

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	IA Operating, Inc.
Well Name	ZERFAS 30-2
Doc ID	1664928

Tops

Name	Top	Datum
Anhydrite	1496	+647
Topeka	3141	-998
Heebner	3361	-1218
Toronto	3381	-1238
Lansing	3401	-1258
BKC	3621	-1478
Arbuckle	3701	-1558
LTD	3706	-1563

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. **3119**

Date	8/27/22	Sec.	30	Twp.	11	Range	19	County	Ellis	State	Ks	On Location		Finish	5:45 pm
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Location Hayswycement - N to Homestead Rd

Lease ZERFAS Well No. 30-2 Owner 2nd SW

Contractor Discovery²
Type Job Long String
Hole Size 7 7/8 T.D. 3702
Csg. 5 1/2 Depth
Tbg. Size Depth
Tool Depth

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
cementer and helper to assist owner or contractor to do work as listed.

Charge To IA Operating

Cement Left in Csg. 42.42 Shoe Joint
Meas Line Displace 87.16

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 425 Qm DC 1/2" F10 500 Flush

150 qt Com 10% Salt 5# Oil

EQUIPMENT

Pumptrk	16	No.	Cementer	<u>Bill</u>
			Helper	
Bulktrk	14	No.	Driver	<u>NICK</u>
			Driver	
Bulktrk	21	No.	Driver	<u>JORDAN</u>
			Driver	<u>TIM</u>

Common 150
Poz. Mix 425 50 Qm DC
Gel.
Calcium

JOB SERVICES & REMARKS

Remarks:
Rat Hole 30
Mouse Hole 20
Centralizers
Baskets
D/V or Port Collar

Hulls
Salt 13
Flowseal 100#
Kol-Seal 750#
Mud CLR 48 500 gal
CFL-117 or CD110 CAF 38
Sand

pipe set @ 3705
Shoe Jt. 42.42
Insert 3662.58

Handling 596
Mileage

FLOAT EQUIPMENT

pump 500 gals Flush
Cemt w/ 375 Lite f/w 150 com

Guide Shoe
Centralizer - 6
Baskets - 3

pump plug w/ 87.16
Float did hold
Cemt did cure

AFU Inserts
Float Shoe
Latch Down - 1

TR: plex shoe - 1

Pumptrk Charge Prod String
Mileage 15

X Signature Tom Berer

Thanks
Tax
Discount
Total Charge

Scale 1:240 Imperial

Well Name: ZERFAS #30-2
Surface Location: SE SE NW SE Sec. 30 - 11S - 19W
Bottom Location:
API: 15-051-27042
License Number: 33335
Spud Date: 8/19/2022 Time: 2:15 PM
Region: ELLIS COUNTY
Drilling Completed: 8/26/2022 Time: 6:25 AM
Surface Coordinates: 1626' FSL & 1384' FEL
Bottom Hole Coordinates:
Ground Elevation: 2135.00ft
K.B. Elevation: 2143.00ft
Logged Interval: 3000.00ft To: 3703.00ft
Total Depth: 3703.00ft
Formation: LANSING; KANSAS CITY, ARBUCKLE
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: IA OPERATING, INC.
Address: 785 W COVELL RD
STE. 200
EDMOND, OK 73003-2389
Contact Geologist: JONATHAN ALLEN
Contact Phone Nbr: (316) 721-0036
Well Name: ZERFAS #30-2
Location: SE SE NW SE Sec. 30 - 11S - 19W
API: 15-051-27042
Pool: State: KANSAS Field: ZERFAS
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.468221
Latitude: 39.064031
N/S Co-ord: 1626' FSL
E/W Co-ord: 1384' FEL

LOGGED BY



Company: BIG CREEK CONSULTING, INC.
Address: 3504 DUNCAN ST
ST. JOE, MO 64507
Phone Nbr: (785) 259-3737
Logged By: GEOLOGIST Name: JEFF LAWLER

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 2
Rig Type: MUD ROTARY
Spud Date: 8/19/2022 Time: 2:15 PM
TD Date: 8/26/2022 Time: 6:25 AM
Rig Release: 8/27/2022 Time: 6:30 PM

ELEVATIONS

K.B. Elevation: 2143.00ft
K.B. to Ground: 8.00ft

Ground Elevation: 2135.00ft

NOTES


DUE TO RECOVERY ON DST #1 DECISION WAS MADE TO COMPLETE OPEN HOLE WITH 5 1/2" PRODUCTION CASING.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

