

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	PETERSON TRUST 4-31
Doc ID	1684572

All Electric Logs Run

MICRO
SONIC
DUAL INDUCTION
COMPENSATED DENSITY NEUTRON PE
LEETH

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	PETERSON TRUST 4-31
Doc ID	1684572

Tops

Name	Top	Datum
LANSING	1547	-175
CHEROKEE	2099	-727
MISSISSIPPIAN	2450	-1078
KINDERHOOK	2769	-1402
HUNTON	2914	-1542
MAQUOKETA	2949	-1577
VIOLA	3020	-1648
SIMPSON	3092	-1720
ARBUCKL	3166	-1794

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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	200	CLASS A	135	3% cc, 2% gel, floreal
Production	7.875	5.5	14	3184	60/40 POZMIX	325	2% KCL, 8% GEL
Production	7.875	5.5	14	3184	THICK SET	125	Kolseal, Penoseal, & CFL-115



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Company Inc

1700 N. Waterfront PKWY BLDG 1200
Wichita, KS 67206

ATTN: Phil Askey

31-16S-10E Lyon, KS

Peterson Trust #4-31

Job Ticket: 70128

DST#: 1

Test Start: 2023.01.17 @ 01:22:00

GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:15

Time Test Ended: 09:40:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Day

Unit No: 70

Interval: 3027.00 ft (KB) To 3037.00 ft (KB) (TVD)

Total Depth: 3037.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1334.00 ft (KB)

1324.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6625 Inside

Press@RunDepth: 34.67 psig @ 3028.00 ft (KB)

Start Date: 2023.01.17

End Date:

2023.01.17

Start Time: 01:22:05

End Time:

09:40:14

Capacity: 8000.00 psig

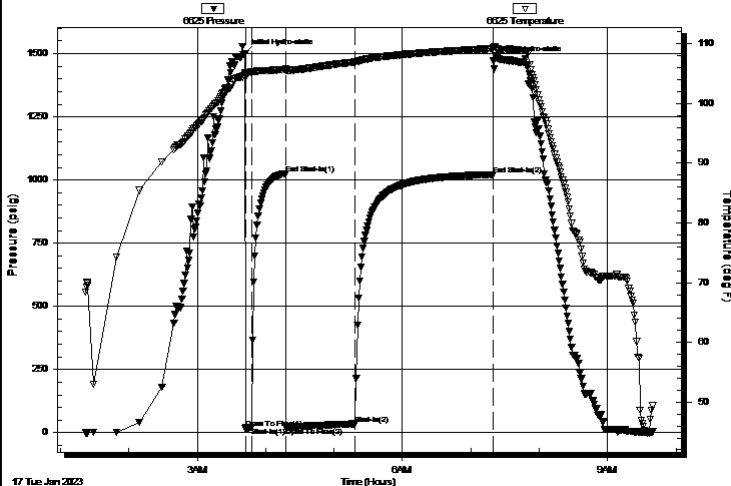
Last Calib.: 2023.01.17

Time On Btm: 2023.01.17 @ 03:42:00

Time Off Btm: 2023.01.17 @ 07:20:00

TEST COMMENT: IF-5- Built to 1"
SI1-30- No return
FF-60- Built to 1"
SI2-120- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1499.61	105.12	Initial Hydro-static
1	15.57	104.35	Open To Flow (1)
6	20.29	105.23	Shut-In(1)
36	1023.89	105.72	End Shut-In(1)
36	21.54	105.49	Open To Flow (2)
97	34.67	106.92	Shut-In(2)
218	1021.80	109.18	End Shut-In(2)
218	1472.33	109.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 5% OIL 95% MUD	0.10
2.00	Heavy Oil 100% oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Company Inc

1700 N. Waterfront PKWY BLDG 1200
Wichita, KS 67206

ATTN: Phil Askey

31-16S-10E Lyon, KS

Peterson Trust #4-31

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Total Depth: 3037.00 ft (KB) (TVD)

1324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 10.00 ft

Serial #: 8167 Outside

Press@RunDepth: psig @ 3028.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.01.17

End Date:

2023.01.17

Last Calib.:

2023.01.17

Start Time: 01:22:05

End Time:

