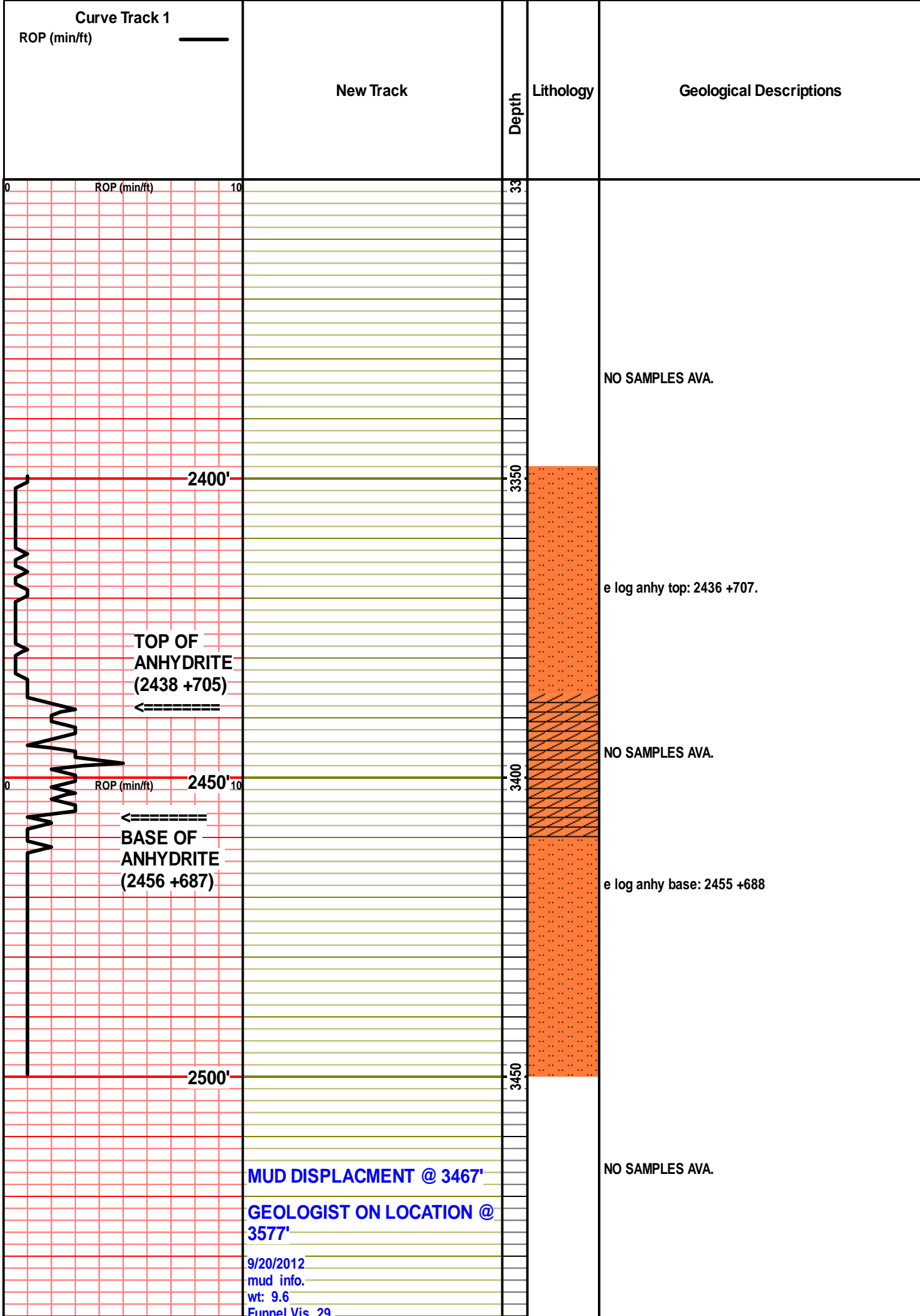
 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
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### ACCESSORIES

<b>MINERAL</b>  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau	 Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	<b>FOSSIL</b>  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom  <b>STRINGER</b>  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg  <b>TEXTURE</b>  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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### OTHER SYMBOLS

<b>POROSITY</b>  Earthy  Fenest  Fracture  Inter  Moldic  Organic  Pinpoint	 Vuggy  <b>SORTING</b>  Well  Moderate  Poor	<b>ROUNDING</b>  Rounded  Subrnd  Subang  Angular  <b>OIL SHOW</b>  Even	 Spotted  Ques  Dead  <b>INTERVAL</b>  Core  Dst	<b>EVENT</b>  Rft  Sidewall
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MUD DISPLACMENT @ 3467'  
 GEOLOGIST ON LOCATION @ 3577'

9/20/2012  
 mud info.  
 wt: 9.6  
 Funnel Vis: 29

Funnel No. 20  
Filtrate API n/c  
Chloride 48,000  
LCM 1

3500

**PUMP PRESSURE:  
850+**

NO SAMPLES AVA.

9/21/2012  
mud info.  
wt: 8.8  
Funnel Vis. 45  
Filtrate API 7.2  
Chloride 3,700  
LCM 1

3550

NO SAMPLES AVA.

**PUMP PRESSURE: 900+**

3610: mstly red sh, tan-buff dolo/lm, poorly xln, fair por, no odr, ns.

3620: incrs in gry sh, tan pack stn, fair por, no odr, ns.

3630: mstly red, gry and green sh.

3640: drty tan-off gry micrtic lm, semi dense, no odr, ns.

3650: crm-tan fn xln lm, dense, hrd to brk, no odr, ns.

3660: crm grain stn, well cemntd, no odr, ns.

3670: gry semi xln lm, xln por, no odr, ns.

3680: aa, incrs in lght crm v. foss lm, foss cast por, no odr, ns.

3690: incrs in red and gry sh. incrs in gry inxln lm, no odr, ns.