FORMATION	P&A 12-2010								•				P&A 8-2003				x												
	MURFIN DRILLING CO								IA OPERATING, INC				MURFIN DRILLING CO				MURFIN DRILLING CO												
	ZERFAS #1								ZERFAS 30-1				ZERFAS #6				ZERFAS #7												
	NW NE SE 3-11-19								SE NE SE 30-11-19				NW SE SE 30-11-19				C S2 SW SE 30-11-19												
ZERFAS 330-2		GL		2135		KB		2125		KB		2138		KB		2140		KB		2139									
LOG TOPS		SAMPLE TOPS		LOG		LOG		SMPL.		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.			
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1496	647	1493	650	1477	648	648	- 1	+ 2	1487	651	- 4	- 1	1478	662	- 15	- 12	1490	649	- 2	+ 1								
BASE	1540	603	1538	605	1519	606	606	- 3	- 1	1525	613	- 10	- 8	1524	616	- 13	- 11	1548	591	+ 12	+ 14								
TOPEKA	3141	-998	3137	-994	3114	-989	-989	- 9	- 5	3127	-989	- 9	- 5	3128	-988	- 10	- 6	3141	-1002	+ 4	+ 8								
HEEBNER SHALE	3361	-1218	3359	-1216	3332	-1207	-1207	- 11	- 9	3347	-1209	- 9	- 7	3350	-1210	- 8	- 6	3367	-1228	+ 10	+ 12								
TORONTO	3381	-1238	3380	-1237	3351	-1226	-1226	- 12	- 11	3366	-1228	- 10	- 9	3368	-1228	- 10	- 9	3386	-1247	+ 9	+ 10								
LKC	3401	-1258	3398	-1255	3373	-1248	-1248	- 10	- 7	3387	-1249	- 9	- 6	3389	-1249	- 9	- 6	3408	-1269	+ 11	+ 14								
BKC	3621	-1478	3619	-1476	3594	-1469	-1469	- 9	- 7	3606	-1468	- 10	- 8	3608	-1468	- 10	- 8	3645	-1506	+ 28	+ 30								
CONGLOMERATE					3660	-1535	-1535																						
ARBUCKLE			3699	-1556	3680	-1555	-1555		- 1	3684	-1546		- 10	3688	-1548		- 8	3771	-1632		+ 76								
TOTAL DEPTH	3706	-1563	3703	-1560	3687	-1562	-1562	- 1	+ 2	3771	-1633	+ 70	+ 73	3694	-1554	- 9	- 6	3830	-1691	+ 128	+ 131								

DST #1 ARBUCKLE 3650' - 3703'

 <p>TRILOBITE TESTING, INC</p>	DRILL STEM TEST REPORT	
	IA Operating Inc 785 W Covell Road Suite 200 Edmond OK 73003+2389 ATTN: Jeff Lawler	30-11s-19w Ellis KS Zerfas #30-2 Job Ticket: 69801 DST#: 1 Test Start: 2022.08.26 @ 14:45:00

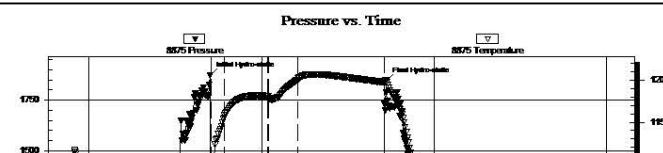
GENERAL INFORMATION:

Formation: Arbuckle	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Spencer J Staab
Time Tool Opened: 17:06:52	Unit No: 84
Time Test Ended: 00:01:21	
Interval: 3650.00 ft (KB) To 3703.00 ft (KB) (TVD)	Reference Elevations: 2143.00 ft (KB)
Total Depth: 3703.00 ft (KB) (TVD)	2135.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair	KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**

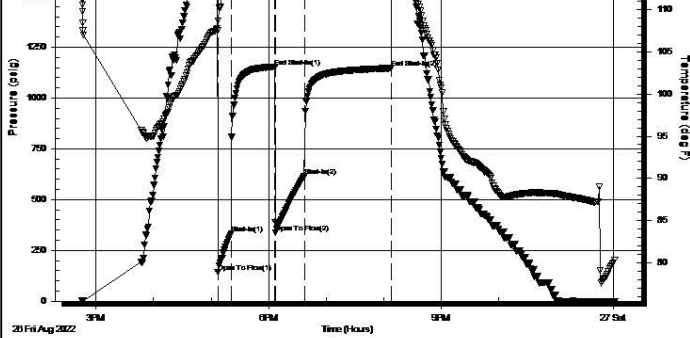
Press@RunDepth: 614.78 psig @ 3653.00 ft (KB)	Capacity: psig
Start Date: 2022.08.26	End Date: 2022.08.27
Start Time: 14:45:01	End Time: 00:01:21
	Last Calib.: 2022.08.27
	Time On Btm: 2022.08.26 @ 17:06:17
	Time Off Btm: 2022.08.26 @ 20:09:47

TEST COMMENT: 15-IF-BOB 2 mins Built to 66"
45-ISI-Weak Surface Blow
30-FF-BOB 2.5 mins Built to 100"
90-FSI-No Return



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.87	107.76	Initial Hydro-static
1	143.94	107.56	Open To Flow (1)



15	331.33	115.54	Shut-In(1)
61	1154.13	118.06	End Shut-In(1)
62	337.49	117.83	Open To Flow (2)
91	614.78	120.02	Shut-In(2)
182	1147.16	119.73	End Shut-In(2)
184	1844.84	119.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1580.00	GO 40%G 60%O	22.12
0.00	180 GIP 100%G	0.00

