KOLAR Document ID: 1487671

Confident	tiality 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 -	DESCRIPT	FII &	
VVELL	HISIONI -	DESCRIPT		LEASE

OPERATOR: License #	API No.:
Name:	Spot Description:
Address 1:	
Address 2:	Feet from Dorth / South Line of Section
City: State: Zip:+	Feet from East / West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
	Producing Formation:
	Elevation: Ground: Kelly Bushing:
	Total Vertical Depth: Plug Back Total Depth:
	Amount of Surface Pipe Set and Cemented at: Feet
CM (Coal Bed Methane) Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used?
	If yes, show depth set: Feet
If Workover/Re-entry: Old Well Info as follows:	
Operator:	If Alternate II completion, cement circulated from:
Well Name:	feet depth to:w/sx cmt.
Original Comp. Date: Original Total Depth:	
Deepening Re-perf. Conv. to EOR Conv. to SWD	Drilling Fluid Management Plan
Plug Back Liner Conv. to GSW Conv. to Producer	(Data must be collected from the Reserve Pit)
Commingled Permit #:	Chloride content: ppm Fluid volume: bbls
Dual Completion Permit #:	Dewatering method used:
SWD Permit #:	Location of fluid disposal if hauled offsite:
EOR Permit #:	
GSW Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	Quarter Sec Twp S. R East West
Recompletion Date Recompletion Date	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:					

KOLAR Document ID: 1487671

Operator Name:	Lease Name: Well #:
Sec TwpS. R East 🗌 West	County:

Page Two

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 (Attach Additional Sh	acate)	Y	′es 🗌 No			og Formatio	n (Top), Depth a	and Datum	Sample
Samples Sent to Geolo			⁄es 🗌 No	1	Name	Э		Тор	Datum
Cores Taken Electric Log Run Geologist Report / Mud List All E. Logs Run:		□ Y □ Y	Yes ☐ No Yes ☐ No Yes ☐ No						
		Rep	CASING ort all strings set-c] Ne	w Used rmediate, productio	on. etc.		
Purpose of String	Size Hole Drilled	Siz	ze Casing et (In O.D.)	Weight Lbs. / Ft.		Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
[ADDITIONAL	CEMENTING /	SQU	EEZE RECORD			
Purpose:	Depth Top Bottom	Туре	Type of Cement #		# Sacks Used		Type and Percent Additives		
Protect Casing Plug Back TD Plug Off Zone									
 Did you perform a hydra Does the volume of the Was the hydraulic fracture 	total base fluid of the	hydraulic fr	acturing treatment		-	☐ Yes ns? ☐ Yes ☐ Yes	No (If No, s	kip questions 2 ar kip question 3) ill out Page Three	
Date of first Production/Inj Injection:	jection or Resumed Pr	oduction/	Producing Meth	iod:		Gas Lift 🗌 O	ther <i>(Explain)</i>		
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wate	er Bb	ls.	Gas-Oil Ratio	Gravity
DISPOSITIO	N OF GAS:		Ν	IETHOD OF COM	DD OF COMPLETION: PRODUCTION INT			DN INTERVAL: Bottom	
Vented Sold (If vented, Subn	Used on Lease		Open Hole		-	·	nit ACO-4)	Тор	Bollom
		Bridge Plug Set At		Acid,		ementing Squeezend of Material Used)			
TUBING RECORD:	Size:	Set At:		Packer At:					

Form	ACO1 - Well Completion
Operator	Jolen Operating Company
Well Name	CARTER 1-6
Doc ID	1487671

All Electric Logs Run

Dual Induction
Compensated Neutron-Density
Sonic
Micro

Form	ACO1 - Well Completion
Operator	Jolen Operating Company
Well Name	CARTER 1-6
Doc ID	1487671

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	17.5	13.375	48	242	Class A		2% Calcuim Chloride, 1/4# Celloflake
Conductor	30	20	52	62	Grout	6	n/a



SM	PAGE	CUST NO	YARD #	INVOICE DATE
ES	1 of 1	1002098	1718	09/20/2019
6.5		INVOICE	NUMBER	
		930	5240 <mark>0 E</mark>	CEIVED
(620) 672-1201	J LEASE		TER #1-6	SEP 26 2019
OMPANY E STE 2460	B LOCATI B COUNTY S STATE		RK	

JOB DESCRIPTION Cement-New Well Casing/Pi

B JOLEN OPERATING COMPANY 1 100 N BROADWAY AVE STE 2460 C OKLANOMA CITY

- COKLAHOMA CITY
- OK US 73102
- O ATTN:

Pratt

ACCOUNTS PAYABLE

JOB #	EQUIPMENT #	PURCHASE	ORDER NO.		TERMS	DUE DATE
41190642					Net - 30 days	10/20/2019
	I	1	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Date	s: 09/19/2019 to	09/19/2019		* *		
0041190642						
171819667L Cerr CEMENT SURFAC	nent-New Well Casing, E CASING	Pi 09/19/2019				
Class A Cement			300.00	SK	16.12	4,836.00 T
Celloflake			76.00		2.08	
Calcium Chloride			564.00		0.52	
Light Vehicle Mile	age		80.00		2.60	
Heavy Equipment		=	160.00		4.16	
Depth Charge, 0'-	1000'		1.00	HR	624.00	
	& Mixing Service Cha	rge	1.00	SK	219.00	219.00
Service Supervisor	r Charge		1.00	EA	75.00	75.00
Driver Charge			1.00	EA	35.00	35.00
		r				
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dan kasalan si ka sa si						
PLEASE REMIT	TO: SE	END OTHER CORRES	PONDENCE TO	D:		9
BASIC ENERGY	SERVICES.LP BA	SIC ENERGY SERV	TCES LP		SUB TOTAL	7,113.96
PO BOX 841903	80	1 CHERRY ST, ST	E 2100		TAX	343.68
DALLAS,TX 752	84-1903 FC	ORT WORTH, TX 76	102	INV	DICE TOTAL	7,457.64

1

Т

E JOB CONTACT





1700 S. Country Estates Raod Liberal, KS 67901 PH (620)-624-2277FAX (620) 624-2280

SERVICE ORDER - 1718 19667 L

	TTL MHR61	Date: 9/19/2019
Well Name:		Location:
Carter #1-6		6,33,23
County - State:		RRC#:
Clark, Ks		14414-13,5
Type Of Service:		Customer's Order #:
Z42 - Cement Surface Casing	1002098	

Customer: Jolen Operating

Address:	100 nº Broad allahoma G	to DK 7	Ste 2460 7102
above named Custo	mer agrees to pay Basic Energy Services In ac	ord with the rates and terms st	ated in Basic Energy Services current price lists,

1

As a consideration, the above named Customer agrees to pay Basic Energy Services In accord with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of invoice. Upon Customer's default in payment of Customers account by such data. Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to emptoy an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and altorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.

Basic Energy Services., warrants only tille to the products, supplies and materials and that the same are free from defects in workmanship. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMBEDIATELY PRECEDING SENTENCE. Basic Energy Services, liability and Customer's exclusive remedy in any cause of action (whether in contract, tot, product liability, breach of warranty or otherwise) and any products, supplies or materials or , at Basic Energy Services, option, to the allowance to the Customer of credit for the cost of such items. In no event shall Basic Energy Services be liable for special, indirect, puntive or consequential damages.

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
BC100	300	SK	Class A Cement	31.00	9300.00
CC102	76	LB	Celloflake	4.00	304.00
CC109	564	LB	Calcium Chloride	1.00	564.00
ME101	80	MI	Light Vehicle Mileage	5.00	400.00
ME102	160	MI	Heavy Equipment Mileage	8.00	1280.00
CC1	1	HR	Depth Charge, 0'-1000'	1200.00	1200.00
CE240	300	SK	Blending & Mixing Service Charge	1.40	420.00
BE143	1	Ea	Supervisor	75.00	75.00
BE144	1	Ea	Driver	35.00	35.00
				,	
					~~~~~
. 1					
					· '.
				Book Total:	\$13,578.00
				Taxes:	
				Disc. Price:	\$7,113.96

\$7,113.96 

YES

PUMP TRUCK NUMBER:

38117, 19919

THIS JOB WAS SATISFACTORILY COMPLETED OPERATION OF EQUIPMENT WAS SATISFACTORY PERFORMANCE OF PERSONEL WAS SATISFACTORY

DRIVER: Je Ja ton Ŀ C 0 20 n

× Klaur Butin CUSTOMER OR HIS AGENT

BASIC ENERGY SERVICES

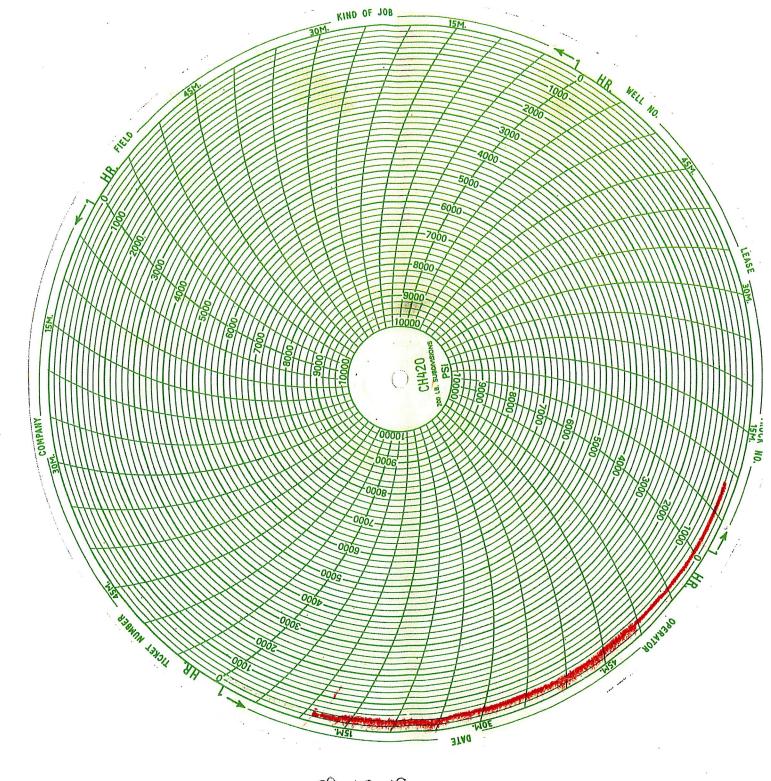
**Customer Comments or Concerns:** 

TO



#### Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRE	SSURE	E PUMP	INC	3	Job Log									
Customer	J	olen Operating	3		Cement Pump No.:	38117, 199	19 13.5Hrs.	Operator TRK No.:	96816	6				
Address					Ticket #:	1718 1	9667 L	Bulk TRK No.:	33708, 73768 Jay					
City, State, Zip:					Job Type:		Z42 - Ce	ment Surface						
Service District	17	18 - Liberal, K	s.		Well Type:			OIL	OIL					
Nell Name and No.:		Carter #1-6	S		Well Location:	6,33,23	County:	Clark	State:	Ks				
Туре	of Cmt	Sacks			Additives			Truck Loa	aded On					
Clas	ss A	300		2% Ca	Icium Chloride, 1/4	# Celloflake	33708, 7	3768 Jay	Front	Back				
									Front	Back				
									Front	Back				
Lead	/Tail:	Weight #1 Gal.	Cu/F	t/sk	Water Red	quirements	CU. FT.	Man I	Hours / Personr	nel				
Ta	il:	15.6	1.	2	5.	23	360	TT Man Hours:	61					
								# of Men on Job:	3					
Time		Volume	Pur	nps	Press	sure(PSI)	D	escription of Oper	ation and Materials					
(am/pm)	(BPM)	(BBLS)	Т	С	Tubing	Casing				n an				
17:45							ON L	OCATION & S	AFETY MEETIN	NG				
19:00								RIG	UP					
6:20 AM								<b>RIG TO CIP</b>	RCULATE					
6:55 AM								RIG TO	O PT					
6:58 AM							PF	RESSURE TES	ST TO 1300PSI					
7:00 AM	5	64.1 slurry				130	PUMP 300SX TAIL @ 15.							
7:25	3.1	10				120	DISPLACE							
	5	20				140								
	5	30				150								
7:36	5	35				160		SHUTDOWN	/ CLOSE IN					
0	477.4701	D 1							Current					
Size Hole	17 1/2"	Depth	050	001	N		TYPE		Swage					
Size & Wt. Csg.	13 3/8" 48#	Depth	252.	38	New / Used		Packer		Depth					
Shoe Amount	20'	Depth					Retainer Perfs		Depth CIBP					
	20	Туре				Basic Represe			Daniel Beck					
Customer Ci-	naturo: 6 (	Cand pe	2/			Basic Represe Basic Signatur		Danio		2				
Customer Sig		Sand Bl	an	-		CHEMICAL STREET, STREE			x the	<u> </u>				
						Date of Service	e:	9/19/2019	12.1. A1.1.					



