KOLAR Document ID: 1394404

Confidentiality Requested:

Yes No

Kansas Corporation Commission Oil & Gas Conservation Division

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No.:				
Name:	Spot Description:				
Address 1:					
Address 2:	Feet from North / South Line of Section				
City:	Feet from East / West Line of Section				
Contact Person:	Footages Calculated from Nearest Outside Section Corner:				
Phone: ()	□NE □NW □SE □SW				
CONTRACTOR: License #	GPS Location: Lat:, Long:				
Name:	(e.g. xx.xxxxxx) (e.gxxx.xxxxxx)				
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	Elevation: Ground: Kelly Bushing:				
☐ Gas ☐ DH ☐ EOR	Total Vertical Depth: Plug Back Total Depth:				
☐ OG ☐ GSW	Amount of Surface Pipe Set and Cemented at: Feet				
CM (Coal Bed Methane)	Multiple Stage Cementing Collar Used? Yes No				
Cathodic Other (Core, Expl., etc.):					
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: 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 #:	Location of hald disposal in hadica offsite.				
GSW Permit #:	Operator Name:				
_	Lease Name: License #:				
Spud Date or Date Reached TD Completion Date or	QuarterSecTwpS. 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 Approved by: Date:					

KOLAR Document ID: 1394404

Page Two

Operator Name: _				Lease Name:			Well #:	
Sec Twp.	S. R.	E	ast West	County:				
	flowing and shu	ut-in pressures, v	vhether shut-in pre	ssure reached st	atic level, hydrosta	tic pressures, bot		val tested, time tool erature, fluid recovery,
Final Radioactivity files must be subm						iled to kcc-well-lo	gs@kcc.ks.gov	v. Digital electronic log
Drill Stem Tests Ta			Yes No			on (Top), Depth ar		Sample
Samples Sent to 0	Geological Surv	/ey	Yes No	Na	me		Тор	Datum
Cores Taken Electric Log Run Geologist Report / List All E. Logs Ru	_		Yes No Yes No Yes No					
		B	CASING eport all strings set-c		New Used	ion, etc.		
Purpose of Strir		Hole illed	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
			ADDITIONAL	CEMENTING / SO	UEEZE RECORD			
Purpose:		epth T Bottom	ype of Cement	# Sacks Used	ed Type and Percent Additives			
Perforate Protect Casi Plug Back T								
Plug Off Zor								
Did you perform a Does the volume Was the hydraulic	of the total base f	fluid of the hydrauli		_	=	No (If No, sk	ip questions 2 an ip question 3) out Page Three	,
Date of first Product Injection:	tion/Injection or R	esumed Production	Producing Meth	nod:	Gas Lift 0	Other (Explain)		
Estimated Production Per 24 Hours	on	Oil Bbls.					Gas-Oil Ratio	Gravity
DISPOS	SITION OF GAS:		N	METHOD OF COMP	LETION:			DN INTERVAL: Bottom
	Sold Used	I on Lease	Open Hole			mmingled mit ACO-4)	Тор	BOROTT
,	,			B.11 B1				
Shots Per Perforation Perforation Bridge Plug Bridge Plug Acid, Fracture, Shot, Cementing Squeeze Record Foot Top Bottom Type Set At (Amount and Kind of Material Used)					Record			
TUBING RECORD:	: Size:	Set	Δ+-	Packer At:				
TODING RECORD:	. 3126.	Set	n.	i donei Al.				

Form	ACO1 - Well Completion			
Operator	Mull Drilling Company, Inc.			
Well Name	REDDING 1-3			
Doc ID	1394404			

All Electric Logs Run

CDL/CNL/PE
DIL
MEL
SONIC

Form	ACO1 - Well Completion			
Operator	Mull Drilling Company, Inc.			
Well Name	REDDING 1-3			
Doc ID	1394404			

Tops

Name	Тор	Datum
Anhydrite	2593	+ 773
B/Anhydrite	2612	+ 754
Heebner Shale	4020	- 654
Lansing	4065	- 699
Stark Shale	4348	- 982
B/KC	4432	- 1066
Marmaton	4438	- 1072
Pawnee	4585	- 1219
Ft. Scott	4632	- 1266
Cherokee	4662	- 1296
Johnson	4728	- 1362
Morrow	4816	- 1450
Morrow Sand	4914	- 1548
Mississippi	4924	- 1558

Form	ACO1 - Well Completion			
Operator	Mull Drilling Company, Inc.			
Well Name	REDDING 1-3			
Doc ID	1394404			