Gas Rates

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

Trilobite Testing, Inc

Ref. No: 69801

Printed: 2022.08.27 @ 00:11:27

ROCK TYPES

	Cht		Dolprim		shale, gry		shale, red
	Cht vari		Lmst fw7>		Carbon Sh		Ss
	Chtcongl		shale, grn		Shblk		

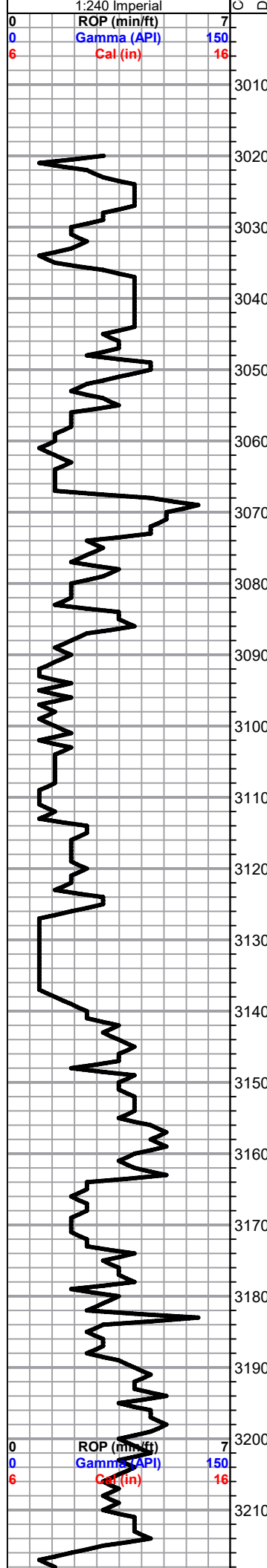
OTHER SYMBOLS

- MISC**
- Daily Report
 - Digital Photo
 - Document
 - Folder
 - Link
 - Vertical Log File
 - Horizontal Log File
 - Core Log File
 - Drill Cuttings Rpt

- DST**
- DST Int
 - DST alt

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)

Curve Track #1		Depth Intervals	DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
ROP (min/ft)							
Gamma (API)							
Cal (in)							



1' DRILL TIME THROUGH ANHYDRITE FROM 1470' - 1550'
1' DRILL TIME FROM 3020' - RTD
10' WET/DRY SAMPLES FROM 3070' - RTD

GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 3070' - RTD

8 5/8" SURFACE PIPE SET @ 221' SURVEY 3/4 deg.

ANHYDRITE TOP 1493' (+650) E-LOG 1496' (+647)
ANHYDRITE BASE 1538' (+605) E-LOG 1540' (+603)

Lm- Gray Buff, FXLN, high-energy w/ fsl frag, sctrd-dns XLN por, barren, sctrd mottling, sl trashy

Sh- Dark Gray, silty & calcareous

Lm- Cream Buff Gray, FXLN, fsl, most fractured w/ dns XLN & secondary reXLN por, few pcs Lt Gray VFXLN cherty Ls

Ss- Drk Gray Frosted, Vf-Fn Grn, shaley/chalky micaceous, trashy, barren

AA w/ influx of frosted Fn Grn, consolidated & mod. sorted, sub-rounded, hvy micaceous

Sh- Gray Green White, calcareous, semi-argillaceous wash

Sh- A/A w/ Brown Maroon, waxy & dns, argillaceous clumps

TOPEKA 3137' (-994) E-LOG 3141' (-998) Lm- Cream Off White, FXLN, hvy fsl, sctrd XLN & clear replacement cementation, barren

Lm- Tan Buff, VFXLN, dns cherty Ls w/ sctrd XLN por, tight

Lm- Gray, FXLN, hvy fsl w/ fragments, dns XLN por, sl trashy

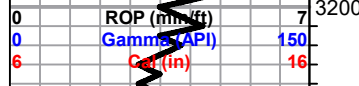
Lm- Cream, FXLN, oolitic, hvy XLN & sctrd vry fn ppt por, 2-3 PCS W/ WK TR STN, NSFO, NO ODR, TR OILY SHEEN UPON CRUSH