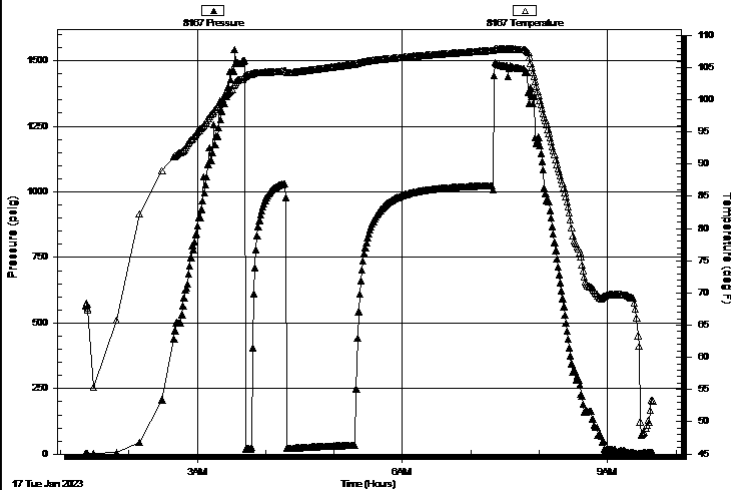
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Time On Btm:

Time Off Btm:

TEST COMMENT: IF-5- Built to 1"
SI1-30- No return
FF-60- Built to 1"
SI2-120- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
20.00	SOCM 5% OIL 95% MUD	0.10
2.00	Heavy Oil 100% oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Company Inc

31-16S-10E Lyon, KS

1700 N. Waterfront PKWY BLDG 1200
Wichita, KS 67206

Peterson Trust #4-31

Job Ticket: 70128

DST#: 1

ATTN: Phil Askey

Test Start: 2023.01.17 @ 01:22:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 39.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	SOCM 5% OIL 95% MUD	0.098
2.00	Heavy Oil 100% oil	0.010