3700: crm-tan v. fn grn lm, well cemtd, no odr, ns.

3710: shw of blk carb sh, tan xln lm, xln por, no odr, ns.

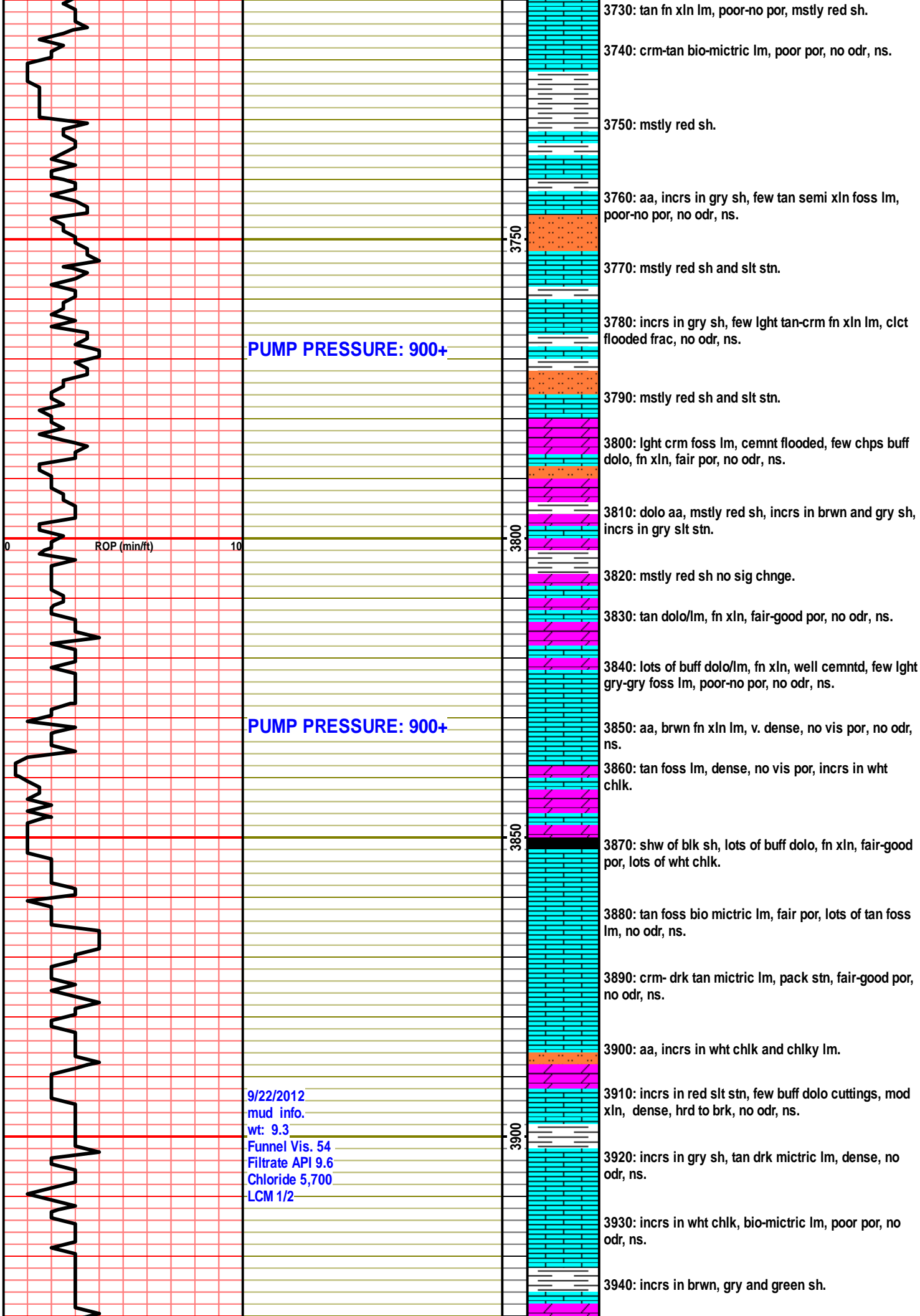
3720: incrs in red and gry sh, lots of crm-tan pack stn lm, fair-poor por, no odr, ns.

