KOLAR Document ID: 1471713

Confident	tiality R	equested:
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	& I FASE
	III JIONI	- DESCRIF HOR		a LLASL

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.xxxx) (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:
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used?
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set: Feet
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)
	Chloride content: ppm Fluid volume: bbls
Commingled Permit #:	Dewatering method used:
Dual Completion Permit #: 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 TwpS. R East West
Recompletion Date 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: 1471713

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	e of Cement	# Sacks Use	d		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	MPLE	TION:			ON INTERVAL:
Vented Sold (If vented, Subn	Used on Lease		Open Hole		Dually Comp. Commingled Top Bottom (Submit ACO-5) (Submit ACO-4)			Bollom	
	foration Perform Top Botto		Bridge Plug Type	Bridge Plug Set At					
TUBING RECORD:	Size:	Set At:		Packer At:					

Form	ACO1 - Well Completion
Operator	Chris Batchman Inc.
Well Name	MILLER 4
Doc ID	1471713

Tops

Name	Тор	Datum
Anhydrite	498	+1278
B.Anhydrite	523	+1253
Heebner	2915	(-1140)
Toronto	2932	(-1156)
Douglas	2948	(-1172)
Brown Line	3039	(-1263)
Lansing	3057	(-1281)
ВКС	3281	-(1505
Arbuckle	3292	(-1516)
RTD	3296	(-1520)

Form	ACO1 - Well Completion
Operator	Chris Batchman Inc.
Well Name	MILLER 4
Doc ID	1471713

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Type and Percent Additives
Surface	12.75	8.625	23	269	640 poz	3% cc 2% gel

d & Cement	MEW WELL	FIELD ORDER Nº C 470)54
IS AUTHORIZED BY:	BOX 438 · HAYSVILLE, KANSAS 67060 316-524-1225 DAT	774	19
	(NAME OF CUSTOMER)		
Address	City	State	
To Treat Well As Follows: Lease Miller	Well No. #4	Customer Order No	
Sec. Twp. Range	County Baston	State KS	

CONDITIONS: As a part of the consideration hereof it is agreed that Copeland Acid Service is to service or treat at owners risk, the hereinbefore mentioned well and is not to be held liable for any damage that may accrue in connection with said service or treatment. Copeland Acid Service has made no representation, expressed or implied, and no representations have been relied on, as to what may be the results or effect of the servicing or treating said well. The consideration of said service or treatment is payable. There will be no discount allowed subsequent to such date. 6% interest will be charged after 60 days. Total charges are subject to correction by our invoicing department in accordance with latest published price schedules.

Av

The undersigned represents himself to be duly authorized to sign this order for well owner or operator.

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED

	Well Owner or Operator	Agent	
QUANTITY	DESCRIPTION	UNIT	AMOUNT
10	Mileage Pump Truck	Yee	4000
2			110.00
	Tump Charge - Sustace Pipe		110000
325	Sades 60140 2% 621	1/25	3656 2
17	Calcium Chloride	4000	680 =
2112		125	12750
SYC	Bulk Charge	10	11553
			165-
	TOTAL BILLING		6069 28
	10	OUANTITY DESCRIPTION 10 Mileage Pump Truck Pump Charge - Surface Pipe 325 Sacks 60140 2% Gul 17 Calcium Chloride 342 Bulk Charge Bulk Truck Miles 15.0487×10miles = 150.487m Process License Fee on Gallons	QUANTITY DESCRIPTION UNIT COST 10 Mileage Pump Truck 1000000000000000000000000000000000000

I certify that the above material has been accepted and used; that the above service was performed in a good and workmanlike manner under the direction, supervision and control of the owner, operator or his agent, whose signature appears below 110

Copeland Represe	ntative. Grues C.		1000,42
Station	63	Chris Batchma	1
		Well Owner, Operator or Agent	

