

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	Murfin Drilling Co., Inc.
Well Name	MERIEM SE 3-20
Doc ID	1730425

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Covey

The Well Watchers

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

Well Name: MERIEM #3-20
Location: Section 20 - Township 28S - Range 9 East
Licence Number: 15-049-22635 -00-00 Region: Elk County, KS.
Spud Date: 19 July 2023 Drilling Completed: 29 July 2023
Surface Coordinates: 1,380' FSL & 1,905' FEL

Bottom Hole
Coordinates:
Ground Elevation (ft): 1,366' K.B. Elevation (ft): 1,378'
Logged Interval (ft): 1,500' To: 2,950' Total Depth (ft): 2,950'
Formation: Kansas City -----> Arbuckle
Type of Drilling Fluid: Displace @ 1,307' - Chemical, Low Solids/Non-Dispersed
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: MURFIN DRILLING COMPANY, INC.
Address: 250 North Water, Suite 300 POC: Bo Beins
Wichita, Kansas 67202
(316) 267-3241

GEOLOGIST

Name: Curtis E. Covey
Company: COVEY - The Well Watchers
Address: 6548 Bedford Circle
Derby, Kansas 67037
Office: (316) 776-0367 Cell: (316) 217-4679

KB: 1,378'

FORMATION TOPS

GL: 1,366'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Kansas City	1,778' (- 400')	1,778' (-400')
Mound City	1,953' (- 575')	1,952' (- 574')
Altamont	2,102' (- 724')	2,104' (- 726')
Pawnee	2,188' (- 810')	2,194' (- 816')
Ft. Scott	2,229' (- 851')	2,231' (- 853')
Excello SH	2,267' (- 889')	2,266' (- 888')
Oakley	2,337' (- 959')	2,336' (- 958')
Mississippi	2,548' (- 1,170')	2,548' (- 1,170')
Arbuckle	2,875' (- 1,497')	2,874' (- 1,496')

RTD: 2,950' LTD: 2,950' ATD: 2,950'

Float:
Rotary Sample Depth is 2' high - 2' low to E-log Depth
for the logged interval: 1,550' - 2,950' (RTD).

E-Loggers:
Midwest Wireline ... Hays, KS.

DST #1 - KINDERHOOK LIME

Rotary Depth: 2,749' - 2,758'
Logger's Depth: 2,751' - 2,760'

Recovery: 60' Muddy Water
(10%Mud, 90% Water)

Recovery Water: (4,300 ppm)
System Water: (900 ppm)

iFP: 18# - 24# / 30"
ISIP: 922# / 60"
FFP: 24# - 32# / 60"
FSIP: 892# / 90"
116 deg F
MH: 1,334# - 1,366#

IF: Weak Surface Blow, built to 1 inch.
ISI: No Blow.
FF: Weak Surface Blow, built to 1.4 inch.
FSI: No Blow.

Reported Rw =
1.290 ohms @ 82 deg F

Recovery Water Mud Engineer:
NA

Trilobite Testing, Inc.
Pratt, KS.

DST #2 - ARBUCKLE

Rotary Depth: 2,876' - 2,885'
Logger's Depth: 2,876' - 2,885'

Recovery: 60' GASSY OIL (5% GAS, 95% OIL)
120' Muddy Water
(10% Mud, 90% Water)

Recovery Water: (7,500 ppm)
System Water: (1,700 ppm)

iFP: 26# - 46# / 30"
ISIP: 946# / 60"
FFP: 57# - 93# / 60"
FSIP: 910# / 90"
117 deg F
MH: 1,328# - 1,314#

OIL Gravity: 31 deg.
OIL API: 33 deg @ 80 deg F

Reported Rw =
0.770 ohms @ 76 deg F

Recovery Water Mud Engineer:
(8,500 ppm)

Trilobite Testing, Inc.
Pratt, KS.

2023

DAILY DRILLING - JULY

2023

12/1/4" Hole (Surface)

7-7/8" Hole (Vertical)

7-7/8" Hole (Vertical)

19 July --- Spud @ 8pm.
Drill to 67'.
Ran 8-5/8" (23#) casing.
Set @ 57'. 55 sx H-325
(2%CC + 3% Gel).
[Hurricane Services]
Plug Down @ 9:30pm.
Cement did circ (5 Bbls).
WOC.

20 - 23 July --- No drilling activity
24 --- U / S @ 10:30am.
Start and
25 --- Finish Bit Trip @ 1,808'.
7am @ 1,920'.
26 --- 7am @ 2,561'. Start and
27 --- 7am @ 2,758'. Finish DST #1 -
Kinderhook Lime (2,749' -
2,758').

28 July --- Resumed Drilling @ 1am.
7am @ 2,838'. DST #2 -
Arbuckle (2,876' - 2,885').
29 --- 7am @ 2,885'.
Resumed Drilling @ 8:55am.
RTD (2,950') @ 1pm.

E-Log.
[Midwest Wireline]

HOLE DEVIATION (67' - 2,950' MD)

12-1/4" Surface Hole

DEPTH / TVD	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
67' /	0.50 (Surface Casing)						

Strap @ NA. Murfin 116 is a top drive, 'single' drilling rig.

7-7/8" Vertical Hole

1,057' /	0.50	
1,808' /	1.00	(Bit Trip)
2,758' /	0.75	(DST #1)
2,950' /	1.25	(RTD)

Strap:
Board:
Diff:

Inclination Surveys provided by Murfin Drilling - Rig #116

CONTRACTOR

Murfin Drilling Co, Inc. --- Rig #116

250 North Water, Suite 300
Wichita, Kansas 67202
Office: (316) 267-3241

Toolpusher: Paco Gonzalez - (620) 309-1818

Pump: IDECO 550
6" x 15" @ 60 SPM.
700 PSI @ Standpipe.
Drill Pipe: 4.5" XH. (16.0# / ft -used)

Drill Collars: 6" x 2.25" --- 462'. (83#/ft)
Dry Collar Weight: 38,346#
Bouyancy Collar Weight: 32,977#
(@ 9.2 ppg / Buoyancy Factor 0.86)
Design Factor: 15% held back to keep
drill string straight, therefore:
available calculated WOB is 28,030#

Check Weight Indicator @ 1,934'.
Calculated String Weight (78,232#) -vs- Observed WI (72,000#).
WI is weighing LIGHT by 9-%.
Therefore: Calculated WOB of 28,030# will show 25,716# on WI.

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
SURFACE ---		(IADC)					(ft/hr)
19 July 2023	12-1/4"	SMITH	15 - 15 - 15	0' / 67'	67'	0.50	132.0
VERTICAL ---							
24 July 2023	7-7/8"	SMITH M-616 (PDC)	15 - 15 - 15	67' / 1,808'	1,471'	11.0	133.7
24 July 2023	7-7/8"	SMITH F-271Y	15 - 15 - 15	1,808' / 2,950'	1,142'	48.5	23.5

ROCK TYPES

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Granite was
- Congl
- Dol lmst
- Silty dol

- Calc dol
- Dol 2
- Dol
- Gyp
- Igne
- Lmst 2
- Lmst
- Silty ls
- Meta
- Mrlst
- Salt
- Shale 3
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Ss 2

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

STRINGER

- Dol ls
- Silty dol
- Anhy

- Arg
 - Bent
 - Coal
 - Dol
 - Gyp
 - Ls
 - Mrst
 - Calc dol
 - Sltstrg
 - Ssstrg
 - Chalk
 - New symbol
- SHOW**
- Oil
 - Spotted
 - Ques
 - Dead
 - Gas
 - Oil/gas
 - Bed contact

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Spore
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro

- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag

- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos

- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

STRINGER

- Dol ls

- Silty dol
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Calc dol
- Sltstrg
- Ssstrg
- Chalk
- New symbol