Total Length: 22.00 ft

Total Volume: 0.108 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

Serial #: 6625

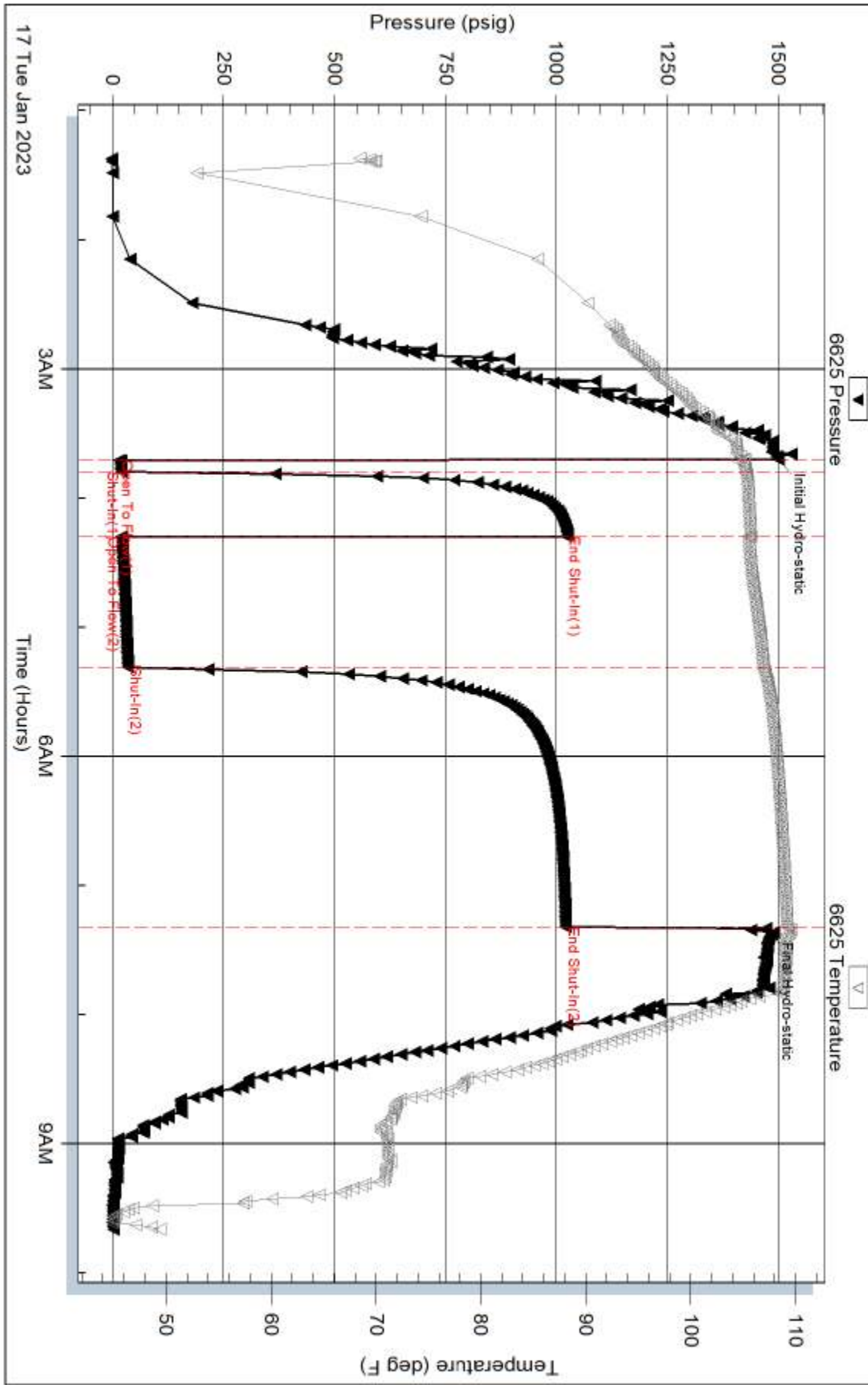
Inside

Mull Drilling Company Inc

Peterson Trust #4-31

DST Test Number: 1

Pressure vs. Time

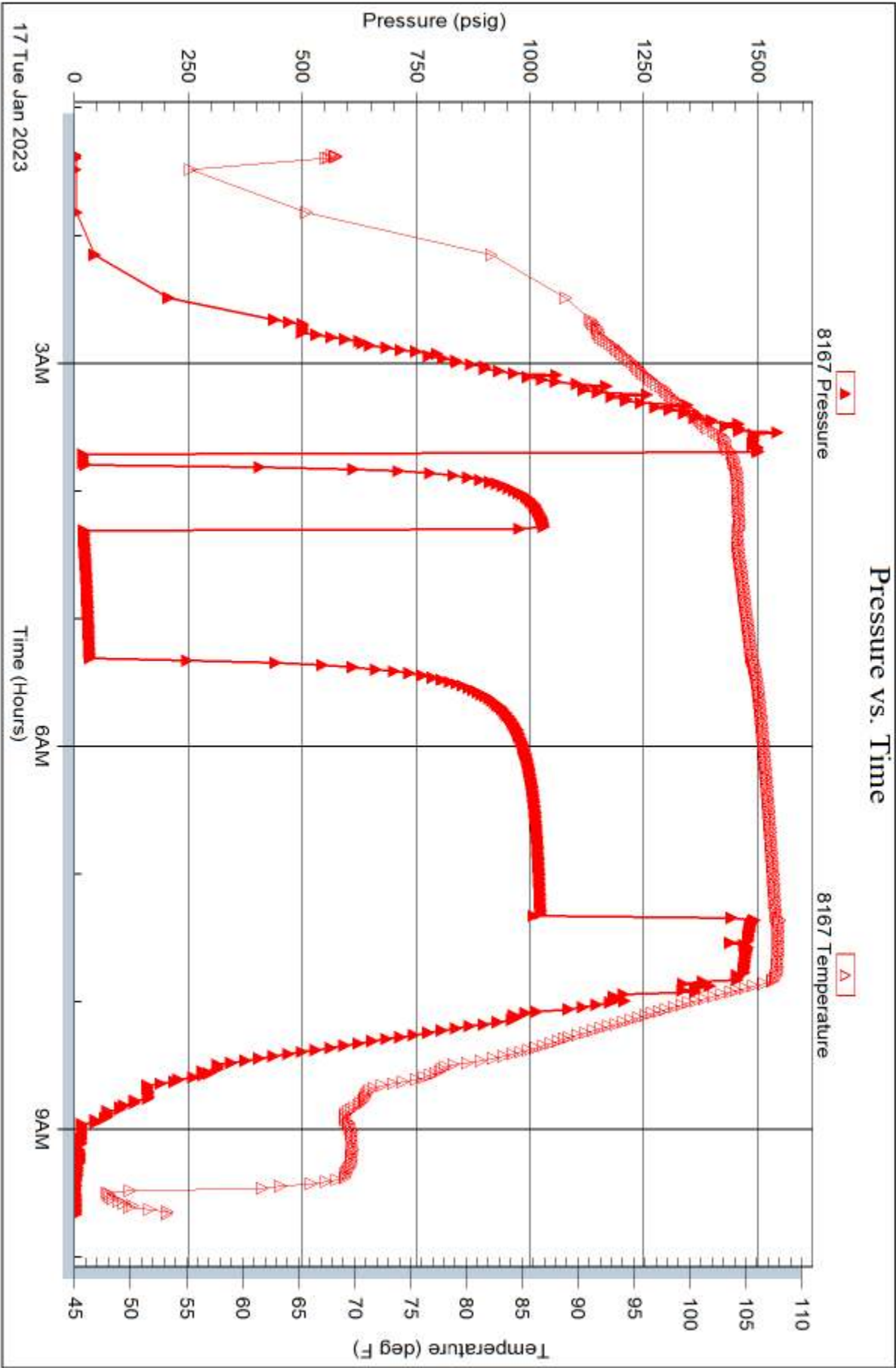


Serial #: 8167

Outside Mall Drilling Company Inc

Peterson Trust #4-31

DST Test Number: 1



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



Cement or Acid Field Report

Ticket No. **6929**

Foreman David L. Archer

Camp Eureka

API # 15-111-20561

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State	
1-12-23	1397	Peterson Trust #4-31	31	16 S	10 E	Lyons	KS	
Customer <u>Will Drilling Company, Inc.</u>			Unit #		Driver		Unit #	Driver
			111		Timothy			
Mailing Address <u>1700 N. Waterfront Pkwy Bldg 1200</u>			112		Dan			
City			State		Zip Code			
<u>Wichita</u>			<u>KS</u>		<u>67206</u>			

Job Type Surface Hole Depth 230' K.B. Slurry Vol. 33 Bbl Tubing _____
Casing Depth 210.66' G.L. Hole Size 12 1/4" Slurry Wt. 15" Drill Pipe _____
