# **Geological Report**

# **Gaskill Range-Bertrand Unit #5-1**

56' FSL & 2048' FWL Sec. 5 T12s R33w Logan County, Kansas



# **Gaskill Range-Bertrand Unit #5-1**

## **General Data**

Well Data:	StrataKan Exploration, LLC. Gaskill Range-Bertrand Unit #5-1 56' FSL & 2048' FWL Sec. 5 T12s R33w Logan County, Kansas API # 15-109-21524-0000		
Drilling Contractor:	WW Drilling, Inc. Rig #2		
Geologist:	Jason T Alm		
Spud Date:	September 8, 2017		
Completion Date:	September 18, 2017		
Elevation:	3167' Ground Level 3172' Kelly Bushing		
Directions:	Monument KS, South 5 mi on 350 Rd. East into location.		
Casing:	260' 8 5/8" surface casing 4788' 5 1/2" production casing		
Samples:	10' wet and dry, 3800' to RTD		
Drilling Time:	3700' to RTD		
Electric Logs:	Pioneer Energy Services "J. Hendrickson		
Drillstem Tests:	Three, Trilobite Testing, Inc. "Bradley Walter"		
Problems:	None		
Remarks:	Deviation 1° @ 4350'. Pipe Strap 1.32 ft long to board @ 4350'.		

	StrataKan Exploration, LLC.		
	Gaskill Range-Bertrand Unit #5-1		
	Sec. 5 T12s R33w		
Formation	56' FSL & 2048' FWL		
Anhydrite	2656' +516		
Base	2679' +493		
Topeka	3848' -676		
Heebner	4071' -899		
Toronto	4096' -924		
Lansing	4109' -937		
BKC	4409' -1237		
Marmaton	4445' -1273		
Pawnee	4539' -1367		
Fort Scott	4593' -1421		
Cherokee	4622' -1450		
Johnson	4666' -1494		
Morrow	4716' -1554		
Mississippian	4732' -1560		
RTD	4790' -1618		
LTD	4789' -1617		

## **Formation Tops**

## Sample Zone Descriptions

LKC "I" zone	(4303', -1131):	Covered in DST #1	
	Ls – Fine crystalline,	oolitic with poor oolicastic porosity, light to	
	fair scattered oil stain	in porosity, no show of free oil, no odor, dull	
	yellow flourescents, few visible gas bubbles, 20 units hotwire.		
LKC "J" zone	(4328', -1156):	Covered in DST #1	
	Ls – Fine crystalline,	oolitic with scattered poor oomoldic porosity,	
	light brown oil stain i	n porosity, slight show of free oil when	
	broken, dull yellow fl	uorescents, 19 units hotwire.	
Fort Scott	(4593', -1421):	Covered in DST #2	
	Ls – Fine crystalline,	oolitic packstone with poor to fair oolicastic	
	porosity, light to fair	oil stain and saturation in porosity, slight	
	show of free oil when	broken, few gas bubbles on break, light to	
	good yellow flouresco	ents, good cut, 72 units hotwire.	
Johnson	(4666', -1494):	Covered in DST #3	
	Ls – Fine to sub-cryst	talline with poor scattered fair vuggy	
	porosity, light to fair	oil stain, few pieces with good saturation,	
	show of free oil on cu	p, light odor, good yellow fluorescents, good	
	cut, 110 units hotwire	· · · · · · · · · · · · · · · · · · ·	

### **Drill Stem Tests**

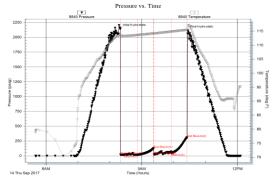
Trilobite Testing, Inc. "Bradley Walter"

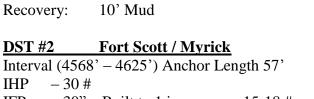
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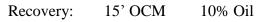
#### DST #1 LKC "I-J" zones

Interv	al (4290' – 4350') Anchor	Length 60'
IHP	-2142 #	
IFP	$-30$ " – Built to $\frac{1}{2}$ in.	17-17 ‡
ISI	– 30" – Dead	125 #
FFP	– 30" – Dead	17-40 ‡
FSI	– 30" – Dead	308 #
FHP	-2112 #	
BHT	– 117°F	





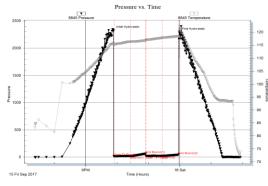
IHP	- 30 #	
IFP	- 30" - Built to 1 in.	15-18 #
ISI	– 30" – Dead	61 #
FFP	- 30" - S. B.	19-23 #
FSI	– 60" – Dead	42 #
FHP	- 2281 #	
BHT	– 121°F	

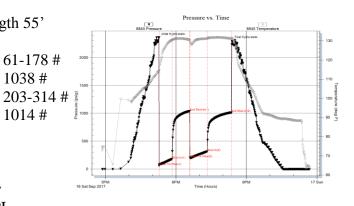


#### DST #3 Johnson

Interval (4645' – 4700') Anchor Length 55' IHP -2352 # IFP – 30" – B.O.B. 3 min. 61-178 # -45" - B.O.B. 15 min. 1038 # ISI -45" - B.O.B. on open FFP FSI - 60" - B.O.B. 40 min. 1014 # FHP - 2295 # – 131°F BHT

Recovery: GTS during final flow 780' GCO 27° API 120' GOCM 25% Oil





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	StrataKan Exploration, LLC.	Abercrombie Drilling	Abercrombie Drilling Beren Corporation		
	Gaskill Range-Bertrand Unit #5-1	Bertrand D #1	Bertrand D #1 Bertrand #2		
	Sec. 5 T12s R33w	Sec. 5 T12s R33w Sec. 7 T12s R33w			
Formation	56' FSL & 2048' FWL	330' FSL & 2310' FEL		C NE NE	
Anhydrite	2656' +516	2654' +517	(-1)	2656' +517	(-1)
Base	2679' +493	NA	NA	2679' +494	(-1)
Topeka	3848' -676	NA	NA	NA	NA
Heebner	4071' -899	4072' -901	(+2)	4068' -895	(-4)
Toronto	4096' -924	4099' -928	(+4)	4092' -919	(-5)
Lansing	4109' -937	4112' -941	(+4)	4108' -935	(-2)
BKC	4409' -1237	NA	NA	NA	NA
Marmaton	4445' -1273	NA	NA	NA	NA
Pawnee	4539' -1367	4539' -1368	(+1)	4532' -1359	(-8)
Fort Scott	4593' -1421	4598' -1427	(+6)	4594' -1421	FL
Cherokee	4622' -1450	4628' -1457	(+7)	4621' -1448	(-2)
Johnson	4666' -1494	4672' -1501	(+7)	4667' -1494	FL
Morrow	4716' -1554	NA	NA	NA	NA
Mississippian	4732' -1560	4737' -1566	(+6)	4735' -1562	(+2)

### **Structural Comparison**

#### Summary

The location for the Gaskill Range-Bertrand Unit #5-1 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Three Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Cherokee / Johnson Zone. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Gaskill Range-Bertrand Unit #5-1 well.

### **Recommended Perforations**

Johnson zone	4666' - 4672'	<b>DST #3</b>
Before Abandonment: Fort Scott	4594' – 4598'	<b>DST #2</b>

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.