KOLAR Document ID: 1701658

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 # 4941
Name: Union Valley Petroleum Corporation
Address 1: 5302 N. US HWY 81
Address 2:
City: ENID State: OK Zip: 73701 + 9760
Contact Person: Dustin Johnson
Phone: (580) 237-3959
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Kyle Johnson
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 #:

02/08/2023	2/16/2023	03/29/2023
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-191-22858-00-00
Spot Description:
NE - SE - SW - NW Sec. 8 Twp. 35 S. R. 3 ☐ East ☑ West
2100 Feet from ☑ North / ☐ South Line of Section
1216 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Sumner
Lease Name: KARL Well #: 1-8
Field Name:
Producing Formation: Simpson
Elevation: Ground: 1158 Kelly Bushing: 1171
Total Vertical Depth: 4847 Plug Back Total Depth: 4847
Amount of Surface Pipe Set and Cemented at: 386 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: 55000 ppm Fluid volume: 480 bbls
Dewatering method used: Evaporated
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: 04/24/2023
☐ **Confidential Release Date:** 04/23/2025
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** David Befort **Date:** 04/25/2023

Page Two

Operator Name: Union Valley Petroleum Corporation Lease Name: KARL Well #: 1-8

Sec. 8 Twp. 35 S. R. 3 ☐ East ☑ West County: Sumner

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:

Density-Neutron
Induction
Microlog

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

Name	Top	Datum
Stalnaker	3298	2129
Mississippi	4402	3233
Woodford	4796	3627

CASING RECORD ☐ New ☑ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	386	Class A	275	2% gel, 1/4# Flo-seal, 3% CaCl2
Production	7.875	5.5	15.5	4819	Thickset	130	5# Kolseal, 1# Phenoseal, 1/4% CFL 115

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 4/15/2023

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	8	10	8	1250	44

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☑ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
4819	4847

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: 2.875 Set At: 4815 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Union Valley Petroleum Corporation
Well Name	KARL 1-8
Doc ID	1701658

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	386	Class A	275	2% gel, 1/4# Flo-seal, 3% CaCl2
Production	7.875	5.5	15.5	4819	Thickset	130	5# Kolseal, 1# Phenoseal, 1/4% CFL 115

Elite Cementing & Acidizing of KS, LLC
PO Box 92
Eureka, KS 67045

Date	Invoice #
2/22/2023	7033

Bill To
Union Valley Petroleum Corp. 5302 N. US Hwy 81 Enid, OK 73701

Customer ID#	1341

71418 - Cement

Job Date	2/17/2023
Lease Information	
Karl #1-8	
County	Sumner
Foreman	KM

			Terms	Net 15
Item	Description	Qty	Rate	Amount
C102A	Cement Pump-Longstring>4000'	1	1,500.00	1,500.00
C107	Pump Truck Mileage (one way)	110	5.00	550.00
C201	Thick Set Cement	160	24.25	3,880.00T
C207	KolSeal	800	0.56	448.00T
C208	Pheno Seal	160	1.55	248.00T
C211	CFL-115	38	12.95	492.10T
C108B	Ton Mileage-per mile (one way)	968	1.50	1,452.00
C752	5 1/2" Type A Packer Shoe (7 3/4 x 8)	1	1,730.00	1,730.00T
C681	5 1/2" Float Collar Body Only	1	254.00	254.00T
C421	5 1/2" Latch Down Plug	1	285.00	285.00T
C604	5 1/2" Cement Basket	1	278.00	278.00T
C504	5 1/2" Centralizer	8	59.00	472.00T
D101	Discount on Services		-175.10	-175.10
D102	Discount on Materials		-404.36	-404.36T

We appreciate your business!

Phone #	Fax #	E-mail
620-583-5561	620-583-5524	rene@elitecementing.com

Send payment to:
Elite Cementing & Acidizing of KS, LLC
PO Box 92
Eureka, KS 67045

Subtotal	$11,009.64
Sales Tax (7.5%)	$576.21
Total	$11,585.85
Payments/Credits	$0.00
Balance Due	$11,585.85

PAID 11430 3-10-23

ENTERED 3-6-23

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE
CEMENTING & ACID SERVICE, LLC

Duke Drlg Rig 7

Cement or Acid Field Report
Ticket No. **7033**
Foreman Kevin McCoy
Camp Eureka

API # 15-191-22858

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
2-17-23	1341	Kall #1-8	8	35S	3W	Sumner	KS

Customer	Safety Meeting	Unit #	Driver	Unit #	Driver
Union Valley Petroleum Corporation	KM AM DK	104	Alan M.		
Mailing Address: 5302 N. US Hwy 81		110	Dan K.		
City: Enid / State: OK / Zip Code: 73701					

Job Type Longstring — Hole Depth 4847' K.B. Driller — Slurry Vol. 43 BBL on L/S — Tubing
Casing Depth 4824.87 — Hole Size 7 7/8" — Slurry Wt. 13.8# — Drill Pipe
Casing Size & Wt. 5½" — Cement Left in Casing 52.53 — Water Gal/SK 9 — Other
Displacement 115 BBL — Displacement PSI 750 — Bump Plug to 1500 PSI — BPM

Remarks: Safety Meeting: 5½" 15.50# Casing w/ Packer Shoe Set @ 4824.87' = 2' Above K.B. Circulate w/ Mud Pump for 1 Hr. Rig up to 5½ Casing. Drop Bass Ball, wait 15 mins. Start Pumping, Basket Shoe Set @ 1300 PSI. Pump 15 BBL fresh water Ahead. Mixed 130 SKS THICK Set Cement w/ 5# Kolseal/SK, 1# Phenoseal/SK, ¼% CFL-115 @ 13.8#/gal, yield 1.85 = 45 BBL Slurry. Wash out Pump & Lines, Shut down. Release Latch Down Plug. Displace Plug to Seat w/ 115 BBL fresh water. Final Pumping Pressure 750 PSI. Bump Plug to 1500 PSI. Wait 2 mins. Release Pressure, Float & Plug Held. Good Circulation @ All times while Cementing. Job Complete. Rig down.

Plug R.H. w/ 15 SKS M.H. w/ 15 SKS
Centralizers on #1, 2, 3, 5, 7, 9, 11, 16 Basket on Top of #14.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 102 A	1	Pump Charge	1500.00	1500.00
C 107	110	Mileage	5.00	550.00
C 201	160 SKS	THICK Set Cement (130 SKS Longstring, 15 SKS R.H. 15 SKS M.H.)	24.25	3880.00
C 207	800 #	Kolseal 5#/SK	.56#	448.00
C 208	160 #	Phenoseal 1#/SK	1.55#	248.00
C 211	38 #	CFL-115 ¼%	12.75#	472.10
C 108 B	8.8 Tons	Ton Mileage	1.50	1452.00
C 752	1	5½ Type 'A' Packer Shoe	1730.00	1730.00
C 681	1	5½ Float Collar Body w/ Insert	254.00	254.00
C 421	1	5½ Latch down Plug	285.00	285.00
C 604	1	5½ Cement Basket	278.00	278.00
C 504	8	5½ x 7⅞ Centralizers	59.00	472.00
			Sub Total	11,589.10
		THANK YOU	Less 5%	609.78
		7.5%	Sales Tax	606.53
			Total	11585.85

Authorization Witnessed By Dustin **Title**

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

Elite Cementing & Acidizing of KS, LLC
PO Box 92
Eureka, KS 67045

ELITE CEMENTING & ACID SERVICE, LLC

Date	Invoice #
2/14/2023	7031

Bill To
Union Valley Petroleum Corp. 5302 N. US Hwy 81 Enid, OK 73701

Customer ID#	1341

71130 - Sur Cmt

Job Date	2/9/2023
Lease Information	
Karl #1-8	
County	Sumner
Foreman	KM

			Terms	Net 15
Item	Description	Qty	Rate	Amount
C101	Cement Pump-Surface	1	950.00	950.00
C107	Pump Truck Mileage (one way)	110	5.00	550.00
C200	Class A Cement-94# sack	275	18.55	5,101.25T
C205	Calcium Chloride	775	0.75	581.25T
C206	Gel Bentonite	515	0.30	154.50T
C209	Flo-Seal	75	2.80	210.00T
C108B	Ton Mileage-per mile (one way)	1,421.2	1.50	2,131.80
C413	8 5/8" Wooden Plug	1	98.00	98.00T
C506	8 5/8" Centralizer	2	80.00	160.00T
D101	Discount on Services		-181.59	-181.59
D102	Discount on Materials		-315.24	-315.24T

We appreciate your business!

