

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)</i> <i>(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	RUDD 1-21
Doc ID	1799371

Tops

Name	Top	Datum
Anhydrite	1244	1063
Chase	2539	-232
Lansing A	4292	-1985
Lansing B	4318	-2011
Lan/KC H	4474	-2167
BKC	4702	-2395
Miss Unconf	4914	-2607
Miss Warsaw	4926	-2619

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Rudd #1-21
Location: 575' FNL & 2450' FWL, NW 1/4, Sec. 21-T28S-R20W
Licence Number: 15-097-21874-00-00
Spud Date: 7/29/2024
Surface Coordinates: 575' FNL & 2450' FWL, Sec. 21-T28S-R20W
Region: Fralick West Ext.
Drilling Completed: 8/6/2024

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 2296' K.B. Elevation (ft): 2307'
Logged Interval (ft): 3400' To: 5025' Total Depth (ft): 5025'
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Fresh water/Gel to 3109'; Chemical Mud 3109' to 5025'

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) 4327' - 4344'(Corrected Depths to Log)(17' anchor) Test Times 30"-45"-60"-90" IFP Tool slid 10' after opening, Blow built to 7.75"/30 Min; FFP Strong Blow BOB/1 Min., Built to 34", No Blowback on SI's; REC: 186' Gas in Pipe, 62' GO(65%G, 35%O), 124' GOCM(25%G, 5%O, 70%M), no water; IFP 143-86#(Some Plugging action on chart), ISIP 1257#, FFP 57-101#, FSIP 1238#, IHP 2150#, FHP 2185#, BHT 109 Deg, F.

DST #2(Miss. Warsaw Dolomite) 4894' - 4939'(Corrected Depths to Log)(45' anchor) Test Times 30"-45"-60"-90" IFP Fair Blow building to BOB(12") in 30 Min., FFP Fair Blow building to BOB(12") in 30 Min. and Built to 23" of water, No Blowback on SI's; REC: 63' Gas in Pipe, 630' OSPkd MdySW(50,000 MudCo. CI Check)(1%O, 10%M, 89%W); IFP 56-166#, ISIP 1378#, FFP 174-304#, FSIP 1382#, IHP 2452#, FHP 2475#, BHT 121 Deg. F.

M

7/29/24 MIRU Sterling Drilling Co. Rig #4, Spud at 6:30 PM; ; 7/30/24 TD. 565' - Wiper Trip; 7/31/24 Drilling at 1250'; 8/1/24 Drilling at 2904'; 8/2/24 Drilling at 4246'; 8/3/24 Drilling at 4374'; 8/4/24 Drilling at 4707'; 8/5/24 TD. 4940' - CTCH for DST #2; 8/6/24 RTD. 5025' at 4:15 AM., CTCH; TOH for Logs. LTD. = 5025' (ELI Wireline). P & A done at 9:00 PM.

Set new 8 5/8"(23#) Surface Casing at 562' with 425 Sacks of Cement(Hurricane Cementing Services). PD. at 10:40 AM. on 7/30/24. Cement Did Circulate.

Surveys:(NOTE: All Surveys taken by the TELEDRIFT system): 0.5 Deg. at 565'(Drop Survey); TELEDRIFT 0.1 Deg. at 593'; 0.5 Deg. at 1165'; 0.9 Deg. at 1452'; 0.8 Deg. at 1738'; 0.4 Deg. at 2216'; 0.2 Deg. at 2694'; 0.1 Deg. at 2981'; 0.6 Deg. at 3650'; 0.3 Deg. at 4128'; 0.2 Deg. at 4383'; 0.2 Deg. at 4765'; 0.4 Deg. at 4861'; DROP SURVEY at 5025' RTD= 0.75 Deg.

Pipe Strap at 4345'(DST #1): Strap 0.13' Short to the Board, no correction made to the Board.

After review of the ELI Logs, DST and Sample data, and the lack of commercially recoverable hydrocarbons, the operator elected to Plug and Abandon the #1-21 Rudd at RTD. 5025' on 8/6/2024.








































































LOG TOPS: Anhydrite 1244(+1063), Base Anhydrite 1273(+1034), Chase 2539(-232), Stotler Lmst. 3469(-1162), Howard 3670(-1363), Heebner Shale 4131(-1824), Toronto 4148(-1841), Brown Lmst. 4286(-1979), Lansing 'A' 4292(-1985), Lansing 'B' 4318(-2011), Lansing/KC 'H' 4474(-2167), Stark Shale 4620(-2313), Base Kansas City 4702(-2395), Marmaton 4716(-2409), Pawnee 4793(-2486), Cherokee Shale 4842(-2535), Base Cherokee Lmst. 4899(-2592), Miss. Unconformity 4914(-2607), Miss. Warsaw Dolomite 4926(-2619).

NOTE: Portions of this log were shifted upward by 1' to 2' for correlation purposes with the 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	 Gyp	FOSSIL	 Ostra	 Sltstrg
 Anhy	 Hvymin	 Algae	 Pelec	 Ssstrg
 Arggrn	 Kaol	 Amph	 Pellet	TEXTURE
 Arg	 Marl	 Belm	 Pisolite	 Boundst
 Bent	 Minxl	 Bioclst	 Plant	 Chalky
 Bit	 Nodule	 Brach	 Strom	 Cryxln
 Brecfrag	 Phos	 Bryozoa	STRINGER	 Earthy
 Calc	 Pyr	 Cephal	 Anhy	 Finexln
 Carb	 Salt	 Coral	 Arg	 Grainst
 Chtdk	 Sandy	 Crin	 Bent	 Lithogr
 Chtlt	 Silt	 Echin	 Coal	 Microxln
 Dol	 Sil	 Fish	 Dol	 Mudst
 Feldspar	 Sulphur	 Foram	 Gyp	 Packst
 Ferrpel	 Tuff	 Fossil	 Ls	 Wackest
 Ferr		 Gastro	 Mrst	
 Glau		 Oolite		

OTHER SYMBOLS

- POROSITY**
 [E] Earthy
 [F] Fenest
 [X] Fracture
 [I] Inter
 [M] Moldic
 [O] Organic
 [P] Pinpoint

- Vuggy
SORTING
 [W] Well
 [M] Moderate
 [P] Poor

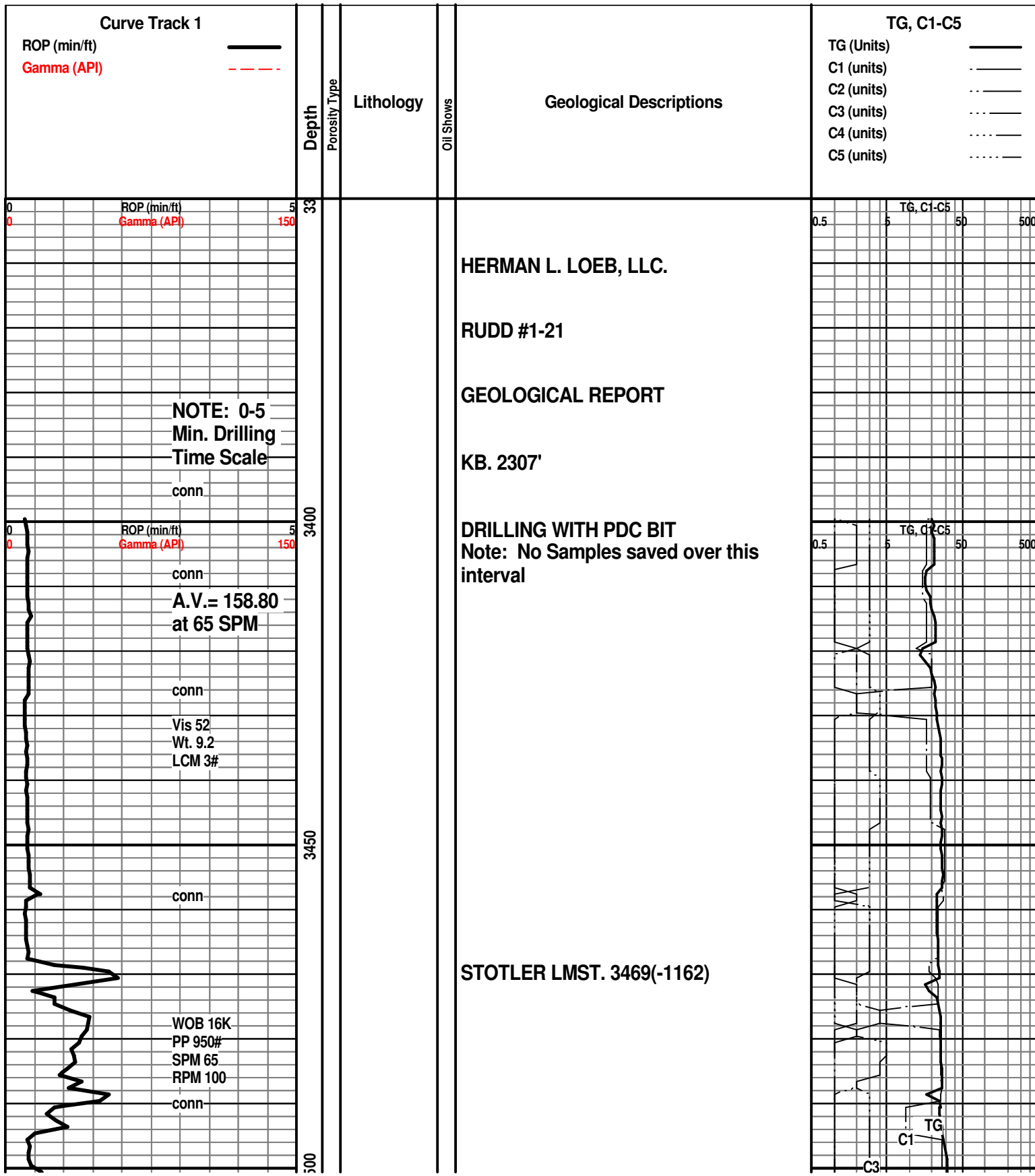
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

