

Sec. _____ Twp. _____ S. R. _____ ☐ East ☐ West County: _____

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Name	Top	Datum
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:					

<div style="text-align: center;"> CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used Report all strings set-conductor, surface, intermediate, production, etc. </div>							
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 (Explain) _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water	Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:	
<input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i>	Top	Bottom

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:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Steffen Resource Development, LLC
Well Name	CAROL 6-23
Doc ID	1710977

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Production	7.875	5.5	15	4777	H long, classA	375	100
Surface	12.258	8.625	0	160		1956	100

OPERATOR

Company: Steffen Resource Development LLC
Address: 3500 N Mayfield Road
Hutchinson, Kansas 67502

Contact Geologist: Jim Musgrove
Contact Phone Nbr: 620-786-0839
Well Name: Carol #6-23
Location: 17-30s-7w SW-SW-SE-
API: 15-095-00007-00-01
Pool:
State: Kansas

Field: Spivey-Grabs-Basil
Country: USA

Scale 1:240 Imperial

Well Name: Carol #6-23
Surface Location: 17-30s-7w SW-SW-SE-
Bottom Location:
API: 15-095-00007-00-01
License Number: 35666
Spud Date: 3/20/2023 Time: 12:00 AM
Region: Kingman
Drilling Completed: 3/24/2023 Time: 12:00 AM
Surface Coordinates: 330' FSL & 2310' FEL
Bottom Hole Coordinates:
Ground Elevation: 1497.00ft
K.B. Elevation: 1510.00ft
Logged Interval: 4300.00ft To: 4886.00ft
Total Depth: 4300.00ft
Formation: Arbuckle
Drilling Fluid Type: Chemical/Fresh Water Gel

CASING SUMMARY

	Surface	Intermediate	Main		
Bit Size					
Hole Size					
	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8 5/8" in	160' ft			
Int Casing					
Prod Casing	5 1/2" in	4777' ft			

CASING SEQUENCE

Type	Hole Size	Casing Size	At
	0.00 in	0.00	0.00 ft

OPEN HOLE LOGS

Logging Company:
Logging Engineer:
Truck #:
Logging Date: Time Spent:
Logs Run: 0 # Logs Run Successful: 0

LOGS RUN

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
	0.00ft	0.00ft	0.00		0

LOGGING OPERATION SUMMARY

Date	From	To	Description Of Operation
12/5/2007	0.00ft	0.00ft	

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude:
Latitude:
N/S Co-ord: 330' FSL

N/S Co-ord: 330 T SE
E/W Co-ord: 2310' FEL

LOGGED BY



Company: James C Musgrove Petroleum LLC
Address: 212 Main Street/PO Box 215
Claflin, KS 67525

Phone Nbr: 620-588-4250 620-786-0839
Logged By: KLG #307

Name: James C Musgrove

CONTRACTOR

Contractor: Duke Drilling Co. Inc.
Rig #: 7
Rig Type: mud rotary
Spud Date: 3/20/2023
TD Date: 3/24/2023
Rig Release:
Time: 12:00 AM
Time: 12:00 AM
Time:

ELEVATIONS

K.B. Elevation: 1510.00ft
K.B. to Ground: 13.00ft
Ground Elevation: 1497.00ft

NOTES

Remarks:

5 1/2" disposal casing was set and cemented at 4777' (109' off the bottom).

Respectfully yours,

James C Musgrove
Petroleum Geologist

ROCK TYPES

	Cht		Clystcol		sdy lmst		shale, grn		shale, red
	Cht vari		Dolprim		Lmst fw<7		shale, gry		Ss
	Clystgy		Dolsec		Lmst fw7>		Carbon Sh		

