KOLAR Document ID: 1670344

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 # 35615
Name: Darrah Oil Company, LLC
Address 1: 125 N MARKET SUITE 1015
Address 2:
City: WICHITA State: KS Zip: 67202 + 1700
Contact Person: Cooper Seely
Phone: (316) 219-3390
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Macklin Armstrong
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 #:

6/29/2022 Spud Date or Recompletion Date
7/7/2022 Date Reached TD
7/21/2022 Completion Date or Recompletion Date

API No.: 15-109-21634-00-00
Spot Description:
NE - SW - SE - SW Sec. 12 Twp. 14 S. R. 32 ☐ East ☑ West
335 Feet from ☐ North / ☑ South Line of Section
1815 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: Logan
Lease Name: OTTLEY Well #: 3-12
Field Name:
Producing Formation: Morrow
Elevation: Ground: 2849 Kelly Bushing: 2858
Total Vertical Depth: 4618 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 217 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2332 Feet
If Alternate II completion, cement circulated from: 2332
feet depth to: 0 w/ 300 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 6400 ppm Fluid volume: 2500 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: 10/21/2022
☐ **Confidential Release Date:** 10/20/2024
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** David Befort **Date:** 10/24/2022

Operator Name: Darrah Oil Company, LLC Lease Name: OTTLEY Well #: 3-12

Sec. 12 Twp. 14 S. R. 32 ☐ East ☑ West County: Logan

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
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:
Attached

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

Name	Top	Datum
Topeka	3630	-772
Heebner	3854	-996
Stark	4133	-1275
Fort Scott	4368	-1510

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	23	217	surface blend	180	-
Production	7.875	5.5	14	4609	h-long	170	-

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: 8/21/2022	Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ 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:	
		Top	Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	4494	4516

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)*
2	4494	4505			
2	4508	4516			

TUBING RECORD: Size: Set At: Packer At:

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

Form	ACO1 - Well Completion
Operator	Darrah Oil Company, LLC
Well Name	OTTLEY 3-12
Doc ID	1670344

All Electric Logs Run

micro
dual induction
sonic
porosity

Form	ACO1 - Well Completion
Operator	Darrah Oil Company, LLC
Well Name	OTTLEY 3-12
Doc ID	1670344

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	23	217	surface blend	180	-
Production	7.875	5.5	14	4609	h-long	170	-

Darrah Oil Company, LLC
Ottley No. 3-12
335' FSL and 1815' FWL
NE SW SE SW
Sec 12 T14S R32W
Logan County, Kansas

Geological Report
by

Macklin M. Armstrong

Scale 1:240 Imperial

Well Name:	Ottley No. 3-12		
Surface Location:	Sec 12 T14S R32W		
Bottom Location:	335' FSL and 1815' FWL		
API:	15-109-21634		
License Number:			
Spud Date:	6/29/2022	Time:	7:00 AM
Region:	Logan County, Kansas		
Drilling Completed:	7/7/2022	Time:	1:26 AM
Surface Coordinates:	199037 & 1194488		
Bottom Hole Coordinates:	199037 & 1194488		
Ground Elevation:	2849.00ft		
K.B. Elevation:	2858.00ft		
Logged Interval:	3400.00ft	To:	4620.00ft
Total Depth:	4600.00ft		
Formation:	Lansing/KC		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

OPERATOR

Company:	Darrah Oil Company, LLC		
Address:	125 N Market, Suite 1015 Wichita, Kansas 67202		
Contact Geologist:	John Hastings		
Contact Phone Nbr:	316-219-3390		
Well Name:	Ottley No. 3-12		
Location:	Sec 12 T14S R32W		
API:	15-109-21634		
Pool:	Oil	Field:	Chauk Buttes

State: Kansas Country: USA

CONTRACTOR

Contractor: Duke Drilling Company
Rig #: 4
Rig Type: mud rotary
Spud Date: 6/29/2022 Time: 7:00 AM
TD Date: 7/7/2022 Time: 1:26 AM
Rig Release: 7/8/2022 Time: 2:30 AM

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: 100.828537
Latitude: 38.845293
N/S Co-ord: 199037
E/W Co-ord: 1194488

ELEVATIONS

K.B. Elevation: 2858.00ft Ground Elevation: 2849.00ft
K.B. to Ground: 9.00ft

NOTES

Date	Depth at 7 am	Activity
6-29-22	MIRU	Spud at 7:00 am
6-30-22	600	Drilling
7-01-22	2282	Drilling
7-02-22	3400	CTCH for Bit Trip
7-03-22	3866	Drilling
7-04-22	4140	TOH for DST 1
7-05-22	4320	Drilling
7-06-22	4490	DST 2
7-07-22	4625	Logging
7-08-22	4625	Set 5 1/2"

Surface Casing: 8 5/8" 20# at 217'
Production Casing: 5 1/2" 15# at 4625

Deviation: 217' - 3/4°
2127 ' - 3/4°
3400 ' - 1/2°
4140 ' - 1/2°
4625 ' - 3/4°

Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
	JZ	12 1/4"	PL616	Surface	217	1
	JZ	7 7/8"	HA527	217	4625	

Drill Stem Tests:

DST No. 1 4092 to 4140 Lansing I and J Zones
30-30-30-30
Recovery: 25' OCM (10%O, 90%M)
IHP 2092 FHP 1991
IFP 36-38 FFP 26-29
ISIP 106 FSIP 69
Temp 116°

DST No. 2 4436 to 4490 Johnson Zone
30-45-45-60
Recovery: 2723' GIP
129' MCGO (30%G, 70%O - 33 deg gravity)
372' MCGO (20%M, 30%G, 50%O)
124' MCGO (20%M, 20%G, 60%O)
124' MWCGO (10%M, 10%W, 10%G, 70%O)

124' MWCGO (10%M, 10%W, 10%G, 70%O)
IHP 2341 FHP 2156
IFP 47-174 FFP 174-314
ISIP 1018 FSIP 972
Temp 128°

Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3	Well 4
Anhydrite	2295		+563	+16	+16	+28	+34
Base/Anhydrite	2334		+524	-2	-2	+10	+17
Stotler	3488		-630	-16	-16	-3	+5
Topeka	3630		-772	-19	-17	-7	-1
Heebner	3854		-996	-19	-14	-4	+2
Lansing	3892		-1034	-19	-14	-19	-1
B Zone	3926		-1115	-18	-13	+4	-3
D Zone	3974		-1116	-19	+1	-1	-4
Muncie Creek	4046		-1188	-13	-12	+1	+1
H Zone	4060		-1202	-10	-10	+4	+5
I Zone	4087		-1234	-9	-6	+5	+8
J Zone	4112		-1254	-9	-5	+6	+7
Stark	4133		-1275	-11	-11	+3	+4
K Zone	4145		-1287	-10	-9	+1	+4
Hushpuckney	4167		-1309	-14	-13	+4	+2
L Zone	4176		-1378	-15	-17	+5	-3
Base/Kansas City	4227		-1369	-16	-14	-2	-3
Marmaton	4269		-1411	-14	-11	+4	-3
Pawnee	4338		-1480	-10	-8	+5	+1
Fort Scott	4368		-1510	-9	-6	+9	+3
Cherokee Shale	4387		-1529	-8	-6	+10	+4
Lower Cherokee Shale	4417		-1559	-6	-3	+12	+4
Johnson Zone	4462		-1604	-7	-14	+12	+2
Morrow Shale	4497		-1639	-6	-11	+7	+3
Morrow Sand	4512		-1647	-7	-7	+9	+3
Mississippi	4522		-1664	-8	+11	+46	+27
Total Depth	4625		-1767				

Well 1: Pioneer Resources Ottley No. 2 NE SW SW SW Sec 12 T14S R32W
Well 2: Pioneer Resources Knopp No. 4 SE NW NW NW Sesc 13 T14S R32W
Well 2: Pioneer Resources Ottley No. 1 NE NW SE Sec 12 T14S R32W
Well 3 Pioneer Resources Knopp No. 7 2283' FNL & 1650' FEL Sec 13 T14S R32W

Pipe was set to further test the Johnson Zone.

Respectfully submitted,
Macklin M. Armstrong

ROCK TYPES

Lmst fw7> | shale, gry | shale, red | Ss
shale, grn | Carbon Sh | Shcol

ACCESSORIES

MINERAL
Sandy
Silty
Chert White

FOSSIL
Crinoids
Fossils < 20%
Oolite
Fussilinid

TEXTURE
Chalky

OTHER SYMBOLS

DST
DST Int
DST alt
Core

Curve Track #1
ROP (min/ft)

Gamma (API)

Cal (in)

1:240 Imperial

Depth | Intervals	DST	Lithology	Oil Show	Geological Descriptions	Comment

Cored Interval

DST Interval

0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16

3320
3340
3360
3380
3400

0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16

3420
3440
3460
3480

Darrah Oil Company, LLC
Ottley No. 3-12
335' FSL and 1815' FWL
NE SW SE SW
Sec 12 T14S R32W
Logan County, Kansas