- Spotted
 [Q] Ques
 [D] Dead

- EVENT**
 [V] Rft
 [▲] Sidewall

- INTERVAL**
 [■] Core
 [□] Dst

- OIL SHOW**
 Even

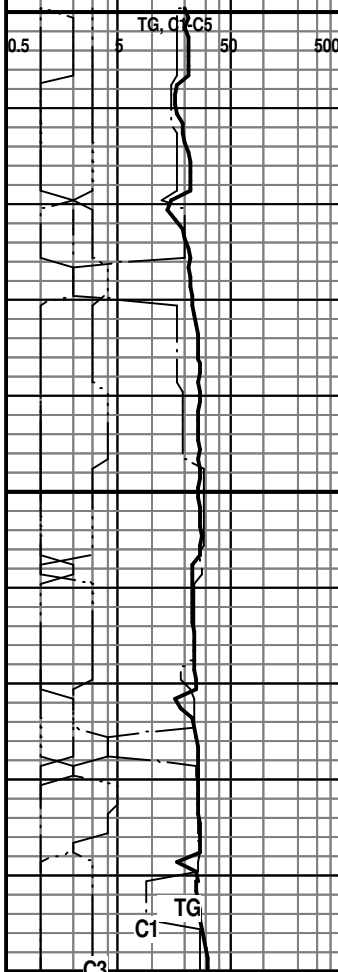


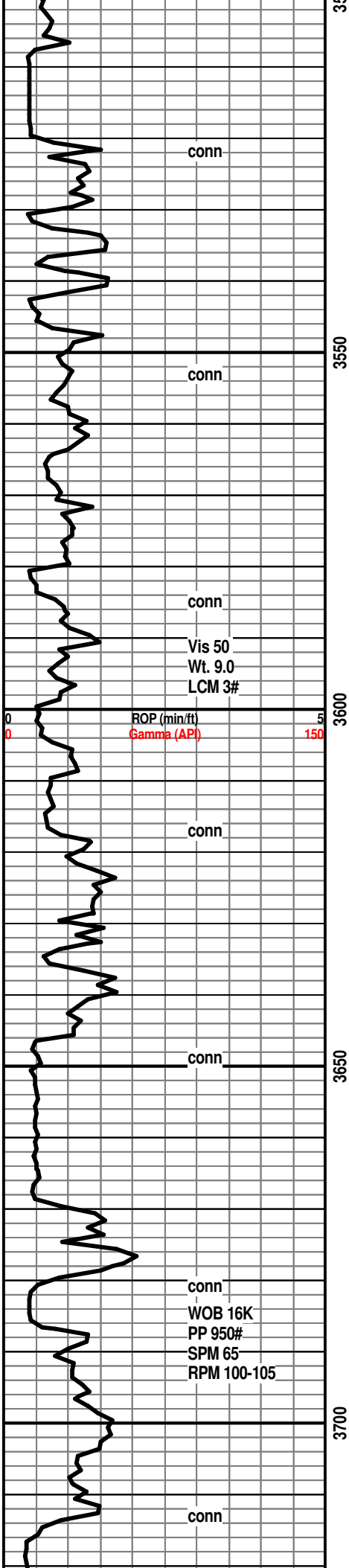
NOTE: 0-5
Min. Drilling
Time Scale

A.V.= 158.80
at 65 SPM

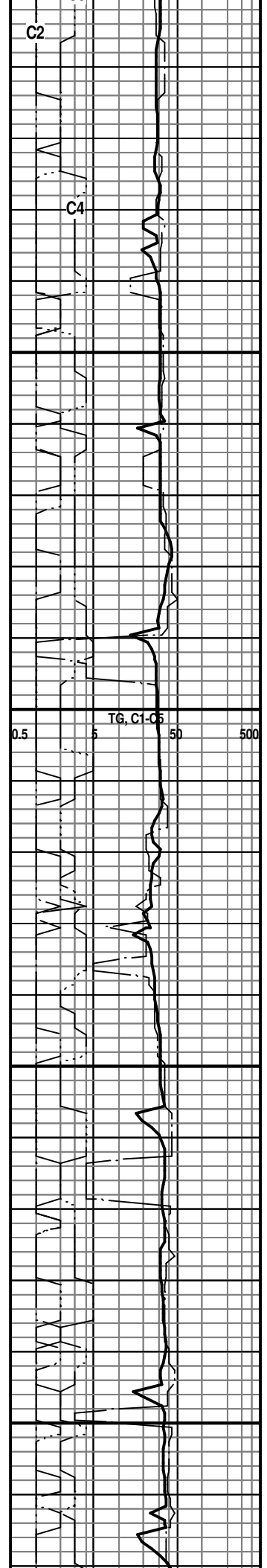
Vis 52
Wt. 9.2
LCM 3#

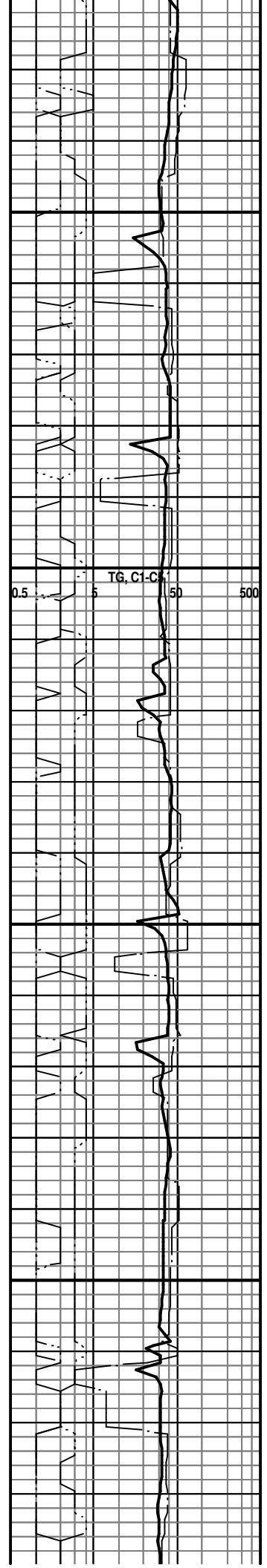
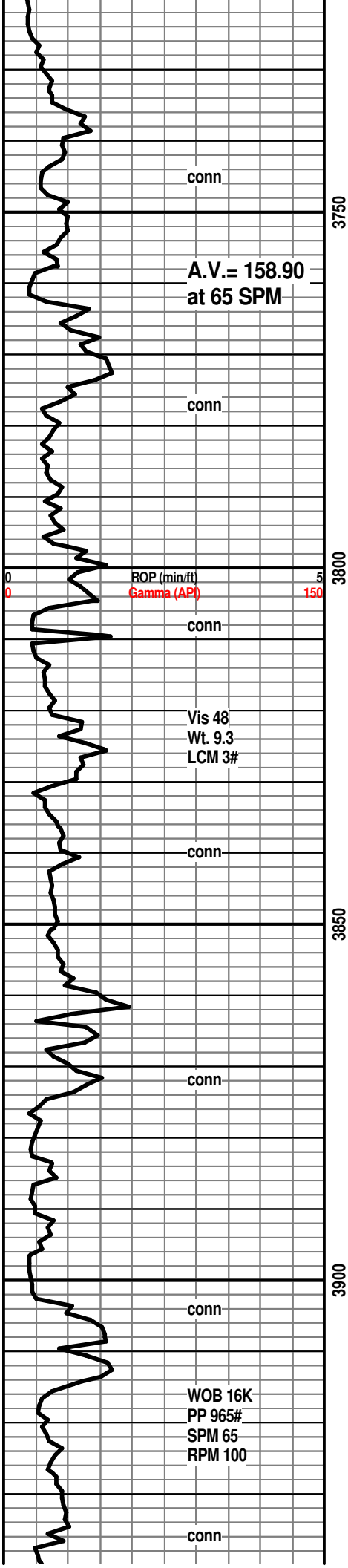
WOB 16K
PP 950#
SPM 65
RPM 100

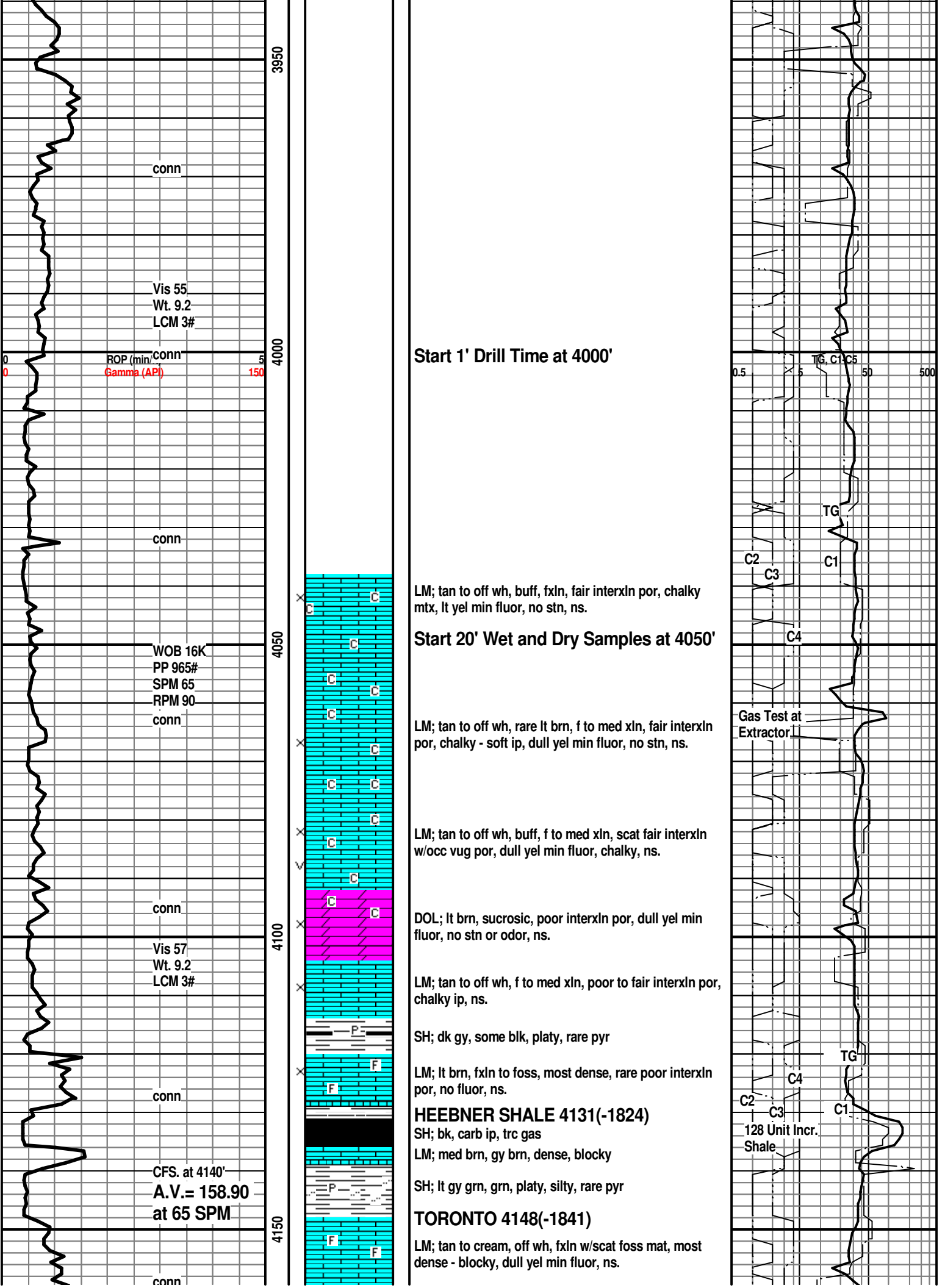




HOWARD 3670(-1363)







WOB 16-17K
PP 1025#
SPM 65
RPM 88
conn

ROP (min/ft)
Gamma (API)

conn

conn

Vis 56
Wt. 9.3
LCM 3#

conn

A.V. = 158.95
at 65 SPM

CFS. at 4308'
Vis 53 Wt. 9.4+
WL 10.8 CI 7000
PH 11.0 LCM 2#

DST #1
Lansing 'B'
4327' - 4344'
Corrected
Depth to Log

CFS. at 4344'

Scale Change
ROP (min/ft)
Gamma (API)

CFS. at 4362'

WOB 40K
PP 1110#
SPM 65
RPM 63



LM; wh, off wh, tan, fxln, scat foss mat, interbdd v. chalky lmst, poor to fair interpart por, no fluor, ns.

