

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

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

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Herman L. Loeb, LLC
Well Name	CLAYTON-ZIMMERMAN 1-16
Doc ID	1774616

Tops

Name	Top	Datum
Stone Corral	1293	1038
Chase	2569	-238
Heebner Shale	4154	-1823
Lansing A	4317	-1986
Lansing B	4342	-2011
L/KC H	4496	-2165
BKC	4723	-2392
Miss Unconf	4935	-2604
Miss Dolomite	4942	-2611

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: #1-16 Clayton-Zimmerman
Location: 1091' FSL & 2480' FEL, Sec. 16-T28S-R20W, Kiowa Co., KS.
Licence Number: 15-097-21872-00-00 Region: Fralick West
Spud Date: 2/1/2024 Drilling Completed: 2/9/2024
Surface Coordinates: 1091' FSL & 2480' FEL, Sec. 16-T28S-R20W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2320' K.B. Elevation (ft): 2331'
Logged Interval (ft): 3450' To: 5025' Total Depth (ft): 5025'
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3116'; Chemical Gel 3116' to TD.

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 277 S. Maple Dunes Ct.
Wichita, KS. 67235-7500

Cores

None Taken

DSTs

DST #1: Lansing 'B' zone 4350' - 4382'(32' anchor) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/10 Min., Blow built to 17.7" in 15 Min.; No Blowback on ISIP; FFP Strong Blow BOB/90 Sec., Blow built to 39.5" in 45 Min; No Blowback on FSIP; REC: 875' Gas in Pipe, 70' GWOCM(32%G, 30%O, 32%M, 6% W) Not enough water to determine CI, could be Filtrate water; IFP 25-43#, ISIP 1135#, FFP 30-61#, FSIP 1191#, IHP 2176#, FHP 2120#, BHT 108 Deg F.

DST #2: Mississippi Dolomite(Warsaw) 4916' - 4956'(40' anchor) Test Times 15"-45"-45"-90" IFP Strong Blow BOB in 3 Min., Built to 160" of water; No Blowback on ISIP; FFP Strong Blow/BOB in 30 Sec., Gas to Surface in 30 Min, Gauged 35.9 MCFG/45 Min. Caught 2 gas samples, gas burns fine, 4" Blowback on FSIP; REC: 531' Total Fluid: 158' CGO(10%G, 90% O), Oil is 35.4 API, 253' GMCO(10%G, 80%O, 10%M), 120' GWMCO(10%G, 80% O, 5% M, 5%W) Not enough Water to determine CI, probably Filtrate water; IFP 52-117#, ISIP 1356#, FFP 125-223#, FSIP 1357#, IHP 2550#, FHP 2273#, BHT 120 Deg. F.

Comments

2/1/2024 MIRU Sterling Drilling Co. Rig #4, Spud at 8:15 PM.; 2/2/24 TD. 384' - Lost Circulation in Surface Hole; 2/3/24 Drilling at 663'; 2/4/24 Drilling at 2575'; 2/5/24 Drilling at 3872'; 2/6/24 TD. 4382' - CFS for DST #1; 2/7/24 Drilling at 4498'; 2/8/24 Drilling at 4810'; 2/9/24 TD. 4956' - DST #2; 2/10/24 RTD. 5025' - LDDP for setting 5 1/2" Production Casing.

Set new 8 5/8"(24#) Surface Casing at 519' KB. with 400 sacks cement(Hurricane Cementing Services). Cement did Circulate to base of Cellar. PD. at 3:00 PM. 2/3/24.

Set Used 5 1/2" Production Casing at 5023' with 225 sacks of "Loeb Blend" cement(Hurricane Cementing Services). PD. at 1:45 PM. on 2/10/24. Job went well(George Payne supervising).

Surveys: 0.25 Deg. at 522'(Surface Casing). NOTE: All Surveys taken by TELEDRIFT system; 0.6 Deg. at 822'; 0.5 Deg. at 1491'; 0.0 Deg. at 2001; 0.5 Deg. at 2479'; 0.1 Deg. at 2892'; 0.1 Deg. at 3466'; 0.3 Deg. at 3944'; 0.4 Deg. at 4231'; 0.4 Deg. at 4422'; 0.5 Deg. at 4613'; 0.1 Deg. at 4804'; 0.0 Deg. at 4900'; 0.4 Deg. at 5025' RTD.


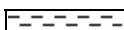

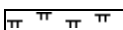
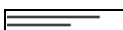
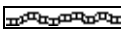






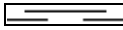

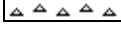


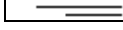
Pipe Strap at 4358'(Bit Trip): Strap 0.7' Long to the Board, no correction made to the Board.

After review of the ELI Wireline logs, DST's and positive shows of commercial amounts of recoverable hydrocarbons the operator elected to set 5 1/2" Production Casing for completion in the Miss. Dolomite zone. The Lansing 'B' zone should be perforated and tested prior to abandonment of the #1-16 Clayton-Zimmerman well.






































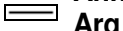

































LOG TOPS: Stone Corral Anhydrite 1293(+1038), Chase 2569(-238), Stotler Lmst. 3489(-1158), Howard 3692(-1361), Heebner Shale 4154(-1823), Toronto 4170(-1839), Brown Lmst. 4307(-1976), Lansing 'A' 4317(-1986), Lansing 'B' 4342(-2011), L/KC 'H' 4496(-2165), Stark Shale 4641(-2310), Base Kansas City 4723(-2392), Marmaton 4737(-2406), Pawnee 4814(-2483), Cherokee Shale 4861(-2530), Base Cherokee Lmst. 4920(-2589), Miss Unconf. 4935(-2604), Miss. Dolomite 4942(-2611).

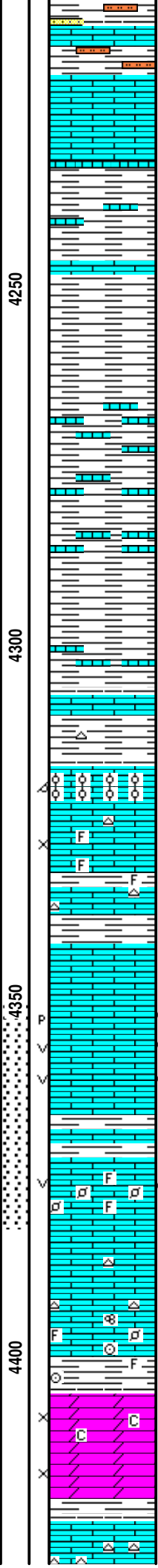
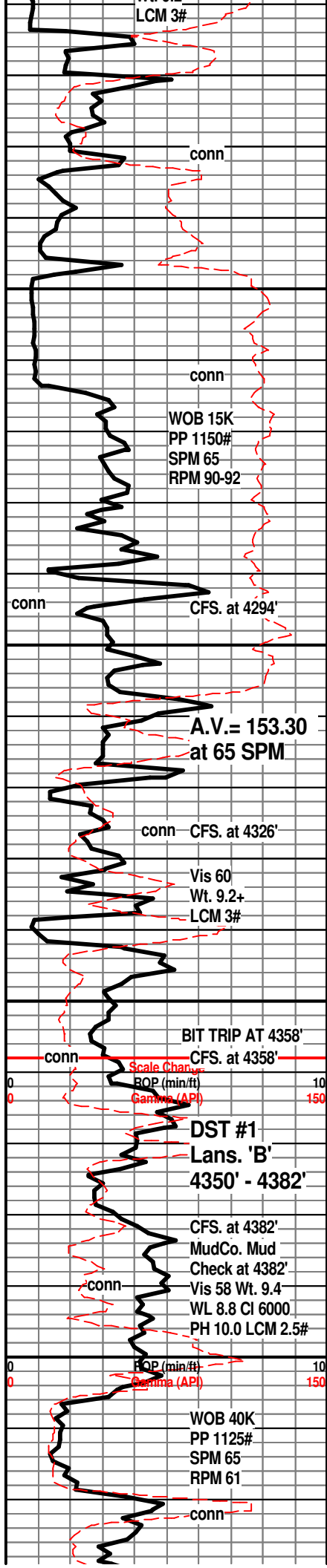
NOTE: This log was shifted ' to correlate with ELI Wireline Logs.

