#### KOLAR Document ID: 1418548

Confident	tiality Re	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 -	<ul> <li>DESCRIPTION</li> </ul>	<b>OF WELL &amp;</b>	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.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:
☐ Oil ☐ WSW ☐ SWD □ Gas □ DH □ EOR	Elevation: Ground: Kelly Bushing:
Gas DH EOR	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	QuarterSecTwpS. R East West
Spud Date orDate Reached TDCompletion Date orRecompletion DateRecompletion 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: 1418548

Operator Nan	ne:				Lease Name:	Well #:
Sec	Twp	_S. F	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		<u> </u>	Yes No			L	og Forn	nation (Top), De	pth and	d Datum	Sample	
(Attach Additiona				(		N	lame	<del>)</del>			Тор	Datum
Samples Sent to Ge Cores Taken Electric Log Run Geologist Report / M List All E. Logs Run:	Aud Logs	vey		∕es ∟ Νο ∕es □ Νο ∕es □ Νο ∕es □ Νο	1							
CASING RECORD New Used Report all strings set-conductor, surface, intermediate, production, etc.												
Purpose of String		ze Hole Drilled	Si	ze Casing et (In O.D.)		Weight _bs. / Ft.		Setting Depth	Type o Cemei		# Sacks Used	Type and Percent Additives
Purpose:		Depth	Turo			NTING / S	ING / SQUEEZE RECORD s Used Type and Percent Additives					
Perforate	Тор	Bottom	тур	Type of Cement					туре	anu re	Acent Additives	
Protect Casing Plug Back TD Plug Off Zone												
<ol> <li>Did you perform a h</li> <li>Does the volume of</li> <li>Was the hydraulic fractional first Production</li> </ol>	the total base acturing treat	e fluid of the hy ment informat	ydraulic fi ion subm	acturing treat	emical disclo		stry?	Gas Lift	No (If	No, skip No, fill c	o questions 2 an o question 3) out Page Three o	
Estimated Production Per 24 Hours	1	Oil B	bls.	Gas	Mcf	,	Water Bbls. Gas-Oil Ratio Grav			Gravity		
DISPOSIT	TION OF GAS	8:			METHO		1PLE	TION:			PRODUCTIC Top	N INTERVAL: Bottom
Vented So	old Use	ed on Lease		Open Hole Perf.			Understand     Commingled       (Submit ACO-5)     (Submit ACO-4)					
Shots Per         Perforation         Perforation         Bridge Plu           Foot         Top         Bottom         Type		Bridge Plug Type		Bridge Plug Set At (Amount and Kind of Material Used)			Record					
TUBING RECORD:	Size:		Set At:		Packer	At:						

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	FAGEN 1-30
Doc ID	1418548

All Electric Logs Run

CDL/CNL
DIL
MICRO
SONIC

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	FAGEN 1-30
Doc ID	1418548

### Tops

Name	Тор	Datum
Anhydrite	1550	+ 867
Heebner	3975	- 1558
Lansing	4042	- 1625
Stark	4359	- 1942
Pawnee	4561	- 2144
Cherokee	4608	- 2191
Mississippi	4721	- 2304
Warsaw	4774	- 2357

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	FAGEN 1-30
Doc ID	1418548

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Surface	12.250	8.625	23	218	Common		3% cc, 2% gel
Production	7.875	5.5	15.5	4874	50/50 Poz	170	2% gel

SWIFT OPERATOR Dawsed Hushin APPROVAL		DATE SIGNED TIME SIGNED TIME SIGNED TATAM. 785-7	IVERY OF GOODS.		u.	LEGAL TERMS: Customer hereby acknowlednes and arreas to	1 Service		um (	2)1 1 Benhenite	1 Stundaur	S76.S 1 Plump Cha	REFERENCE PART NUMBER LOC ACCT DF	ATION INVOICE INSTRUC	4. WELL TYPE WELL CATEGORY	SALES CONTRACTOR	1. Joss City KS WELLPROJECT NO. LEASE FOUND	Services, Inc.	ADDRESS
and the second normal contemposities in the materials and setvices is		AHE YOU SATISFIED	P.O. BOX 466 WE OPERATED THE ECUIPMENT AND PERFORMED JOB NESS CITY, KS 67560 SATISFACTORILY?	INC.		SURVEY AGREE UNDECIDED	- Change Coment 114 ISUIsks		Chlemide 3	$- \frac{64}{2}$	cinciple and two		DESCRIPTION QTY. U/M QTY. U/M	r (cument () 13	JOB PURPOSE	RIG NAMENO. SHIPPED DELIVER		m	Drilling Co.
sted on this ticket. Thank You!	110114		bi Est algorit	Cit Cit		M OO SS 250 17			40 100 280 19	30	13 w 1950, a	100 00 00 00 00 00 00 00 00 00 00 00 00	PRICE	Vetware - HS, 12 E, winter	WELL LOCATION	L	DATE OWNER	PAGE OF	TICKET 031511

