

Form	ACO1 - Well Completion
Operator	Pickrell Drilling Company, Inc.
Well Name	NUSS-COPELAND UNIT 1
Doc ID	1485457

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	8.75	23	263	60/40	225	3% cc

Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Nuss-Copeland Unit #1
API: 15-135-26084
Location: Section 36 - T20S - R25W
License Number: 5123
Spud Date: 10/22/19
Surface Coordinates: 2500' FSL and 1940' FEL
Approx. NW - NE - NW - SE
Region: Ness Co., KS
Drilling Completed: 11/01/19
Bottom Hole
Coordinates:
Ground Elevation (ft): 2368' K.B. Elevation (ft): 2375'
Logged Interval (ft): 3750' To: 4510' Total Depth (ft): 4510'
Formation: Mississippi
Type of Drilling Fluid: Chemical - Mud-Co

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

OPERATOR

Company: Pickrell Drilling Company, Inc.
Address: 100 S Main Ste 505
Wichita, KS 67202+3738

GEOLOGIST

Name: Aaron L. Young, M.S.
Company: Pickrell Drilling Company, Inc.
Address: 100 S Main, Suite 505
Wichita, Kansas 67202

General Info

CONTRACTOR: Pickrell Drilling, Rig #10

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	JZ RR	15-15-15	263	263	5.00
2	7-7/8	HA20C	14-14-16	4510	4247	140.00

SURVEYS: 263'-.75, 743'-.5, 1790'-1, 4320'-.75, 4510'-.75

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 38,000 - 40,000 lbs. on bit and approx 70 RPM.

Running 7.5 stands of collars; 446.29'

Pumping approx 750 psi at standpipe at 60 SPM

Daily Status

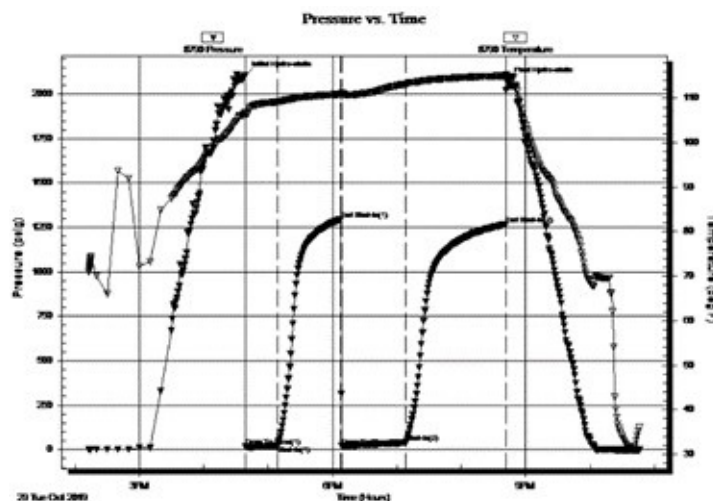
10-22-19: MIRT. Spud @ 5:00PM. Drilled 12 1/4" surface hole to 263'. SHT @ 263' = 3/4°. Ran 6jts of new 23# 8 5/8" surface casing. Set @ 263'KB (tally 253'), cement w/225sx of 60-40 Pozmix, 2%gel, 3%CC. PD @ 2:30 AM
 10/23/19. Global ticket #13879. WOC.
 10-23-19: TD 263'. WOC.
 10-24-19: Drilling 7 7/8" hole @ 1410', SHT @ 743'=1/2°
 10-25-19: Drilling @ 2320', SHT @ 1790' = 1°
 10-26-19: Drilling @ 2920'
 10-27-19: Drilling @ 3486'
 10-28-19: Drilling @ 4013'
 10-29-19: TD 4320'. Prepare to run DST #1: 4270'-4286' (L. Altamont).
 10-30-19: CFS @ 4364'. DST #2: 4462'-4475' (Miss)
 10-31-19: Prepare to run DST #3: 4474'-4484' (Miss)
 11-01-19: Running OH Logs. RTD 4510'. LTD 4513'. P&A as follows: 50sx @ 1650', 80sx@ 850', 50sx @ 300', 20sx @ 60', 30sx in RH. 60-40 Pozmix, 6% Poz, 1/4# floseal. PD @ 3:00PM 11/1/19. Swift ticket # 32802.
 Plugging approved by Larry Harris, Dodge City. RELEASED RIG. FINAL REPORT.

DST #1 Straddle
Lower Altamont
4270'-4286'
30"-60"-60"-90"

IF: BOB in 11 mins. 28 1/4"
 IS: No Return
 FF: BOB in 2 mins. 57"
 FSI: Surface Blow built to 1/4", died in 60 minutes

Rec'd: 32' GOCM (10% G, 30% O, 60% M), 46' GO (10% G, 90% O), 1056' GIP

SIP: 1294-1268#, FP: 19-22#, 20-39#, HP: 2104-2070#

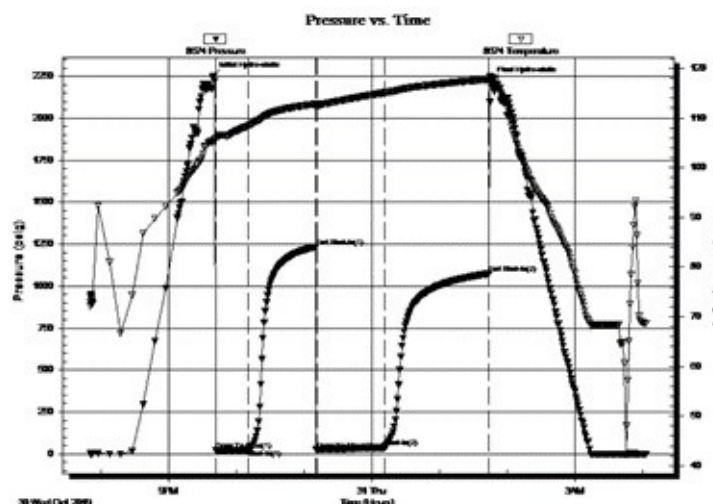


DST #2
Mississippi
4462'-4275'
30"-60"-60"-90"

IF: 1/4" blow built to 3 1/2"
 IS: No return
 FF: 1/2" blow built to 5 1/2"
 FSI: No return

Rec'd: 20' MCGO (10% G, 50% O, 40% M), 30' GO (20% G, 80% O), 63' GIP

SIP: 1234-1074#, FP: 20-26#, 24-39#, HP: 2251-2219#

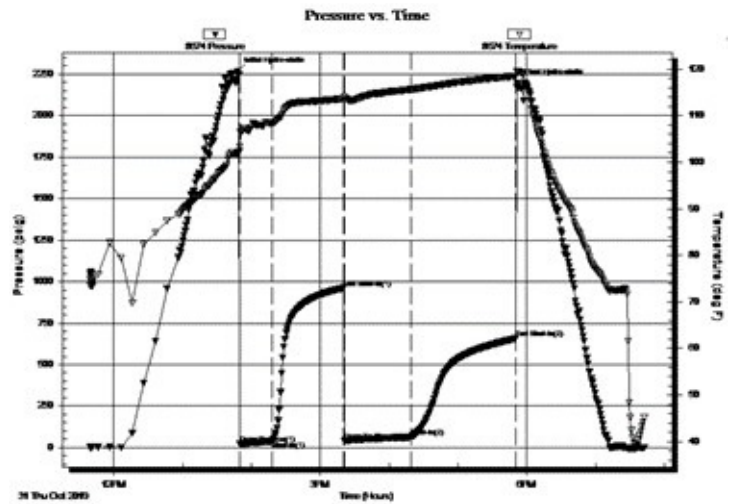


DST #3
Mississippi
4474'-4285'
30"-60"-60"-90"

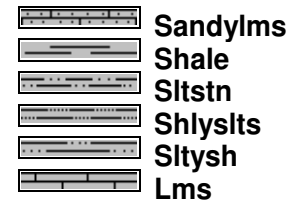
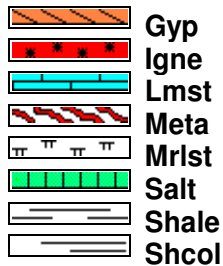
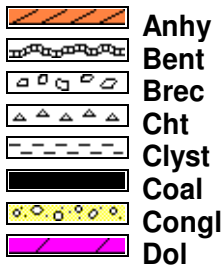
IF: 1/4" blow never built, 2" valve was cracked open
IS: Surface blow built to 1/2"
FF: 1/4 blow built to 5 1/2"
FSI: Surface blow built to 1/2"

Rec'd: 63' OCW (45% W, 5% O, 50% M), 63' GO (10% G, 90% O), 63' GIP

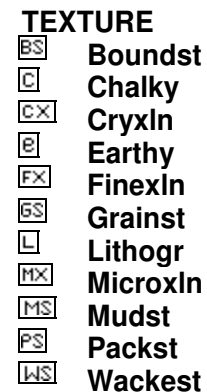
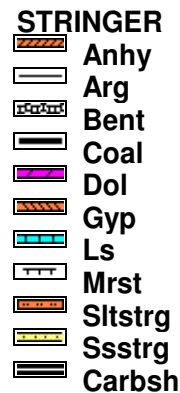
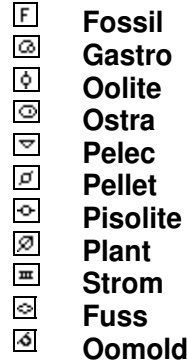
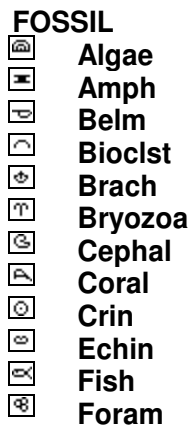
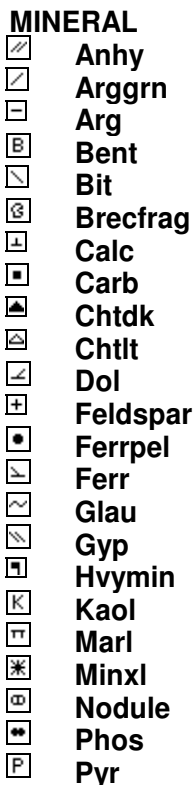
SIP: 962-657#, FP: 21-38#, 42-63#, HP: 2268-2197#



