Joshua R. Austin Petroleum Geologist report for RAMA Operating CO., Inc					
COMPANY: RAMA Operat	ing Company, Inc.				
LEASE: Licholat #1-27					
FIELD: North Star					
LOCATION: SW-NE-SE-SE	E (700' FSL &350' FEL)				
SEC: 27 TWSP: 24s	RGE: <u>12w</u>				
COUNTY: <u>Stafford</u> STA	TE: <u>Kansas</u>				
KB: <u>1880'</u> GL: <u>1867'</u>					
API # 15-185-23857-00-00					
CONTRACTOR: Sterling I	Drilling (rig #5)				
Spud: <u>01/25/2014</u>	Comp: <u>01/31/2014</u>				
RTD: 4180	LTD: <u>4184</u>				
Mud Up: <u>2900'</u>	Type Mud: Chemical was displaced				
Samples Saved From: 28 Drilling Time Kept From: Samples Examined From: Geological Supervision F Geologist on Well: Josh A	2800'to RTD 2800'to RTD rom: <u>3200'to RTD</u>				
Surface Casing: 8 5/8" @3 Production Casing: None					
Electronic Surveys: By Pi	oneer Energy Services				

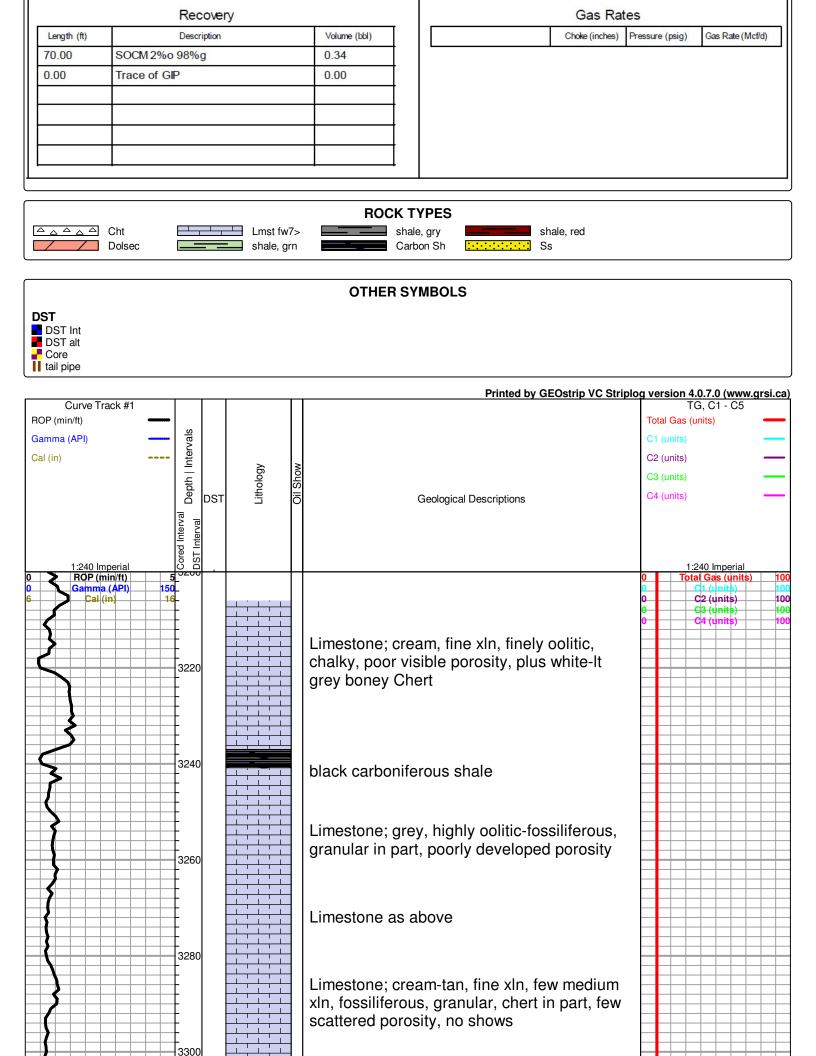
NOTES

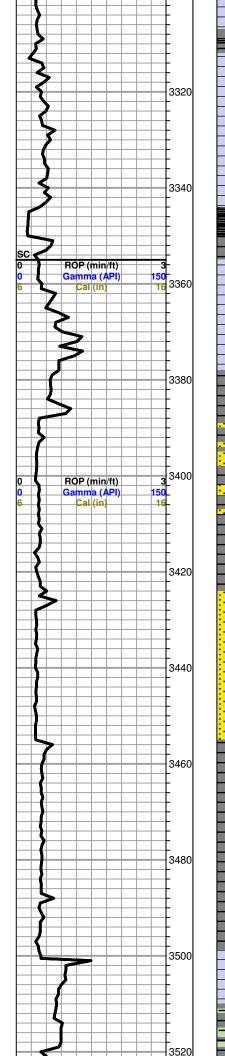
On the basis of the poor sturctural position, lack of shows and after evaluating the electric logs, it was recommended by all parties involved to plug and abandond the Licholat #1-27 at the rotary total depth 4180'.