GL 2849 KB 2858

Sh-gry/red

Ls-gry fxln mdh no por

Sh-gry/red

Ls-gry fxlm mhd no por

Sh-gry/dk gry sl sdy

Sh-AA

Sh-gry/dk gry sl sdy

Sh-AA

---------- **Stotler 3488 -630** ----------

Mud Program:
Mudco:
Chemical Gel/Premix

Sample Cuttings:
Kansas Geological Survey
Well Sample Library

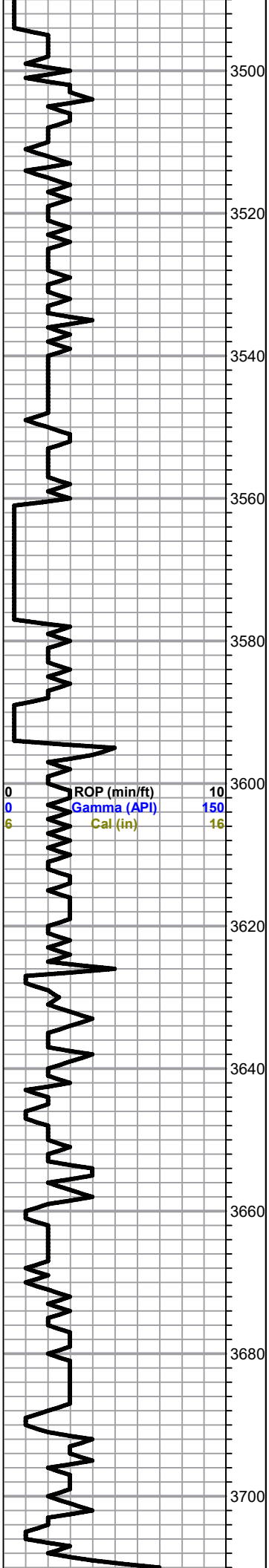
Testing: Trilobite Testing

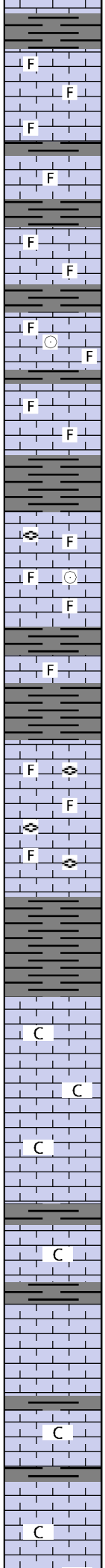
Electric Logs: ELI Wireline Services
DIL
CNL/CDL
MEL
SONIC

Deviation:
217' - 1/4°
2127' - 1/2°
3400' - 1/2°
4140' - 1/2°
4625' - /4°

Mud Data 3400'
8:20 am on 7-2-22
Wt 8.7 Vis 54 WL 6.4
pH 11.5 Chl 2000 Sol 2.4
YP 15 LCM 1.0

All fromation tops on this geological log have been correlated back to





Ls-gry fxln mhd no por

Sh-gry/dk gry

Ls-lt gry/tan f/mxln mhd/dns sl fos no por

Ls-AA

Sh-gry

Ls-lt gry/tan f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

Ls-lt gry/tan f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

Ls-lt gry/tan f/mxln dns sl fos no por sm free crin

Sh-gry

Ls-lt gry/tan f/mxln dns sl fos no por

Sh-gry/dk gry

Ls-tan fxln to blky mhd highly fos no por sm free fussil and crin

Ls-AA

Sh-gry/dk gry

Ls-tan/lt gry fxln mhd/dns sl fos no por

Sh-gry/dk gry

Ls-tan/crm blky mhd highly fos sl clky no por sm free fussil

Ls-AA

Ls-AA

Sh-gry/dk gry

Sh-AA

----------Topeka 3630 -772 ----------

Ls-tan/crm fxln mhd fos sl clky no por

Ls-AA

Ls-crm/lt gry fxln mhd sl clky no por

Sh-gry/dk gry

Ls-crm/lt gry fxln mhd sl clky no por

Sh-gry/dk gry

Ls-tan fxln mjhd/dns no por

Ls-AA

Sh-gry/dk gry

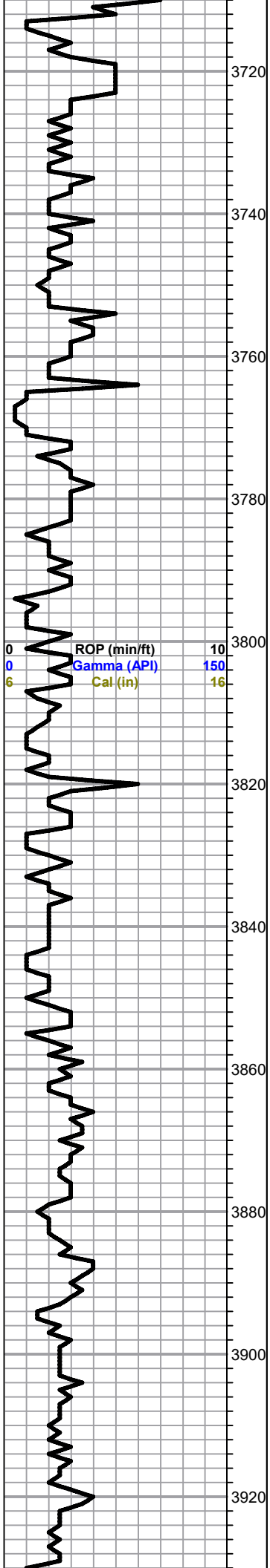
Ls-tan/lt gry fxln mhd/dns no por

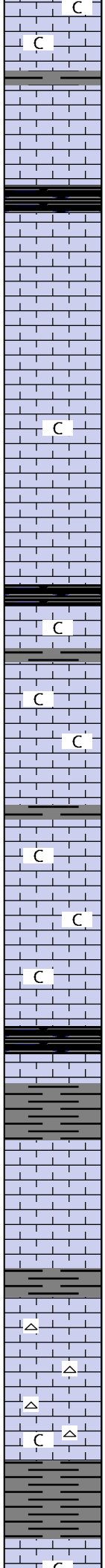
Sh-gry/dk gry

Ls-tah/lt gry fxln mhd no por

Ls-tan/lt gry fxln soft/mhd clky no por

the electric log





Ls-tan/lt gry fxln dns sl clky no por

Ls-tan/lt gry fxln soft/mhd clky no por

Sh-gry/dk gry

Ls-tan lt gry fxln mhd no por

Ls-AA

Sh-blk carb

Ls-tan/lt gry fxln mhd no por

Ls-AA

Ls-tan/lt gry fxln mhd/dns no por

Ls-AA

Ls-crm/lt tan fxln soft clky no por

Ls-tan fxln mhd/dns no por

Ls-AA

Sh-blk carb

Ls-lt gry/crm fxln mhd sl clky no por

Sh-gry/dk gry

Ls-lt gry/crm fxln mhd sl clky no por

Ls-AA

Ls-lt gry/crm fxln dns no por

Sh-gry/dk gry

Ls-crm/lt tan fxln mhd sl clky no por

Ls-AA

Ls-lt gry fxln mhd fos sl clky no por

Ls-gry/lt gry f/mxln mhd/dns no por

---------- **Heebner 3854 -996** ----------

Sh-blk carb

Ls-gry f/mxln dns no por

Sh-gry/dk gry

Ls-lt gry/wt fxln dns no por

Ls-AA

Ls-lt gry fxln dns no por

---------- **Lansing 3892 -1034** ----------

Ls-crm/lt tan fxln mhd no pr sm Cht-wt/tan fsh opaq

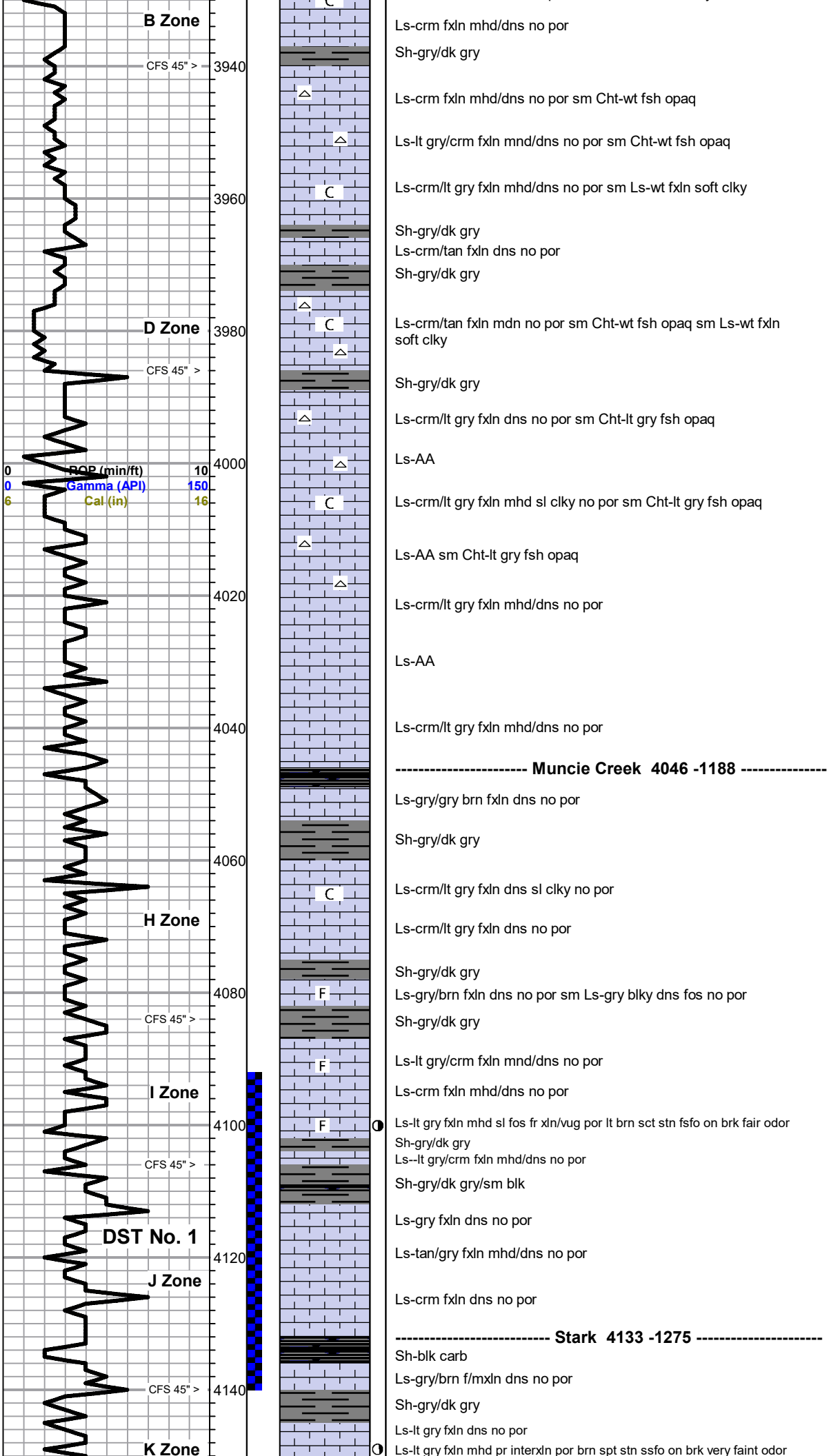
Ls-crm/lt gry fxlndns no por sm Cht-wt/tan fxh opaq

