

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 Recompletion Date \_\_\_\_\_ 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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Form	ACO1 - Well Completion
Operator	Joe Gerstner Oil, LLC
Well Name	WILLARD 1
Doc ID	1631391

Tops

Name	Top	Datum
Anhydrite	2265	+705
Base Anhydrite	2284	+689
Heebner	3868	-897
Lansing	3912	-941
Muncie Creek	4091	-1120
Stark Shale	4192	-1221
BKC	4272	-1301
Pawnee	4406	-1435
Myrick Station	4429	-1458
Ft. Scott	4447	-1476
Cherokee Shale	4470	-1499
Mississippian	4544	-1573



# FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269  
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0469  
 LOCATION Hoxie  
 FOREMAN Tam Williams

## FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-06-21	33605	Willard 1	24	15	32	SCOTT

CUSTOMER Joe Geostner Oil LLC  
 MAILING ADDRESS PO Box 509  
 CITY Ness City STATE KS ZIP CODE 67560

TRUCK #	DRIVER	TRUCK #	DRIVER
101	Tam W		
102	Jack T		
	Jack M		

JOB TYPE Service HOLE SIZE 12 1/4" HOLE DEPTH 306' CASING SIZE & WEIGHT 8 5/8 23#  
 CASING DEPTH 306' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.7 SLURRY VOL 1.4 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT 18 Bbl DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting + rig up on Marfio #102 Circulation Misch  
Mix 225 sacks surface blend. Displace 18 Bbl shoot in 12:00 pm  
Cement did circulate

Thanks Tam & Law

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
PC002	1	PUMP CHARGE <u>Surface</u>	\$1150 <sup>00</sup>	\$1150 <sup>00</sup>
M001	80	MILEAGE	\$6 <sup>00</sup>	\$520 <sup>00</sup>
M002	11.10 tons	Tan Mileage delivery	\$1332 <sup>00</sup>	\$1332 <sup>00</sup>
CR004	225 sacks	Class A 3/4" 210 g/gal	\$24 <sup>50</sup>	\$5512 <sup>50</sup>
			sub total	\$8514 <sup>50</sup>
			less 20% disc.	\$1702 <sup>90</sup>
			sub total	\$6811 <sup>60</sup>
			SALES TAX	374.85
			ESTIMATED TOTAL	7186.45

AUTHORIZATION [Signature] 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.



CHARGE TO: Joe Gerstner Oil  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 35316

PAGE 1 OF 2

1. SERVICE LOCATIONS <u>Ness City, KS</u>	WELL/PROJECT NO. <u>#2</u>	LEASE <u>Willard</u>	COUNTY/PARISH <u>Scott</u>	STATE <u>KS</u>	CITY
2. TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Martin Drilling</u>	RIG NAME/NO. <u>102</u>	SHIPPED VIA <u>CT</u>	DELIVERED TO	WELL PERMIT NO.
3. WELL TYPE <u>Oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Long string</u>	WELL LOCATION		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS				

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE #	QTY. U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	U/M		
575						55	mi		6.00	330.00
578					Pump Charge - Long string	1	EA		1500.00	1500.00
240					D-Air	4	gal		42.00	168.00
281					Mudflush	580	gal		1.50	250.00
221					Liquid KCL	4	gal		25.00	100.00
402					Centralizers 5 1/2"	10	EA		75.00	750.00
403					Cement Balls 5 1/2"	2	EA		275.00	550.00
404					Port Collars 5 1/2"	1	EA		2500.00	2500.00
406					Latch Down Plug & Baffle Kit 5 1/2"	1	EA		250.00	250.00
407					Insert Float Valve/AutoFill 5 1/2"	1	EA		325.00	325.00
419					Rotating Head Rental 5 1/2"	1	EA		250.00	250.00

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

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

DATE SIGNED [Signature] TIME SIGNED  A.M.  P.M.

DATE SIGNED [Signature] TIME SIGNED  A.M.  P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UNDECIDED	DISAGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

Page 2	7,473.00
Page 2	5,677.00
Subtotal	13,150.00
SWIFT	890.44
TOTAL	14,040.44

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

SWIFT OPERATOR [Signature] APPROVAL

Thank You!



Services, Inc.

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

TICKET CONTINUATION

TICKET No. 35316

CUSTOMER  
Joe Gessner D:1

WELL  
W:1 and #2

DATE  
12/19/01

PAGE OF  
2 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT
		LOC	ACCT	DE			QTY.	U/M	QTY.	U/M		
330						Swift Multi-Density Std	125	SKS			18.00	2250.00
325						Standard Cement	180	SKS			14.50	1450.00
284						Calsen	9	SKS			40.00	360.00
283						5A1+	550	lbs			0.25	137.50
285						CFR-1	50	lbs			5.00	250.00
276						Flocele	50	lbs			3.00	150.00
581											2.00	450.00
583											1.00	430.00

SERVICE CHARGE  
MILEAGE TOTAL WEIGHT CHARGE 22415  
LOADED MILES 55

QUANTITY TON MILES  
325 SKS 630.16

CONTINUATION TOTAL

5677.60

JOB LOG

SWIFT Services, Inc.

DATE 12/19/21 PAGE NO. 1

CUSTOMER Joe Gerstner Oil WELL NO. #2 LEASE Willard JOB TYPE Long String TICKET NO. 35316

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
12/18/21	2300							On location w/ Float Equipment Rig Changing Over
								RTD - 4643'
								LTD - 4645'
								Total Pipe - 4643' - 5 1/2" x 17#
								Shoe Joint - 41.76' BPA @ 4601'
								Part Collar - Top of 58 @ 2251'
								Marker Jt @ #6
								Centralizers - 1, 3, 5, 7, 9, 11, 13, 15, 17, 57
								Baskets - 8, 58
	0100							Start Casing w/ Float Equipment
	0345							Break Circulation on Bottom
	0645							Hook up to Swift
		4	12			400		Pump Mud Flush
		4	20			450		Pump KCh Spacer
		2	8					Plug Rathole w/ 30 SK3 SMD
		2	4					Plug Mousehole w/ 15 SK3 SMD
		4	36					Pump Cmt, SMD mixed @ 12.5 ppg
		4	24					Pump EA-2 Cmt mixed @ 15.5 ppg
		4	60					Finish Cmt, Shut Down
		6 1/4						Drop Plug, Washout Pump & Lines
		6 1/4	80			500		Start Displacement, KCh in 1st 20661
		6 1/4	100			900		Catch Cement
		6 1/4	107			1500		Lift PSI -
0800								Land Plug -
								Release Truck, Dry
								Wash up
								Rack up
								Job Complete

Thanks,  
Jon, Preston, Shawn, Isaac





CHARGE TO: **Joe Gerstner Oil**  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 34062

PAGE 1 OF 1

**SERVICE LOCATIONS**  
 1. **Ness City, Ks**

WELL/PROJECT NO. **#** LEASE **WILLARD** COUNTY/PARISH **Scott** STATE **Ks** CITY  DATE **12-27-2021** OWNER **SWME**

TICKET TYPE  SERVICE  SALES CONTRACTOR **FRATZER TACKLINE** RIG NAME/NO.  SHIPPED VIA **Truck** DELIVERED TO **Location** ORDER NO.

WELL TYPE **Oil** WELL CATEGORY **Development** JOB PURPOSE **Convert Part Cover** WELL PERMIT NO.  WELL LOCATION **E/Scott City, Ks**

REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
545		1			MILEAGE <sup>A</sup> 114	55	MI			6.00	330.00
546B		1			PUMP CHANGE - Part Cover	1	JOB	2251	FT	1500.00	1500.00
105		1			Part Cover Opense Tool	1	JOB			300.00	300.00
330		1			SWIFT MOLTZ - DIESTY STANDARD	185	SUS			18.00	3330.00
276		1			FIBERGLASS	50	WSS			3.00	150.00
290		1			D-ADR	3	GAL			42.00	126.00
581		1			SERVITE CHANGE CEMENT	250	SUS			2.00	500.00
583		1			DRYAGE	24950	WSS	686.13	TM	1.00	686.13

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

**X**

DATE SIGNED **12-27-2021** TIME SIGNED **1200**  P.M.  A.M.