ACCESSORIES

STRINGER

~~~~ Chert  
Limestone  
Sandstone  
Siltstone  
Shale  
green shale  
red shale  
carb shale

### OTHER SYMBOLS

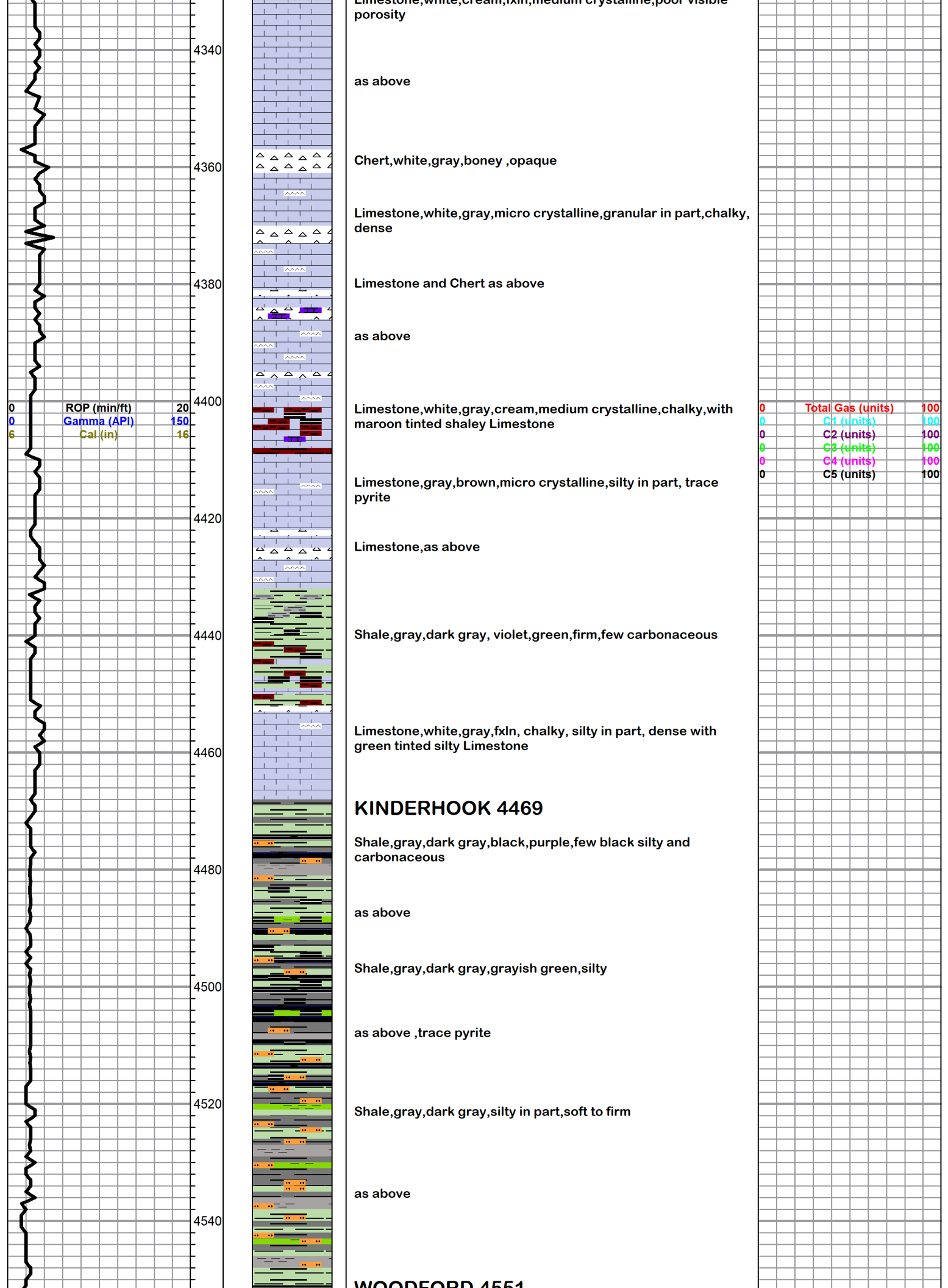
#### Oil Show

● Good Show  
● Fair Show  
○ Poor Show  
○ Spotted or Trace  
○ Questionable Strn  
D Dead Oil Strn  
■ Fluorescence  
\* Gas

#### DST

■ DST Int  
■ DST alt  
■ Core  
|| tail pipe





Limestone, white, cream, fxl, medium crystalline, poor visible porosity

as above

Chert, white, gray, boney , opaque

Limestone, white, gray, micro crystalline, granular in part, chalky, dense

Limestone and Chert as above

as above

Limestone, white, gray, cream, medium crystalline, chalky, with maroon tinted shaley Limestone

Limestone, gray, brown, micro crystalline, silty in part, trace pyrite

Limestone, as above

Shale, gray, dark gray, violet, green, firm, few carbonaceous

Limestone, white, gray, fxl, chalky, silty in part, dense with green tinted silty Limestone

### KINDERHOOK 4469

Shale, gray, dark gray, black, purple, few black silty and carbonaceous

as above

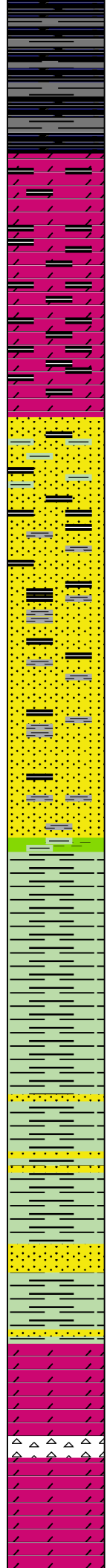
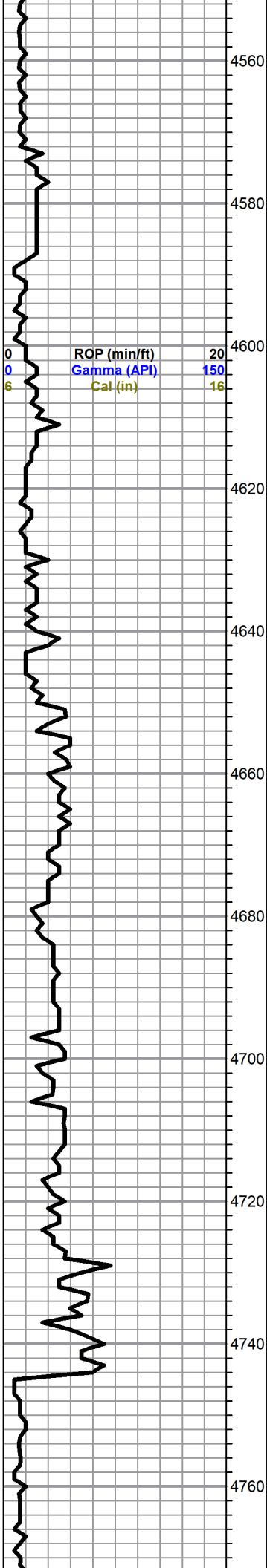
Shale, gray, dark gray, grayish green, silty

as above , trace pyrite

Shale, gray, dark gray, silty in part, soft to firm

as above

WOODFORD 4551



Shale,black carbonaceous,blocky,firm,trace pinpoint bleeding gas bubbles, no odor

as above

### VIOLA 4575

Dolomite,tan,buff,fxln, sucrosic,scattered intercrystalline porosity, with Chert,brown,white,opaque

Dolomite,as above,with trace Dolomite,cream,white, medium crystalline,silty in part,with trace black carbonaceous shales

as above

### SIMPSON SAND 4613

Sand,white,gray,tan,very fine grain,quartzitic,subrounded,friable in part,gray,dark gray , and black carbonaceous shale inclusions

Sand as as above

as above

### SIMPSON SHALE 4676

Shale,gray,dark gray,silty, firm

Shale,gray,light gray, grayish green,silty,hard to soft

Shale as above with sand,white,vfg,quartzitic,pore visible porosity, no shows

Sand,white,vfg,qtz,subrounded,fair sorting friable,trace pyrite inclusions

### ARBUCKLE 4740

Dolomite,white,tan,fxln,sucrosic, poor visible porosity

Dolomite,white,gray,tan,fxln,sucrosic, slightly cherty,dense, with trace white, boney Chert

Dolomite, as above

poor samples

|   |                   |     |
|---|-------------------|-----|
| 0 | Total Gas (units) | 100 |
| 0 | C1 (units)        | 100 |
| 0 | C2 (units)        | 100 |
| 0 | C3 (units)        | 100 |
| 0 | C4 (units)        | 100 |
| 0 | C5 (units)        | 100 |

poor samples

poor samples

BIT TRIP @  
4744.. PIPE  
STRAP  
INDICATED 8.96  
FT UPHOLE  
CORRECTION ,  
ALL SAMPLES  
TOPS, ON NEW  
DRILLED  
FORMATIONS,WI  
LL BE



|   |            |             |     |
|---|------------|-------------|-----|
| 0 | Total      | Gas (units) | 100 |
| 0 | C1 (units) |             | 100 |
| 0 | C2 (units) |             | 100 |
