KOLAR Document ID: 1481575

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: State: Zip: +	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.xxxxx) (e.gxxx.xxxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
	Producing Formation:
☐ 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)	
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)
Described	Chloride content: ppm Fluid volume: bbls
☐ Commingled Permit #:	Dewatering method used:
SWD Permit #:	Location of fluid disposal if hauled offsite:
EOR Permit #:	Location of fluid disposal if flauled offsite.
GSW Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R
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: 1481575

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 Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid,	Fracture, Shot, Cer (Amount and Kind	menting Squeeze I 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	BOUZIDEN UNIT 3-10
Doc ID	1481575

All Electric Logs Run

CDL/CNL/PE
DIL
MEL
SONIC

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	BOUZIDEN UNIT 3-10
Doc ID	1481575

Tops

Name	Тор	Datum		
Anhydrite	1242	+ 1010		
B/Anhydrite	1285	+ 967		
Lansing	4560	- 2308		
Stark	4977	- 2725		
Pawnee	5175	- 2923		
Cherokee	5277	- 2975		
Morrow	5345	- 3093		
Mississippian	5377	- 3125		

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	BOUZIDEN UNIT 3-10
Doc ID	1481575

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Conductor	17.5	13.375	48	76	Common		2% gel, 3% cc, 1/2# PS
Surface	12.25	8.625	23	619	MDC	125	3% cc, 1/2# PS
Surface	12.25	8.625	23	619	Common	150	2% gel, 3% cc, 1/2# PS
Production	7.875	5.5	17	5428	50/50 Poz	235	10% salt, 2% gel

7163

QUALITY WELL SERVICE, INC. Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124
Mailing Address P.O. Box 468

Office 620-727-3410 Fax 620-672-3663

Rich's Cell 620-727-3409 Brady's Cell 620-727-6964

Se	c. Twp.	Range	Т с	County	State	On Location	Finish				
Date 7-//-/9 /0	325	325 Z3W		ZL	U						
Lease Bouziden Uni	Well No.	3-10	Locatio	ocation Ashland KS 14 5/44 Withs							
Contractor Dyles	<u>. 2a 1</u>	f .		Owner							
Type Job Cod	· ' '			To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish							
Hole Size 17/2	T.D.	97		cementer and helper to assist owner or contractor to do work as listed.							
Csg. 13-3/9 45"	Depth	Ø 76'		To MULL Delling Conson Is							
Tbg. Size	Depth			Street							
Tool	Depth			City State							
Cement Left in Csg. /5	Shoe J	oint 15		The above wa	s done to satisfaction ar	nd supervision of owner	agent or contractor.				
Meas Line	Displac	e /0, 37		Cement Amo	ount Ordered $/3$	Esc Commo	p.				
	JIPMENT			<u> 2/ (č</u>	131.00	12175					
Pumptrk & No.				Common	135 &						
Bulktrk / J No. Tolk	<u>S</u>			Poz. Mix							
Bulktrk No.				Gel. 💢	34 lbs						
Pickup No.				Calcium 3	9 <i>1 162-</i>						
JOB SERVIC	ES & REMA	RKS		Hulls			225.00				
Rat Hole		j.	10.00	Salt							
Mouse Hole				Flowseal 67.5 /6(
Centralizers				Kol-Seal							
Baskets	7.7			Mud CLR 48							
D/V or Port Collar				CFL-117 or CD110 CAF 38							
Kun 2 346/33/	143° 51	:1081		Sand							
C5601 Bottom 1/0	ak a to	(39		Handling /43							
Break Circ Wess				Mileage 65/9295							
STAT BAIDER HE	3 10 K	<i>14</i>		FLOAT EQUIPMENT							
2714 Mic 1 Bag	1355	· \ /4.9/	M	Guide Shoe							
200 050 1		4		Centralizer	- 1965 1						
10.4 1341,				Baskets							
Close Volution Cog				AFU Inserts							
Bus Circ Harry	3.			Float Shoe							
circ CMT TO P.+		4		Latch Down			195				
		Ŧ		SELVICE	Sool IEA						
				LNV ((
Thul 400				Pumptrk Cha	rge Can (/						
<u>llaw (</u>	211 A61	944		Mileage /3	' 5						
	r T.					Tax					
1477	had NES	Suppl				Discount [
X Signature						Total Charge					