**REMIT PAYMENT TO:**  
**SWIFT SERVICES, INC.**  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

**SURVEY**  
 OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?   
 WE UNDERSTOOD AND MET YOUR NEEDS?   
 OUR SERVICE WAS PERFORMED WITHOUT DELAY?   
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?   
 ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO  
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL **6922.13**

TOTAL **7854.14**

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

SWIFT OPERATOR **DWAYNE WATSON** APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE

PAGE NO.

12-27-2021

1

CUSTOMER  
JOE GERSTNER OIL

WELL NO.  
# 1

LEASE  
WILLARD

JOB TYPE CEMENT  
PORT COLLAR

TICKET NO.

34062

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1200							ON LOCATION
								TUBING - 2 7/8"
								CASING - 5 1/2"
								PORT COLLAR - 2251'
	1250				✓		1000	PSZ TEST - HELD
	1255	3	3	✓		300		OPEN PORT COLLAR - INJ RATE
	1305	3 1/2	103	✓		300		MAX CEMENT 185 SKS SMD @ 11.2 PPG
	1335	3 1/2	12	✓		450		DISPLACE CEMENT
	1345			✓		1000		CLOSE PORT COLLAR - PSZ TEST - HELD
								CALCULATED 15 SKS CEMENT TO PZT
	1400	4	30	✓		500		RUN 5 JTS TUBING - CALCULATE CROW
								WASH TRUCK
	1500							JOB COMPLETE
								THANK YOU WAYNE, DUSTY, MARK



Home  
(785) 798-2400

# Andrew Stenzel Geologist

Ness City, Kansas



Cell  
(785) 798-5977

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

**Well Name:** Willard #1  
**API:** 15-171-21282-00-00  
**Location:** Sec 24-18S-32W (Scott County)  
**License Number:**  
**Spud Date:** 12/6/21  
**Surface Coordinates:** 1056' FSL & 465' FEL

**Region:** KANSAS  
**Drilling Completed:** 12/19/21

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 2966  
**Logged Interval (ft):** 3700      **To:** TD  
**Formation:** MISSISSIPPIAN  
**Type of Drilling Fluid:** Mud-Co Chemical

**K.B. Elevation (ft):** 2971  
**Total Depth (ft):** 4645

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

### OPERATOR

**Company:** Joe Gerstner Oil, LLC  
**Address:** PO Box 509  
Ness City, KS 67560

### GEOLOGIST

**Name:** Andrew Stenzel  
**Company:** Petroleum Geologist  
**Address:** 501 S. Franklin  
Ness City, KS 67560

## Drilling Report

### DAILY DRILLING REPORT:

12/6/21 MIRU, ran surface casing  
12/7/21 Waiting on cement  
12/8/21 Drilling @ 1313'  
12/9/21 Drilling @ 2600'  
12/10/21 Drilling @ 3363'  
12/11/21 Drilling @ 3928', DST #1  
12/12/21 DST #2, DST #3  
12/13/21 Drilling @ 4035', DST #4  
12/14/21 DST #5, DST #6  
12/15/21 Drilling @ 4270'  
12/16/21 Down due to debris in mud  
12/17/21 DST #8  
12/18/21 DST #9, ran electric logs  
12/19/21 Ran production casing

## Services

RIG: Murfin Drilling, Rig #102

MUD: MUDCO

LOGS: Gemini Wireline; CNDL, PE, DIL, ML

## Casing Record

SURFACE Casing: Ran 7 jts new 8 5/8", 23# casing @ 306'.

PRODUCTION Casing: Ran 114 jts used 5.5", 17# casing set 3' off bottom @ 4542, port collar @ 2251'.

## Formation Tops

### Sample Tops

Anhy.	2265 (+706)
Base Anhy.	2284 (+687)
Heebner	3872 (-901)
Lansing	3913 (-942)
Muncie Cr	4094 (-1123)
Stark Sh	4193 (-1222)
BKC	4273 (-1302)
Pawnee	4406 (-1435)
Myrick St.	4428 (-1457)
Ft. Scott	4446 (-1475)
Cher. Sh.	4471 (-1500)
Miss.	4537 (-1566)
RTD	4643 (-1672)

### LogTops

Anhy.	2266 (+705)
Base Anhy.	2282 (+689)
Heebner	3868 (-897)
Lansing	3912 (-941)
Muncie Cr	4091 (-1120)
Stark Sh	4192 (-1221)
BKC	4272 (-1301)
Pawnee	4406 (-1435)
Myrick St.	4429 (-1458)
Ft. Scott	4447 (-1476)
Cher. Sh.	4470 (-1499)
Miss.	4544 (-1573)
LTD	4645 (-1674)



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Joe Gerstner  
 P.O. Box 509  
 Ness City, Ks 67560  
 ATTN: Andrew Stenzel

**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67693 **DST#: 1**  
 Test Start: 2021.12.11 @ 14:38:18

### GENERAL INFORMATION:

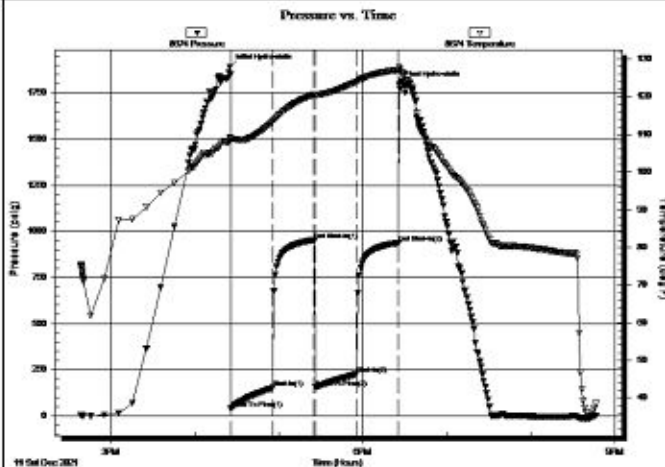
Formation: **LKC A**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:25:48  
 Time Test Ended: 20:46:48  
 Interval: **3897.00 ft (KB) To 3936.00 ft (KB) (TVD)**  
 Total Depth: 3936.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 2971.00 ft (KB)  
 2966.00 ft (CF)  
 KB to GR/CF: 5.00 ft

### Serial #: 8674

### Outside

Press@RunDepth: 225.25 psig @ 3898.00 ft (KB)  
 Start Date: 2021.12.11 End Date: 2021.12.11  
 Start Time: 14:38:23 End Time: 20:46:47  
 Capacity: 8000.00 psig  
 Last Calib.: 2021.12.11  
 Time On Btmr: 2021.12.11 @ 16:24:48  
 Time Off Btmr: 2021.12.11 @ 18:25:48

TEST COMMENT: IF: BOB in 10 mins. 24"  
 IS: Surface blow built to 1/2.  
 FF: BOB in 16 mins. 17"  
 FS: Surface blow built to 3/4. 30-30-30-30



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1891.28	108.90	Initial Hydro-static
1	38.89	108.79	Open To Flow (1)
31	151.85	113.30	Shut-In(1)
60	952.66	120.56	End Shut-In(1)
61	153.95	120.43	Open To Flow (2)
91	225.25	123.93	Shut-In(2)
121	937.29	127.12	End Shut-In(2)
121	1796.39	127.89	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
252.00	ocmw 5%o 85%w 10%m	2.46
189.00	gocw m 10%g 20%o 20%w 50%m	2.65
40.00	oil 100%o	0.56

### Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Joe Gerstner  
 P.O. Box 509  
 Ness City, Ks 67560  
 ATTN: Andrew Stenzel