Ls-crm/tan fxln dns no por sm Ls-wt fxln soft clky
and sm Cht-wt/tan fsh opaq

Sh-gry/dk gry

Ls-crm fxln mhd/dns no por sm Ls-wt fxln soft clky

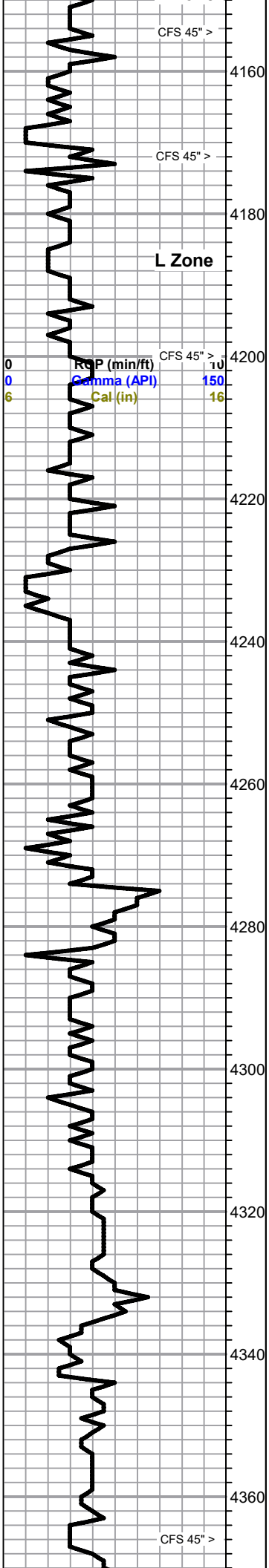
Mud Data 3867'
7:00 am on 7-3-22
Wt 9.1 Vis 57 WL 8.0
pH 11.0 Chl 2500 Sol 5.4
YP 16 LCM 1.0



DST No. 1
4092 to 4140
30-30-30-30
1st Open: Weak blob, built to 1 1/4"
2nd Open: Weak blow, built to 1 1/2"
Recovery: 25' OCM (10%O, 90%M)
IHP 2092 FHP 1992
IFP 36-38 FFP 26-29
ISIP 106 FSIP 116
116°

Pulled 15 stand short trip at 4140' then cir for test 60"

Pipe strap at 4140'. Short



Ls-lt gry fxln mhd/dns no por

Ls-lt gry fxln mhd pr interxln por trc brn stn vssfo on brk very faint odor

Ls-lt gry fxln mhd/dns no por and Ls-crm fxln mhd sl clky no por

---------- **Hushpuckney 4167 -1309** ----------

Sh-blk carb
Ls-gry f/mxln dns no por
Sh-gry/grn/mar

Ls-gry f/mxln mhd sl fos fr/gd vud interxln por dk brn sct to sat stn gd cut f/gsfo on brk fr odor

Ls-lt gry/crm fxln mhd clky no por

Ls-AA

Ls-crm/lt gry/tan fxln mhd sll clky no por

Ls-crm/fxln dns no por

Ls-crm/lt gry fxln dns no por
Sh-gry/dk gry

Ls-lt gry fxln mhd/dns no por
Sh-gry/dk gry

Ls-lt gry fxln mhd/dns no por

---------- **Base/Kansas City 4227 -1369** ----------

Sh-gry/dk gry

Sh-AA

Sh-AA

Ls-crm/lt gry fxln dns no por

Sh-gry/dk gry
Ls-crm/lt gry fxln dns no por
Sh-gry/mar/grn

---------- **Marmaton 4269 -1411** ----------

Ls-crm fsln mhd sl clky no por

Ls-lt gry fsln dns no por

Ls-lt gry fxln mhd fos ool no por sm Ls-lt yel to tan fxln mhd fos ool no por

Sh-gry/dk gry

Ls-crm/lt gry fxln mhd/dns no por

Sh-gry/dk gry

Ls-lt gry fxln dns no por

Ls-AA

Ls-lt gry fxln dns no por

Ls-lt gry fxln dns no por sm Cht-gry wt fsh opaq
Sh-blk carb

---------- **Pawnee 4338 -1480** ----------

Ls-lt gry fxln mhd no por sm Cht-gry wt fsh opaq

Ls-lt gry/gry fxln dns sl fos no por sm Cht-gry wt fsh opaq

Ls-gry/gry brn f/mxln dns no por sm Cht-wt/gry wt fsh opaq

Ls-AA sm Cht-wt fsh opaq
Sh-blk carb

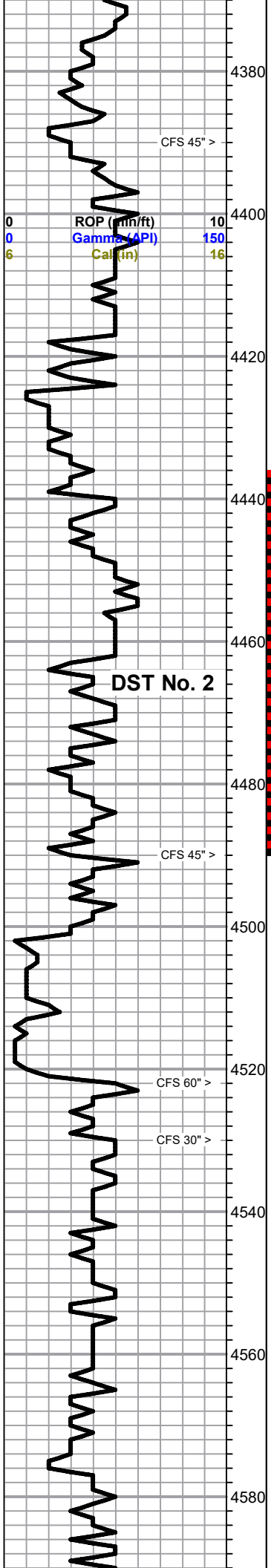
---------- **Fort Scott 4368 -1510** ----------

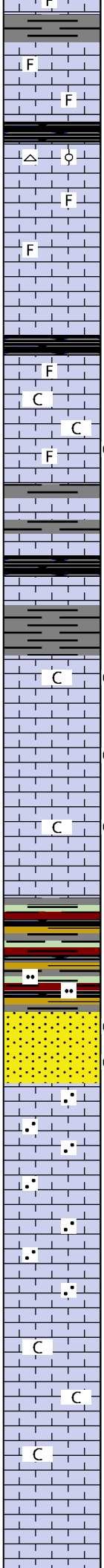
Ls-gry f/mxln dns sl fos no por

7.22' to board..

Mud Data 4140'
9:20 am on 7-4-22
Wt 9.2 Vis 58 WL 8.8
pH 11.0 Chl 3000 Sol 5.9
YP 15 LCM 2.0

Mud Data 4347'
8:50 am on 7-5-22
Wt 9.3 Vis 54 WL 8.8
pH 10.5 Chl 3600 Sol 6.6
YP 16 LCM 2.0





Sh-gry/dk gry

Ls-lt gry/gry fxln mhd fos no por

Ls-lt gry/gry/brn fxln mhd sl fos no por

---------- Cherokee Shale 4387 -1529 ----------

Sh-blk carb

Ls-gry/gry brn fxln mhd fos ool no por sm Cht-wt/brn fsh opaq

Ls-gry/gry brn fxln dns sl fos no por

Ls-AA

Ls-gry/tan fxln dns no por

---------- Lower Cherokee Shale 4417 -1559 ----------

Sh-blk carb

Ls-tan/brn fxln mhd fos no por

Ls-lt gry fxln soft/mhd clky no por

Ls-tan/gry fxln to sl blky mhd sl fos no por with few pcs (10) of Ls-brn fxln mhd pr/fr pp por fr cut vssfo on brk trc odor

Sh-gry/dk gry

Ls-tan/brn fxln dns no por

Sh-gry/dk gry

Ls-tan/brn fxln dns no por

Sh-blk carb

Ls-tan/brn/gry fxln dns no por

Sh-gry/dk gry

---------- Johnson Zone 4462 -1604 ----------

Ls-lt gry/tan fxln mhd sl clky no por with few pcs (10) Ls-brn fxln mhd fr vug por dk brn sct to sat stn gd cut ssfo on brk trc odor

Ls-lt gry/tan fxln mhd/dns no por with few pcs (3) Ls-brn fxln mhd pr interxln por dk brn sat stn fr cut vssfo and gas bub on brk faint cup odor