ROCK TYPES



ACCESSORIES



OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- F Fenest
- F Fracture
- X Inter
- Moldic
- Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- r Subrnd
- a Subang
- A Angular

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

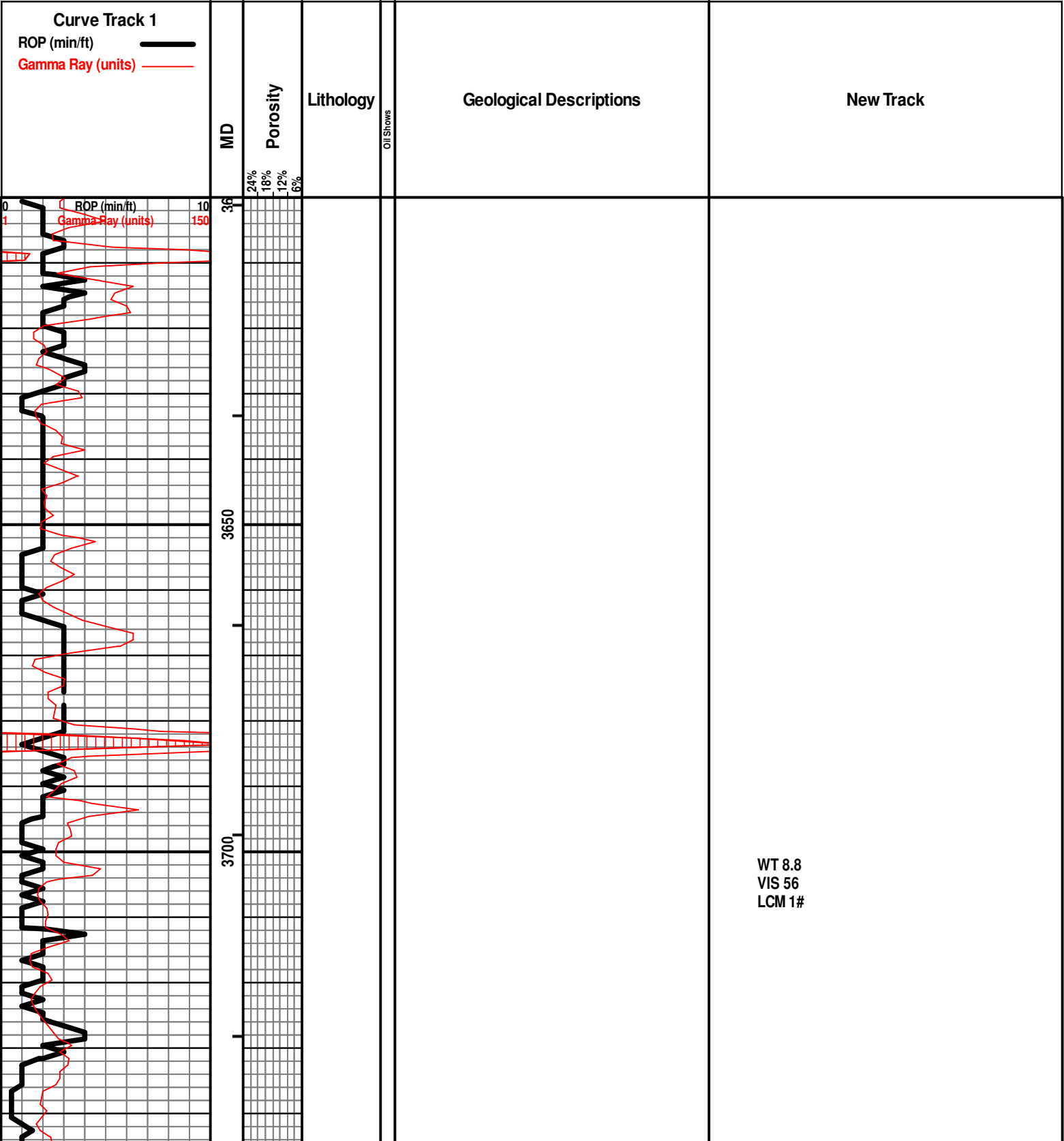
INTERVALS

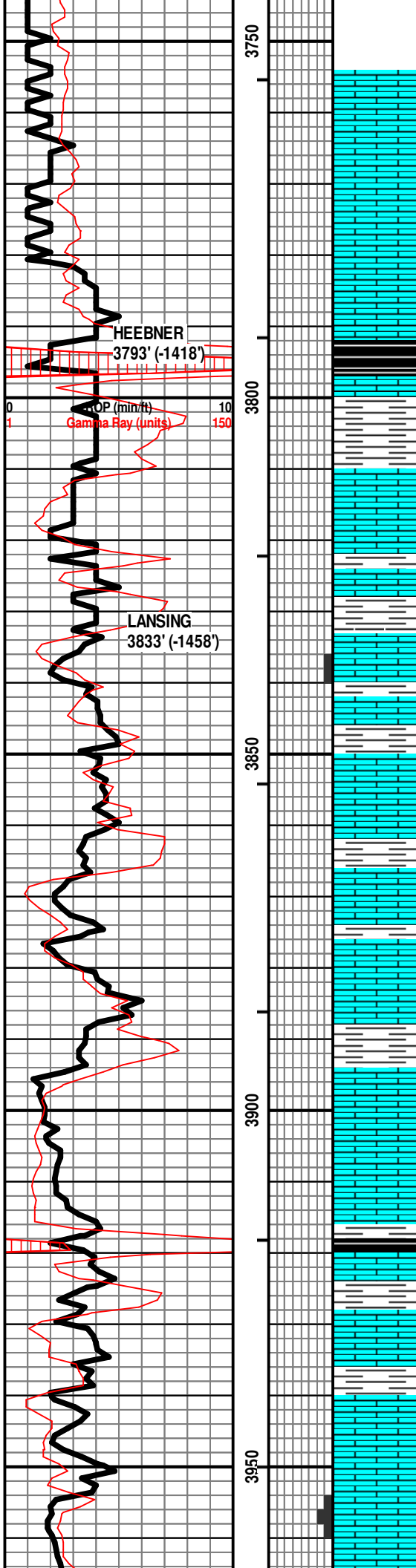
- Core
- Dst

Dst

EVENTS

- Rft
- Sidewall
- Conn





LS - TAN / GY, F / VF XLN, MOD DNS /
SUBCHKY, FOSS IN PT

LS - TAN / CRM / WHT IN PT, VF XLN, SUBCHKY
/ CHKY IN PT

LS - TAN, F XLN, MOD DNS, FOSS

SH - BLK, CARB, W/ LS - CRM / TAN, VF / F XLN,
SUBCHKY

SH - GRN / GY, LS - TAN / GY, F XLN, MOD DNS /
DNS, FOSS, FUSULINIDS

LS - CRM / TAN, F XLN, MOD DNS, FOSS, W/ SH
- GRN / GY / RD IN PT

LS - CRM / TAN, F XLN, MOD DNS / SUBCHKY,
FOSS, W/ SH - GY

LS - CRM / TAN, F XLN, MOD DNS, P INTERXLN
POR IN PT, NS, NO ODOR

LS - CRM / WHT, VF XLN, SUBCHKY / CHKY,
FOSS IN PT, W/ SH - GRN / GY

LS - CRM / TAN, F XLN, MOD DNS, FOSS

SH - GY / GRN / RD, W/ LS - CRM / TAN, F XLN,
FOSS

LS - PRED TAN, CRM IN PT, VF / F XLN, MOD
DNS, FOSS, W/ CHT - TAN, SLI TRANSLUCNT,
FRSH

LS - CRM / TAN, F XLN, MOD DNS, FOSS, W/ SH
- RD / GRN / GY, GY IS V SOFT

SH - GY / GRN / RD, W/ LS - CRM / TAN / WHT, F
/ VF XLN, SUBCHKY / CHKY

LS - CRM / TAN, F XLN, MOD DNS, P INTERXLN
POR IN PT, NS, NO ODOR, FOSS

SH - BLK, CARB, W/ SH - RD / GRN / GY, W/ LS -
CRM / TAN, VF / F XLN, SUBCHKY, FOSS IN PT

SH - GY / GRN / RD / RD-ORNG, W/ LS - CRM /
TAN, VF / F XLN, MOD DNS / SUBCHKY, FOSS
IN PT

LS - PRED TAN / CRM IN PT, F XLN, MOD DNS /
DNS, FOSS

LS - CRM / TAN / WHT IN PT, VF / F XLN,
SUBCHKY / CHKY IN PT, W/ SH - LT BRN, RD /
GRN / GY, V SOFT IN PT

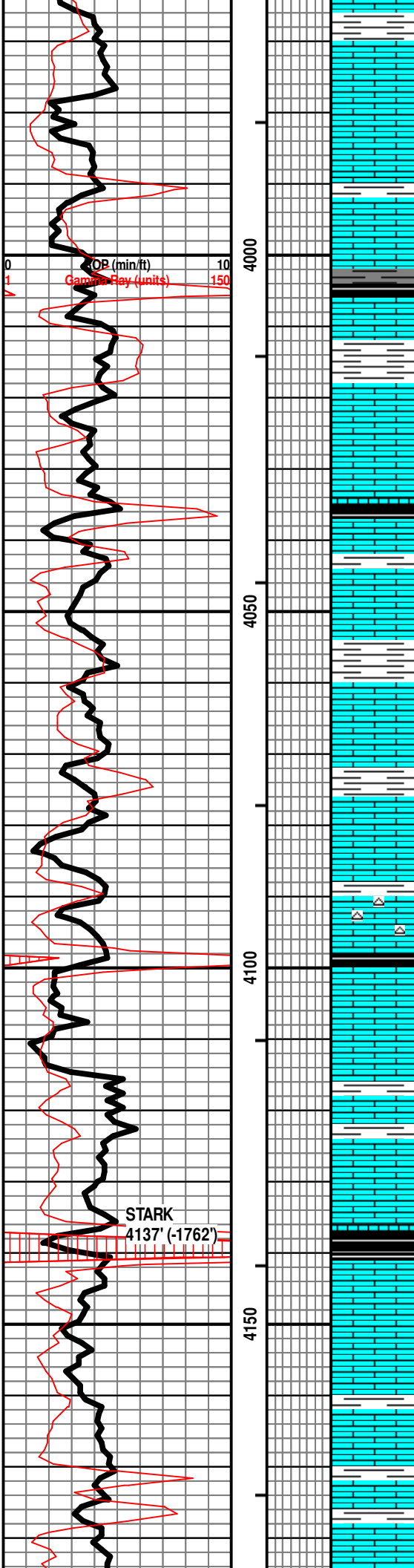
LS - CRM / TAN, F XLN, MOD DNS, P / F
INTERXLN POR IN PT, NS, NO ODOR, FOSS

WT 8.8
VIS 54
LCM 1#

WT 8.9
VIS 51
LCM 1#

WT 8.9
VIS 48
LCM 1#

WT 9.0
VIS 50
LCM 1#



LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, W/
SH - GY / GRN / RD

LS - CRM / TAN, VF / F XLN, MOD DNS, FOSS IN
PT

SH - GY / GRN / RD, W/ LS - CRM / TAN, VF / F
XLN, MOD DNS / SUBCHKY

SH - BLK, CARB, W/ SH - GY / GRN / RD, W/ LS -
CRM / TAN, F / VF XLN, MOD DNS / SUBCHKY,
FOSS IN PT

SH - LT GY, V SOFT, W/ LS - TAN, F XLN, MOD
DNS / DNS, FOSS

LS - CRM / WHT / TAN, VF / F XLN, MOD DNS /
SUBCHKY / CHKY IN PT, FOSS IN PT

LS - CRM / TAN, VF XLN, SUBCHKY, FOSS IN PT

SH - BLK, SLI CARB, W/ LS - CRM, VF XLN,
SUBCHKY

LS - CRM, F / VF XLN, DNS / MOD DNS /