ROCK TYPES

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

ACCESSORIES

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



LM; tan to pale gy-grn, hd, blocky

SH; lt gy, grn, silty

LM; wh, off wh, most dense, scat spar calc xtals, lt yel min fluor, no vis por, ns.

LM; lt brn, foss ip, dense, hd

SH; lt to med gy, firm, platy, interbdd lmst strngs.

SH; med gy, fiss - platy, most smooth

NOTE: This section drilling much harder than normal for the Douglas Shale

SH; med gy, lmy, v. firm

BROWN LMST. 4307(-1976)
LM; med to dk brn, dense, blocky

LANSING 'A' 4317(-1986)
LM; tan to lt brn, foss to oolitic, fair oomoldic por, brittle ip, lt yel fluor, no vis stn, no apparent gas kick, ns.
LM; lt brn, gy brn, fxln, rare interxln por, tite

LM; med brn, hd, scat off wh/tan cht, tite

LANSING 'B' 4342(-2011)
LM; wh, off wh, micritic, blocky, tite

LM; off wh, wh, fxln, fair vug and p-p por, fair to gd odor, SSFO, scat lt brn oil stn, small gas kick, fair to gd cut, first 2 samples when back to drilling after bit trip have oil shows with fairly well dev. vug por, gd odor, much brite yel fluor, few gas bubbles vis.

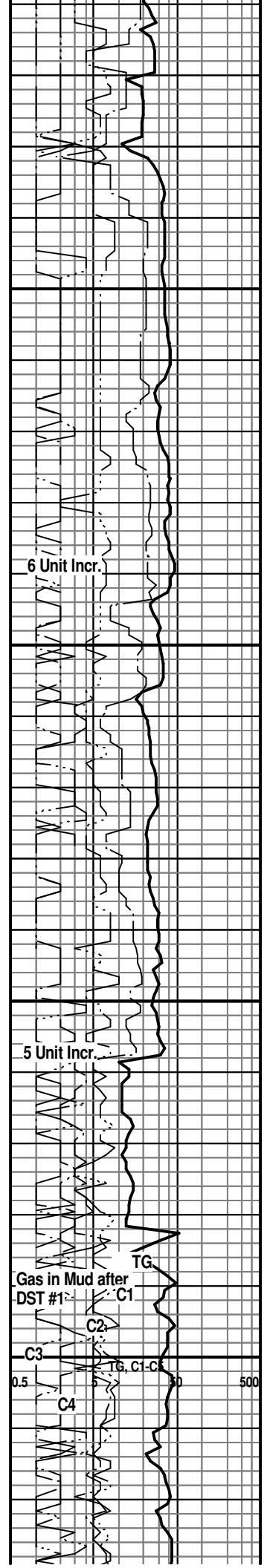
LM; off wh, wh, tan, foss ip w/occ small pellets, trc vug por w/scat lt brn oil stn, lt yel fluor, faint odor, occ chalky mtx, no apparent gas kick

DST #1: Lansing 'B' 4350' - 4382'
LM; tan to lt br, rare off wh, most dense - blocky, scat lt yel min fluor, no vis por, rare tan cht, ns.

LM; med to dk brn, foss-well cem, brn cht, lt to med yel fluor, no vis por, ns.

LANSING 'E' 4405(-2074)
DOL; wh, off wh, sucrosic, partly chalky, fair interxln por, dull yel fluor, no stn or odor, ns.

LM; tan to buff, off wh, cherty ip, most dense, blocky, no vis por, no fluor, ns.



A.V. = 153.40
at 65 SPM

WOB 42K
PP 1135#
SPM 65
RPM 60
conn

Vis 57
conn
Wt. 9.1+
LCM3#

WOB 42K
PP 1190#
SPM 65
RPM 59
conn

Vis 57
Wt. 9.4
LCM 2#
conn

ROP (min/ft)
Gamma (A) conn

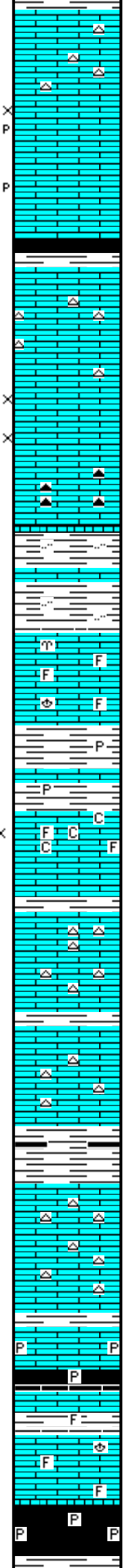
WOB 42K
PP 1195#
SPM 65
RPM 58
conn

A.V. = 153.65
at 65 SPM

conn

MudCo. Mud
Check at 4847'
Vis 60 Wt. 9.3
WL 8.8 CI 9000
PH 10.5 LCM 2#
conn

4650
4700
4750
4800
4850



SWOPE 4650(-2319)

LM; off wh, tan, dense, scat hd micrite, interbdd dk brn dense occc cherty lmst, no vis por, ns.

LM; off wh, buff, fxln w/ scat p-p and poor interxln por, lt yel fluor, ns.

LM; med brn, blocky, tite

HERTHA 4686(-2355)

LM; tan to lt brn, hd, most micritic, scat gy to brn cht, no vis por, ns.

LM; tan to buff, foss w/some finely pelletal lmst, minor chalky mtx, lt yel min fluor, no stn or odor, no gas kick

LM; dk brn, hd, interbdd dk brn cht, tite

BASE KANSAS CITY 4723(-2392)

SH; lt gy, gy grn, silty ip.

MARMATON 4737(-2406)

LM; off wh, buff, f to med xln, foss ip, most well cem, no vis por, ns.

SH; med gy, sticky ip, firm, pyr ip, interbdd thin lmst

LM; med brn, foss ip, trc poor interpart por, lt yel min fluor, chalky ip, ns.