**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67694 **DST#:2**  
 Test Start: 2021.12.12 @ 04:25:42

### GENERAL INFORMATION:

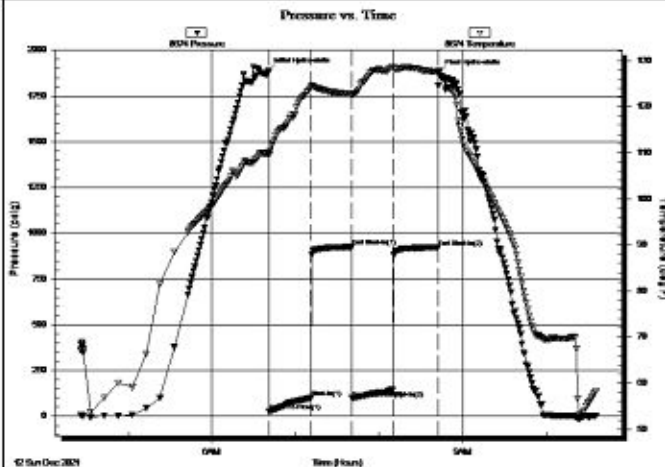
Formation: **LKC B-C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:41:12  
 Time Test Ended: 10:36:12  
 Interval: **3938.00 ft (KB) To 3965.00 ft (KB) (TVD)**  
 Total Depth: 3965.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 2971.00 ft (KB)  
 2966.00 ft (CF)  
 KB to GR/CF: 5.00 ft

### Serial #: 8674

### Outside

Press@RunDepth: 142.59 psig @ 3939.00 ft (KB)  
 Start Date: 2021.12.12 End Date: 2021.12.12  
 Start Time: 04:25:47 End Time: 10:36:11  
 Capacity: 8000.00 psig  
 Last Calib.: 2021.12.12  
 Time On Btmr: 2021.12.12 @ 06:40:12  
 Time Off Btmr: 2021.12.12 @ 08:43:12

TEST COMMENT: IF: 1/4 blow built to 8.  
 IS: No return.  
 FF: 1/4 blow built to 7 1/2.  
 FS: No return. 30s



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.70	109.81	Initial Hydro-static
1	24.97	109.56	Open To Flow (1)
31	99.32	124.11	Shut-In(1)
60	925.52	122.72	End Shut-In(1)
61	99.14	122.39	Open To Flow (2)
90	142.59	128.54	Shut-In(2)
122	922.69	127.42	End Shut-In(2)
123	1878.13	127.49	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
118.00	mcw 90%w 10%m	0.58
156.00	wcm 30%w 70%m	2.19

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Joe Gerstner  
P.O. Box 509  
Ness City, Ks 67560  
ATTN: Andrew Stenzel

**24-18s-32w Scott, Ks**  
**Willard #1**  
Job Ticket: 67695 **DST#: 3**  
Test Start: 2021.12.12 @ 18:15:45

### GENERAL INFORMATION:

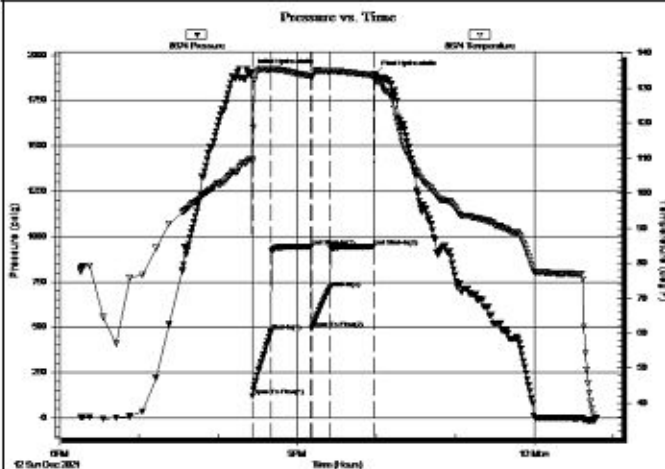
Formation: **LKC E**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:26:15  
Time Test Ended: 00:46:45  
Interval: **3998.00 ft (KB) To 4008.00 ft (KB) (TVD)**  
Total Depth: 4008.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Brandon Turley  
Unit No: 79  
Reference Elevations: 2971.00 ft (KB)  
2966.00 ft (CF)  
KB to GR/CF: 5.00 ft

### Serial #: 8674

### Outside

Press@RunDepth: 714.76 psig @ 3999.00 ft (KB)  
Start Date: 2021.12.12 End Date: 2021.12.13  
Start Time: 18:15:50 End Time: 00:46:44  
Capacity: 8000.00 psig  
Last Calib.: 2021.12.13  
Time On Btmr: 2021.12.12 @ 20:25:45  
Time Off Btmr: 2021.12.12 @ 21:59:15

TEST COMMENT: IF: BOB in 2 mins. 100  
IS: No return.  
FF: BOB in 2 mins. 78  
FS: No return. 15-30-15-30



### PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1904.97	109.76	Initial Hydro-static
1	121.47	109.01	Open To Flow (1)
15	475.73	135.20	Shut-In(1)
45	945.24	133.42	End Shut-In(1)
46	491.64	133.05	Open To Flow (2)
59	714.76	134.80	Shut-In(2)
92	945.15	133.67	End Shut-In(2)
94	1898.99	132.33	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
118.00	water 98 PPM H <sub>2</sub> S 100%w	0.58
953.00	ocw 5%o 95%w	13.37
252.00	gocmw 10%g 10%o 75%w 5%m	3.53
158.00	ocw m 10%o 20%w 70%m	2.22
71.00	oil 100%o	1.00

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Joe Gerstner  
 P.O. Box 509  
 Ness City, Ks 67560  
 ATTN: Andrew Stenzel

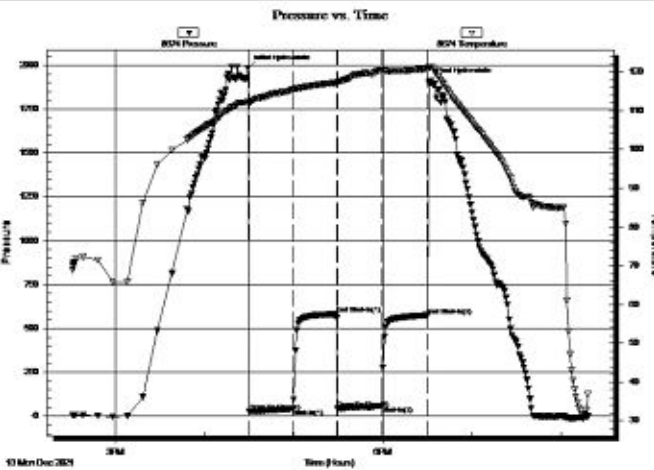
**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67696 **DST#: 4**  
 Test Start: 2021.12.13 @ 14:31:04

### GENERAL INFORMATION:

Formation: **LKC H-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:30:04  
 Time Test Ended: 20:18:04  
 Interval: **4100.00 ft (KB) To 4162.00 ft (KB) (TVD)**  
 Total Depth: 4162.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 2971.00 ft (KB)  
 2966.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8674 Outside**  
 Press@RunDepth: 58.95 psig @ 4101.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.13 End Date: 2021.12.13 Last Calib.: 2021.12.13  
 Start Time: 14:31:09 End Time: 20:18:03 Time On Btmr: 2021.12.13 @ 16:29:04  
 Time Off Btmr: 2021.12.13 @ 18:31:34

**TEST COMMENT:** IF: 1/4 blow built to 1 1/2.  
 IS: No return.  
 FF: Surface blow built to 1.  
 FS: No return. 30s



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1982.98	112.36	Initial Hydro-static
1	25.70	111.96	Open To Flow (1)
31	42.09	115.49	Shut-In(1)
60	580.94	117.19	End Shut-In(1)
61	44.17	117.29	Open To Flow (2)
90	58.95	120.51	Shut-In(2)
121	574.72	120.78	End Shut-In(2)
123	1912.83	121.24	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
90.00	w cm 5%w 95% m	0.44

### Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Joe Gerstner  
 P.O. Box 509  
 Ness City, Ks 67560  
 ATTN: Andrew Stenzel