Phone #	Fax #	E-mail
620-583-5561	620-583-5524	rene@elitecementing.com

Send payment to:
Elite Cementing & Acidizing of KS, LLC
PO Box 92
Eureka, KS 67045

Subtotal	$9,439.97
Sales Tax (7.5%)	$449.23
Total	$9,889.20
Payments/Credits	$0.00
Balance Due	$9,889.20

PAID 11630 3-10-23

ENTERED 3-6-23

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE CEMENTING & ACID SERVICE, LLC

Duke Drlg Rig 7

Cement or Acid Field Report
Ticket No. **7031**
Foreman Kevin McCoy
Camp Eureka

API # 15-191-22858

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
2-9-23	1341	Karl #1-8	8	35S	3W	Sumner	Ks

Customer	Safety Meeting	Unit #	Driver	Unit #	Driver
Union Valley Petroleum Corporation	KM AM SM	104	Alan M.		
Mailing Address: 5302 N. US Hwy 81		110	Steve M.		
City: Enid / State: OK / Zip Code: 73701					

Job Type Surface — Hole Depth 406' K.B. — Slurry Vol. 67 BbL — Tubing
Casing Depth 401' K.B. — Hole Size 12¼" — Slurry Wt. 15# — Drill Pipe
Casing Size & Wt. 8⅝" 23# — Cement Left in Casing 30' — Water Gal/SK — Other
Displacement 23.5 — Displacement PSI — Bump Plug to — BPM

Remarks: Safety Meeting: Rig up to 8⅝" Casing. Break Circulation w/ 10 Bbl Fresh water. Mixed 275 sks Class "A" Cement w/ 3% CaCl2, 2% Gel, ¼# Floseal /sk @ 15#/gal, yield 1.35 = 67 Bbl Slurry. Shut down, Release Plug. Displace w/ 23.5 Bbl Fresh water. Shut Casing in. Good Cement Returns to Surface = 5 Bbl Slurry to Pit. Job Complete. Rig down

Centralizers on #1, #3

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 101	1	Pump Charge	950.00	950.00
C 107	110	Mileage	5.00	550.00
C 200	275 sks	Class "A" Cement	18.55	5101.25
C 205	775#	CaCl2 3%	.75#	581.25
C 206	515#	Gel 2%	.30#	154.50
C 209	75#	Floseal ¼#/sk	2.80#	210.00
C 108 B	12.92 Tons	Ton Mileage 110 miles	1.50	2131.80
C 413	1	8⅝" Wooden Plug	98.00	98.00
C 506	2	8⅝ x 12¼" Centralizers	80.00	80.00
			Sub Total	9,936.80
			Less 5%	520.48
		THANK YOU	Sales Tax 7.5%	472.88
			Total	9889.20

Authorization _____ **Title** _____

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

DRILL STEM TEST REPORT

Union Valley Petroleum

5302 N Hwy 81
Enid, Ok 73701

ATTN: Dustin

8-35S-3W Sumner

Karl 1-8

Job Ticket: 69347 **DST#: 1**

Test Start: 2023.02.14 @ 10:24:54

GENERAL INFORMATION:

Formation: **Miss Chert**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:56:54
Time Test Ended: 17:28:44

Test Type: Conventional Bottom Hole (Initial)
Tester: Eric Burgess
Unit No: 80

Interval: 4398.00 ft (KB) To 4430.00 ft (KB) (TVD)
Total Depth: 4430.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

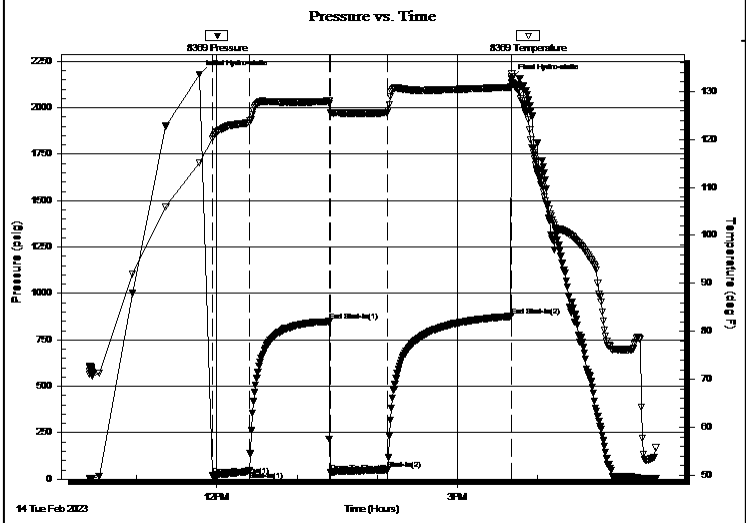
Reference Elevations: 1171.00 ft (KB)
1158.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8369 **Outside**

Press@RunDepth: 51.11 psig @ 4399.00 ft (KB)
Start Date: 2023.02.14 End Date: 2023.02.14
Start Time: 10:24:55 End Time: 17:28:44

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2023.02.14 @ 11:46:54
Time Off Btm: 2023.02.14 @ 15:40:34

TEST COMMENT: IF:Strong Building Blow built 325.19" (30)
ISI:141.45" Blow Back. (60)
FF:Strong Building Blow built 326.68" (45)
FSI:52.80" Blow Back. (90)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2179.92	115.18	Initial Hydro-static
10	18.94	120.18	Open To Flow (1)
38	42.51	123.48	Shut-In(1)
97	849.31	127.98	End Shut-In(1)
98	35.67	125.61	Open To Flow (2)
141	51.11	125.54	Shut-In(2)
234	876.63	130.89	End Shut-In(2)
234	2155.09	133.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	M 100%M	0.92

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	2.15	6.26
Last Gas Rate	0.25	12.02	42.36
Max. Gas Rate	0.25	12.02	42.36

DRILL STEM TEST REPORT

Union Valley Petroleum

5302 N Hwy 81
Enid, Ok 73701

ATTN: Dustin

8-35S-3W Sumner

Karl 1-8

Job Ticket: 69347 **DST#: 1**

Test Start: 2023.02.14 @ 10:24:54

GENERAL INFORMATION:

Formation: **Miss Chert**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:56:54
Time Test Ended: 17:28:44

Test Type: Conventional Bottom Hole (Initial)
Tester: Eric Burgess
Unit No: 80

Interval: 4398.00 ft (KB) To 4430.00 ft (KB) (TVD)
Total Depth: 4430.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

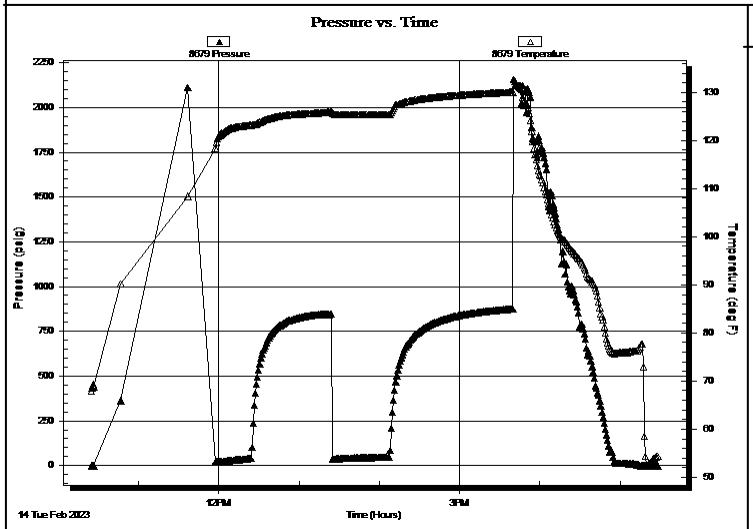
Reference Elevations: 1171.00 ft (KB)
1158.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8679

Press@RunDepth: psig @ ft (KB)
Start Date: 2023.02.14 End Date: 2023.02.14
Start Time: 10:24:55 End Time: 17:28:49

Capacity: 8000.00 psig
Last Calib.: 2023.02.14
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Strong Building Blow built 325.19" (30)
ISI:141.45" Blow Back. (60)
FF:Strong Building Blow built 326.68" (45)
FSI:52.80" Blow Back. (90)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
63.00	M 100%M	0.92

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	2.15	6.26
Last Gas Rate	0.25	12.02	42.36
Max. Gas Rate	0.25	12.02	42.36