ALTAMONT 4776(-2445)

LM; tan to cream, buff, most dense - micritic, cherty w/clr, wh and brn cht, occ spar calc xtals, no vis por, lt yel min fluor, ns

SH; grn, fiss

LM; tan to buff, fxln to micritic, cherty ip, no vis por, lt yel min fluor, interbdd hd tan/lt brn micrite, ns.

SH; med - dk gy, some black, platy

PAWNEE 4814(-2483)

LM; tan to lt brn, most dense-micritic, rare gy cht, scat lt/med yel min fluor, no vis por, no stn or odor, no gas kick

LM; tan to lt brn, dense - micritic, cherty, lt to occ med yel fluor, no stn, ns.

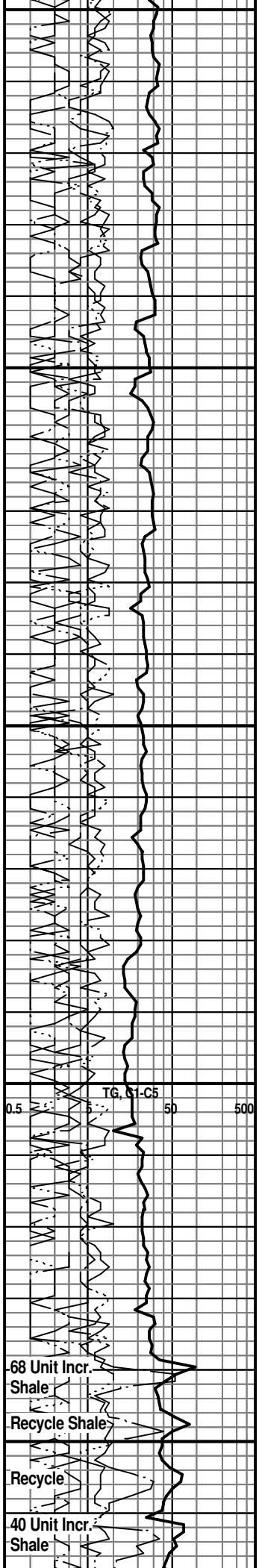
LABETTE SHALE 4840(-2509)

SH; blk, carb ip, trc gas, platy to blocky

LM; med to dk brn, foss ip, well cem, no vis por, scat lt/med yel fluor, no stn or odor, ns.

CHEROKEE SHALE 4861(-2530)

SH; blk, carb, platy to blocky, pyr ip.

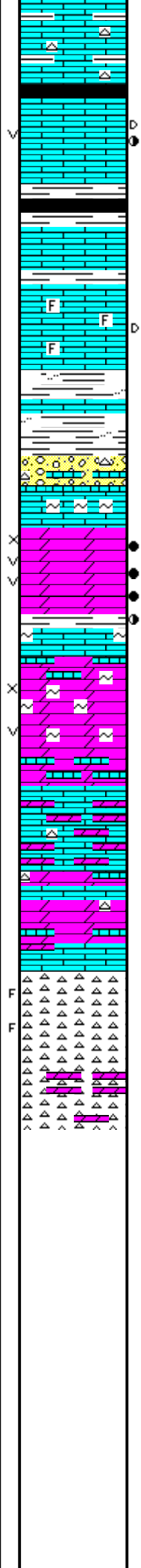
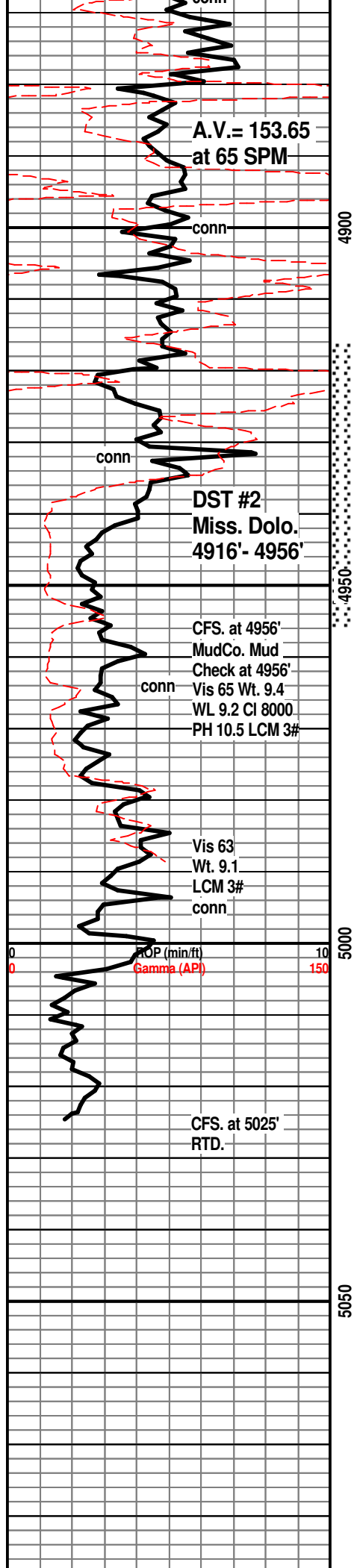


68 Unit Incr. Shale

Recycle Shale

Recycle

40 Unit Incr. Shale



LM; tan to lt brn, some gy brn, argil ip, rare foss mat - well cem, no vis por, interbdd grn shale, no fluor, interbdd brn-org cht, ns.

SH; blk, platy - thin bdd

LM; med brn, med xln, scat poor to fair vug por, med vug fluor, oily film on wet sample, faint odor, instant cut, some blk dead oil/gilsonite, looks tite

SH; med gy - blk, platy

LM; lt to med gy, hd, micritic, no vis por, ns.

LM; lt to med brn, foss ip, most well cem, blocky, no vis por, trc blk dead oil/gilsonite,

BASE CHEROKEE LM. 4920(-2589)

SH; grn, gy grn, platy, silty ip, some varic sh, interbdd red/brn lmst strng.

CONGL; Weath. lmst, cht, trc ss

MISSISSIPPI 4935(-2604)

LM; off wh, lt gy, med/cse xln, glau ip, tite

MISS. DOLOMITE 4942(-2611)

DOL; off wh, tan, sucrosic to finely rhombic, limy at top, much gd vug and interxln por, brite yel fluor, gd odor, SFO, gas bub, gd cut, uniform lt to med brn oil stn

DOL; lt brn, med rhombic, lmy ip, less por than above, even lt brn stn, glau ip, med yel fluor, gd odor, brite yel fluor

DST #2: Miss. Dolomite 4916' - 4956'

DOL; lt gy to lt brn, sucrosic, fair interxln and vug por, glau, no fluor, no stn or odor, becoming lmy and tight, ns.

LMY DOL and DOL LMST; lt to med gy, gritty text, hd, some highly dolomitic, blocky, tite, trc ly gy cht

DOL LMST; lt gy, lt gy brn, gritty text, most dense, no vis por, no fluor, scat lt gy to off wh cht, interbdd hd dolo lmst, ns.