09-19-19 Jolen Operating Carter 1-6 Clark, KS Cement Surface



		PAGE	CI	UST NO	>	YARD #	INVOICE DATE		
B) BASIL	1	of 1	1(	00209	в	1718	10/07/2019		
ENERGY SERVICES				INV	OICE	NUMBER			
					9306	62215			
Pratt(620) 672-1201BJOLEN OPERATING COMPANY100 N BROADWAY AVE STE 2460OKLAHOMA CITYOK US73102O ATTN:ACCOUNTS PAYABLE	J O B I T E	LEASE LOCATI COUNTY STATE JOB DE JOB CO	ON SCRIF	TER #1-6 RK ent-New We					
JOB # EQUIPMENT # PURC	CHASE	ORDER	NO.			TERMS	DUE DATE		
41192107					Net	- 30 days	11/06/2019		
		QTY		U of	UNI	T PRICE	INVOICE AMOUNT		
<i>For Service Dates: 10/05/2019 to 10/05/2019</i>			<u>×</u>	м					
171818150A Cement-New Well Casing/Pi 10/05/2019 PLUG TO ABANDON 60/40 Poz Cement Gel Light Vehicle Mileage Heavy Equipment Mileage Depth Charge, 0'-1000' Blending & Mixing Service Charge Service Supervisor Charge Driver Charge		3	28.00 80.00 60.00 1.00 1.00 1.00	SK LB MI HR SK EA EA		14.04 0.21 2.60 4.11 624.00 138.33 75.00 35.00	6     85.28       0     208.00       6     665.60       0     624.00       2     138.32       0     75.00		
						ECE OCT 1 By	1 W E 2019		
PLEASE REMIT TO: SEND OTHER C	CORRES	SPONDEN	CE TO	:	SIIR	TOTAL	4,568.80		
BASIC ENERGY SERVICES,LP BASIC ENERGY PO BOX 841903 801 CHERRY S DALLAS,TX 75284-1903 FORT WORTH,	ST, ST	TE 2100	2	INV		TAX TOTAL	4,388.80 178.94 4,747.74		

			EIS	ELD SERVICI		KET	
5M 10244 NE Hwy. 61							
BASIC ^M 10244 NE Hwy. 01 P.O. Box 8613 Pratt, Kansas 67124			1/	18 18	TOI	UA	
ENERGY SERVICES Phone 620-672-1201							
PRESSURE PUMPING & WIRELINE TMH-	A DESCRIPTION OF A DESC	alah Milan Kabupatén Kab	DATE	TICKET NO		ter specific office The specific office	
DATE OF JOB - 5 - 2019 DISTRICT	NEW C WELL	VELL F		WDW		STOMER DER NO.:	anna Is such
CUSTOMER JOLEN OPERATING	LEASE C	AR	TER			WELL NO/-	6
ADDRESS	COUNTY (	CA	RK	STATE	Ks	apenerikakan Geografia	
CITY STATE	SERVICE CR	EW LC	= 5 LEY, 1.	McGRAWS	R.1	4.)	do 10 epairi
AUTHORIZED BY	JOB TYPE:	242	Pi	TA	ला समिति हर इन्हें आहे	en andre ander en en Natione une der son	
EQUIPMENT# HRS EQUIPMENT# HRS EQU	UIPMENT#	HRS	TRUCK CAL	LED 10-5-	DATE	AM TIM	E
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1991e0/21010 2			FINISH OPE	RATION	The s	AM O: 3	30
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	and general of	and the	MILES FROM	A STATION TO V	NELL	and the second	
CONTRACT CONDITIONS: (This contract must be signe The undersigned is authorized to execute this contract as an agent of the customer. A products, and/or supplies includes all of and only those terms and conditions appearing or become a part of this contract without the written consent of an officer of Basic Energy So	As such, the unders the front and back	igned agree of this do	ees and acknow cument. No addi IGNED:	ledges that this con	terms ar	nd/or conditions	shall
		UNIT	QUANTITY	UNIT PRICE		\$ AMOUN	
ITEM/PRICE REF. NO. MATERIAL, EQUIPMENT AND SERVICES US		CIVIT	QUANTIT			5 ANOON	
BCIDA GOIGD POC		IR	270			2,130	N
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and the strength and the second se				SUB TO	TAL	Dia	$\alpha$
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				Jul	J	7,568	$ _{\alpha}$
SERVICE THE ABOVE MATI	ERIAL AND SER	VICE	XA	17/-1	ingen (†		
REPRESENTATIVE AUG JESKE ORDERED BY CU		RECEIVE	1000103	TOR CONTRACTO	RORA	AGENT)	
FIELD SERVICE ORDER NO.							
CLOUD LITHO - Abilene, TX							

1

## **FIELD SERVICE TICKET** 1718 18150 A



#### 10244 NE Hwy. 61 P.O. Box 8613 Pratt, Kansas 67124 Phone 620-672-1201

			1. J. P.	Hit D	2		DATE TICKET NO				
DATE OF JOB	k170	DISTRICT			NEW OLD PROD INJ WDW CUSTOMER WELL WELL						
CUSTOMER	CAF	C PERPITIAL	9		LEASE CARTER WELL NO/ 6						
ADDRESS		ter da de		COUNTY	"CA	STATE KS					
CITY	STATE			SERVICE CR	EW L	Ster, Ale Genn (R.H.)					
AUTHORIZED BY					JOB TYPE: 242 PTA						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQL	JIPMENT#	HRS	TRUCK CALLED				
17903/12/177	- Angel						ARRIVED AT JOB				
1910121010	0						START OPERATION				
11 Kit / A Kork	<u>An</u>	to prove the first for the first for the	· A J. educat	in fige	the second s	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	FINISH OPERATION				
		an a					RELEASED				
and the second							MILES FROM STATION TO WELL				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered). The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP. SIGNED:

Call States			(WELL OWN	ER, OPERATOR, CONT	RACIOR OR AGENI)
ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
PITTA	10/40/22	SK	140	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	5-130 18
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SF 101	CHANT WE HILLE MILLEAGE	1 /22	80		deste
115 102	HEAVINE GUTTMENT MILLAGE	ATT.	160		1,28000
CC 1	TEPTHEMARGE ( 1100	HR	1		1,2000
CE 240	FLENDALG CHARGE	SK	10		aldows
RE 14/3	TRUCE GREAVER	EP	1		7500
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	· · · · · · · · · · · · · · · · · · ·			TOTAL	4510 2
				JUS	アンの運
SERVICE REPRESENTATI	VE THE ABOVE MATERIAL AN ORDERED BY CUSTOMER		D BY:	Million	
FIELD SERVICE	ORDER NO.	(WELL C	WNER OPERAT	FOR CONTRACTOR OF	RAGENT)

CLOUD LITHO - Abilene, TX



# TREATMENT REPORT

Customer	OLEN	]	OP		Le	ease No.						Date					
Lease	AATE	R			W	'ell #	- 4	2				1	'D -	5-	-201	19	4
Field Order #	Station	F	RAT	T, K	3.			Casing		Depth		Count	y.Cl	ARK	1	Sta	ate Ks
Type Job	P.T	- 1-	1.						For	mation				Legal De	escription	230	w
PIPE	DATA		PERF	ORAT	ING	DATA		FLUID L	JSED				TREA	TMENT	RESUME		
Casing Size	Tubing Siz	ze	Shots/F	t	Cn	17-	Acid	ISK la	0/40	Poz		RATE	PRE	SS	ISIP		
Depth	Depth		From		То		Pre F	Pad 1,L	13 cu	FT	Max				5 Min.		
Volume	Volume		From		То		Pad		100 000		Min				10 Min.		
Max Press	Max Press	6	From		То		Frac				Avg				15 Min.		
Well Connection	Annulus V	ol.	From		То						HHP Used	k			Annulus F	Press	ure
Plug Depth	Packer De	nth	From		То		Flush	ו'			Gas Volur	ne			Total Load	ł	
Customer Repr	esentative	DA	WE H	ICKW		Station	Manag	ger J.L	D.			Trea	ater /	LESC	EG		
Service Units	76817	19	903	867	19	1990	on à	21010									
Driver Names	EStén	Me	GRAN	)		R.H	1.) .	Contract of Contraction Lines.							•		
Time	Casing Pressure		ubing essure	Bbls	. Pum	ped	R	late					Servi	ce Log			
4:00 Am									ÓA	120	CATT	ON	- SI	AFETT	5 MEE	T	NG
6:30Am								ڊ	4/5	TPL	UGa	211	50	wt	SOSK	5	
0:31Am	50				5			5	Hà	20 F	THEA	D					
6:32Am	50			10	2.7	7	4	5	MI	X.5	OSKS	P	13.2	3 PP	G		
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1:35Am								4	2ª	DP7	WG	æ	270	j'W	BUSK	$\leq$	
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Taylor Printing, Inc. 620-672-3656

## JOLEN OPERATING COMPANY

#### **Christopher D. Althoff**

100 N. Broadway Ave. Suite 2460 OKC, OK Office: 405-235-8444 Ext. 24/Cell: 405-637-7824 Email: ACEalthoff@outlook.com

## GEOLOGICAL REPORT Carter 1-6 S/2 SW NE NE, SECTION 6-33S-23W CLARK COUNTY, KS

#### Summary

The Carter #1-6 was drilled to a total depth of 5,600' on October 4, 2019. A one-man logging unit and geologist were on location from 3,500' to TD. ELI electric logs were run that consisted of Dual Induction, Compensated Neutron-Density, Sonic Log, and Micro-log. Hydrocarbon shows were encountered in the Lansing A&B Oolitic Limestones, the Pawnee Oolitic Limestone, and the Chester Oolite.

#### Lansing A & B Oolitic Limestone

The Lansing A Oolite was cut at 4,546' (-2,371'). The sample descriptions were tan, medium and coarsely oolitic and oomoldic limestone with grainy texture. Green mineral fluorescence when wet with spotted green fluorescence when dry showing gas on break. The samples cut fast with a bright blue gold milky cut and residual ring and a 250 unit rooster gas kick which recycled at 50 units; no stain or odor. The zone was drill stem tested, recovering 20' of mud. The Lansing B Oolite, the primary target, was cut at 4,580' (-2405). It was described as a brown medium and coarsely oolitic and oomoldic limestone with some rare shows of clear live oil which fluoresced under U.V. light. The Lansing B zone was 18' high to the Shupe #1-6 show well in NE SW SW of Section 6. This drill stem test recovered gas to surface in 7 minutes with flowing pressures increasing from 65 to 287 psi. During second shut-in there was good blow back, with second open recovering 6 MCF on a 1/8" choke increasing to 37 MCF on 1/4" choke and flowing pressures beginning at 282 psi increasing to 594 psi. Recorded shut-in pressures were 1,581 psi, with recoveries of 3,372' of gas in pipe, 504' of gassy watery mud and 693' of gassy salt water (chlorides 170,000 ppm).