QUALITY WELL SERVICE, INC. Federal Tax I.D. # 481187368

6618

Home Office 324 Simpson St., Pratt, KS 67124

Office 620-727-3410 Fax 620-672-3663

Rich's Cell 620-727-3409 Brady's Cell 620-727-6964

Date			i .	County	Finish										
Lease	Boi	シヴィ	_) / /	- J _M	/ell No.	3-10	Location								
Contra		MO	250 , //		11/12/9		Locali	Owner Mull Drill-Ag							
Type J		Sicolo		Sound 3 / C	7			To Quality Well Service, Inc.							
Hole S		12	4		T.D.	6201		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Csg.	120	8 9	75		Depth		******	Charge mull Brilling							
Tbg. S	ize				Depth			Street 1900 N water from PKWY BIO 1700							
Tool					Depth			City witchath State K-S-							
Cemer	nt Left i	n Csg.			Shoe Jo	oint		The above was done to satisfaction and supervision of owner agent or contractor.							
Meas I	_ine				Displace	3675		Cement Amo		8 mm 3/0	15 1 25 1				
				EQUIPN	MENT			15046	mm 2./ (EL	3/16/1/8					
Pumpt		∫No.		i di				Common /	50 sk						
Bulktrk	10	⊃No.						Poz. Mix	125 SI						
Bulktrk	11	No.	- 1/1	aktor				Gel. 282 \k							
Pickup No.								Calcium 776 No.							
JOB SERVICES & REMARKS								Hulls							
Rat Hole								Salt							
Mouse	Hole							Flowseal 37.5 b.							
Centra	lizers			·		·	·····	Kol-Seal							
Baske	s		·····					Mud CLR 48							
D/V or	Port C	ollar						CFL-117 or CD110 CAF 38							
	Den	960 d	<u> </u>	10	BBC	<u> </u>		Sand							
<u> </u>	2 <	SAT		MAC	3%	/m	4	Handling 2	94						
	<u> </u>	6.1	11781	4	150	5 m ghr 5 "		Mileage Æ	19555						
		il.	1000	· 0 2 2 - 1		15/ 36:	25	891q FLOAT EQUIPMENT							
	19-	Eles 1	fan 2	Lungf	<u> </u>			Guide Shoe							
		54 ES	<u> 20 -</u>	1"	in.	8 min		Centralizer							
	<u> </u>			······································				Baskets	2 EA -						
								AFU Inserts	I EA BOFFIE	: Plots-	······				
								Float Shoe	1 EA WONE	No6-					
								Latch Down							
					· · · · · · · · · · · · · · · · · · ·			500 J.C	5 5 p) / t	Â					
								LWV	<u> </u>						
								Pumptrk Cha	rge SUPFACE	***************************************	***************************************				
								Mileage (C	25						
			 							Tax	· .				
~	7//	 	3.7	/						Discount					
X Signat	ure 🛴	UK.	J. 19	Stole Stole	<u> </u>					Total Charge					



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

PRESSURE PUMPING Job Log

					Job Log	- <u> </u>					
Customer	* Mul	l Drilling Comp	any		Coment Pump No	37223 19	9572 14HRS	Operator TRK No.	Operator TRK No.1 78868		
Address	:				Ticket	#: 1718	19537 L	Bulk TRK No.	19827 37725 Oscar	19827 37725	
City, State, Zip		~			Јов Тур	•:	Z42 - Cement Production Casing				
Service District	: 1	1718-Liberal K	S		Well Typ	P:		OIL	**************************************		
fell Name and No.		3ouziden #3-1)		Well Location	10,32,2	3 Count	y: Clark	State	Ks	
Туре	of Cmt	Sacks			Additives			Truck Lo	aded On		
50/50 Poz		285	10%	Salt,.5	Defoamer, 5%Gyp 5#Gilsonite, 2%	sum, .5 Fluid Loss, Gel	19827 3	7725 Oscar	Front	Back	
						****	1982	7 37725	Front	Back	
Lead	/Tail:	Weight #1 Gal.	Cu/	Ft/sk	Water Re	quirements	CU. FT.	Mon	Front Hours / Person	Back	
Lead:		13.8		.52		.64	433.2	TT Man Hours:	Hours / Person		
	il:						400.2	# of Men on Job:	3		
Time		Volume	Pt	ımps	Pres	sure(PSI)		Description of Ope	<u> </u>		
(am/pm)	(BPM)	(BBLS)	T	С	Tubing	Casing	1	a coontract of ope	adon and materia	13	
11:00am								Arrived at	location		
15:30pm								Spot truck			
17:08pm						2500	F	Pressure test lin			
17:10pm	3	23				zero		Pump 23bbls	of ultra flush		
17:30pm	3	13				zero	Pump 13bbls to fill rat and mouse hole				
							from 50sks at 13.8lbs				
17:41pm	6	63		ļ		30	Pump 63sks of cement from 235sks at 13.8lbs				
18:02pm							Shut down	/Drop plug/Wa	sh pump and l	ines to pit	
18:13pm					****		Start Displac	cement of 125b	bs of H2O/per	comp.man	
18:17pm	6	20				40		20bbls	gone		
18:21pm	6	40				40		40bbls	gone		
18:25pm	6	60				50		60bbls	gone		
18:29pm	6	80				50		80bbls	gone		
18:33pm	6	100				600		100bbls	gone		
18:36pm	6	115			*****	500	1	15bbls gone/S	low down rate		
18:38pm	33	125			· · · · · · · · · · · · · · · · · · ·	1200	Bump	plug/Hold pres	sure for 5 min	utes	
18:43pm							Relea	se pressure to	check if float h	olds	
							Pressur	e test casing fo	or 15minutes w	ith psi	
								Rig do	own		
							Job completed				
							Thanked company man and rig crew				
Size Hole	7 7/8	Depth			424		TYPE	 	ch down baffle)	
Size & Wt. Csg.	5 1/2 17#	Depth	5427	7.37	New / Used		Latch Down	5388.37	Depth		
Landing Psi	500+	Depth			**		Retainer	 	Depth		
Shoe Joint	39	Туре					Perfs		CIBP		
		1111	2 /	1		Basic Represe	ntative:	Vic	tor A. Corona		
Customer Sign	nature: 🗶	104	1/2	<i>2</i> ·		Basic Signatur	e:	Meder	-a Cor	7.	
	,	v	/			Date of Service	e:	7/22/2019			