)B.FC							T Seri	lices. Inc.	DATE PAGE NO. 5-8-18 1
ISTOM	Brilling	Co.	WELL NO.	-30		LEASE	Fagen	JOB TYPE 858 11 Switzer	TICKET NO. 31571
NO.	тіме О	RATE (BPM)	VOLUME (BBL) (GAL)	PUN T	APS C	PRESSU	JRE (PSI) CASING		RATION AND MATERIALS
	2300	а.						on location	845" 23#
								RTD - 218'	TP-222'
18	QCO							Start 895" 23" CC	issing in well
Ć	300							Break Circulation	
	03:0	41/2	5		~		100	Pump Std wuter	Spicer-
	0315	41/2	36		/		100	mix 150 sks StD:	2862 38cc @ 14.7pp
	0315	41/2	Ø		V		100	Start Displacement	
-		41/2	6			-	200	circulate Comment to	Surface - 7 303657
	0330	41/2	131/2		V	/	200)	Kick out Pump	Shutin
								wash up truck	
	0400	_						Job Complete	
									<u> </u>
		•						Dave P	wh You resten Kirbr
						•			

Thank You!				Inn Hes		leusid like-hn	T
on this ticket.	receipt of the materials and services listed on this ticket.	ot of the materials	owledges receip	VV APPERIVAL APPERIVAL VI APPERIVAL			SWIFT OPERATOR 7
1246007		COOLONIELI DID HOL MIGHTO REAFOND				CIICTOMED ACCEDTA	
TOTAL				785-798-2300	P.M.	TIME SIGNED	DATE SIGNEP7-18
1/10/11/11/11/11/11/10/13		OB	WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?	P.O. BOX 466 NESS CITY, KS 67560	Ċ	X	START OF WORK OR DELIVER
10 2 p. 30 130188		DUT DELAY?	MET YOUR NEEDS? OUR SERVICE WAS PERFORMED WITHOUT DELAY?	SWIFT SERVICES, INC.		provisions.	LIMITED WARRANTY provisions.
TAL Z			OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? WE UNDERSTOOD AND	REMIT PAYMENT TO:	eof which include,	the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and	the terms and condition but are not limited to,
(10() IN	E UNDECIDED DISAGREE	SURVEY AGREE	SUI		he and arreas to	LEGAL TERMS: Clustomer hereby acknowlednes and arreas to	LEGAL TERMS: Cust
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UNIT PRICE AMOUNT	QTY. U/M	QTY. U/M		DESCRIPTION	LOC ACCT DF	SECONDARY REFERENCE/ PART NUMBER	PRICE SE
12 21			ć		INVOICE INSTRUCTIONS	INVOICE INS	REFERRAL LOCATION
Kummer- 115 - 15 F Junt		WELL PERMIT NO.	anashrina	Druchopment Commits 1/2 Low		WELL IYPE	4.
ORDER NO.		T Loca hin	VIA	-	W+W D		ά ι
S OWNER	r T			SE COUNTY/PARISH	CONTRACTOR	IS WELL/PROJECT NO	1. Jess City
				CITY, STATE, ZIP CODE	CITY, ST	Inc.	Services,
					ADDRESS		
TICKET 031520				TO: Mull Derilling	CHARGE TO:	L.	HIMS