OTHER SYMBOLS

ACTIVITY

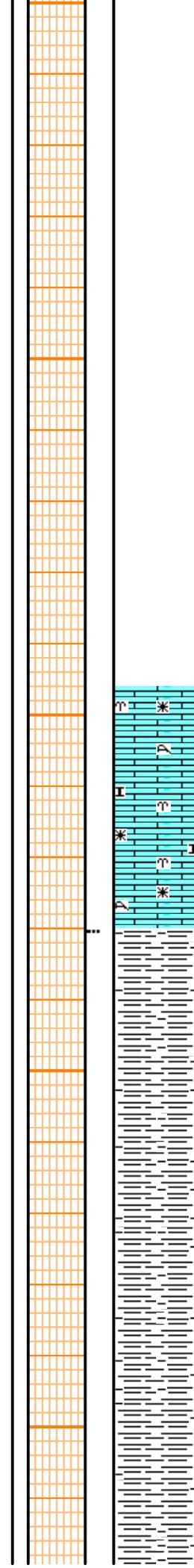
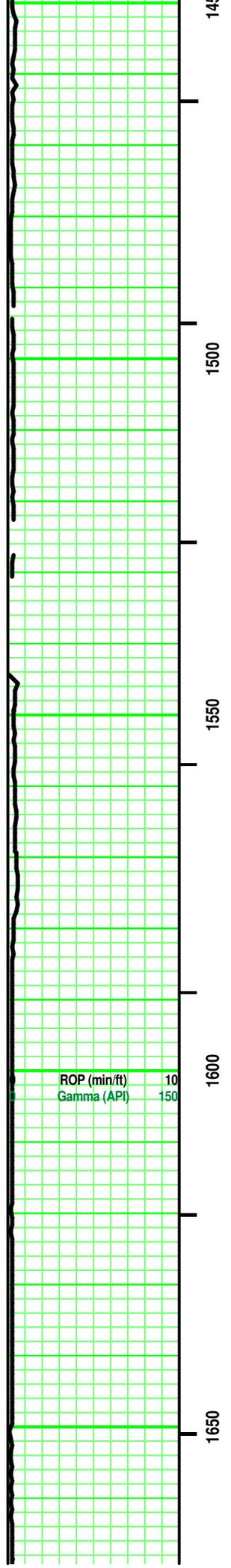
- Lost circluation
- Circulate for same

- Circulate for same
- Rtd
- Trip

- Connection
- Rft

- Sidewall

Curve Track 1 ROP (min/ft) ——— Gamma (API) ———		Depth	Porosity Type Porosity 24% 18% 12% 6%	Shows	Lithology	Geological Descriptions	REMARKS
0	ROP (min/ft)	10					<p>This geolog uses plotted drilling time & available rotary drilling samples to produce this work product.</p> <p>This geolog is an interpretative work product based on available drilling time and available rotary rock samples.</p> <p>Non-representative drilling time and/or non-representative rotary rock samples does negatively effect the accuracy of any geolog.</p> <p>Non-representative drilling time is due to drilling practices and/or bit selection.</p> <p>Non-representative rotary rock samples is due to poor mud rheology, too little/too much WOB, and/or sampling collection / washing.</p> <p>A PDC bit can and does produce drilling time which is not necessary reflective of rock characteristics.</p> <p>Rotary Samples were collected from the rig's sample box.</p> <p>TookeDaq was used in capturing Rotary ROP (for finer drilling time accuracy), where possible to 1,800. Below 1,800', Drill Time is a mixture of: timed drilling, variable WOB and traditional drilling practices.</p> <p>Drilling Time used is a mixture of rig and TookeDaq produced Drilling Time.</p>
0	Gamma (API)	150					
		1300					
		1350					
		1400					
0	ROP (min/ft)	10					
0	Gamma (API)	150					
		50					



LS - Lt/ Med Tan. some Pale Grayish Tan. Sing / Mix. VF/XF, tr Micro-xln. xln & tr part por. No/ some Re-xln. No/ mixed with tr to some Fossil frags (coral, echin). tr Chalky in part. partly Firm. No/ tr vis por.

SH - Med/ Dark Gray. tr Dark Silvery Gray. Silty in part. mixture of: No/ tr Calc, misc frags.

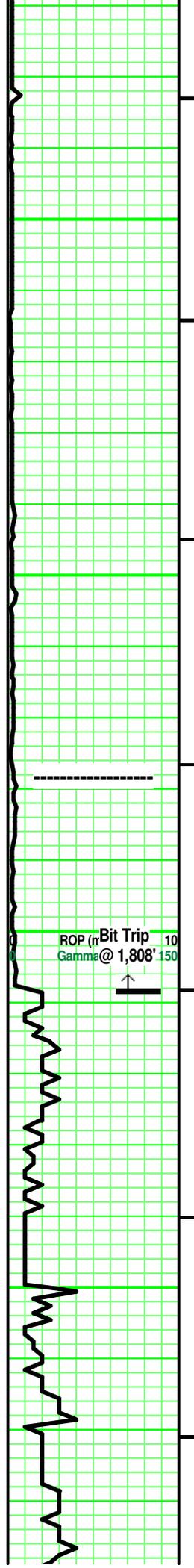
SH - Med/ Dark Gray. tr Dark Silvery Gray. Silty in part. mixture of: No/ tr Calc, misc frags.

Vis: 38
Wt: 9.4
LCM: 2#

Vis: 38
Wt: 9.4
LCM: 2#

Vis: 40
Wt: 9.4
LCM: 2#

Vis: 40
Wt: 9.4
LCM: 2#



SH - Med/ Dark Gray. tr Dark Silvery Gray. Silty in part. mixture of: No/ tr Calc, misc frags.

LS - Lt Grayish Tan. Sing. XF-xln. xln por. mostly No/ tr argil. tr Re-xln. partly Firm. No/ tr vis por.

SH - Med/ Dark Gray. Sing. Massive. tr Calc.

-- KANSAS CITY
1,778' (- 400')

LS - Lt/Med Tan. some Lt Brownish Tan or Lt Grayish Tan. Sing/ Mot/ Mixed. tr XF-/ mostly Xf or Micro-xln. xln por. mixture of No/ some Re-xln. mixture of fossil frags, chaly in part. mixture of mostly Friable, some Firm/ Dense. mixture of: tr or some vis por.

xxxx BIT TRIP @ 1,808' xxxx
^-- Hole Dev: 1 deg @ 1,808'

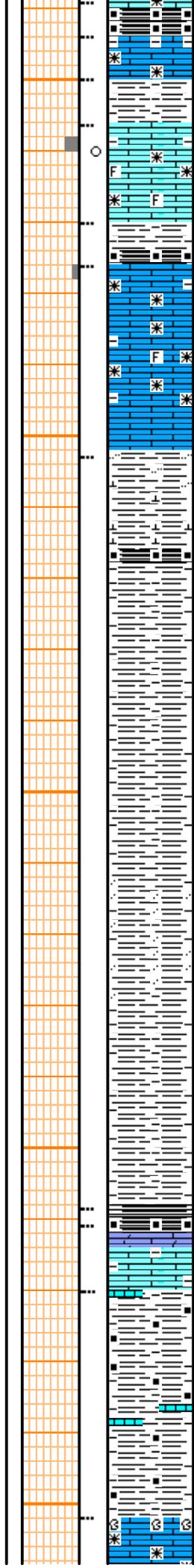
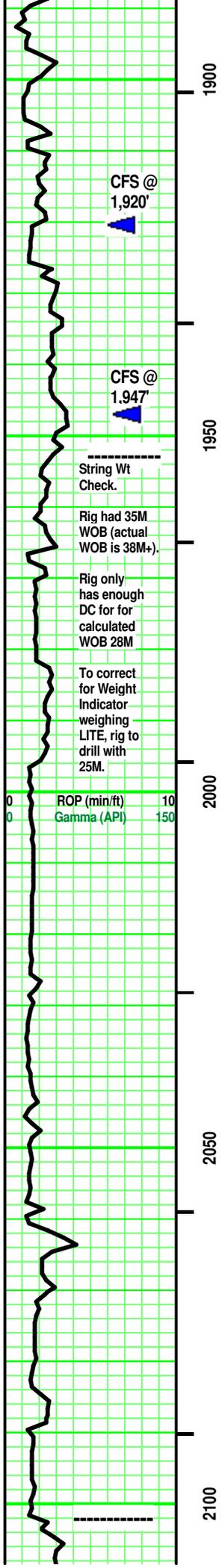
Add: some pcs of CHERT - Clear/ Silvery Gray/ Pale Lt Gray. Mot/Mixed. Semi-transparent. misc inclusions. No trip.

Add: LS - Dark Tannish Brown. Sing. Micro-xln. xln por. [some CHERT - Drusy Garyish Brown/ Off White/ Clear. Mot. lots misc inclusions. no trip.] some Re-xln. partly Firm. No/ tr vis por.

Vis: 41
Wt: 9.4
LCM: 2#

Vis: 40
Wt: 8.9
LCM: 2#

Vis: 45
Wt: 8.9
LCM: 4#



SH - Black. Sing. Carb. soft.

LS - Grayish Tan. Mixed. XF-/ Micro-xln. xln por. partly Firm. tr argil. No/ tr vis por.

SH - Med Gray. Sing. Hi limy in part.

LS - Med Tannish Brown/ some Lt Tan. Sing. XF-/Micro-xln. xln por. tr Re-xln. hi minute fossil frags. partly Firm. No/ tr vis por. ? odor. No free oil or gas. No/ rare Brown spotted stain. No cut/residual. No/? acid & residual.

SH - Med Gray. Sing. soft.

SH - Black. Sing. Carb. soft.

LS - Dk Tannish Brown / Dark Tan / Lt Pale Gray. Sing/ tr Mot/ some Mixed. XF-/ Micro-xln. xln por. No/ tr Re-xln. tr fossil frags. mostly No/ tr argil in part. partly Firm. No/ tr vis por.