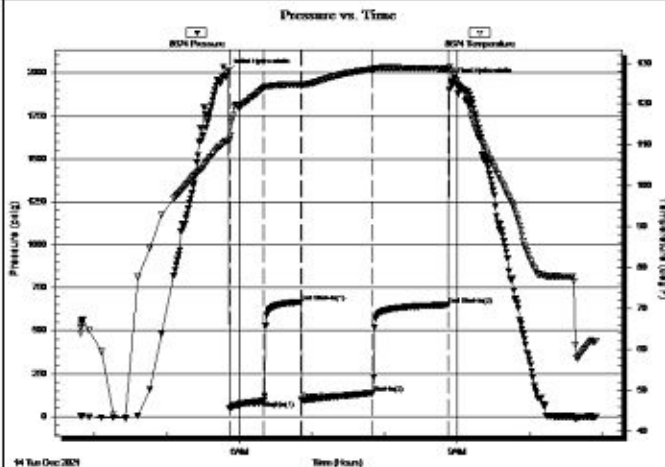
**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67697 **DST#: 5**  
 Test Start: 2021.12.14 @ 03:48:47

## GENERAL INFORMATION:

Formation: **LKC J**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 05:51:47  
 Time Test Ended: 10:54:47  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Interval: **4159.00 ft (KB) To 4181.00 ft (KB) (TVD)**  
 Reference Elevations: 2971.00 ft (KB)  
 Total Depth: 4181.00 ft (KB) (TVD) 2966.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8674 Outside**  
 Press@RunDepth: 137.65 psig @ 4160.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.14 End Date: 2021.12.14 Last Calib.: 2021.12.14  
 Start Time: 03:48:52 End Time: 10:54:46 Time On Btmr: 2021.12.14 @ 05:50:47  
 Time Off Btmr: 2021.12.14 @ 08:54:47

**TEST COMMENT:** IF: 1 blow built to 8 1/2.  
 IS: No return.  
 FF: Surface blow built to 10.  
 FS: Surface blow built to 1/4. 30-30-60-60



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.38	110.95	Initial Hydro-static
1	47.17	111.08	Open To Flow (1)
30	93.21	124.03	Shut-In(1)
60	668.09	124.78	End Shut-In(1)
61	97.80	124.48	Open To Flow (2)
120	137.65	128.55	Shut-In(2)
182	649.98	128.68	End Shut-In(2)
184	1953.05	128.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
118.00	gocmw 10%g 20%o 50%w 20%m	0.58
63.00	gocw m 10%g 10%o 10%w 70%m	0.88
73.00	ocm 10%o 90%m	1.02
15.00	oil 100%o	0.21

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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 ATTN: Andrew Stenzel

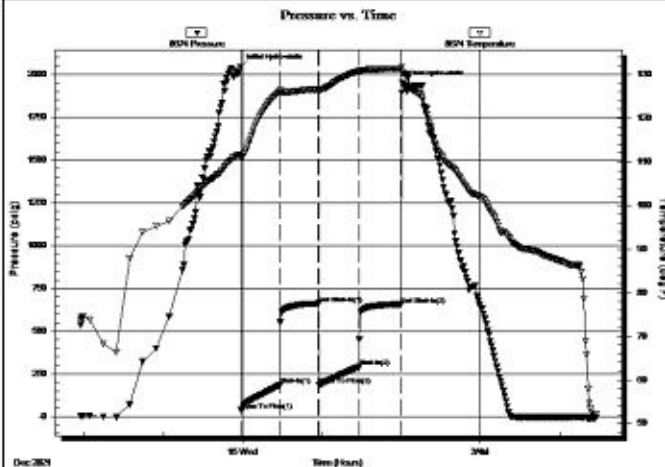
**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67698 **DST#: 6**  
 Test Start: 2021.12.14 @ 21:57:20

## GENERAL INFORMATION:

Formation: **LKC K-L**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:58:50  
 Time Test Ended: 04:27:20  
 Interval: **4192.00 ft (KB) To 4266.00 ft (KB) (TVD)**  
 Total Depth: 4266.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 2971.00 ft (KB)  
 2966.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8674 Outside**  
 Press@RunDepth: 289.56 psig @ 4193.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.14 End Date: 2021.12.15 Last Calib.: 2021.12.15  
 Start Time: 21:57:25 End Time: 04:27:19 Time On Btmr: 2021.12.14 @ 23:58:20  
 Time Off Btmr: 2021.12.15 @ 02:00:50

**TEST COMMENT:** IF: BOB in 11 mins. 23"  
 IS: No return.  
 FF: BOB in 14 mins. 19"  
 FS: No return. 30s



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2044.67	111.65	Initial Hydro-static
1	37.93	111.08	Open To Flow (1)
30	182.33	126.09	Shut-In(1)
59	661.04	126.59	End Shut-In(1)
60	184.69	126.32	Open To Flow (2)
90	289.56	130.78	Shut-In(2)
122	655.83	131.22	End Shut-In(2)
123	1949.68	130.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
252.00	mcw 80%w 20%m	2.46
189.00	mw 50%w 50%m	2.65
172.00	w cm 30%w 70%m	2.41

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Joe Gerstner  
P.O. Box 509  
Ness City, Ks 67560  
ATTN: Andrew Stenzel

**24-18s-32w Scott, Ks**  
**Willard #1**  
Job Ticket: 67699 **DST#:7**  
Test Start: 2021.12.15 @ 18:46:43

### GENERAL INFORMATION:

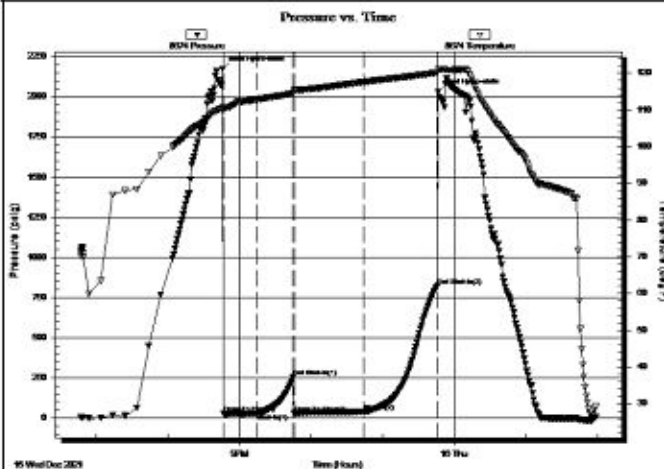
Formation: **Marmaton**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:46:43  
Time Test Ended: 01:58:43  
Interval: **4289.00 ft (KB) To 4342.00 ft (KB) (TVD)**  
Total Depth: 4342.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Brandon Turley  
Unit No: 79  
Reference Elevations: 2971.00 ft (KB)  
2966.00 ft (CF)  
KB to GR/CF: 5.00 ft

### Serial #: 8674

### Outside

Press@RunDepth: 37.66 psig @ 4290.00 ft (KB)  
Start Date: 2021.12.15 End Date: 2021.12.16  
Start Time: 18:46:48 End Time: 01:58:42  
Capacity: 8000.00 psig  
Last Calib.: 2021.12.16  
Time On Btmr: 2021.12.15 @ 20:45:43  
Time Off Btmr: 2021.12.15 @ 23:46:43

TEST COMMENT: IF: 1/4 blow built to 2 1/4.  
IS: No return.  
FF: 1/2 blow built to 3 3/4.  
FS: No return. 30-30-60-60



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2173.20	110.59	Initial Hydro-static
1	26.03	109.77	Open To Flow (1)
29	28.43	112.84	Shut-In(1)
59	254.82	114.49	End Shut-In(1)
60	28.23	115.24	Open To Flow (2)
119	37.66	117.62	Shut-In(2)
180	820.63	120.12	End Shut-In(2)
181	2029.50	120.94	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
40.00	gocm 10%g 20%o 70%m	0.20
0.00	146 GIP	0.00

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Joe Gerstner  
 P.O. Box 509  
 Ness City, Ks 67560  
 ATTN: Andrew Stenzel