Remarks_

NET	30	DAYS
1.4.1-1	50	DAIS

RILOBITE	DRILL STEM T			/20S/11V	M/Dord		
TESTING, IN	n		10/	203/110	V/Dari	on	
			Mi	ller #4			
	Ellinw ood, Kansas 67526+9200		Job	Ticket: 66	6285	DS	T#: 1
	ATTN: Jim Musgrove		Tes	st Start: 20	019.07.2	27 @ 22:10:	00
GENERAL INFORMATION:	4						
Formation: Arbuckle			_		_		
Deviated: No Whipstock: Time Tool Opened: 23:36:17	ft (KB)				Conven Ken Sw		n Hole (Initial)
Time Test Ended: 04:48:02						it Bend/ 30	
Interval: 3261.00 ft (KB) To			Ref	erence Be	vations	· 177	7.00 ft (KB)
Total Depth: 3296.00 ft (KB) (T CI				9.00 ft (CF)
	ble Condition: Fair			KB t	o GR/Cl		3.00 ft
Serial #: 8365 Inside							
Press@RunDepth: 598.47 psig	@ 3262.00 ft (KB)		Capacity				psig
Start Date: 2019.07.27	-	2019.07.28	Last Cali			2019.07	
Start Time: 22:10:01	End Time:	04:48:02	Time On			.27 @ 23:36	
			Time Off	Btm: 2	2019.07	.28 @ 02:40):02
ISI 45 Minu FF 45 Minu	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 13	inches				
ISI 45 Minu FF 45 Minu	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back		inches	RESSUR		MMARY	
ISI 45 Minu FF 45 Minu FSI 60 Minu	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches	RESSUR Temp		MMARY	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressure ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	Time (Min.)	inches Pf Pressure (psig)	Temp (deg F)	Anno	otation	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressure ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	Time (Min.)	inches Pf Pressure (psig) 1624.02	Temp (deg F) 100.38	Anno Initial H	otation łydro-static	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressere ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95 ■ Time (Min.) 0	inches Pf Pressure (psig)	Temp (deg F)	Anno Initial H Open	htation Hydro-static To Flow (1)	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressere ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches Pressure (psig) 1624.02 97.52	Temp (deg F) 100.38 99.85 105.53 104.88	Anno Initial H Open Shut-Ir End Sł	tation łydro-static To Flow (1) n(1) nut- I n(1)	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressere ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89	Temp (deg F) 100.38 99.85 105.53 104.88 104.86	Anno Initial H Open Shut-Ir End Sh Open	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2)	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressere ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28	Anno Initial H Open Shut-Ir End Sh Open	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2)	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressure vs.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Anno hitial H Open Shut-Ir End Sh Open Shut-Ir End Sh	tation hydro-static To Flow (1) n(1) nut-In(1) To Flow (2) n(2) nut-In(2)	
ISI 45 Minu FF 45 Minu FSI 60 Minu Pressure vs.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95 Time (Min.) 0 1 5 30 75 76 76 123 183 184	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Anno hitial H Open Shut-Ir End Sh Open Shut-Ir End Sh	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2)	
ISI 45 Minu FF 45 Minu 60 Minu Pressere ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Anno hitial H Open Shut-Ir End Sh Open Shut-Ir End Sh	tation lydro-static To Flow (1) n(1) nut-In(1) To Flow (2) n(2) nut-In(2)	
ISI 45 Minu FF 45 Minu FSI 60 Minu	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back	tes/ total build 95 Time (Min.) 0 1 5 30 75 76 76 123 183 184	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Anno hitial H Open Shut-Ir End Sh Open Shut-Ir End Sh	tation lydro-static To Flow (1) n(1) nut-In(1) To Flow (2) n(2) nut-In(2)	
ISI 45 Minu FF 45 Minu 60 Minu Pressure vs.	Intes/ No blow back Intes/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time Total The formula The formula Th	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Anno hitial H Open Shut-Ir End Sh Open Shut-Ir End Sh	tation lydro-static To Flow (1) n(1) nut-In(1) To Flow (2) n(2) nut-In(2)	
ISI 45 Minu FF 45 Minu 60 Minu Presence ve.	Intes/ No blow back Intes/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time The former than the former than the former than the former the former than the former	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	
ISI 45 Minu FF 45 Minu FSI 60 Minu Presenter ve.	utes/ No blow back utes/ Blow to BOB in 3 1/2 minu utes/ No blow back Time Time Total formula Total formu	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mof/d)
ISI 45 Minu FF 45 Minu 60 Minu Presenter va Transmitter 20 20 20 20 20 20 20 20 20 2	Intes/ No blow back Intes/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time To be rependent Volume (bbl)	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mcf/d)
ISI 45 Minu FF 45 Minu FSI 60 Minu Presenter ve. Ker Front and a state of the state	Ites/ No blow back Ites/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Tome	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mcf/d)
ISI 45 Minu FF 45 Minu 60 Minu Presenter vs. Transmer vs.	Ites/ No blow back Ites/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time Volume (bbl) 13.05 % W 69% 4.35	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mcf/d)
ISI 45 Minu FF 45 Minu 60 Minu Presenter ve. Temperature and the second	Ites/ No blow back Ites/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time Volume (bbl) 13.05 % W 69% 4.35	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mcf/d)
ISI 45 Minu FF 45 Minu 60 Minu Presenter vs. Treaser v	Ites/ No blow back Ites/ Blow to BOB in 3 1/2 minu Ites/ No blow back Time Time Volume (bbl) 13.05 % W 69% 4.35	tes/ total build 95	inches Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Anno Initial H Open Shut-Ir End St Gopen Shut-Ir Final H	hydro-static To Flow (1) h(1) hut-In(1) To Flow (2) h(2) hut-In(2) hydro-static	Gas Rate (Mcf/d)

AON TR	LOBITE	DR	ILL STEM TEST REPO	RT	F	LUID SUMMAR
TESTING, INC.		Chris I	Batchman Inc	16/20S/1	1W/Barton	
		244 SI	E120 AVE	Miller #4	•	
			ood, Kansas	Job Ticket:	66285	DST#:1
		67526 ATTN:	Jim Musgrove	Test Start:	2019.07.27 @ 22:*	
Mud and Cushio	n Information	1				
					0.140	
/lud Type: Gel Che /lud Weight:	m 9.00 lb/gal		Cushion Type:	£1.	Oil API:	deg API
-	43.00 sec/qt		Cushion Length: Cushion Volume:	ft bbl	Water Salinity:	20000 ppm
Vater Loss:	7.99 in ³		Gas Cushion Type:	DDI		
Resistivity:	ohm.m		Gas Cushion Pressure:	poig		
	00.00 ppm		Gas custion ressure.	psig		
ilter Cake:	1.00 inches					
ecovery Inform	ation					
	1		Recovery Table		_	
	Lengt ft	th	Description	Volume bbl		
		930.00	MCW / M 5% W 95%	13.04	15	
		310.00	VSOCMW / O 1% M 30% W 69%	4.34		
		77.00	VSOCMW/ O 3% M 35% W 62%	1.08	30	
	Recovery Comn	nents: Re	covery Resistivity .315 ohms @ 73 deg.			



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Chris Batchman, Inc	C. ELEVATIONS
LEASE Miller #4	
FIELD	KB_1776'
LOCATION	DF
SEC <u>16</u> TWSP <u>20S</u> COUNTY <u>Barton</u> STATE	Medsurements are all
CONTRACTOR <u>Southwind Drilling</u> SPUD 07/24/2019 COMP 07	g co. (Rig #3) CAS I NG SURFACE 8 5/8"@ 269'
RTD 3296'	
MUD UP_2658'TYPE ML	
SAMPLES SAVED FROM	2800' TO <u>RTD</u>
DRILLING TIME KEPT FROM	2800' TO <u>RTD</u>
SAMPLES EXAMINED FROM	2800' TO RTD
	M 2950' TO RTD
	Jim Musgrove
FORMATION TOPS	- SAMPLES
Anhydrite	498 +1278
B, Anhydrite	523 +1253
Heebner Toronto	2915 (-1140) 2932 (-1156)
Douglas	2948 (-1172)
Brown Lime	3039 (-1263)
Lansing	3057 (-1281)
ВКС	3281 (-1505)
Arbuckle	3292 (-1516)
RTD	3296 (-1520)