Operation:
Uploading recovery & pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE

July **17**

2019

DST #1

Formation: Lansing B

Test Interval: 4600 -

Total Depth: 4630'

4630'

Time On: 14:50 07/17

Time Off: 23:24 07/17

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

Electronic Volume Estimate:

N/A

1st Open Minutes: 5 Current Reading:

199" at 5 min Max Reading: 199" 1st Close Minutes: 30 Current Reading: 0" at 30 min

Max Reading: 0"

2nd Open Minutes: 60 Current Reading:

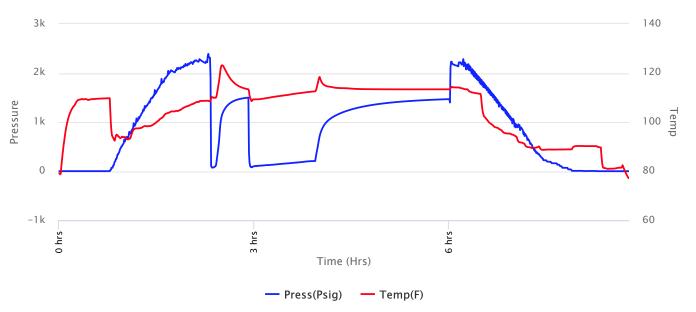
Gg" at 60 min

Max Reading: Gg"

2nd Close Minutes: 120 Current Reading: 23.5" at 120 min

Max Reading: 30.6"

Inside Recorder





Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE July 17

2019

DST #1	Formation: Lansing B	Test Interval: 4600 - 4630'	Total Depth: 4630'

Time Off: 23:24 07/17 Time On: 14:50 07/17

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

Recovered

<u>Foot</u>	<u>BBLS</u>	Description of Fluid	Gas %	<u>Oil %</u>	Water %	<u>Mud %</u>
118	1.67914	SLWCSLMCO	0	87	3	10
63	0.89649	SLMCSLWCGCO	20	76	3	1
126	1.79298	G	100	0	0	0
63	0.89649	SLMCSLGCWCO	5	65	27	3
63	0.89649	HGCO	30	70	0	0
63	0.89649	SLOCGCW	20	3	77	0

Total Recovered: 496 ft

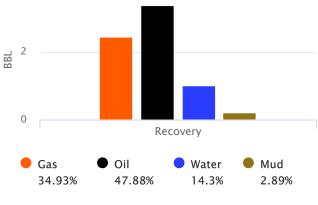
Total Barrels Recovered: 7.05808

Reversed	Out
NO	

Initial Hydrostatic Pressure	2213	PSI
Initial Flow	70 to 100	PSI
Initial Closed in Pressure	1498	PSI
Final Flow Pressure	77 to 205	PSI
Final Closed in Pressure	1467	PSI
Final Hydrostatic Pressure	2180	PSI
Temperature	123	°F
Pressure Change Initial	2.1	%
Close / Final Close		

34.93% GIP cubic foot volume: 13.84169

Recovery at a glance





Uploading recovery &

pressures

Company: Mull Drilling
Company, Inc
Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **17**2019

DST #1 Formation: Lansing Test Interval: 4600 - Total Depth: 4630'

Time On: 14:50 07/17 Time Off: 23:24 07/17

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

BUCKET MEASUREMENT:

1st Open: 1/4" Bob in 30 sec

1st Close: Nobb

2nd Open: Bob instantly gts in 6 min

2nd Close: Built to 30 1/2"

REMARKS:

tool sample blew out

Tool Sample: 0% Gas 0% Oil 0% Water 0% Mud

Ph: 7

Measured RW: .1 @ 85 degrees °F

RW at Formation Temp: 0.071 @ 123 °F

Chlorides: 64600 ppm



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **17**2019

DST #1 Formation: Lansing Test Interval: 4600 - Total Depth: 4630'

4630'