Ls-crm/tan fxln mhd/dns clky no por with few pcs (3) Ls-ben fxln mhd fr vug por dk brn sat stn fr cut vssfo on brk faint cup odor

Ls-lt gry/gry/brn fxln mhd/dns no por

---------- Morrow Shale 4497 -1639 ----------

Sh-gry/grn/red/blk/yel

Sh-AA with sm Siltstone lt grn vfgrn very soft to gummy

---------- Morrow Sand 4512 -1654 ----------

Ss-clr fgrn fri sat stn gd cut f/gsfo fr odor

Ss-AA with sm Ss-clr f/mgrn sl fri nofo

---------- Mississippi 4522 -1964 ----------

Ls-wt/crm fxln dns sl sdy no por

Ls-AA

Ls-wt/crm fxln dns sl sdy no por

Ls-AA

Ls-crm/lt tan fxln mhd/dns no por sm Ls-wt fxln soft clky and sm Cht-lt tan fsh opaq

Ls-AA with sm Cht-lt tan fsh opaq

Ls-crm/lt tan fxln mhd sl clky no por

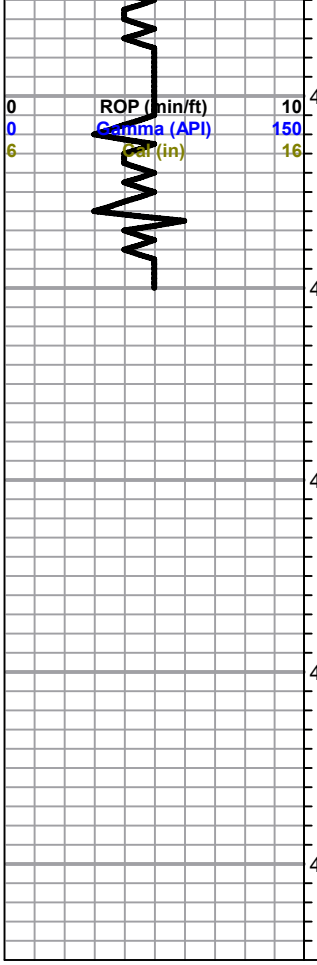
Ls-AA

DST No. 2

4436 to 4490
30-45-45-60
1st Open: BOB in 3"
2nd Open: BOB in 4"
Recovery:
2723' GIP
129' GO (30%G, 70%O)
372' MCGO (20%M, 30%G 50%O)
124' MCGO (20%M, 20%G 60%O)
124' MWCGO (10%M, 10%W, 10%G, 70%O)
IHP 2341 FHP 2156
IFP 47-174 FFP 174-314
ISIP 1018 FSIP 972
128°

Pulled 10 stand short trip at 4490' then cir for test 60"

Mud Data 4490'
8:30 am on 7-6-22
Wt 9.5 Vis 59 WL 9.6
pH 9.5 Chl 3500 Sol 8.2
YP 19 LCM 1.0



4600

4620

4640

4660

4680

Ls-crm/lt tan fxln mhd/dns no por

Ls-AA

Ls-crm/lt gry fxln mhd/dns no por

Ls-AA

---------- RTD 4625 -1767 ----------

Finished drilling at 1:26 am on 7-7-22. Circulated for log 90 minutes.

Fiished logging at 0:00 am on 7-7-22.

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 0632
LOCATION Hoxie
FOREMAN Tom Williams

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-29-22	35615	Ottley 3-12	12	14	32 W	Logan

CUSTOMER: Donrad Oil Company LLC
MAILING ADDRESS: 125 N Market Suite 1425
CITY: Wichita | STATE: KS | ZIP CODE: 67202

TRUCK #	DRIVER	TRUCK #	DRIVER
101	Tom W		

JOB TYPE Surface HOLE SIZE 12¼ HOLE DEPTH 217' CASING SIZE & WEIGHT 8 5/8" 23#
CASING DEPTH 217' DRILL PIPE _____ TUBING _____ OTHER _____
SLURRY WEIGHT 14.8 SLURRY VOL 1.4 WATER gal/sk _____ CEMENT LEFT in CASING _____
DISPLACEMENT 12.5 Bbl DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting & set up on Duke #4. Circulated mud. Pump 180sk surface Blend & displaced 12.5 Bbls. & shut In. at 6:15 cement did circulate

Thanks Tom & Jacks

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
PL002	1	PUMP CHARGE Surface	$1150.00	$1150.00
M002	65	MILEAGE	$1.50	$472.50
M001	5.52 tons	Ton Milage Delivery	$859.95	$859.95
CB004	180 sk	Class A 3% cc 2% gel	$24.50	$4410.00
			sub total	$6842.45
			less 10% disc.	$684.24
			sub total	$6,158.21
			SALES TAX	317.52
			ESTIMATED TOTAL	6475.73

AUTHORIZATION Hector Jones 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.

HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:

DARRAH OIL
C/O JOHN JAY DARRAH JR
PO BOX 2786
WICHITA, KS 67201-2786

Invoice Date:	7/19/2022
Invoice #:	0361881
Lease Name:	Ottley
Well #:	3-12 (New)
County:	Logan, Ks
Job Number:	WP3100
District:	Oakley

Date/Description	HRS/QTY	Rate	Total
Port Collar	0.000	0.000	0.00
H-CON	300.000	24.000	7,200.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	658.000	1.500	987.00
Depth Charge 2001'-3000'	1.000	1,920.000	1,920.00
Cement Blending & Mixing	350.000	1.344	470.40
Service Supervisor	1.000	264.000	264.00
Cement Service-After 4 Hours	3.000	288.000	864.00
Cement Data Acquisition	1.000	240.000	240.00

Total 12,345.40

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!

Hurricane Services, Inc.
250 N. Water St., Suite #200
Wichita, KS 67202

Customer	Darrah Oil Co	**Lease & Well #**	Ottley #3-12			**Date**	7/19/2022
Service District	Oakley KS	**County & State**	Logan KS	**Legals S/T/R**	12-14S-32W	**Job #**	
Job Type	Port Collar	☑ PROD ☐ INJ ☐ SWD		**New Well?**	☑ YES ☐ No	**Ticket #**	WP 3100

Equipment #	Driver
73	Josh
230	John
159-250	Tyler
VAP	Scotty

Job Safety Analysis - A Discussion of Hazards & Safety Procedures

☑ Hard hat	☑ Gloves	☐ Lockout/Tagout	☐ Warning Signs & Flagging
☑ H2S Monitor	☑ Eye Protection	☐ Required Permits	☐ Fall Protection
☑ Safety Footwear	☐ Respiratory Protection	☑ Slip/Trip/Fall Hazards	☑ Specific Job Sequence/Expectations
☑ FRC/Protective Clothing	☐ Additional Chemical/Acid PPE	☑ Overhead Hazards	☑ Muster Point/Medical Locations
☐ Hearing Protection	☑ Fire Extinguisher	☐ Additional concerns or issues noted below	

Comments

Product/ Service Code	Description	Unit of Measure	Quantity			Net Amount
CP025	H-Con	sack	300.00			$7,200.00
M015	Light Equipment Mileage	mi	40.00			$80.00
M010	Heavy Equipment Mileage	mi	80.00			$320.00
M020	Ton Mileage	tm	658.00			$987.00
D013	Depth Charge: 2001'-3000'	job	1.00			$1,920.00
C060	Cement Blending & Mixing Service	sack	350.00			$470.40
R061	Service Supervisor	day	1.00			$264.00
C030	Cement Service - After 4 Hrs on Location	hr	3.00			$864.00
C035	Cement Data Acquisition	job	1.00			$240.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Based on this job, how likely is it you would recommend HSI to a colleague?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely

				Net:	$12,345.40
Total Taxable	$ -	Tax Rate:			
State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.				Sale Tax:	$ -
				Total:	$ 12,345.40

HSI Representative: *John Polley*

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 ½% 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 fom 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 informaiton in determining taxable services.

X_____ **CUSTOMER AUTHORIZATION SIGNATURE**

CEMENT TREATMENT REPORT

Customer:	Darrah Oil Co	**Well:**	Ottley #3-12	**Ticket:**	WP 3100
City, State:	Oakley KS	**County:**	Logan KS	**Date:**	7/19/2022
Field Rep:	Copper	**S-T-R:**	12-14S-32W	**Service:**	Port Collar

Downhole Information	
Hole Size:	7 7/8 in
Hole Depth:	4556 ft
Casing Size:	5 1/2 in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	2332 ft
Displacement:	12.8 bbls