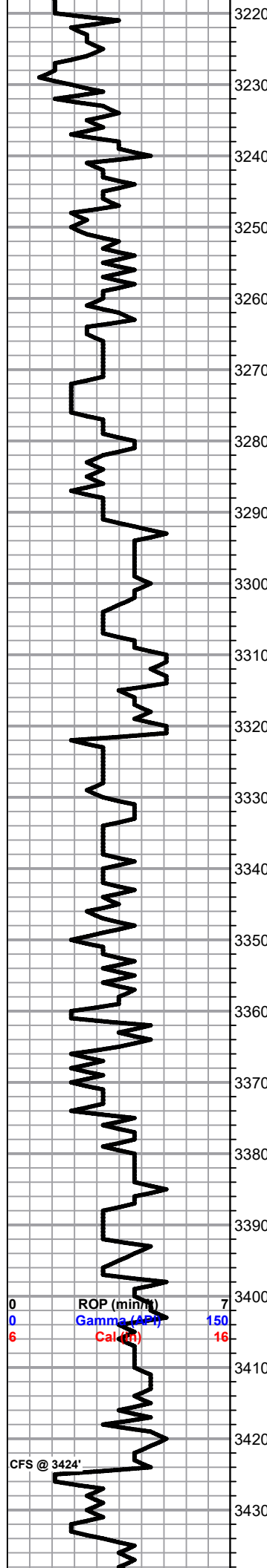
Sh- Black, waxy & dense

Lm- Cream, VF-FXLN, well cemented, tight w/ sctrd micro XLN por

Lm- Buff, FXLN, sl fsl, dns, some sl chalky in part, barren

Lm- Cream Tan, FXLN, hvy fsl, dns XLN por, some soft white chalk





ROP (min) 7
 Gamma (API) 150
 Cal (ft) 16

CFS @ 3424'

Lm- Buff, VFXLN, dns, well cemented, tight w/ sctrd micro XLN por, hvy mottled

Dol- Cream, FXLN, dns, well cemented, dns micro XLN throughout, mottled, barren

Sh- Black Gray White, fissile & carbonaceous, calcareous, gummy white clay

Lm- Cream Tan, VFXLN, dns tight cherty Ls w/o vis. por

Lm- Off White, FXLN, fsl & sl oolitic, dns XLN & sctrd vry fn ppt por, barren

Sh- Gray Green White, calcareous, sl waxy, gummy chalk

Lm- Off White, FXLN, sl fsl, loosely cemented, dns XLN por, chalky

Sh- Gray Black Maroon, calcareous, semi-waxy & carbonaceous

Lm- Cream Off White, VF-FXLN, dns, well cemented cherty Ls, sctrd XLN por, barren

Lm- Cream, FXLN, hvy fsl, sl trashy, dns XLN por, barren, dns mottling

Lm- Cream, FXLN, fsl & oolitic, dns XLN & sctrd secondary reXLN por, some sctrd clear replacement cementation, barren

Lm- Cream, FXLN, fsl, dns XLN por, some sl chalky in part, hvy mottled, barren

A/A

HEEBNER 3359' (-1216) E-LOG 3361' (-1218) Sh- Black Maroon Gray, fissile & carbonaceous, earthy

TORONTO 3380' (-1237) E-LOG 3381' (-1238) Lm- Cream, FXLN, fsl, sctrd-dns XLN por, vry clean, barren

Sh- Gray Green, sl sandy, some calcareous

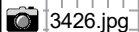
LKC 3398' (-1255) E-LOG 3401' (-1258) Lm- Off White Tan, VF-FXLN, dns tight cherty Ls, mostly tight w/ sctrd XLN por, vry clean & barren

Lm- Buff Gray, VFXLN, well cemented, grainy, sl dolomitic Ls w/ min. vis. por, barren

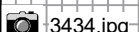
Lm- Gray, FXLN, trashy w/ fsl fragments, sctrd XLN, shaley in part, poor vis. por., barren

Lm- Cream, VF-FXLN, dns, well cemented cherty Ls w/ tr XLN to dns XLN & sctrd vry fn ppt por, SCTRD DRK STN, TR FO, TR ODR

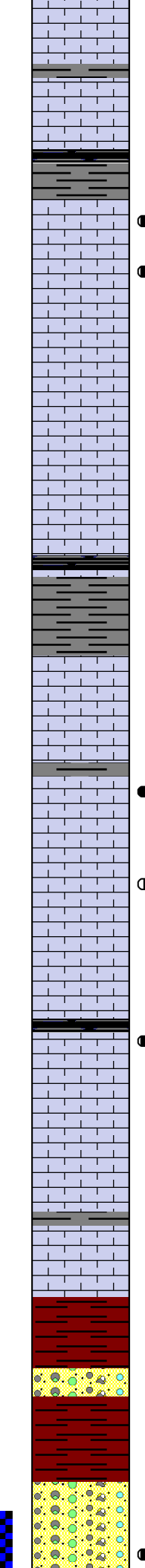
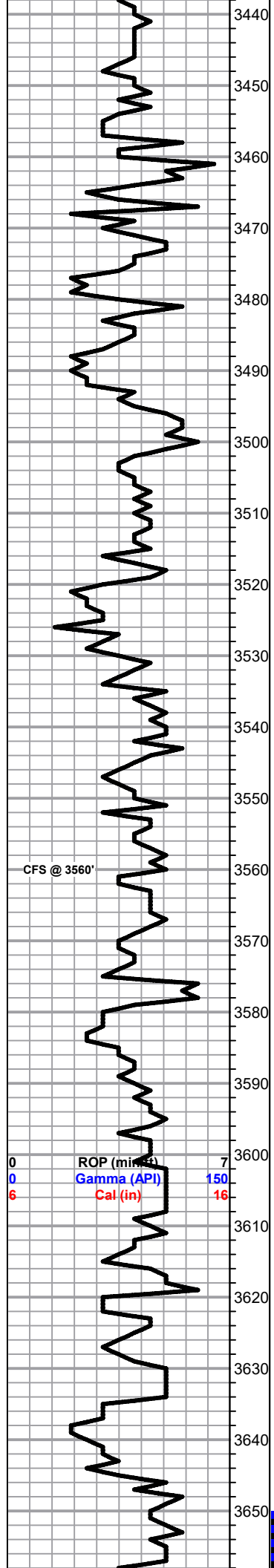
Lm- Cream, FXLN, fsl & sl oolitic, dns XLN & sctrd fn ppt interoolite por, TR WK STN, NSFO, TR ODR