#### **Pawnee Oolitic Limestone**

The Pawnee Oolite was cut at 5,171' (-2,996'). The sample descriptions were cream to white very fine to finely oolitic limestone with bright yellow-gold spotted fluorescence with fair to good shows of clear live oil on break and scattered gas bleeding from inter-particle porosity. The oolite samples had light spotted oil stain with a fair to fast milky cut. The Pawnee had a 130 unit gas show with a 20 unit recycle. The shows and trap noted on the 3D seismic survey merited a drill stem test that recovered 2,334' of gas in pipe and 140' of gassy oil cut mud. Log calculations over the zone averaged 50% water saturation. The nearest offset production comes from the Mount Casino well in the NE Ashland field in 30-32S-22W. Completed in 2014, the Mount Casino has cumulative production to-date of 11.5 MBO, and is currently making 3-5 bopd.

#### **Chester Oolitic Limestone**

The Chester Oolite was cut at 5,483' (-3,308'). The sample descriptions were white and cream to light gray, fine to medium oolitic chalky limestone. Dull spotted fluorescence when wet and none when dry with rare trace of fine beads of live oil on a couple of pieces that had fast cut. The zone had a 140 unit gas show that did not recycle. Due to the presence of chalk, the lack of recycle and, lack of an economic analogue this zone was not drill stem tested.

#### Conclusion

The Carter #1-6 was drilled on a 3D identified four way closure within a larger structural feature on the Northeastern portion of the Jolen Red Cliff Survey to test the Lansing B and porosity build up in the Pawnee Lime. Significant stratigraphic thinning throughout drilling, with oil and gas shows confirm the existence of the structural feature. However, the Carter #1-6 was not high enough on the feature to trap economic hydrocarbons in the Lansing B. The Carter #1-6 had a better drill stem test than the Shupe #1-6, recovering gas to surface and gas cut salt water (the Shupe 1-6 recovered only 3,650' of salt water). Similar improvements in drill stem tests were seen in the Ashland Field (wells tested salt water, followed by gas cut salt water, and then oil toward the top of the structure). Although there are believed to be Pawnee reserves in the Carter #1-6, they are uneconomic given current prices.

It is my recommendation to plug the Carter #1-6 and further evaluate both structural features using the well logs and data collected.

Respectfully Submitted,

Christopher D. Althoff

Petroleum Geologist Jolen Operating Company 10/6/2019

## **ELECTRIC LOG TOPS**

	JOLEN OPERA ⁻ CARTER 1-6 S/2 SW NE NE 06-33S-23W		HAWKINS OIL AND GAS SHUPE 1-6 C NE SW SW 06-33S-23W
BS. HEEBNER	4339	+18	4272
(Subsea)	(-2164)		(-2182)
LANSING	4517	+22	4554
(Subsea)	(-2342)		(-2364)
LANSING B	4580	+17	4512
(Subsea)	(-2405)		(-2422)
BS. STARK SH.	4977	+37	4929
(Subsea)	(-2802)		(-2839)
PAWNEE	5171	+40	5126
(Subsea)	(-2996)		(-3036)
CHEROKEE SH.	5226	+39	5180
(Subsea)	(-3051)		(-3090)
CHESTER	5415	+18	5369
(Subsea)	(-3261)		(-3279)
CHESTER SD/LM	5484	+66	5465
(Subsea)	(-3309)		(-3375)
ST GEN (Subsea)	5540 (-3365)		NDE



## DRILL STEM TEST REPORT

Prepared For: Jolen Operating Company

100 N. Braodway Ave Ste 2460 OKC, OK 73102+8868

ATTN: Ken Leblanc

#### Carter #1-6

#### 6-33s-23w Clark,KS

Start Date:	2019.09.28 @	06:19:00	
End Date:	2019.09.28 @	15:05:19	
Job Ticket #:	65701	DST #:	1

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.10.07 @ 10:11:27

	DRILL STEM TE	ST REP	ORT				<u></u>
RILOBITE	Jolen Operating Company			3s-23w	Clark,KS		
ESTING , INC	100 N. Braodw ay Ave			rter #1-6			
	Ste 2460			Ticket: 6		ne	6T#: 1
	OKC, OK 73102+8868 ATTN: Ken Leblanc				019.09.28 @		
GENERAL INFORMATION:							
Formation: LKC "A"							
Deviated: No Whipstock: Time Tool Opened: 09:56:40 Time Test Ended: 15:05:19	ft (KB)		Tes	ter: I	Conventiona Benny Mullig 66		n Hole (Initial)
Interval: 4528.00 ft (KB) To 455			Ref	erence Ele	evations:	2176	6.00 ft (KB)
Total Depth:4556.00 ft (KB) (TVHole Diameter:7.88 inchesHole				KBt	o GR/CF:		7.00 ft (CF) 9.00 ft
Serial #: 6772 Inside	 	·	·····				
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Length (ft) Description	Volume (bbl)			Choke (ind		e (psig)	Gas Rate (Mcf/d)
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	0.00						
	 Ref No: 65701						

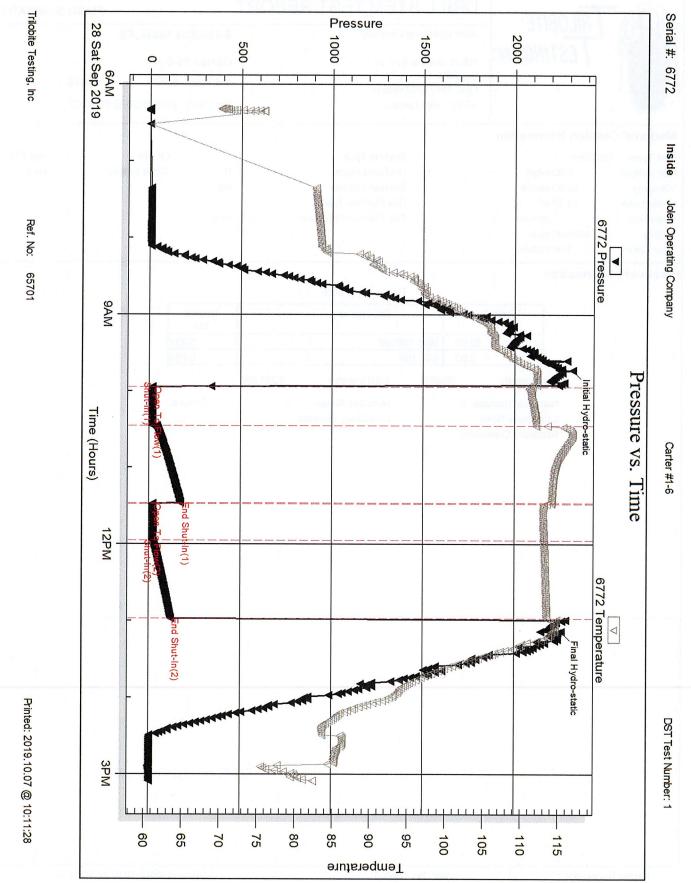
Trilobite Testing, Inc

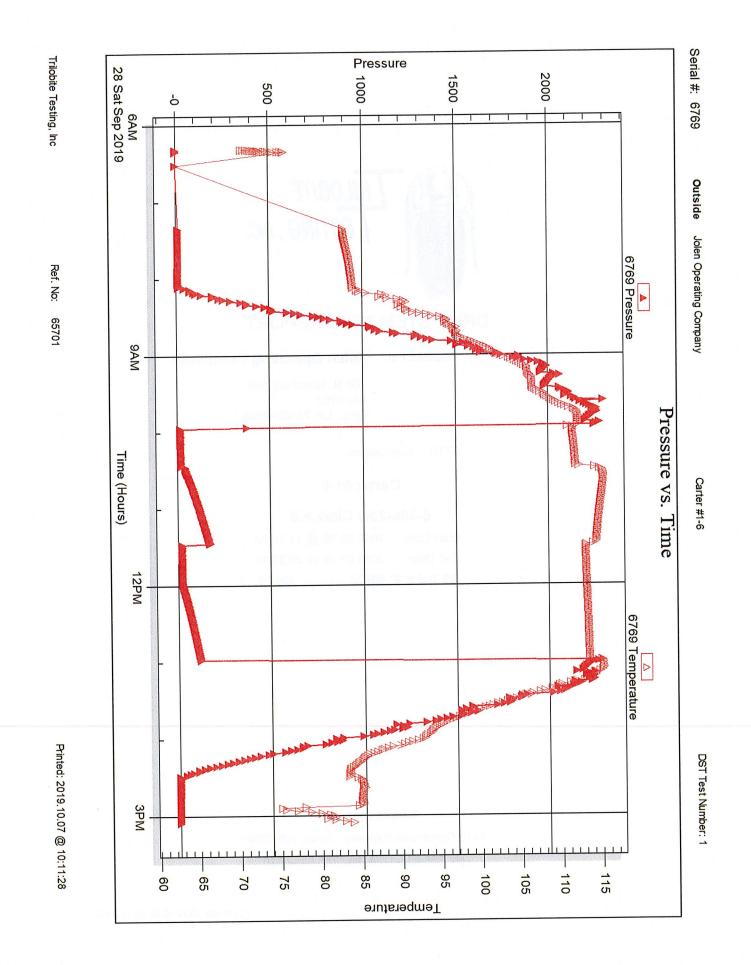
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ACTA -	RILOBITE	DRILL STEM	TEST REP	PORT		
		Jolen Operating Compan	у	6-33s-23w	/ Clark,KS	
	ESTING , INC	100 N. Braodway Ave		Carter #1	-6	
		Ste 2460 OKC, OK 73102+8868		Job Ticket:	65701 <b>D</b> \$	ST#: 1
		ATTN: Ken Leblanc		Test Start:	2019.09.28 @ 06:19	:00
GENERAL IN	FORMATION:			<u> </u>		
Formation: Deviated: Time Tool Opene Time Test Endec		ft (KB)		Test Type: Tester: Unit No:	Conventional Botto Benny Mulligan 66	m Hole (Initial)
nterval:	4528.00 ft (KB) To 45	556.00 ft (KB) (TVD)		Reference I		76.00 ft (KB)
Fotal Depth:	4556.00 ft (KB) (T			KI		67.00 ft (CF) 9.00 ft
Hole Diameter:	7.88 inchesHole	e Condition: Fair				9.00 It
Serial #: 67 Press@RunDep Start Date: Start Time:		<ul> <li>4529.00 ft (KB)</li> <li>End Date:</li> <li>End Time:</li> </ul>	2019.09.28 15:05:19		800 2019.0	00.00 psig 09.28
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RILOBITE		perating Compar	ny		6-33s-23w Cla	rk,KS	
TESTING	<b>, INC.</b> 100 N. E	Braodway Ave			Carter #1-6		
	Ste 246	0			Job Ticket: 65701	t	DST#: 1
		K 73102+8868 Ken Leblanc					
	ATTN.	Ken Lebland			Test Start: 2019.	09.28 @ 0	6:19:00
Tool Information					·····		
Drill Pipe: Length: 4538	8.00 ft Diameter:	3.80 inche	s Volume:	63.66 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe: Length: (	0.00 ft Diameter:	0.00 inche	s Volume:	0.00 bbl	Weight set on		
Drill Collar: Length: (	0.00 ft Diameter:	0.00 inche	s Volume:	0.00 bbl	Weight to Pull I		
	2 00 4	Tot	al Volume:	63.66 bbl	Tool Chased		0.00 ft
•	2.00 ft 3.00 ft				String Weight:	Initial 5	9000.00 lb
Depth to Bottom Packer: 4528	ft					Final 5	9000.00 lb
	3.00 ft						
	0.00 ft						
Number of Packers:	2 Diameter:	6.75 inche	s				
Tool Comments:							
Tool Description	Length (ft)	Serial No P	osition	Denth (ft) Ac	cum Longths		
-		Serial No. P	osition		cum. Lengths		
Change Over Sub	1.00	Serial No. P	osition	4507.00	cum. Lengths		
Change Over Sub Shut In Tool		Serial No. P	osition	4507.00 4512.00	cum. Lengths		
Change Over Sub Shut In Tool Hydraulic tool	1.00 5.00	Serial No. P	osition	4507.00	cum. Lengths		
Change Over Sub Shut In Tool Hydraulic tool Safety Joint	1.00 5.00 5.00	Serial No. P	osition	4507.00 4512.00 4517.00	cum. Lengths		Bottom Of Top Packe
Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer	1.00 5.00 5.00 2.00	Serial No. P	osition	4507.00 4512.00 4517.00 4519.00		E	ottom Of Top Packe
Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb	1.00 5.00 5.00 2.00 5.00	Serial No. P	osition	4507.00 4512.00 4517.00 4519.00 4524.00		E	ottom Of Top Packe
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Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Recorder Recorder Recorder Perforations	1.00 5.00 5.00 2.00 5.00 4.00 1.00 0.00 0.00	6772	Inside	4507.00 4512.00 4517.00 4519.00 4524.00 4528.00 4529.00 4529.00 4529.00			
Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Recorder Recorder Recorder Perforations	1.00 5.00 5.00 2.00 5.00 4.00 1.00 0.00 0.00 24.00 3.00	6772	Inside	4507.00 4512.00 4517.00 4519.00 4524.00 4528.00 4529.00 4529.00 4529.00 4529.00	22.00		
Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Recorder Recorder Perforations Bullnose	1.00 5.00 5.00 2.00 5.00 4.00 1.00 0.00 0.00 24.00 3.00	6772	Inside	4507.00 4512.00 4517.00 4519.00 4524.00 4528.00 4529.00 4529.00 4529.00 4529.00	22.00		
Change Over Sub Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Recorder Recorder Perforations Bullnose	1.00 5.00 5.00 2.00 5.00 4.00 1.00 0.00 0.00 24.00 3.00	6772	Inside	4507.00 4512.00 4517.00 4519.00 4524.00 4528.00 4529.00 4529.00 4529.00 4529.00	22.00		ottom Of Top Packe