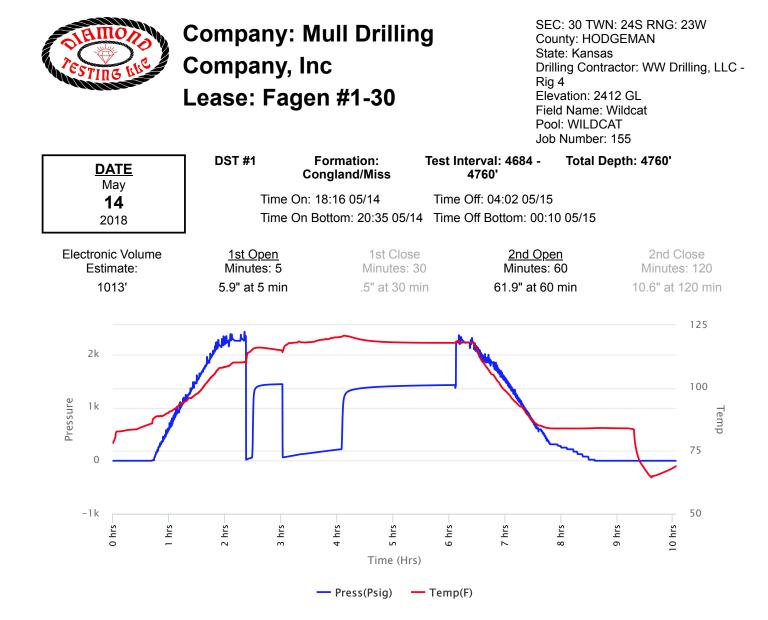
e '	583	581										122	280	Obt	376	292	283	327	PRICE	Services.	ins
																			SECONDARY REFERENCE/ PART NUMBER		
																			ACCOUNTING LOC ACCT DF	Off: 785-798-2300	PO Box 466
	CHARGE TOTAL WEIGH (GAZO LONDED MILES HO												Flochak 21	D'Air	Flocele	[1-land 322		SO/SO POZMAR (2% C-1)		CUSTOMER MULI Drilling	JATION
ŝ	TON MILES 338, 6				 			· · · · · · · · · · · · · · · · · · ·	· · · · · · ·			 1	lino lan	 	16	10%	(COC)	200	QTY	WELL FOGEN #1-30	
CONTINUATION TOTAL	53 00			 										H2 0	اعدا کر ا	8 100	00 20	04 P	UNIT	DATES-17-18	TICKET #3/S2C
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JOB LO						SWIF	T Ser	vices. Inc. Date S-17-18 PAGENO.
CUSTOM	Drilling	3	WELL NO.	-30		LEASE	>	
CHART NO.	TIME	RATE	VOLUME	PUMP		PRESSU	JRE (PSI)	DESCRIPTION OF OPERATION AND MATERIALS
<u> </u>	0200	(BPM)	(BBL) (GAL)		C	TUBING	CASING	
	0.au					-		on location 51/2" 15,5#
								RTD- 4875' LTD- 4879'
-								TP-4874 ST-#1 39.54
								$P(-\frac{1}{2}) = \frac{1}{2} = $
								P.C #83 1566 out #122#123#124#125#12 Turbes - #2#3#4#5#6#8#84
								Baskels-#83
								Cushes VJ
-	0545			ſ				Start 51/2" 15.5" casing in well
	1							particular the covering in west
	0800							Drop Bull circulate
								in the seat contract
·	0435	61/2	15		1		400	Pump 15 Wel 15CL Flush
	-	61/2	24		~		350	Piump 1000 and Flocheck 21
		61/2	5		1		300	Piump 1000gal Flochack 21 Piump 5661 164 Flush
	1	_						
			7		_			Pluce RH (30 sks)
								5
	0950	41/2	39		1		250	mix 170 sks 50/50 Pozmix @ 14.4, ppg
								with out Pimp + Lines
								Relasse Top Plug
	1010	/ 11	el				15.0	
· <u> </u>	1010	61/2	Ø		V		100	Start Displacement
		61/2	91				250	Lift Pressure
	1020	642 642	114					max lift Pressure
	1030	612	115	1			1500	Land Top Plug
	÷				-+			
4		·			_			Release Pressure * Float Hold *
					+			1
					-			wash up truck
	100						••••	TI CIL
	100				-+			Job Complete
	3. 1							TT ()/
<u> </u>								Thank You
					-			Dave Preston Kirby
								· · ·

Thank You!					AFTHOVAL	Dewich Kuchy	
ket.	on this tic	receipt of the materials and services listed on this ticket.	of the materials a		CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges	2 52	SWIET ODED A
41 944	e K	H TO RESPOND	CUSTOMER DID NOT WISH TO RESPOND				
	TOTAL	N		ARE YOU SATISFIED WITH OUR SERVICE?	785-798-2300	26/K	DATESIGNED
1831 UN	Hall		JIPMENT	WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?	P.O. BOX 466 NESS CITY, KS 67560	MUST BE SIGNEAD TO STOMER OR CLASTOMER'S AGENT PRIOR TO START OF MORK OR DELIVERY OF GOODS.	MUST BE SIGNED START OF WORK
-474 77 4272 193	102050		JELAY?	MET YOUR NEEDS? OUR SERVICE WAS PERFORMED WITHOUT D	SWIFT SERVICES, INC.	LIMITED WARRANTY provisions.	LIMITED WA
TAL HTHT, 70	PAGE TOTAL			OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	REMIT PAYMENT TO:	the terms and conditions on the reverse side hereof which include, but are not limited to DAVMENT DELEASE INDEMNITY and	the terms and
		UNDECIDED DISAGREE		SURVEY		LEGAL TERMS: Customer hereby acknowledges and agrees to	LEGAL TERI
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75 304 25		175 str			Service Charge Comment		185
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as CUC n					MILEAGE Tok # 115		575
AMOUNT	UNIT	QTY. U/M	QTY. U/M		DESCRIPTION	SECONDARY REFERENCE/ ACCOUNTING PART NUMBER LOC ACCT	PRICE
the day have						OCATION INVOICE INSTRUCTIONS	REFERRAL LOCATION
lla ha li	WELL LOCATION		WELL PERMIT NO	Faller	Development Cement Sh" Porto		4.
				VIACT	Well Scrube	Cheyen	
18 OWNER	DATE JS-18		CITY DEI WEREN TO	STATE	LEASE COUNTY/PARISH	City US WELL/PROJECT NO. 10XET TYPE CONTRACTOR	1. A CATIONS
PAGE OF	P		I		CITY, STATE, ZIP CODE	s, Inc.	Services,
						ADDRESS	
тіскет 031577	TICKE.		]		SETO: Mr. II Dorilling	CHARGE TO:	NS