DRILL STEM TEST REPORT

FLUID SUMMARY

Union Valley Petroleum

5302 N Hwy 81
Enid, Ok 73701

ATTN: Dustin

8-35S-3W Sumner

Karl 1-8

Job Ticket: 69347 **DST#: 1**

Test Start: 2023.02.14 @ 10:24:54

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	7000.00 ppm				
Filter Cake:	0.20 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	M 100%M	0.921

Total Length: 63.00 ft Total Volume: 0.921 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

DRILL STEM TEST REPORT

GAS RATES

Union Valley Petroleum

5302 N Hwy 81
Enid, Ok 73701

ATTN: Dustin

8-35S-3W Sumner

Karl 1-8

Job Ticket: 69347 **DST#: 1**

Test Start: 2023.02.14 @ 10:24:54

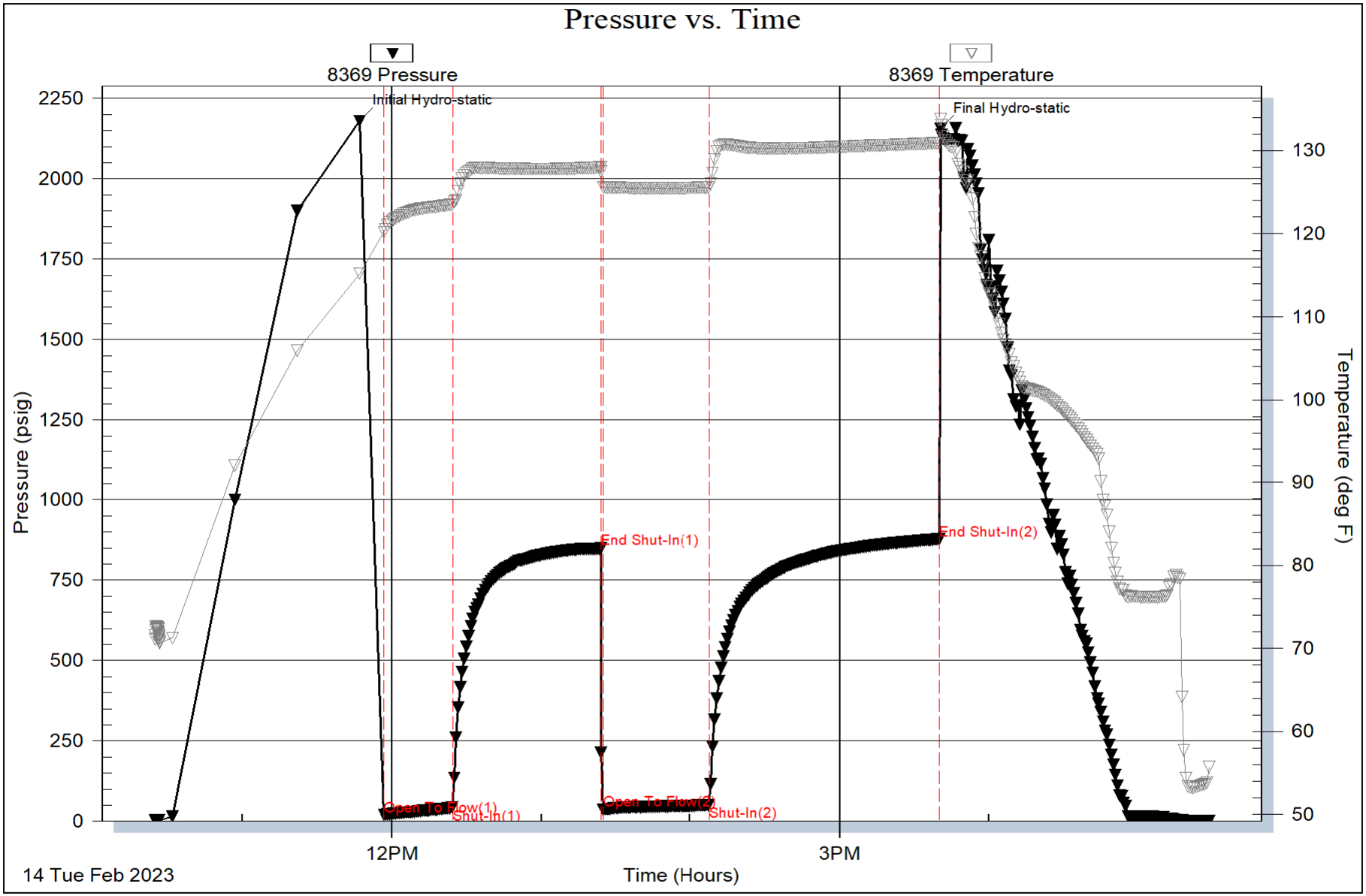
Gas Rates Information

Temperature: 48 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

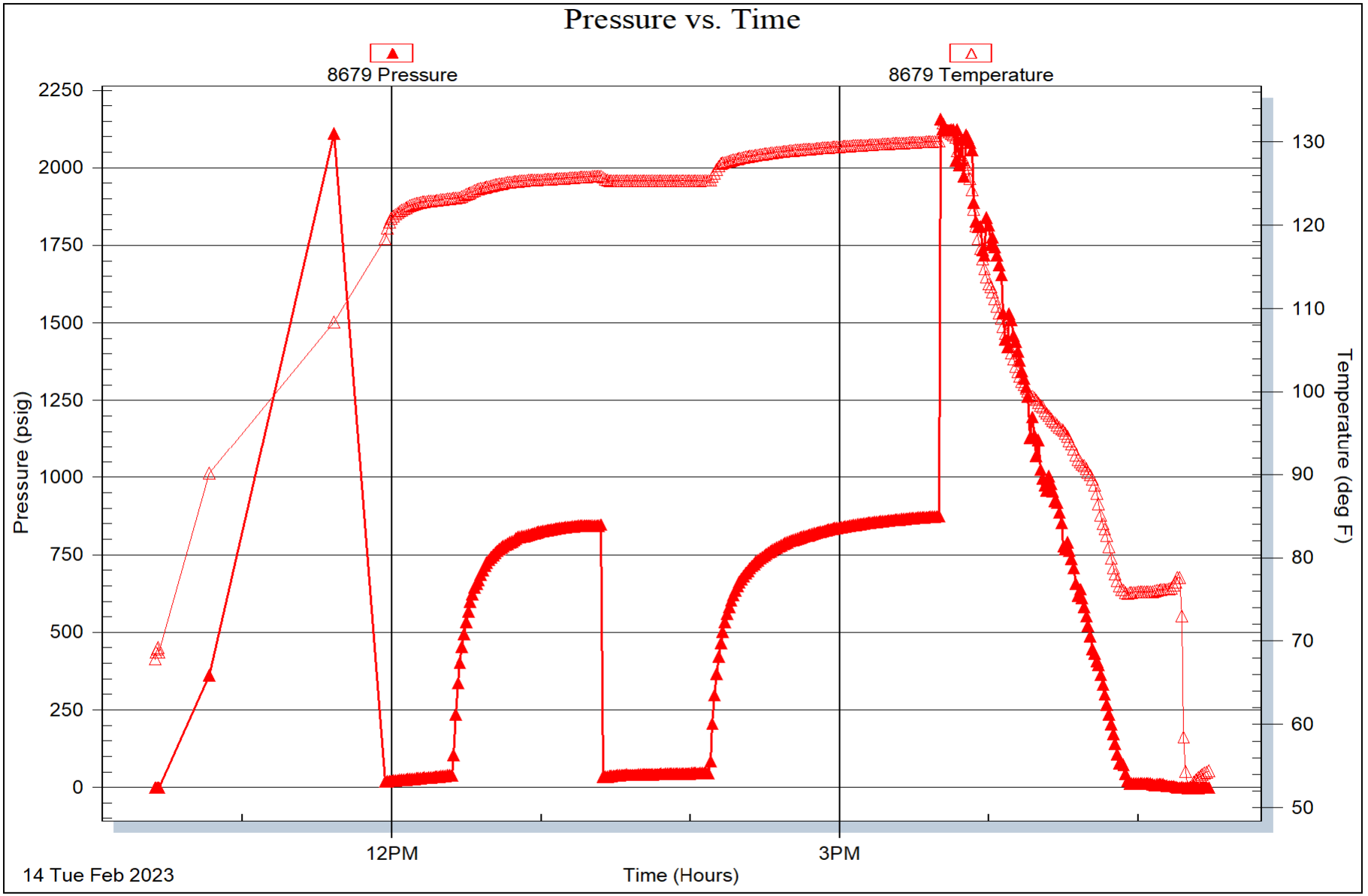
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	1	0.13	2.15	6.26
1	10	0.13	5.58	7.56
1	20	0.13	11.83	9.92
2	0	0.13	5.97	7.71
2	10	0.25	11.19	41.03
2	20	0.25	11.74	41.92
2	30	0.25	11.89	42.16
2	40	0.25	11.98	42.30
2	45	0.25	12.02	42.36