(11 11)入	<b>T</b> RILOBITE	DRI	LL STEM TEST REPO	ORT		FLUID	SUMMARY
			Dperating Company	6-33s-2	3w Clark,KS		
	ESTING , INC.	100 N.	Braodway Ave	Carter	#1-6		
	-	Ste 246	60	Job Ticke	et: 65701	DST#:	1
NE OF			0K 73102+8868 Ken Leblanc	Test Star	rt: 2019.09.28 @	ወ 06:19:00	
uh <b>e</b> dli,							
lud and Cu	shion Information						
	el Chem		Cushion Type:		Oil API:	· •	deg API
Mud Weight:	9.00 lb/gal		Cushion Length: Cushion Volume:	ft bbl	Water Salin	iity:	ppm
/iscosity: Nater Loss:	55.00 sec/qt 13.37 in³		Gas Cushion Type:	551			
Resistivity:	ohm.m		Gas Cushion Pressure:	psig			
Salinity:	8000.00 ppm						
Filter Cake:	1.00 inches						
Recovery In	formation						
			Recovery Table	·			
	Lengt ft	th	Description	Volum bbl	ne 🛛		
		20.00	Mud 100%M		.281		
		0.00	GIP 100'		.000		
	Total Length:	20	.00 ft Total Volume: 0.28	1 bbl			
	Num Fluid Samp	oles: 0	Num Gas Bombs: 0	Seri	ial #:		
	Laboratory Nan	ne:	Laboratory Location:				
	Laboratory Nan Recovery Comr		Laboratory Location:				
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## DRILL STEM TEST REPORT

Prepared For:

Jolen Operating Company

100 N. Braodway Ave Ste 2460 OKC, OK 73102+8868

ATTN: Ken Leblanc

#### Carter #1-6

#### 6-33s-23w Clark,KS

Start Date:	2019.09.29 @	11:10:00	
End Date:	2019.09.29 @	20:29:19	
Job Ticket #:	65702	DST #:	2

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620

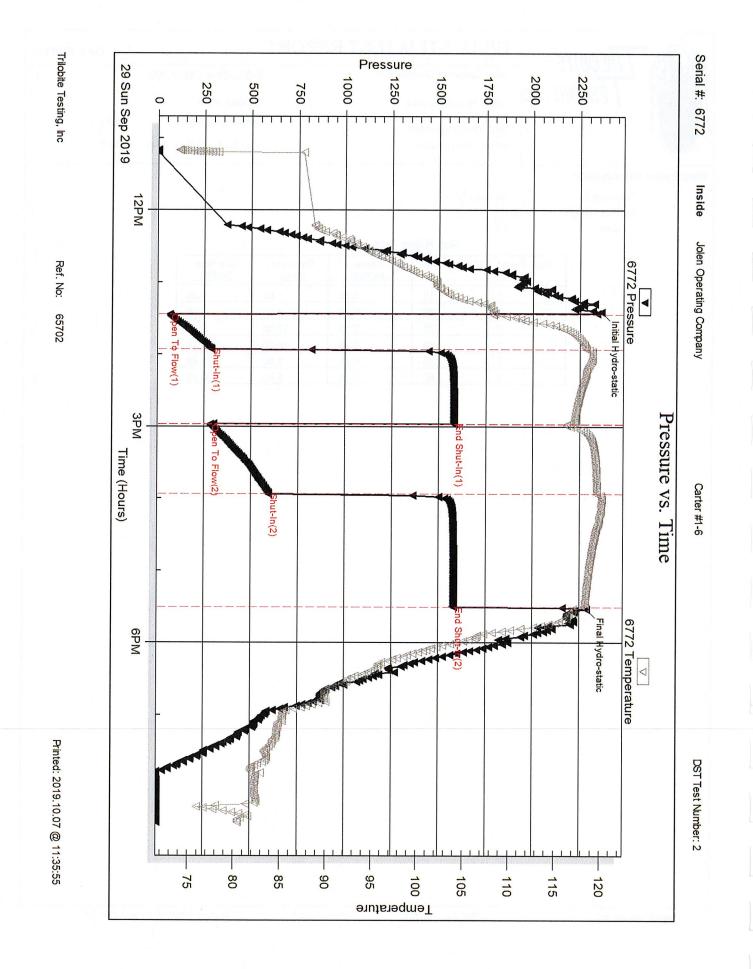
	DRILL STEM 1	EST	REPC	ORT				
RILOBITE	Jolen Operating Company			6-33	s-23w C	lark,l	KS	
ESTING, INC	100 N. Braodw ay Ave			Carl	ter #1-6			
	Ste 2460			Job T	ricket: 657	702	DST#:	2
	OKC, OK 73102+8868 ATTN: Ken Leblanc			Test	Start: 201	19.09.2	9 @ 11:10:00	
				<u>_</u>				
Formation:LKC "B"Deviated:NoWhipstock:Time Tool Opened:13:26:40Time Test Ended:20:29:19	ft (KB)			Test Teste Unit I	er: B	enny N	tional Bottom H <i>I</i> ulligan	ole (Initial)
Total Depth: 4590.00 ft (KB) (T	5 <b>90.00 ft (KB) (TVD)</b> VD) e Condition: Fair			Refe	rence Elev KB to	vations	2167.0	) ft (KB) ) ft (CF) ) ft
Serial #: 6772         Inside           Press@RunDepth:         594.90 psig           Start Date:         2019.09.29           Start Time:         11:10:01	@ 4567.00 ft (KB) End Date: End Time:	2	2019.09.29 20:29:19	Capacity: Last Calib Time On E Time Off	).: 3tm: 2		8000.0 2019.09.2 0.29 @ 13:24:3 0.29 @ 17:31:5	9
FF-60- BOB 1 m FSI-90- 28 psi b	nin built to 8.6 psi at 1/4 choke low back	Э						
Pressure vs.	Time			PF	RESSUR	ESU	MMARY	
	<u> </u>		Time	Pressure	Temp		MMARY	
Pressure vs.	Time		(Min.)	Pressure (psig)	Temp (deg F)	Ann	otation	
Pressure vs.	Time	115		Pressure	Temp (deg F) 108.25	Ann Initial		
Pressure vs.	Time	115	(Min.) 0 3 31	Pressure (psig) 2362.54 65.88 287.14	Temp (deg F) 108.25 108.26 118.48	Ann Initial Open Shut-	otation Hydro-static To Flow (1) In(1)	
ZZD	Time	115	(Min.) 0 3 31 93	Pressure (psig) 2362.54 65.88 287.14 1581.81	Temp (deg F) 108.25 108.26 118.48 117.15	Ann Initial Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1)	
273 Pressure vs.	Time	115	(Min.) 0 3 93 93	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81	Temp (deg F) 108.25 108.26 118.48 117.15 116.31	Ann Initial Open Shut- End S Open	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2)	
Pressure vs.	Time	Tomparatura 115	(Min.) 0 3 31 93	Pressure (psig) 2362.54 65.88 287.14 1581.81	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2)	
PICSNERC VS.	Time	115 115 118 125 129 159	(Min.) 0 3 31 93 94 152	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) shut-In(1) To Flow (2) In(2)	
Pressure vs.	Time	Tomparatura 115	(Min.) 0 3 31 93 94 152 246	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2)	
PIESSERE VS.	Time	115 115 118 125 129 159	(Min.) 0 3 31 93 94 152 246	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2)	
PICSNERC VS.	Time IV: Vergenden IV: Vergenden	115 115 118 125 129 159	(Min.) 0 3 31 93 94 152 246	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2)	
PICSNEE VS.	Time rec toponton rec topont	115 115 118 125 129 159	(Min.) 0 3 31 93 94 152 246	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2)	
Pressure vs.	Time V Temperature V Temperature	115 115 118 125 129 159	(Min.) 0 3 31 93 94 152 246	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09	Ann Initial Open Shut- End S Open Shut- End S	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2) Hydro-static	
Pressure vs.	Time V Temperature V Temperature	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09	Ann Initial Open Shut- End S Gpen Shut- End S Final	otation Hydro-static To Flow (1) In(1) Shut-In(1) To Flow (2) In(2) Shut-In(2) Hydro-static	Gas Rate (Mcf/d)
Pressure vs.	Time PVZ Verpenken Volume (bbl)	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248 First Ga	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09 Ga	Ann Initial Open Shut- End S Final Final s Rat inches) 0.13	es Pressure (psig)	6.06
Pressure vs.	Time View managements View managements View managements View managements View managements Volume (bbl) 70% M 3.53	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248 7 First Ga Last Ga	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67 s Rate	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09 Ga	Ann Initial Open Shut- End S Open Shut- End S Final s Rat inches) 0.13	es Pressure (psig) 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80	6.06 36.49
Pressure vs.	Time	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248 First Ga	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67 s Rate	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09 Ga	Ann Initial Open Shut- End S Final Final s Rat inches) 0.13	es Pressure (psig)	6.06
Pressure vs. 072774 0 0 0 0 0 0 0 0 0 0 0 0 0	Time	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248 7 First Ga Last Ga	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67 s Rate	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09 Ga	Ann Initial Open Shut- End S Open Shut- End S Final s Rat inches) 0.13	es Pressure (psig) 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80	6.06 36.49
Pressure vs. 072 Pressure vs.	Time	115 115 118 125 129 159	(Min.) 0 3 93 94 152 246 248 7 First Ga Last Ga	Pressure (psig) 2362.54 65.88 287.14 1581.81 282.81 594.90 1581.03 2288.67 s Rate	Temp (deg F) 108.25 108.26 118.48 117.15 116.31 119.66 118.36 117.09 Ga	Ann Initial Open Shut- End S Open Shut- End S Final s Rat inches) 0.13	es Pressure (psig) 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80	6.06 36.49