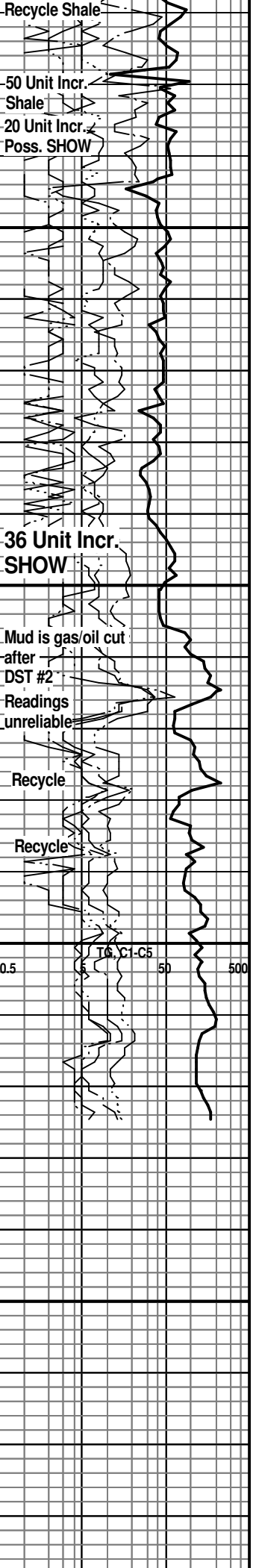
CHT; off wh, lt gy, most fresh, occ spicular, poss frags, no fluor, no stn or odor, ns.

CHT; lt brn, off wh, some dolomitic cht, tite, no vis por, ns.

RTD. 5025' at 3:30 PM. 2/9/24

LTD. 5026'

ELI Wireline DIL, NEU/DEN w/PE, Microlog





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

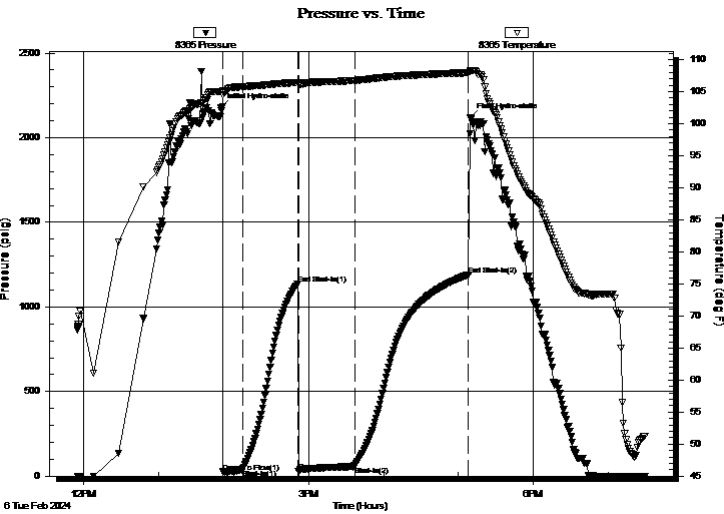
16-28S-20W Kiowa
1-16 Clayton-Zimmerm
 Job Ticket: 71362 **DST#: 1**
 Test Start: 2024.02.06 @ 11:55:00

GENERAL INFORMATION:

Formation: **Lansing "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:51:17
 Time Test Ended: 19:29:02
 Interval: **4350.00 ft (KB) To 4382.00 ft (KB) (TVD)**
 Total Depth: 4382.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 72
 Reference Elevations: 2331.00 ft (KB)
 2320.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8365 Outside
 Press@RunDepth: 60.86 psig @ 4356.00 ft (KB) Capacity: psig
 Start Date: 2024.02.06 End Date: 2024.02.06 Last Calib.: 2024.02.06
 Start Time: 11:55:01 End Time: 19:29:02 Time On Btm: 2024.02.06 @ 13:49:47
 Time Off Btm: 2024.02.06 @ 17:09:32

TEST COMMENT: IF: Strong Blow , BOB in 10 minutes, Built to 17.7"
 IS: No Blow Back
 FF: Strong Blow , BOB in 90 seconds, Built to 39.52"
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.81	104.99	Initial Hydro-static
2	24.76	104.48	Open To Flow (1)
18	42.78	105.76	Shut-In(1)
62	1135.40	106.40	End Shut-In(1)
62	30.17	106.20	Open To Flow (2)
107	60.86	106.74	Shut-In(2)
199	1190.83	108.00	End Shut-In(2)
200	2119.82	108.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	875' GIP	0.00
70.00	GWOCM 32%G 6%W 30%O 32%M	0.34

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
PO Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

16-28S-20W Kiowa
1-16 Clayton-Zimmerm
Job Ticket: 71362 **DST#: 1**
Test Start: 2024.02.06 @ 11:55:00

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	875' GIP	0.000
70.00	GWOCM 32%G 6%W 30%O 32%M	0.344

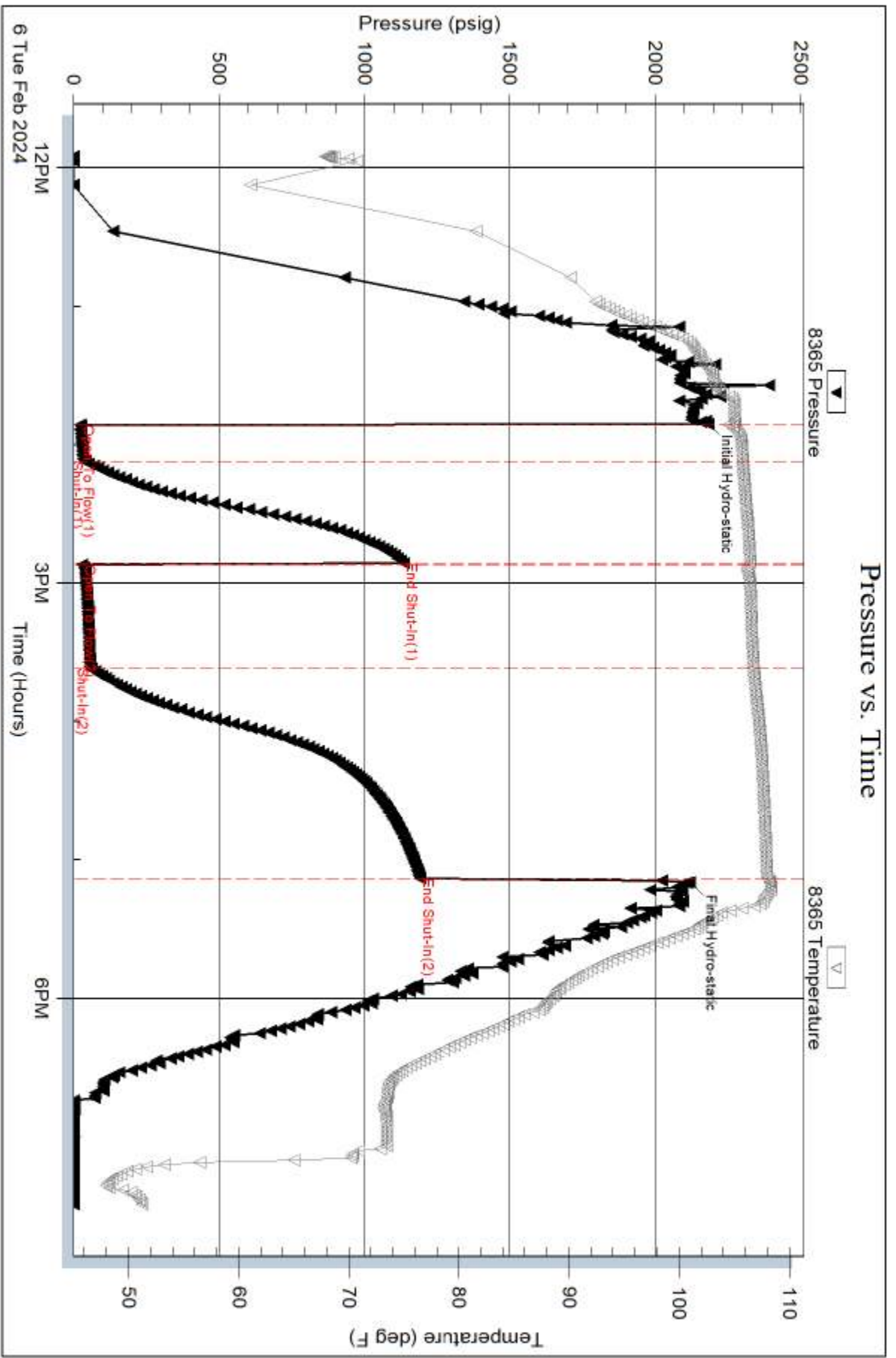
Total Length: 70.00 ft Total Volume: 0.344 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8365