SH - Med/ Dark Gray, tr Silvery Gray. Sing. Mod to hi silty. Siltstone intermixed (mostly near top). Calc/ Hi Limy at and with depth.

SH - Black. Sing. Carb. soft.

SH - some Med/ Dark Gray. Blackish Gray. Sing/ tr Mixed. Hi limy. Blocky.

SH - similiar to above. Hi Sandy. [Clear. XF qtz grains. SA/SR. mod sort & sph. 'floating' grain contact. Friable. No/ tr vis por.]

SH - some Med/ Dark Gray. Blackish Gray. Black & carb with depth. Sing/ tr Mixed. tr limy. Blocky.

SH - Black. Sing. carb. soft.

LS (tr Dol in part) - Lt/ Med Gray. Mot/Mixed. Micro-xln. xln por. argil. Dense. No/ tr vis por.

SH - Med/ Dark Gray. Black intermixed. No/ tr limy streaks (intermixed).

LS - Dark Tan. Sing. XF-xln. xln por. tr misc frags. No/ some Re-xln. No/ tr vis por. Interbedded with

-- STARK SH
1,889' (- 511')

Vis: 43
Wt: 9.2
LCM: 3#

1,920' Sample had ? odor.
xxxx CFS @ 1,920': 30" xxxx

WOB & String Weight
Check @ 1,934'

Vis: 42
Wt: 9.1
LCM: 2#

1,947' (CFS) -
Vis: 44 Wt: 9.0+ Wtr Loss: 8.0
PV: 13 YP: 12 Gels: 8/16
pH: 11.0 Cl (700) Ca (40)
Solids: 5.4% LCM: 3#

xxxx CFS @ 1,947': 30" xxxx

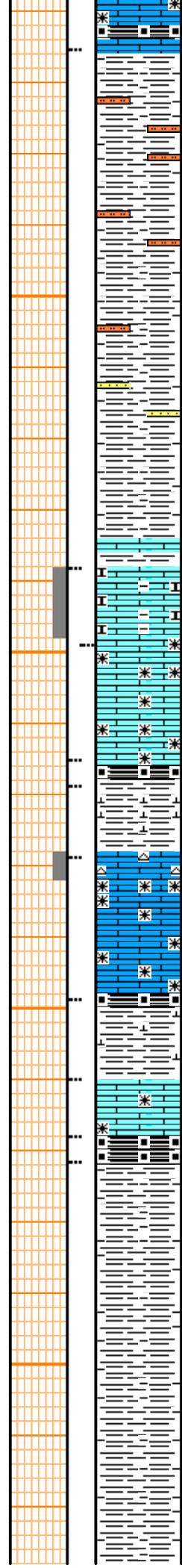
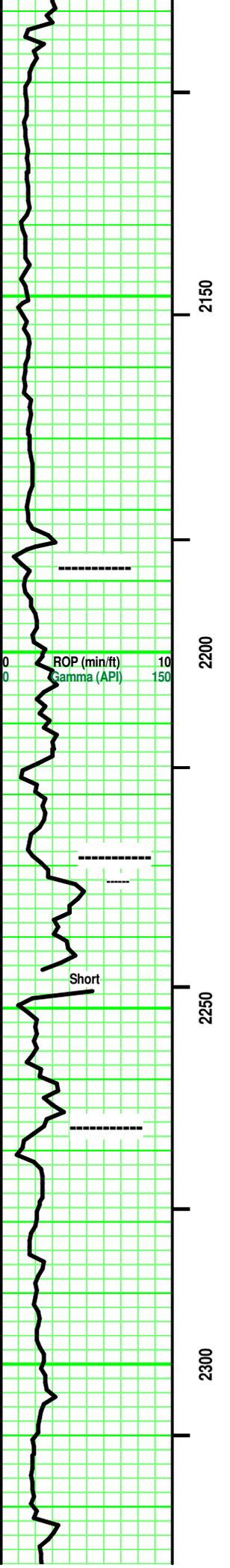
--- MOUND CITY
1,953' (- 575')

Vis: 44
Wt: 9.1
LCM: 4#

Vis: 42
Wt: 9.1
LCM: 4#

Vis: 42
Wt: 9.1
LCM: 4#

-- ALTAMONT
2,102' (- 724')



Black SH with depth.

SH - Med/ Dark Gray. Black intermixed. No/ tr highly silty streaks (intermixed/ interbedded).

Add: LS stringer.

LS - Lt/ Med Brown. some Brownish Tan. Sing. XF-/Micro-xln. xln por. No/ tr Re-xln. No/ some fossil frags. Chalky and argil at top. partly Friable. No/ tr vis por.

SH - Black. Sing. carb. soft.

LS - Med Tan, Grayish Tan. Sing/ some Mixed. XF-/ Micro-xln. xln por. No/ tr Re-xln. [No/ tr Chert: Pale Lt Gray. Opaque. No Inclusions. No trip.]

SH - Black. Sing. carb. soft.

SH - Med Gray. Sing. Calc in part.

LS - Lt Brownish Tan/ Dark Tan. Sing/ tr Mixed. XF-/ Micro-xln. xln por. No/rare Re-xln. partly Firm. No/ tr vis por.

SH - Black. Sing. carb. soft.

SH - some Med/ mostly Dark Gray, Blackish Gray and Black. Mixed/ some Mot. Silty near top. Interbedded LS with depth. mostly Friable. tr blocky.

-- PAWNEE
2,188' (- 810')

Vis: 40
Wt: 9.2
LCM: 4#

Vis: 38
Wt: 4#
LCM: 4#

Vis: 40
Wt: 9.0
LCM: 4#

Vis: 45
Wt: 9.2
LCM: 3#

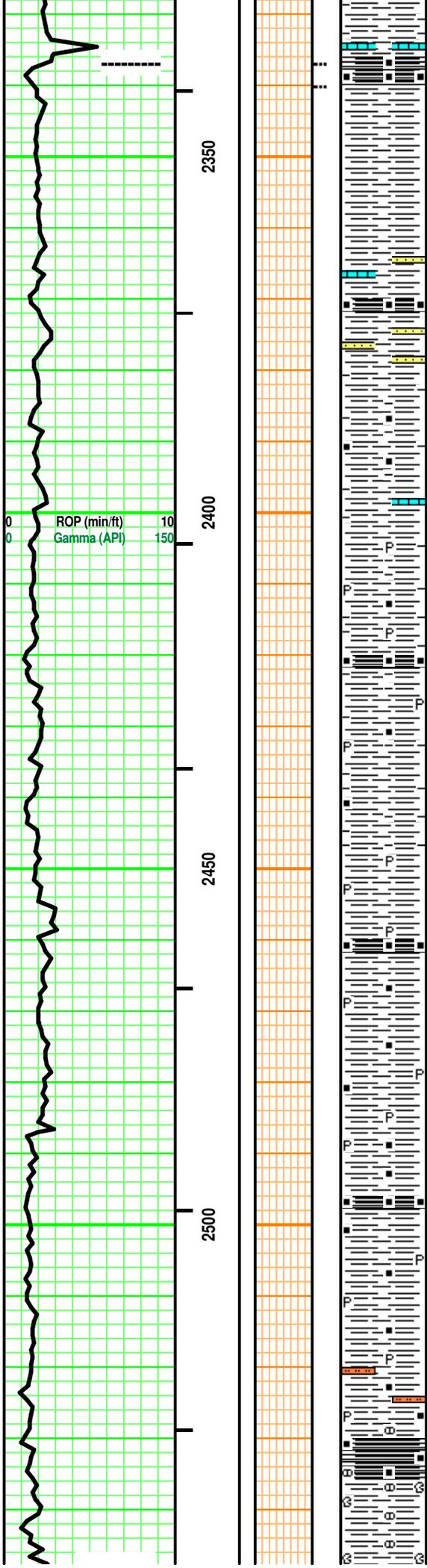
-- FT. SCOTT
2,229' (- 851')

Vis: 53
Wt: 9.2
LCM: 3#

-- Excello SH
2,267' (- 889')

Vis: 53
Wt: 9.1
LCM: 3#

-- OAKLEY SH
2,337' (- 959')



SH - Black. Sing. carb. soft.

Interbedded SH, SS & LS

SH - tr Med/ mostly Dark Gray, Blackish Gray. Sing. Mot, Mixed. No/ some Silty or sandy in part. misc inclusions (mica, minute fossil frags, plant frags).

SH - Black. Sing. carb. soft.

SS - Lt/ Med, tr Dark Gray, Clear. tr XF-/ silt sized qtz grains. SA/SR. highly sorted, mod sph. Vitreous, some frosted luster, mixture of Point/sutured grain contact. Sil / tr calc cement. misc inclusions. argil/shaly. No/ tr/ some fair vis por.

LS - Lt/Med Gray. Sing. Micro-xln. xln por. argil in part. partly Firm. No/ tr vis por.