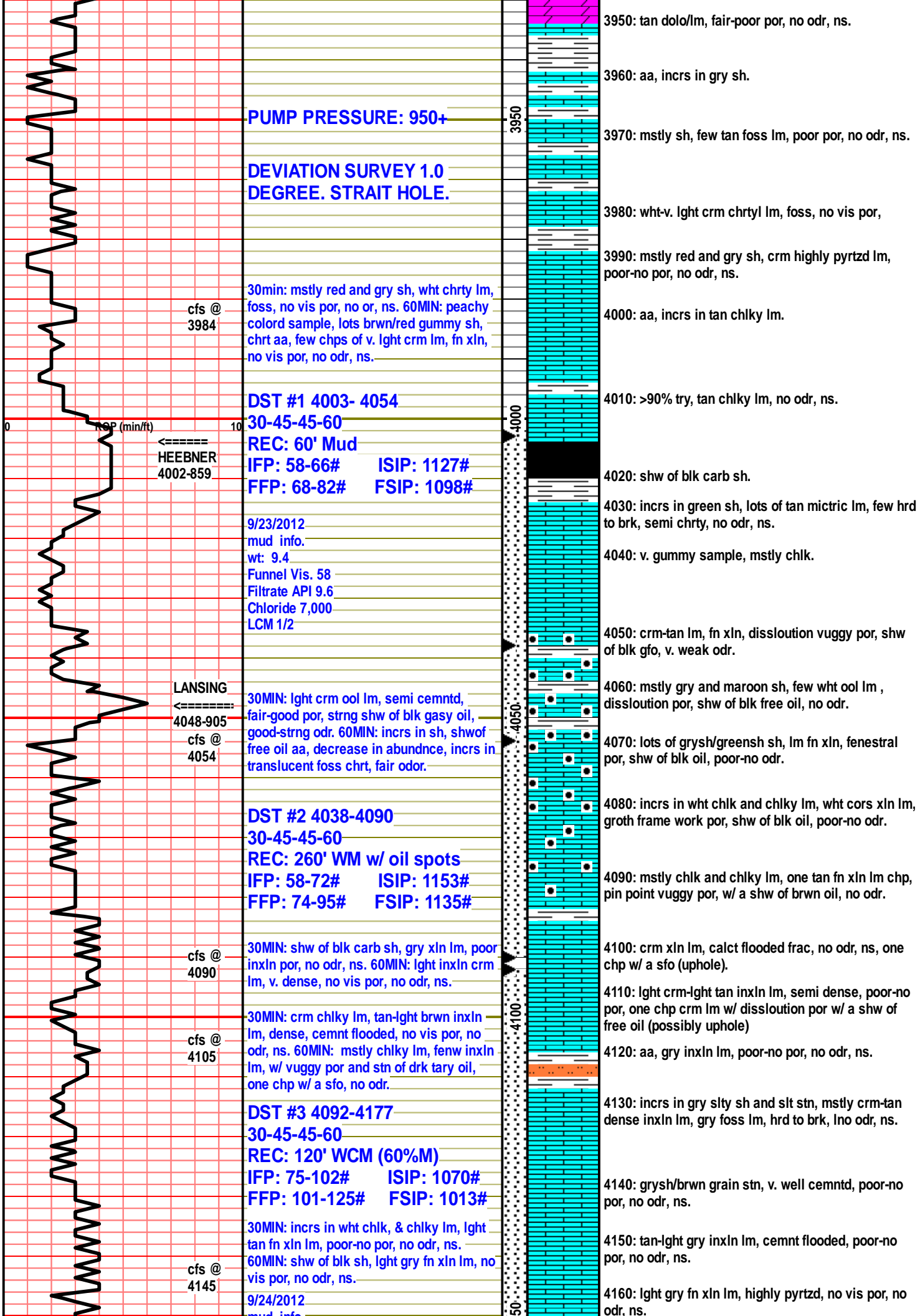
0 ROP (min/ft) 10

←  
**STOTLER  
3620-477**

3650

3700





3950: tan dolo/lm, fair-poor por, no odr, ns.

3960: aa, incrs in gry sh.

**PUMP PRESSURE: 950+**

3950

3970: mstly sh, few tan foss lm, poor por, no odr, ns.

**DEVIATION SURVEY 1.0 DEGREE. STRAIT HOLE.**

3980: wht-v. lght crm chrtyl lm, foss, no vis por,

3990: mstly red and gry sh, crm highly pyrtzd lm, poor-no por, no odr, ns.

cfs @ 3984

30min: mstly red and gry sh, wht chrty lm, foss, no vis por, no or, ns. 60MIN: peachy colord sample, lots brwn/red gummy sh, chrt aa, few chps of v. lght crm lm, fn xln, no vis por, no odr, ns.

4000: aa, incrs in tan chlky lm.

**DST #1 4003- 4054**

30-45-45-60

**REC: 60' Mud**

**IFP: 58-66#**

**ISIP: 1127#**

**FFP: 68-82#**

**FSIP: 1098#**

4000

4010: >90% try, tan chlky lm, no odr, ns.

ROP (min/ft)  
HEEBNER  
4002-859

4020: shw of blk carb sh.

9/23/2012

mud info.

wt: 9.4

Funnel Vis. 58

Filtrate API 9.6

Chloride 7,000

LCM 1/2

4030: incrs in green sh, lots of tan mictric lm, few hrd to brk, semi chrty, no odr, ns.

4040: v. gummy sample, mstly chlck.

LANSING

4048-905

cfs @ 4054

30MIN: lght crm ool lm, semi cemntd, fair-good por, strng shw of blk gasy oil, good-strng odr. 60MIN: incrs in sh, shwof free oil aa, decrease in abundnce, incrs in translucent foss chrt, fair odor.

4050: crm-tan lm, fn xln, dissoluton vuggy por, shw of blk gfo, v. weak odr.

4060: mstly gry and maroon sh, few wht ool lm, dissoluton por, shw of blk free oil, no odr.

4070: lots of grysh/greenish sh, lm fn xln, fenestral por, shw of blk oil, poor-no odr.

**DST #2 4038-4090**

30-45-45-60

**REC: 260' WM w/ oil spots**

**IFP: 58-72#**

**ISIP: 1153#**

**FFP: 74-95#**

**FSIP: 1135#**

4050

4080: incrs in wht chlck and chlky lm, wht cors xln lm, groth frame work por, shw of blk oil, poor-no odr.

4090: mstly chlck and chlky lm, one tan fn xln lm chp, pin point vuggy por, w/ a shw of brwn oil, no odr.

cfs @ 4090

30MIN: shw of blk carb sh, gry xln lm, poor inxln por, no odr, ns. 60MIN: lght inxln crm lm, v. dense, no vis por, no odr, ns.

4100: crm xln lm, calct flooded frac, no odr, ns, one chp w/ a sfo (uphole).

cfs @ 4105

30MIN: crm chlky lm, tan-lght brwn inxln lm, dense, cemnt flooded, no vis por, no odr, ns. 60MIN: mstly chlky lm, fenw inxln lm, w/ vuggy por and stn of drk tary oil, one chp w/ a sfo, no odr.

4110: lght crm-lght tan inxln lm, semi dense, poor-no por, one chp crm lm w/ dissoluton por w/ a shw of free oil (possibly uphole)

4120: aa, gry inxln lm, poor-no por, no odr, ns.