Serial #: 8369 **Outside** Union Valley Petroleum Karl 1-8 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 69347 Printed: 2023.02.14 @ 20:28:51

Serial #: 8679 | Union Valley Petroleum | Karl 1-8 | DST Test Number: 1



Trilobite Testing, Inc | Ref. No: 69347 | Printed: 2023.02.14 @ 20:28:52

GEOLOGICAL WELL SITE SERVICE
OFFICE: 325-655-4356
WEB SITE: www.geosite.us E-MAIL: E-mail:geosite@geosite.us

HYDROCARBON LOG

Vertical Log

COMPANY:	UNION VALLEY PETROLEUM CORPORATION		
WELL:	KARL #1-8		
FIELD:	WEST CALDWELL		
COUNTY:	SUMNER	STATE:	KS
API #:	15-191-22858	AFE #:	

LEGAL LOCATION

SEC. 8-35S-3W SPOT:2100' FWL&1216 'FWL

LAT: LONG:

Latitude and Longitude are of Datum type: NAD27

ELEVATION

KB:	1169
DF:	1167
GL:	1156

Log Measured From KB Elevation

LOGGING INTERVAL

START DATE:	2/11/2023	END DATE:	
HOLE START DEPTH:	2350	HOLE END DEPTH:	4847

LOGGING UNIT

Unit #12

LOGGERS

BRICE WINTERS

RIG INFORMATION

CONTRACTOR:	DUKE
RIG NUMBER:	7
RIG PHONE:	620-617-0217

MUD INFORMATION

CONTRACTOR:	MUDCO, INC.
ENGINEER:	BRAD BORTZ
PHONE:	620-793-2421

TOOL PUSHER INFORMATION

TOOL PUSHER:	TIM ARELL
PUSHER PHONE:	620-617-0217

COMPANY INFORMATION

REP:	DUSTIN JOHNSON
PHONE:	580-541-6251

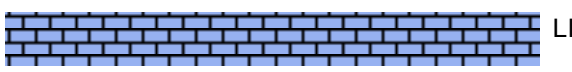
JOBID: 18062 comp76-U8PCP-IIRBO Server Version: 4.24.4.196 Log Version: 4.24.4.196 AG

All interpretations are opinions based on inferences from the hole condition, sampling, electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and who shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, for expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents, or employees.

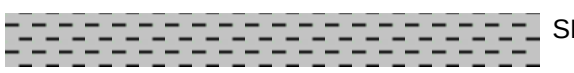

CHERT


DOLOMITE

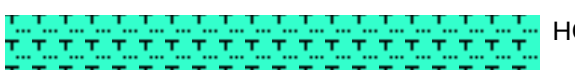

GRANITE


LIME


SAND

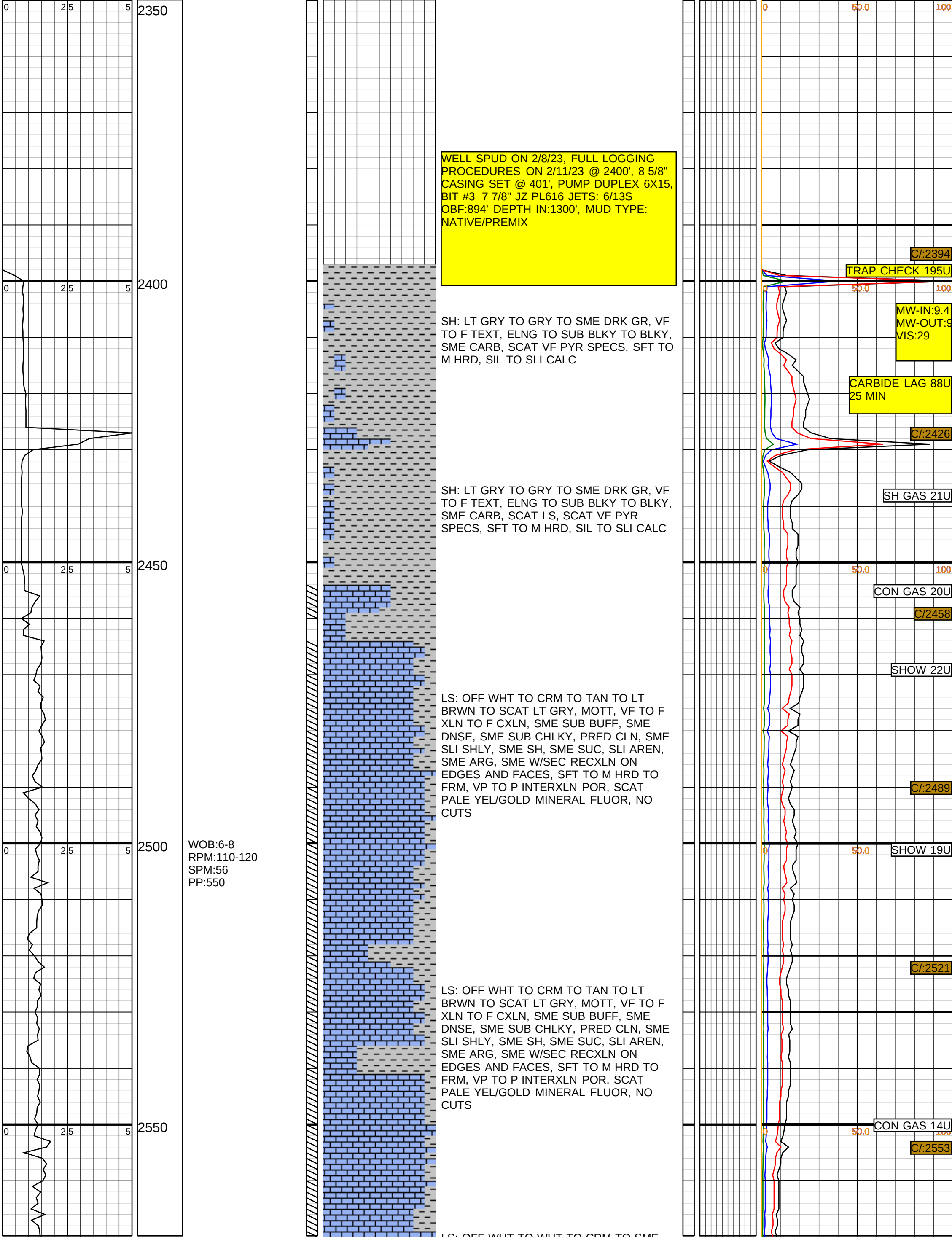

SHALE


SILTSTONE


HOT SHALE


SHALEY LIME

DRILLRATE MIN/FT	DEPTH	NOTES	POR	LITHOLOGY	DESCRIPTIONS	CUT	FLUOR	C3 C2 C1 HOT WIRE


0
2 5
5
2350
2400
2450
2500
2550
WELL SPUD ON 2/8/23, FULL LOGGING PROCEDURES ON 2/11/23 @ 2400', 8 5/8" CASING SET @ 401', PUMP DUPLEX 6X15, BIT #3 7 7/8" JZ PL616 JETS: 6/13S OBF:894' DEPTH IN:1300', MUD TYPE: NATIVE/PREMIX
SH: LT GRY TO GRY TO SME DRK GR, VF TO F TEXT, ELNG TO SUB BLKY TO BLKY, SME CARB, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC
SH: LT GRY TO GRY TO SME DRK GR, VF TO F TEXT, ELNG TO SUB BLKY TO BLKY, SME CARB, SCAT LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC
LS: OFF WHT TO CRM TO TAN TO LT BRWN TO SCAT LT GRY, MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS
LS: OFF WHT TO CRM TO TAN TO LT BRWN TO SCAT LT GRY, MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS
WOB:6-8
RPM:110-120
SPM:56
PP:550
0
50.0
100
C/:2394
TRAP CHECK 195U
MW-IN:9.4
MW-OUT:9
VIS:29
CARBIDE LAG 88U
25 MIN
C/:2426
SH GAS 21U
CON GAS 20U
C/:2458
SHOW 22U
C/:2489
SHOW 19U
C/:2521
CON GAS 14U
C/:2553