Interbedded SH

SH - tr Med/ mostly Dark Gray, Blackish Gray. Sing. Mot, Mixed. No/ some Silty or sandy in part. misc inclusions (mica, minute fossil frags, plant frags).

SH - Black. Sing. carb. soft. minute pyritic xtals in part.

Interbedded SH & tr Siltstone

SH - Dark Gray, Blackish Gray, Black. Pyritic in part. mixture of carb and silty. Med/ mottled Lt Gray at depth. misc Dark Gray argil & Off Grayish Tan calc frags/ siliceous (minute) Dark Brownish nodules at depth.

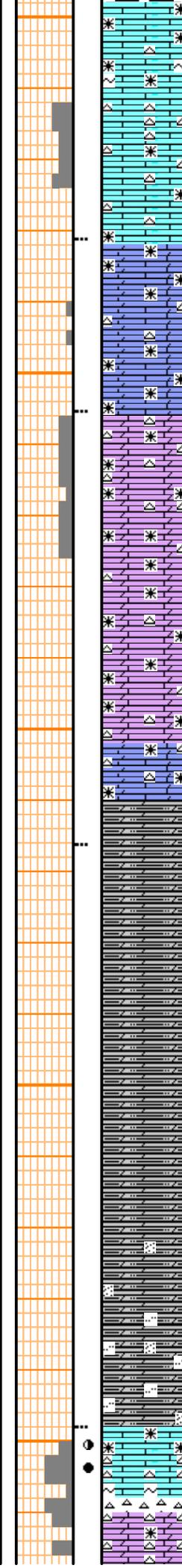
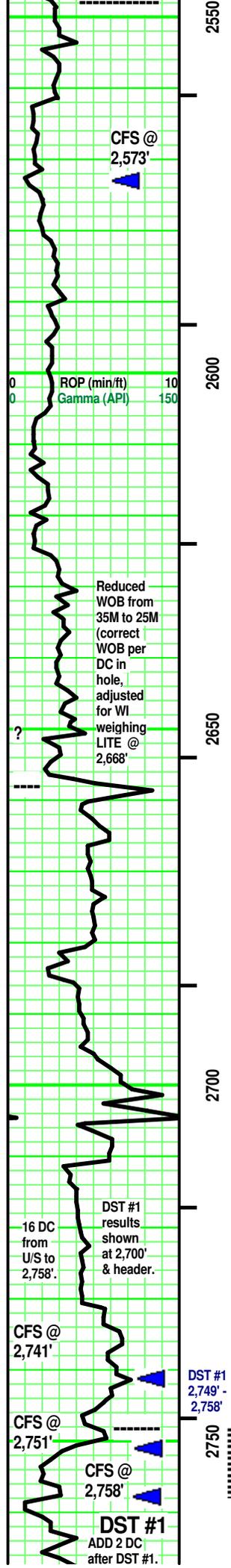
Siltstone - Silvery Lt Gray. Mot. Platty. misc inclusions. Calc in part.

Vis: 51
Wt: 9.2
LCM: 3#

Vis: 50
Wt: 9.2
LCM: 3#

Vis: 53
Wt: 9.2
LCM: 3#

Vis: 52
Wt: 9.2
LCM: 4#



LS - Tans, some Off White / Lt Gray / tr Med Brown. mixture of: Sing/ Mixed/ Mot. tr F-/XF-xln. xln & part por. some Re-xln. [few/some CHERT - Clear/ Lt Gray/ Off White/ Lt Tan. Mot/ Mixed. Opaque. partly weathered mottled with fresh. minute Oolitic & fossil frag.] Brown LS has misc inclusions. tr glauc. Firm. No/ tr vis por.

LS (Dol) - Med Tan / Grayish Tan. Sing. XF-/ Micro-xln. xln por. some Re-xln. rare fossil frag.

DOL (Hi Calc) - Lt/ Med Brown, Brownish Gray. Tans. Sing/ some Mot or Mixed. XF-/ Micro-xln. mostly xln por/ tr sucrosic. some Re-xln. HI cherty. (similar to 2 above. Add: Lt Gray. No show.) mostly Friable. tr vis por.

LS (Dol) - Lt Brownish Gray, Grayish Tan. Sing. XF-/ some F- & Micro-xln. xln por. No/ tr chalky in part. [some CHERT - Lt Gray, Tan, some Off White. Opaque, No/ some misc inclusions. No trip.] partly Friable. some No/ mostly tr to Fair vis por.

DOL - Brownish Gray, Blackish Brown. Sing. Micro-xln. xln por. Silty. No/ some minute dark inclusions. mostly soft.

DOL - Brownish Gray, Blackish Brown. Sing. Micro-xln. xln por. Silty. No/ some minute dark inclusions. mostly soft.

----- **B / COWLEY 2,748' (-1,370')**
 LS (1) - tr Lt/ mostly Med Tan, tr Drusy Grayish Tan. tr Sing, mostly Mixed, rare Mot. tr XF-/ Micro-xln. xln por. No/ tr sucrosic por in part. some VF, SA glauc grains. tr Cherty (as below). Firm. ----->

Interbedded / Intermixed --
 DOL / DOL (Calc) & CHERT

-- MISS
 2,548' (- 1,170')

Vis: 52
 Wt: 9.2
 LCM: 4#

xxxx CFS @ 2,573': 30" xxxx

2,592' -
 Vis: 51 Wt: 9.3+ Wtr Loss: 8.4
 PV: 18 YP: 15 Gels: 8/13
 pH: 10.5 Cl (1,000) Ca (40)
 Solids: 7.4% LCM: 3#

Vis: 51
 Wt: 9.2
 LCM: 3#

Vis: 51
 Wt: 9.2
 LCM: 3#

Vis: 49
 Wt: 9.3
 LCM: 3#

2,670' Sample had Cowley.
 Cowley samples have a petroliferous odor.

=====

DST #1
 KINDERHOOK LIME 2,749' - 2,758'
 Recovery: 60' Muddy Water (10%M, 90%W)

IFP: 21# - 26# / 30"	IF: Weak Surface Blow, built to 1 inch
ISIP: 911# / 60"	ISI: No Blow.
FFP: 32# - 42# / 60"	FF: Weak Surface Blow built to 1.4 inch.
FSIP: 895# / 90"	FSI: No Blow.
MH: 1,303# - 1,257#	

=====

Vis: 49 Wt: 9.2 LCM: 3#

LS (1) No/ tr vis por. Fair/ Good odor. rare minute free Black oil / No free gas. tr spotted, tr uniform Med Brown stain. Weak Pos cut/residual. Weak Pos acid/ residual.

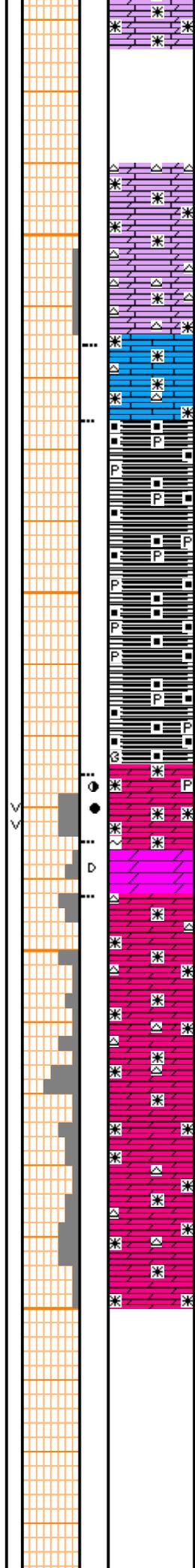
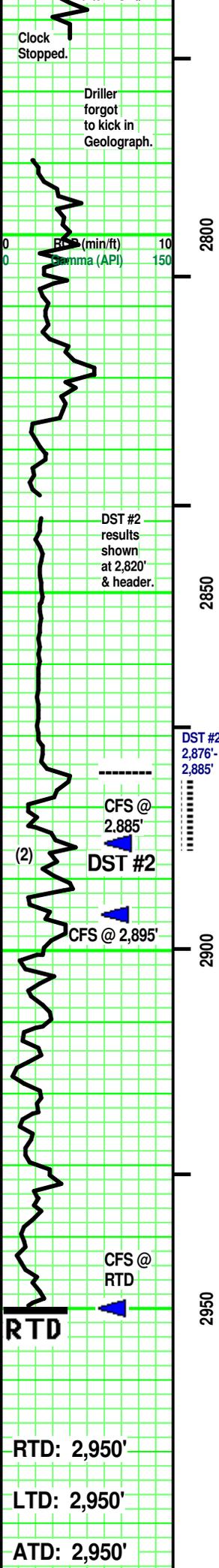
CHERT - tr Off White/Grays/drusy Brown. Mot/Mixed. Opaque. No/ tr inclusions. tr trip. Fair odor. rare minute free Black oil / rare free gas. some spotted, some uniform Med Brown stain. Weak Pos cut/ residual. Weak Pos acid/ residual.

xxxxx CFS @ 2,741': 30" xxxxx

Vis: 50 Wt: 9.3 LCM: 3#

xxxxx CFS @ 2,751': 30" xxxxx
 ^--- 2,751 Circ Sample had fair odor and few rx chips with show.

xxxxxxxxx DST #1 xxxxxxxxxxxx
 ^--- CFS @ 2,758': 30"
 ^--- S/T above 1,800'.
 ^--- CHC: 60"



DOL / Dol (Calc) - some Lt / mostly Med Tan. few pcs: Pale Grayish Tan. Sing/ some Mixed. Micro-Re-xln (micro-subehedral xtals). mixture of: xln and some sucrosic por. partly Firm. No/ tr vis por.