3426.jpg



3434.jpg



Lm- Cream Off White, FXLN, fsl, sctrd-dns XLN & vry fn ppt por, mostly clean & barren

Lm- Cream, VFXLN, well cemented, fsl & sl oolitic, dns vry fn ppt por, sctrd secondary reXLN, SCTRD DRK STN, NSFO, FR ODR

Lm- Off White, F-MXLN, oolitic w/ mostly consistent fn ppt por, SCTRD LT STN, NSFO, FR ODR

Lm/Chert- Off White, Crypto-VFXLN, tight oolitic mix of cherty Ls & fresh bedded vitreous cherty, w/o to min vis. por, barren

Lm- Cream Buff, VF-FXLN, dns, well cemented, sctrd XLN por, barren

Sh- Black Gray Maroon, fissile & carbonaceous, waxy, earthy

Lm- Cream Buff, VF-FXLN, sl fsl, mostly tight w/ sctrd XLN por, barren, some chalky in part

A/A w/ few pcs of fsl vitreous fresh bedded chert

Lm- Cream, F-MEDXLN, fsl & oolitic, mix of mod. dev. w/ dns XLN & sctrd fn ppt interoolite por & well cemented, dns vry fn ppt por throughout, SCTRD DRK STN, OILY SHEEN, NSFO, FR ODR

Lm- Cream Tan, VF-FXLN, dns, well cemented, mostly tight w/ sctrd XLN por, barren, several pcs of cherty Ls w/ min. vis. por

Lm- Cream, FXLN, fsl & oolitic, dns XLN & sctrd vry fn ppt por, SCTRD DRK STN, OILY SHEEN, NOSFO, WK ODR

Lm- Cream, VFXLN, dns & well cemented cherty Ls w/ sctrd XLN por, barren

Sh- Black Gray Green, fissile & carbonaceous, waxy, calcareous

Lm- Cream Semi-Translucent, FXLN, oolitic/oomoldic, dns XLN & sctrd vuggy por, DRK SCTRD STN, TR FO, FR ODR

Lm- Cream Off White, FXLN, sl fsl & oolitic, sctrd-dns XLN por, barren

A/A & some chalky in part & loosely cemented, barren

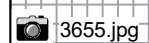
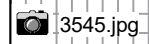
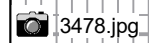
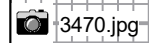
Lm- Cream, FXLN, fsl & sl oolitic, dns XLN por, barren, small chlorite inclusions

Lm- Cream Off White, FXLN, fsl & oolitic, sctrd-dns XLN por, some sl chalky in part, barren

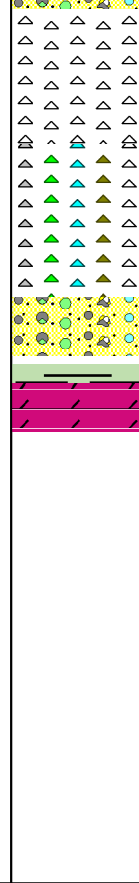
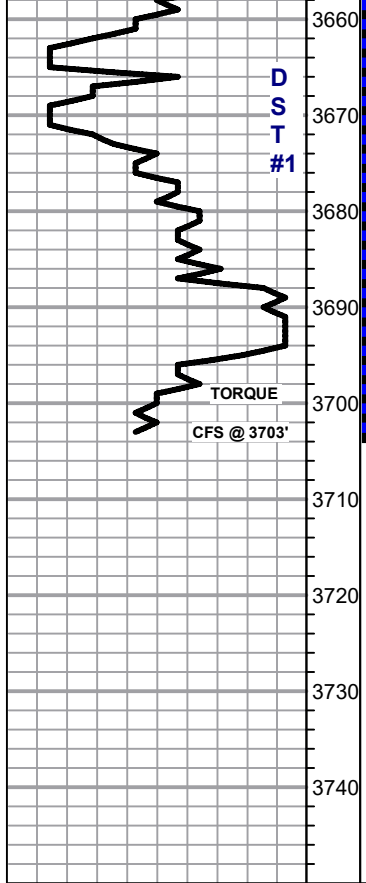
BKC 3619' (-1476) E-LOG 3621' (-1478) Sh- Maroon Gray, waxy

Cherty Conglomerate- Maroon Tan Milky White, mix of fresh bedded, sl fsl, cryptoXLN fresh bedded & conglomerate chert

Chert- Salmon White, detrital bedded chert, min. vis. to sctrd microXLN por, SCTRD DRK STN, NSFO, NO ODR, NO FLOR, some sl dolomitic chert