DOUGLAS SHALE 4174(-1867)

SH; lt gy, gy grn, platy, occ silty

LM; lt to med gy, gy brn, foss - well cem, most dense, rare pyr

LM; lt brn, hd, highly foss ip, some dense - micritic, dull yel min fluor, ns.

SH; lt to med gy, fiss - platy, occ silty

SH; lt to med gy, platy, most smooth

SH; lt to med gy, platy, rarely silty

BROWN LMST. 4286(-1979)

LM; med to dk brn, dense, micritic

LANSING 'A' 4292(-1985)

LM; tan to off wh, buff, highly foss - partly oolitic, poor to fair interpart/oomoldic por, some dense/well cem, lt yel fluor, no stn or odor, no cut, no vis gas bubbles, minor chalky mtx, rare lt gy cht

LM; lt gy, gy brn, argil ip, tite

LANSING 'B' 4318(-2011)

LM; tan to cream, foss ip, most tite - micritic, minor chalky mtx, lt yel fluor, no sample shows, no gas kick

LM; tan to lt brn, med xln ip, some gd p-p and vug por, SFO, occ chalky mtx, much brite yel fluor, fair to gd odor, trc gas bubbles, spotted to occ even lt brn oil stn, gd cut

DST #1(Lansing 'B') 4327' - 4344'
Start 10' Wet/Dry Samples at 4350'

LANSING 'C' 4348(-2041)

LM; tan to off wh, buff, f to med xln, occ spar calc xtals, fair vis interxln por, rarely foss, no stn/odor, no sample shows, dull yel min fluor, cherty ip.

LM; lt to med brn, gy brn, most dense - micritic, some gy brn argil lmst, no vis por, no fluor, scat brn to gy cht, ns.

LANSING 'E' ZONE 4380(-2073)

TG, C1-C5

TG
C1
C3
C4
C2

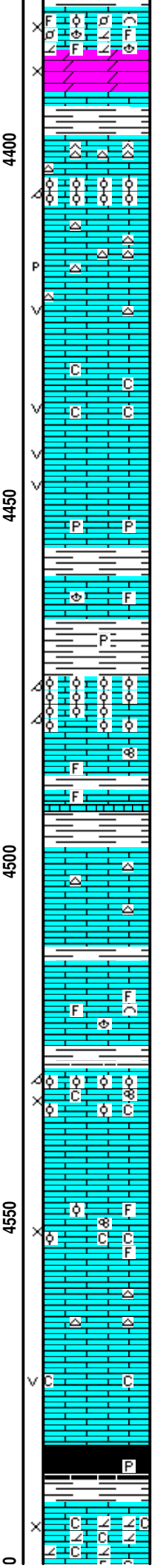
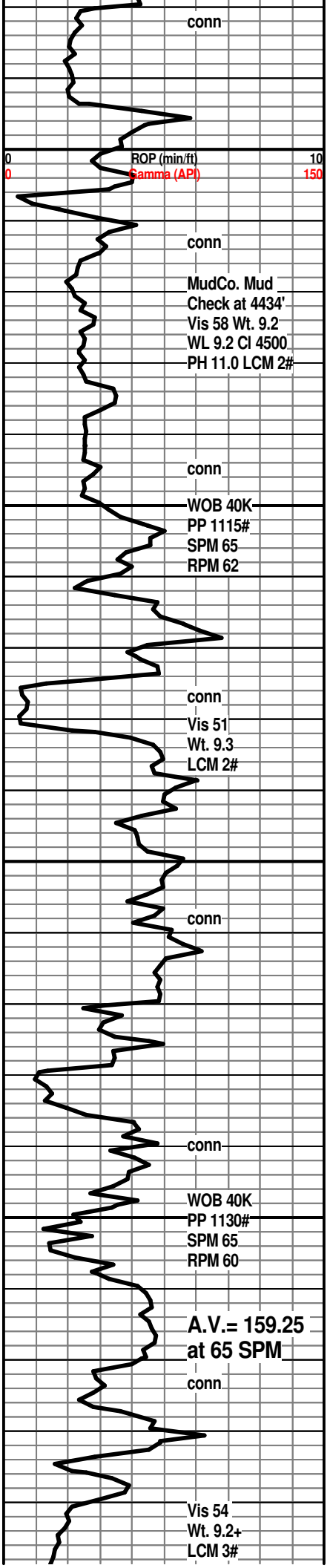
14 Unit Incr.

105 Unit Incr.
SHOW
GAS KICK
RECYCLED

OIL IN MUD AFTER
DST #1

10 Unit Incr.)

Oil in Mud Recycle



LANSING E ZONE 4388(-2079)
LM; off wh, buff, highly foss, much foss hash, fair to gd interpart por, dull yel fluor, partly dolomitic, ns.

DOL; off wh, tan, buff, most sucrosic, poor to fair interxln por, dull yel fluor, ns.

LM; lt brn, hd, v. cherty, tite

LM; lt to med brn, oolitic, brittle ip, fair oomoldic por, lt yel min fluor, no stn/odor, no gas kick

LM; off wh, wh, f to med xln to gran text, scat fair p-p and vug por, chalky mtx ip, scat wh cht, no fluor, ns.

LM; tan, buff, cse xln, well dev. vug por in some, spar calc xtals, no fluor, no stn/odor, ns.

LM; lt to med gy, hd, micritic, pyr ip.

SH; med gy, gy grn, sticky ip.

LM; med brn, hd, blocky, scat well cem foss mat, no vis por, ns.

SH; med to dk gy, platy, rare pyr

LANS/K.C. 'H' 4474(-2167)
LM; lt to med brn, oolitic, fair oomoldic por, some brittle, lt yel min fluor only, no stn or odor, no gas kick, ns.
LM; med brn, foss ip, well cem, tite

SH; med gy, platy

LM; med brn, hd, most micritic, blocky, scat brn cht, no vis por, ns.

LM; lt to med brn, highly foss, most well cem, lt yel fluor, no stn or odor, ns.

K.C. 'I' ZONE 4529(-2222)
LM; tan to lt brn, foss - oolitic, fair to gd interpart por, some fair oomoldic por, occ soft chalky mtx, dull yel fluor, no stn or odor, no gas kick, ns.

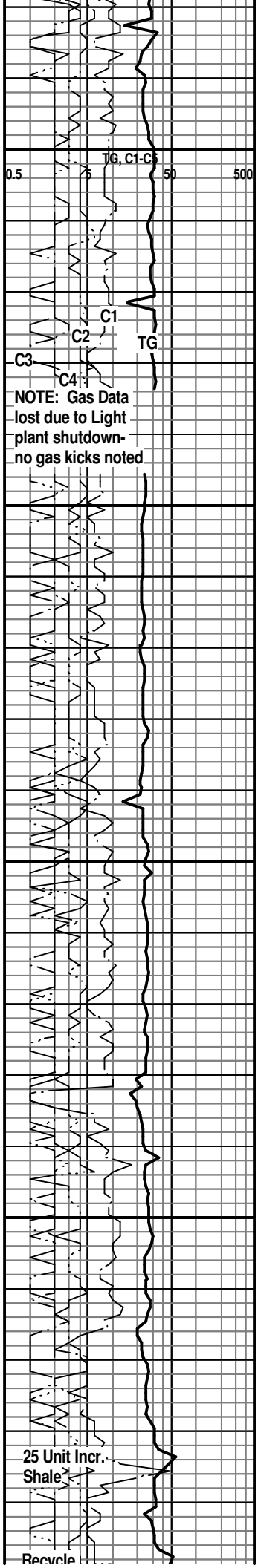
LM; tan to off wh, cream, foss, minor soft chalky mtx, fair interpart por, dull to lt yel fluor, no stn or odor, ns.

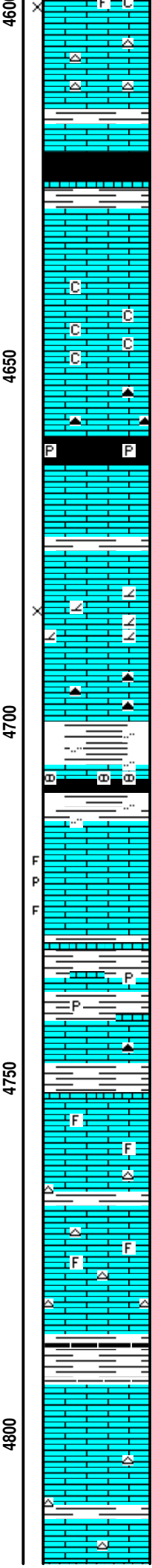
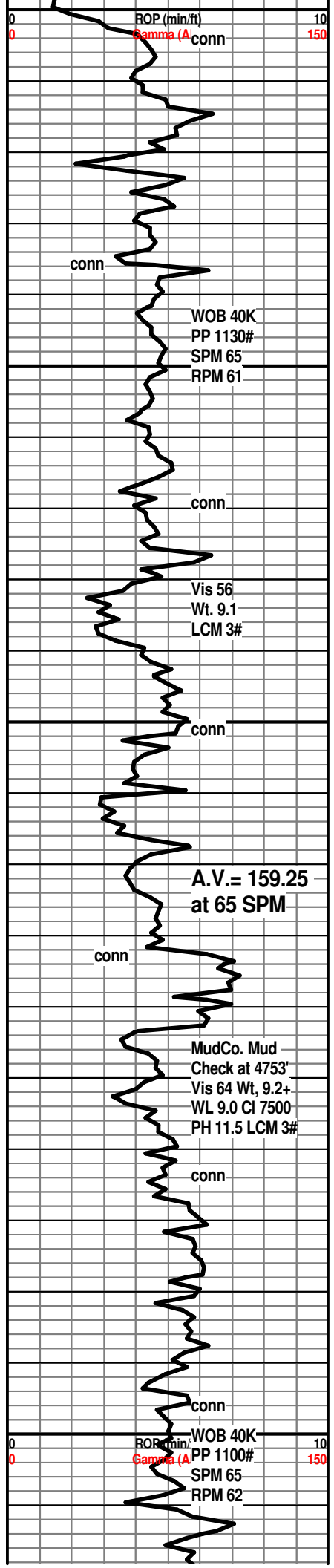
LM; med brn, hd, micritic, scat brn cht, tite

LM; off wh, tan, cream, fxln, rare vug por, minor soft chalky mtx, no stn/odor, ns.