**DST #3 4092-4177**

30-45-45-60

**REC: 120' WCM (60%M)**

**IFP: 75-102#**

**ISIP: 1070#**

**FFP: 101-125#**

**FSIP: 1013#**

4100

4130: incrs in gry slty sh and slt stn, mstly crm-tan dense inxln lm, gry foss lm, hrd to brk, lno odr, ns.

4140: grysh/brwn grain stn, v. well cemntd, poor-no por, no odr, ns.

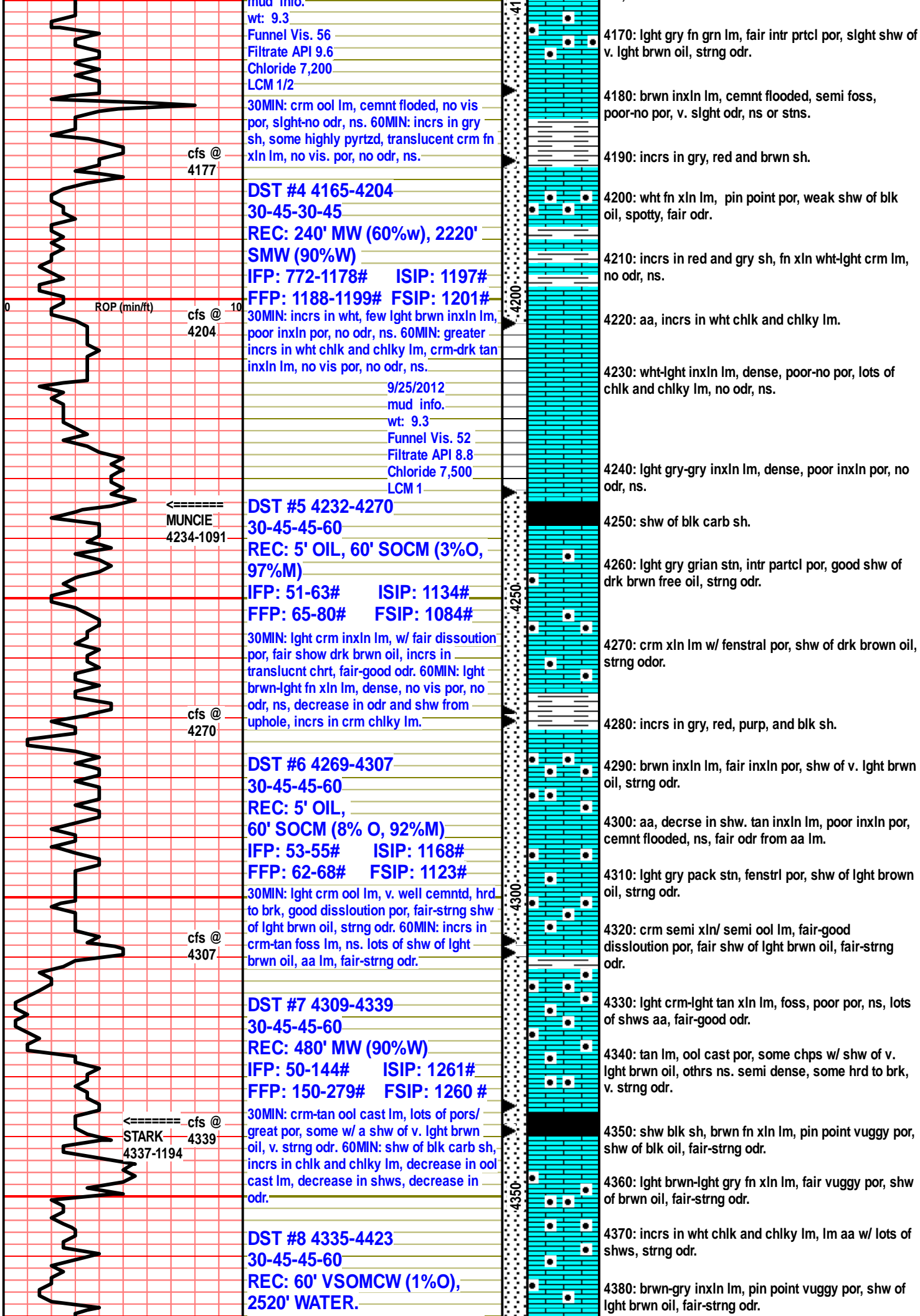
cfs @ 4145

30MIN: incrs in wht chlck, & chlky lm, lght tan fn xln lm, poor-no por, no odr, ns. 60MIN: shw of blk sh, lght gry fn xln lm, no vis por, no odr, ns.

4150: tan-lght gry inxln lm, cemnt flooded, poor-no por, no odr, ns.

4160: lght gry fn xln lm, highly pyrtzd, no vis por, no odr, ns.

4150



mud info.

wt: 9.3  
 Funnel Vis. 56  
 Filtrate API 9.6  
 Chloride 7,200  
 LCM 1/2

30MIN: crm ool lm, cemnt floded, no vis por, slight-no odr, ns. 60MIN: incrs in gry sh, some highly pyrtzd, translucent crm fn xln lm, no vis. por, no odr, ns.

cfs @ 4177

**DST #4 4165-4204**  
 30-45-30-45  
 REC: 240' MW (60%W), 2220' SMW (90%W)  
 IFP: 772-1178# ISIP: 1197#  
 FFP: 1188-1199# FSIP: 1201#

30MIN: incrs in wht, few lght brwn inxln lm, poor inxln por, no odr, ns. 60MIN: greater incrs in wht chlk and chlky lm, crm-drk tan inxln lm, no vis por, no odr, ns.

cfs @ 4204

9/25/2012  
 mud info.  
 wt: 9.3  
 Funnel Vis. 52  
 Filtrate API 8.8  
 Chloride 7,500  
 LCM 1

**DST #5 4232-4270**  
 30-45-45-60  
 REC: 5' OIL, 60' SOCM (3%O, 97%M)  
 IFP: 51-63# ISIP: 1134#  
 FFP: 65-80# FSIP: 1084#