CHERT - Off White, Lt Gray, Silvery Gray, Drusy Gray, and trTans. Mot in part -or- Mixed. Opaque. Misc minute Inclusions. mostly No trip, tr part por.

LS - mostly Tans, tr / some Blue Green. Sing. tr XF-/ mostly Micro-xln. xln por. No/ tr Re-xln. tr chert as above. Firm/ Dense in part.

SH - Blackish Gray, Black. Sing. Massive. No/ tr v minute pyrite.

DOL - Med Tan, some Pale Lt Tannish Gray. Sing/ tr Mixed. mixture of: Mirco-Re-xln and mixture of: M/ F/XF subehedral xtals. xln & some vuggy por. couple pcs: minute ----->

DOL (2) - Tan. Sing. tr M/ mostly F & XF subehedral xtals. Friable. few pcs with black asphaltic infill. mostly Fair to Good vis por. [tr CHERT - White. Sing. Opaque. mostly fresh. Dark inclusions.] ?/Faint odor. No free oil or gas. Asphaltic infill. Weak Pos cut & residual. Weak Pos acid & residual

DOL - Grayish Off White with depth. Sing / rare Mixed. mixture of: Micro-Re-xln and F/XF subehedral xtals. xln & tr vuggy por. [tr CHERT - mostly Off White / White, tr Lt/Med Gray. Sing / tr Mixed. Opaque. No/ rare minute inclusions. No trip.] Highly Friable. mixture of: Fair/ Good vis por.

Work Kelly (15').
Check sample box for Volume & Type of Fill.

^--- Hole Dev: 0.75 deg @ 2,758'

^--- DST #1. Vis: 50 Wt: 9.1 LCM: 3#

^--- 2,758' (DST #1) - Vis: 48 Wt: 9.2 Wtr Loss: 9.6 PV: 14 YP: 13 Gels: 3/9 pH: 9.6 Cl (900) Ca (40) Solids: 6.4% LCM: 4#

Vis: 50 Wt: 9.3 LCM: 3#

=====

DST #2
ARBUCKLE 2,876' - 2,885'

Recovery:
60' GASSY OIL (5% GAS, 95% OIL)
API = 33 deg @ 80 deg F
120' Muddy Water (10% M, 90%)

iFP: 26# - 46# / 30" IF: Fair Blow,
ISIP: 946# / 60" built to 4.5 inch
FFP: 57# - 93# / 60" ISI: No Blow.
FSIP: 910# / 90" FF: Fair Blow,
117 deg F built to 4.5 inch.
MH: 1,328# - 1,314# FSI: No Blow.

=====

Vis: 55 Wt: 9.2 LCM: 2#

DOL - pyrite & chlorite xtals. Fair to Good vis por. Good odor. No gas bubble. No/? free oil. tr Spotted/ mostly uniform Med Brown stain. few pcs: Black, asphaltic infill. Pos cut & residual. Pos acid & residual.

2,870' Sample had a petroliferous odor.

-- ARBUCKLE
2,875' (- 1,497')
Vis: 50 Wt: 9.3 LCM: 2#

xxxxxxxxx DST #2 xxxxxxxxxxxx
^--- CFS @ 2,885': 30"
^--- DST #2

^--- 2,885' (DST #2) - Vis: 57 Wt: 9.4 Wtr Loss: 10.2 PV: 16 YP: 14 Gels: 17/49 pH: 9.0 Cl (1,700) Ca (40) Solids: 7.7% LCM: 2#

<- Work on Rig.

^--- 2,885' (Circ after DST #2) - Vis: 59 Wt: 9.3 Wtr Loss: 11.6 PV: 11 YP: 12 Gels: 9.34 pH: 8.0 Cl (1,850) Ca (40) Solids: 7.0 LCM: 1#

Vis: 41 Wt: 9.4 LCN: 2#

xxxxxxxxxxxxx RTD xxxxxxxxxxxxxxx

^--- CFS @ RTD: 30"
^--- CHC: 45"
Work Kelly (15")

^--- Hole Dev: 1.25 deg @ RTD

^--- E-Log.
[Midwest Wireline]

MERIEM #3-20

1,380' FSL & 1,905' FEL 20-T28S-R9E
Elk County, Kansas

MURFIN DRILLING CO., INC.
Wichita, Kansas

Geologist:
Curtis Covey
COVEY - The Well Watchers
Well Number: 1,219

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

6

DRILLING REPORT - LOG TOPS - MERIEM SE 3-20

MDCI Meriem SE #3-20 1380'FSL 1905'FEL Sec. 20-T28S-R9E KB: 1378						
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Heebner				1044	+334	+4
Lansing				1431	-53	+2
Kansas City	1778	-400	-6	1778	-400	-6
Stark	1889	-511	-5	1891	-513	-7
Mound City	1953	-575	-6	1952	-574	-5
Altamont	2102	-724	-2	2104	-726	-4
Pawnee	2188	-810	+3	2194	-816	-3
Ft. Scott.	2229	-851	-4	2231	-853	-6
Excello	2267	-889	-9	2266	-888	-8
Oakley	2337	-959	-7	2336	-958	-6
Mississippi	2548	-1170	-3	2547	-1169	-2
B Cowley	2748	-1370	-6	2750	-1372	-8
Kinderhook				2750	-1372	-8
Arbuckle	2875	-1497	-4	2874	-1496	-3
RTD	2950	-1572				
LTD				2950	-1572	



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co, Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Curtis Covey

Meriem #3-20

20-28s-9w Elk,KS

Start Date: 2023.07.27 @ 05:51:00

End Date: 2023.07.27 @ 18:28:47

Job Ticket #: 71031 DST #: 1

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

Printed: 2023.08.01 @ 16:54:59



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc.

20-28s-9w Elk,KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71031

DST#: 1

ATTN: Curtis Covey

Test Start: 2023.07.27 @ 05:51:00

GENERAL INFORMATION:

Formation: **Kinderhook LM**

Deviated: No Whipstock: 1378.00 ft (KB)

Time Tool Opened: 10:13:47

Time Test Ended: 18:28:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 2749.00 ft (KB) To 2758.00 ft (KB) (TVD)

Reference Elevations: 1378.00 ft (KB)

Total Depth: 2758.00 ft (KB) (TVD)

1366.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 6751 Outside

Press@RunDepth: 42.16 psig @ 2750.00 ft (KB)

Capacity: psig

Start Date: 2023.07.27

End Date:

2023.07.27

Last Calib.: 1899.12.30

Start Time: 05:51:01

End Time:

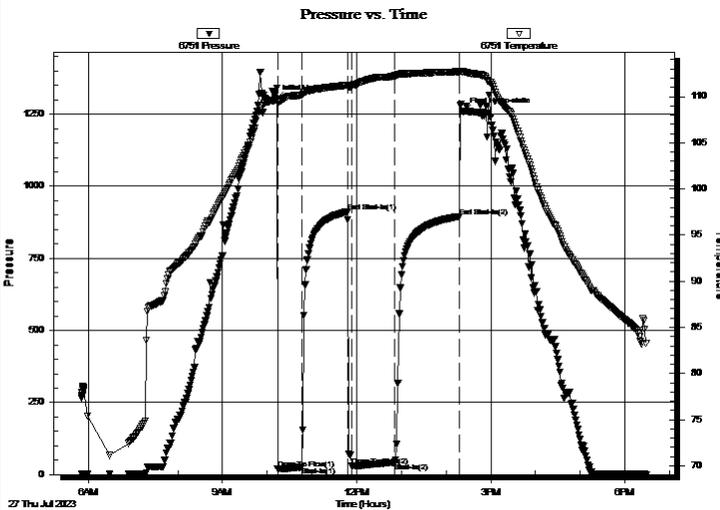
18:28:47

Time On Btm: 2023.07.27 @ 10:11:32

Time Off Btm: 2023.07.27 @ 14:22:47

TEST COMMENT: IF: 30 min., weak surface blow , 1 inch
IS: 60 min., no blow back
FF: 60 min., weak surface blow , 1.4 inches
FS: 90 min., no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1303.22	109.62	Initial Hydro-static
3	20.72	109.36	Open To Flow (1)
35	26.19	110.17	Shut-In(1)
96	911.27	111.21	End Shut-In(1)
102	31.51	111.14	Open To Flow (2)
160	42.16	112.27	Shut-In(2)
247	895.37	112.70	End Shut-In(2)
252	1257.15	112.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	muddy water 10%M,90%W	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc.