Time On: 14:50 07/17 Time Off: 23:24 07/17

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

Down Hole Makeup

Heads Up: 28.9 FT Packer 1: 4595 FT

Drill Pipe: 4596.33 FT **Packer 2:** 4600 FT

ID-3 1/2 Packer 3: 4630 FT

Weight Pipe: FT Top Recorder: 4584.42 FT

Collars: FT Bottom Recorder: 4602 FT

ID-2 1/4 Below Straddle Recorder: 4631 FT

Test Tool: 33.57 FT Well Bore Size: 7 7/8

ID-3 1/2-FH Surface Choke: 1"

Jars
Safety Joint
Bottom Choke: 5/8"

Total Anchor: 30

ID-2 7/8

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): FT

4 1/2-FH

Change Over: FT

Drill Pipe: (in anchor): FT

ID-3 1/2

Change Over: FT

Perforations: (below): 29 FT

4 1/2-FH

STRADDLE

Straddle Packer(s): FT

Change Over: FT

Drill Pipe: FT

ID-3 1/2"

Change Over: FT

Perforations (in tail pipe): FT

4 1/2-FH



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **17**2019

DST #1 Formation: Lansing Test Interval: 4600 - Total Depth: 4630'

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

Mud Properties

Mud Type: 9.2 Weight: 53 Viscosity: 10 Filtrate: 7200 Chlorides: ppm



Operation:
Uploading recovery & pressures

Company: Mull Drilling

Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek Pool: Infield

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **17**2019

DST #1 Formation: Lansing

Test Interval: 4600 - 4630'

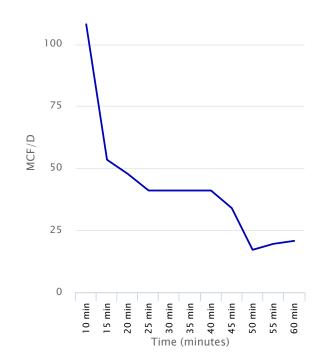
Total Depth: 4630'

Time On Bottom: 17:10 07/17 Time Off Bottom: 20:45 07/17

Gas Volume Report

	1st Open					
Time	Orifice	PSI	MCF/D			
10	0.75	2.0	108			
15	0.50	2.5	53.4			
20	0.50	2.0	47.7			
25	0.50	1.5	41.0			
30	0.50	1.5	41.0			
35	0.50	1.5	41.0			
40	0.50	1.5	41.0			
45	0.50	1.0	33.9			
50	0.25	3.5	17.1			
55	0.25	4.5	19.5			
60	0.25	5.0	20.7			

2nd Open			
Time	Orifice	PSI	MCF/D





Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE
July
18

DST #2 Formation: Lansing H Test Interval: 4790 - 4820'

Total Depth: 4820'

Time On: 16:27 07/18

Time Off: 01:48 07/19

Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

Electronic Volume Estimate: N/A

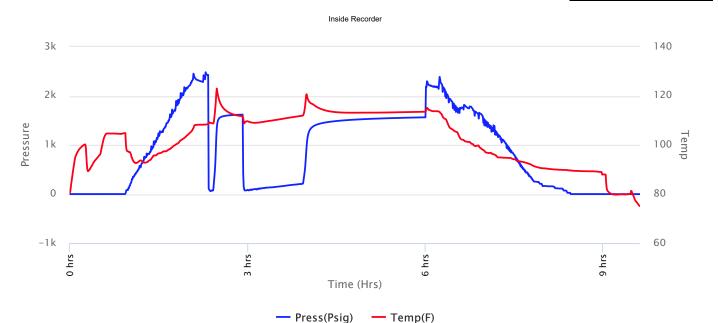
2019

1st Open Minutes: 5 Current Reading: 234.6" at 5 min

Max Reading: 234.6"

1st Close Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"

2nd Open Minutes: 60 Current Reading: Gg" at 60 min Max Reading: Gg" 2nd Close
Minutes: 120
Current Reading:
Bleeding off" at 120 min
Max Reading: Bleeding
off"





Company: Mull Drilling Company, Inc

Operation:
Uploading recovery & pressures

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE	
July	
18	
2019	

DST #2	Formation: Lansing	Test Interval: 4790 -	Total Depth: 4820'
	н	4820'	•

Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

Recovered

<u>Foot</u>	BBLS	Description of Fluid	Gas %	Oil %	Water %	<u>Mud %</u>
94	1.33762	SLMCSLGCO	10	87	0	3
63	0.89649	SLGCSLWCMCO	5	65	10	20
189	2.68947	G	100	0	0	0
63	0.89649	SLWCSLMCO	0	80	10	10
63	0.89649	SLMCSLWCSLGCO	10	77	10	3
63	0.89649	SLMCSLGCO	5	92	0	3