JOB LO	G					SWIF	T Seri	vices. Inc. DATE PAGE NO.
CUSTOM	R Deillin		WELL NO.	-30	 )	LEASE	<u><u> </u></u>	JOB TYPE
CHART	TIME	) RATE	VOLUME	1.1.2	MPS		Hagan URE (PSI)	DESCRIPTION OF OPERATION AND MATERIALS
NO.	inor)	(BPM)	(BBL) (GAL)	T	С	TUBING	CASING	
	1000						-	on location 27/8"×51/2"
								Deneric
								P.C 1566
	1000	Ø	Ø				Imma	
	1020	Ø	<u> </u>		V		free	Pressure Test XHold X
	1115							
	ШD		· · ·					Open P.C Blow
	1120	21/2	4	V	<u> </u>	200		T-I DI
	1120		1	1		all		Injection Rate
	1125	L	83	7	· .	200		1M1 150 de 5100 4. # (1 0 11)
	1000					au		Mix 150 sts SMD 1/4 # Flo @ 11.2 pg Circulate Coment to Surface - 20 sts
								CIUCIGLINE CEMENT TO SUPPORE - 20345
_	1145	Ч	81/2	1		400	1	Displace Commit
				1				Lop Mc Comai
	1150	Ø	0	V		1000		Close P.C. * Test Hold *
_	-							Run 4 Jts
						/		
	1205	31/2	20		V	]	300	Reverse Clean
								wash up truck
		•						1
				I				* ISO sks SMD /4 Flo total *
		1		\				* 20 sks To P.1 *
	10.12		-					
	1240				_		(	Job Camplete
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								Thank You Dave Proston Russ
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PLEMONS Vesting Me	Com	ipany, li	/Iull Drilli nc en #1-30	ing	Co Sta Dri Rig Ele Fie Po	C: 30 TWN: 2- unty: HODGE ate: Kansas Illing Contracto g 4 evation: 2412 C eld Name: Wild ol: WILDCAT b Number: 155	MAN or: WW Drilli GL cat	
DATE	DS	6T #1 C	Formation: ongland/Miss		val: 4684 - ′60'	Total Depth	n: 4760'	
May			-					
14			18:16 05/14		: 04:02 05/15			
2018		Time On	Bottom: 20:35 05	14 Time Oil	Bollom: 00.1	10 05/15		
Recovered								
	<u>LS</u>	Description		<u>Gas %</u>	<u>Oil %</u>	Water %		
	4053	G		100	0	0	0	
	'641	0		0	100	0	0	
	988	SLGCH		15	45	0	40	
189 1.584	0006	SLGCSLC	DCWCM	13	15	27	45	)
Total Recovered: Total Barrels Reco		7.7208206	Reversed Out NO	10	Recove	ry at a glanc	e	
Initial Hydrostatic P	ressure	2262	PSI					
Initi	al Flow	19 to 60	PSI	BBL				
Initial Closed in Pr	essure	1446	PSI	5				
Final Flow P	ressure	64 to 217	PSI					
Final Closed in Pr	essure	1430	PSI	0				
Final Hydrostatic Pr	essure	2261	PSI			Rec	overy	
	erature	121	°F	•	Gas 68.17%	• Oil 20.39%	Water 2.41%	Mud 9.03%
Pressure Chang Close / Fina		1.2	%					



**DST #1** 

SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE
May
14
2018

Formation: Congland/Miss

Time On: 18:16 05/14

Test Interval: 4684 -Total Depth: 4760' 4760'

Time Off: 04:02 05/15 Time On Bottom: 20:35 05/14 Time Off Bottom: 00:10 05/15

#### REMARKS:

10. 1/2" Blow. Built to 6 inches in 5 mins

1C. 1/2" Blow Back

20. 2" Blow. BOB in 8 1/2 mins

2C. 10 3/4" Blow Back

Tool Sample: 10 % G 35 % O 20% W 35% M

Gravity: 33 @ 60 degrees F

Ph: 7

RW: .59 @ 54 degrees F

Chlorides: 15000 ppm



# **Company: Mull Drilling** Company, Inc Lease: Fagen #1-30

SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE May	DST #1	Formation: Congland/Miss	Test Interval: 4684 - 4760'	Total Depth: 4760'
14	Time	e On: 18:16 05/14	Time Off: 04:02 05/15	
2018	Time	e On Bottom: 20:35 05/14	Time Off Bottom: 00:10	05/15

### **Down Hole Makeup**

Heads Up:	9.43 FT	Packer 1:	4678.77 FT
Drill Pipe:	4549.3 FT	Packer 2:	4683.77 FT
ID-3 1/2		Top Recorder:	4670.77 FT
Weight Pipe: ID-2 7/8	0 FT	Bottom Recorder:	4753 FT
Collars:	118.74 FT	Well Bore Size:	7 7/8
ID-2 1/4		Surface Choke:	1"
<b>Test Tool:</b> <i>ID-3 1/2-FH</i>	26.16 FT	Bottom Choke:	5/8"
Total Anchor:	76.23		
	Makeup		
Packer Sub:	1 FT		
Perforations: (top): 4 1/2-FH	3 FT		
Change Over:	.5 FT		
Drill Pipe: (in anchor): ID-3 1/2	62.73 FT		
Change Over:	1 FT		
Perforations: (below): 4 1/2-FH	8 FT		



SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE May	DST #1	Formation: Congland/Miss	Test Interval: 4684 - 4760'	Total Depth: 4760'
<b>14</b> 2018		ne On: 18:16 05/14 ne On Bottom: 20:35 05/14	Time Off: 04:02 05/15 Time Off Bottom: 00:10	) 05/15
		Mud Proper	ties	