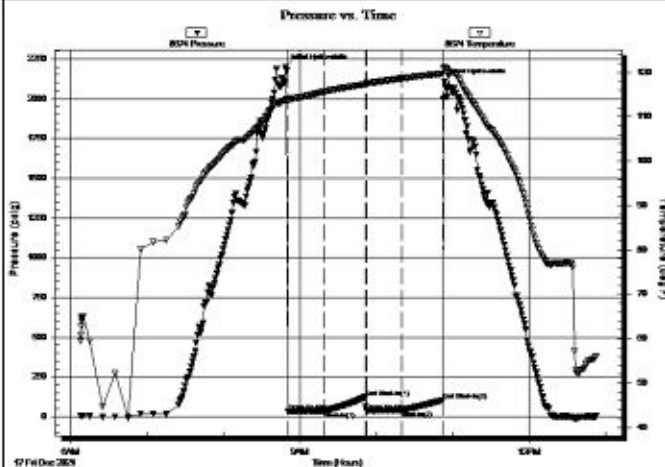
**24-18s-32w Scott, Ks**  
**Willard #1**  
 Job Ticket: 67700 **DST#: 8**  
 Test Start: 2021.12.17 @ 06:07:39

## GENERAL INFORMATION:

Formation: **Altamont C- Ft Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:50:39  
 Time Test Ended: 12:53:09  
 Interval: **4338.00 ft (KB) To 4494.00 ft (KB) (TVD)**  
 Total Depth: 4494.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 2971.00 ft (KB)  
 2966.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8674 Outside**  
 Press@RunDepth: 41.53 psig @ 4339.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.17 End Date: 2021.12.17 Last Calib.: 2021.12.17  
 Start Time: 06:07:44 End Time: 12:53:08 Time On Btmr: 2021.12.17 @ 08:48:39  
 Time Off Btmr: 2021.12.17 @ 10:53:39

**TEST COMMENT:** IF: 1/4 blow built to 2 1/2.  
 IS: No return.  
 FF: Surface blow built to 1 1/2.  
 FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2198.76	113.70	Initial Hydro-static
2	31.55	113.45	Open To Flow (1)
31	35.99	115.65	Shut-In(1)
63	122.21	117.28	End Shut-In(1)
64	35.88	117.46	Open To Flow (2)
92	41.53	118.62	Shut-In(2)
124	102.20	119.72	End Shut-In(2)
125	2106.79	121.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	gocm 5%g 5%o 90%m	0.15
0.00	90 GP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
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## DRILL STEM TEST REPORT

Joe Gerstner  
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Ness City, Ks 67560  
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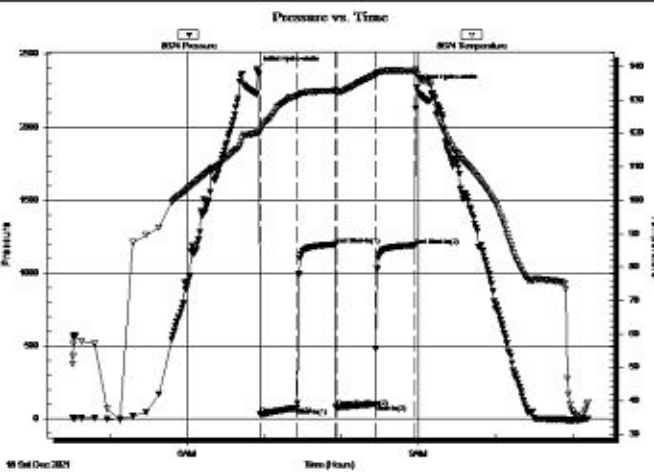
**24-18s-32w Scott, Ks**  
**Willard #1**  
Job Ticket: 68376 **DST#:9**  
Test Start: 2021.12.18 @ 04:30:50

### GENERAL INFORMATION:

Formation: **Miss**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:56:50  
Time Test Ended: 11:12:20  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Brandon Turley  
Unit No: 79  
Interval: **4624.00 ft (KB) To 4643.00 ft (KB) (TVD)**  
Reference Elevations: 2971.00 ft (KB)  
Total Depth: 3936.00 ft (KB) (TVD) 2966.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8674 Outside**  
Press@RunDepth: 99.62 psig @ 4625.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2021.12.18 End Date: 2021.12.18 Last Calib.: 2021.12.18  
Start Time: 04:30:55 End Time: 11:12:19 Time On Btmr: 2021.12.18 @ 06:54:20  
Time Off Btmr: 2021.12.18 @ 08:58:50

**TEST COMMENT:** IF: 1/4 blow built to 3 1/4.  
IS: No return.  
FF: Surface blow built to 2 1/2.  
FS: No return. 30s



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2398.06	120.16	Initial Hydro-static
3	28.63	120.45	Open To Flow (1)
31	76.17	131.06	Shut-In(1)
61	1194.46	132.81	End Shut-In(1)
62	78.57	132.47	Open To Flow (2)
92	99.62	137.49	Shut-In(2)
123	1189.17	138.56	End Shut-In(2)
125	2270.21	137.85	Final Hydro-static

### Recovery


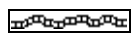
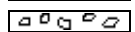
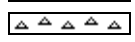
Length (ft)	Description	Volume (bbl)
118.00	mcw 70%w 30%m	0.58
63.00	wcm 5%w 95%m	0.88

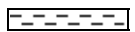



\* Recovery from multiple tests





### Gas Rates

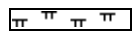

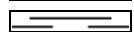
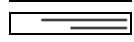
Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)