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight		Type Of Cement		Type and Percent Additives
Surface	12.250	8.625	23	238	Common		3% cc, 2% gel
Production	7.875	5.500	17	4967	Thixoblen d III	200	1250# Kolseal



, PRESSURE PUMPING LLC

9588 aug	

TICKET NUMBER LOCATION

FOREMAN

PO Box 884, 620-431-921	Chanute, KS 66720 10 or 800-467-8676	FIELD I	ICKET & TREA CEMEN		PORT #	F811873	S Ver
DATE	CUSTOMER#	WELL NAME	& NUMBER	SECTION		HIP RANGE	COUNTY
1-28-17	5659	Reddina	1-3	3	16-		Wichita
STOMER	MallA	Alla O	RusellSpy	·			T WICHTY
ILING ADDRE	SS SS	7.000	5+0A"		DRIVE	R TRUCK#	DRIVER
MN.W	okleflantf	YONG Blag.	1200 141	73/	- Coth	$\frac{D}{1}$	
Alidia	s	TATE ZIP C	ODE SIVE	772-7-1	4.D.C	J.	
14101117	•	KS 672	16-6637				
B TYPE PO	intCaller H	OLE SIZE 77	HOLE DEPTH	Ĺ ₹	CASING SI	ZE & WEIGHT/	<u> </u>
SING DEPTH	•	RILL PIPE	TUBING	27/8	OAGING SI	OTHER	
JRRY WEIGH	T_12.5 si	LURRY VOL_ 1.8	7 WATER gal/s		CEMENT LI	EFT in CASING	
PLACEMENT	<u> 14861</u> p	ISPLACEMENT PSI_	MIX PSI		RATE		
MARKS: _S	after month	10 A19 100	Codell to	+ took	P 10000	held Smin	data 1 3 m
bblow	@4mzec	Den tool	1x 2903ks	<u> </u>	8% Vux	1 flores we	-1 -11
ISAKE			177	10001	held 5,		Ford Sta
reverse	· Clean wi	F4 30661	Cement (urcuk	Red to	Surfeer an	000 4016
0 by4		,					p-op 1-or
<u> </u>							*
		***************************************				Then KVO	ici
				****		Low of the	ea
CCOUNT			***************************************			- 1	
CODE	QUANITY or	UNITS	DESCRIPTION of	SERVICES or	PRODUCT	UNIT PRICE	TOTAL
E045/		PUMP	CHARGE			17.00.00	1900.00
F0005 4	-35	MILEA	GE			7.15	250.25
E0710	12.	47 to:	n milron d	olivery		1.75	763.78
			0				
C5831.	- 290	3Kr /:	Rebland VI			17.50	5075.00
26075	73	H C	low seel			5,00	219.00-
C-6080 d	500	*	14 lls			1-00	500.00
5326	/OO3		salt	•		NC	15
	· ·		•				
						7.LILI	878808
						250%	2612,40
						Subolold	6095,63
			_			SUPPRINC	

							A 1 1 1 25
						SALES TAX	3/4/.7
3737	0 0	/				ESTIMATED	lallis
HORIZTION_	IKm/Bm	<u> </u>	alkalalkali ilm			TOTAL	W770
	-Vily		TITLE			DATE	611

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



9487/9375

LOCATION Cold by G

FOREMAN_ FIELD TICKET & TREATMENT REPORT PO Box 884, Chanute, KS 66720 620-431-9210 or 800-467-8676 **CEMENT** DATE CUSTOMER# WELL NAME & NUMBER SECTION TOWNSHIP RANGE COUNT 37W A4514/1 SPrins 15 TRUCK# DRIVER TRUCK# DRIVER stoca*a* Sink HOLE SIZE 238 CASING SIZE & WEIGHT 854" 234 HOLE DEPTH CASING DEPTH DRILL PIPE TUBING SLURRY WEIGHT 19.5 SLURRY VOL WATER gal/sk CEMENT LEFT in CASING 543 DISPLACEMENT PSI_ REMARKS: Thanks unles teven ACCOUNT **QUANITY or UNITS DESCRIPTION of SERVICES or PRODUCT** CODE **UNIT PRICE** TOTAL PUMP CHARGE 1150,00 MILEAGE 07/0 155 308 disc

AUTHORIZTION May Acides Title fugler Date 1/2/5 17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



PRESSURE PUMPING LLC PO Box 884, Chanute, KS 66720 620-431-9210 or 800-467-8676

CUSTOMER# .