SH; blk, carb ip, trc pyr

K.C. "J" ZONE 4589(-2282)
LM; wh, off wh, sucrosic text, dolomitic, fair interpart por, soft chalky mtx, rare foss mat, dull yel fluor, no stn or odor, no gas kick





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

STARK SHALE 4620(-2313)
SH; blk, carb ip, faint gas odor

SWOPE 4628(-2321)
LM; med to dk brn, hd, blocky, tite

LM; off wh, wh, fxln, some soft chalky mtz, no vis por, no stn or odor, ns.

LM; lt to med brn, most dense - micritic, scat smoky cht, no vis por, no fluor, ns.
SH; dk gy, blk, fiss, occ pyr

HERTHA 4665(-2358)
LM; lt to med brn, rare gy brn, blocky, hd, no vis por, no fluor, ns.

LM; off wh, wh, buff, fxln, some sucrosic text, partly dolomitic, fair to poor interpart por, med yel min fluor, no stn or odor, no gas kick

LM; med to dk brn, dense, scat dk brn/smoky cht, tite

BASE KANSAS CITY 4702(-2395)
SH; lt to med gy, grn, trc blk, platy, occ silty, interbdd gy brn nodular lmst.

MARMATON 4716(-2409)
LM; tan to buff, off wh, most dense - micritic, scat calc fld frags, trc poor p-p por, lt yel min fluor, no stn or odor, no gas kick

SH; lt to med gy, lmy ip, v. firm, interbdd gy brn lmst, rare pyr

LM; lt to med brn, hd, blocky, trc blk cht, no vis por, lt yel min fluor, ns.

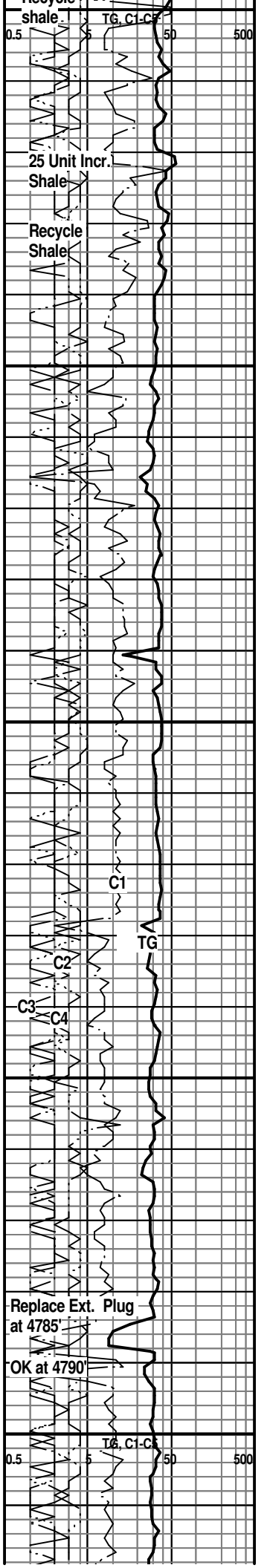
ALTAMONT 4753(-2446)
LM; lt to med brn, most micritic, rare well cem foss mat, lt yel min fluor, no stn or odor, no vis por, scat wh to tan cht, ns.

LM; tan to lt brn, buff, fxln w/rare foss mat, most dense, lt yel min fluor, occ spar calc xtals, no stn or odor, occ cherty, ns.

SH; dk gy - blk, platy

PAWNEE 4793(-2486)
LM; tan to buff, lt brn, hd, blocky, most micritic, lt yel min fluor, no vis por, no stn or odor, rare med gy cht, ns.

LM; lt brn, fxln to micritic, hd, no vis por, dull yel min fluor, no stn or odor, ns.



A.V.= 159.30
at 65 SPM

conn

Vis 57
Wt. 9.1
LMC 3#

R= Rough
Drilling

WOB 40K
PP 1025#
SPM 65
RPM 61

CFS. at 4923'
DST #2
Miss. Dolo.
4894' - 4939'

CFS. at 4939'
MudCo. Mud
Check at 4940'
Vis 68 Wt. 9.3+
WL 10.4 CI 9000
PH 11.0 LCM 2.5#

Vis 60
Wt. 9.1
LCM 3#

ROP (min/ft) 10
Gamma (API) 150

CFS. at 5025'
RTD.

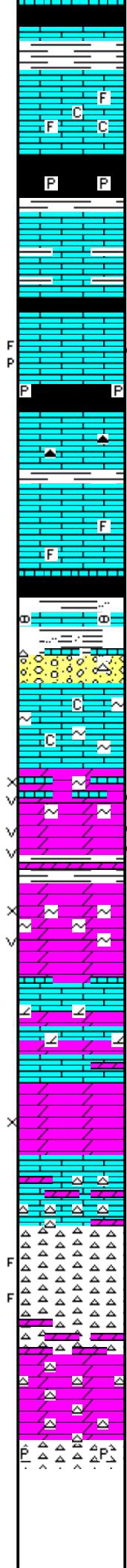
MudCo. Mud
Check at 5025'
Vis 54 Wt. 9.4

4850

4900

4950

5000



LABETTE SHALE 4819(-2512)

SH; blk, carb ip, platy
LM; dk brn, dense, blocky, hd

LM; tan to lt brn, foss ip - well cem, partly soft chalky
mtx, lt yel fluor, no stn or odor, ns.

CHEROKEE SHALE 4842(-2535)

SH; blk, carb ip, occ pyr

LM; lt brn to gy brn, some argil lmst, thinly interbdd
shale and shaly lmst, no vis por, no fluor, ns.

SH; blk, platy, rare pyr
LM; med to dk brn, med xln ip, faint odor, trc gas
bubbles, poss fracs, scat dk brn oil stn, some gilsonite,
v. dull yel fluor, trc p-p por, fair to gd cut, looks tite,
CHECK LOGS

SH; blk, dk gy, pyr ip.

LM; lt to med gy, gy brn, dense, trc blk cht, tite

SH; dk gy, platy

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

BASE CHER. LMST 4899(-2592)

SH; varic, blk, grn, rust red, platy, yellow, silty ip,
interbdd gy-grn nodular lmst.

CONGL; weath lmst, rare cht, lrg rnd qtz gr.

MISSISSIPPI UNCF. 4914(-2607)

LM; wh, off wh, cse xln, occ glau, occ chalky

MISSISSIPPI DOLO. 4926(-2619)

DOL; off wh, buff, sucrosic, lmy ip, fair interxln and vug
por, spotted lt brn stn, fair odor, spotted lt/med yel
fluor, glau ip, no vis F.O.

DOL; lt brn, sucrosic, well dev. vug por, SSFO, gd odor,
med golden yel fluor, spotted to even lt brn stn, trc gas
bubbles

DST #2: Miss. Dolomite 4894' - 4939'

Corrected Depths to log

DOL; lt brn to gy brn, rare tan, sucrosic, fair interxln
w/scat gd vug por, glau, dull yel fluor, poss faint odor,
no vis stn, no cut

DOL LMST; lt to med gy brn, hd, rare glau, lt to med yel
min fluor, no vis stn, no odor, ns.

DOL; tan, lt brn, fxln, some lmy, most soft, fair interxln
por, dull yel fluor, ns.

DOL LMST; lt to med gy, cherty ip, some dense -
blocky, no vis por, no fluor, ns.

CHT; off wh, lt gy, mottled text, fresh - sharp, poss
fracs, no vis por, no stn or odor, no fluor, ns.

DOL CHT; wh, off wh, lt gy, hd, no vis por, ns.

DOL; wh, off wh, cherty, hd, no vis por, no fluor, ns.

CHT; wh, lt gy, fresh-sharp, pyr ip.

RTD. 5025' at 4:15 AM. 8/6/24

25 Unit Incr.
Shale

32 Unit Incr.
Shale

15 Unit Incr.
POSS. SHOW

12 Unit Incr.
Shale

10 Unit Incr.
Shale

11 Unit Incr.
SHOW

15 Unit Incr.
SHOW

0.5 5 TG, C1-C5 50 500

VIS 54 Wt. 9.4
WL 10.8 CI 9000
PH 11.0 LCM 2.5#

5050

00

LTD. 5025'

ELI Wireline DIL, Neutron/Density, PE,
Microlog

**NOTE: Portions of this log was shifted
upward by 1' - 2' for correlation
purposes with the ELI Logs.**



DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

P.O. Box 838
Lawrenceville, IL 62439

ATTN: Jon Christensen

Rudd #1-21

21-28s-20w Kiowa,KS

Start Date: 2024.08.02 @ 16:43:00

End Date: 2024.08.03 @ 00:57:02

Job Ticket #: 71438 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.08.13 @ 11:11:21

Herman L. Loeb, LLC
21-28s-20w Kiowa,KS
Rudd #1-21
DST # 1
LKC B
2024.08.02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L. Loeb, LLC
P.O. Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

21-28s-20w Kiowa, KS

Rudd #1-21

Job Ticket: 71438

DST#: 1

Test Start: 2024.08.02 @ 16:43:00

GENERAL INFORMATION:

Formation: **LKC B**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:02:17
Time Test Ended: 00:57:02

Test Type: Conventional (Initial)
Tester: Chris Hagman
Unit No: 69

Interval: 4328.00 ft (KB) To 4345.00 ft (KB) (TVD)
Total Depth: 4345.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2307.00 ft (KB)
2295.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6751