| 0 | C3 (units) |             | 100 |
| 0 | C4 (units) |             | 100 |
| 0 | C5 (units) |             | 100 |

**TERMS:** Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 3/4% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

ftv: 7-2020/11/30  
mplv: 367-2023/02/28





# WELL TREATMENT REPORT

Customer: STEFFEN RESOURCE DEVELOPMENT  
City, State: RAGO KS  
Field Rep: KURT STRUBE

Well: CAROL 6-23  
County: KINGMAN KS  
S-T-R: 17-30S-07W

Ticket: WP4089  
Date: 3/24/2023  
Service: 2 STAGE L.S.

## Downhole Information

Hole Size: 7 7/8 in  
Hole Depth: 4895 ft  
Casing Size: 5 1/2 in  
Casing Depth: 4777.21 ft  
Tubing / Liner: in  
Depth: ft  
Tool / Packer:  
Tool Depth: 313.57 ft  
Displacement: 112.7 bbls

## Calculated Slurry - Lead

Blend: H-LONG  
Weight: 15.0 ppg  
Water / Sx: 6.0 gal / sx  
Yield: 1.42 ft<sup>3</sup> / sx  
Annular Bbls / Ft.: bbs / ft.  
Depth: ft  
Annular Volume: 0.0 bbls  
Excess:  
Total Slurry: 44.3 bbls  
Total Sacks: 175 sx

## Calculated Slurry - Tail

Blend: CLASS A  
Weight: 15.6 ppg  
Water / Sx: 5.0 gal / sx  
Yield: 1.30 ft<sup>3</sup> / sx  
Annular Bbls / Ft.: bbs / ft.  
Depth: ft  
Annular Volume: 0 bbls  
Excess:  
Total Slurry: 34.7 bbls  
Total Sacks: 150 sx

| TIME     | RATE | PSI   | BBLs  | TOTAL BBLs | REMARKS                                                                                      |
|----------|------|-------|-------|------------|----------------------------------------------------------------------------------------------|
| 7:30 PM  |      |       | -     | -          | ON LOCATION                                                                                  |
| 8:10 PM  |      |       |       | -          | RUN 5 1/2 15.5# CASING WITH BASKET SHOE ON BOTTOM, BAFFLE IN COLLAR OF #1 DV TOOL AT 313.57' |
|          |      |       |       | -          | BASKET ON 1 & TURBOLIZERS IN 2,4,6,8,10,12,14 &                                              |
| 10:10 PM |      |       |       | -          | CASING IN, 118' OFF BOTTOM                                                                   |
| 10:32 PM |      |       |       | -          | DROP BALL, HOOK TO CASING, BREAK CIRCULATION WITH RIG                                        |
| 10:39 PM |      | 500.0 |       | -          | SET PAKER SHOE                                                                               |
| 11:35 PM | 3.0  | 310.0 | 24.0  | 24.0       | MIX 1000 GALLONS SUPER FLUSH II                                                              |
| 11:44 PM | 3.0  | 250.0 | 5.0   | 29.0       | PUMP 5 BBL WATEWR                                                                            |
| 11:45 PM | 5.0  | 410.0 | 44.3  | 73.3       | MIX 175 SKS H-LONG                                                                           |
| 11:58 AM | 4.0  | 25.0  | 4.0   | 77.3       | WASH PUMP AND LINES, DROP PLUG                                                               |