0 2.5 5

2600

0 2.5 5

2650

DEPTH: 2648
INC:0.5

0 2.5 5

2700

0 2.5 5

2750

LS: OFF WHT TO WHT TO CRM TO SME TAN TO LT BRWN TO SCAT LT GRY, MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

LS: OFF WHT TO WHT TO CRM TO SME TAN TO LT BRWN TO SCAT LT GRY, MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

SS: PRED OFF WHT TO WHT TO SME CLR TO FRSTED, VF TO F GR CONSOL, SME TT, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO SME SLI CALC MTX, PRED CLN, SME SLMY, SME SHLY W/CARB SPECS IMBED, FRI, SFT TO M HRD TO FRM, VP TO P TO SME FAIR INTERGRN POR, NO FLUOR OR CUTS

SH: LT GRY TO GRY TO SCAT DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME SCAT CARB, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

SH: LT GRY TO GRY TO SCAT DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME SCAT CARB, SME LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

LS: OFF WHT TO WHT TO CRM TO SME TAN TO LT BRWN TO SCAT LT GRY, MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

HOT SH GAS 26U
C/:2585
0 50.0 100
C/:2617
SHOW 11U
SH GAS 12U
C/:2648
0 50.0 100
SH GAS 13U
C/:2679
SH GAS 15U
0 50.0 100
SH GAS 22U
C/:2711
SH GAS 22U
CON GAS 24U
C/:2743
SHOW 21U
0 50.0 100
SLI SHOW 18U
SLI SHOW 18U
DISPLACE MUD
CON GAS 8U
C/2775

0 2 5

2800

2/12/2023

0 2 5

2850

0 2 5

2900

BASE OF HEEBNER
MD: 2883'
TVD: 2883'
SS: (-1714)

0 2 5

2950

0 2 5

3000

LS: OFF WHT TO WHT TO CRM TO SME LT TAN TO LT BRWN, SME V MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

SH: LT GRY TO GRY TO DRK GRY TO SME BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME V CARB AND ASHY, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

SH: LT GRY TO GRY TO PRED DRK GRY TO BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME V CARB AND ASHY, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

SH: LT GRY TO GRY TO DRK GRY TO SME BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME V CARB AND ASHY, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

SH: LT GRY TO GRY TO DRK GRY TO SME BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME V CARB AND ASHY, SME LS, SME SS, SME SNDY LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

LS: OFF WHT TO WHT TO CRM TO SME LT TAN TO LT BRWN, SME V MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

0 50.0 100

C/:2806

C/:2838

0 50.0 100

C/:2868

HOT SH GAS 8U

0 50.0 C/:2900

C/:2932

0 50.0 100

C/:2963

SLI SHOW 6U

C/:2995

0 50.0 100

MW-IN:9.0
MW-OUT:9
VIS:49

DEPTH: 3020
WOB:6-10
RPM:110-120
SPM:56
PP:700

LCM:2#

C/:3026

0 2.5 5

3050

LS: OFF WHT TO WHT TO CRM TO SME LT TAN TO LT BRWN, SME V MOTT, VF TO F XLN TO F CXLN, SME SUB BUFF, SME DNSE, SME SUB CHLKY, PRED CLN, SME SLI SHLY, SME CARB SH, SME SUC, SLI AREN, SME ARG, SME W/SEC RECXLN ON EDGES AND FACES, SFT TO M HRD TO FRM, VP TO P INTERXLN POR, SCAT PALE YEL/GOLD MINERAL FLUOR, NO CUTS

0 50.0 100

C/:3057

C/:3088

0 2.5 5

3100

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

0 50.0 100

C/:3120

0 2.5 5

3150

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

DEPTH: 3151
INC:0.5

0 50.0

C/:3151

C/:3183

0 2.5 5

3200

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

0 50.0 100

C/:3215

HASKEL
MD: 3226'

MUD WT 9.0
FV 51 PV 15
YP
15 GEL

TVD: 3226'
SS: (-2057)

14/48 PH 11
FIL 8.8 CK
1 CHL 5K

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, TRC LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

C/:3247

0 2 5

3250

0 50.0 100

SH GAS 10U

SH GAS 10U

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

C/:3278

SH GAS 10U

TONKAWA
MD: 3298'
TVD: 3298'
SS: (-2129)

0 2 5

3300

0 50.0 100

SHOW 9U

SS: OFF WHT TO WHT TO LT GRY, VF TO F SUB ANG TO SUB RND GR CONSOL, SME TT, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO SLI CALC MTX, PRED CLN, SME SLI SHLY, SME S/CARB SPECS, SME SH, SME SLTST, FRI, SFT TO M HRD TO SME FRM, VP TO P TO FAIR INTERGRN POR, NO FLUOR OR CUTS

C/:3310

C/:3341

0 2 5

3350

0 50.0 100

SHOW 12U

SHOW 11U

SS: PRED OFF WHT TO WHT TO LT GRY TO SME CLR TO FRSTED, VF TO F SUB ANG TO SUB RND GR CONSOL, SME TT, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO SLI CALC MTX, PRED CLN, SME SLI SHLY, SME S/CARB SPECS, SME SH, SME SLTST, FRI, SFT TO M HRD TO SME FRM, VP TO P TO FAIR INTERGRN POR, NO FLUOR OR CUTS

C/:3373

SHOW 11U

0 2 5

3400

CON GAS 10U

0 50.0 100

C/:3404

SS: PRED OFF WHT TO WHT TO LT GRY TO SME CLR TO FRSTED, VF TO F SUB ANG TO SUB RND GR CONSOL, SME TT, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO SLI CALC MTX, PRED CLN, SME SLI SHLY, SME S/CARB SPECS, SME SH, SME SLTST, FRI, SFT TO M HRD TO SME FRM, VP TO P TO FAIR INTERGRN POR, NO FLUOR OR CUTS

SHOW 10U

SHOW 10U

C/:3436

SS: PRED OFF WHT TO WHT TO LT GRY TO SME CLR TO FRSTED, VF TO F SUB

0 2 5

3450

ANG TO SUB RND GR CONSOL, SME TT, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO SLI CALC MTX, PRED CLN, SME SLI SHLY, SME S/CARB SPECS, SME SH, SME SLTST, FRI, SFT TO M HRD TO SME FRM, VP TO P TO FAIR INTERGRN POR, NO FLUOR OR CUTS

0 50.0 100

SHOW 8U

SHOW 8U

C/:3468

3500

BIT BALLING UP

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

CON GAS 9U

C/:3499

0 50.0 100

CON GAS 9U

C/:3532

BIT BALLING UP

DEPTH: 3556
WOB:10-12
RPM:120
SPM:56
PP:700

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

SH GAS 10U

3550

0 50.0 100

BIT BALLING UP

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

C/:3563

BIT BALLING UP

TRIP GAS 10U

C/:3594

TOH AT 3594' FOR PLUGGED BIT, RE RAN SAME BIT # 3 7 7/8" JZ PL616

3600

0 50.0 100

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

C/:3626

DEPTH: 3626
WOB:14-16
RPM:120
SPM:56
PP:800

2/13/2023

SH: LT GRY TO GRY TO SME DRK GRY, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SCAT LS, SME SS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

3650

0 50.0 100

DEPTH: 3657
INC:0.5

CON GAS 6U

C/:3657

BASE OF AVANT HS
MD: 3668'
TVD: 3668'

HOT SH GAS 15U

SS: (-2499)

SH: LT GRY TO GRY TO PRED DRK GRY TO BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME SLTST, SME V CARB AND ASHY, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CALC

C/:3688

SH GAS 9U

0 2 5 5

3700

COTTAGE GROVE
MD: 3702'
TVD: 3702'
SS: (-2533)

0 50.0 100

SS: OFF WHT TO WHT TO LT GRY TO SCAT CLR TO FRSTED, VF TO F SUB ANG TO SCAT SUB RND GR CONSOL, MOD TO WELL SORT, FAIR TO WELL CMT W/SIL TO CALC MTX, SME CLN, SME SLTY/SHLY, SME W/SHALE IMBED, SME FREE SLTST AND SH, SME FRI, SFT TO M HRD TO FRM, VP TO P TO SME FAIR INTERGRN POR, NO FLUOR OR CUTS

SHOW 8U

C/:3720

SHOW 8U

KC LIME
MD: 3738'
TVD: 3738'
SS: (-2569)