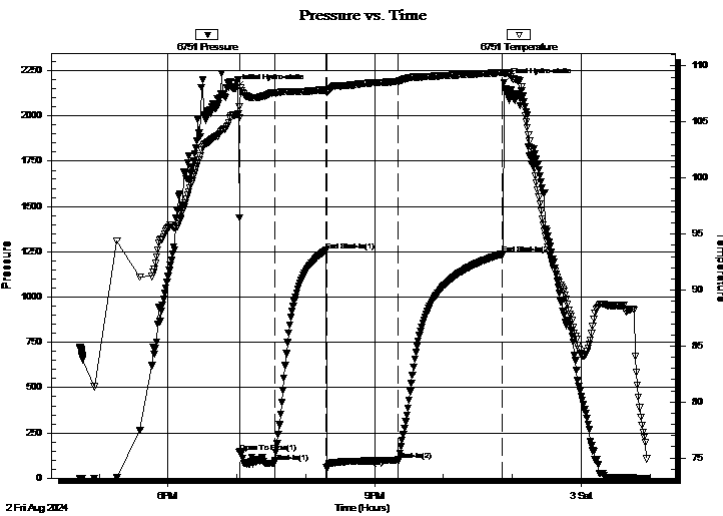
Outside

Press@RunDepth: 100.62 psig @ 4330.00 ft (KB)
Start Date: 2024.08.02 End Date: 2024.08.03
Start Time: 16:43:01 End Time: 00:57:02

Capacity: psig
Last Calib.: 1899.12.30
Time On Btm: 2024.08.02 @ 18:58:47
Time Off Btm: 2024.08.02 @ 22:53:02

TEST COMMENT: IF: 30 min., slid 10' to bottom, fair building blow, 7.75 inches
IS: 45 min., no blow back
FF: 60 min., BOB 1 min., strong building blow, 34 inches
FSI: 90 min., no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2150.01	105.63	Initial Hydro-static
4	143.28	106.40	Open To Flow (1)
34	85.92	107.60	Shut-In(1)
79	1257.00	107.85	End Shut-In(1)
80	57.03	107.61	Open To Flow (2)
142	100.62	108.64	Shut-In(2)
233	1237.82	109.43	End Shut-In(2)
235	2185.37	109.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gassy oil 35%O,65%G	0.30
124.00	gassy oily mud 70%M,5%O,25%G	0.61
0.00	186' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Herman L. Loeb, LLC
 P.O. Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

21-28s-20w Kiowa,KS
Rudd #1-21
 Job Ticket: 71438 **DST#: 1**
 Test Start: 2024.08.02 @ 16:43:00

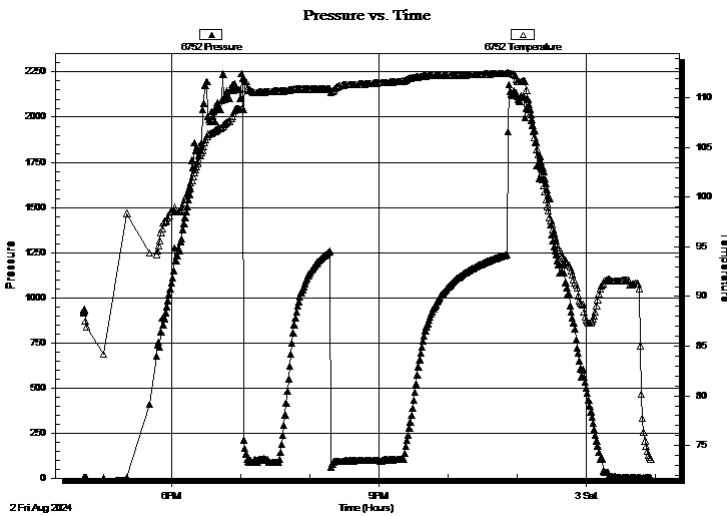
GENERAL INFORMATION:

Formation:	LKC B				
Deviated:	No Whipstock:	ft (KB)	Test Type:	Conventional (Initial)	
Time Tool Opened:	19:02:17		Tester:	Chris Hagman	
Time Test Ended:	00:57:02		Unit No:	69	
Interval:	4328.00 ft (KB) To 4345.00 ft (KB) (TVD)		Reference Elevations:	2307.00 ft (KB)	
Total Depth:	4345.00 ft (KB) (TVD)			2295.00 ft (CF)	
Hole Diameter:	7.80 inches	Hole Condition: Good	KB to GR/CF:	12.00 ft	

Serial #: 6752 Inside

Press@RunDepth:	psig @ 4330.00 ft (KB)	Capacity:	psig
Start Date:	2024.08.02	End Date:	2024.08.03
Start Time:	16:43:01	End Time:	00:57:02
		Last Calib.:	1899.12.30
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF: 30 min., slid 10' to bottom, fair building blow , 7.75 inches
 IS: 45 min., no blow back
 FF: 60 min., BOB 1 min., strong building blow , 34 inches
 FS: 90 min., no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gassy oil 35%O,65%G	0.30
124.00	gassy oily mud 70%M,5%O,25%G	0.61
0.00	186' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

21-28s-20w Kiowa,KS

P.O. Box 838
Lawrenceville, IL 62439

Rudd #1-21

Job Ticket: 71438

DST#: 1

ATTN: Jon Christensen

Test Start: 2024.08.02 @ 16:43:00

Tool Information

Drill Pipe:	Length: 4110.00 ft	Diameter: 3.80 inches	Volume: 57.65 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 58.68 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4328.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	0.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4308.00	
Hydraulic tool	5.00			4313.00	
Isolator Sub	3.00			4316.00	
Safety Joint	3.00			4319.00	
Packer	5.00			4324.00	25.00 Bottom Of Top Packer
Packer	4.00			4328.00	
Stubb	1.00			4329.00	
Perforations	1.00			4330.00	
Recorder	0.00	6752	Inside	4330.00	
Recorder	0.00	6751	Outside	4330.00	
Pickup sub perf	5.00			4335.00	
Perforations	7.00			4342.00	
Bullnose	3.00			4345.00	17.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

21-28s-20w Kiowa,KS

P.O. Box 838
Lawrenceville, IL 62439

Rudd #1-21

Job Ticket: 71438

DST#: 1

ATTN: Jon Christensen

Test Start: 2024.08.02 @ 16:43:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	gassy oil 35%O,65%G	0.305
124.00	gassy oily mud 70%M,5%O,25%G	0.610
0.00	186' GIP	0.000

Total Length: 186.00 ft

Total Volume: 0.915 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

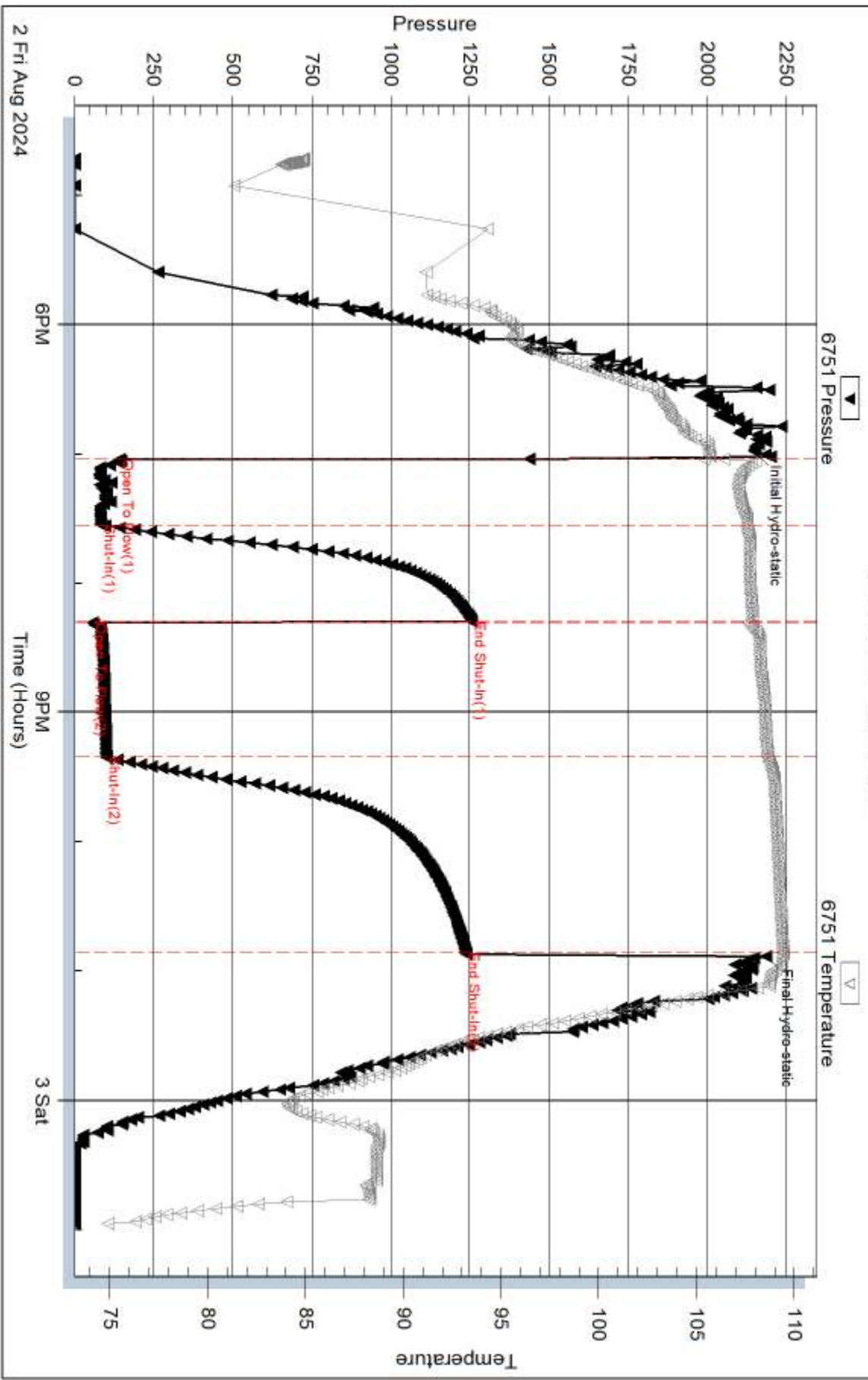
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