Mud Type: Chem

Weight: 9.3

Viscosity: 62

Filtrate: 8.8

Chlorides: 6400 ppm

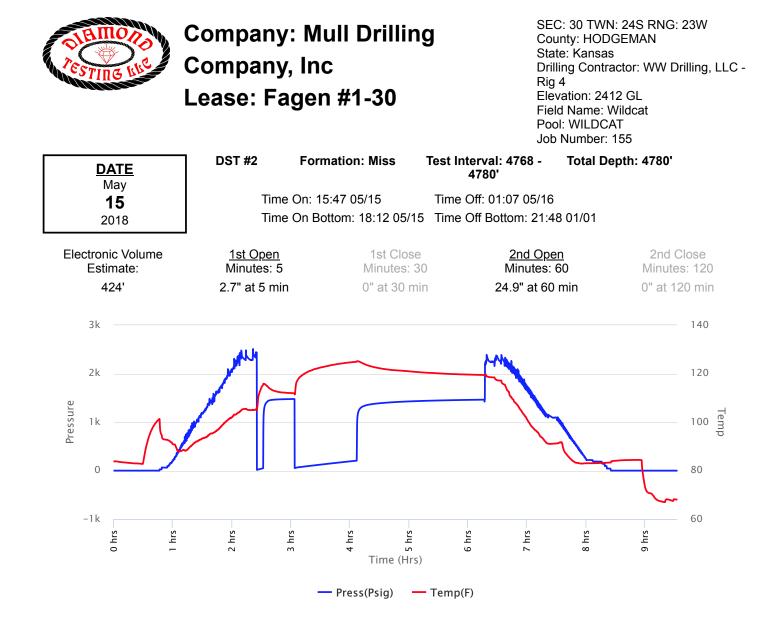


SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE May	DST #1	Formation: Congland/Miss	Test Interval: 4684 - 4760'	Total Depth: 4760'
<b>14</b> 2018		e On: 18:16 05/14 e On Bottom: 20:35 05/14	Time Off: 04:02 05/15 Time Off Bottom: 00:10	05/15

### Gas Volume Report

	1st Op	ben			2nd O	pen	
Time	Orifice	PSI	MCF/D	Time	Orifice	PSI	MCF/D



resting the	Company: Company, Lease: Fag		ng	Cour State Drilli Rig 2 Elev Field Pool		VW Drilling, LLC -
DATE	DST #2	Formation: Miss	Test Interv 478		Total Depth: 4	780'
May	-			-		
15		On: 15:47 05/15		01:07 05/16	04/04	
2018	Time o	On Bottom: 18:12 05/	15 Time Oπ E	Bottom: 21:48	01/01	
Recovered						
Foot BBLS		tion of Fluid	<u>Gas %</u>	<u>Oil %</u>	Water %	<u>Mud %</u>
3 0.04269	-	G	100	0	0	0
438 5.103623	32 SI	_MCW	0	0	85	15
Total Recovered: 44 <sup>2</sup> Total Barrels Recove		Reversed Out NO		Recovery	/ at a glance	
Initial Hydrostatic Press	sure 2317	PSI				
Initial F		PSI	L 2.5			
Initial Closed in Press	ure 1477	PSI				
Final Flow Press	sure 53 to 205	PSI				
Final Closed in Press	ure 1464	PSI	0			
Final Hydrostatic Press	ure 2309	PSI			Recove	ry
Temperat	ture 126	°F	4	<b>6 6 1</b>		e Mud
Pressure Change In Close / Final Cl		%		Gas 0.83%	Oil <b>O</b> ik Water 0% 84.29	-



DST #2

SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE	
May	
15	
2018	

Formation: Miss

Test Interval: 4768 - Total Depth: 4780' 4780'

 Time On: 15:47 05/15
 Time Off: 01:07 05/16

 Time On Bottom: 18:12 05/15
 Time Off Bottom: 21:48 01/01

#### REMARKS:

10. 1/2 Blow. Built to 2 3/4 inches in 5 mins

1C. NOBB

20. 1/2" Blow. BOB in 26 1/2 mins

2C. NOBB

Tool Sample: 5 % O 60% W 35% M

Ph: 7

RW: .42 @ 64 degrees F

Chlorides: 27000 ppm



# **Company: Mull Drilling** Company, Inc Lease: Fagen #1-30

SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

	4780'	Total Depth: 4780'
Time On: 15:47 05/15 Time On Bottom: 18:12 05/15	Time Off: 01:07 05/16 Time Off Bottom: 21:48	01/01

#### **Down Hole Makeup**

Heads Up:	29.13 FT	Packer 1:	4763 FT
Drill Pipe:	4643.28 FT	Packer 2:	4768 FT
ID-3 1/2		Top Recorder:	4752.42 FT
Weight Pipe: ID-2 7/8	0 FT	Bottom Recorder:	4773 FT
Collars:	121.28 FT	Well Bore Size:	7 7/8
ID-2 1/4		Surface Choke:	1"
<b>Test Tool:</b> ID-3 1/2-FH Jars Safety Joint	33.57 FT	Bottom Choke:	5/8"
Total Anchor:	12		
	<u>Makeup</u>		
Packer Sub:	1 FT		
Perforations: (top): 4 1/2-FH	3 FT		
Change Over:	0 FT		
Drill Pipe: (in anchor): ID-3 1/2	0 FT		
Change Over:	0 FT		
Perforations: (below): 4 1/2-FH	8 FT		



SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE May	DST #2	Formation: Miss	Test Interval: 4768 - 4780'	Total Depth: 4780'
<b>15</b> 2018		e On: 15:47 05/15 e On Bottom: 18:12 05/15	Time Off: 01:07 05/16 Time Off Bottom: 21:48	8 01/01
		Mud Proper	rties	

Mud Type: Chem

Weight: 9.25

Viscosity: 65

Filtrate: 10

Chlorides: 5200 ppm



SEC: 30 TWN: 24S RNG: 23W County: HODGEMAN State: Kansas Drilling Contractor: WW Drilling, LLC -Rig 4 Elevation: 2412 GL Field Name: Wildcat Pool: WILDCAT Job Number: 155

DATE May	DST #2	Formation: Miss	Test Interval: 4768 - 4780'	Total Depth: 4780'
15	Tim	e On: 15:47 05/15	Time Off: 01:07 05/16	
2018	Tim	e On Bottom: 18:12 05/15	Time Off Bottom: 21:48	01/01

### **Gas Volume Report**

	1st Op	ben			2nd O	pen	
Time	Orifice	PSI	MCF/D	Time	Orifice	PSI	MCF/D

RTD. SPUD FIELD SAMPLES EXAMINED FROM SEC. LEASE DRILLING TIME KEPT FROM GEOLOGICAL SUPERVISION FROM MUD UP CONTRACTOR. LOCATION GEOLOGIST ON WELL COUNTY Hodgeman COMPANY Pawnee Stansing Stand Shale FORMATION TOPS Migs Lm Migs Warsen Cheroka Sta Ft Scott Congl 4 nhydrite LID/RID HechNer Ikc 5-8-18 30 4875' 3500' Wildcot GEOLOGIST'S Fagen 1650' FSL \$ Mull Dailling TWSP WW DRilling DRILLING TIME COMP 5-16-18 46097 4723 4720 4725 4725 4048 39750 # 1-30 4564 4355 PETROLEUM GEOLOGIST 245 TYPE MUD Chemical-Mud Co STATE. 201 Phil 1637' -2192 m.0 +867 -2333 -2060 -2147 -2170 -1938 -1631 8551-COMPANY 4879 # 3900 3906 Askey RGE + Kansas FEL 3500 AND ASKEY 1954 SAMPLES 2978 23 W 4355 4608 4704 4704 4704 585h <u> 1040</u> (549 Inc SAMPLE +38+13/ REPORT +32 +32 430 +38 +25 +34 +21 CAS ING SURFACE 85/8 "C" င်္ဂ deper AP1# 15-083-21948 Measurements Are ല ß 00 5 ELI: CNL/CDL W/PE, Canaday oil crap Oliphant ELECTRICAL Micro, RID RM **ELEVATIONS** RTD Fagen #1-30 2412' Sonic mill alz 24171 C 1LTD 0 SURVEYS 0-4879 218 ou, REMARKS 7505 located The Mull Arilling Co. Fac, Fagen#1-30 ran spectrumly high to the two wells to the neath and south, that were used to reference wells, sample should obele observes in the Conglorments churt zone and the mississippi formation were OST it with positive Reputts. After close review and evaluation of the E-logs, it was more decided to set Ste production pipe to complete the well in the Conglomenate Chert and miss admite yores. Phil askey, LG LEGEND Δ ī ũ ۵ 5 <u>.</u> D D Anhydrite Salt Sandstone Shale Carb sh Limestone **Ool.Lime** Chert Dolomite SCALE 100' 22 -----DRILLING TIME IN MINUTES ПЦНОГОСА PER FOOT Rate of Penetration Increases DEPTH SAMPLE DESCRIPTIONS REMARKS 7708 10" 20" 25" 5" 15" ဗ္ဗ 1540 1550 /eg /550 +867 MILL Amhyanita 1156711 Amhyanita 1156711 A-Vog 115577 4 05 8 mud-Co data @ 3859' -3900 for Hay-vit Che, Mish WT 8.8 VIS 50 WL 8.4 pH 10.5 CL 4,700 ppm LCm 1# YP 13 Solid. 3.42 LS up um Hqu frm, uf fxla, Sme chky, sut 655, to the, degy to chty LS (me by degy-gybra), das MUR. Frld, PO, NS Samples: 20' wet/dry from 3900'- 4100'; 10' wet/dry from dr cam tan Dol, das. prours NS 4100'- RTD to Dol, com tar, fron the, psuce & LI, much with chky LS. the crm gybra, fim-das 50 Rig data VF-milrox/w, NVis \$, NS FOR POC bit to 4482' L WOB 10-15K SPM 60 PP 550-650 RPm 90-100 15, tan cra, fra-das, uf tild Smith bit from 4492- RTD She marox/n, bat X/N \$ , NS ee 4 ne + 4 397411. SPm 58 WUB 38 10g 3975 (-155 SH, blk carb PP 850 RPM 80 15 the con 144, ALS, VI-fels