DRK STN, NSFO, NO ODR, NO FLOR., some srt dolomitic chert



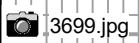
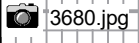
Chert- Tan Translucent, vitreous fresh bedded cryptoXLN, barren

● Chert/Shale- White, massive dolomitic chert, some w/ sctrd dns micro XLN por, SCTRD TO SAT DRK STN, NSFO, TR ODR, dns waxy shales

ARBUCKLE 3699' (-1556) E-LOG Dol/Shale- White Frosted, Med-CrsXLN, sucrosic, loosely cemented, consistent ppt por, few w/ rounded fn grn qtz inclusions, SPECKLED BLK DO STN, SCTRD TO SUB-SAT BRWN STN, TR FO, FR ODR, Sh- Mint Green, waxy, sandy

3703' 40"- Dol- Cream, F-MedXLN, limey dolomite, consistent XLN & sctrd vry fn-fn ppt por, SCTRD LT STN, NSFO, FR ODR

RTD 3703' LTD 3706' (-1563) @ 06:25 8/26/2022



SHORT TRIP SURVEY 3/4 deg. STRAP +1.28'

DST #1
ARBUCKLE
3650' - 3703'
15-45-30-90

180' GIP
1580' GSY OIL
(40% G, 60% O)
Gr: 27

IFP: 143-331#
FFP: 337-614#
SIP: 1154-1147#
BHT: 119 deg.



3434.jpg

A002 1280x1024 2022/08/25 12:30:40



3434'

3470.jpg

A003 1280x1024 2022/08/25 15:11:31



3470'

3478.jpg



3478

3545.jpg

A005 1280x1024 2022/08/25 19:10:14



3545







QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 3106

Date	8-18-22	Sec.	30	Twp.	11	Range	19	County	Ellis	State	KS	On Location		Finish	7:30 PM
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--	--------	---------

Location *Yocemento 3/2 to Homestead Rd*

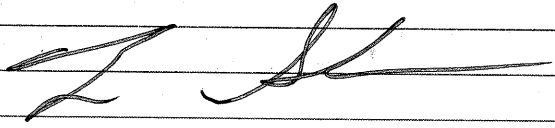
Lease	<i>Zerfus</i>	Well No	<i>30-2</i>	Owner	<i>2W NIN</i>
Contractor	<i>Discovery #2</i>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	<i>SURFACE</i>	Charge To <i>I.A. Operating</i>			
Hole Size	<i>12 1/4</i>	T.D.	<i>221</i>	Street	
Csg.	<i>88</i>	Depth		City	State
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	<i>150M 20/20 3-2</i>
Cement Left in Csg.	<i>15</i>	Shoe Joint			
Meas Line		Displace	<i>13.6 bbls</i>		

EQUIPMENT

Pumptrk	<i>17</i>	No.	Cementer <i>Bill</i>	Common	<i>120</i>
			Helper	Poz. Mix	<i>30</i>
Bulktrk		No.	Driver <i>JORDAN</i>	Gel.	<i>3</i>
			Driver	Calcium	<i>6</i>
Bulktrk	<i>21</i>	No.	Driver <i>ROSS</i>		
			Driver		

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<i>S Jt 8 1/2 e 221</i>	Sand
<i>Cent w 150M</i>	Handling <i>159</i>
<i>pump plug w 13.6 bbls</i>	Mileage
<i>Cent did circ</i>	
	FLOAT EQUIPMENT
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	Pumptrk Charge <i>Surface</i>
	Mileage <i>15</i>

X
Signature 

Thanks

Tax	
Discount	
Total Charge	



DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

785 W Covell Road Suite 200
Edmond OK 73003+2389

ATTN: Jeff Lawler

Zerfas #30-2

30-11s-19w Ellis,KS

Start Date: 2022.08.26 @ 14:45:00

End Date: 2022.08.27 @ 00:01:21

Job Ticket #: 69801 DST #: 1

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

Printed: 2022.08.29 @ 11:29:27



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

IA Operating Inc
 785 W Covell Road Suite 200
 Edmond OK 73003+2389
 ATTN: Jeff Lawler