RILOBITE	Jolen Operating Company	·······	6-33s-2	3w Cla	irk,KS	
ESTING , INC	100 N. Braodw ay Ave		Carter		, -	
	Ste 2460 OKC, OK 73102+8868		Job Tick		,	ST#: 2
	ATTN: Ken Leblanc				- <b>-</b> 09.29 @ 11:1(	
GENERAL INFORMATION:		······································				
Formation: LKC "B"						
Deviated: No Whipstock:	ft (KB)		Test Typ	e. Conv	ventional Botto	m Hole (Initial)
Time Tool Opened: 13:26:40 Time Test Ended: 20:29:19			Tester: Unit No:		ny Mulligan	
nterval: 4566.00 ft (KB) To 459	00.00 ft (KB) (TVD)		Reference	e Elevati	ons: 217	76.00 ft (KB)
Fotal Depth:4590.00 ft (KB) (TV)Hole Diameter:7.88 inches Hole					216	67.00 ft (CF)
				KB to GF	RVCF:	9.00 ft
Serial #: 6769 Outside Press@RunDepth: psia @			, <u></u>		-	· · · · · · · · · · · · · · · · · · ·
ress@RunDepth: psig @ Start Date: 2019.09.29	4567.00 ft (KB) End Date:	2019.09.29	Capacity:			0.00 psig
Start Time: 11:10:01	End Time:	2019.09.29 20:29:19	Last Calib.: Time On Btm:		2019.0	9.29
			Time Off Btm:			
FF-60- BOB 1 min FSI-90- 28 psi blov 	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back		PRFSS	URF S		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	Time	PRESS Pressure Terr		UMMARY	
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	o (Min.)		p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	s (Min.)	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov 	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	s (Min.)	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov 	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov 	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	s (Min.)	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov 	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr	p Ar		
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim other and the second state of the	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr (psig) (deg	p Ar	notation	
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blow Pressure vs. Time COOPenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Coopenant Co	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	<ul> <li>(Min.)</li> <li>(Min.)</li> <li>Interpret to the second se</li></ul>	Pressure Terr (psig) (deg	p Ar	notation	Gas Rate (Mct/d)
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blow Pressure vs. The Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Collineau Col	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	(Min.)	Pressure Terr (psig) (deg	p Ar F) Gas Rat	es	Gas Rate (Mctid) 6.06
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blov Pressure vs. Tim COD Pressure COD Pressure COD Pressure Set Set Set Set Set Set Set Set Set Se	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	First Gas	Pressure Terr (psig) (deg	p Ar F) Gas Rat e (inches) 0.13 0.25	es Pressure (psig) 1.80 8.60	
ISI-60- GTS 7 mins FF-60- BOB 1 min FSI-90- 28 psi blow Pressure vs. The Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Confirment Conf	into shut in 111" blow back built to 8.6 psi at 1/4 choke v back	(Min.)	Pressure Terr (psig) (deg	p Ar F) Gas Rat e (inches) 0.13	es Pressure (psig) 1.80	6.06

		DRIL	L STE	MTEST	REPOR	<u></u> २Т	TOOL DI	AGRAM
RILOB	ITE	lalan Or	perating Comp		<u> </u>	6-33s-23w Clar		
TEST	ING , INC	100 N. E	Braodw ay Av			Carter #1-6		
		Ste 2460	) < 73102+8868	8		Job Ticket: 65702	DST#: 2	
			Ken Leblanc	-		Test Start: 2019.09	9.29 @ 11:10:00	
Tool Information								
Drill Pipe: Length:	4569.00 ft	Diameter:	3.80 inc	ches Volume:	64.09 bbl		2500.00 <b>l</b> b	
Heavy Wt. Pipe: Length:		Diameter:		ches Volume:	0.00 bbl		acker: 25000.00 lb	
Drill Collar: Length:	0.00 ft	Diameter:	-	ches Volume:	0.00 bbl	-	oose: 70000.00 lb 0.00 ft	
Drill Pipe Above KB: Depth to Top Packer:	25.00 ft 4566.00 ft			Total Volume:	64.09 bbl	String Weight: I		
Depth to Bottom Packer:	4000.00 ft					ľ		
Interval between Packers:	24.00 ft							
Tool Length:	46.00 ft							
Number of Packers:	2	Diameter:	6.75 ind	ches				
Tool Comments:								
Tool Description	Le	ngth (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths		
Change Over Sub	, , ,	1.00			4545.00			
Shut In Tool		5.00			4550.00			
Hydraulic tool		5.00			4555.00			
Safety Joint		2.00			4557.00			
Packer		5.00			4562.00	22.00	Bottom Of To	p Packer
Packer		4.00			4566.00			
Stubb		1.00			4567.00			
Recorder		0.00	6772	Inside	4567.00			
Recorder		0.00	6769	Outside	4567.00			
Perforations		20.00			4587.00	24.00	Bottom Packers &	Anchor
Bullnose		3.00			4590.00	24.00		
Total Too	I Length:	46.00						
i i i i i i i i i i i i i i i i i i i								
1								

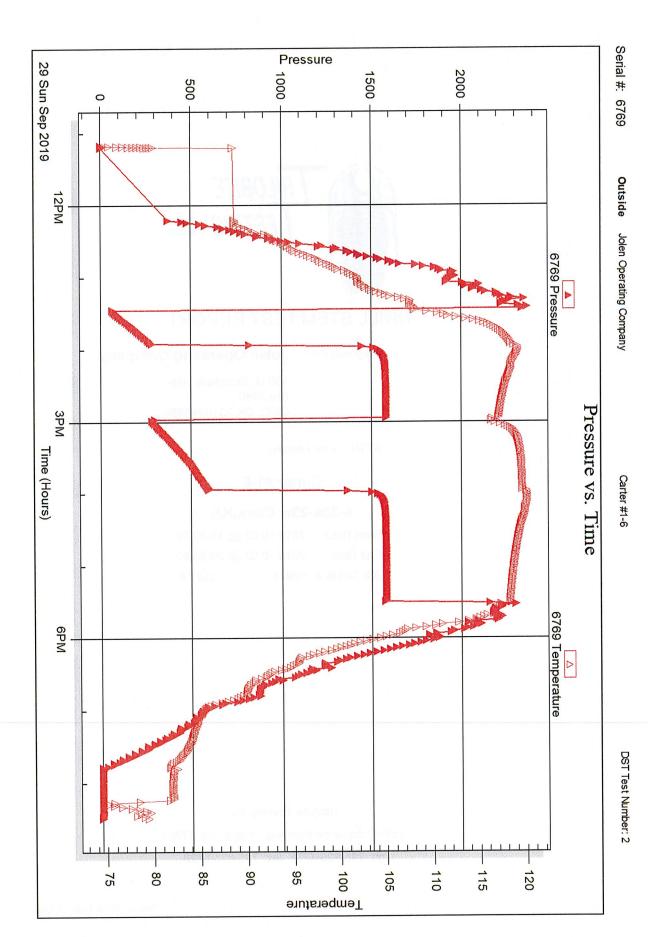
(DA	RILOBITE		ILL STEM TEST REPOR	Т		FLUID SUMMAR
正明	TEOTINO	Jolen	Operating Company	6-33s-23v	v Clark,KS	
	ESTING , I	1 1001	l. Braodw ay Ave	Carter #1	-6	
		Ste 24 OKC	460 OK 73102+8868	Job Ticket:	65702	DST#: 2
			Ken Leblanc	Test Start:	2019.09.29 @ 1	1:10:00
Mud and Cu	ushion Informatio			i		
	el Chem		Cushion Type:			
Mud Weight:	9.00 lb/gai		Cushion Length:	ft	Oil API: Water Salinity:	deg API
Viscosity:	43.00 sec/qt		Cushion Volume:	bbl	vvater Saimity:	13000 ppm
Water Loss:	14.58 in³		Gas Cushion Type:	501		
Resistivity:	ohm.m		Gas Cushion Pressure:	psig		
Salinity:	11000.00 ppm			paig		
Filter Cake:	1.00 inches					
Recovery In	formation		* * *		<b>.</b>	· · · · ·
	<b></b>	····	Recovery Table		_	
	Le	ngth ft	Description	Volume bbl		
		252.00	GWM 10%G 20%W 70%M	3.535	5	
		252.00	GMW 10%G 10%M 80%W	3.535		
		693.00	GW 10% 90%W	9.721		
		0.00	GIP 3372'	0.000	-	
	Total Length:	1197	.00 ft Total Volume: 16.791 bbl		-	
	Num Fluid Sa	mples: 0	Num Gas Bombs: 0	Serial#		
	Laboratory N		Laboratory Location:	Sel lai #.		
	Recovery Co		128@81.9			
	•		0			

10 PM			DF	RILL STE	M TEST R	EPORT		GAS RATES
	RILOBITE	' <b>-</b>	Jole	n Operating Comp	bany	6-	33s-23w Clar	k,KS
	TESTING	, INC.	100	N. Braodway Av	e	Ca	arter #1-6	
	-		Ste 2	2460		Jo	b Ticket: 65702	DST#: 2
				C, OK 73102+8868 N: Ken Leblanc	>	Те	st Start: 2019.0	9.29 @ 11:10:00
Gas Rates	Information							
	Temperature:		59 (	(deg F)				
	Relative Density:		0.65					
	Z Factor:		0.8	Gas Rate	as Table			
	Г	Flow Pe	eriod	Elapsed Time	Choke	Pressure	Gas Rate	
			SHOU	Lapsed time	(inches)	(psig)	(Mcf/d)	
			2	10	0.13	1.80	6.06	
			2	20	0.13	4.80	7.19	
			2	30 40	0.13 0.25	<u> </u>	<u>9.13</u> 38.71	
			2	50	0.25	8.60	36.49	
	-		2	60	0.25	8.60	36.49	•





Ref. No: 65702



Trilobite Testing, Inc



## DRILL STEM TEST REPORT

Prepared For:

Jolen Operating Company

100 N. Braodway Ave Ste 2460 OKC, OK 73102+8868

ATTN: Ken Leblanc

#### Carter #1-6

#### 6-33s-23w Clark,KS

Start Date:	2019.10.02 @	11:46:00	
End Date:	2019.10.02 @	20:30:02	
Job Ticket #:	65915	DST #:	3