30MIN: lght crm inxln lm, w/ fair dissoution por, fair show drk brwn oil, incrs in translucent chrt, fair-good odr. 60MIN: lght brwn-lght fn xln lm, dense, no vis por, no odr, ns, decrease in odr and shw from uphole, incrs in crm chlky lm.

cfs @ 4270

**DST #6 4269-4307**  
 30-45-45-60  
 REC: 5' OIL, 60' SOCM (8% O, 92%M)  
 IFP: 53-55# ISIP: 1168#  
 FFP: 62-68# FSIP: 1123#

30MIN: lght crm ool lm, v. well cemntd, hrd to brk, good dissoution por, fair-strng shw of lght brwn oil, strng odr. 60MIN: incrs in crm-tan foss lm, ns. lots of shw of lght brwn oil, aa lm, fair-strng odr.

cfs @ 4307

**DST #7 4309-4339**  
 30-45-45-60  
 REC: 480' MW (90%W)  
 IFP: 50-144# ISIP: 1261#  
 FFP: 150-279# FSIP: 1260 #

30MIN: crm-tan ool cast lm, lots of pors/ great por, some w/ a shw of v. lght brwn oil, v. strng odr. 60MIN: shw of blk carb sh, incrs in chlk and chlky lm, decrease in ool cast lm, decrease in shws, decrease in odr.

cfs @ 4339  
 STARK 4337-1194

**DST #8 4335-4423**  
 30-45-45-60  
 REC: 60' VSOMCW (1%O), 2520' WATER.

4170: lght gry fn grn lm, fair intr prtcl por, slight shw of v. lght brwn oil, strng odr.

4180: brwn inxln lm, cemnt flooded, semi foss, poor-no por, v. slight odr, ns or stns.

4190: incrs in gry, red and brwn sh.

4200: wht fn xln lm, pin point por, weak shw of blk oil, spotty, fair odr.

4210: incrs in red and gry sh, fn xln wht-lght crm lm, no odr, ns.

4220: aa, incrs in wht chlk and chlky lm.

4230: wht-lght inxln lm, dense, poor-no por, lots of chlk and chlky lm, no odr, ns.

4240: lght gry-gry inxln lm, dense, poor inxln por, no odr, ns.

4250: shw of blk carb sh.

4260: lght gry grian stn, intr partcl por, good shw of drk brwn free oil, strng odr.

4270: crm xln lm w/ fenstral por, shw of drk brown oil, strng odor.

4280: incrs in gry, red, purp, and blk sh.

4290: brwn inxln lm, fair inxln por, shw of v. lght brwn oil, strng odr.

4300: aa, decrse in shw. tan inxln lm, poor inxln por, cemnt flooded, ns, fair odr from aa lm.

4310: lght gry pack stn, fenstrl por, shw of lght brown oil, strng odr.

4320: crm semi xln/ semi ool lm, fair-good dissoution por, fair shw of lght brwn oil, fair-strng odr.

4330: lght crm-lght tan xln lm, foss, poor por, ns, lots of shws aa, fair-good odr.

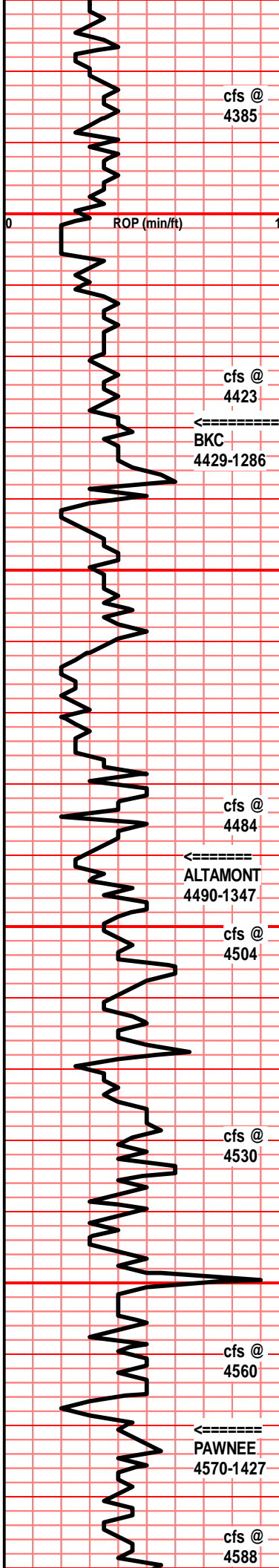
4340: tan lm, ool cast por, some chps w/ shw of v. lght brwn oil, othrs ns. semi dense, some hrd to brk, v. strng odr.

4350: shw blk sh, brwn fn xln lm, pin point vuggy por, shw of blk oil, fair-strng odr.

4360: lght brwn-lght gry fn xln lm, fair vuggy por, shw of brwn oil, fair-strng odr.

4370: incrs in wht chlk and chlky lm, lm aa w/ lots of shws, strng odr.

4380: brwn-gry inxln lm, pin point vuggy por, shw of lght brwn oil, fair-strng odr.



IFP: 200-699# ISIP: 1252#  
 FFP: 734-1059# FSIP: 1254#

30MIN: lght gry-drty tan inxln lm, some chps w/ shw, semi foss, poor por, lots of chlkly lm, fair odr. 60MIN: drty crm-lght fn xln lm, frac and pin point vuggy por, shw of lght brwn oil, strng odr.

9/26/2012 9/27/2012  
 mud info. mud info.  
 wt: 9.4 wt: 9.1  
 Funnel Vis. 56 Funnel Vis. 53  
 Filtrate API 11.2 Filtrate API 9.6  
 Chloride 9,700 Chloride 9,000  
 LCM 1 LCM 1

30MIN: incrs in green and gry sh, crm-tan xln lm, poor-no por, no odr ns, one pice fn xln lm w/ pin point vuggy por w/ weak shw of oil (uphole). 60MIN: lots of gry and maroon sh, tan-gry inxln lm, cemnt flooded, no odr, ns. two chps inxln lm w/ shw (uphole).