Casing Size & Wt. 8 5/8" Cement Left in Casing 15' 4" Water Gal/SK _____ Other _____
Displacement 13 1/4 Bbl Displacement PSI _____ Bump Plug to _____ BPM _____

Remarks: Safety Meeting: Rig up to 8 5/8" casing. Break circulation w/ 10 Bbl fresh water.
Mixed 135 SRS Class H Cement w/ 3% Cel 2% Gel, 1/4" Fluorolux @ 15"/gal, yield 1.27
= 33 Bbl slurry. Displace w/ 13 1/4 Bbl fresh water. Shut down. Close casing in. Good cement
returns to surface = 13 Bbl slurry to pit. Job complete. Rig down.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C101	1	Pump Charge	950.00	950.00
C107	70	Mileage	5.00	350.00
C200	135 SK	Class H Cement	18.55	2504.25
C205	380 th	Grade 31	.75	285.00
C206	255 th	Fel 2%	.30	76.50
C209	35 th	Fluorolux 1/4"/SK	2.80	98.00
C108B	60.34 Tons	Ton Mileage - 70 miles	1.50	605.70
Thank You			Sub Total	4,929.45
			Less 5%	257.59
			Sales Tax	222.28
Authorization <u>Mr. Charlie Galtie</u> Title <u>Lighthouse Drilling - Field Position</u>			Total	4,894.14