(RILOBITE		ST REPORT
	GIND DOLCHINGTING	16/20S/11W/Barton
ESTING	TOTAL AND	Miller #4
	Ellinw ood, Kansas 67526+9200	Job Tickel: 66285 DST#:1
NOY.	ATTN: Jim Musgrove	Test Start: 2019.07.27 @ 22:10:00
GENERAL INFORMATION		
Formation: Arbuckte		
Deviated; No Whip Time Tool Opened: 23;36;17 Time Test Ended: 04;48;02	stock: ft (KB)	Test Type: Conventional Bottom Hole (Initial) Tester: Ken Swinney Unit No: 72 Great Bend/ 30
Interval: 3261.00 ft (KB)	To 3296.00 ft (KB) (TVD)	Reference Bevations: 1777.00 ft (KB)
	(KB) (TVD) chesHole Condition: Fair	1769.00 ft (CF) KB to GR/CF: 8.00 ft
Serial #: 8365 Inside		
	7 psig @ 3262.00 ft (KB) .07.27 End Date:	Capacity: psig
	:10:01 End Time:	2019.07.28 Last Calib.: 2019.07.28 04:48:02 Time On Btm: 2019.07.27 @ 23:36:02 Time Off Btm: 2019.07.28 @ 02:40:02
ISI 4	30 Minutes/Blow to BOB in 2 1/2 minutes/ 15 Minutes/No blow back 15 Minutes/Blow to BOB in 3 1/2 minutes/	
FSI	30 Minutes/ No blow back	
(source wa Thome	PRESSURE SUMMARY
j		(Min.) (psig) (deg F)
	1 -	0 1624.02 100.38 Initial Hydro-static 1 97.52 99.85 Open To Flow (1)
	1 1-	30 369.39 105.53 Shut-h(1) 75 665.53 104.88 End Shut-h(1)
ž – ř – j – j		76 415.89 104.86 Open To Flow (2)
		123 598.47 105.28 Shut-h(2)
		163 671.08 104.99 End Shut-In(2) 184 1575.96 105.06 Final Hydro-static
- / /	· · · · · · · · · · · · · · · · · · ·	
and also		
Rec	overy	Gas Rates
Long th (fr) Descrip		Chole (inches) Pressure (psig) Ges Rate (Mole)
930.00 MCW / M 5% W 9 310.00 VSOCMW / O 1%		
77.00 VSOCMW/ 0 3%		
Triobite Testing, Inc.	Ref. No: 66285	Printed: 2019.07.28 @ 10:03:33
	ROCK T	YPES
Dolprim		bon Sh
		le, red
	ACCESS	ORIES
RINGER · Sandstone		
	OTHER SY	MIBOLS
il Show DST		

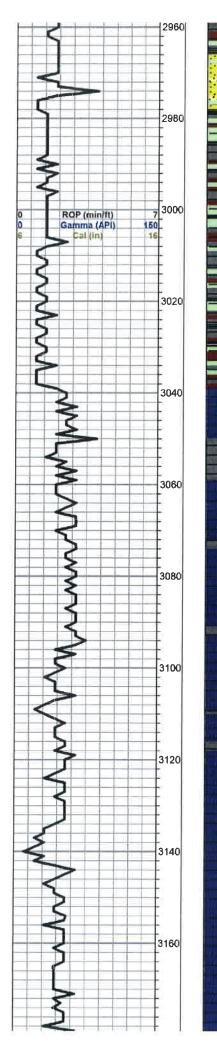
. ...



- Fair Show
 Poor Show
 Spotted or Trace
 Questionable Stn
 D Dead Oil Stn
 Fluorescence
 K Gas



Curve Track #1				GEOstrip VC Striplog	Total Ga	TG, C1	C5	
OP (min/ft)	<u> </u>							
amma (API)	Depth [Intervals				C1 (units		1	Arrow
al (in)	te la				C2 (units	s)		_
		60			Cl3 (Units	i)	-	_
		Lithology	Geological Descriptions		C4 (units	5)		_
		" -	Geological Descriptions			·		
	val							
	1 Inter							
	Cored Interval DST Interval							
1:240 Imperial ROP (min/ft)	00				0 1	1:240 Imp otal Gas (
Ganima (API)	150				Q	Cit (uni	UNU	
Cal (in)	16-	1 1			0	C2 (uni	is)	
					0	Ci (uni	(5)	
								Ē
								-
1	2820	1 1						_
1		1 1						-
								_
2								
$+ \cup + + -$		1				1		-
3	2840	1 1						Ξ
	++++	1 1						-
2		1 1						
		1 1						-
		1 1						
5		1 1						-
2	2860	1 1						
		1 1						_
1						+-+-+-		-
5			.S, tan, foss, f- medxln foss , dk brn/ b	orn stain insfo no				_
				orn stairr, risio, no				-
~			odor					_
	2880							-
	2000							
								-
<			.S, tan, cream, fxl, foss. in pt, chalky in	nt no shows				Ξ
			ie, een, ereann, ini, iossi in piç enaiky in	. ps/110 3110495				Ì
C								[
2	2900							
3		and the second s	.S, a/a, tr. gry chert		_			
								Ē
2								
5				1140.0				
			HEEBNER 2916.0 (-1	1140.0)			+ +-+-	
~	2920							Ē
>		internet in the second second	h. Black carb					
>		in the second						_
			<u> </u>	1156 0)				_
\sim		And and a state of the second state of the sec		100.01				
C			C white cropp ful challes "crumeles"	poor vir	_			_
2	2940		S, white, cream, fxl, chalky, "crumbly"	poor vis.				
~	2040		orosity, no shows					
5				470 0				
THE			OOUGLAS 2948.0 (-1	11/2.0]				
		Statistics of the local division of the						
		Contraction of the local division of the loc	h, gry, green, rusty brn, maroon, silty	1				-
		And in case of the local division of the loc						Ĩ



Tr. sd., gry, green, silty in pt, tr. brn, dk brn stain, nsfo, no odor

Sh, gry/ greenish silty

Sh, gry, greenish, silty

BROWN LIME 3039.0 (-1263.0)

LS, tan brn, fxl, slightly cherty

Sh, gry, green shale
LANSING 3057.0 (-1281.0)

LS, tan, fxl, foss, iun pt, poor vis. porosity, dk brn stain, nsfo, Ft. odor

Tr. gry, sh

0

LS, tan, ool, f- med xln , chalky, poor vis. porosity, poor/ light brn sptty stain , nsfo, no odor