95731	1	C
· • • • • • • • • • • • • • • • • • • •	MI	B
	au	W

TICKET NUMBER LOCATION FOREMAN

FIELD TICKET & TREAT	IMENT REP	QRT .: L	Miles
FIELD TICKET & TREAT	T	involugity	311870°
WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE

DATE	CUSTOMER#	. WEL	L NAME & NUM	IBER	SECTION	TOWNSHIP	RANGE	COUNTY
11-22-17	5659	Red	28/2 1-	3	3	165	374	Wickite
STOMER	M. 1	/ D.it.	0	Rassell Spo	1.7.85	2.5%		
LING ADDRE	ss + Iq.l	Unillia	\	SHA	***************************************	DRIVER	TRUCK#	DRIVER
M.M	Geo-fourt	THEM YEAR	KUAA 12	40 0	753	Travish		
<u>~~~~~~</u>	- Land Lake	STATE	<u> </u>	Sinto	7727127	Miles 5		
Nilhita	L.	" K	LT20L	7.0.				
4 - 10 - 11 - 1	· ·	70	VIAU]				
B TYPE ON	15 10 121	HOLE SIZE	7/8	_ HOLE DEPTH	4980	CASING SIZE & 1	NEIGHT 5 /	A 17#
SING DEPTH_	F . /	DRILL PIPE		_TUBING			OFFER 2	
URRY WEIGH		SLURRY VOL_	1.42	WATER gal/sl	k	CEMENT LEFT IN	GASING P.C	, e260°
PLACEMENT		DISPLACEMEN	T PSI	ATX PSI		RATE		
MARKS: 5	a Sty mee	Assa L	SADON	Dake #	- I run flori	toger cen	Helizes	Tus 1.2.3
7.9.11.	13.60 b	9588×1/2	2015	9 PC	top 39 sc	160 260	3 run cas	
Hom Aux	no ball thr	4 20110	1/05+	Dumo =	266/11/0	Aud flus		12 Dane
1x 200	11. 11.	oblered III	5 #-Kol	seel hi	- , - , - , - , - , - ,		/*. * ·	, ,
BOLEE	1.07	60/fcg	water	abtane	7 7 7 7	Sion @07		May follow
300 th 6	1 1	1 0000	3 Ex 1	~ <i>/</i> ~ <i>1</i>			UBBI OUT-	100114
CONTA	lug lendec	- COUNT) # rele	used be	kr Clost	-neld		
·	<u> </u>						***************************************	
				······································			-11	
1- L D	11 25 1	44 VF				-	- 14an 10	r
OSKS KI ACCOUNT	H 20 3/6	11/11/11	T				Jary sc.	ev
CODE	QUANITY	or UNITS	DE	SCRIPTION of	SERVICES or PRO	DDUCT	UNIT PRICE	TOTAL
E0453	1 0 1		PUMP CHARG	E			28000	2800.00
E0002	! 4	5	MILEAGE				715	3717
E0710	/ 11)	7.5	27.	Ilm- del	See . c		175	0250
		<i></i>	10., //1/	ilogoz del.	wert j		1.12	925.31
¢5862	0 0E	Ailes ·	11. 1	1 1 771			<u> </u>	1
1/1000	175	Osks	thixph				26.00	6500.co
C60/1	AMORE IN	<u> </u>	Kalsa			· · · · · · · · · · · · · · · · · · ·	.50	625.00
C6/25 4	COUNTY ()gg/	mud-	145h			165	325.co
P 3485	· 1	U	5/21	4 Fu-Pa	et skap		585M	58500
P8254		•		atch dex			400.00	4mm
P8554		>	51/2	restali	· vary		- 0-1	40000
P8629			5/2	~~ '/ '/ '	200		8/.00	14/40
0777			3/2	hoskat	// - / - :		38500	385.00
0110			3/2	Port Col	ar (w)		2850.00	2850.00
				•				16214/-
							MUNOSZI	יטדדעטי
						*	30% Visc	4933.8
	-							THE POST OF
	•				2	Xe.	1	
	•	•				molstarine	d	11,51224
		•			E	MO HOUN	d	11,51224
		•			E	mo Hack	SALESTAY	7317
3737		-			ay Bu	8.5%	SALES TAX ESTIMATED TOTAL	731.7

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DRILL STEM TEST REPORT

Mull Drilling Co., Inc.