20-28s-9w Elk, KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71031

DST#: 1

ATTN: Curtis Covey

Test Start: 2023.07.27 @ 05:51:00

Tool Information

Drill Pipe:	Length: 2285.00 ft	Diameter: 3.80 inches	Volume: 32.05 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: 462.00 ft	Diameter: 2.25 inches	Volume: 2.27 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 34.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 73000.00 lb
Depth to Top Packer:	2749.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	39.00 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			2724.00	
Hydraulic tool	5.00			2729.00	
Isolator Sub	3.00			2732.00	
Jars	5.00			2737.00	
Safety Joint	3.00			2740.00	
Packer	5.00			2745.00	30.00 Bottom Of Top Packer
Packer	4.00			2749.00	
Stubb	1.00			2750.00	
Recorder	0.00	6752	Inside	2750.00	
Recorder	0.00	6751	Outside	2750.00	
Pickup sub perf	5.00			2755.00	
Bullnose	3.00			2758.00	9.00 Bottom Packers & Anchor

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc.

20-28s-9w Elk,KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71031

DST#: 1

ATTN: Curtis Covey

Test Start: 2023.07.27 @ 05:51:00

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:

4300 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	muddy water 10%M,90%W	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

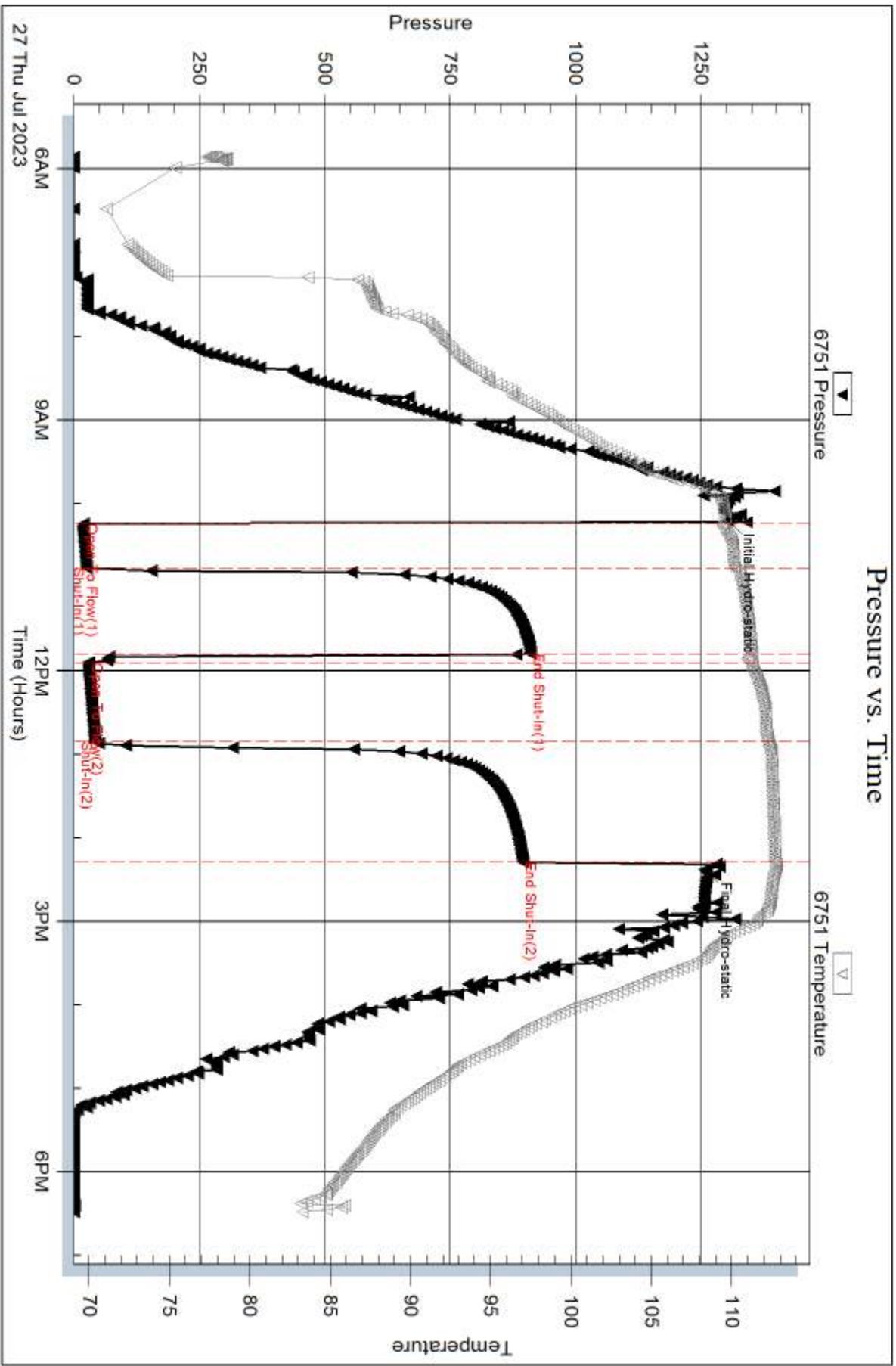
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=1.290@82F=4300 ppm



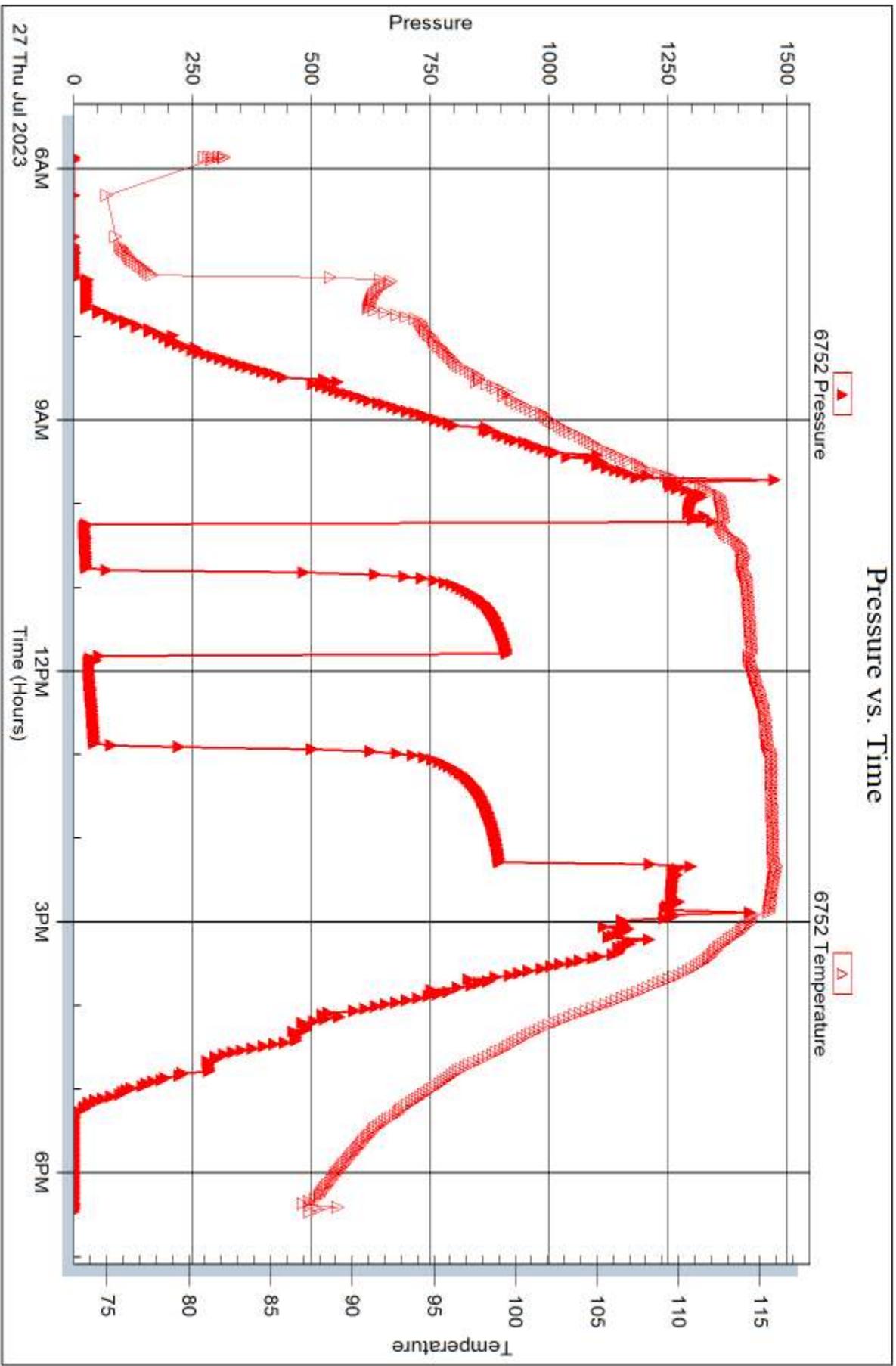
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Inside

Marfin Drilling Co, Inc.