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620

RILOBITE	Jolen Operating Company	<u> </u>	6-33s-2	3w Clark,K	S
ESTING , INC	100 N. Braodw ay Ave		Carter	#1-6	
	Ste 2460		Job Ticke	et: 65915	DST#: 3
	OKC, OK 73102+8868 ATTN: Ken Leblanc		Test Star	t: 2019.10.02	@ 11:46:00
ENERAL INFORMATION:	,,,	<u> </u>			
ormation: <b>Pawnee</b> Deviated: No Whipstock: ime Tool Opened: 14:11:47 ime Test Ended: 20:30:02	ft (KB)		Test Typ Tester: Unit No:	e: Conventio Leal Caso 74	onal Bottom Hole (Reset) on
nterval: 5086.00 ft (KB) To 52 Total Depth: 5200.00 ft (KB) (Tw Jole Diameter: 7.88 inchesHole			Reference	ce Elevations: KB to GR/CF:	2176.00 ft (KB) 2167.00 ft (CF) 9.00 ft
Gerial #:         8672         Inside           ress@RunDepth:         81.68 psig           start Date:         2019.10.02           start Time:         11:46:01	@ 5087.00 ft (KB) End Date: End Time:	2019.10.02 20:30:02	Capacity: Last Calib.: Time On Btm: Time Off Btm:		psig 2019.10.02 02 @ 14:11:32 02 @ 18:01:17
ISI: No Blow Bac FF: Strong Blow , FSI: No Blow Bac	, BOB Immediate, Built to 220"				
FF: Strong Blow, FSI: No Blow Bac	BOB Immediate, Built to 220" ck		PRES	SURE SUN	IMARY
FF: Strong Blow , FSI: No Blow Bac Pressure vs. T	BOB Immediate, Built to 220"	(8.6	Pressure Te	emp Annot	
FF: Strong Blow, FSI: No Blow Bac	BOB Immediate, Built to 220" ck	s (Min.)	Pressure Te (psig) (de 2519.55 11	emp Annot eg F) 0.50 Initial Hy	ation ydro-static
FF: Strong Blow , FSI: No Blow Bac Pressure vs. T	BOB Immediate, Built to 220"	s (Min.) 0 s 1	Pressure Te (psig) (de 2519.55 11 23.18 10	mp Annot g F) 0.50 Initial Hy )9.70 Open T	ation ydro-static o Flow (1)
FF: Strong Blow, FSI: No Blow Bac Pressure vs. T	BOB Immediate, Built to 220" ck	s (Min.) 0	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11	emp Annot eg F) 0.50 Initial Hy 09.70 Open T 13.92 Shut-In (4.75 End Shu	ation ydro-static io Flow (1) (1) ut-In(1)
FF: Strong Blow, FSI: No Blow Bac Pressure ve. T	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11	mp         Annot           2g F)         0.50         Initial Hy           09.70         Open T         3.92           Shut-In         4.75         End Shut           4.36         Open T         3.92	ation ydro-static io Flow (1) (1) ut-In(1) io Flow (2)
FF: Strong Blow, FSI: No Blow Bac Pressure ve. T	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         11           1781.44         11	Imp         Annot           2g F)         0.50         Initial Hy           09.70         Open T           13.92         Shut-Initial Hy           4.75         End Shut           14.36         Open T           15.43         Shut-Initial Hy           16.60         End Shut	ation ydro-static io Flow (1) (1) ut-In(1) io Flow (2) (2) ut-In(2)
FF: Strong Blow, FSI: No Blow Bar	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Tell (de (de 2519.55)         Tell 11           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         11           1781.44         11	Imp         Annot           2g F)         0.50         Initial Hy           09.70         Open The second se	ation ydro-static io Flow (1) (1) ut-In(1) io Flow (2) (2) ut-In(2)
FF: Strong Blow, FSI: No Blow Bar	BOB Immediate, Built to 220"	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         11           1781.44         11	Imp         Annot           2g F)         0.50         Initial Hy           09.70         Open T           13.92         Shut-Initial Hy           4.75         End Shut           14.36         Open T           15.43         Shut-Initial Hy           16.60         End Shut	ation ydro-static io Flow (1) (1) ut-In(1) io Flow (2) (2) ut-In(2) ydro-static
FF: Strong Blow, FSI: No Blow Bar	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         12           1781.44         12           2475.89         12	mp         Annot           ig F)         0.50         Initial Hy           09.70         Open T           13.92         Shut-Initial Hy           4.75         End Shut           14.36         Open T           15.43         Shut-Initial Hy           16.60         End Shut           16.81         Final Hy           Gas Rates	ation ydro-static to Flow (1) (1) ut-In(1) to Flow (2) (2) ut-In(2) ydro-static
FF: Strong Blow, FSI: No Blow Bar	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         12           1781.44         12           2475.89         12	mp         Annot           ag F)         0.50         Initial Hy           09.70         Open T           (3.92         Shut-Initial Hy           (4.75         End Shut           (4.36)         Open T           (5.43)         Shut-Initial Hy           (6.60)         End Shut           (6.81)         Final Hy           Gas Rates	ation ydro-static to Flow (1) (1) ut-In(1) to Flow (2) (2) ut-In(2) ydro-static
FF: Strong Blow, FSI: No Blow Bar Pressure vs. T	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         12           1781.44         12           2475.89         12	mp         Annot           ag F)         0.50         Initial Hy           09.70         Open T           (3.92         Shut-Initial Hy           (4.75         End Shut           (4.36)         Open T           (5.43)         Shut-Initial Hy           (6.60)         End Shut           (6.81)         Final Hy           Gas Rates	ation ydro-static to Flow (1) (1) ut-In(1) to Flow (2) (2) ut-In(2) ydro-static
FF: Strong Blow, FSI: No Blow Bar Pressure vs. T	BOB Immediate, Built to 220" ck	(Min.) 0 1 31 93 94 138 229 230	Pressure (psig)         Te (de 2519.55           23.18         10           47.18         11           1780.58         11           62.73         11           81.68         12           1781.44         12           2475.89         12	mp         Annot           ag F)         0.50         Initial Hy           09.70         Open T           (3.92         Shut-Initial Hy           (4.75         End Shut           (4.36)         Open T           (5.43)         Shut-Initial Hy           (6.60)         End Shut           (6.81)         Final Hy           Gas Rates	ation ydro-static to Flow (1) (1) ut-In(1) to Flow (2) (2) ut-In(2) ydro-static

Trilobite Testing, Inc

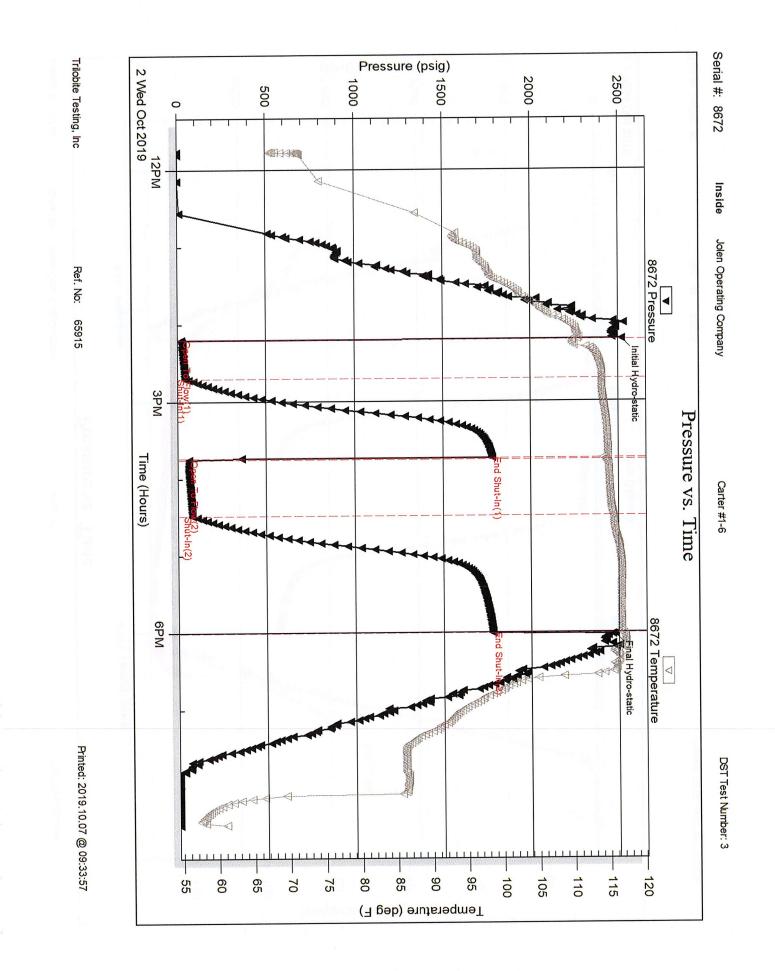
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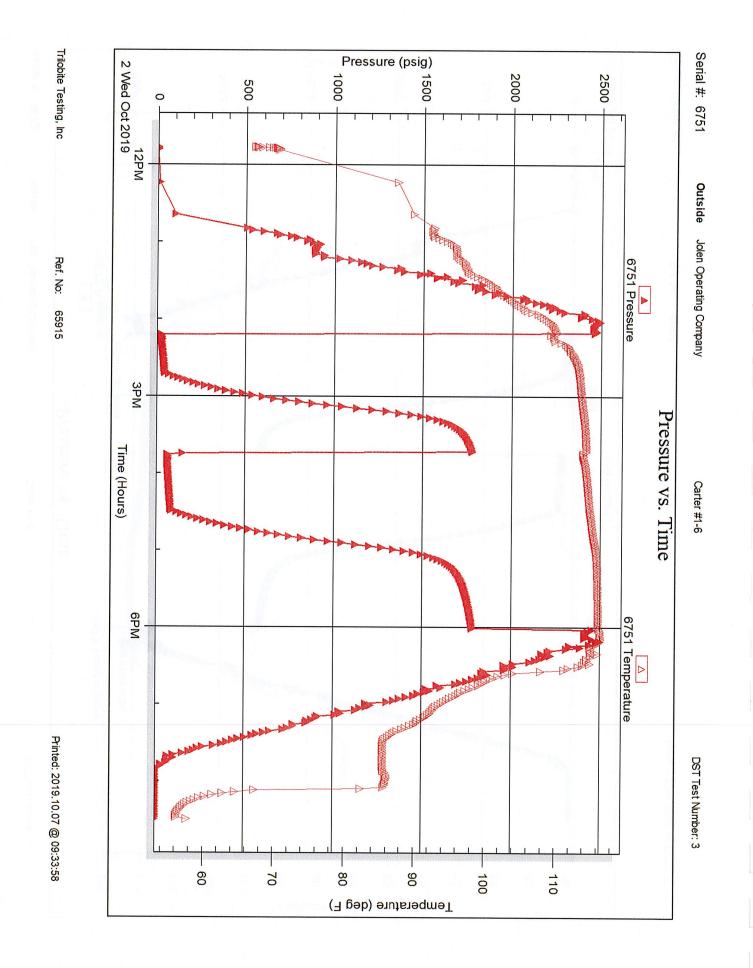
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RILOBITE	DRILL STEM TE	SIREP				<u> </u>
TESTING, INC.	Jolen Operating Company		6-3	33s-23w	Clark,KS	
	100 N. Braodw ay Ave		Ca	rter #1-	6	
	Ste 2460 OKC, OK 73102+8868		Job	Ticket: 6	5915	DST#: 3
	ATTN: Ken Leblanc		Tes	st Start: 2	019.10.02 @	2 11:46:00
GENERAL INFORMATION:						
Formation: <b>Pawnee</b> Deviated: No Whipstock: Time Tool Opened: 14:11:47 Time Test Ended: 20:30:02	ft (KB)		Tes	ster:	Convention Leal Cason 74	al Bottom Hole (Reset)
Interval: 5086.00 ft (KB) To 520 Total Depth: 5200.00 ft (KB) (TV				erence El		2176.00 ft (KB)
Hole Diameter: 7.88 inchesHole	•			KB	to GR/CF:	2167.00 ft (CF) 9.00 ft
Serial #: 6751OutsidePress@RunDepth:psig @Start Date:2019.10.02Start Time:11:46:01	5087.00 ft (KB) End Date: End Time:	2019.10.02 20:30:02	Capacity Last Cali Time On Time Off	ib.: Btm:		psig 2019.10.02
FF: Strong Blow, I	/					
FSI: No Blow Back	ac				RE SUMM	
FSI: No Blow Back		Time (Min.)	Pressure (psig)	RESSUF Temp (deg F)	RE SUMM	
FSI: No Blow Back	BC CFORT Responders FRS FRS FRS FRS FRS FRS FRS FRS	(Min.)	Pressure	Temp (deg F)	·	
FSI: No Blow Back	DCT Temperature CCT Temperature 0 0 0 0 0 0 0 0 0 0 0 0 0	(Min.)	Pressure	Temp (deg F)	Annotation Annotatio	
FSI: No Blow Back	BC COT Forgendan COT Forgendan Cot Cot Forgendan Cot Cot Cot Cot Cot Cot Cot Cot Cot Cot	(Min.)	Pressure	Temp (deg F) Ga	Annotation Annotatio	on
FSI: No Blow Back	RC COT Formation COT Formation CO	(Min.)	Pressure	Temp (deg F) Ga	Annotation Annotatio	on
FSI: No Blow Back	BC COT Forgendan COT Forgendan Cot Cot Forgendan Cot Cot Cot Cot Cot Cot Cot Cot Cot Cot	(Min.)	Pressure	Temp (deg F) Ga	Annotation Annotatio	on
FSI: No Blow Back	RC COT Formation COT Formation CO	(Min.)	Pressure	Temp (deg F) Ga	Annotation Annotatio	on