LS: OFF WHT TO WHT TO CRM TO LT GRY TO LT TAN TO LT BRWN, VF TO F XLN TO F CLXN, SME SUB BUFF, SME CHLKY, DNSE, PRED CLN, SME SLI SNDY, SME SUC, SME SLI AREN, SME W/SEC RECLN ON EDGES, SME SH, SFT TO M HRD TO FRM, VP TO P TO SCAT FAIR INTERXLN POR, SME DULL MINERAL FLUOR, NO CUTS

0 2 5 5

3750

0 50.0 100

C/:3752

MW-IN:9.3
MW-OUT:9
VIS:45
LCM:2#

LS: SME OFF WHT TO WHT TO CRM TO PRED LT GRY TO LT TAN TO LT BRWN, VF TO F XLN TO F CLXN, SME SUB BUFF, SME CHLKY, DNSE, PRED CLN, SME SLI SNDY, SME SUC, SME SLI AREN, SME W/SEC RECLN ON EDGES, SME SH, SFT TO M HRD TO FRM, VP TO P TO SCAT FAIR INTERXLN POR, SME DULL MINERAL FLUOR, NO CUTS

C/:3783

0 2 5 5

3800

0 50.0 100

TRAP CHECK 122U

DEPTH: 3811
WOB:10-12
RPM:120
SPM:56
PP:900

C/:3815

SH: LT GY-GY-TR DK GY VF-F TEX AND SM SME VF GRAN TEX AND SLTY SME ELG ANG AND SME FLKY SME CARB SCAT VF PYR SPECS SCAT MICA SFT-M HD SIL-SME SL CALC

C/:3847

0 2 5 5

3850

0 50.0 100

LS: CRM-TAN-LT BRN-BRN SME MOTT SME SUB BUFF VF-F XL-F CXL DNS-SME SUB CHLKY PRED CLN SME SUC SSME ARG TR AREN TR/SH PART IMBD SCAT VF PYR SPECS TR FOS SFT-M HD-FRM VP-P INTXL POR SCAT DULL GOLD MNRL FLOR NO CUT

C/:3879

HOT SH GAS 55U

CHECKER BOARD HOT SHALE
MD: 3882'

SH: DK GY-BLK VF-F TEX AND SM SME VF GRAN TEX AND ASHY V CARB SCAT VF PYR SPECS SCAT PYR CHUNKS SFT-M HD SIL-PRED CALC

MD: 3882
TVD: 3882'
SS: (-2713)

3900

LS: TRS WH-OFF WH-CRM-TAN-LT BRN-BRN SME V MOTT SME SUB BUFF VF-F XL-F CXL DNS-SME SUB CHLKY PRED CLN SME SHY SME SUC SME SL AREN SME ARG TR FOS SME/SEC RECXL ON EDGES SFT-M HD-SME FRM VP-P-TR FR INTXL POR TRS POS FRAC POR ABUNDANT DULL GOLD MNRL FLOR TR V PALE YEL FLOR/WEAK MILKY YEL CUT/FAINT YEL RING

GAS SHOW 43U

C/:3910

SH GAS 22U

C/:3941

LS: OFF WH-CRM-TAN-LT BRN SME MOTT SME SUB BUFF VF-F XL-F CXL DNS-SME SUB CHLKY SME CLN SME SHY SME SUC SL ARG SL AREN TR/SEC RECXL ON EDGES SFT-M HD VP-P INTXL POR TR DULL GOLD MNRL FLOR NO CUT

SH GAS 19U

3950

SL SHOW 18U

SH GAS 12U

C/:3973

LS: SME WH-OFF WH-LT BRN-BRN SME V MOTT SME SUB BUFF VF-F XL-F CXL SME DNS SME SUB CHLKY PRED CLN SME SHY SME SUC SL AREN SME ARG TRS FOS SME/SEC RECXL ON EDGES AND FACES SFT-M HD-FRM VP-P INTXL POR TR POS FRAC POR SCAT V PALE YEL MNRL FLOR NO CUT

4000

MARMATON
MD: 4000'
TVD: 4000'
SS: (-2831)

C/:4005

SH: DK GY-BLK VF-F TEX AND SM SME VF GRAN TEX AND ASHY V CARB SCAT VF PYR SPECS SFT-M HD SIL-PRED CALC

SH GAS 26U

SH GAS 10U

LS: SME WH-OFF WH-CRM-TAN-LT BRN-BRN SME MOTT SME SUB BUFF VF-F XL-F CXL DNS-SME SUB CHLKY PRED CLN SME SHY SME SUC SME SL AREN SME ARG SME FOS SME/SEC RECXL ON FACES AND EDGES SFT-M HD-FRM VP-P INTXL POR TRS VIS FRAC POR SCAT DULL GOLD-V PALE YEL MNRL FLOR NO CUT

C/:4037

4050

DEPTH: 4053
WOB:10-12
RPM:115-120
SPM:56
PP:900

MUD WT 9.2+ FV 48 PV 13 YP 14 GEL 9/42 PH 11 FIL 8.8 CK 1 CHL 5000 CAL 80 SD TR SOL 6.1 WTR 93.9 LCM 2.5#

LS: PRED OFF WH-CRM-TAN-LT BRN-BRN SME MOTT SME SUB BUFF VF-F XL-F CXL DNS-SME SUB CHLKY PRED CLN SME SHY SME SUC SME AREN SME ARG SME FOS SME/SEC RECXL ON FACES AND EDGES SFT-M HD-FRM VP-P INTXL POR TRS VIS FRAC POR SCAT DULL V PALE YEL MNRL FLOR NO CUT

C/:4069

HOT SH GAS 48U

4100

LS: WH-OFF WH-TAN-LT BRN-BRN SME MOTT SME BUFF-SUB BUFF VF-F XL-F CXL SME DNS-SME SUB CHLKY PRED CLN SME SHY SME/SH INCL SME SUC SL ARG SL AREN SL TR/VF OTZ INCL SCAT

C/:4101

VF PYR SPECS SFT-M HD-FRM VP-P INTXL POR TR POS FRAC POR SCAT DULL GOLD-TRS V PALE YEL MNRL FLOR NO CUT

HOT SH GAS 56U

C/:4133

SH: DK GY-BLK VF-F TEX AND SM SME VF GRAN TEX AND ASHY V CARB SCAT VF PYR SPECS SFT-MM HD SIL-SME CALC

HOT SH GAS 48U

0 2.5 5

4150

BASE OF FORT SCOTT HOT SHALE
MD: 4151'
TVD: 4151'
SS: (-2982)

SHORT TRIP FROM 4164' UP TO 3200'

0 50.0 100

LS: SME WH-CRM-TAN-LT BRN-BRN SME V MOTT SME BUFF-SUB BUFF VF-F XL-F CXL SME DNS-SME SUB CHLKY PRED CLN SME SHY SME SUC SME SME SL ARG SME SL AREN TRS FOS SME/SEC RECXL ON EDGES AND SME ON FACES SFT-M HD-FRM VP-P INTXL POR SCAT TRS FRAC POR SCAT V PALE YEL MNRL FLOR NO CUT

SHOW 13U

C/:4164

SHORT TRIP GAS 22U

0 2.5 5

4200

SH: SME LT GRY TOG RY TO PRED DRK GRY TO BLK, VF TO F TEXT, SME SLTY TEXT, ELNG TO SUB BLKY TO BLKY, SME V CARB AND ASHY, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CAC

C/:4195

HOT SH GAS 20U

0 50.0 100

HOT SH GAS 17U

SH: SME LT GRY TOG RY TO PRED DRK GRY TO BLK, VF TO F TEXT, SME SLTY TEXT, ELNG TO SUB BLKY TO BLKY, SME V CARB AND ASHY, SME FREE LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CAC

C/:4226

SLI SHOW 14U

0 2.5 5

4250

0 50.0 100

C/:4257

SH GAS 11U

SH: SME LT GRY TOG RY TO PRED DRK GRY TO BLK, VF TO F TEXT, SME SLTY TEXT, ELNG TO SUB BLKY TO BLKY, SME V CARB AND ASHY, SME FREE LS, SCAT VF PYR SPECS, SFT TO M HRD, SIL TO SLI CAC

C/:4288

0 2.5 5

4300

0 50.0 100

SH GAS 12U

SH: LT GRY TO GRY TO SME DRK GRY TO BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME CARB AND ASHY, SME FREE SLTST, SME FREE LS, SME SCAT SS, SCAT VF PYR SPECS, SFT TO M HRD, SILT TO SLI CALC