Wichita, KS 67206 ATTN: Kevin Kessler

Bldg. 1200

1700 N. Waterfront Pkw y.

3-16S-37W Wichita, KS

Redding #1-3

Job Ticket: 63117

DST#: 1

Test Start: 2017.11.19 @ 19:58:29

GENERAL INFORMATION:

Formation: Marmaton

Deviated: Whipstock: Test Type: Conventional Bottom Hole (Initial) No ft (KB)

Time Tool Opened: 00:02:20 Time Test Ended: 07:29:34

Interval: 4460.00 ft (KB) To 4530.00 ft (KB) (TVD)

Total Depth: 4530.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair Tester: Brannan Lonsdale

Unit No: 73

Reference Elevations:

3366.00 ft (KB)

3354.00 ft (CF)

KB to GR/CF: 12.00 ft

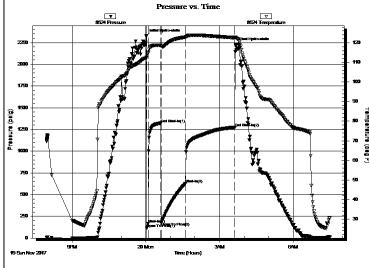
Serial #: 8524 Outside

Press@RunDepth: 628.07 psig @ 4463.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2017.11.19 End Date: 2017.11.20 Last Calib.: 2017.11.20 Start Time: 19:58:30 End Time: 2017.11.20 @ 00:01:20 07:29:34 Time On Btm: 2017.11.20 @ 03:39:35 Time Off Btm:

TEST COMMENT: 005- IF- BOB 2mins

030- ISI- 1" blow 060- FF- BOB 2mins 120- FSI- 8" blow



-				
	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
	0	2321.89	112.61	Initial Hydro-static
	1	111.65	112.35	Open To Flow (1)
	5	165.40	114.58	Shut-In(1)
	36	1322.43	118.67	End Shut-In(1)
	37	182.04	118.20	Open To Flow (2)
	96	628.07	122.88	Shut-In(2)
6 5	217	1275.16	122.56	End Shut-In(2)
J	219	2225.18	122.63	Final Hydro-static

PRESSURE SUMMARY

Recovery

Length (ft)	Description	Volume (bbl)
1473.00	CGO, 10%G 90%O	20.88
0.00	202' GIP	0.00

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

Printed: 2017.11.20 @ 09:14:53 Trilobite Testing, Inc. Ref. No: 63117



DRILL STEM TEST REPORT

Mull Drilling Co., Inc.

Wichita, KS 67206 ATTN: Kevin Kessler

Bldg. 1200

1700 N. Waterfront Pkw y.

3-16S-37W Wichita, KS

Redding #1-3

Job Ticket: 63117

DST#: 1

Test Start: 2017.11.19 @ 19:58:29

GENERAL INFORMATION:

Formation: Marmaton

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 00:02:20 Tester: Brannan Lonsdale

Time Test Ended: 07:29:34 Unit No: 73

Interval: 4460.00 ft (KB) To 4530.00 ft (KB) (TVD) Reference Elevations: 3366.00 ft (KB)

Total Depth: 4530.00 ft (KB) (TVD) 3354.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 12.00 ft

Serial #: 6771 Inside

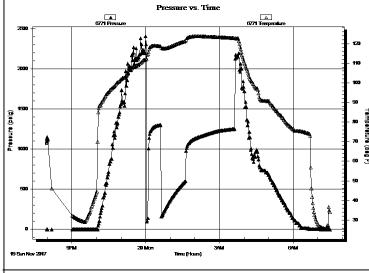
Press@RunDepth: psig @ 4463.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2017.11.19 End Date: 2017.11.20 Last Calib.: 2017.11.20

Start Time: 19:58:39 End Time: 07:29:43 Time On Btm: Time Off Btm:

TEST COMMENT: 005- IF- BOB 2mins

030- ISI- 1" blow 060- FF- BOB 2mins 120- FSI- 8" blow



PRESSURE S	UMMARY
------------	--------

-	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
Temperatura (dea F)				
J				

Recovery

Length (ft)	Description	Volume (bbl)
1473.00	CGO, 10%G 90%O	20.88
0.00	202' GIP	0.00
-	-	

Gas Rates

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

Trilobite Testing, Inc Ref. No: 63117 Printed: 2017.11.20 @ 09:14:54



DRILL STEM TEST REPORT

FLUID SUMMARY

ppm

Mull Drilling Co., Inc.