		cry \$x/a, "NS
		SHI water gy, gygru-grn Bit data me myshy "The state of the state of
4000 TOR 1/5 400 1 1/5 8 51		me myshy They from up form, gill they from in form of form, gill some integrand, gill some integrand, gill 218'-4482' 81"4 here (52.5'/hr)
- 4000		LS, much which ky,
		crm offich drs-frm, mun- 4482'-4875 21 hors (18.7/hr) fally gast xlo \$, NS
		son this gy, dar, Cyto-micoxb. NS,NI
	California California	SH, mestly dkay gygrn fr 53, ay-ayarn, trom, utyran
		1 15, qy- q. ygen, trom, utavan pgan p, NT Dev Survey 5 31 ° m 210'
		34° ~ 218' 1° ~ 4760'
- 50	COLUMN	1 0 4760 15 cm ton, fm Jns, Ut Aria, 1° @ RTD 4875'
		Sme ph-ppt-ode \$, NS
	Contractor and Contra	Pipe Straps ~ 4760'
		U. su- gybrs das, arg, contractory, Strap 4782.43' 2'se is yellowing like meth das - Chy. Mary Abor, Cht Chy Bourd 4784.52' St. gu fred yr relemonants Bourd 4784.52'
		to as - ph pints, com, from, NS Pipe shout 2.09' (No conse made)
		sna cra tan, frondar, more Virge, scatter & als
		3pc Cht, salmon bod, Ach
- 4/00		JH 94 some sdy - slog to ss. A) s
		LS, comtan, for day, microsoft, pK/2 4, NS been much dkgy LS, das, brottle,
		ang, VERLUIT & My, NUIS & NS
		D, fan, fim-das, seat ou c-ph\$, NJ
		Us on degy, das, utxle, arg, p. 2. ~S Some com tag, Kon-das, VE traft, NU
		Zpc tan- qu Cht
- 50		the tan, dat, micro - Virla, small Chily, + Chit, tan gy smallchily-Chily NS
		SH & degg
		(cat (ht, 14 tan sold, NS
		LS much ich chky some cron, pon, ut talay, XIN \$, NS
		front 1 wh 94
	<u> </u>	
		CS, much which they
- 4200		sere com tan, fron das, Utilas scar xin \$1, 15 to the - to store dos a urxin bis
		to fan - It- utequbors, dors, on workly, - bar to goder ungs-ph \$ 1. N. J
		C, Whichty ay tan un, from -d 45, fold.
		tr lay - tan cht, fresh
		SA, blt carb - Ib carb 13. ay-tan, diss, miles X/2. Ary 4. Bts, p. S. M.
- 50		HEST, p'Spis
\$		LS, which the smith shelley
		tan ay cron-ball, transformed starting
		15. uh Bity - stickty 94 for 496000, mietlydrs Note: Samples: 4300-10 1655, Gity, por NS
		D. crm tan, frm, vf-fxl, Sat X/w, O, NS st-fr odor sno while m, shickly chty
- 4300		Jone tan Itay, drs, murax of to 5, NS
		truch to tim, they start , NS
		S. to com offich, dus - from multi-Visida, px/1 & - 15 
		y360-70
		NUSS show where no cour the -slow of the slow of the
		LS, tan (rm, frm, small ooc-ph, d, NS
		EFSI LS, 4/a, 2 pc over oth \$, NS trodal truch-che's up de court
		LS, crm, fing-dat, vFx/AL, scat ool-ouc Ø
- 50 - <u>5142 A 56 11355 1-1986</u>		tr-slotlar
E 10g 1/355 (-1938)		SH, 614, Rr, cart-
		S, ben u whethy,
		Ime the orm qy, fron-des, man- Eles, son x los vaggy \$, NS
		W, more wh-chky
		CFS: LS / VChay, Alt No od on
		CFS: LS II VChar, NS No od on
- 4400		JH, bik, carb-sbcarb
		Widy-JU, qu, #Pgan-Shy, grang, NS W, crm tan from day, UF-tal
		Ine fost, sine trinitated Q, NS Jo tan foss at sine which ky
		still, addag gygon Zpchracht
		S, comottal, for dat, min SAD
		reat KN & NS it The Shehly Chky
		US, the prosting das, man-introly, some play
		Seat which ty is fan offal then from das
- 50		Micron By, Sut Shelky
		Active K/w, ang, some to IS, for the ty
		tr tan-cra, flm, which, this NS- Note: PDC bit change pulled very tight
B/6 44756-2050		Uery tight
PDC to 6-140 44477 (-1060) Smith bit		SH, qy-gygrad nixed col-sky-dy Mud-Co data @ 4482'
change @ 4 9 2'		col Str. My Jay back to the with WT 9.35 US 47 WL 8.8. "H 10.0
- 4500-		15 av tan das new the pity 1/ harriganit mealy 1 trub - child
		C, compandas, contronolo to but may apr to which ty aff 2 pe pp
	and a second sec	SH, dkgy gygra
		LS, crontan, das, microsta, smep ly-chty NVIS \$1, NS
		Prore wh-chky
		to Cht, tan/bial/ligg, sharp NS
- 50		S, gyben, das, microstur-mealur. 4 foto, nvie g, mr foto, a/a
Paumer 4/5/6/1 /2/14/1		SH, bik carb
E-109- 4567 (20187)		LS. JUBEN, das, massive, to 555 mictoria, NVIS & NS
		Us, been even the a fligh, mostly, day, into-mercente, plty, some chity, will pro
		Sect shokty Note: Samples: 4590-4600 Sthelt carbo dos: marcosto 1/2 - 1
		US, Hay contan, das mice Mary 1/2 tr-slodor, NO visshow IS, Hay contan, das mice Mary 1/2 tr-slodor, NO visshow