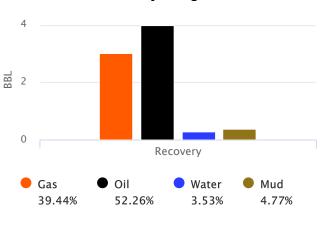
Total Recovered: 535 ft

Total Barrels Recovered: 7.61305

Reversed Ou
NO

Initial Hydrostatic Pressure	2296	PSI
Initial Flow	57 to 77	PSI
Initial Closed in Pressure	1618	PSI
Final Flow Pressure	76 to 208	PSI
Final Closed in Pressure	1563	PSI
Final Hydrostatic Pressure	2278	PSI
Temperature	122	°F
Pressure Change Initial	3.4	%
Close / Final Close		

Recovery at a glance



GIP cubic foot volume: 16.8577



Uploading recovery &

Company: Mull Drilling Company, Inc Lease: Bouziden Unit #3-10 SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

pressures DATE July

DST #2 Formation: Lansing Test Interval: 4790 -4820'

Total Depth: 4820'

Time On: 16:27 07/18 Time Off: 01:48 07/19

Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

BUCKET MEASUREMENT:

18

2019

1st Open: Bob in 30 sec

1st Close: Nobb

2nd Open: Gts in 3 1/2 min

2nd Close: Could not bleed off so let it bleed out the whole final shut in..

REMARKS:

tool sample blew out.

Tool Sample: 0% Gas 0% Oil 0% Water 0% Mud



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **18**2019

DST #2 Formation: Lansing Test Interval: 4790 - Total Depth: 4820'

4820'

Time On: 16:27 07/18 Time Off: 01:48 07/19

Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

Down Hole Makeup

Heads Up: 27.44 FT **Packer 1:** 4785 FT

Drill Pipe: 4784.87 FT **Packer 2:** 4790 FT

ID-3 1/2 Top Recorder: 4774.42 FT

Weight Pipe: FT Bottom Recorder: 4792 FT

ID-2 7/8

Well Bore Size: 7 7/8

ID-2 1/4 Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

Collars:

Jars Safety Joint

Total Anchor: 30

Anchor Makeup

FT

Packer Sub: 1 FT

Perforations: (top): FT

4 1/2-FH

Change Over: FT

Drill Pipe: (in anchor): FT

ID-3 1/2

Change Over: FT

Perforations: (below): 29 FT

4 1/2-FH



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **18**2019

DST #2 Formation: Lansing Test Interval: 4790 - Total Depth: 4820'

Time On: 16:27 07/18 Time Off: 01:48 07/19

Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

Mud Properties

Mud Type: Chemical Weight: 9.35 Viscosity: 50 Filtrate: 10 Chlorides: 7800 ppm



Operation:
Uploading recovery & pressures

Company: Mull Drilling

Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **18**2019

DST #2 Formation: Lansing

Test Interval: 4790 - 4820'

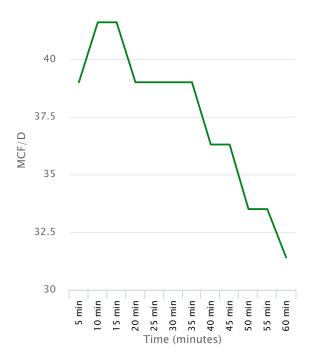
Total Depth: 4820'

Time On: 16:27 07/18 Time Off: 01:48 07/19
Time On Bottom: 18:44 07/18 Time Off Bottom: 22:19 07/18

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D
5	0.375	4.0	39.0
10	0.375	4.5	41.6
15	0.375	4.5	41.6
20	0.375	4.0	39.0
25	0.375	4.0	39.0
30	0.375	4.0	39.0
35	0.375	4.0	39.0
40	0.375	3.5	36.3
45	0.375	3.5	36.3
50	0.375	3.0	33.5
55	0.375	3.0	33.5
60	0.375	2.5	31.4





Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

Operation:
Uploading recovery &
pressures

July **20** 2019 DST #3 Formation: Pawnee / myrick

Test Interval: 5170 - 5200'

Total Depth: 5200'

Time On: 10:15 07/20 Time Off: 18:10 07/20

Time On Bottom: 12:23 07/20 Time Off Bottom: 15:58 07/20

Electronic Volume Estimate: 125' 1st Open Minutes: 5 Current Reading: 1.3" at 5 min

Max Reading: 1.3"

1st Close Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0" 2nd Open Minutes: 60 Current Reading: 7.8" at 60 min

Max Reading: 7.8"

Minutes: 120 Current Reading: 0" at 120 min

Max Reading: 0"

2nd Close

Inside Recorder





pressures

Company: Mull Drilling Company, Inc Lease: Bouziden Unit #3-10

Time On: 10:15 07/20

Operation:
Uploading recovery &

_

SEC: 10 TWN: 32S RNG: 23W County: CLARK

County: CLARI State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

Total Depth: 5200'