Outside Herman L Loeb LLC

1-16 Clayton-Zimmerm

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 71362

Printed: 2024.02.06 @ 21:51:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

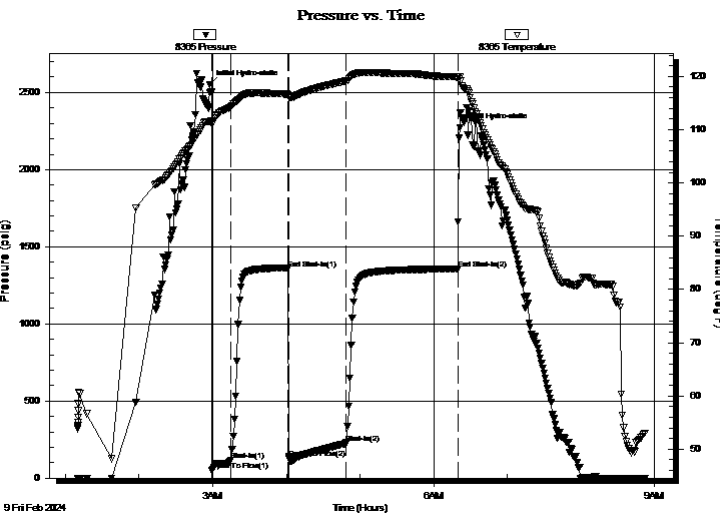
16-28S-20W Kiowa
1-16 Clayton-Zimmerm
 Job Ticket: 71363 **DST#: 2**
 Test Start: 2024.02.09 @ 01:10:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:59:32
 Time Test Ended: 08:52:02
 Interval: **4916.00 ft (KB) To 4956.00 ft (KB) (TVD)**
 Total Depth: 4956.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 72
 Reference Elevations: 2331.00 ft (KB)
 2320.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8365 Outside
 Press@RunDepth: 223.53 psig @ 4922.00 ft (KB) Capacity: psig
 Start Date: 2024.02.09 End Date: 2024.02.09 Last Calib.: 2024.02.09
 Start Time: 01:10:01 End Time: 08:52:02 Time On Btm: 2024.02.09 @ 02:57:32
 Time Off Btm: 2024.02.09 @ 06:21:17

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 160.89"
 IS: No Blow Back
 FF: Strong Blow , BOB in 30 seconds, GTS in 30 minutes, Gauged & Sampled
 FS: 4" Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2549.61	111.56	Initial Hydro-static
2	52.17	111.14	Open To Flow (1)
18	116.58	114.29	Shut-In(1)
64	1356.53	116.61	End Shut-In(1)
65	125.53	116.13	Open To Flow (2)
111	223.53	119.14	Shut-In(2)
202	1357.53	119.92	End Shut-In(2)
204	2272.99	119.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4369' GIP	0.00
120.00	GWMCO 10%G 5%W 5%M 80%O	0.59
253.00	GMCO 10%G 10%M 80%O	2.67
158.00	GSY Oil 10%G 90%O	2.22

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	9.68	35.47
Last Gas Rate	0.25	10.02	35.98
Max. Gas Rate	0.25	10.02	35.98



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
PO Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

16-28S-20W Kiowa
1-16 Clayton-Zimmerm
Job Ticket: 71363 **DST#: 2**
Test Start: 2024.02.09 @ 01:10:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 35.4 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.79 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 9000.00 ppm		
Filter Cake: 0.02 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4369' GIP	0.000
120.00	GWMCO 10%G 5%W 5%M 80%O	0.590
253.00	GMCO 10%G 10%M 80%O	2.674
158.00	GSY Oil 10%G 90%O	2.216

Total Length: 531.00 ft Total Volume: 5.480 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity Was 34.8 @ 54 degrees



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Herman L Loeb LLC
PO Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