**DST #9 4435-4504**  
**30-45-45-60**  
**RECORDIING ERROR ON THE 1ST SHUT IN.**  
**REC: 10' OIL,**  
**50' OCM (20%O)**  
**IFP: 62-70# ISIP: 138#**  
**FFP: 75-83# FSIP: 1211#**

30MIN: lots og lght gry gummy chlk, tan fn xln lm, no vis por, incrs in pack stn shws (looks as above) no odr. 60MIN: lght gry semi xln semi granul med grn lm, w/ pin point vuggy por, w/ a shw of brwn oil, mod-strng odr.

30MIN: incrs in gry and maroon sh, incrs in chlk, tan-gry fn xln lm, no vis por, nodr, ns. 60MIN: tan cors xln lm, frac por, foss, incrs in pyrt, ns, no odr.

**DST #10 4469-4530**  
**30-45-45-60**  
**REC: 570' GIP,**  
**570' GO (90%O),**  
**120' GMCO (10%G, 50%O)**  
**IFP: 79-181# ISIP: 1333#**  
**FFP: 188-313# FSIP: 1321#**

30MIN: crm ool lm, intr prtcl por, well cemntd, shw of lght brwn oil, tan inxln lm, poor inxln por(ns), fair-mod odr. 60MIN: aa w/ shw, few chpstan inxln lm w/ inxln por w/ a slght shw brwn oil, fair odr.

30MIN: show of brwn chrt, tan-lght brwn inxln lm, semi chrt, cemnt flooded, no vis por, no odr, ns. 60MIN: shw of gry chrt, ool, ool lm, cemnt floded no vis por, no odr, ns.

9/28/2012  
 mud info.  
 wt: 9.2  
 Funnel Vis. 45  
 Filtrate API 10.4  
 Chloride 9,600  
 LCM 1/2

30MIN: crm-tan foss lm, dense, no vis por, no odr ns. 60MIN: incrs in wht chlk, incrs

cfs @ 4385

cfs @ 4423

←=====  
 BKC  
 4429-1286

cfs @ 4484

←=====  
 ALTAMONT  
 4490-1347

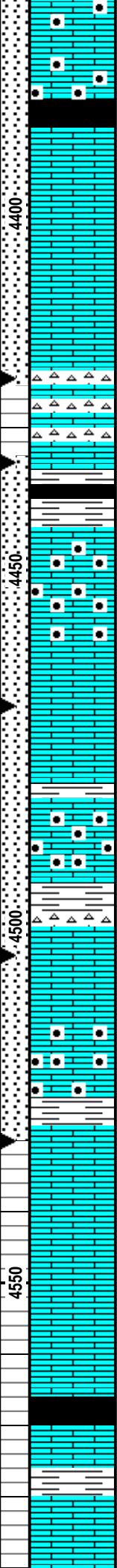
cfs @ 4504

cfs @ 4530

cfs @ 4560

←=====  
 PAWNEE  
 4570-1427

cfs @ 4588



4390: tan ool lm, well cemntd, hrd to brk, aa w/ a shw of free oil, mod odr.

4400: shw of blk carb sh, incrs in mlky chrt, tan foss lm, dense, poor por, few inxln lm pices w/ a shw of free oil (uphole).

4410: lght tan-drk tan inxln lm, cemnt flooded, poor-no por, no odr, ns.

4420: aa, no sig change, no odr, ns.

4430: tan-brwn inxln lm, foss, well cemntd, poor-no por, one pice w/ show (uphole) fair odr.

4440: incrs in gry foss chrt, incrs gry sh, brwn-tan foss lm, cemnt flooded, no vis por, no odr, ns.

4450: shw of blk carb sh, drk crm-tan fn xln lm, no vis por, no odr, ns.

4460: gry pack stn lm, fair intr prtcl por, abundant fair show of drk brwn oil, fair-mod odr.

4470: aa/ incrs in fluid shw, incrs drk tan-brwn mictric lm, v. fn grn (ns), fair-mod odr.

4480: incrs in chlk and chlkly lm, one pice gry pack stn w/ a shw (uphole), no odr.

4490: drk tan-gry inxln lm, semi foss, semi dense, no vis por, ns, incrs in fn grn gry slt stn.

4500: gry prtly xln lm, fair inxln por, shw of brwn gasy oil, slight-fair odr.

4510: mstly gry and maroon sh, incrs in wht chrt, lots of fn xln lm, no vis por, no odr, ns.

4520: aa, no sig change.

4530: crm ool lm, fair-poor intr prtcl por, shw of lght brwn oil, slght-fair odr.

4540: incrs in gry and maroon sh, two chps tan fn xln lm w/ a show of free brwn oil, faint-no odr.

4550: tan fn xln lm, pin point vuggy por, w/ a weak show of drk brwn oil, lots of gry inxln lm, poor por, no odr, ns.

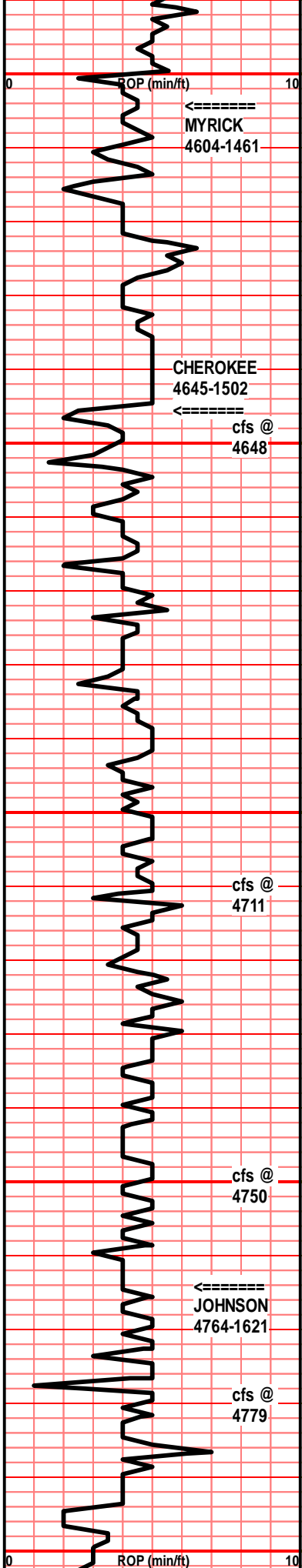
4560: tan-gry inxln lm, v. dense, no vis por, no odr, ns.