- 4600		LS. comottant them, firm das, p milro-ut-tale, some skedery, some test, reat x/w St. tribit child tr-St orle R. wrissberry
B Charthe Sh. Hade (+21)94		SH. blk. cart
		SH, blk, cart (J. 1440, ottal, Amdre, milro-
		Jone mott, dns, arg W, wvis \$NS
		much qy-dkqy to, dhs, org., NY, US
		to blk fix/pains in to
		Stat stortg-chty (1), Nor (1)
		Loi, brailoftuh, fim - das, fiss froil-gaini (fc \$, Nr, Nodon
- 50		Zpeuk Oct
- 50		Son Mott das WICybald, NS Inthe Sitts, 14-9494N
- 50		and the second property of the Second second provide a second s
		US, offich they anton, for- das micro-vrold, or play, were as will be and and the play, were as will be as a physical and play, were as use as a physical and play, were as a vision of the play, were as a vision
		LS, offich they contain for- das, micro-versity, for- we king in the plan, for- we king in the plan, for- we give a start of the plan. Sthe gu-mushy smither offers (1, 6400 pam LCM 1# YP 15 solids 6.8,
		LS, offich they contain, fig- das microvership, orte play, we king sinse Sty, qu-mushy smithe relation to by on ppm com 1th yp 15 solids 6.8, to SI, which, due, anguar, pert, pit
50		LS, offich they contain the dass micro version the wr 9.3 VIS 62 WL 8.8 pH 9.5 wr 9.3 VIS 62 WL 8.8 pH 9.5 SH, qu-mushy smille rollier th SS, which, dus, magna, pert, pp Nis LS, tan bro, das - they, copberts 'ccar ish stocky-clips' DST #1 46 84- 4760'
		LS, offich they contain fin- das micro version fin- wr 9.3 VIS 62 WL 8.8 pH 9.5 wr 9.3 VIS 62 WL 8.8 pH 9.5 Sth, qu-mushy smille rolling the ST, which is smille rolling the ST, which is an open, pert, po Nicro LS, fan brow, das - ching, copber/w 'ccat whe sickly-clifed DST # 1 46 84- 4760'
		LS, offich they contain, fifty- das micro vitrola, ortholity, with do interplay, with do interplay, with a single relation interplay, with a single relation interplay, with a single relation interplay, is the solution of the single relation interplay is the solution of the single relation interplay is the solution interplay is the solution of the solution is the single relation interplay is the solution of the solution is the solution interplay is the solution is
		LS, offich they contain, fift- das much vitrold, ortholity, with d. with the play, with d. with the play, with d. with the rathers SH, qu-muthy smithe rathers CL 6400 ppm ccm 1# 40 8.8 pH 9.5 CL 6400 ppm ccm 1# 46 84' 4760' CS; tan brow, das - Chta, crybets CC 64, with stickly-clips CC 64, with stickly-clips Cht, wool, much yet-commune Times: 5*-30"-60"-120" Times: 5*-30"-60"-120" 15 open: 1/2 incl 61000 built to 6 incle (1/2 incl 61000 built to 6 incle (1/2 incl 61000 back)
		LS, offich they contain the dass micro version the will all of the plan, the will all of the plan, and the sty, and - Co data a 4719' will all of the will all of the will all of the Mud-Co data a 4719' will all of the will all of the will all of the contained by the solution of the contained by the con
		LS, offich they contain, fighting, with given whole, orthold,
		Is, offich, Hay Contain, For- das, micro-viscos, or play, we king inservised, or play, we king inservised, or play, we king inservised, or play, we get in the inservised of the play, we get inservised of the play, we
		Is, offich Hay Contain, Fri- das, micro-visch, ord pity, weller & visch, ord pity, weller & visch, ord pity, weller & visch, ord pity, with 9.3 VIS 62 WL 8.8 pH 9.5         SH, qu-muthy smittle ordered with foll, diff, manappert, pit         K. S. Which, diff, manappert, pit         Allor         LS, fan brow, das - Chrin, cryber/or allor         Car ich stickly-clipy         DST #1       46 84'- 4760'         Times: 5 <sup>th</sup> -30" - 60" - 120"         Cht, v col, much yel-comorange officer of the officer of the loss huy club, floe, godie why her floe loss huy club, his, frech loss huy club, his, his, frech loss huy club, his, his, his, his floe loss huy club, his, his, his, huy club, his, his, huy club, his, his floe loss huy club, his, his, his, his, huy club, his, his, huy club, his, his, huy club, his, his, his, huy club, his, huy club, his, his, huy club, his,