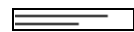



### ROCK TYPES

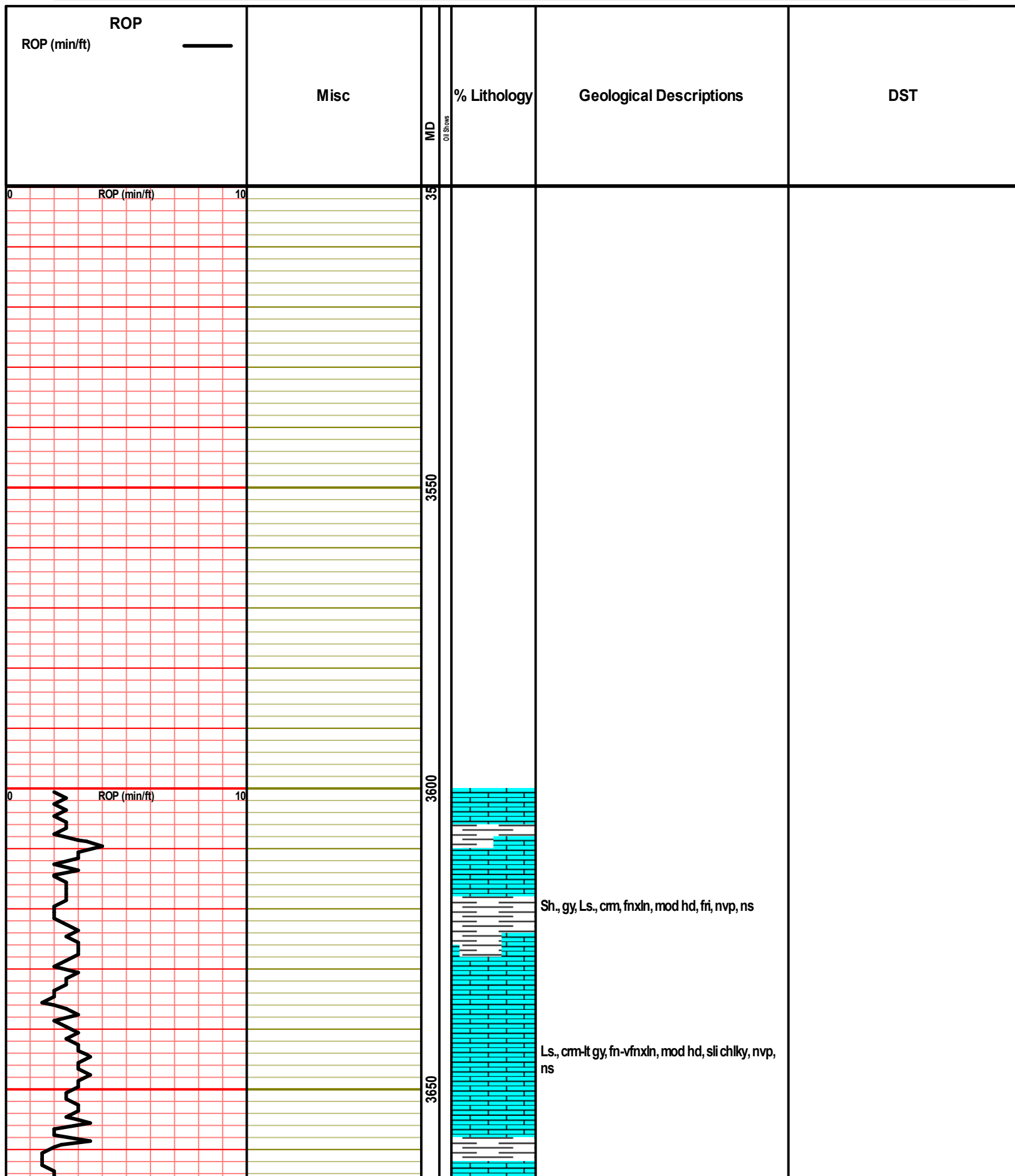
-  Anhy
-  Bent
-  Brec
-  Cht

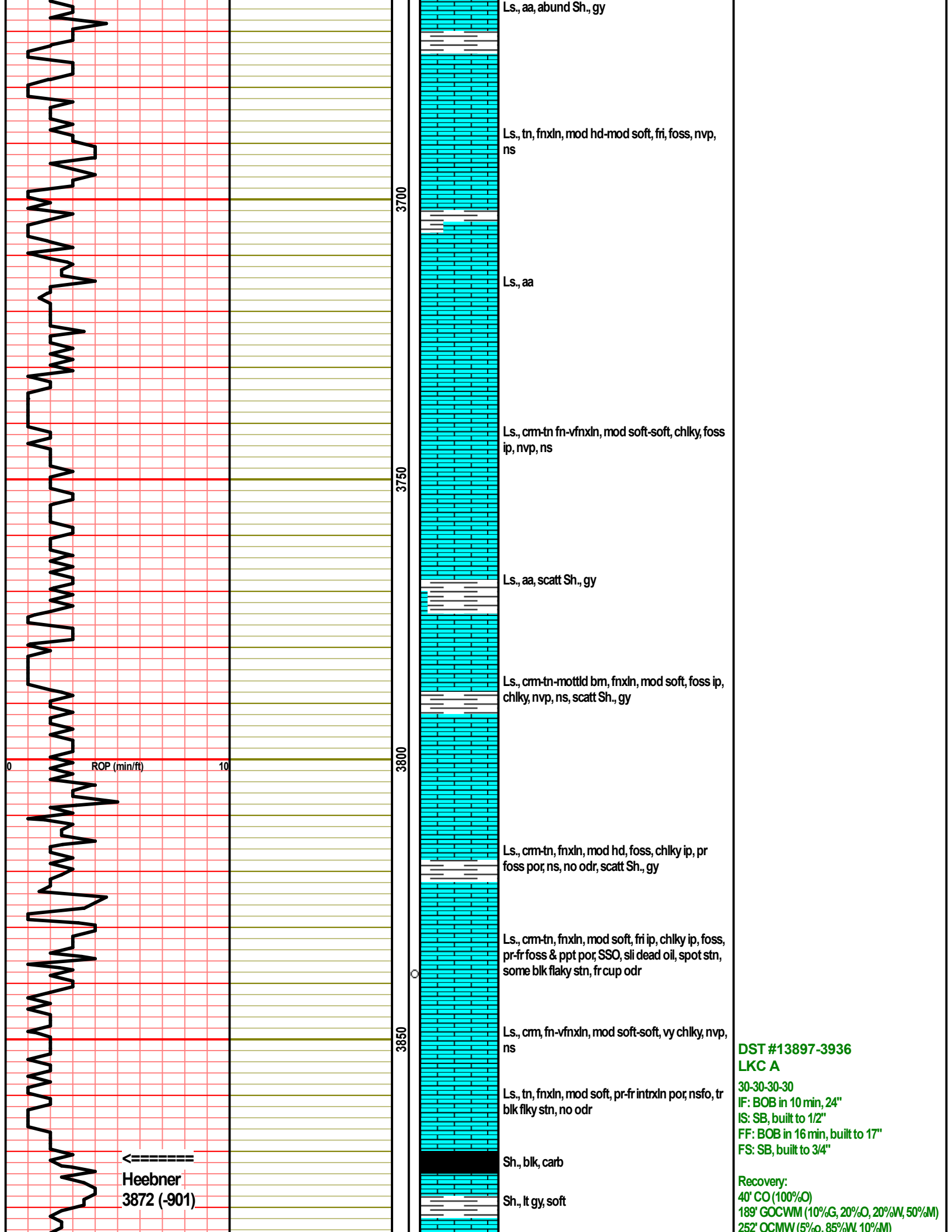
-  Clyst
-  Carb shale
-  Congl
-  Dol

-  Gyp
-  Igne
-  Lmst
-  Meta

-  Mrlst
-  Salt
-  Shale
-  Shcol

-  Shgy
-  Sltst
-  Ss
-  Till





Ls., aa, abund Sh., gy

Ls., tn, fnxln, mod hd-mod soft, fri, foss, nvp, ns

Ls., aa

Ls., cm-tn fn-vfnxln, mod soft-soft, chlky, foss ip, nvp, ns

Ls., aa, scatt Sh., gy

Ls., cm-tn-mottld bm, fnxln, mod soft, foss ip, chlky, nvp, ns, scatt Sh., gy

Ls., cm-tn, fnxln, mod hd, foss, chlky ip, pr foss por, ns, no odr, scatt Sh., gy

Ls., cm-tn, fnxln, mod soft, fri ip, chlky ip, foss, pr-fr foss & ppt por, SSO, sli dead oil, spot str, some blk flky stn, fr cup odr