DATE	
July	
20	
2019	

DST #3 Formation: Pawnee / Test Interval: 5170 - myrick 5200'

Time Off: 18:10 07/20

Time On Bottom: 12:23 07/20 Time Off Bottom: 15:58 07/20

Recovered

<u>Foot</u>	<u>BBLS</u>	Description of Fluid
63	0.89649	G
63	0.89649	HMCW
63	0.89649	SLMCW

<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
100	0	0	0
0	0	70	30
0	0	90	10

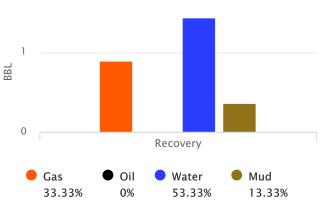
Total Recovered: 189 ft

Total Barrels Recovered: 2.68947

Reversed Out		
NO		

Initial Hydrostatic Pressure	2482	PSI
Initial Flow	16 to 23	PSI
Initial Closed in Pressure	1808	PSI
Final Flow Pressure	22 to 68	PSI
Final Closed in Pressure	1794	PSI
Final Hydrostatic Pressure	2456	PSI
Temperature	120	°F
Pressure Change Initial	8.0	%
Close / Final Close		

Recovery at a glance



GIP cubic foot volume: 5.03334



Company: Mull Drilling Company, Inc Lease: Bouziden Unit #3-10

Operation: Uploading recovery & pressures

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE July 20 2019

Formation: Pawnee / Total Depth: 5200' Test Interval: 5170 myrick 5200'

Time On: 10:15 07/20 Time Off: 18:10 07/20

Time On Bottom: 12:23 07/20 Time Off Bottom: 15:58 07/20

BUCKET MEASUREMENT:

1st Open: Wsb built to 1 1/4"

1st Close: Nobb

2nd Open: Wsb built to 7 3/4"

2nd Close: Nobb

REMARKS:

Tool Sample: 0% Gas 1% Oil 96% Water 3% Mud

DST #3

Ph: 7

Measured RW: .1 @ 101 degrees °F

RW at Formation Temp: 0.085 @ 120 °F

Chlorides: 53800 ppm



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATE
July
20
2019

DST #3 Formation: Pawnee / Test Interval: 5170 - Total Depth: 5200' myrick 5200'

Time On: 10:15 07/20 Time Off: 18:10 07/20

Time On Bottom: 12:23 07/20 Time Off Bottom: 15:58 07/20

Down Hole Makeup

Heads Up: 26.98 FT **Packer 1:** 5165 FT

Drill Pipe: 5164.41 FT **Packer 2:** 5170 FT

ID-3 1/2 Top Recorder: 5154.42 FT

Weight Pipe: FT Bottom Recorder: 5172 FT

Well Bore Size: 7 7/8

ID-2 1/4 Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

ID-2 7/8

Collars:

FT

Jars Safety Joint

Total Anchor: 30

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): FT

4 1/2-FH

Change Over: FT

Drill Pipe: (in anchor): FT

ID-3 1/2

Change Over: FT

Perforations: (below): 29 FT

4 1/2-FH



Uploading recovery &

pressures

Company: Mull Drilling Company, Inc

Lease: Bouziden Unit #3-10

SEC: 10 TWN: 32S RNG: 23W

County: CLARK State: Kansas

Drilling Contractor: Duke Drilling

Company, Inc - Rig 1 Elevation: 2240 GL

Field Name: Big Bear Creek

Pool: Infield Job Number: 373

API #: 15-025-21609-00-00

DATEJuly **20**2019

DST #3 Formation: Pawnee / Test Ir myrick

ee / Test Interval: 5170 -5200' Total Depth: 5200'