4570: aa/ no sig change, no odr, ns.

4580: lots of blk carb sh.

4590: incrs in gry sh, tan cors xln lm, dense, frac por, no odr, ns.

4600: lght tan inxln lm, dense, poor por, no odr, ns.



in brwn chrt, one chp crmsh/tan xln lm, frac por, w/ a v. weak shw of free oil, no odr, ns.

9/29/2012  
mud info.  
wt: 9.3  
Funnel Vis. 52  
Filtrate API 9.6  
Chloride 9,400  
LCM 2

**PUMP PRESSURE: 875+**

30MIN: shw of blk carb sh, incrs in crm chky lm, lots of foss inxln lm, no odr, ns. 60MIN: lots of gry and blk carb sh, incrs in gry inxln lm, foss, no odr, ns.

**DEVIATION : 1.0 DEGREE. STRAIT HOLE.**

30MIN: lots of green and gry sh, tan ool lm, cemnt floded, no vis por, no odr, ns.

9/30/2012  
mud info.  
wt: 9.1  
Funnel Vis. 50  
Filtrate API 11.2  
Chloride 9,800  
LCM 1

30MIN: gry micrtic lm, v. fn grn, hrd to brk, no odr, ns. 60MIN: mstly gry and maroon sh, lm aa/ no odr, ns.

**PUMP PRESSURE: 875+**

30MIN: mstly maroon, green, & gry sh, lots of pyrt, incrs in chlky lm, few tan-brwn inxln lm, sli foss, no odr, ns. 60MIN: mstly sh aa, lm aa, no odr, ns.

4600: lght tan inxln lm, dense, poor por, no odr, ns.

4610: shw of blk carb sh, gry bio micrtic lm, tan semi foss xln lm, poor por, no odr, ns.

4620: crm-tan in xln lm, cemnt floded, no vis. por, no odr, ns.

4630: show blk carb sh, incrs in foss translucent chert, lm aa, no odr, ns.

4640: crm ool lm, cemnt floded, no vis por, no odr, ns.

4650: aa, incrs in chrt, no odr, ns.

4660: tan ool lm, cemnt floded, no vis por, lots of tan inxln lm, dense, poor-no por, no odr, ns.

4670: lght gry micrtic lm, v. fn grn, well cemntd, no odr, ns.

4680: incrs in blk carb sh, lght brwn foss/sli ool lm, poor por, no odr, ns.

4690: incrs in brwn and mlky chrt, tan cors inxln lm, cemnt floded frags, no odr, ns.

4700: incrs in gry and green sh.

4710: tan ool lm, cemnt floded, no vis por, no odr, ns.

4720: incrs in gry sh, tan-lght brwn inxln lm, inxln por, no odr, ns.

4730: tan ool lm, poor-no por, no odr, ns.

4740: lots of gry sh, crm inxln lm, sli foss, poor por, no odr, ns.

4750: incrs in purp and green sh, crm xn lm, hghly pyrtzd, foss, no odr, ns.

4760: lots of gry and maroon sh, tan fn xln lm, poor-no por, no odr, ns.

4770: mstly gry and maroon sh, lght-drk brwn xln lm, poor-no por, no odr, ns.

4780: aa, incrs in brwn sh.