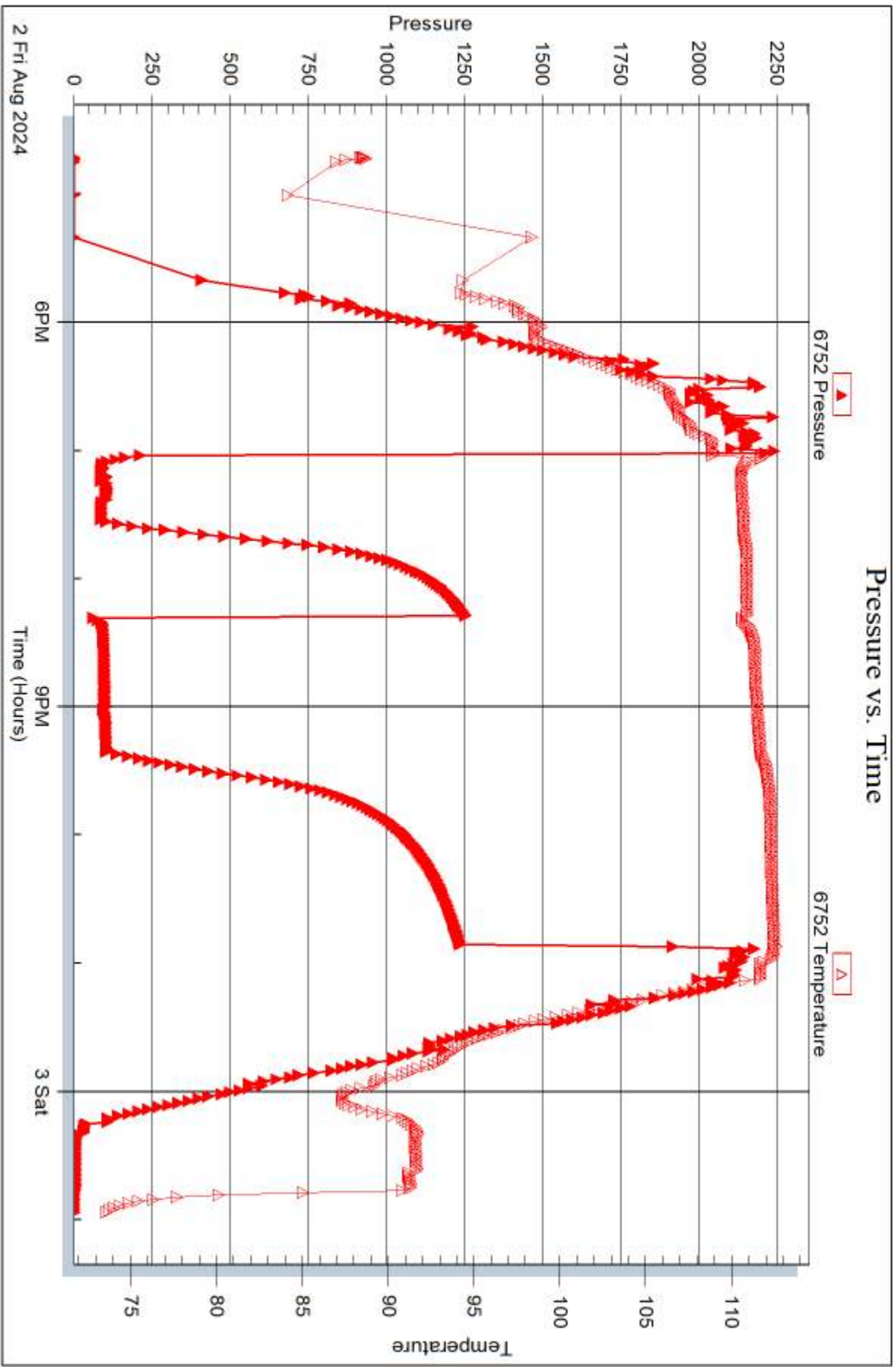
Serial #: 6752

Inside

Herman L. Loeb, LLC

Rudd #1-21

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 71438

Printed: 2024.08.13 @ 11:11:22



DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

P.O. Box 838
Lawrenceville, IL 62439

ATTN: Jon Christensen

Rudd #1-21

21-28s-20w Kiowa,KS

Start Date: 2024.08.05 @ 10:14:00

End Date: 2024.08.05 @ 18:52:02

Job Ticket #: 71439 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.08.13 @ 11:08:42

Herman L. Loeb, LLC
21-28s-20w Kiowa,KS
Rudd #1-21
DST # 2
Miss:
2024.08.05



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Herman L. Loeb, LLC
 P.O. Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

21-28s-20w Kiowa,KS

Rudd #1-21

Job Ticket: 71439

DST#: 2

Test Start: 2024.08.05 @ 10:14:00

GENERAL INFORMATION:

Formation: **Miss.**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:29:17
 Time Test Ended: 18:52:02
 Interval: **4895.00 ft (KB) To 4940.00 ft (KB) (TVD)**
 Total Depth: 4940.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chris Hagman
 Unit No: 69
 Reference Elevations: 2307.00 ft (KB)
 2295.00 ft (CF)
 KB to GR/CF: 12.00 ft

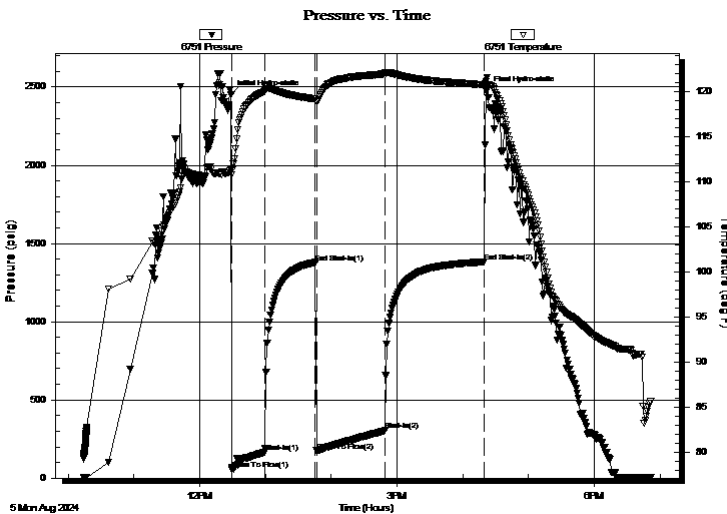
Serial #: 6751

Outside

Press@RunDepth: 303.92 psig @ 4898.00 ft (KB) Capacity: psig
 Start Date: 2024.08.05 End Date: 2024.08.05 Last Calib.: 1899.12.30
 Start Time: 10:14:01 End Time: 18:52:02 Time On Btm: 2024.08.05 @ 12:28:32
 Time Off Btm: 2024.08.05 @ 16:21:47

TEST COMMENT: IF: 30 min., BOB 30 min., strong building blow , 12 inches
 IS: 45 min., no blow back
 FF: 60 min., BOB 30 min., strong building blow , 23 inches
 FS: 90 min., no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2451.94	111.37	Initial Hydro-static
1	55.62	110.72	Open To Flow (1)
31	166.49	120.03	Shut-In(1)
77	1377.94	119.13	End Shut-In(1)
78	174.19	118.87	Open To Flow (2)
141	303.92	121.96	Shut-In(2)
231	1382.17	120.70	End Shut-In(2)
234	2474.83	120.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
630.00	oil spotted w ater 1%O,99%W	6.92
0.00	63' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Herman L. Loeb, LLC
P.O. Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

21-28s-20w Kiowa,KS

Rudd #1-21

Job Ticket: 71439 **DST#: 2**
Test Start: 2024.08.05 @ 10:14:00

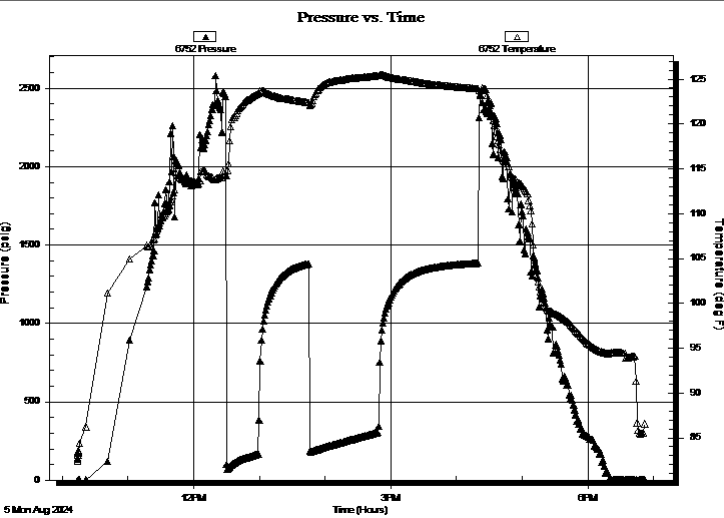
GENERAL INFORMATION:

Formation: **Miss.**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:29:17
Time Test Ended: 18:52:02
Interval: **4895.00 ft (KB) To 4940.00 ft (KB) (TVD)**
Total Depth: 4940.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Chris Hagman
Unit No: 69
Reference Elevations: 2307.00 ft (KB)
2295.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6752 **Inside**

Press@RunDepth: psig @ 4898.00 ft (KB) Capacity: psig
Start Date: 2024.08.05 End Date: 2024.08.05 Last Calib.: 1899.12.30
Start Time: 10:14:01 End Time: 18:52:02 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: 30 min., BOB 30 min., strong building blow , 12 inches
IS: 45 min., no blow back
FF: 60 min., BOB 30 min., strong building blow , 23 inches
FS: 90 min., no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
630.00	oil spotted w ater 1%O,99%W	6.92
0.00	63' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

21-28s-20w Kiowa,KS

P.O. Box 838
Lawrenceville, IL 62439

Rudd #1-21

Job Ticket: 71439

DST#: 2

ATTN: Jon Christensen

Test Start: 2024.08.05 @ 10:14:00

Tool Information

Drill Pipe:	Length: 4690.00 ft	Diameter: 3.80 inches	Volume: 65.79 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose:	100000.0 lb
			<u>Total Volume: 66.82 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	81000.00 lb
Depth to Top Packer:	4895.00 ft			Final	82000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4875.00	
Hydraulic tool	5.00			4880.00	
Isolator Sub	3.00			4883.00	
Safety Joint	3.00			4886.00	
Packer	5.00			4891.00	25.00 Bottom Of Top Packer
Packer	4.00			4895.00	
Stubb	1.00			4896.00	
Perforations	2.00			4898.00	
Recorder	0.00	6752	Inside	4898.00	
Recorder	0.00	6751	Outside	4898.00	
Change Over Sub	1.00			4899.00	
Drill Pipe	32.00			4931.00	
Change Over Sub	1.00			4932.00	
Perforations	5.00			4937.00	
Bullnose	3.00			4940.00	45.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

21-28s-20w Kiowa,KS

P.O. Box 838
Lawrenceville, IL 62439

Rudd #1-21

Job Ticket: 71439

DST#: 2

ATTN: Jon Christensen

Test Start: 2024.08.05 @ 10:14:00

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:

62000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
630.00	oil spotted w ater 1%O,99%W	6.924
0.00	63' GIP	0.000