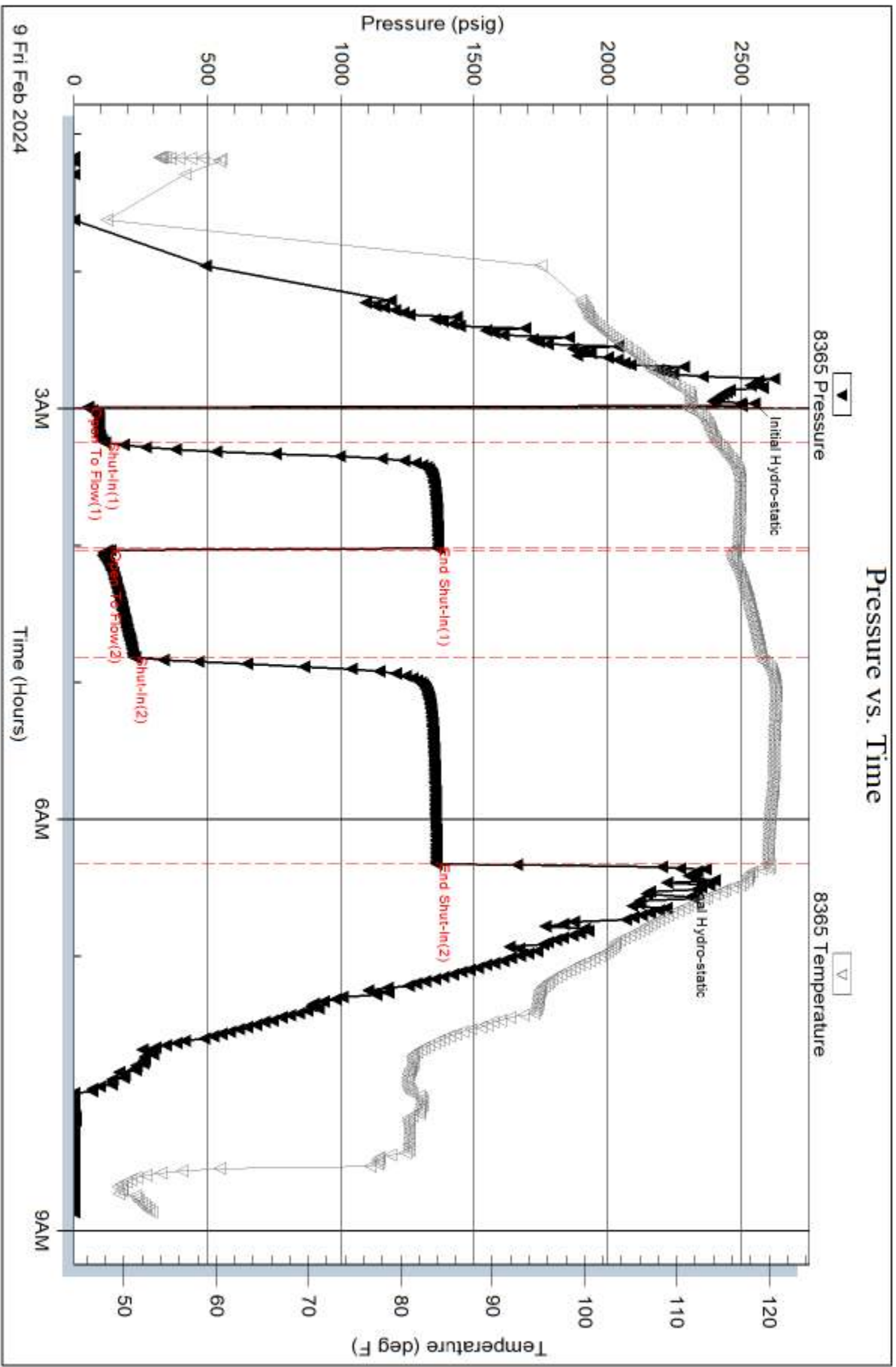
16-28S-20W Kiowa
1-16 Clayton-Zimmerm
Job Ticket: 71363 **DST#: 2**
Test Start: 2024.02.09 @ 01:10:00

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.67
Z Factor: 0.9

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	30	0.25	9.68	35.47
2	40	0.25	9.96	35.89
2	45	0.25	10.02	35.98