Sh, gry, green

LS, tan, ool, f- med xln, chalky, poor vis. porosity, poor / lt. brn sptty stain , nsfo, no odor

Sh, gry/ blk

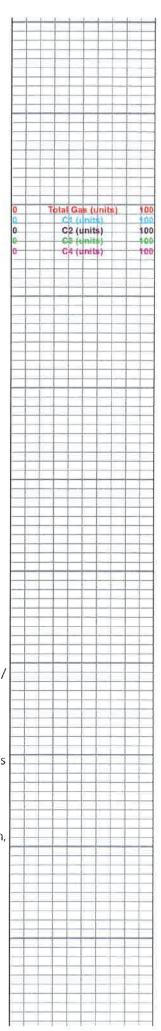
Ö

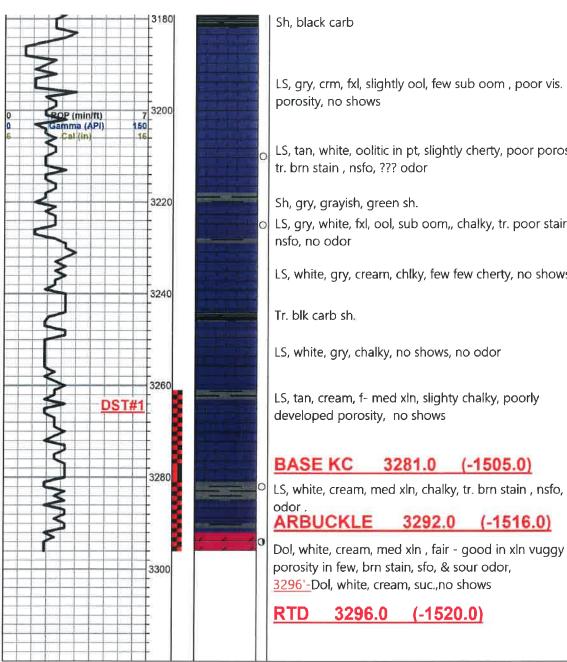
LS, white, gry, ool/ foss, chalky, poor porosity, no shows

LS, tan, white, cream, ool, sub oom, brown-dk brn stain, nsfo, no odor

LS, tan, sub oom, fr. porosity, chalky in pt, no shows

LS, white, gry, chlky, dense





	DST#1 3261-3296	
	30-45-45-60	
	Ist Open: BOB 2.5 mins.	0
osity,	2nd Open: BOB 3.5 mins.	Ð
in,	<u>Recovery:</u> 77' very slight oil cu	t
vs	muddy water (3%O, 62%W, 35% M)	I I I I I I I
	310' SLOCMW (1%O, 69%W, 30% M)	i î î î î î î î î
	930' MUDDY WATER (95%W, 5%M)	
, ft.	Pressures: ISIP 665 psi FSIP 571 psi	I I I'II'I I I
/	IFP 97-369 psi FFP 415-598 psi HSH 1624-1575 psi	

d & Cement	MEW WELL	FIELD ORDER Nº C 470)54
IS AUTHORIZED BY:	BOX 438 · HAYSVILLE, KANSAS 67060 316-524-1225 DAT	774	19
	(NAME OF CUSTOMER)		
Address	City	State	
To Treat Well As Follows: Lease Miller	Well No. #4	Customer Order No	
Sec. Twp. Range	County Baston	State KS	

CONDITIONS: As a part of the consideration hereof it is agreed that Copeland Acid Service is to service or treat at owners risk, the hereinbefore mentioned well and is not to be held liable for any damage that may accrue in connection with said service or treatment. Copeland Acid Service has made no representation, expressed or implied, and no representations have been relied on, as to what may be the results or effect of the servicing or treating said well. The consideration of said service or treatment is payable. There will be no discount allowed subsequent to such date. 6% interest will be charged after 60 days. Total charges are subject to correction by our invoicing department in accordance with latest published price schedules.

Av

The undersigned represents himself to be duly authorized to sign this order for well owner or operator.

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED

	Well Owner or Operator	Agent	
QUANTITY	DESCRIPTION	UNIT	AMOUNT
10	Mileage Pump Truck	Yee	4000
2			110.00
	Tump Charge - Sustace Pipe		110000
325	Sades 60140 2% 621	1/25	3656 2
17	Calcium Chloride	4000	680 =
2112		125	12750
SYC	Bulk Charge	10	11553
			165-
	TOTAL BILLING		6069 28
	10	OUANTITY DESCRIPTION 10 Mileage Pump Truck Pump Charge - Surface Pipe 325 Sacks 60140 2% Gul 17 Calcium Chloride 342 Bulk Charge Bulk Truck Miles 15.0487×10miles = 150.487m Process License Fee on Gallons	QUANTITY DESCRIPTION UNIT COST 10 Mileage Pump Truck 1000000000000000000000000000000000000

I certify that the above material has been accepted and used; that the above service was performed in a good and workmanlike manner under the direction, supervision and control of the owner, operator or his agent, whose signature appears below 110

Copeland Represe	ntative. Grues C.		1000,42
Station	63	Chris Batchma	1
		Well Owner, Operator or Agent	