CARBIDE LAG 58U
37 MINUTES

C/:4320

BIT BALLING UP

TRIP GAS 18U

2/14/2023

0 2.5 5

4350

DEPTH: 4350
WOB:8-12
RPM:110-115
SPM:56
PP:900

TOH AT 4330' FOR BIT, BIT BALLED UP, CLEANED BIT, RE RAN SAME BIT #3 7 7/8" JZ PL616

SH: LT GRY TO GRY TO SME DRK GRY TO BLK, VF TO F TEXT, SME SLTY, ELNG TO SUB BLKY TO BLKY, SME CARB AND ASHY, SME FREE SLTST, SME FREE LS, SME SCAT SS, SCAT VF PYR SPECS, SFT TO M HRD, SILT TO SLI CALC

TRAP CHECK 78U

CON GAS 68U

0 50.0 100

C/:4351

MUD WT 9.4 FV 49
PV 12 YP 14 GEL 11/44
PH 10.5 FIL 8.8 CK 1
CHL 7000 CAL 80 SD
TR SOL 7.4 WTR

C/:4383

0 2.5

DST

4400

LS: OFF WHT TO WHT TO CRM TO LT TAN TO LT BRWN TO SME LT GRY, SME MOTT, VF TO F XLN TO F CXLN, PRED CLN, SME CHRTY, SME FREE CHRT, SME SH, LS IS SUC, SLI AREN, SFT TO M HRD TO FRM, VP TO P TO FAIR INTERXLN POR, SCAT CHRT HAS BRT WHT TO YEL FLUOR W/SLI STRMNG YEL CUT W/FAINT YEL RES RING

SHOW 77U

0 50.0 100

MISS. CHAT
MD: 4402'
TVD: 4402'
SS: (-3233)

PREPARING TO RUN DST #1 FROM 4398' TO 4430'

CHRT:TR OPAQUE-WH-PRED OFF WH-CRM-LT BRN-SME BRN SME MOTT TRS BUFF-SME SUB BUFF TRS LITHO-VF-F XL-F CXL SME F CHLKY TEX SME DNS PRED CLN TR LMY SME SUC SME WEATHERED TRS/SEC RECXL ON EDGES AND FACES SCAT LT BRN-TR MED BRN O-STNING SME SFT-M HD-SME FRM P-FR-SME GOOD INTXL POR SCAT VIS FRAC POR ABUNDANT DULL GOLD-SME MED YEL-SCAT BRITE YEL FLOR SME SLOW SL STRMING CUT OUT OF DULL FLOR/MED YEL RING AND SME FASTER STRMING YEL CUT OUT OF BRITER FLOR/MED HVY-HVY YEL RING SME SAMPLE PCS DEGASSING SAMPLE HAS A SLIGHT ODOR

SHOW W/CON GAS 96U

C/:4414

SHOW 66U

TRIP GAS 160U

DEPTH: 4430
WOB:10-12
RPM:90`
SPM:56
PP:900

0 2.5 5

4450

C/:4445

SHOW 15U

0 50.0 100

DST #1 INFORMATION IN NOTES AT BOTTOM OF MUD LOG

SHOW 15U

2ND MISS. CHAT
MD: 4465'
TVD: 4465'
SS: (-3296)

CHRT: SCAT OPAQUE TO SME WHT TO PRED OFF WHT TO CRM TO SME LT BRWN TO TRC BRWN, SME MOTT, SME SUB BUFF, TRC LITHO TO VF TO F XLN TO F CXLN, SME SLI CHLKY, SME DNSE, SME WEATHERED, TRC LMY, PRED CLN, SME SUC, SME AREN, SCAT W/SEC RECXLN ON EDGES AND FACES, SCAT LT BRWN OIL STAINING ON EDGES, M HRD TO HRD TO FRM, P TO FAIR TO SME GOOD INTERXLN POR, SCSAT VIS FRAC POR, SME SCAT BRT YE;/WHT FLUOR W/SME SCAT MED WHT TO YEL FLUOR W/SME V DULL GOLD FLUOR, SLOW STRMNG YEL CUT IN THE MED YEL FLUOR AND SLOW TO MED STRMNG YEL CUT IN THE BRT FLUOR, V WEAK TO TRC STRMNG YEL CUT IN DULL GOLD FLUOR, WEAK TO MOD YEL RES RING

SHOW 23U

SHOWCON GAS 23U

C/4477

SHOW 17U

MW:9.8
VIS:49
LCM:2#

0 50.0

CON GAS 15U

STOPPED AT 4488' TO CIRC. UP SAMPLES

0 - 10

0 5.0 10

4500

SCALE CHANGE

2/15/2023

C/:4509

DEPTH: 4550
MW-IN:9.2
MW-OUT:9.3
VIS:49
LCM:3#

DEPTH: 4550
WOB:16-18
RPM:90
SPM:56
PP:900

LS: SME OFF WHT TO WHT TO PRED CRM TO LT TAN TO TAN TO LT BRWN TO BRWN TO SME LT GRY, SME MOTT, SME SUB BUFF, SME CHLKY TEXT, VF TO F XLN TO F CXLN, DNSE, PRED CLN, SME DOLIMITIC, SME SUC, SME SLI AREN, SME W/SEC RECXLN ON EDGES, SME CHRT, SCAT DOLO, SFT TO M HRD TO HRD TO FRM, VP TO P TO SCAT FAIR INTERXLN POR, TRC MED YEL FLUOR

CON GAS 20U

C/:4540

SHOW 42U

SHOW 26U

MISS LIME
MD: 4540'
TVD: 4540'
SS: (-3371)

0 5 0 10

4550

TRIP FOR NEW BIT AT 4557'

W/V SLOW STRMNG YEL CUT W/V FAINT YEL RES RING

TRIP GAS 84U

SL SHOW 11U

CON GAS 14U

C/:4571

NEW BIT #4, 7 7/8", JZ 615, JETS: 5-13S, DI. 4557'. OB FTG. 3257', HRS. 70 1/2.

MUD WT 9.2+ FV 54 PV 14 YP 24 GEL 18/56 PH 9.5 FIL 9.8 CK 1 CHL 9000 CAL 80 SD TR SOL 5.8 WTR 94.2 LCM 4#

4600

DEPTH: 4602
WOB:12-14
RPM:65
SPM:56
PP:900

LS: TRS CRM-LT BRN-PRED DK BRN SME MOTT SME BUFF-SUB BUFF SME LITHO-VF-F XL SME F CXL SME V DNS TR SUB CHLKY PRED CLN SME SL SUC SME SL AREN TRS DOLOMIC SCAT OPAQUE-ABUNDANT LT BRN-DK BRN CHRT SCAT VF PYR SPECS TR POS LT BRN O-STNING SME SFT-PRED M HD-FRM VP-P INTXL POR TR POS FRAC POR TR V PALE YEL FLOR/WEAK MILKY-TR SLOW SL STRMING YEL CUT/FAINT-MED YEL RING

CON GAS 14U

C/:4603

SL SHOW 13U

SHOW 16U

CON GAS/SHOW 25U

C/:4635

SHOW 21U

4650

LS: SCAT OFF WHT TO CRM TO LT BRWN TO PRED BRWN TO DRK BRWN TO GRY, SME MOTT, SME BUFF TO SUB BUFF, SME LITHO TO VF TO F XLN TO F CXLN, SME V DNSE, TRC SUB CHLKY, PRED CLN, SLI SUC, SME SLI AREN, TRC DOLOMITIC, ABNDT LT BRWN TO DRK BRWN TO SCAT OPAQUE CHRT, SCAT VF PYR SPECS, TRC POS LT BRWN O-STNING, SCAT SFT TO PRED M HRD TO HRD TO FRM, VP TO P INTERXLN POR, TRC POS FRAC POR, TRC V PALE EL FLUOR W/WK MLKY TO TRC V SLOW STRMNG YEL CUT W/FAINT YEL RES RING

C/:4667

SHOW 22U

SHOW 23U

SHOW 21U

MW-IN:9.3
VIS:46
LCM:7#

4700

DEPTH: 4700
WOB:10
RPM:70
SPM:56
PP:900

C/:4699

LS: TRC OFF WHT TO CRM TO SME LT BRWN TO PRED BRWN TO DRK BRWN TO GRY, SME MOTT, SME BUFF TO SUB BUFF, SME LITHO TO VF TO F XLN TO F CXLN, SME V DNSE, TRC SUB CHLKY, PRED CLN, SLI SUC, SME SLI AREN, TRC DOLOMITIC, ABNDT LT BRWN TO DRK BRWN TO SCAT OPAQUE CHRT, SCAT VF PYR SPECS, TRC POS LT BRWN O-STNING, SCAT SFT TO PRED M HRD TO HRD TO FRM, VP TO P INTERXLN POR, TRC POS FRAC POR, TRC V PALE EL FLUOR W/WK MLKY TO TRC V SLOW STRMNG YEL CUT W/FAINT YEL RES RING