Meriem #3-20

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 71031

Printed: 2023.08.01 @ 16:55:00



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co, Inc.**

250 N Water STE 300
Wichita, KS 67202

ATTN: Curtis Covey

Meriem #3-20

20-28s-9w Elk,KS

Start Date: 2023.07.28 @ 13:50:00

End Date: 2023.07.29 @ 04:47:32

Job Ticket #: 71032 DST #: 2

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

Printed: 2023.08.01 @ 16:52:59



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co, Inc.

20-28s-9w Elk,KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71032

DST#: 2

ATTN: Curtis Covey

Test Start: 2023.07.28 @ 13:50:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: 1378.00 ft (KB)

Time Tool Opened: 18:32:17

Time Test Ended: 04:47:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 2876.00 ft (KB) To 2885.00 ft (KB) (TVD)

Reference Elevations: 1378.00 ft (KB)

Total Depth: 2885.00 ft (KB) (TVD)

1366.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition:

KB to GR/CF: 12.00 ft

Serial #: 6751 Outside

Press@RunDepth: 92.73 psig @ 2877.00 ft (KB)

Capacity: psig

Start Date: 2023.07.28

End Date:

2023.07.29

Last Calib.: 1899.12.30

Start Time: 13:50:01

End Time:

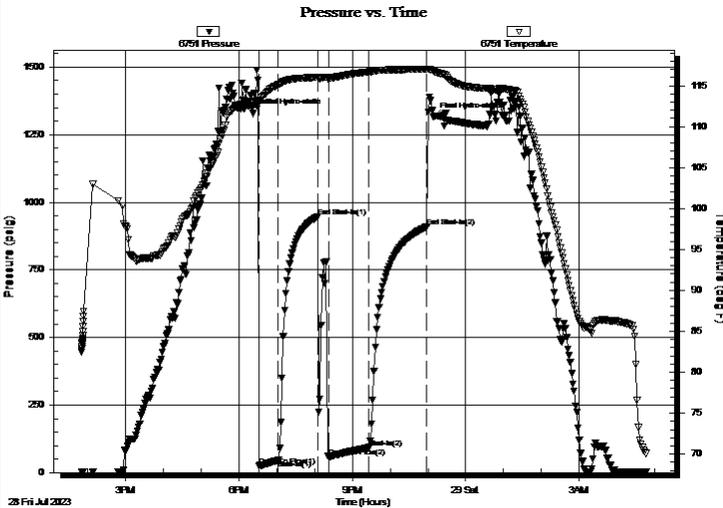
04:47:32

Time On Btm: 2023.07.28 @ 18:22:17

Time Off Btm: 2023.07.28 @ 23:08:17

TEST COMMENT: IF: 30 min., fair building blow , 4.5 inches
IS: 60 min., no blow back
FF: 60 min., fair building blow , 4.5 inches
FS: 90 min., no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1328.19	112.58	Initial Hydro-static
11	25.79	113.06	Open To Flow (1)
41	45.61	115.11	Shut-In(1)
103	946.13	116.01	End Shut-In(1)
120	56.70	115.88	Open To Flow (2)
184	92.73	116.66	Shut-In(2)
276	910.20	116.97	End Shut-In(2)
286	1314.48	116.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	gassy oil 5%G,95%O	0.30
120.00	muddy water 90%W,10%M	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co, Inc.

20-28s-9w Elk, KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71032

DST#: 2

ATTN: Curtis Covey

Test Start: 2023.07.28 @ 13:50:00

Tool Information

Drill Pipe:	Length: 2407.00 ft	Diameter: 3.80 inches	Volume: 33.76 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: 462.00 ft	Diameter: 2.25 inches	Volume: 2.27 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 36.03 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	72000.00 lb
Depth to Top Packer:	2876.00 ft			Final	73000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	9.00 ft				
Tool Length:	39.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			2851.00	
Hydraulic tool	5.00			2856.00	
Isolator Sub	3.00			2859.00	
Jars	5.00			2864.00	
Safety Joint	3.00			2867.00	
Packer	5.00			2872.00	30.00 Bottom Of Top Packer
Packer	4.00			2876.00	
Stubb	1.00			2877.00	
Recorder	0.00	6752	Inside	2877.00	
Recorder	0.00	6751	Outside	2877.00	
Pickup sub perf	5.00			2882.00	
Bullnose	3.00			2885.00	9.00 Bottom Packers & Anchor

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co, Inc.

20-28s-9w Elk,KS

250 N Water STE 300
Wichita, KS 67202

Meriem #3-20

Job Ticket: 71032

DST#: 2

ATTN: Curtis Covey

Test Start: 2023.07.28 @ 13:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

7500 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	gassy oil 5%G,95%O	0.295
120.00	muddy water 90%W,10%M	0.590

Total Length: 180.00 ft Total Volume: 0.885 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

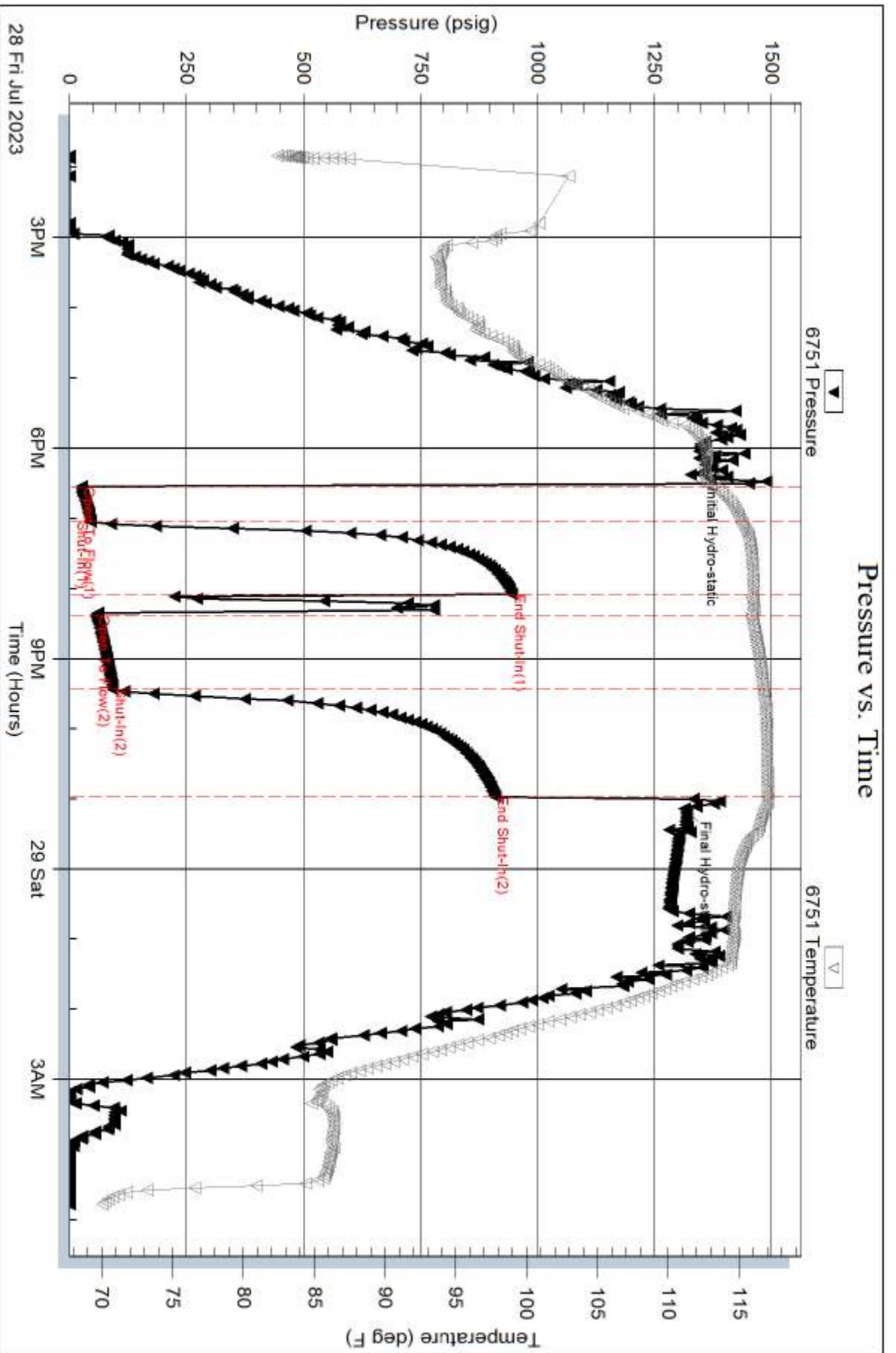
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API = 33@80=31api

