

# Jeff Christian

PETROLEUM GEOLOGIST  
Wichita, Kansas

<b>OPERATOR</b> <u>MURFIN DRILLING COMPANY</u>		<b>GEOLGISTS</b> <u>REPORT</u>	
<b>LEASE</b> <u>JLM # 1-15</u>		<b>DRILLING TIME AND SAMPLE LOG</b>	
<b>LOCATION</b> <u>550' FL. # &amp; 2300' FEL</u>		<b>ELEVATIONS</b>	
<b>SEC</b> <u>15</u> <b>TWP</b> <u>21 S</u> <b>RNG</b> <u>34 W</u>		<b>RESIDENTIAL NUMBER</b>	
<b>COUNTY</b> <u>FINNEY</u> <b>STATE</b> <u>KANSAS</u>		<b>CASING RECORD</b>	
<b>FIELD</b> <u>NINN NORTH</u>		<b>CONDUCTOR</b> <u>NONE</u>	
<b>API</b> <u>15-055-2281</u>		<b>Surface &amp; Elev @ 282'</b>	
<b>CONTRACTOR</b> <u>COMPANY TOOLS</u> <b>RING NO.</b> <u>21</u>		<b>W/175' ON</b>	
<b>DRILLING STARTED</b> <u>09/29/2012</u> <b>COMPLETED</b> <u>10/07/2012</u>		<b>Production Data</b>	
<b>MUD DISPLAYED</b> <u>340'</u> <b>MUD TYPE</b> <u>CHEMICAL</u>		<b>Production Data</b>	
<b>DRILLING TIME KEPT FROM</b> <u>3430'</u> <b>TO</b> <u>RTD</u>		<b>Production Data</b>	
<b>SWALES SAVED FROM</b> <u>3430'</u> <b>TO</b> <u>RTD</u>		<b>Production Data</b>	
<b>SWALES MAINTAINED FROM</b> <u>3430'</u> <b>TO</b> <u>RTD</u>		<b>Production Data</b>	
<b>GEOTECHNICAL SUPERVISION FROM</b> <u>3425'</u> <b>TO</b> <u>RTD</u>		<b>Production Data</b>	
<b>FORMATION NAME</b>		<b>LOGS</b>	<b>SAMPLE DATA</b>
<b>BASE ANHYDRITE</b> <u>2104'</u> <b>(-872)</b> <u>2103'</u> <b>(-872)</b>		<b>TOP</b>	<b>DATE</b>
<b>HEEBNER</b> <u>3817'</u> <b>(-842)</b> <u>3817'</u> <b>(-842)</b>		<b>TOP</b>	<b>DATE</b>
<b>LANSING</b> <u>3865'</u> <b>(-890)</b> <u>3865'</u> <b>(-890)</b>		<b>TOP</b>	<b>DATE</b>
<b>STARK</b> <u>4176'</u> <b>(-1200)</b> <u>4176'</u> <b>(-1200)</b>		<b>TOP</b>	<b>DATE</b>
<b>MARMATON</b> <u>4336'</u> <b>(-1361)</b> <u>4336'</u> <b>(-1361)</b>		<b>TOP</b>	<b>DATE</b>
<b>PAWNEE</b> <u>4419'</u> <b>(-1444)</b> <u>4419'</u> <b>(-1444)</b>		<b>TOP</b>	<b>DATE</b>
<b>CHEROKEE</b> <u>4489'</u> <b>(-1541)</b> <u>4489'</u> <b>(-1541)</b>		<b>TOP</b>	<b>DATE</b>
<b>MORROW SH.</b> <u>4644'</u> <b>(-1669)</b> <u>4644'</u> <b>(-1669)</b>		<b>TOP</b>	<b>DATE</b>
<b>MUS. ST. GEN.</b> <u>4678'</u> <b>(-1703)</b> <u>4678'</u> <b>(-1703)</b>		<b>TOP</b>	<b>DATE</b>
<b>TOTAL DEPTH</b> <u>4853'</u> <b>(-1875)</b> <u>4853'</u> <b>(-1875)</b>		<b>TOP</b>	<b>DATE</b>
<b>FORMATION NAME</b>		<b>LOGS</b>	<b>SAMPLE DATA</b>
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DATE	7:00 AM DEPTH	REMARKS
9/29/12	MIRT	SPUD 5:45 pm
9/30/12	340'	DRLG dev. 1 deg. @ 225'
10/1/12	2452'	DRLG
10/2/12	3597'	DRLG dev. 1 deg. @ 3425'
10/3/12	4087'	CFH
10/4/12	4400'	TOH for DST # 1 dev. 4 deg. @ 4400'
10/5/12	4498'	OB w/ DST # 2
10/6/12	4690'	CFH
10/7/12	4818'	DRLG. RTD 4850' @ 9:30 am dev. 7 deg. @ 4850'

**Remarks**  
The JLM # 1-15 was declared dry and abandoned.  
All shows of oil were condemned by drill stem tests.

Electric log measurements correlate about even to 1' deep compared to rotary measurements  
Sample tops adjusted to the electric log.

Samples deposited at the Kansas Geological Survey.

Respectfully Submitted,  
*Jeff Christian*  
Jeff Christian

LITH	DRILL TIME (MIN:FT)	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
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