SUBCHKY / CHK IN PT, FOSS IN PT, W/ SH - RD
/ GRN

SH - RD / GRN / GY, W/ LS - TAN / CRM, F XLN,
MOD DNS, FOSS

LS - CRM / TAN, F XLN, MOD DNS, FOSS, W/ SH
- GY / GRN / RD

LS - CRM / TAN / GY IN PT, F XLN, MOD DNS,
FOSS

LS - CRM / TAN, F XLN, MOD DNS, FOSS, W/
CHT - GY, FRSH, SLI TRANSLUCNT

SH - BLK, CARB, W/ LS / CRM / TAN, F XLN,
MOD DNS, FOSS

LS - CRM / WHT, VF XLN, SUBCHKY / CHKY,
FOSS IN PT

LS - CRM / TAN, F XLN, MOD DNS, SUBCHKY IN
PT, FOSS IN PT, W/ SH - GY / GRN / RD

SH - BLK, CARB, W/ LS - CRM / TAN, F XLN,
MOD DNS, FOSS

LS - GY / TAN / CRM IN PT, F XLN, MOD DNS /
DNS, FOSS, SHLY IN PT

LS - WHT / CRM, VF XLN, CHKY / SUBCHKY

LS - WHT / CRM / TAN, VF / F XLN, CHKY /
SUBCHKY / MOD DNS, W/ SH - GRN / GY

WT 9.1
VIS 48
LCM 1#

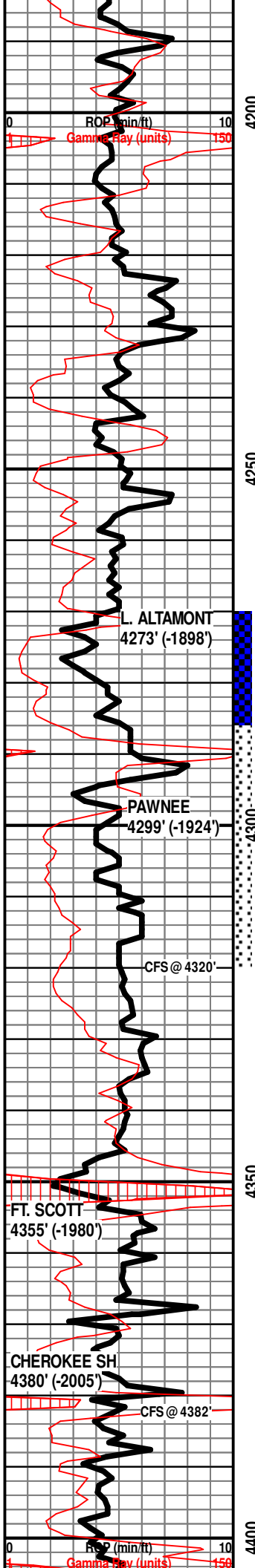
WT 9.1
VIS 47
LCM 1#

WT 9.0
VIS 54
LCM 1#

WT 9.0
VIS 53

WT 9.1
VIS 52
LCM 1/2#

WT 9.2
VIS 53
LCM 1/2#



LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD
DNS, W/ SH - RD / GRN

LS - CRM, VF XLN, SUBCHKY / MOD DNS

SH - BLK, CARB, W/ SH - GY / GRN / RD

LS - TAN / CRM, F XLN, MOD DNS, FOSS IN PT

SH - LT RDISH-BRN / LT GRN, V SOFT

SH - DK GY, W/ LS - CRM / TAN, F XLN, MOD
DNS / SUBCHKY IN PT, FOSS IN PT

LS - CRM / WHT, VF XLN, SUBCHKY / CHKY, W/
SH - RDISH-BRN, V SOFT

LS - TAN / CRM, F XLN, MOD DNS, FOSS IN PT

LS - TAN, M / F XLN, MOD DNS / DNS, FOS IN PT

LS - CRM, F XLN, P INTERXLN & INTERPART
POR, ABUND OIL SHEEN WHEN BROKEN,
SSFO, F CUP ODOR, BRI YEL-GRN FLUOR,
ABUND FOSS, OOLITIC IN PT

SH - GRN / GY / RD, W/ LS - CRM, VF XLN,
SUBCHKY / CHKY

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD
DNS, FOSS IN PT

LS - TAN, VF / F XLN, MOD DNS, FOSS IN PT

LS - TAN / CRM, F XLN, MOD DNS, FOSS IN PT,
SLI MINERAL FLUOR

LS - CRM / TAN, VF / F XLN, MOD DNS

SH - GY / BLK, CARB

SH - BLK, CARB

LS - CRM, VF XLN, SUBCHKY / CHKY

LS - TAN / LT BRN, F / M XLN, MOD DNS / DNS,
FOSS, NO VIS POR, NS

SH - GRN / GY / RD IN PT, PYRITIC IN PT, W / LS
- CRM / WHT, VF XLN, SUBCHKY / CHKY, FOSS
IN PT

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD
DNS, FOSS IN PT

SH - BLK, CARB, W/ SH - GRN

LS - TAN, F XLN, MOD DNS / DNS, FOSS

LS - CRM / TAN, VF / F XLN, P / F INTERXLN &
VUG POR IN PT IN FEW PIECES, SSFO, F
ODOR, BRI YEL-GRN FLUOR, CHKY IN PT

WT 9.2
VIS 51
LCM 1/2#

WT 9.2
VIS 50
LCM 1/2#

DST #1 Straddle
Lower Altamont
4270'-4286'
30"-60"-60"-90"

IF: BOB in 11 mins. 28 1/4"
IS: No Return
FF: BOB in 2 mins. 57"
FSI: Surface Blow built to 1/4", died in 60
minutes