Ls., cm, fn-vfnxln, mod soft-soft, vy chlky, nvp, ns

Ls., tn, fnxln, mod soft, pr-fr intrxn por, nsfo, tr blk flky stn, no odr

Sh., blk, carb

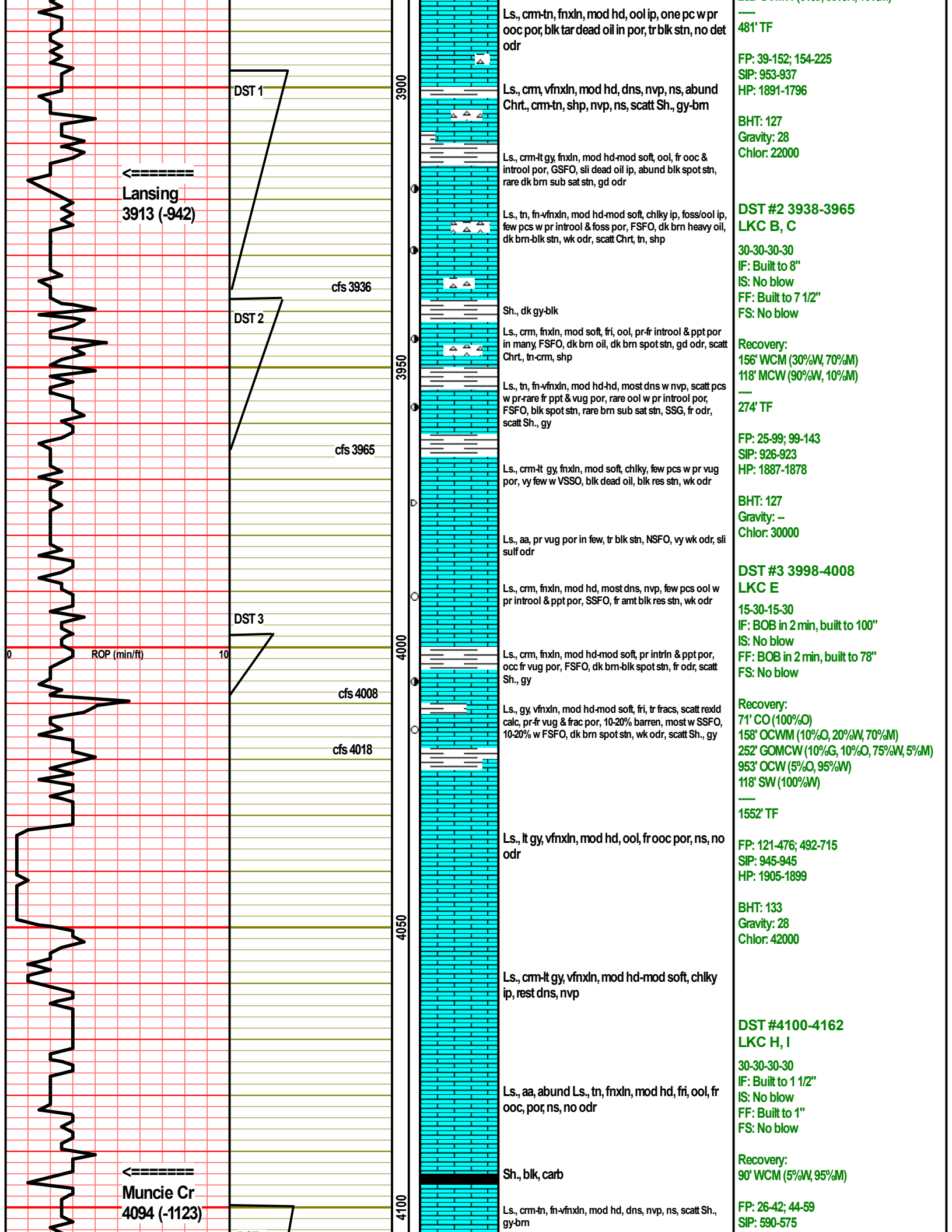
Sh., lt gy, soft

**DST #13897-3936**  
**LKC A**

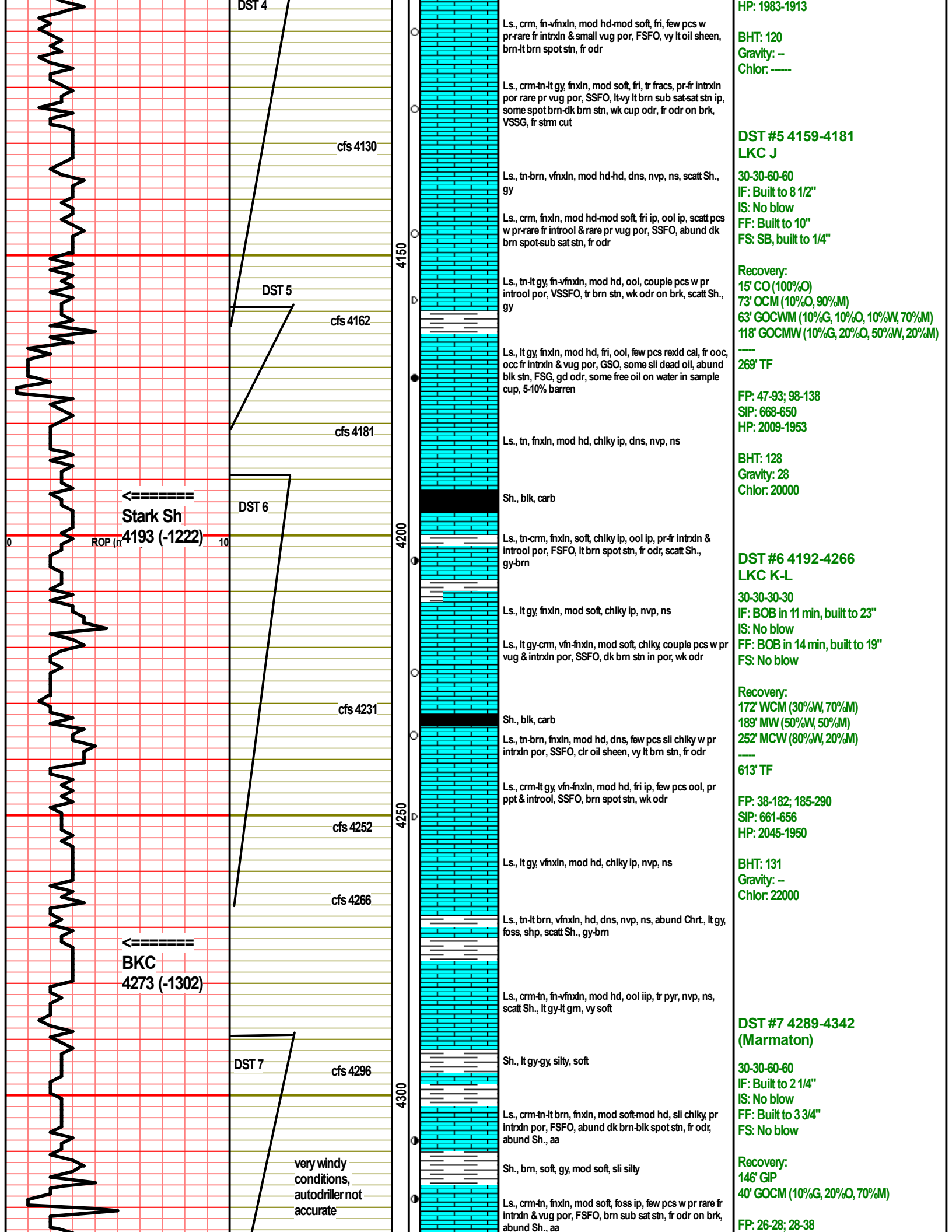
30-30-30-30  
IF: BOB in 10 min, 24"  
IS: SB, built to 1/2"  
FF: BOB in 16 min, built to 17"  
FS: SB, built to 3/4"

Recovery:  
40' CO (100%O)  
189' GOCWM (10%G, 20%O, 20%W, 50%M)  
252' OCMW (5%O, 85%W, 10%M)

← Heebner  
3872 (-901)







HP: 1983-1913

BHT: 120  
Gravity: -  
Chlor: ----

**DST #5 4159-4181  
LKC J**

30-30-60-60  
IF: Built to 8 1/2"  
IS: No blow  
FF: Built to 10"  
FS: SB, built to 1/4"

Recovery:  
15' CO (100%O)  
73' OCM (10%O, 90%M)  
63' GOCWM (10%G, 10%O, 10%W, 70%M)  
118' GOCMW (10%G, 20%O, 50%W, 20%M)

269' TF

FP: 47-93; 98-138  
SIP: 668-650  
HP: 2009-1953

BHT: 128  
Gravity: 28  
Chlor: 20000

**DST #6 4192-4266  
LKC K-L**

30-30-30-30  
IF: BOB in 11 min, built to 23"  
IS: No blow  
FF: BOB in 14 min, built to 19"  
FS: No blow

Recovery:  
172' WCM (30%W, 70%M)  
189' MW (50%W, 50%M)  
252' MCW (80%W, 20%M)

613' TF

FP: 38-182; 185-290  
SIP: 661-656  
HP: 2045-1950

BHT: 131  
Gravity: -  
Chlor: 22000

**DST #7 4289-4342  
(Marmaton)**

30-30-60-60  
IF: Built to 2 1/4"  
IS: No blow  
FF: Built to 3 3/4"  
FS: No blow

Recovery:  
146' GIP  
40' GOCM (10%G, 20%O, 70%M)