Total Length: 630.00 ft Total Volume: 6.924 bbl

Num Fluid Samples: 0

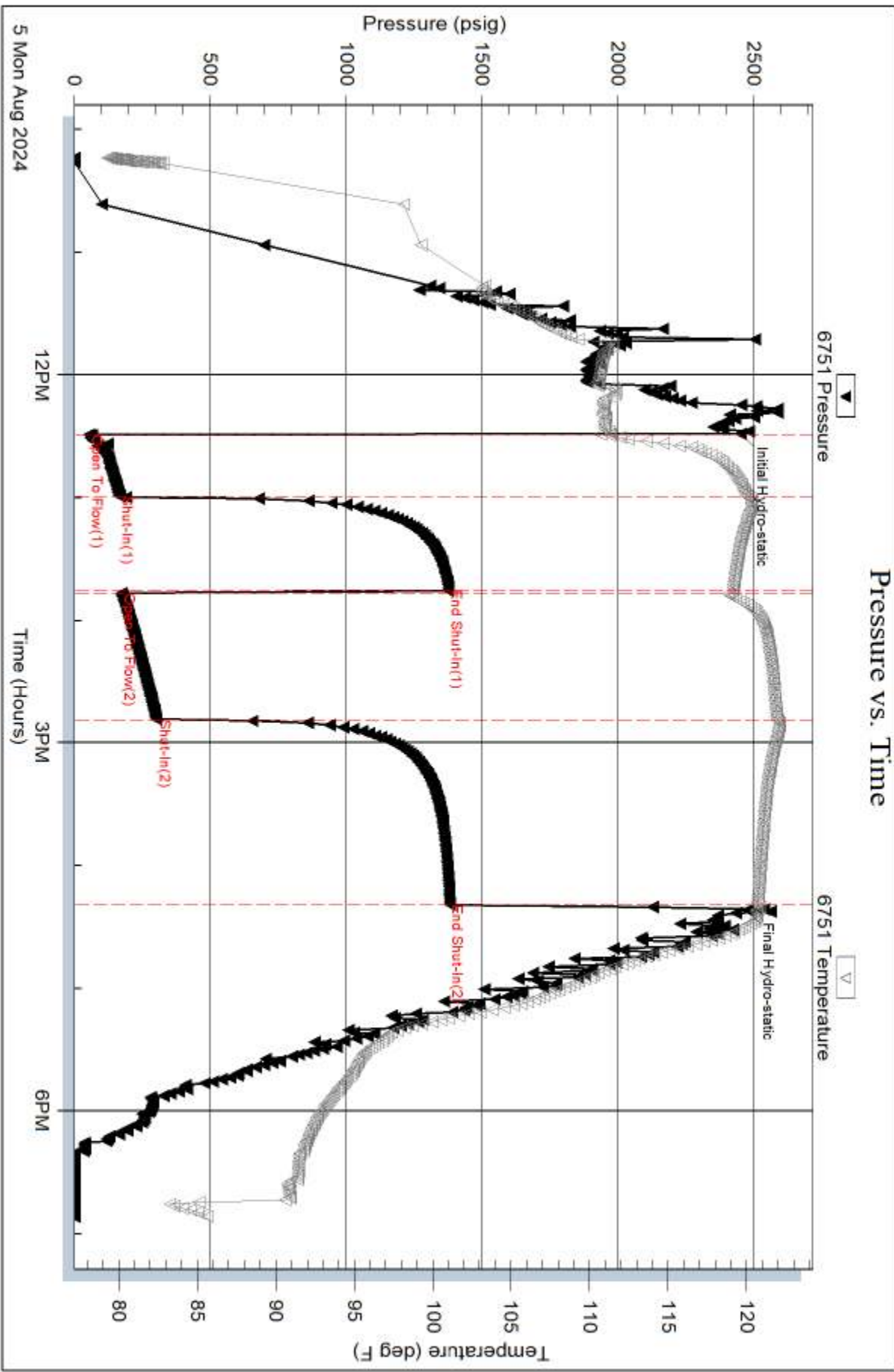
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.104@84F=62,000ppm



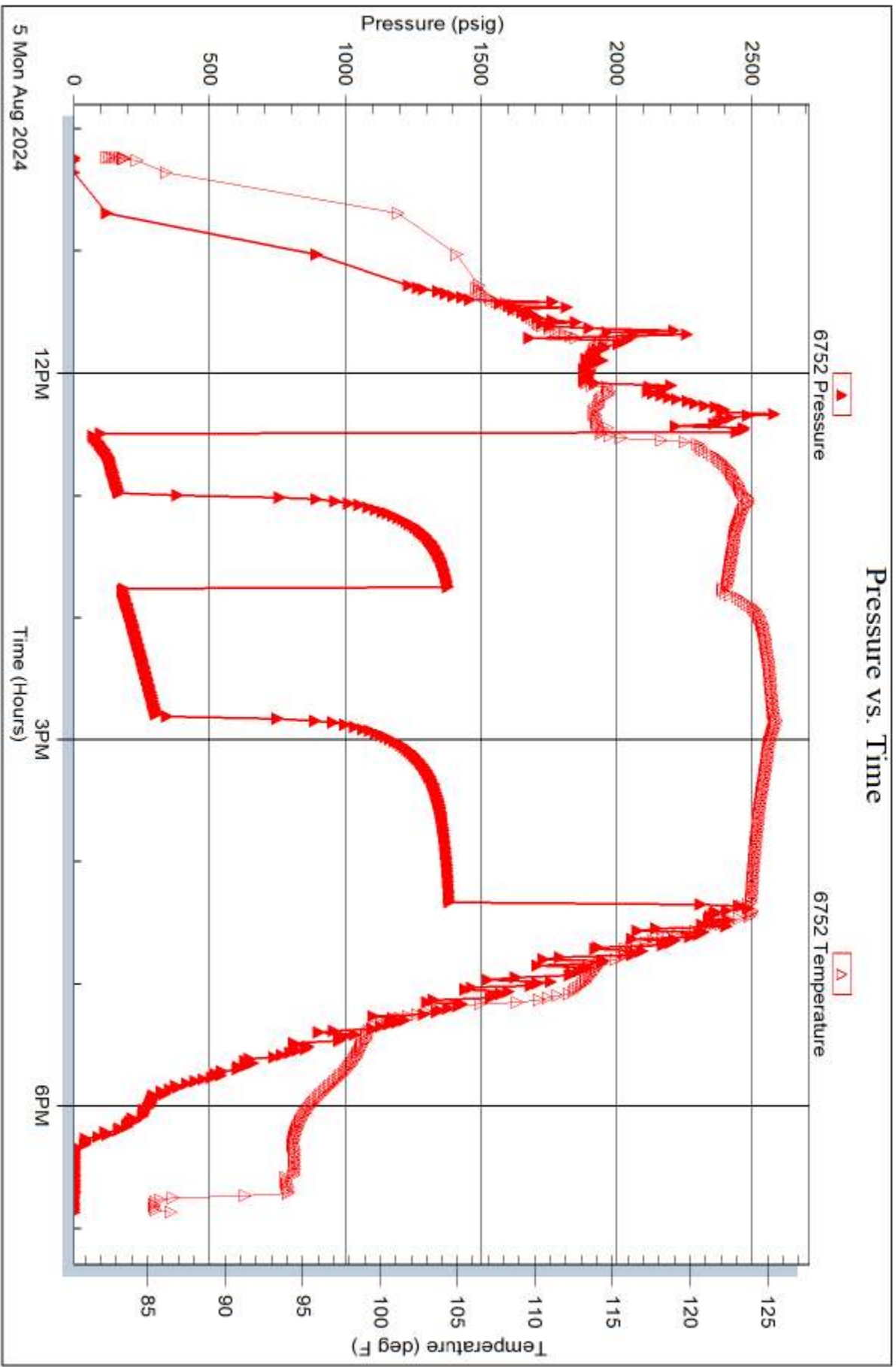
Serial #: 6752

Inside

Herman L. Loeb, LLC

Rudd #1-21

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 71439

Printed: 2024.08.13 @ 11:08:43



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 71438

Well Name & No. Rudd 121 Test No. 1 Date 8-2-24
 Company Herman L. Loeb, LLC Elevation 2307 KB 2795 GL
 Address P.O. Box 838 Lawrenceville, IL 62439
 Co. Rep / Geo Tom Christensen Rig Sterling 04
 Location: Sec. 21 Twp 28 Rge. 20 Co. Kiowa State KS

Interval Tested 4328-4345 Zone Tested Leasing B
 Anchor Length 17' Drill Pipe Run 4110 Mud Wt. 9.4
 Top Packer Depth 4323 Drill Collars Run 210 Vis 53
 Bottom Packer Depth 4328 Wt. Pipe Run N.A. WL 10.8
 Total Depth 4345 Chlorides 7,000 ppm System LCM 2 #

Blow Description IF: 30 min, slid 10', fair building blow, 7.75 inches
ISB: 45 min, no blow back
PF: 60 min, BOB 1 min, strong building blow, 34 inches
PSB: 90 min, no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>gassy oil</u>	<u>65</u>	<u>35</u>		
<u>124</u>	<u>gassy oily mud</u>	<u>25</u>	<u>5</u>		<u>70</u>

Rec Total 186 BHT 109 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 Initial Hydrostatic 2150 Test conv. 1950 Ruined Shale Packer _____
 Initial Flow 143 to 86 Jars _____ Ruined Packer x 1.0 625
 Initial Shut-In 1257 Circ Sub _____ Hotel _____
 Final Flow 57 to 101 Hourly Standby _____ EM Tool Successful good
 Final Shut-In 1238 Mileage x90 (Prtb) Accessibility _____
 Final Hydrostatic 2185 Sampler 157.50 Gas Sample _____
 T-On Location 1500 Straddle _____ Oversized Hole _____
 Initial Flow 30 T-Started 1645 Shale Packer _____ Sub Total 625
 Initial Shut-In 45 T-Open 1905 Extra Packer _____ Total 2732.50
 Final Flow 60 T-Pulled 2250 Extra Recorder _____ Tool Loaded _____ @ _____
 Final Shut-In 90 T-Out 0100 Day Standby _____ MP/DST Disc't _____
 Comments 1643

Approved By _____ Our Representative 785-656-3947
Chris Heggen

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 71439

Well Name & No. Rudd 1-21 Test No. 2 Date 8-5-24
 Company Herman L. Loeb, LLC Elevation 2307 KB 2295 GL
 Address P.O. Box 538 Lawrenceville, IL. 62439
 Co. Rep / Geo John Christensen Rig Stehly 24
 Location: Sec. 21 Twp 28 Rge. 20 Co. Lincoln State KS