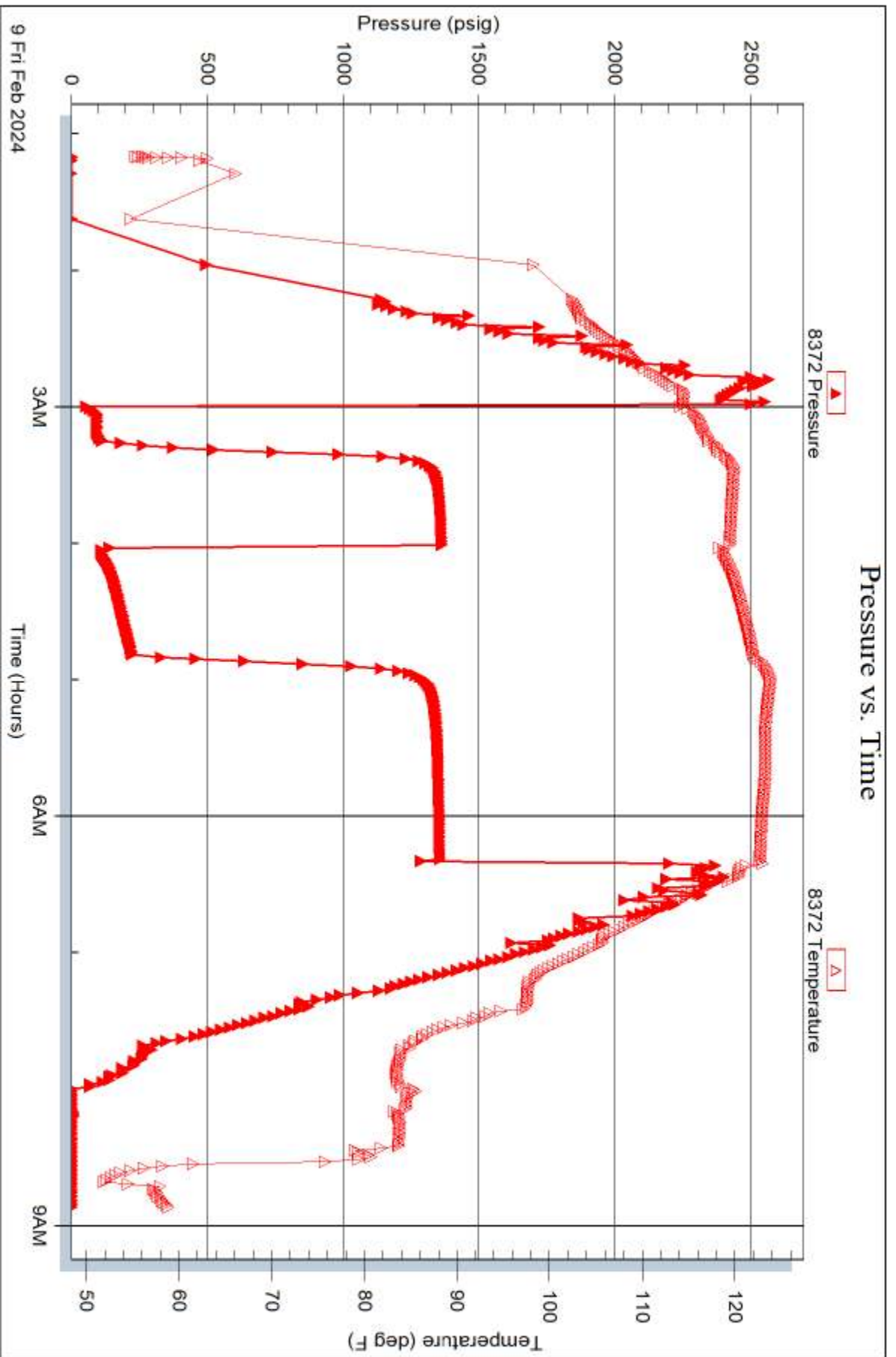
Serial #: 8372

Inside

Herman L Loeb LLC

1-16 Clayton-Zimmerm

DST Test Number: 2

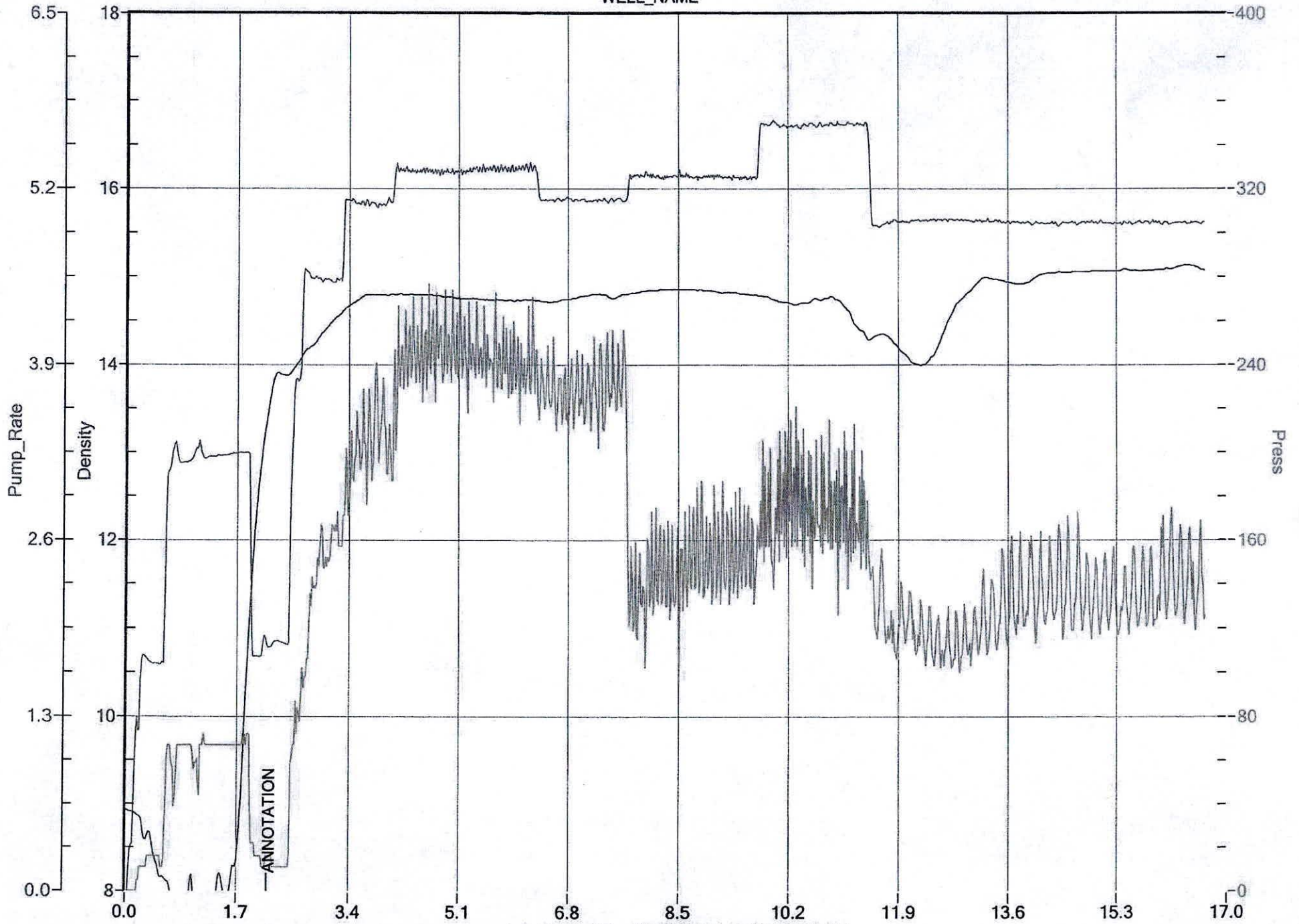


Triobite Testing, Inc

Ref. No: 71363

Printed: 2024.02.09 @ 09:08:20

MDC
WELL_NAME



Job Started On: 02/05/2024 @ 11:25:44 PM



CEMENT TREATMENT REPORT

Customer: Herman L Loeb	Well: Clayton Zimmerman 1-16	Ticket: WP 5108
City, State:	County: Kiowa, Kansas	Date: 2/10/2024
Field Rep: Mr. George Payne	S-T-R: 16-28s-20w	Service: Prod. Casing