Rec'd: 32' GOCM (10% G, 30% O, 60% M),
46' GO (10% G, 90% O), 1056' GIP

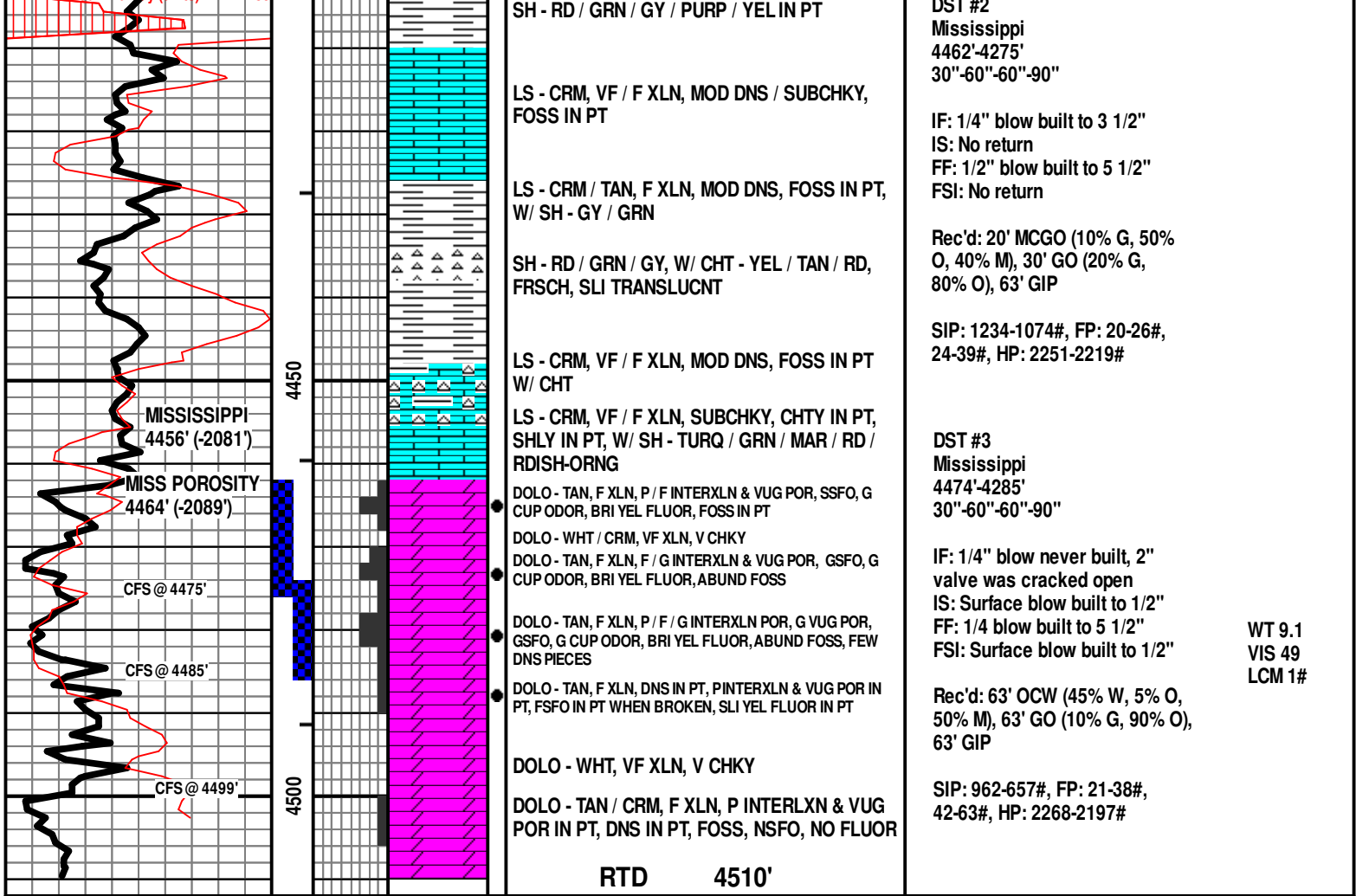
SIP: 1294-1268#, FP: 19-22#, 20-39#, HP:
2104-2070#

Strap 0.63 long to
board

WT 9.2
VIS 47
LCM 1/2#

WT 9.2
VIS 49
LCM 1/2#

WT 9.2
VIS 48
LCM 1/2#





P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
11/1/2019	32802

BILL TO
Pickrell Drilling Co. Inc. PO Box 375 Ness City, KS 67560

NOV 12 2019



File copy

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1	Nuss-Copeland	Ness	Pickrell Rig #10	Oil	Workover	PTA	PTA
PRICE REF.		DESCRIPTION			QTY	UM	UNIT PRICE	AMOUNT
575W	Mileage - 1 Way			20	Miles	5.00	100.00T	
576W-P	Pump Charge - PTA			1	Job	925.00	925.00T	
328-4	60/40 Pozmix (4% Gel)			230	Sacks	11.00	2,530.00T	
276	Flocele			50	Lb(s)	3.00	150.00T	
290	D-Air			1	Gallon(s)	42.00	42.00T	
581W	Service Charge Cement			230	Sacks	1.85	425.50T	
582W	Minimum Drayage Charge			1	Each	250.00	250.00T	
Subtotal							4,422.50	
Sales Tax Ness County						6.50%	287.46	
We Appreciate Your Business!						Total	\$4,709.96	

[Signature]



Services, Inc.

CHARGE TO:

Pickrell Drilling

ADDRESS

CITY, STATE, ZIP CODE

TICKET 032802

PAGE 1 OF 1

SERVICE LOCATIONS

1. New City KS

WELL/PROJECT NO.

#1

LEASE

NESS - CORLAND

COUNTY/PARISH

NESS

STATE

KS

CITY

New City

DATE

1 Nov 19

OWNER

ORDER NO.

36 - 20 - 25

2.

TICKET TYPE

☐ SERVICE

☐ SALES

CONTRACTOR

PICKRELL

RIG NAME/NO.

NO

SHIPPED

BY

DELIVERED TO

location

WELL PERMIT NO.

3.

WELL TYPE

PTA

WELL CATEGORY

PTA

JOB PURPOSE

Shut In Abandon

4.

REFERRAL LOCATION

PRICE REFERENCE

SECONDARY REFERENCE/ PART NUMBER

LOC

ACCT

DF

DESCRIPTION

MILEAGE

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

575

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

576P

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

388-4

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

276

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

290

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

581

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

582

1

20 mi

QTY.

UNIT

QTY.

UNIT

UNIT PRICE

AMOUNT

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

X

DATE SIGNED

TIME SIGNED

☐ A.M.

☐ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.

P.O. BOX 466

NESS CITY, KS 67560

785-798-2300

SURVEY

AGREE

UNDECIDED

DISAGREE

PAGE TOTAL

4422.58

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE?

☐ YES

☐ NO

CUSTOMER DID NOT WISH TO RESPOND

TOTAL

4422.58

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR

APPROVAL

Thank You!

GLOBAL OIL FIELD SERVICES, LLC

24 S. Lincoln
RUSSELL, KS 67665

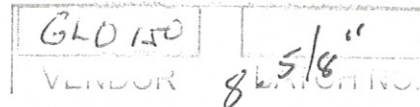
Invoice

Date	Invoice #
10/31/2019	13879

File
Copy

Bill To
PICKRELL DRLG CO INC 100 MAIN ST STE 505 WICHITA, KS 67202

NOV 07 2019



P.O. No.	Terms	Project
COPELAND#1	Due on receipt	

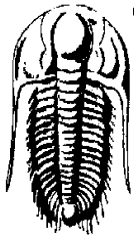
Quantity	Description	Rate	Amount
225	60/40 POZMIX CEMENT	13.75	3,093.75
4	BENTONITE GEL	30.00	120.00
8	CALCIUM-CHLORIDE	80.00	640.00
237	HANDLING	1.90	450.30
	BULK MILEAGE	850.00	850.00
1	TRI-PLEX PUMP CHARGE FOR SURFACE	850.00	850.00
35	HEAVY EQUIPMENT. ONE WAY	6.50	227.50
35	LMV- ONE WAY	2.75	96.25
	15% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE		
	NESS CO SALES TAX	7.50%	0.00

Thank you for your business.

Total

\$6,327.80

Phone #	Fax #
785-445-3525	785-445-3526



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66063

DST#: 1

Test Start: 2019.10.29 @ 14:12:59

GENERAL INFORMATION:

Formation: **Lower Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:38:59

Time Test Ended: 22:46:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: 4270.00 ft (KB) To 4286.00 ft (KB) (TVD)

Total Depth: 4320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8790 Inside

Press@RunDepth: 38.78 psig @ 4271.00 ft (KB)

Start Date: 2019.10.29

End Date:

2019.10.29

Start Time: 14:13:04

End Time:

22:46:29

Capacity: 8000.00 psig

Last Calib.: 2019.10.29

Time On Btm: 2019.10.29 @ 16:38:29

Time Off Btm: 2019.10.29 @ 20:42:59

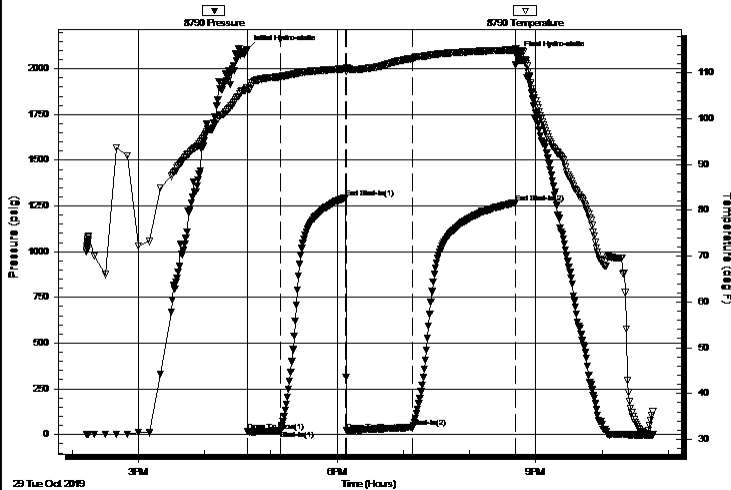
TEST COMMENT: IF: BOB in 11 mins. 28 1/4"

IS: No return.

FF: BOB in 2 mins. 57"

FS: Surface blow built to 1/4 died in 60 mins.

Pressure vs. Time



PRESSURE SUMMARY

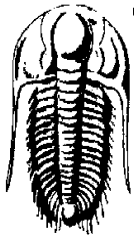
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2103.89	106.86	Initial Hydro-static
1	18.72	106.23	Open To Flow (1)
30	21.72	109.15	Shut-In (1)
89	1293.69	110.91	End Shut-In (1)
90	20.46	111.06	Open To Flow (2)
150	38.78	113.17	Shut-In (2)
243	1267.70	115.04	End Shut-In (2)
245	2069.65	114.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
32.00	gocm 10%g 30%o 60%m	0.45
46.00	go 10%g 90%o	0.65
0.00	1056 GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66063

DST#: 1

Test Start: 2019.10.29 @ 14:12:59

GENERAL INFORMATION:

Formation: **Lower Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:38:59

Time Test Ended: 22:46:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: 4270.00 ft (KB) To 4286.00 ft (KB) (TVD)

Total Depth: 4320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8674 Outside

Press@RunDepth: psig @ 4271.00 ft (KB)

Start Date: 2019.10.29

End Date:

2019.10.29

Start Time: 14:12:06

End Time:

22:45:31

Capacity: 8000.00 psig

Last Calib.: 2019.10.29

Time On Btm:

Time Off Btm:

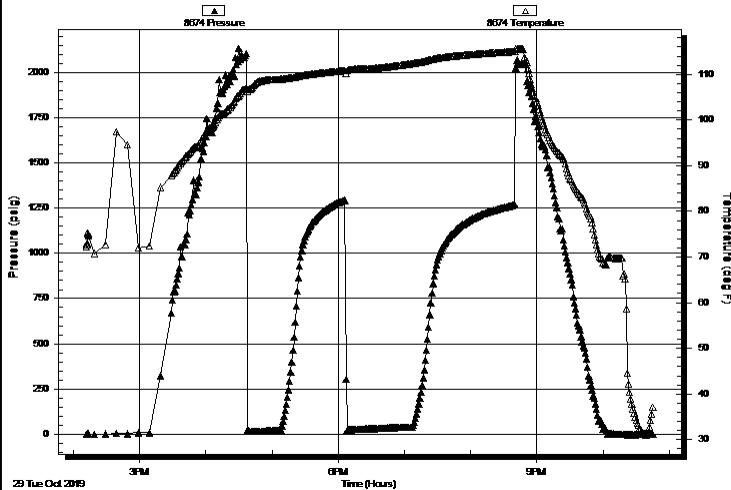
TEST COMMENT: IF: BOB in 11 mins. 28 1/4"

IS: No return.