SHOW 26U

SHOW 29U

SHOW 25U

C/:4731

SHOW 26U

SCALE CHANGE 0-5

SCALE CHANGE 0-400

0 2 5 5

4750

SH: SME LT GY-DK GY-DK BRN VF-F TEX AND SM SME VF GRAN TEX AND ASHY SME V CARB SCAT VF PYR SPECS SFT-M HD SIL-TR SL CALC SCAT MOTT GRN AND WHT GLAU/HVY PYR INCL

SH GAS 39U

SH GAS W/CON GAS 50U

C/4763

SH GAS 51U

KINDERHOOK
MD: 4765'

SS: (-3596)

WOODFORD
MD: 4796'
SS: (-3627)

VIOLA
MD: 4823'
SS: (-3654)

VIOLA DOL/
1ST WILCOX
MD: 4830'
SS: (-3661)

STOPPED AT
4840'
CIRC. FOR
SAMPLES

STOPPED AT
4847'
CIRC. FOR
SAMPLES

SH: V LT GY-GY VF-F TEX AND SM SME VF GRAN TEX SME ELG AND ANG SME LMY/LS INCL SCAT VF PYR INCL SCAT MICA SFT-M HD PRED CALC

SH: V DK BRN-BLK VF-F TEX AND SM SME VF GRAN TEX AND ASHY V CARB SCAT VF PYR SPECS SCAT PYR CHUNKS SFT-M HD SIL-SME SL CALC

DOL: (1ST WILCOX) TRS CLR-FRSTD-OFF WH-LT BRN-BRN SME MOTT SME BUFF VF-F-MED-C XL-LRG RHOMS SME DNS PRED CLN SME LMY/LS INCL SCAT PCS OF WH CHLKY LS SME SUC AREN SCAT LT-MED-TRS DK BRN O-STNING SME DD O-STNING SME SFT-M HD-FRM VP-P-SME FR INTXL POR SCAT MED YEL FLOR/SLOW SL STRMING-MILKY YEL CUT/FAINT-MED YEL RING

STOPPED AT 4847' TO RUN 'E' LOGS

0 2 5

4800

2/16/2023

4850

4900

4950

SH GAS 39U

SH GAS 34U

C/:4794

HOT SH GAS 170U

SH GAS 137U

CON GAS/SHOW 129U

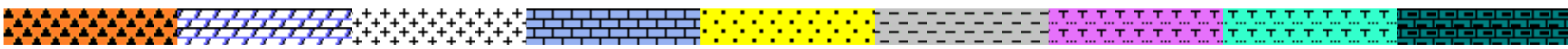
C/:4825

SHOW 368U

RECYCLED SHOW 90U

0 200.0 400

DRILLRATE	DEPTH	NOTES	POROSITY	LITHOLOGY	DESCRIPTIONS	CUT	FLUOR	HOT WIRE
								C1
								C2
								C3



Well Notes for KARL #1-8

2/14/2023

RUN DST TEST #1
FOMATION- MISSISSIPPI CHAT
TIME TOOL OPENED: 11:56:54
TIME TOOL ENDED: 17:28:44
INTERVAL: 4398' TO 4430'
TOTAL DEPTH: 4430'
HOLE DIAMETER: 7.88" HOLE CONDITION: FAIR

PRESS @RUN DEPTH: 51.11 PSIG @ 4399' CAPACITY: 8000 PSIG
START TIME: 10:24:54 END TIME: 17:28:44
TIME ON BOTTOM: 11:46:54
TIME OFF BOTTOM: 15:40:34
INITIAL OPEN: 30 MIN.
INITIAL SHUT IN: 60 MIN.
FINAL FLOW: 45 MIN.
FINAL SHUT IN: 90 MIN.

TEST COMMENT:
IF: STRONG BUILDING BLOW, BUILT 325.19" (30)
ISI: 141.45" BLOW BACK (60)
FF: STRONG BUILDING BLOW BUILT 326.68" (45)
FSI: 52.80" BLOW BACK (90)

PRESSURE SUMMARY:
TIME (MIN.)-0 PRESSURE-2179.92 TEMP-115.18 ANNOTATION-INITIAL HYDRO-STATIC
TIME(MIN.)-10 PRESSURE-18.94 TEMP-120.18 ANNOTATION-OPEN TO FLOW(1)
TIME(MIN.)-38 PRESSURE-42.51 TEMP-123.48 ANNOTATION-SHUT-IN(1)
TIME(MIN.)-97 PRESSURE-849.31 TEMP-127.98 ANNOTATION-END SHUT-IN(1)
TIME(MIN.)-98 PRESSURE-35.67 TEMP-135.61 ANNOTATION-OPEN TO FLOW(2)
TIME(MIN.)-141 PRESSURE-51.11 TEMP-125.54 ANNOTATION-SHUT-IN(2)
TIME(MIN.)-234 PRESSURE-876.63 TEMP-130.89 ANNOTATION-END SHUT-IN(2)
TIME(MIN.)-234 PRESSURE-2155.09 TEMP-133.76 ANNOTATION-FINAL HYDRO-STATIC

RECOVERY-LENGTH 63' MUD 100%M VOLUME-0.92

GAS RATES-FIRST GAS RATE-CHOKE-0.13 PRESSURE-2.15 PSIG GAS RATE-6.26 MCF/D
LAST GAS RATE-CHOKE-0.25 PRESSURE-12.02 PSIG GAS RATE-42.36 MCF/D
MAX GAS RATE-CHOKE-0.25 PRESSURE-12.02 PSIG GAS RATE-42.36 MCF/D

FLUID SAMPLES-0 GAS BOMBS-0

Mudlogging Definitions

AZI	Azimuth
BG	Background Gas
BP	By Pass
C/O	Change Out
CALC	Calculated
CHK	Check
CHL	Chloride
CO	Circulate Out
CS	Cutting Size
DC	Drill Collar
Dir TLS	Directional Tools
DP	Drill Pipe
DST	Drill Stem Test
DTG	Down Time Gas
DVSG	Deviation Survey Gas or Survey Gas
ELEC.	Electrical
FC	Flow Check (requires + or -; + means flow, - no flow)
FIT	Formation Integrity Test
GC	Gas Chromatograph
HCL	Hydrochloric Acid
INC	Inclination or angle
LAT	Log After Trip
LWD	Logging While Drilling
MM	Mud Motor
MWD	Measurement While Drilling
NB	New Bit
NR	No Returns or Lost Returns
PDC	Polycrystalline Diamond Compact
PP	Pump Pressure
PWR	Power
Rig Ser.	Rig Service
RPL	Replace
RRB	Re-Run Bit
SCP	Surface Casing Point
SHKR	Shaker
SPR	Slow Pump Rate
STPG	Short Trip Gas or Wiper Trip Gas
SVYG	survey Gas
SYS	System
TFNB	Trip for New Bit
THA	Total Hydrocarbon Analyzer
TOH	Trip Out of Hole
TPG	Trip Gas
TVD	True Vertical Depth
VS	Vertical Section
W/	With
WT	Mud Weight
BB	Blow Back
BHA	Bottom Hole Assembly or Lateral Assembly
C	Connection
CAL	Calibration
CG	Connection Gas
CHK FL	Check Flow (requires + or -; + means flow, - no flow)
CHNG	Change
CONN	Connection
CSG	Casing
DEN	Density
DISPL	Displace
DRLG	Drilling
DT	Down Time
DVS	Deviation Survey or Directional Survey
ECD	Equivalent Circulating Density
EMW	Equivalent Mud Weight
FIL	Filtrate
GB	Gas Buster
GR	Gamma Ray
ICP	Intermediate Casing Point
KB	Kelly Bushing
LOT	Leak Off Test
MD	Measured Depth
MON	Monitor
MWT	Mud Weight
NCB	New Core Bit
OBM	Oil Base Mud
PH	Potential Hydrogen
PPM	Parts Per Million
R	Rotate
ROP	Rate Of Penetration
RPM	Revolutions Per Minute
S	Slide
SCRN	Screen
SPM	Strokes Per Minute
STP	Short Trip or Wiper Trip
SVY	Survey
SWP	Sweep
TD	Total Depth
TG	Total Gas
TIH	Trip In Hole
TP	Trip
TRANS	Transfer
VIS	Viscosity
Vsec	Vertical Section
WOB	Weight On Bit