Remarks_

M	ET	30	DAYS
1.1		00	PAIO

RILOBITE		L STEM TE	IST REP		0001441			
TESTING		tchman Inc		16/	20S/11V	v/вало	on	
	1 - · · · - ·			Mi	ler #4			
	67526+92	d, Kansas 200		Job	Ticket: 66	6285	DST	ſ#: 1
N/SAM	ATTN: J	Jim Mu sgrove		Tes	t Start: 20)19.07.27	' @ 22:10:0	0
GENERAL INFORMATION:	+							
Formation: Arbuckle				-		o		
Deviated: No Whip Time Tool Opened: 23:36:17 Time Test Ended: 04:48:02	stock:	ft (KB)		Tes	ter: I	Ken Swir		Hole (Initial)
Interval: 3261.00 ft (KB)	To 3296.00 ft (Ki	B) (TVD)		Ref	erence Be	evations:	1777	.00 ft (KB)
Total Depth: 3296.00 ft (_,(,						.00 ft (CF)
Hole Diameter: 7.80 inc	hesHole Condition:	Fair			KB t	io GR/CF:	8	.00 ft
Serial #: 8365 Inside	<u>}</u>							
		2.00 ft (KB)	0040 07 00	Capacity			0040.07	psig
		Date: Time:	2019.07.28 04:48:02	Last Cali Time On		2019 07 '	2019.07 27 @ 23:36	
	.10.01	THE G.	04.40.02	Time Off			28 @ 02:40	
FSI 6	60 Minutes/ No blow	back	s/ total build 95 i	ncnes				
FSI 6	60 Minutes/ No blow	back		ncnes				
	ssare vs. Time			Pf	RESSUR			
Pre	ssare vs. Time	back	Time		RESSUR Temp (deg F)	RE SUM		
Pres XSTS Pressure	ssare vs. Time	T	Time (Min.) 0	Pressure (psig) 1624.02	Temp (deg F) 100.38	Annot Initial Hy	ation /dro-static	
	ssare vs. Time	2 mgm&n **	Time (Min.) 0 1	Pressure (psig) 1624.02 97.52	Temp (deg F) 100.38 99.85	Annot Initial Hy Open Te	ation /dro-static o Flow (1)	
Pres	ssare vs. Time	Terependure Terependure data	Time (Min.) 0	Pressure (psig) 1624.02	Temp (deg F) 100.38 99.85 105.53	Annot Initial Hy Open Te Shut-In(ation vdro-static oFlow(1) 1)	
Pro-	ssare vs. Time	2 mgm&n **	Time (Min.) 0 1 30 75	Pressure (psig) 1624.02 97.52 369.39	Temp (deg F) 100.38 99.85 105.53 104.88 104.88	Annot hitial Hy Open To Shut-In(End Shu Open To	ation vdro-static oFlow(1) 1)	
	ssare vs. Time	2 regendare 	Time (Min.) 0 1 30 75	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28	Annot hitial Hy Open To Shut-In(End Shu Open To Shut-In(ation /dro-static o Flow (1) 1) 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
CS0 CS0 CS0 CS0 CS0 CS0 CS0 CS0 CS0 CS0	ssare vs. Time	2 regendare 	Time (Min.) 0 1 30 75 76 123 183	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Annot hitial Hy Open To Shut-In End Shu Open To Shut-In End Shu	ation /dro-static o Flow (1) 1) ut-h(1) o Flow (2) 2) ut-h(2)	
	REFERE VS. TIME		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Annot hitial Hy Open To Shut-In End Shu Open To Shut-In End Shu	ation /dro-static o Flow (1) 1) 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
Pro-	ASHIC VS. TÌMLC	2 regendare 	Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Annot hitial Hy Open To Shut-In End Shu Open To Shut-In End Shu	ation /dro-static o Flow (1) 1) ut-h(1) o Flow (2) 2) ut-h(2)	
Pro-	ASHIC VS. TÌMLC		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Annot hitial Hy Open To Shut-In End Shu Open To Shut-In End Shu	ation /dro-static o Flow (1) 1) ut-h(1) o Flow (2) 2) ut-h(2)	
Pro-	ASHIC VS. TÌMLC		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99	Annot hitial Hy Open To Shut-In End Shu Open To Shut-In End Shu	ation /dro-static o Flow (1) 1) ut-h(1) o Flow (2) 2) ut-h(2)	
Pro-	REFE VE, TÈRIE TER (SAM)		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Final Hy	ation vdro-static p Flow (1) 1) ut-h(1) p Flow (2) 2) ut-h(2) dro-static	
Pro-	RENERC V.S. TÜRBLE THE (V.S.		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation vdro-static p Flow (1) 1) ut-h(1) p Flow (2) 2) ut-h(2) dro-static	Gas Rale (Mcf/d)
Pre-	ASHERC V.Y. TÈRAC ACT DE ACT		Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation rdro-static to Flow (1) 1) ut-In(1) to Flow (2) 2) ut-In(2) dro-static	Gas Rate (Mcf/d)
Pre- tre Pre-	ARMERE V.S. TÜRDE XEEP 10 XEEP 10 XE	Treesmakers	Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation rdro-static to Flow (1) 1) ut-In(1) to Flow (2) 2) ut-In(2) dro-static	Gas Rate (Mcf/d)
Pro- TOTO	REMETE V.S. TÜRD.C TERPERENT TE	Volume (bbl) 13.05	Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation rdro-static to Flow (1) 1) ut-In(1) to Flow (2) 2) ut-In(2) dro-static	Gas Rate (Mcf/d)
Pre- transformation transfor	REMETE V.S. TÜRD.C TERPERENT TE	Volume (bbl) 13.05 4.35	Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation rdro-static to Flow (1) 1) ut-In(1) to Flow (2) 2) ut-In(2) dro-static	Gas Rate (Mcf/d)
Pre- Tra	REMETE V.S. TÜRD.C TERPERENT TE	Volume (bbl) 13.05 4.35	Time (Min.) 0 1 30 75 76 123 183 183 184	Pressure (psig) 1624.02 97.52 369.39 665.53 415.89 598.47 671.08	Temp (deg F) 100.38 99.85 105.53 104.88 104.86 105.28 104.99 105.06	Annot hitial Hy Open To Shut-h(End Shu Gpen To Shut-h(End Shu Final Hy	ation rdro-static to Flow (1) 1) ut-In(1) to Flow (2) 2) ut-In(2) dro-static	Gas Rate (Mcf/d)

RILOBI		ILL STEM TEST REPO	RT	F			
		Batchman Inc	16/20S/11	W/Barton			
I ESTI	NG , INC. 244 S	E 120 AVE	Miller #4				
		ood, Kansas S+9200	Job Ticket:	66285	DST#: 1		
NG SN		: Jim Musgrove	Test Start:	2019.07.27 @ 22: [.]	10:00		
Aud and Cushion Info	rmation						
/ud Type: Gel Chem		Cushion Type:		Oil API:	deg API		
/ud Weight: 9.00 lb/	gal	Cushion Length:	ft	Water Salinity:	20000 ppm		
iscosity: 43.00 se	-	Cushion Volume:	bbl	,	P		
/ater Loss: 7.99 in ³	1	Gas Cushion Type:					
esistivity: of	ım.m	Gas Cushion Pressure	psig				
alinity: 6000.00 pp Iter Cake: 1.00 inc							
Iter Cake: 1.00 ind	ines						
ecovery mornauon		Recovery Table					
Γ	Length	Description	Volume	1			
-	ft		bbl				
-	930.00	MCW / M 5% W 95%	13.04				
-	310.00 77.00	VSOCMW / O 1% M 30% W 69% VSOCMW / O 3% M 35% W 62%	4.34				
Reco	very Comments: R	ecovery Resistivity .315 ohms @ 73 deg,					