FF: BOB in 2 mins. 57"

FS: Surface blow built to 1/4 died in 60 mins.

Pressure vs. Time



PRESSURE SUMMARY

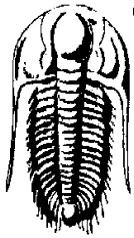
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
32.00	gocm 10%g 30%o 60%m	0.45
46.00	go 10%g 90%o	0.65
0.00	1056 GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66063

DST#: 1

Test Start: 2019.10.29 @ 14:12:59

GENERAL INFORMATION:

Formation: **Lower Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:38:59

Time Test Ended: 22:46:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: 4270.00 ft (KB) To 4286.00 ft (KB) (TVD)

Total Depth: 4320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8524 Below (Straddle)

Press@RunDepth: psig @ 4316.00 ft (KB)

Start Date: 2019.10.29

End Date:

2019.10.29

Start Time: 14:12:21

End Time:

22:45:16

Capacity: 8000.00 psig

Last Calib.: 2019.10.29

Time On Btm:

Time Off Btm:

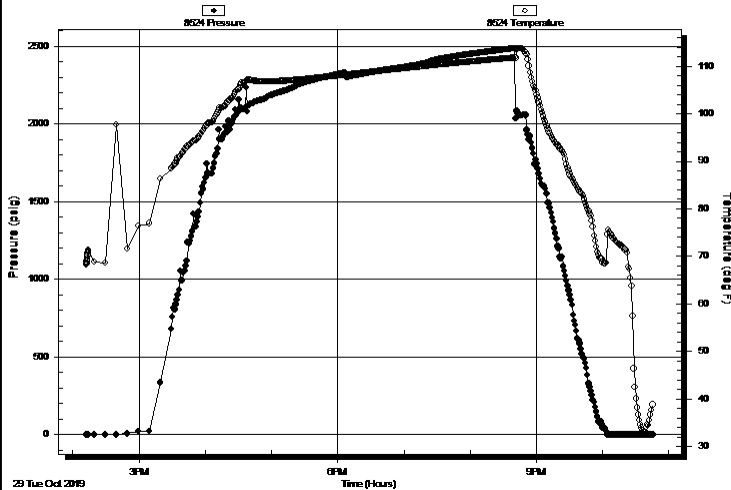
TEST COMMENT: IF: BOB in 11 mins. 28 1/4"

IS: No return.

FF: BOB in 2 mins. 57"

FS: Surface blow built to 1/4 died in 60 mins.

Pressure vs. Time



PRESSURE SUMMARY

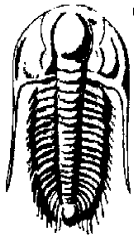
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
32.00	gocm 10%g 30%o 60%m	0.45
46.00	go 10%g 90%o	0.65
0.00	1056 GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Company Inc

36-20-25 Ness KS

100 S Main St ste 505
Wichita, Ks 67202

Nuss-Copeland Unit 1

Job Ticket: 66063

DST#: 1

ATTN: Aaron Young

Test Start: 2019.10.29 @ 14:12:59

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
32.00	gocm 10%g 30%o 60%m	0.449
46.00	go 10%g 90%o	0.645
0.00	1056 GIP	0.000

Total Length: 78.00 ft

Total Volume: 1.094 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 38@40=40