3-16S-37W Wichita, KS

1700 N. Waterfront Pkw y.

Bldg. 1200

Wichita, KS 67206 ATTN: Kevin Kessler Redding #1-3

Job Ticket: 63117 DST#: 1

Test Start: 2017.11.19 @ 19:58:29

Mud and Cushion Information

Mud Type: Gel Chem Cushion Type: Oil API: 26 deg API Water Salinity:

Mud Weight: Cushion Length: 9.00 lb/gal ft Viscosity: 56.00 sec/qt Cushion Volume: bbl

Water Loss: 7.20 in³ Gas Cushion Type:

Resistivity: Gas Cushion Pressure: ohm.m psig

Salinity: 4000.00 ppm Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1473.00	CGO, 10%G 90%O	20.880
0.00	202' GIP	0.000

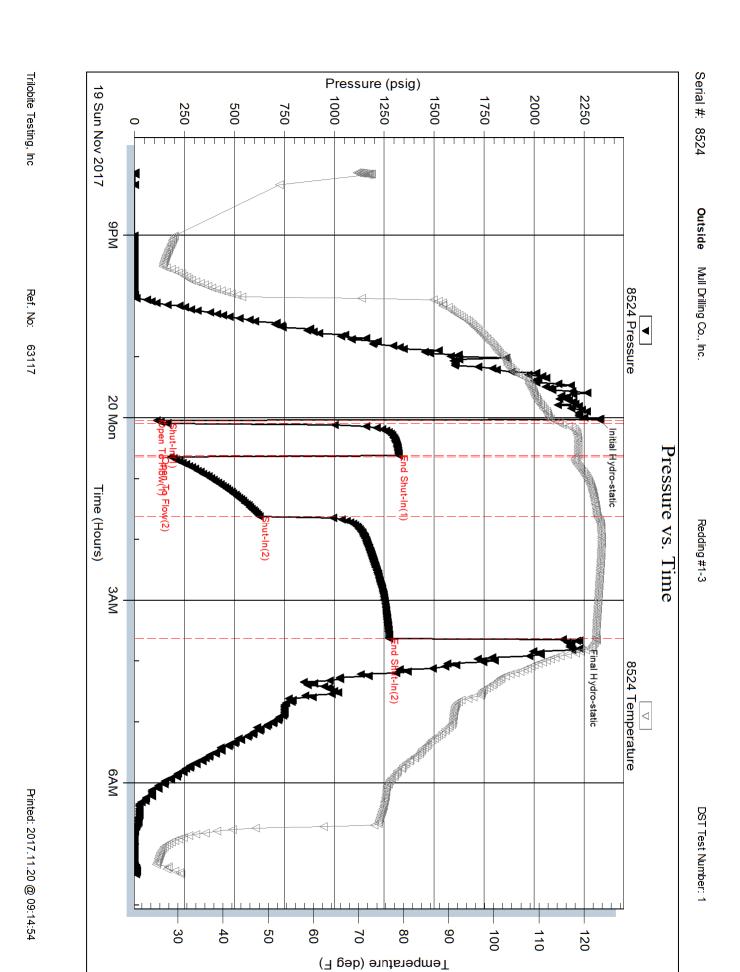
Total Length: 1473.00 ft Total Volume: 20.880 bbl

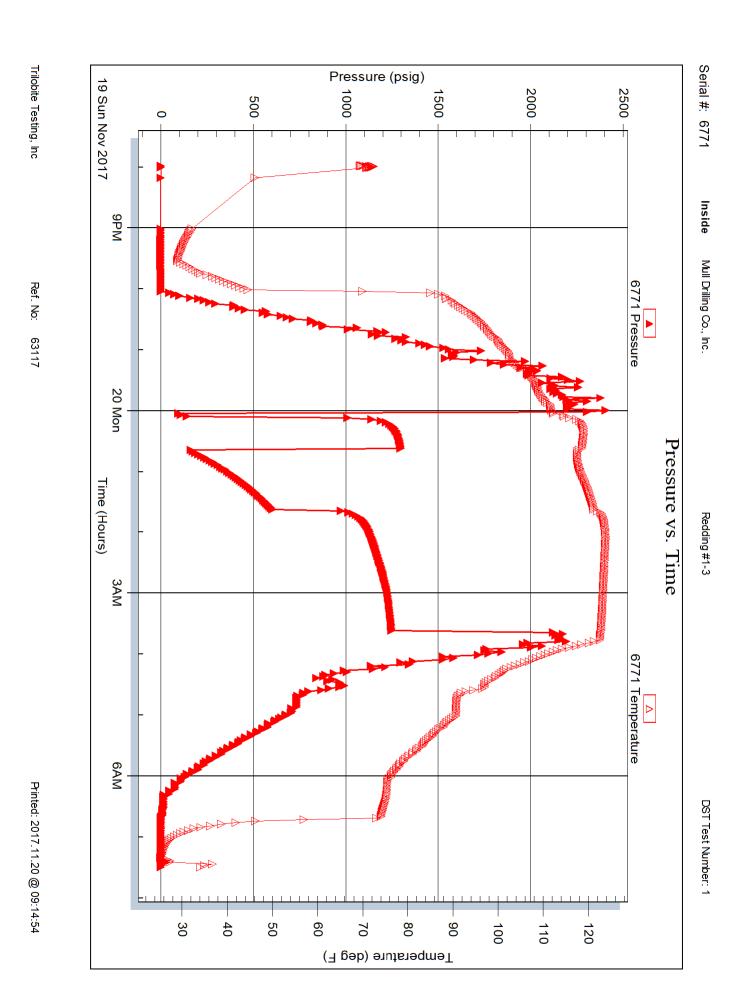
Num Fluid Samples: 0 Num Gas Bombs: Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Printed: 2017.11.20 @ 09:14:54 Trilobite Testing, Inc Ref. No: 63117