Time On: 10:15 07/20 Time Off: 18:10 07/20

Time On Bottom: 12:23 07/20 Time Off Bottom: 15:58 07/20

Mud Properties

Mud Type: Chemical Weight: 9.2 Viscosity: 53 Filtrate: 9.2 Chlorides: 8350 ppm

KEVIN L. KESSLER CONSULTING PETROLEUM GEOLOGIST (316) 522 - 7338 **ELEVATION OPERATOR:** MULL DRILLING CO. INC. LEASE: BOUZIDEN UNIT WELL #: 3 - 10 **KB**: 2252' **LOCATION**: 1621' FNL & 2315' FEL GL: 2240' **SEC**: 10 **TWP**: 32 S **RGE**: 23 W MEASURMENTS FROM: COUNTY: CLARK **STATE:** KANSAS KB CONTRACTOR: DUKE RIG # 1 CASING RECORD: SURFACE: COMM: 07 - 10 - 2019 COMP: 07 - 22 - 2019 8 5/8" @ 619' RTD: 5430' LTD: 5426' PRODUCTION: GEOLOGICAL SUPERVISION FROM: 4300' TO: RTD 5 1/2" @ 4680' SAMPLES SAVED FROM: 4300' TO: RTD SAMPLE DATUM TOP LOG DATUM COMP. FORMATION: **ELECTRICAL SURVEYS:** DIL - 2124 4376 HEEBNER - 2124 + 04 4376 CNL/CDL - 2308 4560 4560 LANSING - 2308 + 02 **MICRO** 4976 + 04 STARK - 2724 4976 - 2724 SONIC 5210 - 2958 FORT SCOTT - 2958 **FLAT** 5210 5226 CHEROKEE - 2974 5226 - 2974 **FLAT** - 04 MISSISSIPPI 5378 - 3126 5378 - 3126 REFERENCE WELL FOR STRUCTURAL COMPARISON: MULL # 2-10 BOUZIDEN UNIT 10-32S-23W CLARK CO. KS. 4300 -SHALE: RED - BRN GRAY - GREEN SILTY LST: CRM - TAN FXTAL DNSE HARD MICRITIC IN PART RARE FOSS MINOR -FR AMT GRAY SHALE NO VIS. POR. NSO 4350 -LST: A. A. DNSE BLOCKY NO VIS. POR. SHALE: BLACK CARB. HEEBNER 4376 (- 2 124) SHALE: BLACK CARB. W/ FRAIR AMT GRAY CALC, SHALE SHALE: A. A. W/ MINOR DNSE MOTTLED HARD LST. NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -DNSE RARE FOSS. NO VIS. POR. NSO 4400 MUD CHECK @ 4100' LST: A. A. MINOR CHERT NO VIS. POR. М SHALE: GRAY - BRN SILTY SANDY IN PART NO VIS. POR. NSO. SHALE: GRAY - BRN SILTY. NSO 4450 -LST: CRM - TAN FXTAL SUBCHKY - DNSE SLI FOSS NO VIS. POR. NSO SHALE: BRN - GRAY SILTY - SANDY INPART NO VIS. POR. NSO 4500 MUD CHECK @ 4500' SHALE: BRN SILTY SANDY NSO М SHALE: A. A. NSO SHALE: BRN. SILTY SANDY IN PART NSO 4550 -ANSIN G 4560 (08) SHALE A.A. W/ MINOR INTERBEDDED GRAY LST. NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -DNSE SLI FOSS, FR AMT GRAY SILTY SHALE NO VIS. POR. NSO 4600 -MUD CHECK @ 4600' LST: A. A. NO VIS. POR. NSO VV/T LST: CRM - TAN FXTAL DNSE BRITTLE OOLICASTIC IN PART FSFO FNT. ODOR VRY LT BRN SAT STN BRIGHT YELLOW # FLUOR. FR - GD OOLICASTIC POR. 250 UNIT H.W. #1(4600-LST: CRM - TAN FXTAL SUBCHKY - DNSE DST 630 MINOR OOLITES PR VIS. POR. NSO GTS 6 MIN. GAGE 20:7MCF / D 60 496 SLIWCGO 48% O SHALE: GRAY NSO IÉ P 1498# LST: CRM - GRAY FXTAL MOST DNSE 1\$IF FOSS SSFO DULL YELLOW FLUOR. NO 4650 ODOR PR. INTRPRT. POR. 57 UNIT H. W. LST: CRM - GRAY FXTAL SUBCHKY -DNSE FOSS IN PART MINOR OOLITES NO VIS. POR. NSO LST: A. A. NO VIS. POR. NSO 4700 -M CHECK @ 4700' LST: WHT - CRM - GRAY FXTAL SUBCHKY - MOSTLY DNSE FOSS IN PART MINOR OOLITS FR AMT. GRAY W/T CALC. SHALE NO VIS. POR. NSO LST: CRM - GRAY FXTAL DNSE HARD BRITTLE OOLICASTIC IN PART. MINOR AMT MICRITIC. FR - GD OLICAST POR. LST: WHT - CRM FXTAL SUBCHKY -DNSE SLI FOSS FR AMT OOLITIC W/ FR -GD INTRPRT POR NSO NO ODOR NO FLUOR NO G.K. 4750 -LST: CRM - GRAY FXTAL DNSE BLOCKY HARD SLI FOSS NO VIS. POR. NSO LST: A. A. DNSE SLI FOSS. CPL PCS W/ FR INTRPRT POR. NSO 4800 -MUI CHECK @ 4 800' Ś LST: CRM - GRAY FXTAL HARD BRITTLE WI MINOR AMT OOLITIC - OOLICASTIC VRY FRIABLE LOOSE SSFO FR ODOR SCATT SUBSAT - SAT VRY LITE BRN STN GD YELLOW FLUOR, GD OOLICASTIC, POR. 275 UNIT H.W. #2 (1790 4820 i) RE .5 M N. 2ND FLO LST: CRM - TAN FXTAL DNSE HARD GAGE 31.4 MCF!