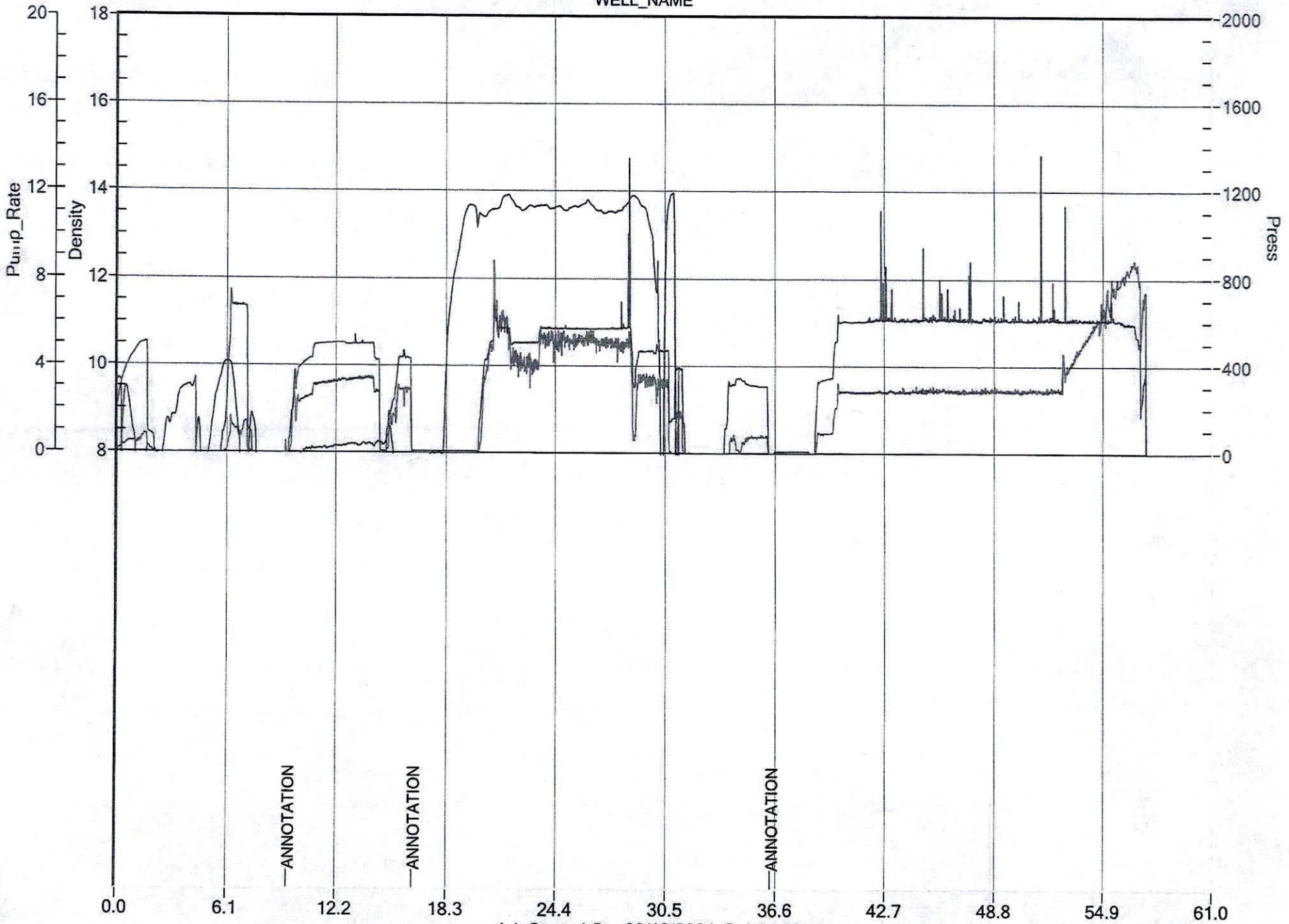
Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-Plug	Blend:	50:50:2 Loeb Blend
Hole Depth:	5025 ft	Weight:	13.8 ppg	Weight:	14 ppg
Casing Size:	5 1/2 in	Water / Sx:	6.9 gal / sx	Water / Sx:	5.0 gal / sx
Casing Depth:	5023 ft	Yield:	1.43 ft ³ / sx	Yield:	1.32 ft ³ / sx
Tubing / Liner:	in	Annular Bbbls / Ft.:	bbs / ft.	Annular Bbbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packer:		Annular Volume:	0.0 bbbls	Annular Volume:	0 bbbls
Baffle Depth:	5003 ft	Excess:		Excess:	
Displacement:	119.0 bbbls	Total Slurry:	12.7 bbbls	Total Slurry:	52.9 bbbls
		Total Sacks:	50 sx	Total Sacks:	225 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
6:00 AM			-	-	On location - Spot equipment - Job & Safety
					Float shoe at 5023' Latch Down Plug Baffle at 5003'
					Baskets on joints 16 & 23 Turbolizers on joints 1,2,3,5,8,11,14,16,17,20,22,25
8:30 AM					Start casing in hole
10:00 AM					Circulate fo 30 minutes with 69 joints in hole - 2600'
11:40 AM					Casing on botton and cuirculate for 1 hour
					Rlg up to cement pump
12:50 PM	4.0	250.0			Start Mud Flush
12:55 PM	5.0	500.0	24.0	24.0	Mud Flush in - start tail slurry at 14.2 ppg
1:13 PM	5.7	500.0	53.0	77.0	Cement in - Stop pump and close bottom valve on manifold
					Wash pump and lines
					Open top valve on manifold and release plug
	2.0				Start displacement
	6.0		2.0	2.0	Increase rate and open bottom valve on maniffod
	6.0	230.0	40.0	42.0	Flush at shoe
	6.0	300.0	24.0	66.0	Cement at shoe - start reciprocating casing
	6.0	600.0	19.0	85.0	See lift pressure
	6.0	650.0	5.0	90.0	Gradual pressure increase
	6.0	700.0	5.0	95.0	Gradual pressure increase
	6.0	750.0	5.0	100.0	Gradual pressure increase
	4.0	700.0	10.0	110.0	Slow rate
1:45 PM	4.0	1,500.0	9.0	119.0	Bump plug and hold pressure
					Release pressure and floats hold
	2.0	100.0	7.5	7.5	Plug Rathole with 30 sacks H-Plug
	2.0	100.0	5.2	12.7	Plug Mousehole with 20 sacks H-Plug
					Thank you - Keven, Mike, Bryan, and Kevin

CREW		UNIT	SUMMARY		
Cementor:	K. Brungardt	913	Average Rate	Average Pressure	Total Fluid
Pump Operator:	M. McGraw	540-522	4.7 bpm	529 psi	209 bbbls
Bulk #1:	B. Whitfield	179-533			
Bulk #2:	K. Lesley	936			

Herman Loeb Longstring

WELL_NAME



Job Started On: 02/12/2024 @ 1:34:29 PM

DIRECTIONS: _____

COMPANY: HERMAN COEB

DATE: 2/10/24

WELL NAME: CLAYTON ZEMMERMAN #1-16

LEGALS AND COUNTY: 16-28s-20w KIOWA

VOL. BETWEEN PIPE & HOLE CAP.

	BBL/FT	FT/BBL	CF/FL
4 1/2 - 7 7/8	.0406	24.85	.2278
5 1/2 - 7 7/8	.0309	32.41	.1733
6 5/8 - 12 1/4	.0735	13.61	.4127
8 5/8 - 12 1/4	.0558	17.93	.3132
13 3/8 - 17 1/2	.1924	8.08	.8940

VOL. BETWEEN PIPE & PIPE CAP.

	WT	BBL/FT	FT/BBL	CF/FL
2 3/8 - 4 1/2	11.8	.0101	99.37	.0565
2 3/8 - 5 1/2	17.0	.0178	56.28	.0988
2 7/8 - 5 1/2	17.0	.0152	65.71	.0854
2 7/8 - 7	23.0	.0313	31.91	.1760

TUBING & CASING SIZE & CAP.

	WT	BBL/FT	FT/BBL
2 3/8	4.5	.0039	258.85
2 7/8	8.5	.0058	172.76
3 1/2	9.3	.0087	114.89
4 1/2	10.5	.0159	62.70
4 1/2	11.6	.0155	64.34
5 1/2	16.5	.0238	42.01
5 1/2	17.0	.0232	43.02
5 1/2	20.0	.0222	45.09
5 1/2	23.0	.0212	47.20
8 5/8	32.0	.0609	16.41
9 5/8	36.0	.0773	12.94

TD: _____ TUBING SIZE: _____ CASING SIZE: 5 1/2"

HOLE SIZE: 7 7/8" TUB DEPTH: _____ CSG DEPTH: _____

PERFS: _____ PACKER SETTING: _____ BP SETTING: _____

MAX PSI: _____ MAX RATE: _____

LEAD SURRY - 12.7 SURRY	FLUSH	24
1.43 13.8 6.92	LEAD	8.2
TRAIL SURRY - 52.9 SURRY	TRAIL	27
1.32 14.0 5.04	WASH	10
	DISP.	119
FLUSH @ SHOE	42	
CEMENT @ SHOE	66	
SEE LEFT PSI	96.3	
DIFF. PSI		
TRAIL/KCL	512.3	5003
FLUSH/KCL		.0238
MUD/KCL	126.3	119.1
DIFF. PSI TO LAND PLUG	638.5*	EXCESS-3% 3.5
SEE LEFT PSI		TOTAL DISP 122.6
53 ÷ 0.547 = 969'		BASKETS 16 + 23
5023 - 969 = 4054'		SCRATCHERS #2 4' APART 2" DOWN FROM COLLAR
4054' x .0238	96.5	TURBOLIZERS 1, 2, 3, 5, 8, 11
EBLs DISP.	96.9	14, 16, 17, 20, 22, 25