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Chris Batchman, Inc	C. ELEVATIONS
LEASE Miller #4	
FIELD	KB_1776'
LOCATION	DF
SEC <u>16</u> TWSP <u>20S</u> COUNTY <u>Barton</u> STATE	Medsurements are all
CONTRACTOR <u>Southwind Drilling</u> SPUD 07/24/2019 COMP 07	g co. (Rig #3) CAS I NG SURFACE 8 5/8"@ 269'
RTD 3296'	
MUD UP_2658' TYPE ML	
SAMPLES SAVED FROM	2800' TO <u>RTD</u>
DRILLING TIME KEPT FROM	2800' TO <u>RTD</u>
SAMPLES EXAMINED FROM	2800' TO RTD
	M 2950' TO RTD
	Jim Musgrove
FORMATION TOPS	- SAMPLES
Anhydrite	498 +1278
B, Anhydrite	523 +1253
Heebner Toronto	2915 (-1140) 2932 (-1156)
Douglas	2948 (-1172)
Brown Lime	3039 (-1263)
Lansing	3057 (-1281)
ВКС	3281 (-1505)
Arbuckle	3292 (-1516)
RTD	3296 (-1520)

<image/>		
Testing in the set is a constrained base in the set is constrained base in the set is a constrained b		LL STEM TEST REPORT
Bitwood Karwas Juit Note Bitwood Karwas Juit State: 6025 Bitwood Karwas Juit State: 6025 ATN: Jon Mungrovs Test State: 2019/07.27 (§ 22:10.00) GENERAL INFORMATION: Test Type: Convertional Bottom Hole (Ntate) The Tool Open G2:30617 Test State: 2019/07.27 (§ 22:10.00) GENERAL INFORMATION: Test Type: Convertional Bottom Hole (Ntate) The Tool Open G2:30617 Test State: 2019/07.27 (§ 02:10.00) The Tool Open G2:30617 Test State: 2019/07.27 (§ 02:00) The Tool Open G2:30617 Test State: 2019/07.27 (§ 02:00) Herval: 2019/07.27 (§ 02:00) Bitwit Date: 2019/07.27 (§ 02:00) Start Date: 2019/07.27 (§ 02:00) Bitwit The: 2019/07.28 (§ 02:40:02) Bitwit The: 2019/07.28 (§ 02:40:02) <td></td> <td>atchman hc 16/20S/11W/Barton</td>		atchman hc 16/20S/11W/Barton
Image: Second control of the second control of th		
GENERAL INFORMATION Formation: A thurd is Devided: The Structure Devided: No Whipstock: ft (K8) The Tool Opened 23.35.17 Tastic:: Xen SW Inny The Ote Denker: 7.80. Inhoes/Ide Conditor:: Fair KB to GR/CF:: 8.00 ft (KB) Start Start: The: 2219.07.2 End Denk 2019.07.28 End Denk Bit If the Deak 2019.07.2 End Denk 2019.07.28 End Denk FEST COMMENT: F 30 Multee/ Bow to BOB in 2.12 minutee/ total build 52 inches FS End Multee/ No blow back FS1 60 Multee/ Mo blow back The Of Barc 2019.07.28 (g. Devid Form(1)) 103.39 (g. Devid Form(1)) <tr< td=""><td></td><td></td></tr<>		
Formation: Arbeidate Deviated: No Withstote: ft (KS) Test Type: Conventional Bottom Hole (nkild) The Tod Opened 2336177 The Tod Opened 2336177 Test Type: Conventional Bottom Hole (nkild) The Tod Opened 2336177 The Tod Opened 2336177 Test Type: Conventional Bottom Hole (nkild) The Tod Opened 2336177 Test Type: Conventional Bottom Hole (nkild) 179500 ft (KB) The Tod Opened 2336177 Test Type: Conventional Bottom Hole (nkild) 179500 ft (KB) The Tod Tome 2336177 The Tod Tome 2336177 Bottom Hole (nkild) 179500 ft (KB) The Tod Tome 2336177 The Tod Date: 2019.07.23 Last Calib.: 2019.07.28 (pt 2.40.02) Start The: 2019.07.27 End Date: 2019.07.28 (pt 2.40.02) The Off Bmr. 2019.07.28 (pt 2.40.02) THE To Monteel Houre ID BOR 10 BOB ID A: 122 minuteel ID Id Bod ID A: 122 minuteel ID ID A: 122 mi		
Deviation: No Witherson: ft (KB) The St. Type: Conversional Bottom Hole (Hald) The Tool Cycened 238617 The St. Type: Conversional Bottom Hole (Hald) Tool trime: 72 Creat Bond 30 Interval: 3280.00 ft (KB) To 3296.00 ft (KB) TVD) Tool St. Type: Conversional Bottom Hole (Hald) The Tool Cycened 2500 Tradition: 769 Incheside Condition: Fair Kin Store Hole Heid Damker: 7.89 Incheside Condition: Fair Kill to GR/CF: 8.00 ft Steri Date: 2019.07.27 End Date: 2019.07.28 Last Calls: 2019.07.28 (23.396.2 Steri Date: 2019.07.29 End Date: 2019.07.28 (23.296.2 2019.07.28 (23.296.2 Test Type: Steri Date: 2019.07.28 (23.296.2 The Of Bine: 2019.07.28 (23.296.2 Test Tope: 30 Mindee/ Bore to BOR in 3.12 minutee/ Idual build Sti inches FF 45 Minutee/ No bloce build. The Of Bine: 2019.07.28 (20.00.2.92.2) Test Type: Start Date: 76 45.59 (10.46.20 The Of Bine: 2019.07.28 (20.00.2.92.2) Test Type: Start Date: 76 45.59 (10.46.20 The Of Bine: 2019.07.28 (20.00.2.92.2)	GENERAL INFORMATION:	
The Ford Opened 23:817 The Surface With	Formation: Arbuckle	