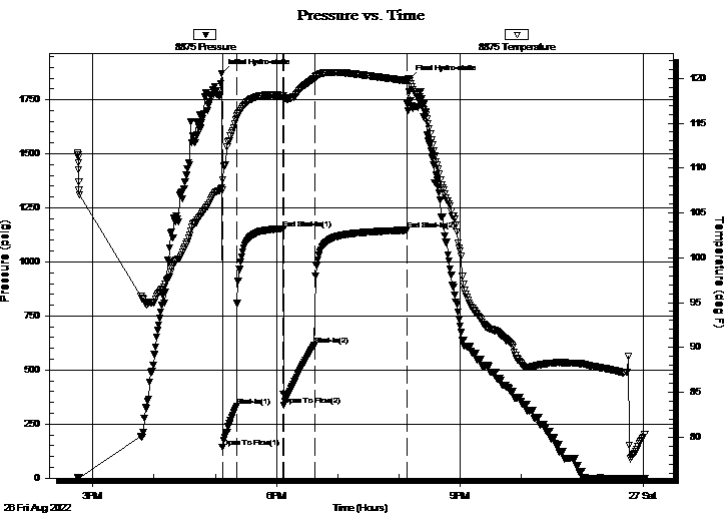
30-11s-19w Ellis,KS
Zerfas #30-2
 Job Ticket: 69801 **DST#: 1**
 Test Start: 2022.08.26 @ 14:45:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:06:52
 Time Test Ended: 00:01:21
 Interval: **3650.00 ft (KB) To 3703.00 ft (KB) (TVD)**
 Total Depth: 3703.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Spencer J Staab
 Unit No: 84
 Reference Elevations: 2143.00 ft (KB)
 2135.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8875 Inside
 Press@RunDepth: 614.78 psig @ 3653.00 ft (KB) Capacity: psig
 Start Date: 2022.08.26 End Date: 2022.08.27 Last Calib.: 2022.08.27
 Start Time: 14:45:01 End Time: 00:01:21 Time On Btm: 2022.08.26 @ 17:06:17
 Time Off Btm: 2022.08.26 @ 20:09:47

TEST COMMENT: 15-IF-BOB 2 mins Built to 66"
 45-ISI-Weak Surface Blow
 30-FF-BOB 2.5 mins Built to 100"
 90-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.87	107.76	Initial Hydro-static
1	143.94	107.56	Open To Flow (1)
15	331.33	115.54	Shut-In(1)
61	1154.13	118.06	End Shut-In(1)
62	337.49	117.83	Open To Flow (2)
91	614.78	120.02	Shut-In(2)
182	1147.16	119.73	End Shut-In(2)
184	1844.84	119.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1580.00	GO 40%G 60%O	22.12
0.00	180 GIP 100%G	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc
785 W Covell Road Suite 200
Edmond OK 73003+2389
ATTN: Jeff Lawler

30-11s-19w Ellis,KS
Zerfas #30-2
Job Ticket: 69801 **DST#: 1**
Test Start: 2022.08.26 @ 14:45:00

Tool Information

Drill Pipe:	Length: 3599.00 ft	Diameter: 3.82 inches	Volume: 51.02 bbl	Tool Weight:	2500.00 daN
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 daN
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	71000.00 daN
		Total Volume: - bbl		Tool Chased	ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	46000.00 daN
Depth to Top Packer:	3650.00 ft			Final	52000.00 daN
Depth to Bottom Packer:	ft				
Interval between Packers:	53.00 ft				
Tool Length:	85.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3619.00	
Shut In Tool	5.00			3624.00	
Hydraulic tool	5.00			3629.00	
Jars	5.00			3634.00	
Gap Sub	4.00			3638.00	
Safety Joint	3.00			3641.00	
Packer	5.00			3646.00	32.00 Bottom Of Top Packer
Packer	4.00			3650.00	
Stubb	1.00			3651.00	
Perforations	1.00			3652.00	
Change Over Sub	1.00			3653.00	
Recorder	0.00	6838	Inside	3653.00	
Recorder	0.00	8875	Inside	3653.00	
Drill Pipe	32.00			3685.00	
Change Over Sub	1.00			3686.00	
Perforations	14.00			3700.00	
Bullnose	3.00			3703.00	53.00 Bottom Packers & Anchor
Total Tool Length:	85.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc
785 W Covell Road Suite 200
Edmond OK 73003+2389
ATTN: Jeff Lawler

30-11s-19w Ellis,KS
Zerfas #30-2
Job Ticket: 69801 **DST#: 1**
Test Start: 2022.08.26 @ 14:45:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 27 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5300.00 ppm		
Filter Cake: inches		

