KOLAR Document ID: 1408481

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:	SecTwpS. R East West					
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: w/ sx cmt.					
Original Comp. Date: Original Total Depth:						
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD	Drilling Fluid Management Plan					
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer	(Data must be collected from the Reserve Pit)					
Commingled Permit #:	Chloride content:ppm Fluid volume:bbls					
Dual Completion Permit #:	Dewatering method used:					
SWD Permit #:	Location of fluid disposal if hauled offsite:					
EOR Permit #:	Location of haid 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: 1408481

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		Type and F	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	Redland Resources, LLC
Well Name	HALL 23-5
Doc ID	1408481

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	718	A- CON/COM MON		3%cc,.5# CELLOFL AKE
Production	7.875	4.5	10.5	5295	60/40 POZ/AA-2	300	4% GEL



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

77/41/236 FIELD SERVICE TICKET

1718 16358 A

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

The second second		MPING & WIRELINE	one 620-672-1	1201			DATE	TICKET NO)		
DATE OF JOB	1/3//8	DISTRICT	***************************************		NEW ☑ OLD ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:						
CUSTOMER	Pedlor	d Resour	CES		LEASE 1-1011 73-5 WELL NO.						
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SERVICE REPRESENTATIV	'E ////		THE ABOVE M ORDERED BY				ву:Х ДД	1 Hely		***************************************	

FIELD SERVICE ORDER NO.

ENERGY SERVICES PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET 1718 16359 A

TTM/ 14

DATE TICKET NO.___

DATE OF JOB	14/18	∕ DIST	RICT				WENT TO	OLD	PROD [] IN	J 🗌 WDW	<u></u>	CUSTOMER ORDER NO.:	
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SERVICE	
REPRESENTATIVE	

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. >





The second of th			hone 620-672-1			DATE	TICKET NO	•		
DATE OF -	9-18 1	DISTRICT PLATE		NEW WEL	L DA OFFIC	PROD IN		CUSTO		
CUSTOMER		Resource		LEAS	SE HAII				LL NO.	23.
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SERVICE

REPRESENTATIVE MIKE MIGHT OF

THE ABOVE MATERIAL AND SERVICE

ORDERED BY CUSTOMER AND RECEIVED BY

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

2441

FIELD SERVICE ORDER NO.

BASIC 10244 NE Hwy. 61 P.O. Box 8613 Pratt, Kansas 67124

FIELD SERVICE TICKET

PRESSURE PUMPING & WIRELING	6)6		
DATE OF 1-19-18 DISTRICT PARTY WELL PROD INJ WDW	CUSTO		
	· · · · · · · · · · · · · · · · · · ·	ELL NO.	15
ADDRESS COUNTY 16 OW A STATE	H.		
CITY STATE SERVICE CREW			
AUTHORIZED BY JOB TYPE: 42 LONG STRING	·		
EQUIPMENT# HRS EQUIPMENT# HRS EQUIPMENT# HRS TRUCK CALLED		AM TI	ME
ARRIVED AT JOB		AM PM	
START OPERATION		PM AM PM	···········
FINISH OPERATION		AM PM	
RELEASED		AM PM	
MILES FROM STATION TO		*101	
ITEM/PRICE MATERIAL, EQUIPMENT AND SERVICES USED UNIT QUANTITY UNIT PRICE	· · · · · · · · · · · · · · · · · · ·	OR OR AC	
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SERVICE & EQUIPMENT %TAX ON \$ MATERIALS %TAX ON \$		312	10

SERVICE

REPRESENTATIVE MILE MATTUI

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: X



TREATMENT REPORT

Customen	(0.0c. 1	2	L	ease No.				1	Date			
Lease	HAII	?esour	V V	Vell #		23-5				- 19	-18	
Field Order		on Pla					Ph Depth	2210	•	iow F		State //
Type Job	2-43		Long ST	(1/19			Formation	53081	. P1	Legal De	,	- 305-19W
	E DATA	1.5	FORATING	-				,,,,,,,)0) 1/0
Casing Size	Tubing S			DAIA	FLUID USED			0 . F	TREATMENT RESUME			
Depth 3					• • • • • • • • • • • • • • • • • • • •				Max soll 23 PPS J. 5 Ming Floor 109			
Volume			To			Pad SAY		70% 56 Min - 601	10116100	178 J.F	<u>・ </u>	(and 104
Max Press	Max Pres	s	To	····	Fra	<u> </u>	1 60/c				15 Min.	
Well Connecti		Vol. From	To			20 2		ं ४०र HHP Used	47.5	ř.	Annulus Pre	essure
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Customer Re	presentative (Avin H		Station	Mana	ager W ' ST			Treater	ATTAL		
Service Units				2,97,			19960	19866		T		
Driver Names	Marra		MARRI				Whomat		1.1			
	Casing Pressure	Tubing Pressure	Bbls. Pum	ped		Rate			Sen	ice Log		
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GEOLOGICAL REPORT HALL 23-5 SW/NE/SW/NW SECTION 23 – T30S – R19W KIOWA COUNTY, KANSAS