Interval Tested 4895-4940 Zone Tested Miss
 Anchor Length 45' Drill Pipe Run 4690 Mud Wt. 9.2
 Top Packer Depth 4890 Drill Collars Run 210 Vis 64
 Bottom Packer Depth 4895 Wt. Pipe Run NA WL 9.0
 Total Depth 4940 Chlorides 7500 ppm System LCM 3 #

Blow Description IF 30 min, ROB 30 min, strong building blow, 12 inches
ISS: 45 min, no blow back
EP 60 min, ROB 30 min, strong building blow, 23 inches
AS 90 min, no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>630</u>	<u>oil spotted water</u>		<u>1</u>	<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>63' GTP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 630 BHT 121 Gravity _____ API RW 104 @ 84 *F Chlorides 62,000 ppm
 Initial Hydrostatic 2452 Test conv. 1950 Ruined Shale Packer _____
 Initial Flow 56 to 166 Jars _____ Ruined Packer _____
 Initial Shut-In 1378 Circ Sub _____ Hotel _____
 Final Flow 174 to 304 Hourly Standby _____ EM Tool Successful logged
 Final Shut-In 1382 Mileage x 90 157.50 Accessibility -350
 Final Hydrostatic 2475 Sampler _____ Gas Sample _____
 T- On Location (A30) Straddle _____ Oversized Hole _____
 Initial Flow 30 T-Started 1015 Shale Packer _____ Sub Total -350 +1083.33
 Initial Shut-In 45 T-Open 1230 Extra Packer _____ Total 1757.50 +1083.33
 Final Flow 60 T-Pulled 1615 Extra Recorder _____ Tool Loaded 8-5 @ 1900
 Final Shut-In 90 T-Out 1900 Day Standby 2d 8.5h MP/DST Disc't _____
 Comments 1014

Approved By _____ Our Representative Chris Higgins

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



CEMENT TREATMENT REPORT

Customer:	HERMAN L. LOEB	Well:	RUDD 1-21	Ticket:	WP5577
City, State:	MULLINVILLE KS	County:	KIOWA KS	Date:	7/30/2024
Field Rep:		S-T-R:	21-28S-20W	Service:	SURFACE

Downhole Information	
Hole Size:	in
Hole Depth:	565 ft
Casing Size:	8 5/8 in
Casing Depth:	561.65 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	33.1 bbls

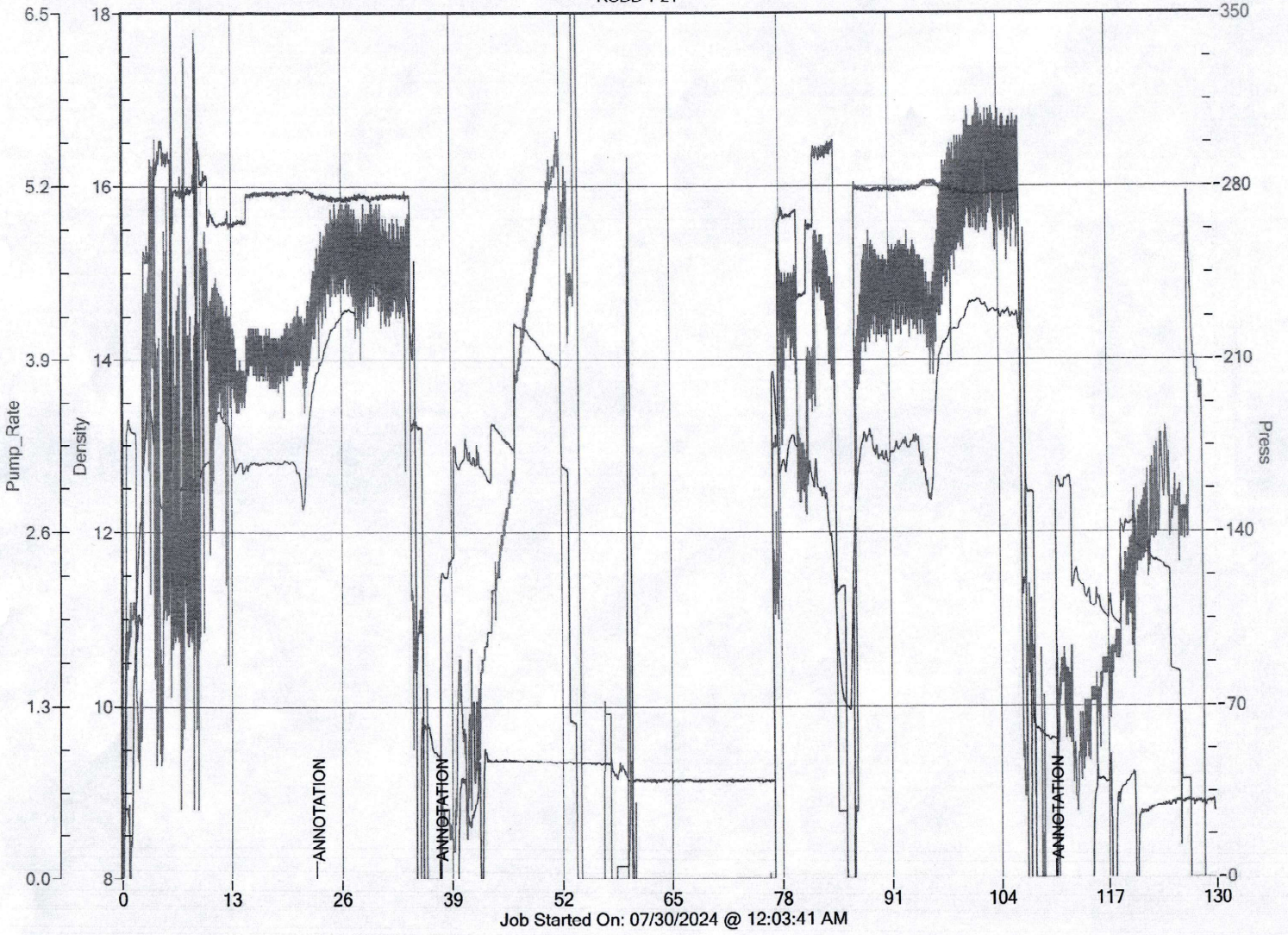
Calculated Slurry - Lead	
Blend:	H-CON
Weight:	12.8 ppg
Water / Sx:	11.2 gal / sx
Yield:	2.03 ft³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	81.4 bbls
Total Sacks:	225 sx

Calculated Slurry - Tail	
Blend:	60/60 POZMIX
Weight:	14.8 ppg
Water / Sx:	5.2 gal / sx
Yield:	1.21 ft³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	43.1 bbls
Total Sacks:	200 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
5:30 AM			-	-	ON LOCATION
8:45 AM			-	-	RUN 8 5/8 CASING, GUIDE SHOE ON 1ST JOINT, FIBER BAFFLE PLATE IN 1ST COLLAR
9:35 AM			-	-	CASING ON BOTTOM
9:40 AM			-	-	HOOK TO CASING, BREAK CIRCULATION WITH RIG
9:50 AM	3.2	110.0	81.4	81.4	MIX 225 SKS H-CON
10:09 AM	5.2	280.0	43.1	124.5	MIX 200 SKS 60/40 POZ
10:21 AM				124.5	DROP PLUG
10:23 AM	2.1	60.0		124.5	START DISPLACEMENT
10:38 AM	0.7	150.0	31.0	155.5	SLOW RATE
10:40 AM		280.0	33.1	188.6	PLUG DOWN, SHUT IN WELL
					CEMENT TO SURFACE
				-	JOB COMPLETE, THANK YOU!
				-	MIKE MATTAL
				-	AUSTIN & KENNY

CREW		UNIT	SUMMARY		
Cementer:	MATTAL	955	Average Rate	Average Pressure	Total Fluid
Pump Operator:	CLIFTON	539/521	2.8 bpm	172 psi	189 bbls
Bulk #1:	JULIAN	179/533			
Bulk #2:					

HERMAN LOEB
RUDD 1-21



**CEMENT TREATMENT REPORT**

Customer: Herman L Loeb	Well: Rudd 1-21	Ticket: wp 5625
City, State: Mullinville Kansas	County: Kiowa Kansas	Date: 8/6/2024
Field Rep: Jaun Chavez	S-T-R: 21-28s-20w	Service: PTA

Downhole Information	Calculated Slurry - Lead	Calculated Slurry - Tail
Hole Size: 7 7/8 in	Blend: H-Plug	Blend:
Hole Depth: 1260 ft	Weight: 13.7 ppg	Weight: ppg
Casing Size: dp in	Water / Sx: 6.9 gal / sx	Water / Sx: gal / sx
Casing Depth: 1260 ft	Yield: 1.43 ft³ / sx	Yield: ft³ / sx
Tubing / Liner: in	Annular Bbbs / Ft.: bbs / ft.	Annular Bbbs / Ft.: bbs / ft.
Depth: ft	Depth: ft	Depth: ft
Tool / Packer:	Annular Volume: 0.0 bbls	Annular Volume: 0 bbls
Tool Depth: ft	Excess:	Excess:
Displacement: 12.0 bbls	Total Slurry: 53.4 bbls	Total Slurry: 0.0 bbls
	Total Sacks: 210 sx	Total Sacks: 0 sx

TIME	RATE	PSI	BBLs	STAGE TOTAL BBLs	REMARKS
6:20 PM			-	-	on location job and safety
6:30 PM				-	spot trucks and rig up
				-	
7:10 PM				-	1st plug 50 sacks h-plug at 13.7 ppg at 1260ft
	3.5	220.0	5.0	5.0	fresh water
	3.5	230.0	12.7	17.7	mix 50 sacks h-plug
	3.5	200.0	12.0	29.7	displacement
7:45 PM				-	2nd plug 50 sacks h-plug at 13.7 ppg at 600ft
	3.5	180.0	5.0	5.0	fresh water
	3.5	150.0	12.7	17.7	mix 50 sacks h-plug
	4.0	150.0	3.0		displacement
8:10 PM					3rd plug 50 sacks h-plug at 13.7 ppg at 330 ft
	3.5	100.0	5.0		fresh water
	3.5	150.0	12.7		mix 50 sacks h-plug
	3.5	150.0	0.5		displacement
8:40 PM	2.0	-	5.0		60ft plug
8:50 PM	2.0	-	7.6		rat hole
8:55 PM	2.0	-	5.0		mouse hole

CREW		UNIT	SUMMARY		
Cementer:	M Brungardt	916	Average Rate	Average Pressure	Total Fluid
Pump Operator:	M McGraw	540/522	3.2 bpm	128 psi	86 bbls
Bulk #1:	E J McGraw	181/534			
Bulk #2:					

Herman Loeb pta
Rudd 1-21