RW = .770@76F=7500 ppm



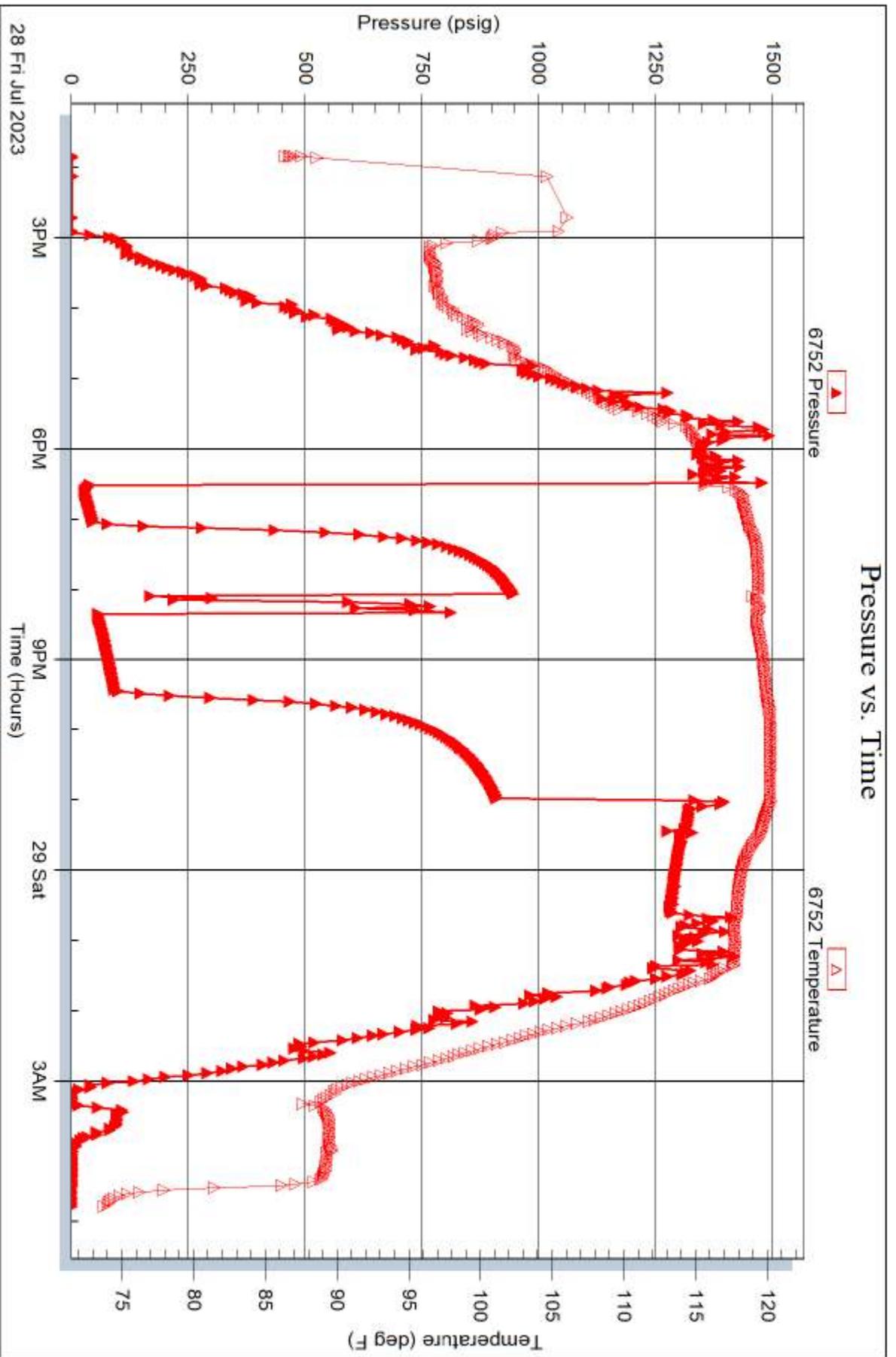
Serial #: 6752

Inside

Marfin Drilling Co, Inc.

Meriem #3-20

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 71032

Printed: 2023.08.01 @ 16:53:00



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 71031

Well Name & No. Merion 3-20 Test No. 1 Date 7-27-23
 Company Martin Drilling Co, Inc. Elevation 1378 KB 1366 GL
 Address 250 N WATER ST. 300 Wichita, KS 67202
 Co. Rep / Geo Curtis Covey Rig Martin 116
 Location: Sec. 20 Twp 28 Rge. 9 Co. ELK State KS

Interval Tested 2749-2758 Zone Tested Kinderhook LM
 Anchor Length 9' Drill Pipe Run 2285 Mud Wt. 9.35
 Top Packer Depth 2744 Drill Collars Run 462 Vis SI
 Bottom Packer Depth 2749 Wt. Pipe Run N.A. WL 8.4
 Total Depth 2758 Chlorides 1000 ppm System LCM 3#

Blow Description IF: 30 min, weak surface blow, 1 inch
TSI: 60 min, no blow back
FP: 60 min, weak surface blow, 1.4 inches
FSP: 90 min, no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>muddy water</u>			<u>90</u>	<u>10</u>
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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 113 Gravity _____ API RW 1.290 @ 82 °F Chlorides 4300 ppm
 Initial Hydrostatic 1303 Test CONV. 4600 - 1800 Ruined Shale Packer _____
 Initial Flow 21 to 26 Jars 300 Ruined Packer _____
 Initial Shut-In 911 Circ Sub _____ Hotel _____
 Final Flow 32 to 42 Hourly Standby _____ EM Tool Successful good
 Final Shut-In 895 Mileage 265 miles (Part) Accessibility 150
 Final Hydrostatic 1257 Sampler 133mi 232.75 48mi 84 Gas Sample _____
 T-On Location 0300 Straddle _____ Oversized Hole _____
 Initial Flow 30 T-Started 0600 Shale Packer _____ Sub Total 0
 Initial Shut-In 60 T-Open 1020 Extra Packer _____ Total 3416.75
 Final Flow 60 T-Pulled 1420 Extra Recorder _____ Tool Loaded _____ @ _____
 Final Shut-In 90 T-Out 1830 Day Standby _____ MP/DST Disc't _____

Comments tube loss

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

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. 71032

Well Name & No. Merion 3-20 Test No. 2 Date 7-28-23
 Company Murfin Drilling Co, Inc. Elevation 1378 KB 1366 GL
 Address 250 N Water STE 300 Wichita, KS 67202
 Co. Rep / Geo Curtis Covey Rig Murfin 116
 Location: Sec. 20 Twp 28 Rge. 9 Co. Elk State KS

Interval Tested 2876-2885 Zone Tested Arkacke
 Anchor Length 9' Drill Pipe Run 2407 Mud Wt. 9.4
 Top Packer Depth 2871 Drill Collars Run 462 Vis 57
 Bottom Packer Depth 2876 Wt. Pipe Run N.A. WL 10.2
 Total Depth 2885 Chlorides 1700 ppm System LCM 2#

Blow Description IF: 30 min, fair building blow, 4.5 inches
ISI: 60 min, no blow back
FF: 60 min, fair building blow, 4.5 inches
FST: 90 min, no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>gassy oil</u>	<u>5</u>	<u>95</u>		
<u>120</u>	<u>muddy water</u>			<u>90</u>	<u>10</u>

Rec Total 180 BHT 117 Gravity 31 API 33 @ 80 °F Chlorides 7500 ppm
 Initial Hydrostatic 1328 Test conv. Ruined Shale Packer
 Initial Flow 26 to 46 Jars 300 Ruined Packer
 Initial Shut-In 946 Circ Sub Hotel
 Final Flow 57 to 93 Hourly Standby EM Tool Successful good
 Final Shut-In 910 Mileage 80 (El Dorado) Accessibility 150
 Final Hydrostatic 1314 Sampler 96mi 168 84 + 232.75 Gas Sample
 T-On Location 1300 Straddle Oversized Hole
 Initial Flow 30 T-Started 1400 Shale Packer Sub Total 0
 Initial Shut-In 60 T-Open 1845 Extra Packer Total 3734.75
 Final Flow 60 T-Pulled 2245 Extra Recorder Tool Loaded 7/29 @ 13:45
 Final Shut-In 90 T-Out 0500 Day Standby MP/DST Disc't
 Comments 1350

Approved By _____ Our Representative Chris Hagan

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