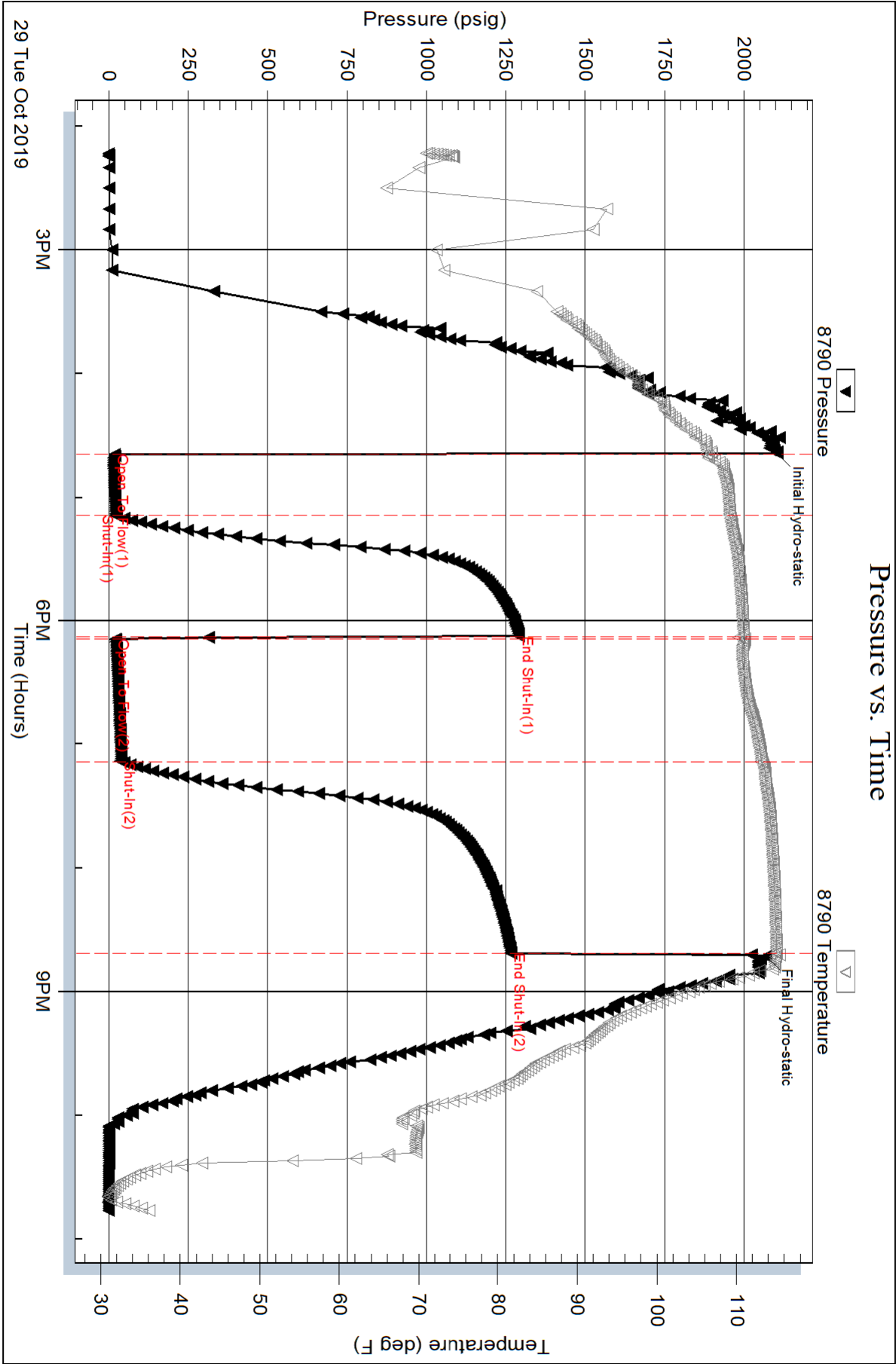
Serial #: 8790

Inside

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 1



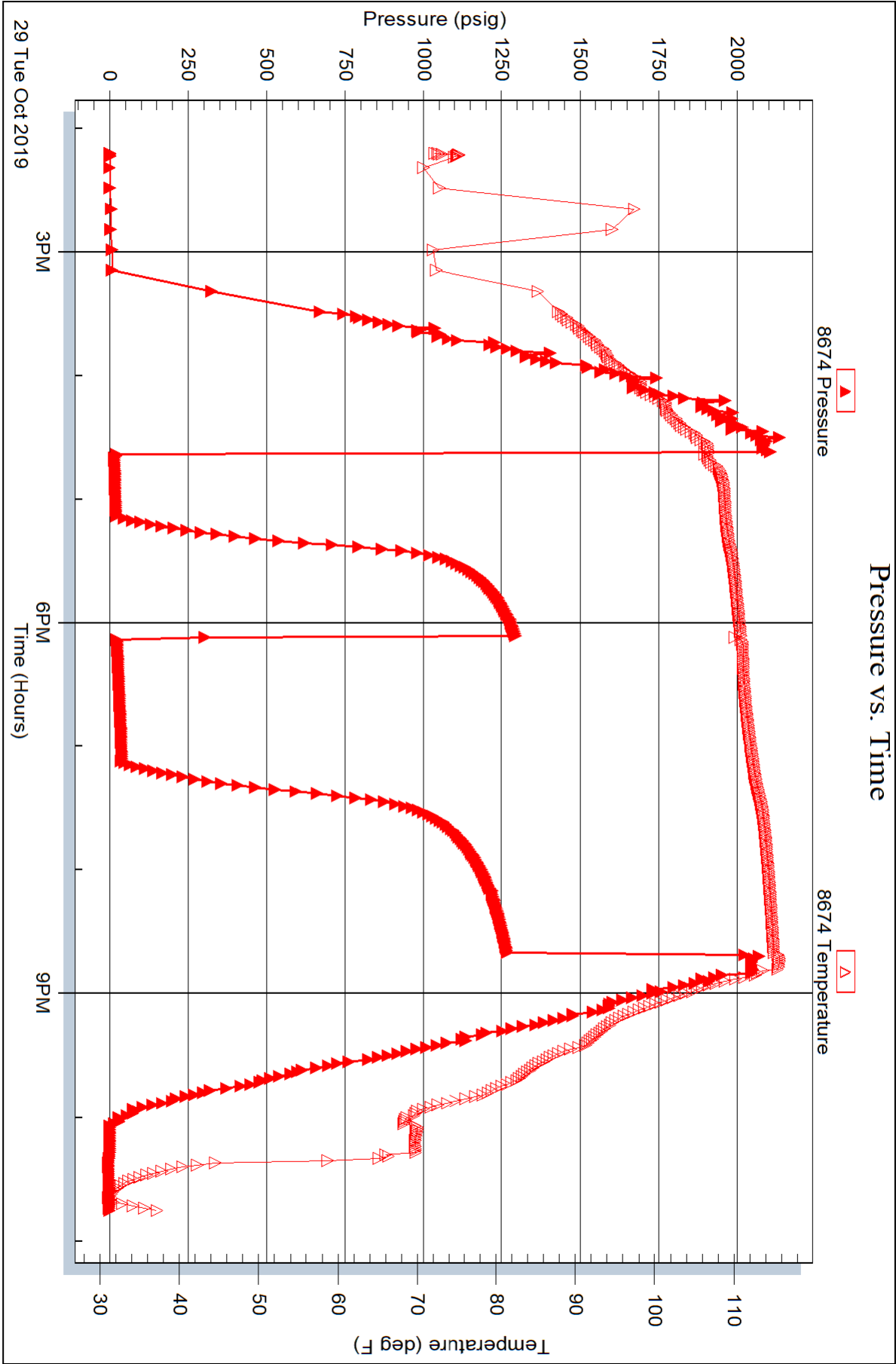
Serial #: 8674

Outside

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 1

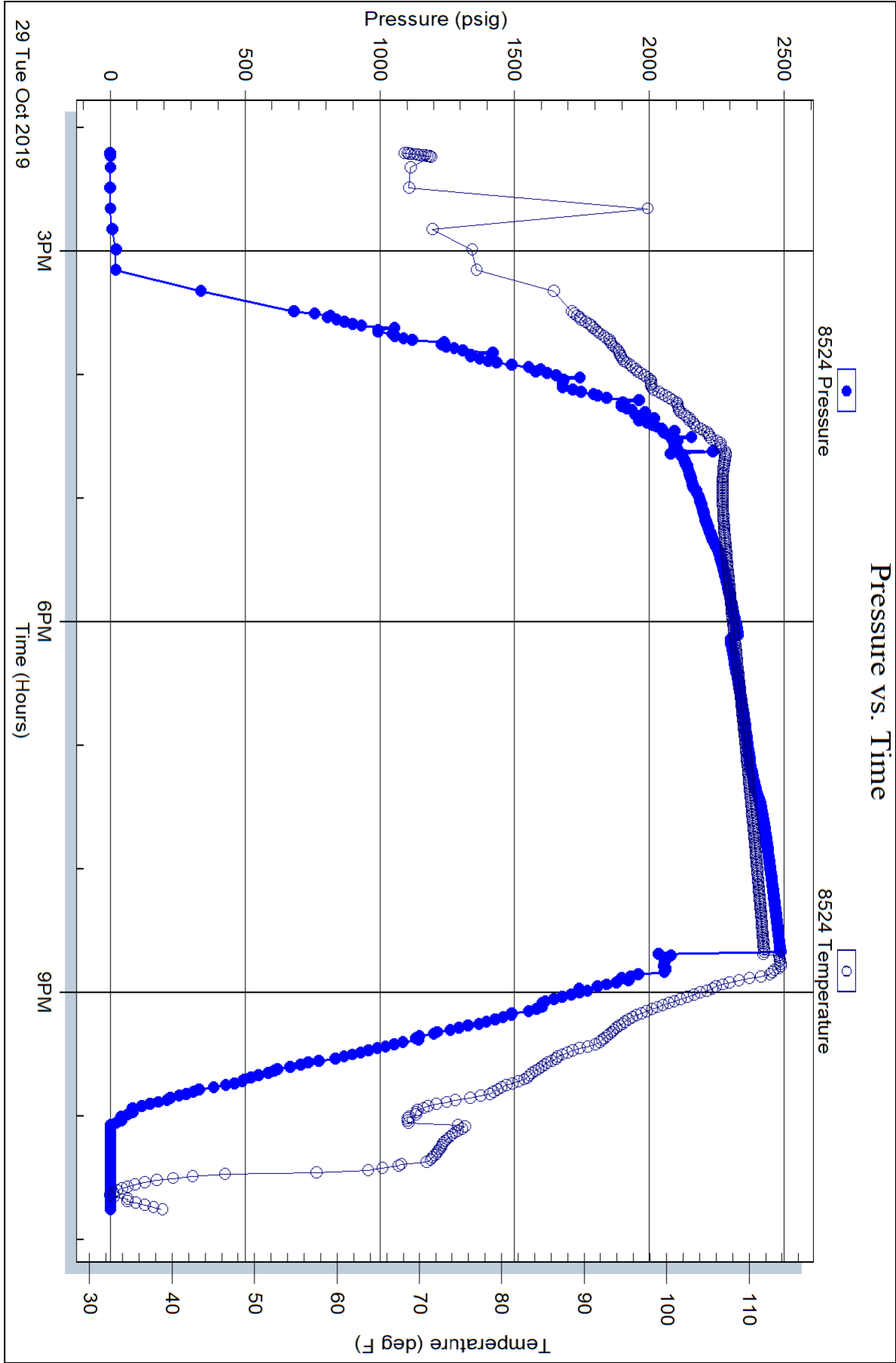


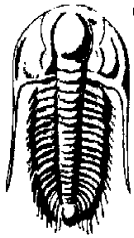
Serial #: 8524

Below (Stratton) Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 1





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66064

DST#: 2

Test Start: 2019.10.30 @ 19:50:29

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:41:29

Time Test Ended: 04:02:29

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4462.00 ft (KB) To 4475.00 ft (KB) (TVD)

Total Depth: 4475.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8674

Press@RunDepth: 38.94 psig @ ft (KB)

Start Date: 2019.10.30

End Date:

2019.10.31

Start Time: 19:50:34

End Time:

04:02:28

Capacity: 8000.00 psig

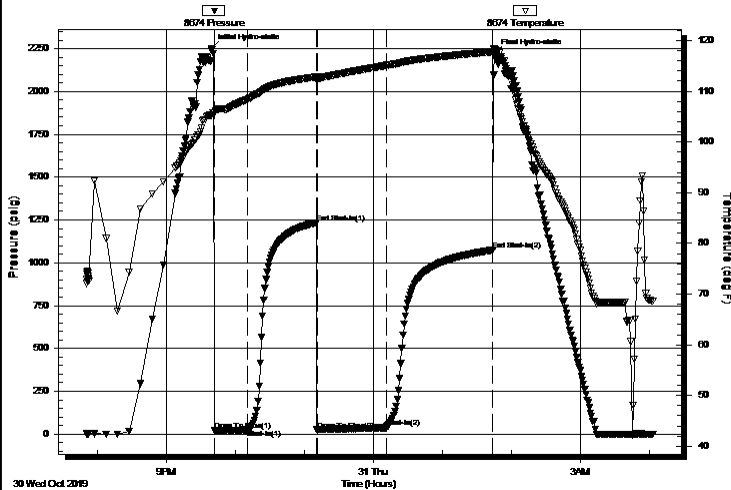
Last Calib.: 2019.10.31

Time On Btm: 2019.10.30 @ 21:38:59

Time Off Btm: 2019.10.31 @ 01:44:59

TEST COMMENT: IF: 1/4 blow built to 3 1/2.
IS: No return.
FF: 1/2 blow built to 5 1/2.
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2251.40	105.25	Initial Hydro-static
3	19.70	105.63	Open To Flow (1)
31	25.69	108.34	Shut-In (1)
91	1233.74	112.81	End Shut-In (1)
92	24.27	112.26	Open To Flow (2)
152	38.94	115.07	Shut-In (2)
245	1073.86	117.78	End Shut-In (2)
246	2219.38	118.25	Final Hydro-static

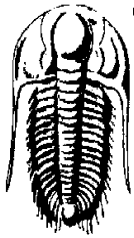
Recovery

Length (ft)	Description	Volume (bbl)
20.00	mcgo 10%g 50%o 40%m	0.28
30.00	go 20%g 80%o	0.42
0.00	63 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66064

DST#: 2

Test Start: 2019.10.30 @ 19:50:29

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:41:29

Time Test Ended: 04:02:29

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4462.00 ft (KB) To 4475.00 ft (KB) (TVD)

Total Depth: 4475.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8790

Press@RunDepth: psig @ ft (KB)

Start Date: 2019.10.30

End Date:

2019.10.31

Start Time: 19:50:21

End Time:

04:02:15

Capacity: 8000.00 psig

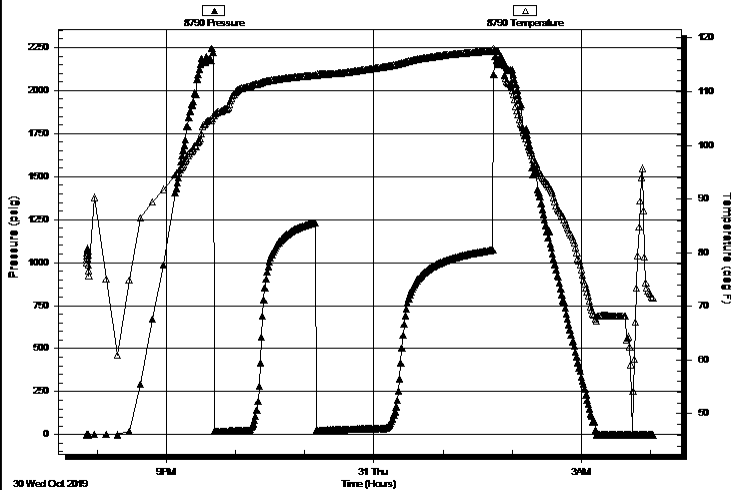
Last Calib.: 2019.10.31

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/4 blow built to 3 1/2.
IS: No return.
FF: 1/2 blow built to 5 1/2.
FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

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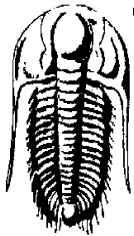
Recovery

Length (ft)	Description	Volume (bbl)
20.00	mcgo 10%g 50%o 40%m	0.28
30.00	go 20%g 80%o	0.42
0.00	63 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Company Inc

36-20-25 Ness KS

100 S Main St ste 505
Wichita, Ks 67202

Nuss-Copeland Unit 1

Job Ticket: 66064

DST#: 2

ATTN: Aaron Young

Test Start: 2019.10.30 @ 19:50:29

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 8.79 in³

Resistivity: 0.00 ohm.m

Salinity: 5200.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

36 deg API

0 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mcgo 10%g 50%o 40%m	0.281
30.00	go 20%g 80%o	0.421
0.00	63 GIP	0.000

Total Length: 50.00 ft

Total Volume: 0.702 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

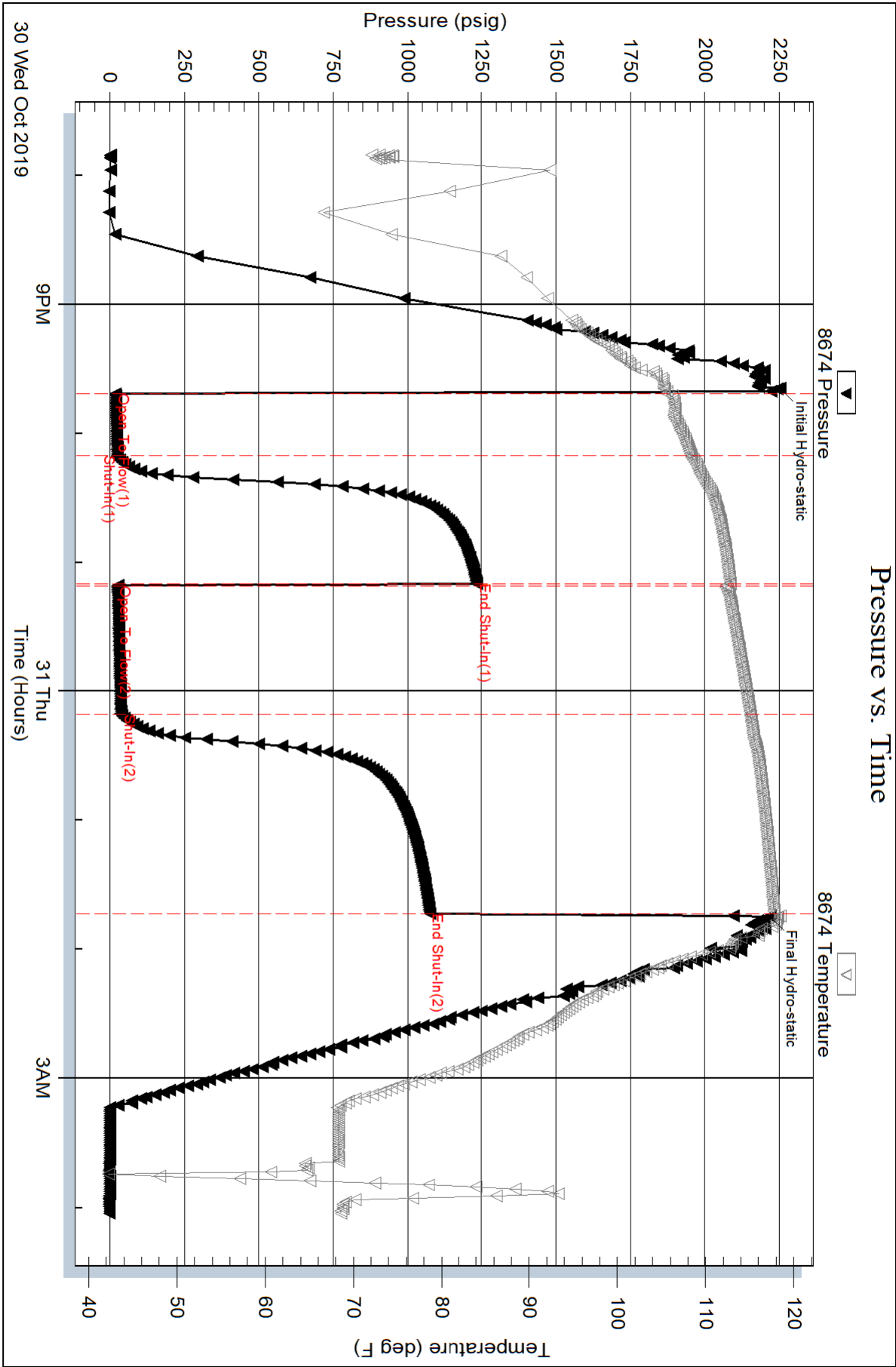
Recovery Comments: 33@30=36

Serial #: 8674

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 2

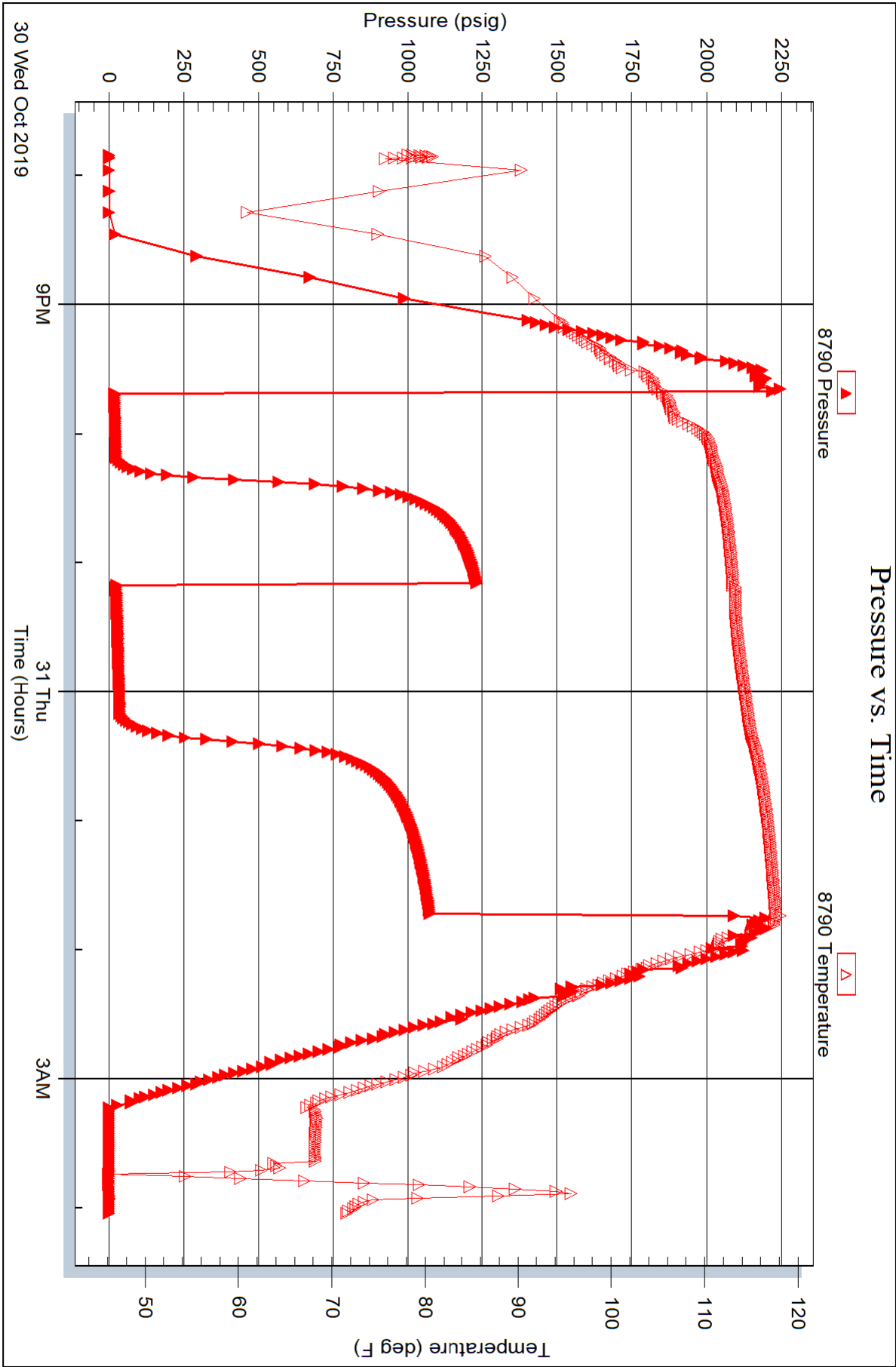


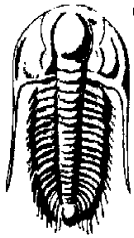
Serial #: 8790

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 2





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66065

DST#: 3

Test Start: 2019.10.31 @ 11:39:19

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:49:49

Time Test Ended: 19:42:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4474.00 ft (KB) To 4485.00 ft (KB) (TVD)