KEVIN L. KESSLER CONSULTING PETROLEUM GEOLOGIST (316) 522 - 7338 **ELEVATION OPERATOR:** MULL DRILLING CO. INC. LEASE : REDDING **KB**: 3366' **WELL #**: 1-3 **LOCATION**: 914' FNL & 1942' FEL GL: 3354' **SEC**: 03 **TWP**: 16 S **RGE**: 37 W MEASURMENTS FROM: COUNTY: WICHITA **STATE:** KANSAS KB CONTRACTOR: DUKE DRILLING RIG # 1 CASING RECORD: SURFACE: COMM: 11 - 14 - 2017 COMP: 11 - 22 - 2017 8 5/8" @ 238' LTD: 4978' RTD: 4980' PRODUCTION: GEOLOGICAL SUPERVISION FROM: 3700' TO: RTD 5 1/2" @ 4980' SAMPLES SAVED FROM: 3700' TO: RTD SAMPLE DATUM TOP LOG DATUM COMP. FORMATION: **ELECTRICAL SURVEYS:** DIL 4020 - 654 HEEBNER 4020 - 654 - 14 CNL / CDL 4065 - 699 4065 LANSING - 699 - 04 **MICRO** 4342 - 976 - 02 STARK 4342 - 976 SONIC BASE/KC 4432 - 1066 4432 - 01 - 1066 4661 CHEROKEE - 1295 - 1295 4661 - 07 MISSISSIPPI 4924 4924 - 1558 - 1558 - 06 REFERENCE WELL FOR STRUCTURAL COMPARISON: MULL # 1 - 9 KLT 9 - 16S - 37 W WICHITA CO. KS. 3700 -LST: CRM - GRAY FXTAL SUBCHKY -DNSE RARE FOSS MINOR SAND FEW LOOSE GRAINS W/ ABUNDANT RED SHALE NO VIS. POR. NSO LST: WHT - CRM - GRAY FXTAL MOST HARD BRITTLE FOSS. IN PART NFR AMOUNT GRAY SILTY AND RED SHALE NO VIS. POR. NSO 3750 -MUD CHECK @ 3740' VIS: 4 LST: CRM - GRAY FXTAL SUBCHKY -DNSE SLI FOSS, SANDY IN PART FR AMOUNT GRAY GREEN SHALE CALC. IN PART NO VIS. POR. NSO 3800 -SHALE: GRAY CALC. WITH FR AMOUNT LST. A. A. NO VIS. POR. NSO LST: CRM - GRAY - TAN FXTAL CHKY -SUBCHKY - DNSE ARENACEOUS IN PART FOSS, FR. INTRPRT, POR, NSO LST: CRM - TAN - BRN FXTAL SOFT CHALKY FOSS. IN PART SLI AREN. NO VIS. POR. NSO 3850 MUD CHECK @ 3840' LST: CRM - GRAY - TAN FXTAL SUBCHKY WT:8 - DNSE AREN. IN PART MINOR OOLITES SLI FOSS. NO VIS. POR. NSO LST: CRM - TAN FXTAL SUBCHKY - DNSE FOSS. ON PART AREN. NO VIS. POR. SHALE: DARK GRAY 3900 LST: CRM - GRAY FXTAL SUBCHKY -CHKY OOLITIC SLI FOSS. GD INTRPRT. POR. NSO LST: CRM - TAN - GRAY FXTAL SUBCHKY - DNSE FOSS IN PART MINOR OOLITES NO VIS. POR. NSO LST: CRM - TAN FXTAL SUBCHKY - DNSE FOSS SLI OOLITIC ARENACEOUS IN PART FR INTRPRT. POR. NSO 3950 MUD CHECK @ 39 LST: CRM - GRAY FXTAL SUBCHKY -₩T DNSE AREN. IN PART SLI FOSS FR AMT DRK GRAY SILTY SHALE NO VIS. POR. LST: CRM - GRAY FXTAL SUBCHKY -DNSE OOLITIC IN PART MINOR FOSS. NO VIS. POR. NSO LST: CRM - TAN FXTAL MOST DNSE FOSS IN PART NO VIS. POR. NSO 4000 LST: A. A. NO VIS. POR. NSO HEEBNER 4020 (+ 654 SHALE: BLACK CARB. W/ MINOR - FR AMT DNSE MOTTLED LST. NO VIS. POR. SHALE: GRAY CALC. NSO LST: WHT - CRM FXTAL SUBCHKY -DNSE SLI FOSS CHERTY W/ WHT - GRAY FRESH CHERT NO VIS. POR. NSO 4050 MLID CHECK @ 40 LST: A. A. NO VIS. POR. NSO ANSING LST: WHT - CRM FXTAL SUBCHKY -DNSE FOSS W/ FR AMOUNT OOLITIC PR - FR INTRPRT. POR. NSO LST: WHT - CRM FXTAL SUBCHKY -DNSE FOSS IN PART NO VIS. POR. NSO 4100 SHALE: GRAY - GREEN NO VIS. POR. LST: CRM - WHITE FXTAL SUBCHKY -DNSE FOSS IN PART SOME BRITTLE SSFO FR ODOR SCATT DRK BRN SUBSAT - SAT STN PR - FR VUGGY & INTRPART. POR. LST: CRM - GRAY FXTAL SUBCHKY -DNSE FOSS IN PART NO VIS. POR. NSO LST: CRM -GRAY - WHT FXTAL DNSE BLOCKY MINOR FOSS. OOLITIC IN PART 4150 NO VIS. POR. NSO MLÉD CHECK @ 4 50 <u> VIS</u> \\\/T SHALE: BLACK CARB. NO VIS. POR. NSO LST: CRM - GRAY FXTAL SOFT CHKY SLI FOSS. SSFO FR ODOR SCATTLT - MED BRN SPTY - SUBSAT STN PR - FR PIN POINT VUGGY POR. LST: CRM - GRAY FXTAL SUBCHKY -DNSE SLI FOSS. NO VIS. POR. NSO 4200 -LST: WHT - CRM - GRAY FXTAL MOST HARD BRITTLE OOLICASTIC IN PART FR OOLICASTIC POR. NSO LST: WHT - CRM - GRAY FXTAL MOST DNSE FEW OOLITES SLIFOSS. NO VIS. POR. NSO LST: WHT - CRM - GRAY FXTAL DNSE BLOCKY NO VIS. POR. NSO LST: A. A. NO VIS. POR. NSO 4250 MUD CHECK @ 42 50 W/T SHALE: BLACK CARB. W/ FR AMT DNSE LST: CRM - GRAY FXTAL SUBCHKY -DNSE FOSS. IN PART NO VIS. POR. NSO LST: CRM - TAN FXTAL MOST DNSE BRITTLE FOSS IN PART OOLITIC FR INTRPART POR. NSO 4300 LST: WHT - CRM - GRAY FXTAL MOST DNSE SLI FOSS. FR AMOUNT GRAY SILTY SHALE FSFO FNT ODOR SCATT SUBSAT - SAT MED BRN STN FR INTRPART POR. LST: CRM - GRAY FXTAL MOST DNSE HARD BRITTLE SLI FOSS. MOST OOLICASTIC W/ GD OOLICASTIC POR. LST: CRM - GRAY FXTAL DNSE HARD BLOCKY SLI FOSS RARE OOLITE NO VIS. 4350 POR. NSO SHALE: BLACK CARB. W/ MINOR AMOUNT DISE GRAY LST. NO VIS. POR. LST: CRM - GRAY FXTAL SOFT CHKY IN PART FOSS, FR INRPART, FOSS, POR. NSO LST: CRM - GRAY MOTTLED IN PART SOFT CHKY FOSS, PR FOSS, POR, NSO 4400 -SHALE: DRK GRAY - BLACK CARB. NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -DNSE FOSS IN PART NO VIS POR. NSO LST: CRM - GRAY FXTAL CHKY -SUBCHKY FOSS IN PART NO VIS. POR. HECK @ 4 MLID 4450 LST: CRM - GRAY FXTAL HARD BRITTLE VRY FOSS, PR VIS. INTRPRT, POR, NSO 1 (4460 - 49 30) LST: CRM - GRAY VERY SOFT MARL LIKE CHKY SILTY NO VIS. POR. NSO 2<u>02</u> 3".CGO 91 12 - 165# SHALE: GRAY SILTY ARGILACEOUS IN FFP 82 - 62B# PART