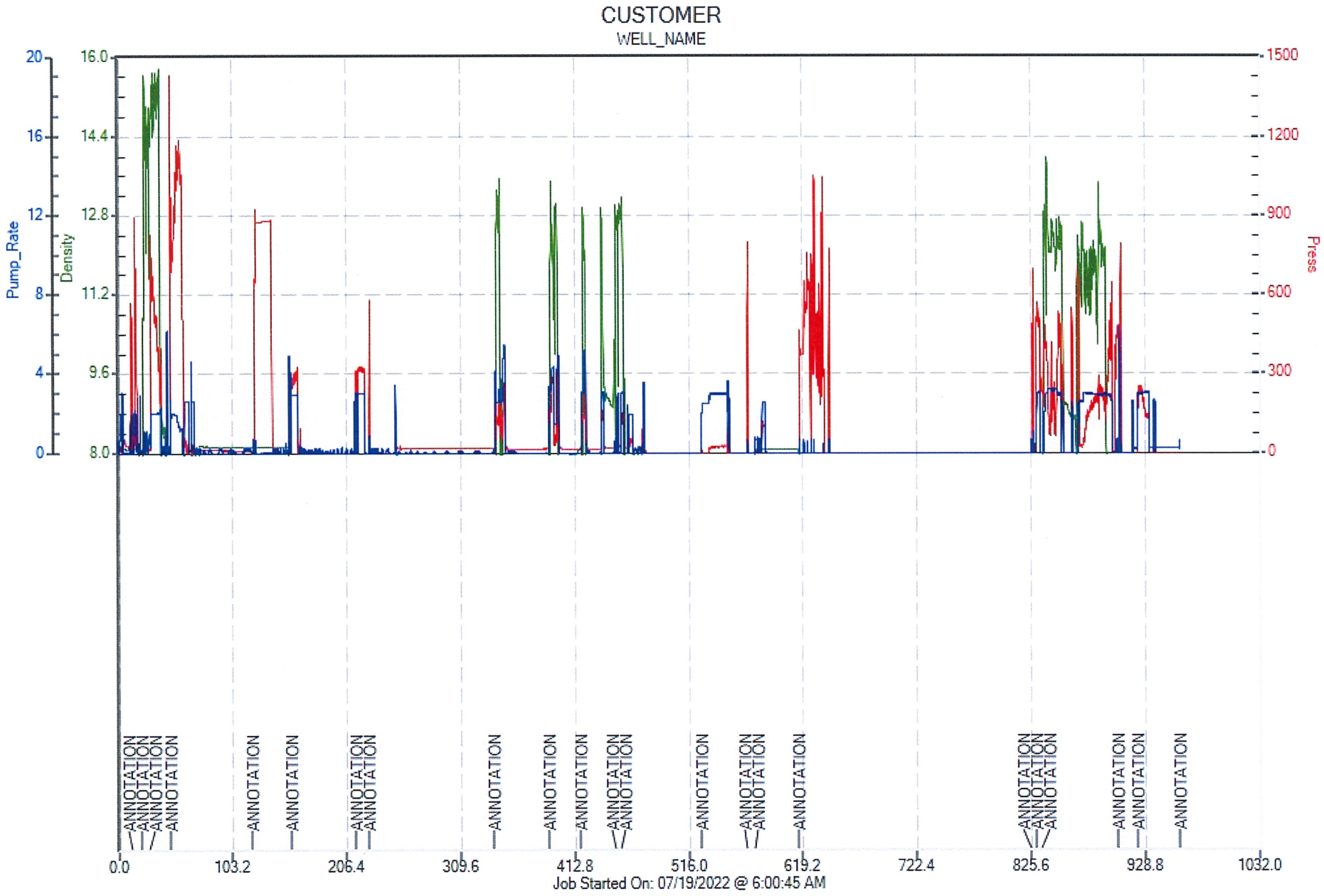
Calculated Slurry - Lead	
Blend:	H-Con
Weight:	12.0 ppg
Water / Sx:	15.5 gal / sx
Yield:	2.56 ft^3 / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	2332 ft
Annular Volume:	72.1 bbls
Excess:	
Total Slurry:	136.7 bbls
Total Sacks:	300 sx

Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
8:35 AM			-	-	Arrived on location
8:45 AM				-	Safety meeting
8:55 AM				-	Rigged up
10:20 AM	3.0	150.0	73.0	73.0	Loaded hole
11:02 AM	0.5	740.0	0.3	73.3	Pressure tested tubing
11:10 AM	2.5	100.0	11.0	84.3	Spotted sand @ 3140'
11:19 AM				84.3	Shut down and waited for sand to fall
11:49 AM				84.3	Had trouble opening tool tripped out of hole
3:20 PM	0.5	500.0	0.3	84.5	Pressure tested back side
3:24 PM	3.0	530.0	10.0	94.5	Water ahead
3:32 PM	3.0	450.0	52.0	146.5	Mixed 114 sacks H-Con cement @ 12.0 ppg
3:45 PM					Shut down waited for 15 minutes
4:02 PM	2.7	175.0	84.7		Mixed 300 total sacks H-Con cement @ 12.0 ppg
4:08 PM	3.0	150.0	10.0		Gained circulation through 8 5/8 backside @ 10 bbls out
4:26 PM	3.0	250.0	84.7		Circulated 12 bbls cement through 8 5/8 backside to pit @ 136.7 out 12.0 ppg
4:27 PM	2.9	260.0	12.8		Begin displacement
4:33 PM					Shut down
4:35 PM					Closed tool
4:37 PM	0.5	500.0	0.3		Pressure test through backside
4:56 PM	3.0	170.0	30.0		Reversed out going short way
5:07 PM					Shut down
5:09 PM	3.0	100.0			Washed up tub and pump
5:34 PM	3.0	160.0			Washed out sand
5:57 PM	3.0	470.0	80.0		Pump crude oil down hole
6:32 PM					Cleared lines and pump
6:34 PM					Rigged down
6:52 PM					Left location

CREW		UNIT
Cementer:	Josh	73
Pump Operator:	John	230
Bulk #1:	Tyler	159-250
Bulk #2:	Scotty	VAP

SUMMARY		
Average Rate	Average Pressure	Total Fluid
2.4 bpm	314 psi	449 bbls


CUSTOMER
WELL_NAME
Pump_Rate
Density
Press
20
16
12
8
4
0
16.0
14.4
12.8
11.2
9.6
8.0
1500
1200
900
600
300
0
ANNOTATION
0.0
103.2
206.4
309.6
412.8
516.0
619.2
722.4
825.6
928.8
1032.0
Job Started On: 07/19/2022 @ 6:00:45 AM

HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:

DARRAH OIL
C/O JOHN JAY DARRAH JR
PO BOX 2786
WICHITA, KS 67201-2786

Invoice Date:	7/8/2022
Invoice #:	0361888
Lease Name:	Ottley
Well #:	3-12 (New)
County:	Logan, Ks
Job Number:	WP3049
District:	Oakley

Date/Description	HRS/QTY	Rate	Total
Longstring	0.000	0.000	0.00
H-Long	150.000	33.600	5,040.00
H-Plug	50.000	13.440	672.00
Cement Friction Reducer	57.000	7.680	437.76
Cement baskets 5 1/2"	1.000	288.000	288.00
5 1/2" Turbolizers	5.000	120.000	600.00
5 1/2" Floatshoe-Flapper AFU	1.000	360.000	360.00
5 1/2" Port Collar	1.000	3,360.000	3,360.00
5 1/2" LD Plug & Baffle	1.000	336.000	336.00
Service Supervisor	1.000	264.000	264.00
Mud flush	500.000	0.960	480.00
KCL-CS701	5.000	28.800	144.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	366.000	1.500	549.00
Depth Charge 4001'-5000'	1.000	2,400.000	2,400.00
Cement plug container	1.000	240.000	240.00
Cement Blending & Mixing	200.000	1.344	268.80

Total 15,839.56

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

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WE APPRECIATE YOUR BUSINESS!

Hurricane Services, Inc.
250 N. Water St., Suite #200
Wichita, KS 67202

Customer	Darrah Oil Co	**Lease & Well #**	Ottley 3-12			**Date**	7/8/2022
Service District	Oakley KS	**County & State**	Logan KS	**Legals S/T/R**	12-14S-32W	**Job #**	
Job Type	Longstring	☑ PROD ☐ INJ ☐ SWD		**New Well?**	☑ YES ☐ No	**Ticket #**	WP 3049

Equipment #	Driver
64	John
208	Jose V
180-530	Charlie

Job Safety Analysis - A Discussion of Hazards & Safety Procedures

☑ Hard hat	☑ Gloves	☐ Lockout/Tagout	☐ Warning Signs & Flagging
☑ H2S Monitor	☑ Eye Protection	☐ Required Permits	☐ Fall Protection
☑ Safety Footwear	☐ Respiratory Protection	☑ Slip/Trip/Fall Hazards	☑ Specific Job Sequence/Expectations
☑ FRC/Protective Clothing	☐ Additional Chemical/Acid PPE	☑ Overhead Hazards	☑ Muster Point/Medical Locations
☐ Hearing Protection	☑ Fire Extinguisher	☐ Additional concerns or issues noted below	

Comments

Product/ Service Code	Description	Unit of Measure	Quantity			Net Amount
CP030	H-Long	sack	150.00			$5,040.00
CP055	H-Plug	sack	50.00			$672.00
CP133	Cement Friction Reducer	lb	57.00			$437.76
FE130	5 1/2" Cement Basket	ea	1.00			$288.00
FE135	5 1/2 Turbolizer	ea	5.00			$600.00
FE145	5 1/2" Float Shoe - AFU Flapper Type	ea	1.00			$360.00
FE165	5 1/2" Port Collar	ea	1.00			$3,360.00
FE170	5 1/2" Latch Down Plug & Baffle	ea	1.00			$336.00
R061	Service Supervisor	day	1.00			$264.00
CP170	Mud Flush	gal	500.00			$480.00
AF055	Liquid KCL Substitute	gal	5.00			$144.00
M015	Light Equipment Mileage	mi	40.00			$80.00
M010	Heavy Equipment Mileage	mi	80.00			$320.00
M020	Ton Mileage	tm	366.00			$549.00
D015	Depth Charge: 4001'-5000'	job	1.00			$2,400.00
C050	Cement Plug Container	job	1.00			$240.00
C060	Cement Blending & Mixing Service	sack	200.00			$268.80

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Based on this job, how likely is it you would recommend HSI to a colleague?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely

			Net:	$15,839.56
Total Taxable	$ -	**Tax Rate:**		
State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.			**Sale Tax:**	$ -
			Total:	$ 15,839.56

HSI Representative: *John Polley*

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X_____ **CUSTOMER AUTHORIZATION SIGNATURE**

ftv: 13-2021/01/19
mplv: 258-2022/03/01

CEMENT TREATMENT REPORT

Customer:	Darrah Oil Co	**Well:**	Ottley 3-12	**Ticket:**	WP 3049
City, State:	Oakley KS	**County:**	Logan KS	**Date:**	7/8/2022
Field Rep:	Cooper	**S-T-R:**	12-14S-32W	**Service:**	Longstring