| 12:05 PM | 5.0  | 130.0 |       | 77.3       | START DISPLACEMENT                                                                           |
| 12:24 PM | 5.0  | 250.0 | 89.0  | 166.3      | LIFT PRESSURE                                                                                |
| 12:29 PM | 3.5  | 320.0 | 102.0 | 268.3      | SLOW RATE                                                                                    |
| 12:35 PM |      |       | 115.0 | 383.3      | PLUG DID NOT LAND, WENT 2% OVER, RELEASED AND HELD                                           |
| 12:58 PM |      |       |       | 383.3      | DROP OPENING TOOL                                                                            |
| 1:00 AM  | 2.0  | 25.0  | 7.0   | 390.3      | MIX 30 SKS H-PLUG FOR RAT HOLE                                                               |
| 1:05 AM  | 2.0  | 25.0  | 5.0   | 395.3      | MIX 20 SKS H-PLUG FOR MOUSE HOLE                                                             |
| 1:09 AM  |      | 500.0 |       | 395.3      | OPEN TOOL AND CIRCULATE                                                                      |
| 1:16 AM  | 3.8  | 130.0 | 34.7  | 430.0      | MIX 150 SKS CLASS A CEMENT TO SURFACE WHILE MIXING CEMENT                                    |
| 1:28 AM  | 4.0  | 25.0  | 4.0   | 434.0      | WASH PUMP AND LINES, DROP CLOSING PLUG                                                       |
| 1:32 AM  | 3.0  | 130.0 |       | 434.0      | START DISPLACEMENT                                                                           |
| 1:36 AM  |      |       | 7.7   | 441.7      | PLUG DID NOT LAND                                                                            |
| 1:50 AM  |      | 900.0 | 8.0   | 449.7      | PUMPED .25 BBL AND PLUG LANDED CLOSING TOOL                                                  |
|          |      |       |       | -          | JOB COMPLETE, THANK YOU!                                                                     |
|          |      |       |       | -          | MIKE MATTAL                                                                                  |
|          |      |       |       |            | AUSTIN & JOSH                                                                                |

## CREW

## UNIT

## SUMMARY

|                |         |         |              |                  |             |
|----------------|---------|---------|--------------|------------------|-------------|
| Cementer:      | MATTAL  | 912     | Average Rate | Average Pressure | Total Fluid |
| Pump Operator: | CLIFTON | 179/521 | 3.6 bpm      | 262 psi          | 450 bbls    |
| Bulk #1:       | JOSH    | 525/534 |              |                  |             |
| Bulk #2:       |         |         |              |                  |             |