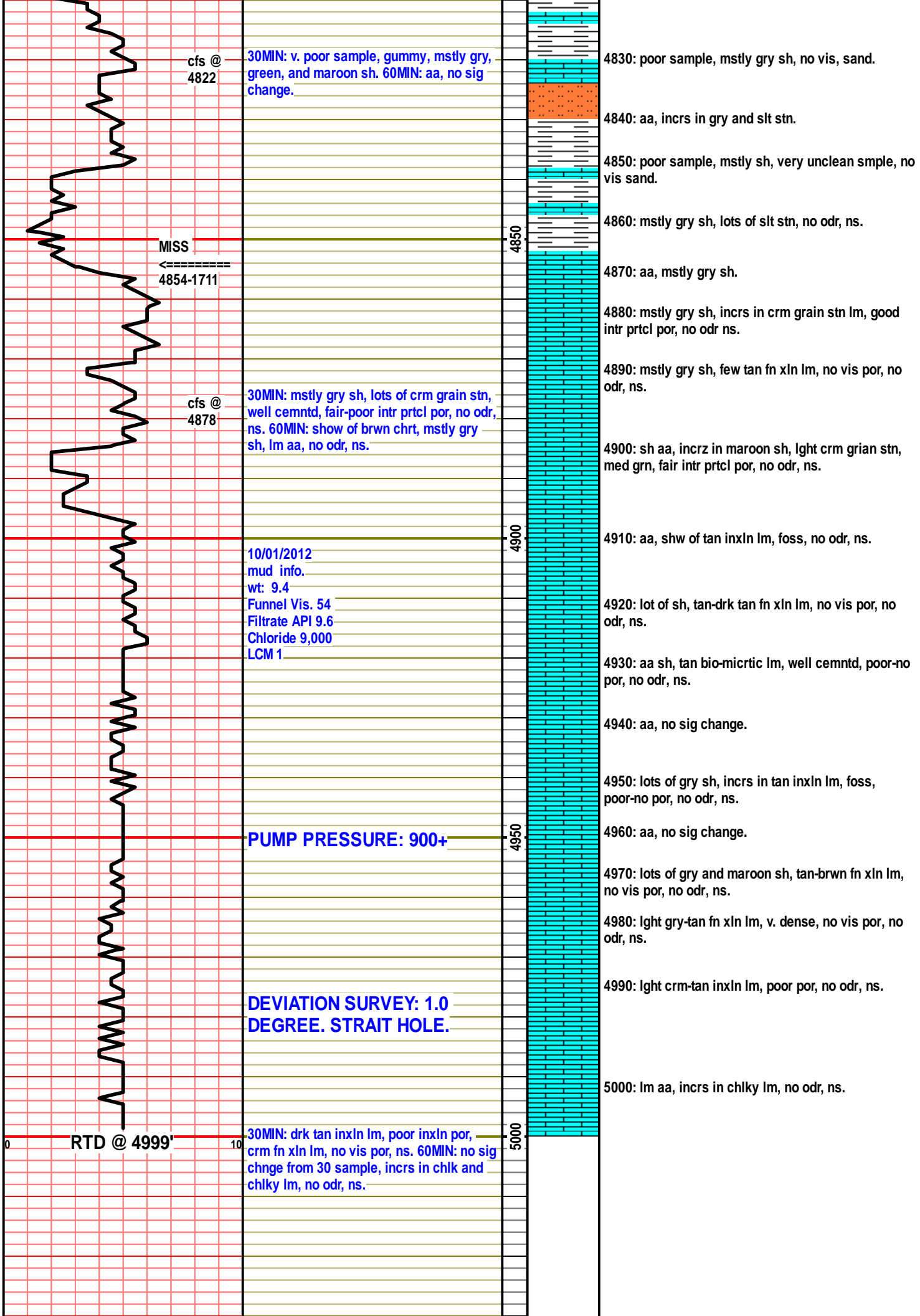
4790: mstly gry, green and maroon sh, incrs in chlk.

4800: sh aa, crm-tan semi xln semi foss lm, poor por, no odr, ns.

4810: aa, no sig change.

4820: mstly gry and green, brwn sh, incrs in chlk.





cfs @ 4822

30MIN: v. poor sample, gummy, mstly gry, green, and maroon sh. 60MIN: aa, no sig change.

4830: poor sample, mstly gry sh, no vis, sand.

4840: aa, incrs in gry and slt stn.

4850: poor sample, mstly sh, very unclean smple, no vis sand.

4860: mstly gry sh, lots of slt stn, no odr, ns.

MISS

4854-1711

4870: aa, mstly gry sh.

4880: mstly gry sh, incrs in crm grain stn lm, good intr prtcl por, no odr ns.

4890: mstly gry sh, few tan fn xln lm, no vis por, no odr, ns.

cfs @ 4878

30MIN: mstly gry sh, lots of crm grain stn, well cemntd, fair-poor intr prtcl por, no odr, ns. 60MIN: show of brwn chrt, mstly gry sh, lm aa, no odr, ns.

4900: sh aa, incrz in maroon sh, lght crm grian stn, med grn, fair intr prtcl por, no odr, ns.

4910: aa, shw of tan inxln lm, foss, no odr, ns.

10/01/2012  
mud info.  
wt: 9.4  
Funnel Vis. 54  
Filtrate API 9.6  
Chloride 9,000  
LCM 1

4920: lot of sh, tan-drk tan fn xln lm, no vis por, no odr, ns.

4930: aa sh, tan bio-micrtic lm, well cemntd, poor-no por, no odr, ns.

4940: aa, no sig change.

4950: lots of gry sh, incrs in tan inxln lm, foss, poor-no por, no odr, ns.

PUMP PRESSURE: 900+

4960: aa, no sig change.

4970: lots of gry and maroon sh, tan-brwn fn xln lm, no vis por, no odr, ns.

4980: lght gry-tan fn xln lm, v. dense, no vis por, no odr, ns.

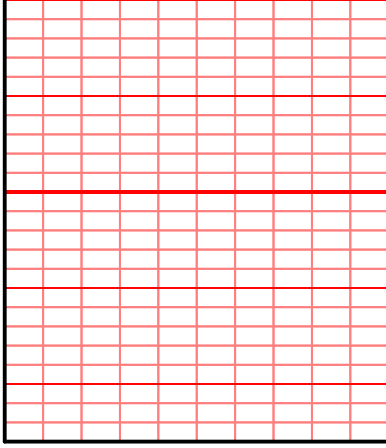
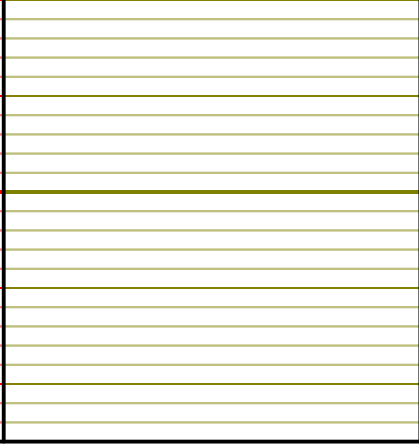

DEVIATION SURVEY: 1.0 DEGREE. STRAIT HOLE.

4990: lght crm-tan inxln lm, poor por, no odr, ns.

RTD @ 4999'

30MIN: drk tan inxln lm, poor inxln por, crm fn xln lm, no vis por, ns. 60MIN: no sig chnge from 30 sample, incrs in chlk and chlky lm, no odr, ns.

5000: lm aa, incrs in chlky lm, no odr, ns.

			
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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

January 14, 2013

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

Re: ACO1  
API 15-203-20187-00-00  
Baker 13CD 1  
SE/4 Sec.13-17S-35W  
Wichita 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