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	4618 ft
Casing Size:	5 1/2 in
Casing Depth:	4608 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	2333 ft
Displacement:	111.2 bbls

Calculated Slurry - Lead	
Blend:	H-Plug
Weight:	13.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.42 ft^3 / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	12.6 bbls
Total Sacks:	50 sx

Calculated Slurry - Tail	
Blend:	H-Long
Weight:	15 ppg
Water / Sx:	6.2 gal / sx
Yield:	1.36 ft^3 / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	36.3 bbls
Total Sacks:	150 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
8:53 PM			-	-	Arrived on location
9:03 PM				-	Safety meeting
9:13 PM				-	Rigged up
1:15 AM				-	Casing on bottom
1:36 AM				-	Circulated mud
2:38 AM	3.2	200.0	5.0	5.0	Water ahead
2:40 AM	3.5	200.0	12.0	17.0	Pumped mud flush
2:45 AM	3.0	200.0	10.0	27.0	Water behind
2:53 AM	2.0	100.0	7.5	34.5	Mixed 30 sacks H-Plug cement @ 13.8 ppg for rat hole plug
2:58 AM	3.0	250.0	5.0	39.5	Mixed remaining 20 sacks H-Plug cement down hole @ 13.8 ppg
3:01 AM	5.0	300.0	36.3	75.8	Mixed 150 sacks H-Long cement down hole @ 15.0 ppg
3:14 AM					Shut down, loaded plug and cleared pump and lines
3:25 AM	6.0	300.0	111.2		Begin displacement with KCL in first 40 bbls
3:46 AM		1,400.0			Plug down with 900 landing psi and 1400 bump psi
3:48 AM					Released pressure plug held with 1/2 bbl back to tank
3:50 AM					Washed up and rigged down
4:15 AM					Left location

	CREW	UNIT
Cementer:	John	64
Pump Operator:	Jose V	208
Bulk #1:	Charlie	180-530
Bulk #2:		

SUMMARY

Average Rate	Average Pressure	Total Fluid
3.7 bpm	369 psi	187 bbls

ftv: 13-2021/01/19
mplv: 258-2022/03/01

DRILL STEM TEST REPORT

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67986 **DST#: 1**

Test Start: 2022.07.04 @ 08:29:16

GENERAL INFORMATION:

Formation: **Lansing I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:02:46
Time Test Ended: 14:53:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4092.00 ft (KB) To 4140.00 ft (KB) (TVD)
Total Depth: 4140.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

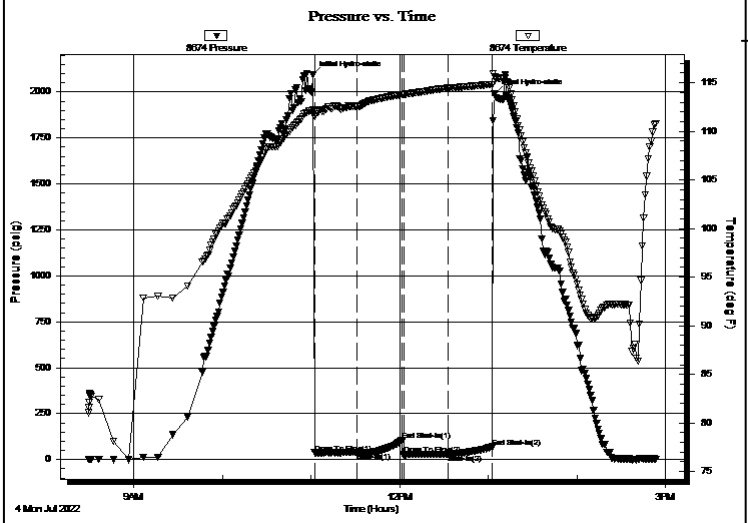
Reference Elevations: 2858.00 ft (KB)
2848.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8674 **Outside**

Press@RunDepth: 28.75 psig @ 4093.00 ft (KB)
Start Date: 2022.07.04 End Date: 2022.07.04
Start Time: 08:29:21 End Time: 14:53:45

Capacity: 8000.00 psig
Last Calib.: 2022.07.04
Time On Btm: 2022.07.04 @ 11:01:16
Time Off Btm: 2022.07.04 @ 13:04:16

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2092.20	112.18	Initial Hydro-static
2	35.98	111.77	Open To Flow (1)
30	38.29	112.59	Shut-In(1)
61	106.19	113.78	End Shut-In(1)
62	26.16	113.76	Open To Flow (2)
92	28.75	114.45	Shut-In(2)
122	69.07	114.83	End Shut-In(2)
123	1991.52	115.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	ocm 10%o 90%m	0.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67986 **DST#: 1**

Test Start: 2022.07.04 @ 08:29:16

GENERAL INFORMATION:

Formation: **Lansing I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:02:46
Time Test Ended: 14:53:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4092.00 ft (KB) To 4140.00 ft (KB) (TVD)
Total Depth: 4140.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

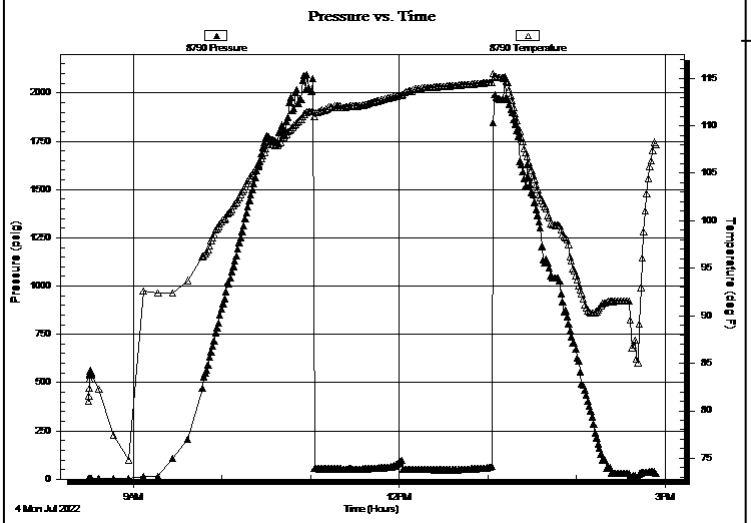
Reference Elevations: 2858.00 ft (KB)
2848.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8790 **Inside**

Press@RunDepth: psig @ 4093.00 ft (KB)
Start Date: 2022.07.04 End Date: 2022.07.04
Start Time: 08:29:48 End Time: 14:54:12

Capacity: 8000.00 psig
Last Calib.: 2022.07.04
Time On Btm:
Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
25.00	ocm 10%o 90%m	0.35

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67986 **DST#: 1**

Test Start: 2022.07.04 @ 08:29:16

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

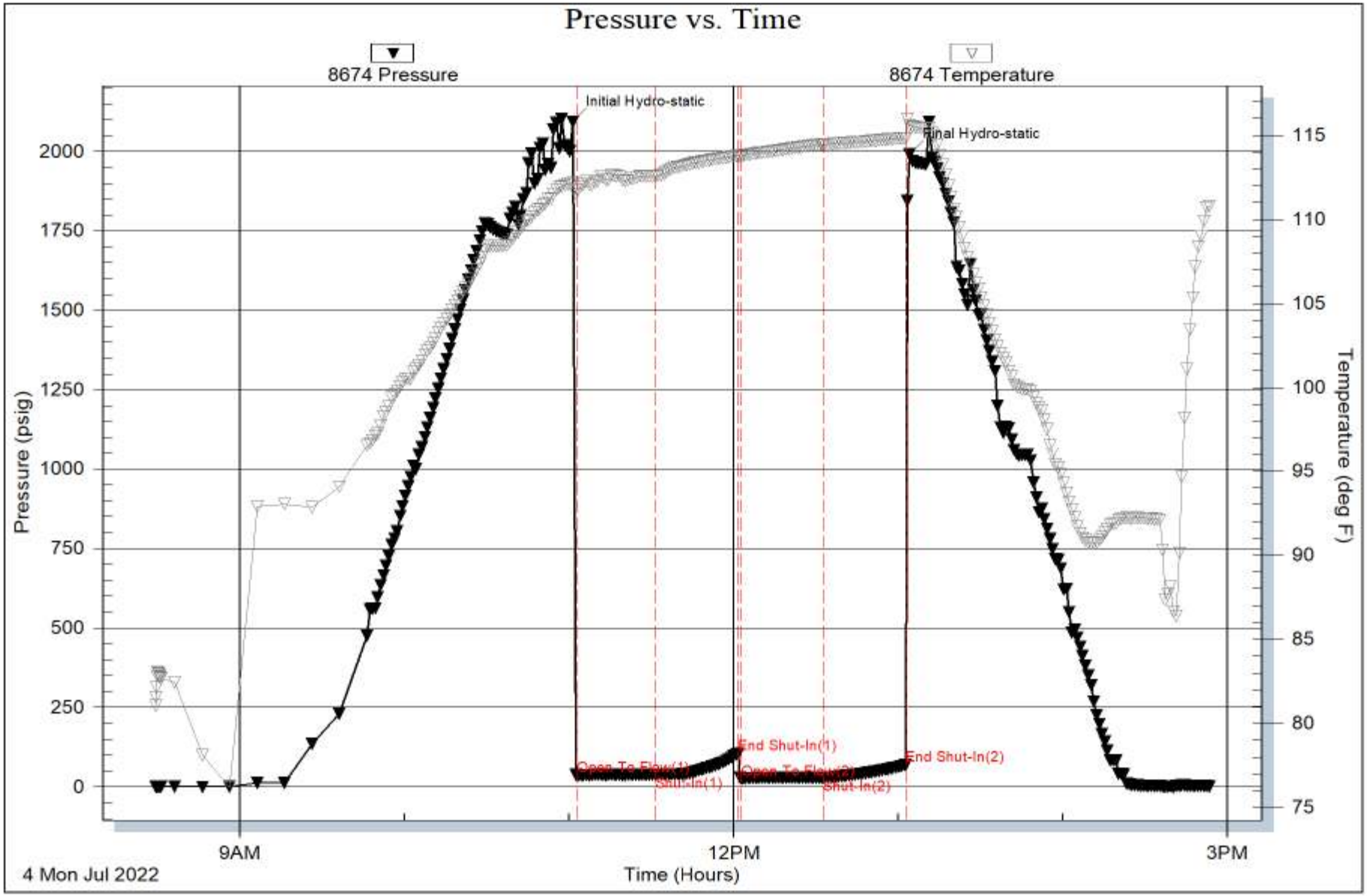
Recovery Table

Length ft	Description	Volume bbl
25.00	ocm 10%o 90%m	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl

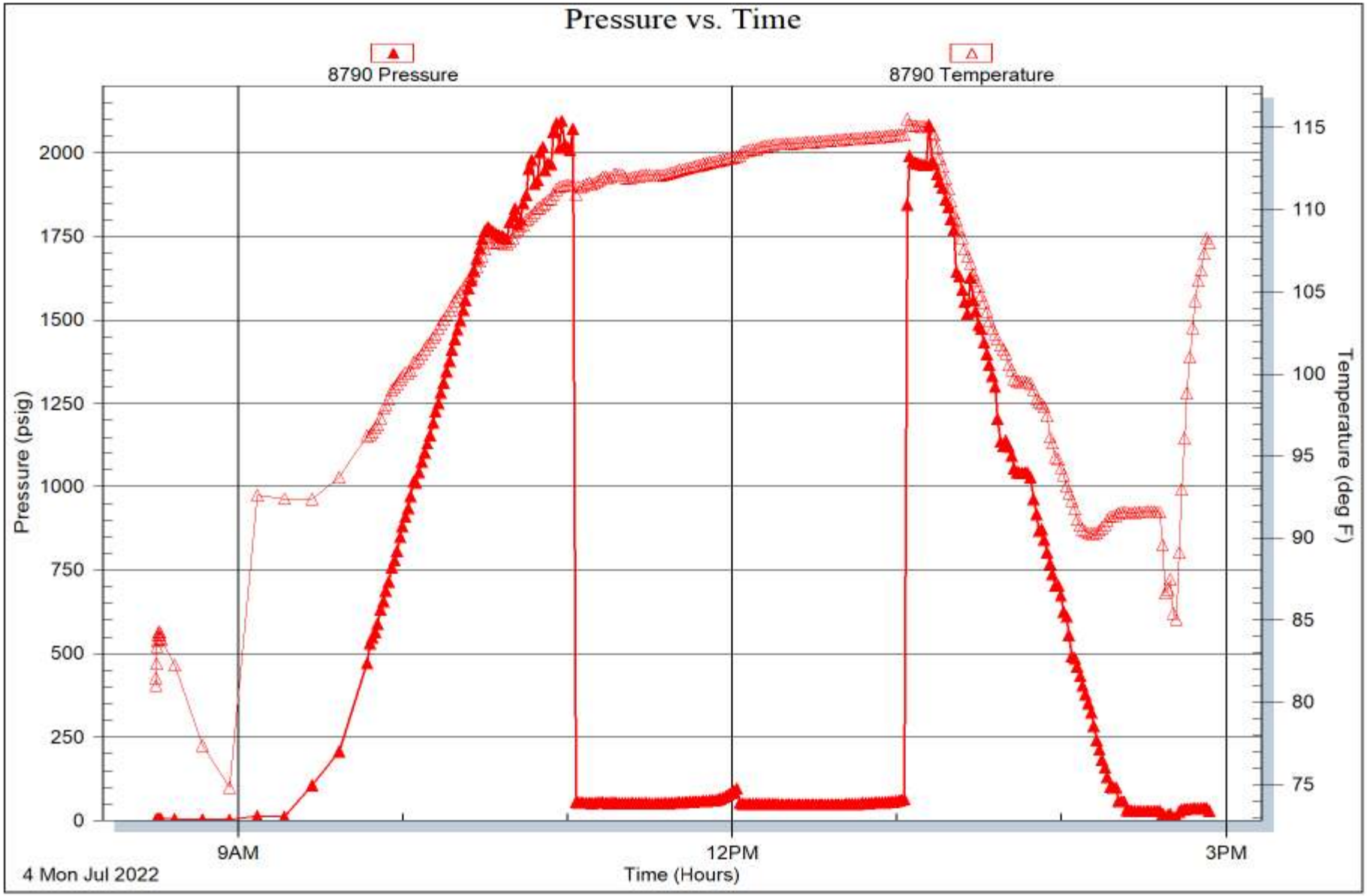
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8674 **Outside** Darrah Oil Company LLC Ottely 3-12 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 67986 Printed: 2022.07.04 @ 22:33:36

Serial #: 8790 **Inside** Darrah Oil Company LLC Ottely 3-12 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 67986 Printed: 2022.07.04 @ 22:33:37

DRILL STEM TEST REPORT

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67987 **DST#: 2**

Test Start: 2022.07.06 @ 02:21:45

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:57:45
Time Test Ended: 11:16:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4436.00 ft (KB) To 4490.00 ft (KB) (TVD)
Total Depth: 4490.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

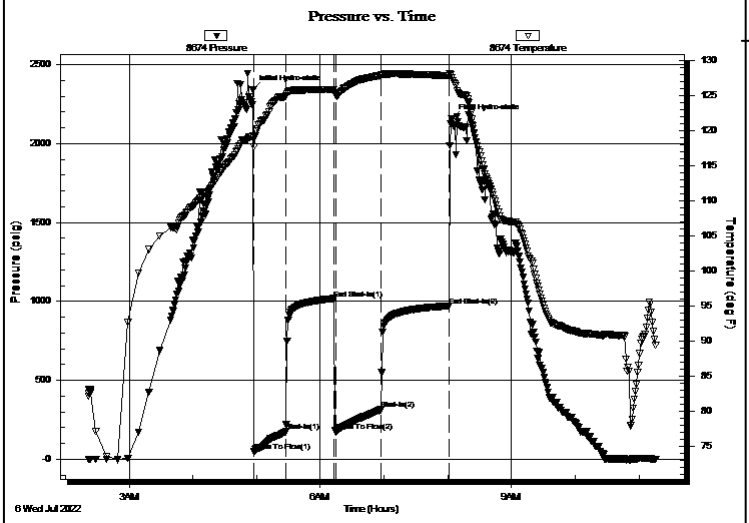
Reference Elevations: 2858.00 ft (KB)
2848.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8674 **Outside**

Press@RunDepth: 313.58 psig @ 4437.00 ft (KB)
Start Date: 2022.07.06 End Date: 2022.07.06
Start Time: 02:21:50 End Time: 11:16:15

Capacity: 8000.00 psig
Last Calib.: 2022.07.06
Time On Btm: 2022.07.06 @ 04:56:45
Time Off Btm: 2022.07.06 @ 08:03:45

TEST COMMENT: IF: BOB in 3 min. 110"
IS: 1/2 blow built to 8 1/2.
FF: BOB in 4 min. 92"
FS: BOB in 8 mins. 40" 30-45-45-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2340.62	119.19	Initial Hydro-static
1	46.94	117.73	Open To Flow (1)
31	173.69	124.91	Shut-In(1)
76	1018.15	125.84	End Shut-In(1)
78	174.14	125.19	Open To Flow (2)
121	313.58	127.83	Shut-In(2)
185	971.81	127.79	End Shut-In(2)
187	2155.99	127.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mw cgo 10%g 70%o 10%w 10%m	1.74
124.00	mcgo 20%g 60%o 20%m	1.74
372.00	mcgo 30%g 50%o 20%m	5.22
129.00	go 30%g 70%o	1.81
0.00	2723 GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67987 **DST#: 2**

Test Start: 2022.07.06 @ 02:21:45

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:57:45
Time Test Ended: 11:16:15

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4436.00 ft (KB) To 4490.00 ft (KB) (TVD)
Total Depth: 4490.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

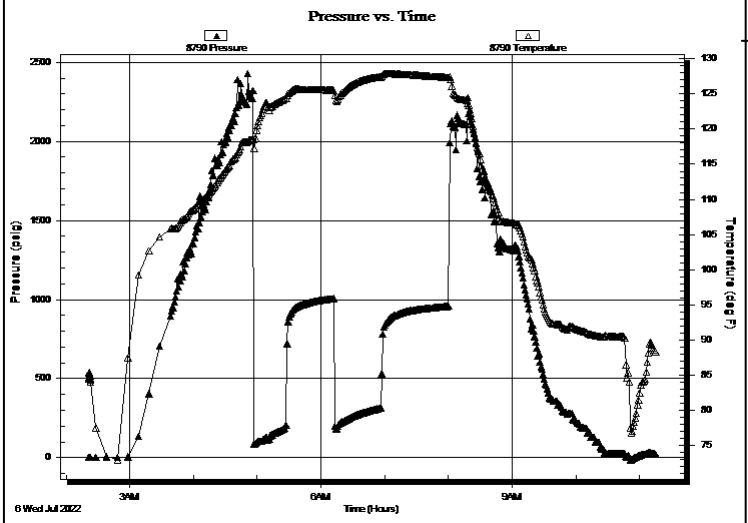
Reference Elevations: 2858.00 ft (KB)
2848.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8790 **Inside**