NO VIS. POR. NSO LST: CRM - TAN - GRAY FXTAL MOST HARD BRITTLE SLI FOSS - OOLITIC 4500 MOST TIGHT WELL CEMENTED SSFO FNT ODOR SCATT MED - DRK BRNSUBSAT - SAT STN PR - FR INTRPRT & VUGGY POR LST: CRM - TAN FXTAL SUBCHKY - DNSE SLI FOSS NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -DNSE RARE FOSS INTERBEDED WITH BRN EARTHY SILTY SHALE NO VIS. POR. 4550 MUD CHECK @ 4550 LST: CRM - GRAY FXTAL DNSE HARD BLOCKY RARE FOSS, NO VIS. POR. NSO М 4 LST: A. A. NO VIS. POR. NSO SHALE: BLACK CARB. NO VIS. POR. NSO LST: CRM - GRAY FXTAL MOST DNSE HARD BLOCKY NO VIS. POR. NSO 4600 SHALE: BLACK CARB. NO VIS. POR. NSO LST: GRAY FXTAL SUBCHKY - DNSE MICRITIC IN PART NO VIS. POR. NSO SHALE: BLACK CARB. NO VIS. POR. NSO LST: CRM - GRAY - TAN - BRN FXTAL DNSE HARD BLOCKY OOLITIC IN PART 4650 MUD CHECK @ 4650 NO VIS. POR. NSO SHALE: BLACK CARB. NO VIS. POR. NSO LST: GRAY FXTAL SUBCHKY - MOSTLY DNSE RARE FOSS. ABUNDANT DRKGRAY - BLACK CARB. SHALE NO VIS. LST: A. A. W/ INTERBEDED DRK GRAY -BLACK SHALE NO VIS. POR. NSO 4700 LST: CRM - GRAY FXTAL DNSE HARD RARE FOSS. FR AMT GRAY - DRK GRAY SILTY SHALE NO VIS. POR. NSO SHALE: GRAY CALC. NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -DNSE SLI FOSS NO VIS. POR. NSO SHALE: GRAY - DRK GRAY - BLACK NO VIS. POR. NSO 4750 MUD CHECK @ 4750' М A. A. NO VIS. POR. NSO LST: CRM - GRAY FXTAL DNSE HARD RARE FOSS. NO VIS. POR. NSO LST: A. A. NO VIS. POR. NSO 4800 LST: A. A. W/ FR AMT DRK GRAY SHALE NO VIS. POR. NSO SHALE: GRAY - DRK GRAY - BRN SILTY IN PART ARGILACEOUS NO VIS. POR. CHECK @ 4850' MLID М 4850 SAND :QTZ FN - MED GRAINED SUBANGULAR - ROUNDED GRAINS SUBFRIABLE - TIGHT HARD WELL SORTED CLUSTERS WELL CEMENTED PR VIS INTRGRAN, POR, NSO SHALE: GRAY - DRK GRAY SILTY SANDY NO VIS. POR. NSO A. A. NO VIS. POR. NSO 4900 SHALE: GRAY SILTY SANDY NO VIS. POR. NSO SAND: QTZ SUBANGULAR - WELL ROUNDED PR - FR SORTED FN - MED GRN TIGHT CLUSTERS PR INTRGRAN. MISSISSIFPI 4924 (- 1 POR. NSO NO ODOR NO FLUOR. OR CUT 558) SHALE: A. A. NO VIS. POR. NSO LST: CRM - TAN FXTAL MOST DNSE HARD BLOCKY FOSS. IN PART SLI OOLITIC NO VIS. POR. NSO 4950 CHECK @ 4950 LST: CRM - TAN FXTAL DNSE HARD SLI MLID FOSS RARE OOLITE NO VIS. POR. NSO М LST: CRM - TAN - GRAY FXTAL SUBCHKY - DNSE OOLITIC IN PART MINOR FOSS. NO VIS. POR. NSO COMMENTS: 5 1/2" PRODUCTION CASING WAS SET TO FURTHER EVALUATE THE PRODUCTIVITY OF THIS WELL KEVIN L. KESSLER