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

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



Lighthouse
DA19
R191

Cement or Acid Field Report

Ticket No. **6966**

Foreman KEVIN MCCOY

Camp EUREKA

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
1-18-23	1397	Peterson Trust 4-31	31	165	10E	LYON	Ks
Customer MULL DRILLING COMPANY, INC.			Safety Meeting KM AM DG SM SF	Unit # 104 110 112 113	Driver ALAN M. DAVE G. SHANNON F. STEVE M.	Unit #	Driver
Mailing Address 1700 N. WATERFRONT PKWY Bldg 1200							
City WICHITA	State Ks	Zip Code 67206					

Job Type Longstring Hole Depth 3300' K.B. Slurry Vol. 92 BBL LEAD
Casing Depth 3183.99' K.B. Hole Size 7 7/8" Slurry Wt. 12.6 # - 13.8 # Tubing _____
Casing Size & Wt. 5 1/2" 14 # Cement Left in Casing 3' Water Gal/SK _____ Drill Pipe _____
Displacement 79.2 BBL Displacement PSI 1250 Bump Plug to 1750 psi Other _____ BPM _____

Remarks: SAFETY Meeting: 5 1/2" 14 # Casing w/ Packer Shoe Set @ 3183.99' K.B. (3171.99 G.L.) Rig up to 5 1/2 Casing. Drop BRASS BALL, wait 10 mins, Set Packer Shoe @ 1050 PSI. Pump 10 BBL Fresh water Ahead, Mixed 290 SKS 60/40 Pozmix Cement w/ 8% Gel, 2" PhenoSeal /SK @ 12.6 #/GAL, yield 1.78 = 92 BBL SLURRY, TAIL IN w/ 125 SKS THICK Set Cement w/ 5" Kol-Seal /SK, 2" PhenoSeal /SK, 1/4" CFL-115 @ 13.8 #/GAL, yield 1.85 = 41 BBL SLURRY. WASH out Pump & Lines. Shut down. Release Latch down Plug. Displace Plug to Seat w/ 79.2 BBL Fresh water. (KCL in first 40 BBL) FINAL Pumping Pressure 1250 PSI. Bump Plug to 1750 PSI. Wait 2 mins. Release Pressure. Float & Plug Held. Good Cement Returns to SURFACE = 18 BBL Slurry to Pit. Job Complete. Rig down. Annulus Standing Full of Cement.

Plug R.H. 20 SKS M.H. 15 SKS

Centralizers on #2, 4, 6, 8, 10, 12, 29, 31, 49, 51 Baskets on Top of #30, #50

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 102	1	Pump Charge	1180.00	1180.00
C 107	70	Mileage	5.00	350.00
C 203	325 SKS	60/40 Pozmix Cement	15.75	5118.75
C 206	2235 #	Gel 8%	.30 #	670.50
C 208	650 #	PhenoSeal 2" /SK	1.55 #	1007.50
C 201	125 SKS	THICK Set Cement	24.25	3031.25
C 207	625 #	Kol-Seal 5" /SK	.56 #	350.00
C 208	250 #	PhenoSeal 2" /SK	1.55 #	387.50
C 211	30 #	CFL-115 1/4"	12.95 #	388.50
C 108 B	20.85 TONS	Ton Mileage 70 miles	1.50	2189.25
C 421	1	5 1/2 Latch down Plug	285.00	285.00
C 752	1	5 1/2 Type A Packer Shoe	1730.00	1730.00
C 681	1	5 1/2 Float Collar Body only	254.00	254.00
C 504	10	5 1/2 x 7 7/8 Centralizers	59.00	590.00
C 604	2	5 1/2 Cement Baskets	278.00	556.00
C 781	2	5 1/2 Stop Rings	37.00	74.00
C 222	2.5 gal	KCL (in first 40 BBL of Displacement water)	32.00	80.00
		Sub Total		18242.25
		Less 5%		966.57
		Sales Tax		1089.23
		Total		18364.91

Authorization Robin Brown

Title _____

Total

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PHIL ASKEY
PETROLEUM GEOLOGIST

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Mull Drilling Co., Inc.

LEASE Peterson Trust #4-31

FIELD Rainbow Ridge No. 1

LOCATION 1906' E 126' F W L

SEC 31 TWP 16 S RGE 10 E

COUNTY Lyon STATE Kansas

CONTRACTOR Lytle & Sons Building #1

SPUD 1-12-23 COMP 1-18-23

RID 3300' LTD 3298'

MUD UP 1700' 1750' TYPE MUD Chemical

SAMPLES EXAMINED FROM 2400' TO 3300'

DRILLING TIME KEPT FROM 2000' TO 3300'

GEOLOGICAL SUPERVISION FROM 2300' TO 3300'

GEOLOGIST ON WELL Phil Askey, G.S.