	ITE		perating Com	pany		6-33s-23w Clark,KS	
ESTI	I <mark>NG</mark> , INC	100 N. E	Braodw ay Av	/e		Carter #1-6	
		Ste 2460	<u>כ</u>			Job Ticket: 65915	DST#: 3
			< 73102+886 Ken Lebland			Test Start: 2019.10.02 @	2 11:46:00
ool Information		ļ					
Prill Pipe: Length:	5088.00 ft	Diameter:	3.80 in	ches Volume:	71.37 bb	-	2100.00 lb
leavy Wt. Pipe: Length:	0.00 ft	Diameter:	0.00 in	ches Volume:	0.00 bb		
orill Collar: Length:	0.00 ft	Diameter:	0.00 in	ches Volume:	0.00 bb	-	
	28.00 ft			Total Volume:	71.37 bb		ft
Frill Pipe Above KB: Depth to Top Packer:	5086.00 ft					String Weight: Initial Final	68000.00 lb 68000.00 lb
Depth to Bottom Packer:	5000.00 ft					rinai	u 00,000,00 B
terval between Packers:	114.00 ft						
ool Length:	140.00 ft						
lumber of Packers:	2	Diameter:	6.75 in	ches			
ool Comments:							
Shut In Tool		5.00			5065.00		
lydraulic tool		5.00			5070.00		
lars		5.00			5075.00		
Safety Joint		2.00			5077.00	26.00	Bottom Of Top Packe
Packer		5.00			5082.00 5086.00	26.00	
Packer		4.00 1.00			5087.00		
Stubb		0.00	8672	Inside	5087.00		
Recorder Recorder		0.00	6751	Outside	5087.00		
Perforations		4.00	0/01	Calcino	5091.00		
Change Over Sub		1.00			5092.00		
Drill Pipe		93.00			5185.00		
Change Over Sub		2.00			5187.00		
Perforations		10.00			5197.00		
Bullnose		3.00			5200.00	114.00 B	ottom Packers & Ancho
Total Tool	Length:	140.00					

	RILOBITE		LL STEM TEST REPOR	T	FLU	JID SUMMAR
		Jolen (	Operating Company	6-33s-23w	Clark,KS	
TESTING , INC.			Braodway Ave	Carter #1	-6	
		Ste 24	60 DK 73102+8868	Job Ticket: (	65915 <b>DS</b>	T#: 3
			Ken Leblanc	Test Start: 2	2019.10.02 @ 11:46:	00
	on Information					
Mud Type: Gel Ch			Cushion Type:		Oil API:	deg API
Aud Weight:	9.00 lb/gal		Cushion Length:	ft	Water Salinity:	ppm
/iscosity: Vater Loss:	54.00 sec/qt		Cushion Volume:	bbl		
Resistivity:	8.79 in³ ohm.m		Gas Cushion Type:			
-	500.00 ppm		Gas Cushion Pressure:	psig		
filter Cake:	0.02 inches					
Recovery Inform	mation					
	nauon		Recovery Table			
	Leng		Description		7	
	ft	11	Description	Volume bbl		
		0.00	2334 GIP	0.000		
		120.00	GOCM 12%G 6%O 82%M	1.683		
		20.00	GCM 20%G 80%M	0.281		
	Total Length:	140	.00 ft Total Volume: 1.964 bbl			
	Num Fluid Samp	les: 0	Num Gas Bombs: 0	Serial #		
	Laboratory Nam		Laboratory Location:			
	Recovery Comn	nents:				





RILOBITE			Test Tic	cket	
JESTING INC. 1515 Commerce Parkway • 1	Hays, Kansas 6760	)1	NO. 6	5701	
Interval Tested 4528-4556 Anchor Length 287 Top Packer Depth 4523 Bottom Packer Depth 452.8 Total Depth 4556 Blow Description TEBOB 2-5 sec TST no hlow both FF built to 1	ige. <u>23</u> Zone Tested <u>La</u> Drill Pipe Run Drill Collars Run Wt. Pipe Run	60 OKlahama Rig Duke 1 _ Co. <u>Clarke</u> ansirg "A" 4538'	Kig         H            Mud V            Vis            WL	state Ky	GL
Rec 201 Feet of Much	1015	%gas	%oil	%water /	O Comud
Rec Feet ofOO' GIP	.01	%gas	%oil	%water	%mud
Rec Feet of	00	%gas	%oil	%water	%mud
Rec Feet of		%gas	%oil	%water	%mud
Rec Feet of		%gas	%oil	%water	%mud
Rec Total BHT C	Gravity	API RW@_	°F Chlo		ppm
(A) Initial Hydrostatic 2317	<b>Di Test</b> 1300		T-On Location	n <u>140</u>	OAM
(B) First Initial Flow	G Jars		T-Started		1
(C) First Final Flow	a Safety Joint	75	T-Open	1.00	1
(D) Initial Shut-In 73	Circ Sub		T-Pulled	2:00	PM
(E) Second Initial Flow	C Hourly Standby		T-Out		, ,
(F) Second Final Flow	A Mileage 164	RT 180rt	Comments_		<u></u>
(G) Final Shut-In	C Sampler		- 123		
(H) Final Hydrostatic ZZ 59	G Straddle		CI EM Tool		
	the function of the second			Shale Packer	
Initial Open 30				Packer	
Initial Shut-In				pies	
Final Flow 30			Sub Total		
Final Shut-In 60				555	
n na ser na nastati inter terreta de la constante de la constante de la constante de la constante de la constan La constante de la constante de	Sub Total 1555		MP/DST D	isc't	
Annual Du		ur Bepresentative B			

Approved By ______ Our Representative ______ Our Representative ______ Contend 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.

4/10 RILOBITE JESTING INC 1515 Commerce Parkwa	C. ay ∙ Hays, Kansas 67601	<b>Test Ticket</b> NO. 65702
Well Name & No. Carter #1-6 Company Jolen Operating ( Address 100 N. Broad Way	Test No. 2 Company Elevation 2 Ave STE 2.460 OKIahom	
Co. Rep/Geo. Ken Leblanc		Rig 4
Location: Sec Twp 3 55	Rge2-3 WCoClark	State
nterval Tested 4566-4590	Zone Tested Lansing B	<u> </u>
Anchor Length 24'	Drill Pipe Run	Mud Wt
op Packer Depth	Drill Collars Run	Vis <u>43</u>
ottom Packer Depth 4566	Wt. Pipe Run	
otal Depth 4590	Chlorides <u></u> ppm S	ystem
Blow Description IS - BOB Imic	Ssec total build of	109"
IST-gas to surta	ce Tmins into Shutin 1	11" Blow back
FF-BOB Imin	built to 8.6 PSI at 1/4	Choke
<u>FS.T 28 psi bl</u>	ow back	<u> </u>
ec 0252 Feet of G.W.M.	/ 6 _{%gas}	%oil 20 %water 70 %mud
ec 252 Feet of G.M.W.	10 _{%gas}	%oil 80 %water 10 %mud
ec 693 Feet of <u>GW</u>	10 %gas	%oil 9D %water %mud
Feet of C.T.P	3377 %gas	%oil %water %mud
ec Feet of	%gas	%oil %water %mud
ec Total	Gravity API RW	F Chlorides
) Initial Hydrostatic2362	Test_1300	T-On Location 10:00 AM
) First Initial Flow65	□ Jars	T-Started
) First Final Flow	Safety Joint 75	T-Open 1:26 PM
) Initial Shut-In	Circ Sub	T-Pulled Z.6
) Second Initial Flow	Hourly Standby	T-Out 8:2.9
) Second Final Flow	Mileage 164 mi LT 180	Comments Loaded touls
) Final Shut-In / 58 (	Sampler	aster the test
) Final Hydrostatic 2288	Straddle	For days off
· · · · · · · · · · · · · · · · · · ·	Shale Packer	
tial Open 30	C Extra Packer	Ruined Shale Packer
tial Shut-In60	Extra Recorder	Ruined Packer
nal Flow6 Ŏ		Extra Copies Sub Total
nal Shut-In 70	Day Standby	Total 1555
le de la compansión de la construcción de la constr	C Accessibility Sub Total1555	
proved By Ken (Bonc		MP/DST Disc't

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.



**Gas Volume Report** 

1515 Commerce Parkway · Hays, Kansas 67601

in ?	#2	Operator		Carte	DST No		
Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	Ins. of Water PSIG	Orifice Size	CF/D
0	1.8	1/8	6.063				
20	4,8	1/8	7.186	- 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			
2030	10	1/8	9,133	1997 A 2000 (			
10	10	1/4	38,708				
D	8,6	1/4	36.487				
50	8.6	1/4	36.487				
		Maria and Andrews			· · · · · · · · · · · · · · · · · · ·		
							1993 <u>(</u>
							(169 ⁴ )
100.00							
					oji 70 		
					for the second		
			199	100			
				194go	18 D		
		undat series			a o		
	· · · · · · · · · · · · · · · · · · ·						

Remarks:

(B) First Initial Flow       23       If Jars       250       T-Star         (C) First Final Flow       47       If Safety Joint       75       T-Ope         (D) Initial Shut-In       1780       I Circ Sub       T-Out	кв <u>2167</u> GL
Address JOO N. Broad way Ave Ste 2460 OK lakoma CCo. Rep / Geo. Ken LeBlancRig Dake 4Location: Sec.Low 335Interval Tested $5086$ Sold $5200$ Zone TestedPawneeAnchor Length114Drill Pipe Run $5087$ Top Packer Depth $5086$ Wt. Pipe Run $0$ Sotom Packer Depth $5086$ Wt. Pipe Run $0$ Total Depth $5086$ Wt. Pipe Run $0$ Total Depth $5200$ Chlorides $2500$ pm SystemBlow Description $IE: Fair Blow, ROB immediate, Built to b2 incTSI: No Blow BackFFi Strang Blow, BOB immediate, Built to 20 inchesFSI: No Blow BackRec2334Rec120Feet ofGCMRec120Feet of600Rec120Feet of600Rec1400Rec7519Word Bart117GravityMagasKoilRec7519Word SackCold1200Feet of900Go first Initial Flow2519Word Sately Joint75Co first Final Flow477Word Sately Joint75Top E1780Co first Start Initial Flow1780Co first Start Initial Flow1780Co first Start Initial Flow1780$	State     K.5       Mud Wt.     9       Vis     54       WL     8.8
Co. Rep / Geo.       Ken LeBlanc       Rig Dake 4         Location: Sec.       6       Twp 335       Rgs. 23 w       Co. Clark         Interval Tested $5086$ - $5200$ Zone Tested $Pawnee$ Anchor Length       114       Drill Pipe Run $5083$ Drill Collars Run $0$ Bottom Packer Depth $5086$ Wt. Pipe Run $0$ Bottom Packer Depth $5086$ Wt. Pipe Run $0$ Total Depth $5200$ chorides $2500$ ppm System         Blow Description $E: Fair Blow, R0B im Iminity Tes, Buil It to 62 inc       1100         TSI:       NO Blow Back         FF:       String Blow, BOB immedicate, Built to 20 inckes       FSI^2 \otimes NO Back         FSI:       NO Blow Back Aoil         Rec       2334       Feet of GCM 20\%gas       \%oli         Rec       120       Feet of GCM 12\%gas       \%oli         Rec       Feet of GCM 12\%gas       \%oli       MC         Rec       Feet of GCM 12\%gas       \%oli       MC MC $	
Location: Sec.       6       Twp       335       Rge.       23 w       Co.       Clark         Interval Tested $5086$ $-5200$ Zone Tested $Pawnee$ Anchor Length       114       Drill Pipe Run $5083$ Top Packer Depth $5086$ Wt. Pipe Run $0$ Bottom Packer Depth $5086$ Wt. Pipe Run $0$ Total Depth $5200$ Chlorides $7500$ ppm System         Blow Description $IE: Fair Blow, ROB in 11 minutes, Built to 62 in 0         TST:       No       Blow Back         FFi Strang Blow, BOB inmedicate, Built to 20 inches         FST: NO Blow Back         Feet of GCM       20 %gas         Rec       20       Feet of GCM         Rec       12 %gas       6 %oll         Rec       Feet of       GCM 12 %gas         Rec       Feet of       GOM 12 %gas %oll         Rec       Feet of       GOM I400       Ton 1         (A) Initial Hydrostatic       2519 1400       Ton 1         (B) First Initial Flow       21 1400       Ton 1         $	Mud Wt. $\overline{\mathcal{P}}, \overline{\mathcal{G}}$ Vis $5^{-2}$ / WL $\frac{8}{4}$
Interval Tested $50\ \ensuremath{\partial} \ensuremath{back} \ensuremat$	Mud Wt. $\overline{\mathcal{P}}, \overline{\mathcal{G}}$ Vis $5^{-2}$ / WL $\frac{8}{4}$
Anchor Length $1/4$ Drill Pipe Run $507$ Top Packer Depth $5081$ Drill Collars Run $0$ Bottom Packer Depth $5086$ Wt. Pipe Run $0$ Total Depth $5086$ Wt. Pipe Run $0$ Total Depth $5200$ Chlorides $7500$ ppm System         Blow Description $IE: Fair Blow_R B0B$ immediate, Built to $62$ inc $frither for form for the form inclust exploring for the form inclust explored for the form $	Vis WL
Top Packer Depth $5081$ Drill Collars Run $0$ Bottom Packer Depth $5086$ Wt. Pipe Run $0$ Total Depth $5200$ chlorides $7500$ ppm System         Blow Description $IE: Fair Blow_BOB in It minutes, Built to b2 incomposite to b2$	Vis WL
Bottom Packer Depth       50.86       Wt. Pipe Run       O         Total Depth       52.00       Chlorides       7500       ppm System         Blow Description       IE: Fair Blows R0B immediate, Built to 62 inconstruction       Frisher Blows Back         FFi Strang Blow, BOB immediate, Built to 20 inches       FFi Strang Blow, BOB immediate, Built to 20 inches         FSI: No Blow Back       Back         Rec       2334       Feet of CIP       %gas       %oil         Rec       20       Feet of CIP       %gas       %oil         Rec       20       Feet of COC M       12.%gas       6.%oil         Rec       Feet of       GOC M       12.%gas       %oil         Rec       Feet of       25.00       Mole       Mole         Rec       Feet of       GOC M       12.%gas       %oil         Rec       Feet of       %gas       %oil         Rec       75.00       Fon 1       Mc@       Mc@         (A) Initial Hydrostatic       25.19       @ Test       1400       Ton 1         (B) First Initial Flow       23       @ Jars       250       T-Star         (D) Initial Shut-In       17.80       I Circ Sub       T-Out         (D) In	WL 8.8
Total Depth       5200       Chlorides       7500       ppm System         Blow Description       IE: Fair Blow, B0B immediate, Built to 62 inc         Total Depth       STOC       ppm System         Blow Description       IE: Fair Blow, Bob immediate, Built to 62 inc         FSI: No Blow Back         FF: Strong Blow, Bob immediate, Built to 20 inches         FSI: No Blow Back         Rec_2334       Feet of GIP       %gas %oil         Rec_2334       Feet of GIP       %gas %oil         Rec_20       Feet of GCM       12 %gas %oil         Rec_120       Feet of GCM       12 %gas %oil         Rec_120       Feet of GCM       %gas %oil         Rec_190       Feet of %gas %oil         Rec_190       Feet of %gas %oil         Rec_190       For for feet of %gas %oil         Rec_190       Feet of %gas %oil         Rec_190       For feet of %gas %oil         All 117	Li
Blow Description $IE: Fair Blow, ROB in IIminutes, Built to 62 inc.         TSI:       No       Blow Back         FFi Strong Blow, BOB immediate, Built to 20 inches         FSI:       No Blow Back         Rec       20 inches         Peet of       GIM       20 inches         Rec       20 Feet of GCM       20 %gas       %oil         Rec       20 Feet of GCM       12 %gas       6 %oil         Rec       120 Feet of GCM       12 %gas       6 %oil         Rec       120 Feet of GCM       12 %gas       6 %oil         Rec       120 Feet of GCM       12 %gas       6 %oil         Rec       90 Feet of GCM       12 %gas       6 %oil         Rec       90 Feet of GCM       12 %gas       6 %oil         Rec       90 Feet of GCM       12 %gas       6 %oil         Rec       90 Feet of GCM       12 %gas       6 %oil         Rec       90 Feet of GCM       90 Feet of GCM       90 Feet of GCM       90 Feet of GCM         Rec       90 Feet of GCM         Rec       90 Feet of GCM       90 Feet of GCM       90 Feet of GCM       90 Feet of GCM       90 Feet of $	LCM 4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Les
F5T: NO BIOW Back         Rec       2334       Feet of $GIP$ %gas       %oil         Rec       20       Feet of $GCM$ 20%gas       %oil         Rec       120       Feet of $GCM$ 12%gas       %oil         Rec       120       Feet of $GCM$ 12%gas       %oil         Rec       Feet of $GCM$ $I2%gas$ %oil         Rec       Feet of       %gas       %oil         Rec       I       I       Gravity $MC$ $MC$ $MC$	
F5T: NO BIOW Back         Rec       2334       Feet of $GIP$ %gas       %oil         Rec       20       Feet of $GCM$ 20%gas       %oil         Rec       120       Feet of $GCM$ 12%gas       %oil         Rec       120       Feet of $GCM$ 12%gas       %oil         Rec       Feet of $GCM$ $I2%gas$ %oil         Rec       Feet of       %gas       %oil         Rec       I       I       Gravity $MC$ $MC$ $MC$	
Rec20Feet of $GCM$ $20\%$ gas $\%0it$ Rec120Feet of $GOCM$ 12%gas $6\%0it$ RecFeet of $12\%$ gas $6\%0it$ RecFeet of $\%$ gas $\%0it$ RecI $117$ Gravity $M^{1/2}$ (A) Initial Hydrostatic $2519$ IfTest(B) First Initial Flow $23$ IfJars $250$ (C) First Final Flow $47$ IfSafety Joint $75$ Tope(D) Initial Shut-In $1780$ IfCirc SubToutIf Out $6.3$ IfIfIfIf	
Rec       120       Feet of       6000 M       12 %gas       6 %oil         Rec       Feet of       %gas       %oil         Rec Total       1400       BHT       117       Gravity       MC API RW       MC @       MC         (A) Initial Hydrostatic       2519       1400       T-On I       1400       T-On I         (B) First Initial Flow       23       C Jars       250       T-Star         (C) First Final Flow       47       Safety Joint       75       T-Ope         (D) Initial Shut-In       1780       C Circ Sub       T-Pull	%water %mud
Rec       Feet of       %gas       %oil         Rec Total       1400       MC@       MC@         (A) Initial Hydrostatic       2519       Def Test       1400       T-On I         (B) First Initial Flow       23       Def Test       1400       T-Star         (C) First Final Flow       47       Def Safety Joint       T-Ope         (D) Initial Shut-In       1780       Def Circ Sub	%water 80%mud
Rec       Feet of       %gas       %oil         Rec Total       140       BHT       117       Gravity       M (API RW)       M (C)       M (C) <t< td=""><td>%water 82%mud</td></t<>	%water 82%mud
Rec Total $140$ BHT $117$ Gravity $NIG$ $NIG$ $NIG$ $NIG$ (A) Initial Hydrostatic $2519$ IP Test $1400$ T-On I(B) First Initial Flow $23$ IP Jars $250$ T-Star(C) First Final Flow $47$ IP Safety Joint $75$ T-Ope(D) Initial Shut-In $1780$ IP Circ SubT-Out	%water %mud
(A) Initial Hydrostatic       7519       1400       T-On 1         (B) First Initial Flow       23       1315       250       T-Star         (C) First Final Flow       47       Safety Joint       75       T-Ope         (D) Initial Shut-In       1780       Circ Sub       T-Out	%water %mud
(A) Initial Hydrostatic       7519       1400       T-On I         (B) First Initial Flow       23       1 Jars       250       T-Star         (C) First Final Flow       47       Safety Joint       75       T-Ope         (D) Initial Shut-In       1780       Circ Sub       T-Out	F Chlorides ppm
(C) First Final Flow         47         G Safety Joint         75         T-Ope           (D) Initial Shut-In         1780         Circ Sub         T-Out	ocation 10:415
(C) First Final Flow         47         Safety Joint         75         T-Ope           (D) Initial Shut-In         1780         Circ Sub         T-Pull	ted 11:46
(D) Initial Shut-In 1780	n_14:11
(E) Second Initial Flow (E) Second Initial Flow (E) Second Initial Flow	20:30
	ients
H) Final Hydrostatic 2476 D Structure	
	И Тоо!
	uined Shale Packer
	ined Packer
90	tra Copies
Final Shut-In Total Total Total	otal
Approved By Ken & BP C Sub Total 1905 MP/D	otal

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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.

## Koda Services, Inc.

#### Conductor and Rat Hole Drilling, Landfill Gas Drilling and Well Construction Nationwide



# Date Invoi

INVOICE

Date	Invoice #
9/18/2019	13173

to contract and a track of downstrong

AUG 19 2019

20

**Bill To** 

Jolen Operating Company 100 N. Broadway, Suite 2460 Oklahoma City, OK 73102

Legal Description	Ordered By	Terms	Field Ticket	Lease Na	ame	Drill Rig		
NW of Ashland, KS	David Hickman	Net 30	9569	Carter #1	1-6	Duke 4		
Item	Quantity		Description		Rate	Amount		
Conductor 20" Pipe 60" X 5' Dirt Removal Placement Grout Deliver Grout		Drilled 62' of 30" hol Furnished 62' of 20" Furnished 5' X 5' tinł Provided Labor and I cleanup Place Conductor Pipe Furnished grout Deliver grout to locat	conductor pipe torn Equipment for dirt	removal and	35.00 35.00 412.50 70.00 275.00 192.50 350.00	2,170.00 2,170.001 412.501 210.00 275.00 1,251.251 350.00		
Thank you for your b	usiness.	e na seu contra de la constante de la seconda Alexandre de la constante de la		Subt	total	\$6,838.75		
		etica nda Succession englise eticgo	••••••	Sale	s Tax (6.5%)	\$249.19		
				Tota	1	\$7,087.94		

P.O. Box 66 · Woodward, OK 73802-0066 · Phone: (580) 254-5019 · Fax: (580) 254-5908