Press@RunDepth: psig @ 4437.00 ft (KB)
Start Date: 2022.07.06 End Date: 2022.07.06
Start Time: 02:21:13 End Time: 11:15:38

Capacity: 8000.00 psig
Last Calib.: 2022.07.06
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB in 3 min. 110"
IS: 1/2 blow built to 8 1/2.
FF: BOB in 4 min. 92"
FS: BOB in 8 mins. 40" 30-45-45-60



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mw cgo 10%g 70%o 10%w 10%m	1.74
124.00	mcgo 20%g 60%o 20%m	1.74
372.00	mcgo 30%g 50%o 20%m	5.22
129.00	go 30%g 70%o	1.81
0.00	2723 GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Darrah Oil Company LLC

125 N Market Suite 1425
Wichita, Ks 67202

ATTN: Mac Armstrong

12-14s-32w Logan, Ks

Ottely 3-12

Job Ticket: 67987 **DST#: 2**

Test Start: 2022.07.06 @ 02:21:45

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	33 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3600.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

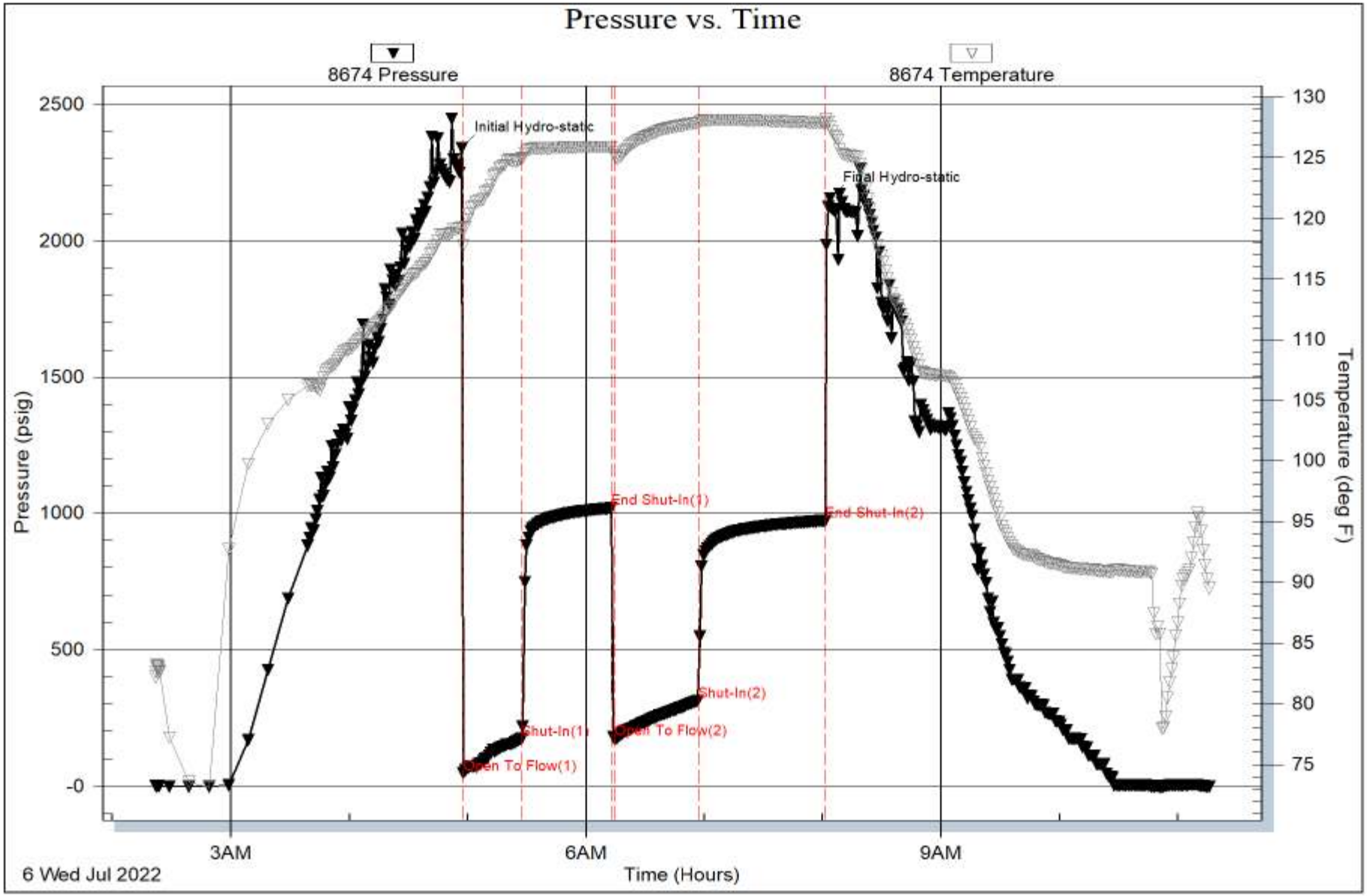
Recovery Table

Length ft	Description	Volume bbl
124.00	mw cgo 10%g 70%o 10%w 10%m	1.739
124.00	mcgo 20%g 60%o 20%m	1.739
372.00	mcgo 30%g 50%o 20%m	5.218
129.00	go 30%g 70%o	1.810
0.00	2723 GIP	0.000

Total Length: 749.00 ft Total Volume: 10.506 bbl

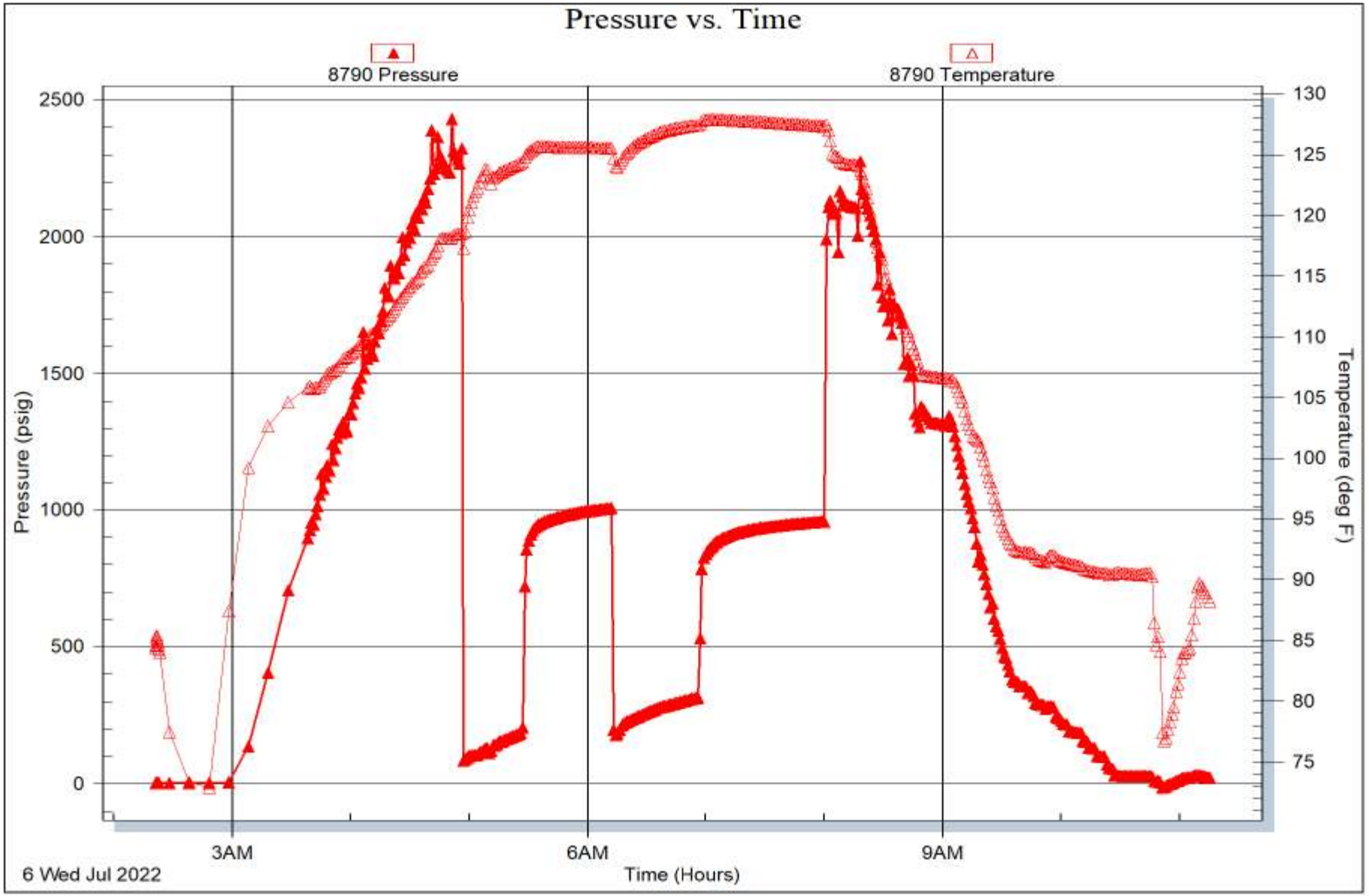
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 30@90=33

Serial #: 8674 **Outside** Darrah Oil Company LLC Ottely 3-12 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 67987 Printed: 2022.07.06 @ 11:37:49

Serial #: 8790 **Inside** Darrah Oil Company LLC Ottely 3-12 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 67987 Printed: 2022.07.06 @ 11:37:49