FORMATION TOPS LOG SAMPLES +/-

MISSOURI 2356 -1084 2358 -1

MAJ. bed 344 2359 -1218 2361 -1

MAJ. bed 344 2362 -1218 2364 -1

MAJ. bed 344 2365 -1218 2367 -1

MAJ. bed 344 2368 -1218 2370 -1

MAJ. bed 344 2371 -1218 2373 -1

MAJ. bed 344 2374 -1218 2376 -1

MAJ. bed 344 2377 -1218 2379 -1

ELEVATIONS

KB 1372'

CL 1360'

Measurements are

From KA

API # 15-11-20661

CASING 240'

PRODUCTION 3 1/2" x 3300'

ELECTRICAL SURVEYS

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

31' depth, 100' depth

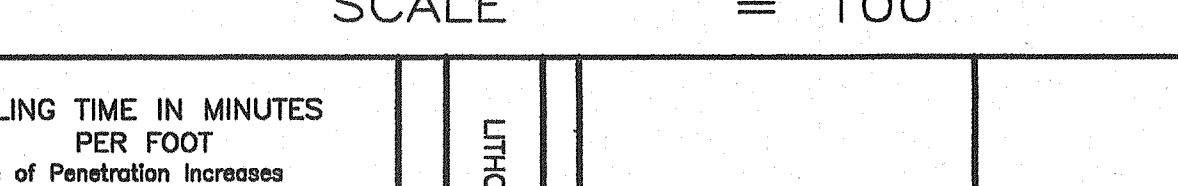
31' depth, 100' depth

31' depth, 100' depth

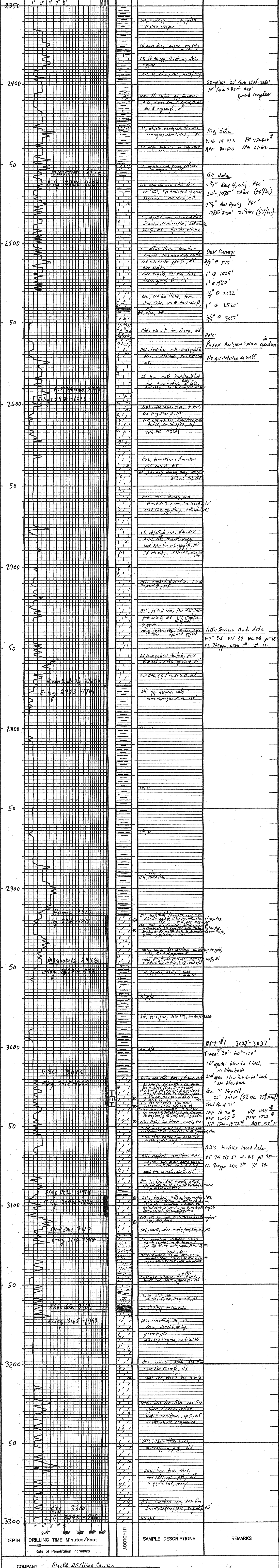
31' depth, 100' depth

REMARKS
The Mull Drilling Co., #4-31 Peterson Trust was structurally seen to the #4-31 on the
Missouri; and well 4' from the Rainbow Ridge No. 1, making it the only highest well
on the 4' from the Rainbow Ridge No. 1. The well was heavily drilled with low oil recovery and
it was decided to drill deeper into the Anhydrite (133') for a possible fracture SWNW. 54' casing will be set.
After review of the logs, all 3 formations, sand, oil, and water, should be completed as per Mull Drilling.
Phil Askey

LEGEND



SCALE " = 100'



COMPANY Mull Drilling Co., Inc.
LEASE Peterson Trust #4-31
LOCATION 1906' E 126' F W L SEC 31 TWP 16 S RGE 10 E
COUNTY Lyon STATE KS

ELEVATION: 1372' KB