Total Depth: 4485.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8674 Outside

Press@RunDepth: 63.34 psig @ 4475.00 ft (KB)

Start Date: 2019.10.31

End Date:

2019.10.31

Start Time: 11:39:24

End Time:

19:42:18

Capacity: 8000.00 psig

Last Calib.: 2019.10.31

Time On Btm: 2019.10.31 @ 13:47:49

Time Off Btm: 2019.10.31 @ 17:51:49

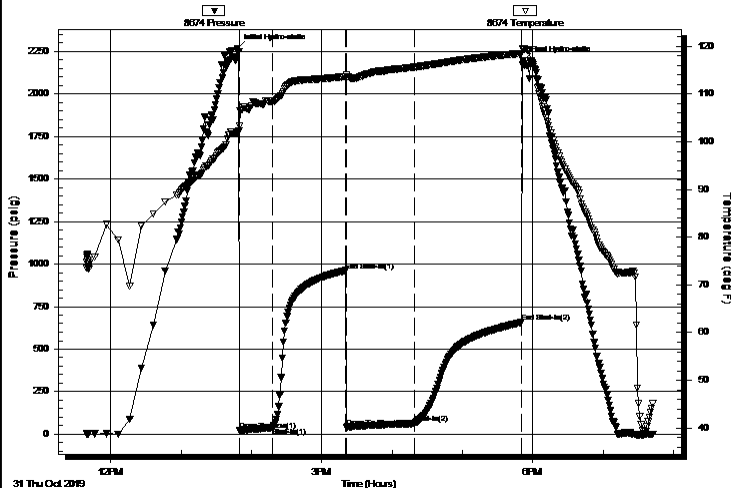
TEST COMMENT: IF: 1/4 blow never built 2 inch valve w as cracked open.

IS: Surface blow built to 1/2.

FF: 1/4 blow built to 5 1/2.

FS: Surface blow built to 1/2.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2268.43	101.88	Initial Hydro-static
2	21.05	103.23	Open To Flow (1)
30	38.31	108.50	Shut-In(1)
93	962.09	113.66	End Shut-In(1)
94	42.02	113.98	Open To Flow (2)
152	63.34	115.64	Shut-In(2)
243	657.38	118.49	End Shut-In(2)
244	2197.46	119.56	Final Hydro-static

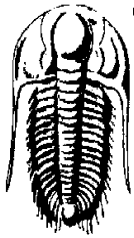
Recovery

Length (ft)	Description	Volume (bbl)
63.00	ocw m 5%o 45%w 50%m	0.88
63.00	go 10%g 90%o	0.88
0.00	63 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Company Inc

100 S Main St ste 505
Wichita, Ks 67202

ATTN: Aaron Young

36-20-25 Ness KS

Nuss-Copeland Unit 1

Job Ticket: 66065

DST#: 3

Test Start: 2019.10.31 @ 11:39:19

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:49:49

Time Test Ended: 19:42:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4474.00 ft (KB) To 4485.00 ft (KB) (TVD)

Total Depth: 4485.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2375.00 ft (KB)

2368.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8790 Inside

Press@RunDepth: psig @ 4475.00 ft (KB)

Start Date: 2019.10.31

End Date:

2019.10.31

Start Time: 11:39:31

End Time:

19:42:25

Capacity: 8000.00 psig

Last Calib.: 2019.10.31

Time On Btm:

Time Off Btm:

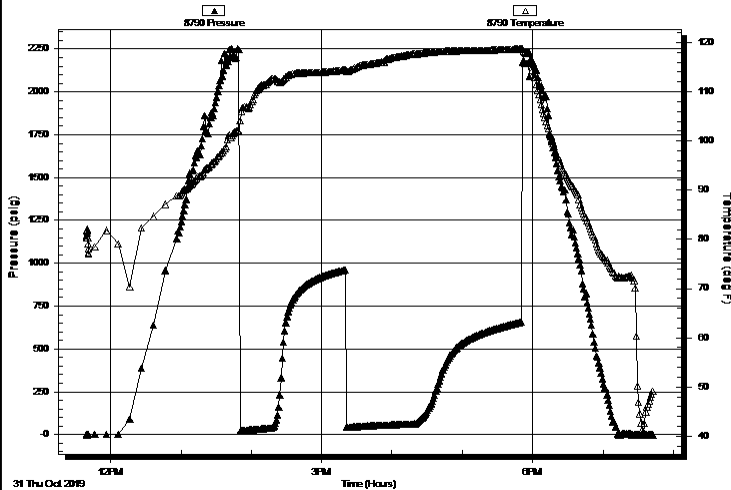
TEST COMMENT: IF: 1/4 blow never built 2 inch valve w as cracked open.

IS: Surface blow built to 1/2.

FF: 1/4 blow built to 5 1/2.

FS: Surface blow built to 1/2.

Pressure vs. Time



PRESSURE SUMMARY

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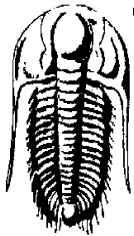
Recovery

Length (ft)	Description	Volume (bbl)
63.00	ocw m 5%o 45%w 50%m	0.88
63.00	go 10%g 90%o	0.88
0.00	63 GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Company Inc

36-20-25 Ness KS

100 S Main St ste 505
Wichita, Ks 67202

Nuss-Copeland Unit 1

Job Ticket: 66065

DST#: 3

ATTN: Aaron Young

Test Start: 2019.10.31 @ 11:39:19

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	ocw m 5%o 45%w 50%m	0.884
63.00	go 10%g 90%o	0.884
0.00	63 GIP	0.000

Total Length: 126.00 ft

Total Volume: 1.768 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 35@50=36

.40@52=24000

Serial #: 8674

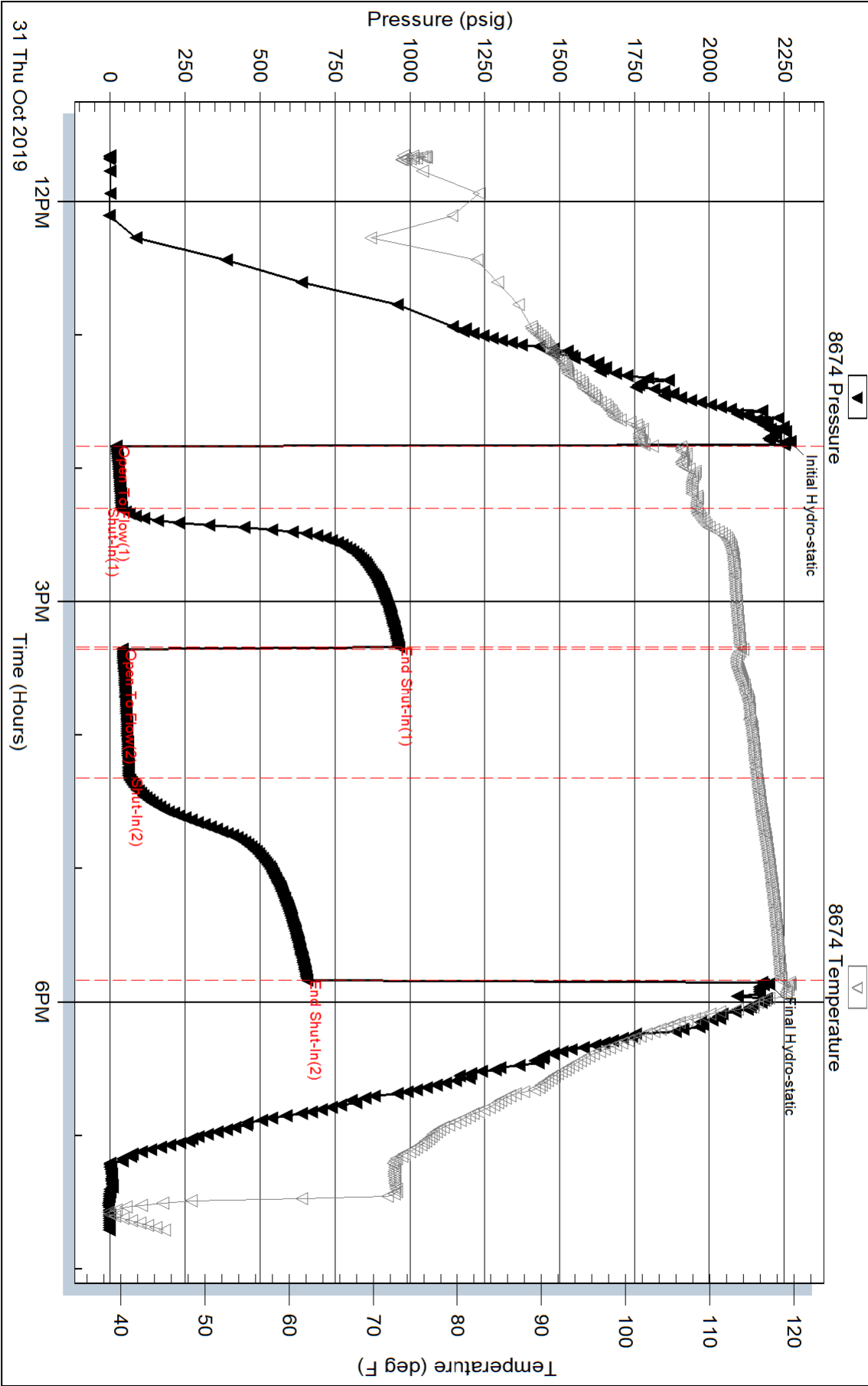
Outside

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 3

Pressure vs. Time



Serial #: 8790

Inside

Pickrell Drilling Company Inc

Nuss-Copeland Unit 1

DST Test Number: 3