Interval: 2261.00 ft (KB) To 2266.00 ft (KB) To 1777.00 ft (KB) Total Degin: 2201.00 ft (KB) To 1769.00 ft (KB) 1769.00 ft (KB) Hole Damate: 720 ft (KB) To 1769.00 ft (KB) 1769.00 ft (KB) Serial #: 585 ft Inside 2019.07.20 Last Calto: 2019.07.20 ft (KB) Start Date: 2019.07.20 ft (KB) To Edd Calto: 2019.07.20 ft (KB) 2019.07.20 ft (KB) Start Time: 2019.07.20 ft (KB) To Edd Calto: 2019.07.20 ft (KB) 2019.07.20 ft (KB) Start Time: 2019.07.20 ft (KB) To Other: 2019.07.20 ft (KB) 2019.07.20 ft (KB) 2019.07.20 ft (KB) Start Time: 2019.07.20 ft (KB) To Other: 2019.07.20 ft (KB) 2019.07.20 ft (KB) 2019.07.20 ft (KB) TeST COMMENT: F 30 Minutes/ Row to BOB in 312 minutes/ total buil 132 inches Time of Bm: 2019.07.20 ft (KB) 2019.07.20 ft (KB) FF 45 Minutes/ Row to BOB in 312 minutes/ total buil 95 inches 105.30 ft (KB) 106.30 ft (KB) 106.30 ft (KB) 106.30 ft (KB) FF 45 Minutes/ Row to BOB in 312 minutes/ total buil 95 inches 105.30 ft (KB) 106.30 ft (KB) 106.30 ft (KB) 106.30 ft (KB)	Time Tool Opened: 23:36:17	Tester: Ken Swinney
Total Desh: 226.00 ft (KB) (TV0) 1760.00 ft (GF) Heis Dameter: 7.00 inchesHole Condition: Fair KB to GRVCF: 6.00 ft Serial #: 539.47 psig (g) 222100 / 22 End Date: 2019.07.27 End Date: 2019.07.27 End Date: 2019.07.27 End Date: 2019.07.27 End Date: 2019.07.28 Lest Callo ST. 2019.07.24 2019.07.27 2019.07.28 Date: 2019.07.27 2019.07.27 2019.07.27 2019.07.28 Date: 2019.07.28	Interval: 3261.00 ft (KB) To 3296.00 ft (KB	
Press@PanDiaphit: 598.47 paig 3262.00 II (KB) Capacity: paig Start Date: 2019.07.27 End Date: 2019.07.28 Last Cabi: 2019.07.28 (g) 02.40.02 Start Time: 22:10.01 End Time: 04:48.02 Time On Bim: 2019.07.28 (g) 02.40.02 TEST COMMENT: F 30 Minutes/ Blow back Time On Bim: 2019.07.28 (g) 02.40.02 TEST COMMENT: F 30 Minutes/ No blow back FF 45 Minutes/ No blow back FF 45 Minutes/ Blow to BOB in 3 1/2 minutes/ total baid 132 inches FF 45 Minutes/ No blow back FF 45 Minutes/ No blow back FF 45 Minutes/ No blow back Time On Bim: 2019.07.28 (g) 02.40.02 Time On Bim: 2019.07.28 (g) 02.40.02 Time On Bim: 2019.07.28 (g) 02.40.02 2019.07.28 (g) 02.40.02 Time On Bim: FF 45 Minutes/ No blow back FF 45 Minutes/ No blow back FF 45 Minutes/ No blow back FF 45 Minutes/ No blow back Time On Bim: Pressure Time On Bim: Pressure Time On Bim: 2019.07.28 (g) 02.40.02 105.05 File 0.05 Bit 10.10 Time On Bim: 2019.07.28 (g) 02.40.02 90.85 (G	Total Depth: 3296.00 ft (KB) (TVD)	1769.00 ft (CF)
Ster Date: 2019.07.27 End Date: 2019.07.28 Lasi Calib.: 2019.07.27 (g) 23.36.02 Ster Time: 2210.01 End Time: 0448.02 Time Oft Bm: 2019.07.28 (g) 02.40.02 TEST COMMENT: F 30 Minutes/ No blow back. F F 45 Minutes/ No to BOB in 2 1/2 minutes/ total build 132 inches FSI 46 Minutes/ No tolow back. F F 90 Minutes/ No blow back. FSI 60 Minutes/ No blow back. F F 10 minutes/ total build 95 inches FSI 60 Minutes/ No blow back. F F 10 minutes/ total build 95 inches FSI 60 Minutes/ No blow back. F F 10 minutes/ total build 95 inches FSI 60 Minutes/ No blow back. F F 10 minutes/ total build 95 inches FSI 60 Minutes/ No blow back. F F 10 minutes/ total build 95 inches Ster Time PRESSURE SUMMARY F 99.85 105.53 Stuck-1(2) 105.30 580.47 10 S20 Stuck-1(2) 10 S20 Stuck-1(2) 105.30 580.47 10 S20 Stuck-1(2) 10 S20 F	Serial #: 8365 Inside	
Start Time: 22:10:01 End Time: 04:48:02 Time On Bim: 2019:07:27 (# 22:36:02 TEST COMMENT: F 30 Minutes/ Brow to BOB in 2:12 minutes/ total build 132 inches E 45 Minutes/ No blow back FF 45 Minutes/ Brow to BOB in 3:12 minutes/ total build 95 inches E 100 Minutes/ Brow to BOB in 3:12 minutes/ total build 95 inches F8 40 Minutes/ No blow back F 45 Minutes/ No blow back F9 45 Minutes/ No blow back F 45 Minutes/ No blow back F9 45 Minutes/ No blow back F 45 Minutes/ No blow back F9 45 Minutes/ Mo biow back F Annotation F9 45 Minutes/ Mo biow back F F Annotation F9 45 Minutes/ Mo biow back		
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Is4 Is75.96 It55.06 Final Hydro-static Image: State State Image: State State State State State State State (Mode) Image: State State State State (Mode) S30.00 MCW / M 5% W 95% I3.05 Image: State State State State State (Mode) S10.00 VSOCMW / O 1% M 30% W 89% 4.35 Chole (modes) Pressure (psig) Ges Rate (Mode)		
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	Trilobite Testing, Inc Ref. 1	No: 66285 Printed: 2019.07.28 @ 10:03:33
		ROCK TYPES
ROCK TYPES	Dolprim shale, grn	Carbon Sh Carbon Sh
Dolprim shale, grn Carbon Sh Carbon Sh	Lmst fw<7 shale, gry	shale, red
Dolprim shale, grn Carbon Sh Ss		ACCESSORIES
Dolprim	RINGER	
Dolprim shale, grn Carbon Sh Ss Lmst fw<7	Sandstone	
Dolprim shale, grn shale, grn shale, grn shale, grn shale, red shale, red		
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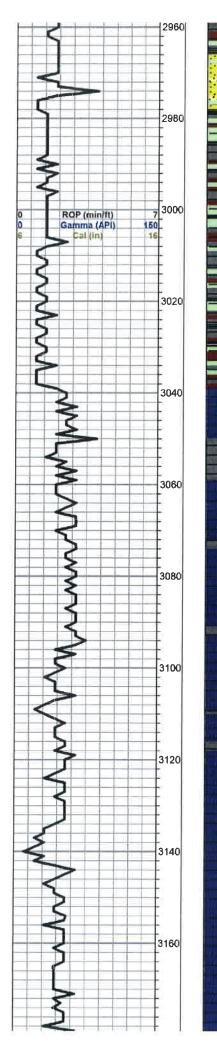