SUMMARY

The above captioned well was drilled to a total depth of 5,300 feet on January 19, 2018. A one-man logging unit was on location from approximately 4,000 feet to TD. The well was under the geological supervision of the undersigned from 4,000 feet to TD. At TD, Weatherford electric logs were ran that consisted of Dual Induction, Compensated Neutron-Density and Micro-log. From the data collected while drilling and analyzing, potential hydrocarbon shows were encountered in the Mississippian Spergen Dolomite and Mississippian Warsaw Dolomite. The decision was made to run casing and attempt completion in the above mentioned zones.

MISSISSIPPIAN SEDIMENTS

The top of the Mississippian Unconformity was encountered at 5,123 (-2840) feet. A twenty foot "cap-rock" was cut that encountered scattered gas kicks. These samples were described as Limestone: off white to cream to buff to tan, predominantly microcrystalline to dense, some sub chalky, slightly fossilliferous, trace pin point vugular porosity in part, mottled in part, some dolomitic in part, with sucrosic texture, friable, trace to fair inter-crystalline porosity, with abundant dull yellow mineral fluorescence, some yellow fluorescence, with slow stream cut, no odor, no visible stain.

The top of the Spergen Dolomite was cut at 5,143 (-2860) feet, with porosity extending to 5,168. Samples were described as Dolomite: white to off white to light tan, very fine to fine crystalline, sucrosic texture, trace to fair inter-crystalline porosity, trace pin-point vugular porosity, very limey grading to dolomitic limestone, slightly glauconitic, friable in part, trace opaque to milky spotted chert, abundant yellow fluorescence, with good stream cut, trace light brown live oil stain, good odor. Electric logs indicate the Spergen to have a neutron porosity as high as 25% that calculates productive along with good micro-log separation.

The top of the Warsaw Dolomite was cut at 5,171 (-2888) feet. Samples were described as Dolomite: off white to cream to tan to light brownish grey, very fine to fine crystalline, sucrosic texture, friable in part, trace to fair inter-crystalline porosity, trace pin point vugular porosity, trace fractured porosity, limey in part, glauconite, trace opaque to light brown chert, abundant bright yellow fluorescence, with excellent stream cut, trace to fair light brown live oil stain, with good odor. A 190-unit gas kick was recorded from the gas chromatograph. Electric logs indicate porosity as high as 19% and have good micro-log separation.

ELECTRIC LOG TOPS

	REDLAND HALL SW NW 23-T30S-R19W	MCCOY PET. HILL "A" 1-23 N/2, NE, SW 23-T30S-R19W	GRAHAM-MICHAELIS HAYSE #1-23 C NE NW 23-T30S- R19W
CHASE	2611	2600	2595
(Subsea)	(-373)	(-346)	(-333)
TOP PENN	3472	3430	3432
(Subsea)	(-1189)	(-1176)	(-1170)
BS. HEEBNER	4270	4246	4256
(Subsea)	(-1987)	(-1992)	(-1994)
STARK SH.	4750	4722	4730
(Subsea)	(-2467)	(-2468)	(-2468)
ALTAMONT	4941	4924	4932
(Subsea)	(-2658)	(-2670)	(-2670)
CHEROKEE SH.	5025	4996	5004
(Subsea)	(-2742)	(-2742)	(-2742)
MISS. UNCON.	5123	5064	5078
(Subsea)	(-2840)	(-2810)	(-2816)
T/ WARSAW	5171	5122	5124
(Subsea)	(-2888)	(-2868)	(-2862)

CONCLUSION

The Hall 23-5 was drilled as an in-fill development well for additional hydrocarbons in the Mississippian Spergen Dolomite. After all data was analyzed the decision was made to set production easing and attempt completion in the Spergen Dolomite.

Respectfully Submitted,

Mike Pollok

Petroleum Geologist

1/22/2018