/ D 60' BLOCKY RARE OOLITE SLI FOSS NO VIS. 535 SLIWUGO 52% O POR. NSO ΙĖΡ ISIE 1618# FFF : /b - 208#): 1563# LST: A. A. W/ FR AMT GRAY SILTY CALC. SHALE NO VIS. POR. NSO 4850 -LST: CRM - TAN - GRAY FXTAL DNSE BLOCKY RARE FOSS, NO VIS. POR. NSO SHALE: DRK GRAY CALC. NSO 4900 LST: CRM - WHT - GRAY FXTAL DNSE SLI FOSS. NO VIS. POR. NSO LST: CRM - GRAY FXTAL DNSE BLOCKY HARD VOID OF FOSS. NO VIS. POR. NSO LST: A. A. DNSE HARD NO VIS. POR. NSO 4950 -LST: A. A. NO VIS. POR. NSO STARK 4976 (- 272 SHALE: BLACK CARB. LST: TAN - BRN FXTAL DNSE BRITTLE W/ INTRBEDDED GRAY CALC. SHALE NO 5000 MUD CHECK @ 5000 VIS. POR. NSO 9.2 ۱МП SHALE: BLACK CARB. W/ FR AMT GRAY -DRK GRAY CALC. W/ MINOR DNSE LST: A. A. NO VIS. POR. NSO LST: CRM - GRAY FXTAL DNSE HARD MICRITIC IN PART NO VIS. POR. NSO 5050 -LST: A. A. W/ FR AMT. GRAY - DRK GRAY SHALE NO VIS. POR. NSO SHALE: GRAY SILTY W/ MINOR FLAGGY GRAY LIMESTONE NO VIS. POR. NSO LST: CRM - TAN - GRAY FXTAL SUBCHKY - DNSE RARE FOSS, NO VIS. POR. NSO 5100 -MUD CHECK @ 5100 V/J LST: CRM - GRAY FXTAL DNSE SLI FOSS FR AMT GRAY GREEN SHALE NO VIS. POR. NSO SHALE: GRAY - DRK GRAY W/ MINOR BLACK CARB. NO VIS. POR. NSO 5150 LST: WHT - CRM FXTAL SUBCHKY -DNSE SLI FOSS COMPACT COLITIC IN PART NO VIS. POR. NSO #3 (5170 - 5200) RE SHALE: BLACK CARB. NO VIS. POR. NSO 126 MCW 16 - 23# S ISIF LST: WHT - CRM FXTAL MOSTLY DNSE 22 - 68# FFF OOLITIC IN PART SLI FOSS VSSFO FNT ODOR DULL YELLOW FLOUR PR INTRPRT. POR 268 UNIT H.W. LST: CRM - WHT FXTAL DNSE BLOCKY NO VIS. POR. NSO 5200 -SCOTT 5210 (948 LST: CRM - GRAY DNSE BLOCKY RARE FOSS W/ FR AMT BLACK CARB. SHALE NO VIS. POR. NSO CHERO KEE 5226 (2974 LST: WHT - CRM - GRAY FXTAL SUBCHKY - DNSE FOSS IN PART W/ FR AMT BLACK CARB. SHALE NO VIS. POR. 5250 LST: GRAY FLAGGY W/ ABUNDANT GRAY - DRK GRAY SHALE NO VIS. POR. NSO LST: CRM - GRAY FXTAL SUBCHKY -MOSTLY HARD BRITTLE DNSE MUCH INTERBEDDED GRAY - DRK GRAY SHALE NO VIS. POR. NSO LST: A. A. W/ INTEBEDDED SHALE A. A. NO VIS. POR. NSO 5300 -CHECK @ 4 M 400' WT LST: GRAY DNSE SLI FOSS. NO VIS. POR. NSO LST: GRAY FXTAL DNSE W/ INTERBEDDED GRAY - DRK GRAY SHALE NO VIS. POR. NSO 5350 -LST: GRAY FXTAL SUBCHKY - DNSE RARE FOSS ABUND. GRAY - DRK GRAY SHALE NO VIS. POR. NSO SAND: FN GRND, QTZ, WELL SORTED MISSISSIPPI 5378 (TIGHT CLUSTERS VSSFO FNT ODOR VRY DULL YELLOW FLUOR, LT BRN SPTY - SUBSAT STN PR. INTRGRAN. POR. 130 UNIT H.W. LST: CRM - GRAY FXTAL MOST DNSE SLI FOSS MINOR OOLITES NO VIS. POR. 5400 LST: CRM - GRAY FXTAL SUBCHKY -MOSTLY DISE FOSS IN PART MINOR OOLITES NO VIS. POR. NSO LST: CRM - GRAY DNSE SLI FOSS RARE OOLITES NO IS POR. NSO COMMENTS: 5 1/2" PRODUCTION CASING WAS RUN TO FURTHER TEST THE PRODUCTIVITY OF THIS WELL KEVIN L. KESSLER