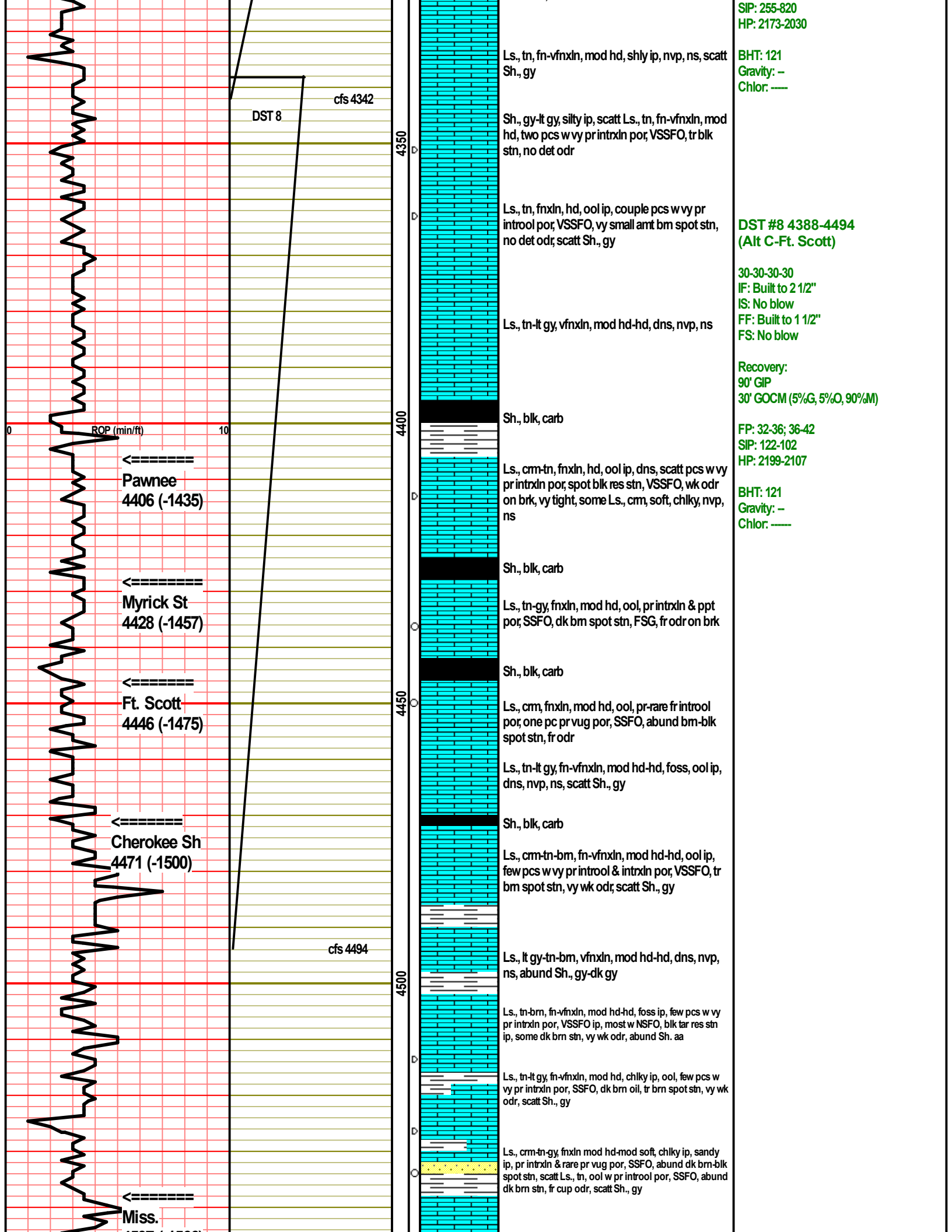
FP: 26-28; 28-38



← Stark Sh  
ROP (ft) 4193 (-1222)

← BKC  
4273 (-1302)

very windy conditions, autodriller not accurate



SIP: 255-820  
HP: 2173-2030

Ls., tn, fn-vfnxn, mod hd, shly ip, nvp, ns, scatt Sh., gy

BHT: 121  
Gravity: -  
Chlor: ---

DST 8 cfs 4342

Sh., gy-lt gy, silty ip, scatt Ls., tn, fn-vfnxn, mod hd, two pcs w vy pr intrxn por, VSSFO, tr blk stn, no det odr

DST #8 4388-4494  
(Alt C-Ft. Scott)

Ls., tn, fnxn, hd, ool ip, couple pcs w vy pr introol por, VSSFO, vy small amt bm spot stn, no det odr, scatt Sh., gy

30-30-30-30  
IF: Built to 2 1/2"  
IS: No blow  
FF: Built to 1 1/2"  
FS: No blow

Ls., tn-lt gy, vfnxn, mod hd-hd, dns, nvp, ns

Recovery:  
90' GIP  
30' GOCM (5%G, 5%O, 90%M)

Sh., blk, carb

FP: 32-36; 36-42  
SIP: 122-102  
HP: 2199-2107

Ls., cm-tn, fnxn, hd, ool ip, dns, scatt pcs w vy pr intrxn por, spot blk res stn, VSSFO, wk odr on brk, vy tight, some Ls., cm, soft, chlky, nvp, ns

BHT: 121  
Gravity: -  
Chlor: ---

Pawnee  
4406 (-1435)

Sh., blk, carb

Myrick St  
4428 (-1457)

Ls., tn-gy, fnxn, mod hd, ool, pr intrxn & ppt por, SSFO, dk bm spot stn, FSG, fr odr on brk

Sh., blk, carb

Ft. Scott  
4446 (-1475)

Ls., cm, fnxn, mod hd, ool, pr-rare fr introol por, one pc pr vug por, SSFO, abund bm-blk spot stn, fr odr

Ls., tn-lt gy, fn-vfnxn, mod hd-hd, foss, ool ip, dns, nvp, ns, scatt Sh., gy

Cherokee Sh  
4471 (-1500)

Sh., blk, carb

Ls., cm-tn-bm, fn-vfnxn, mod hd-hd, ool ip, few pcs w vy pr introol & intrxn por, VSSFO, tr bm spot stn, vy wk odr, scatt Sh., gy

cfs 4494

Ls., lt gy-tn-bm, vfnxn, mod hd-hd, dns, nvp, ns, abund Sh., gy-dk gy

Ls., tn-bm, fn-vfnxn, mod hd-hd, foss ip, few pcs w vy pr intrxn por, VSSFO ip, most w NSF0, blk tar res stn ip, some dk brn stn, vy wk odr, abund Sh. aa

Ls., tn-lt gy, fn-vfnxn, mod hd, chlky ip, ool, few pcs w vy pr intrxn por, SSFO, dk brn oil, tr brn spot stn, vy wk odr, scatt Sh., gy

Miss.

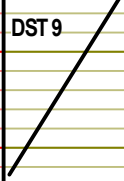
Ls., cm-tn-gy, fnxn mod hd-mod soft, chlky ip, sandy ip, pr intrxn & rare pr vug por, SSFO, abund dk brn-blk spot stn, scatt Ls., tn, ool w pr introol por, SSFO, abund dk brn stn, fr cup odr, scatt Sh., gy

4537 (-1566)



ROP (min/ft)

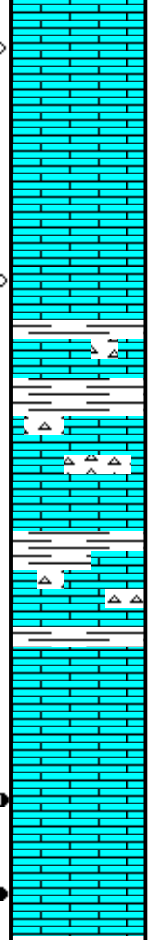
RTD  
4643 (-1672)



cfs 4633

cfs 4643

4550  
4600  
4650  
4700  
50



Ls., tn, vfnxn, hd, fri ip, dns, couple pcs ool w pr introol por, VSSFO, dk brn spot stn, couple pcs w pr egde stn, NSFO, vy wk odr, scatt Sh., gy

Ls., crm-tn, vfnxn, mod hd-hd, chlky ip, dns, ool ip, couple pcs w vy pr introol & intrxn por, VSSFO, tr brn stn, vy wk odr, scatt Sh., gy

Ls., aa, nvp, ns, Sh., gy-dk gy, abund Chrt, clr-crm, frac, weath, nvp, ns

Ls., & Chrt, aa, abund Sh., gy-lt gm-bm, poss shale sluff

Ls., crm-tn, fnxn, mod hd-mod soft ip, ool ip, scatt pcs w pr-fr ooc por, FSFO, couple w GSFO, spot-sub sat dk brn stn, fr odr, abund Sh., aa, poss sluff

Ls., crm-tn, fnxn, mod hd, scatt pcs ool w pr-fr ooc por, FSFO, dk brn spot-sub sat stn, gd odr, abund Sh., aa

**DST #9 4624-4643 (Spergen)**

30-30-30-30  
IF: Built to 3 1/4"  
IS: No blow  
FF: Built to 2 1/2"  
FS: No blow

Recovery:  
63' WCM (5%W, 95%M)  
118' MCW (70%W, 30%M)

181' TF

FP: 29-76; 79-100  
SIP: 1194-1189  
HP: 2398-2270

BHT: 138  
Gravity: -  
Chlor: 27000