- Fair Show
 Poor Show
 Spotted or Trace
 Questionable Stn
 Dead Oil Stn
 Fluorescence
 Case

- **∗** Gas



					Printed by GEOstrip VC Striplog	1.10	reio	n 4	0.9.1	5 (115)	N (1)	
Curve Track #1				Т	Philled by GEOsinp VC Stripio		1510	11 4.	G, C	0 (ww	/w.gr 5	si.ca)
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3					LS, tan, cream, fxl, foss. in pt, chalky in pt, no shows				1			
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~ ~ ~ ~ ~ ~			No. 1		LS, a/a, tr. gry chert				-		1	
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5	-			3	TEEDINEIX 2310.0 (-1140.0)							
2	2920		HERE CONTAINS		Sh. Black carb			1	-			-
2	-	1						-	-		+	
2	-	- 8										
	1	ji			<u>TORONTO 2932.0 (-1156.0)</u>							
7						_						
	-				LS, white, cream, fxl, chalky, "crumbly" poor vis.						H	
2	2940		and the first		porosity, no shows							
5												
2					DOUGLAS 2948.0 (-1172.0)							
	-					_						
	-	-			Sh, gry, green, rusty brn, maroon, silty	_					11	
	F I		1000	ļ				-1-	-	-	t-	



Tr. sd., gry, green, silty in pt, tr. brn, dk brn stain, nsfo, no odor

Sh, gry/ greenish silty

Sh, gry, greenish, silty

# BROWN LIME 3039.0 (-1263.0)

LS, tan brn, fxl, slightly cherty

Sh, gry, green shale
LANSING 3057.0 (-1281.0)

LS, tan, fxl, foss, iun pt, poor vis. porosity, dk brn stain, nsfo, Ft. odor

Tr. gry, sh

0

LS, tan, ool, f- med xln , chalky, poor vis. porosity, poor/ light brn sptty stain , nsfo, no odor

### Sh, gry, green

LS, tan, ool, f- med xln, chalky, poor vis. porosity, poor / lt. brn sptty stain , nsfo, no odor

Sh, gry/ blk

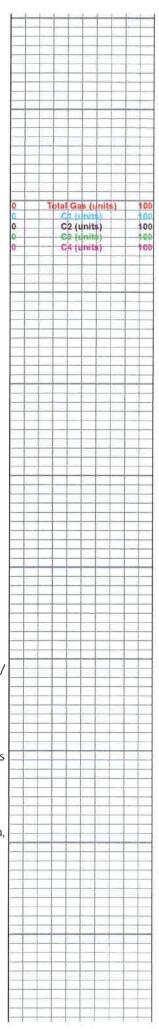
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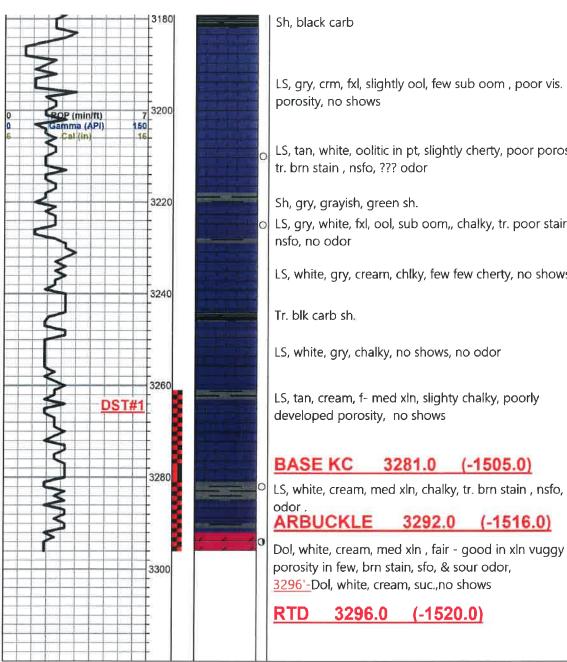
LS, white, gry, ool/ foss, chalky, poor porosity, no shows

LS, tan, white, cream, ool, sub oom, brown-dk brn stain, nsfo, no odor

LS, tan, sub oom, fr. porosity, chalky in pt, no shows

LS, white, gry, chlky, dense





	DST#1 3261-3296	
	30-45-45-60	
	Ist Open: BOB 2.5 mins.	10
osity,	2nd Open: BOB 3.5 mins.	Ð
in,	<u>Recovery:</u> 77' very slight oil cu	t
vs	muddy water (3%O, 62%W, 35% M)	<b>IIIII</b>
	310' SLOCMW (1%O, 69%W, 30% M)	ITTTT
	930' MUDDY WATER (95%W, 5%M)	tion i frid i
, ft.	Pressures: ISIP 665 psi FSIP 571 psi	1111111
/	IFP 97-369 psi FFP 415-598 psi HSH 1624-1575 psi	