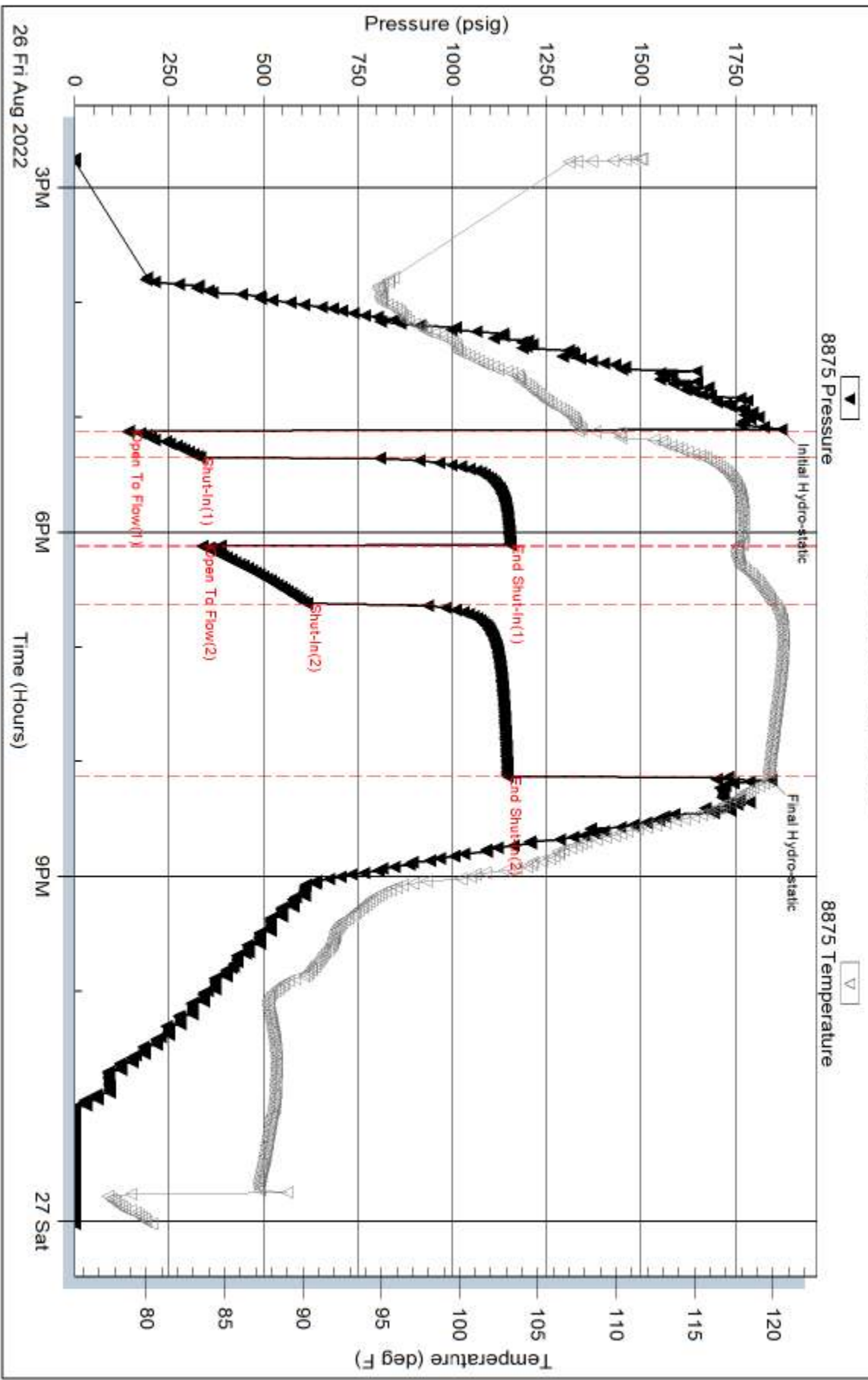
Recovery Information

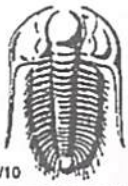
Recovery Table

Length ft	Description	Volume bbl
1580.00	GO 40%G 60%O	22.119
0.00	180 GIP 100%G	0.000

Total Length: 1580.00 ft Total Volume: 22.119 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 1#LCM

Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69801**

Well Name & No. Zorfas # 30-2 Test No. 1 Date 08/26/2022
 Company JA Operating Inc Elevation 2143' KB 2135' GL
 Address 785 W. Covell Road Suite 200 Edmond OK 73003-2389
 Co. Rep / Geo. Jeff Lawler Rig Discovery #2
 Location: Sec. 30 Twp 11S Rge. 19W Co. Ellis State OK

Interval Tested 3650' - 3703' Zone Tested Arbuckle
 Anchor Length 53' Drill Pipe Run 3599' Mud Wt. 9.2
 Top Packer Depth 3645' Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3650' Wt. Pipe Run - WL 6.0
 Total Depth 3703' Chlorides 5300 ppm System LCM #

Blow Description 77- BOB 2 mins; Built to 66"
78- Weak Surface Blow
79- BOB 2 mins; Built to 100"
7SD - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1580'</u>	<u>GO</u>	<u>40%</u>	<u>60%</u>		
	<u>180' GTP</u>	<u>100%</u>			
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud

Rec Total 1580' BHT 119° Gravity 27° API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic <u>1871</u>	<input checked="" type="checkbox"/> Test <u>1800</u>	T-On Location <u>10:10</u>
(B) First Initial Flow <u>143</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>14:45</u>
(C) First Final Flow <u>331</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>17:02</u>
(D) Initial Shut-In <u>1154</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>20:02</u>
(E) Second Initial Flow <u>337</u>	<input checked="" type="checkbox"/> Hourly Standby <u>4</u> 3h 300	T-Out <u>23:58</u>
(F) Second Final Flow <u>614</u>	<input checked="" type="checkbox"/> Mileage <u>4427</u> 66	Comments
(G) Final Shut-In <u>1147</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1844</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool <u>-350</u>
Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>-350</u>
	<input type="checkbox"/> Accessibility	Total <u>2116</u>
	Sub Total <u>2466</u>	MP/DST Disc't

Approved By _____ Our Representative Spencer J. Jacobs Thanks
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the 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.

785-259-6793