		perating C	
		mparison s	neet
DRILLING	WELL	COMPARISON WELL	COMPARISON WELL

	Licholat 1-27				2	Dale	#1	<u>s</u>	Budde #3			
	1880	KB			1872	KB	Struct		1882	KB	Struct	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	3344	-1464	3348	-1468	Sector Products				3338	-1456	-8	-12
Toronto	3355	-1475	3364	-1484								
Douglas	3378	-1498	3388	-1508					3390	-1508	10	0
Brown Lime	3500	-1620	3502	-1622					3501	-1619	-1	-3
Lansing	3528	-1648	3524	-1644	3520	-1648	0	4	3521	-1639	-9	-5
Viola	3942	-2062	3942	-2062	3950	-2078	16	16	3934	-2052	-10	-10
Simpson Shale	4060	-2180	4061	-2181	4061	-2189	9	8	4058	-2176	-4	-5
Arbuckle	4125	-2245	4123	-2243	4124	-2252	7	9				
Total Depth	4180	-2300	4184	-2304	4151	-2279		56-151	4082	-2200		tio.

	DRILL STEM TE	ST REP	ORT				
RILOBITE	Rama Oper. Co. Inc.	27-	27-24s-12w Stafford co.				
TESTING , INC	101 S. Main St. Stafford, Ks. 67578			holat #1 Ticket: 51		DST#:1	
	ATTN: Josh Austin				929 14.01.30 @		
. എ .().			100			00.10.01	
GENERAL INFORMATION:							
ormation: Lansing "L"			_				
eviated: No Whipstock: ime Tool Opened: 02:30:21	0.00 ft (KB)		Tes		Conventional Gary Pevotea		e (Initial)
ime Tool Opened: 02:30:21 ime Test Ended: 06:51:06					53	aux	
nterval: 3750.00 ft (KB) To 3	780.00 ft (KB) (TVD)			erence Ee		1880.00	ft (KB)
otal Depth: 3780.00 ft (KB) (T						1867.00	
lole Diameter: 7.88 inches Hol	e Condition: Fair			KB t	o GR/CF:	13.00	ft
ress@RunDepth: 56.45 psig itart Date: 2014.01.30 itart Time: 00:18:56 EST COMMENT: IF: Weak blow . ISI: No blow . FF: Weak blow . FSI: No blow .	End Date: End Time: Surf 3 in.	2014.01.30 06:51:05	Capacity Last Cali Time On Time Off	b.: Btm: 2	2014.01.30 @ 2014.01.30 @		psig
Pressure vs. 7			P	RESSUR	E SUMMA	ARY	
0710 Pressure	0710 Tenpazáve	Time	Pressure	Temp	Annotatio	n	
- Harrison		(1111.)	(psig)	(deg F)	he it is a local	-1-1-	
		0	1908.43 15.14	104.31	Initial Hydro Open To Flo		
		35	45.55		Shut-In(1)		
	5	- 65	1000.49	107.99	End Shut-In	(1)	
		65	<mark>41</mark> .81	107.80	Open To Flo	ow (2)	
		95	56.45	109.18			
		145 147	1039.76 1883.90	110.34 110.74	End Shut-In		
	e	147	1003.90	110.74	Final Hydro	-วเตแง	





black-grey shale

Limestone; cream, fine xln, chalky, dense, slightly cherty in part, poor porosity

HEEBNER 3344 (-1464)

Black carboinferous shale

TORONTO 3355 (-1475)

Limestone; white, fine xln, chalky, few pinpoint type porosity, no staining, no SFO, no odor

DOUGLAS 3378 (-1498)

grey-greyish green shale, silty in part, slightly micaceous

Shale; grey-greyish green, micaceous, silty, few siltstone; greyish green, micaceous

Sand; grey-greyish green, very fine grained, silty, micaceous in part, no shows

Sand as above, plus Shale; grey-greyish green, silty, micaceous, few soft pieces

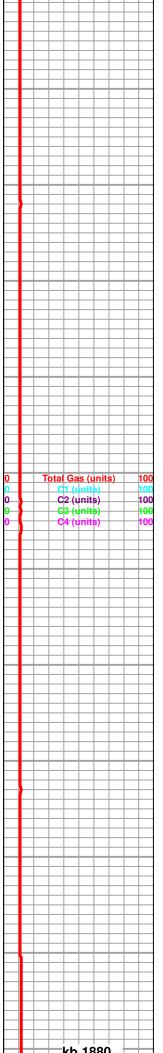
Shale; grey-dark grey, silty in part, slightly micaceous

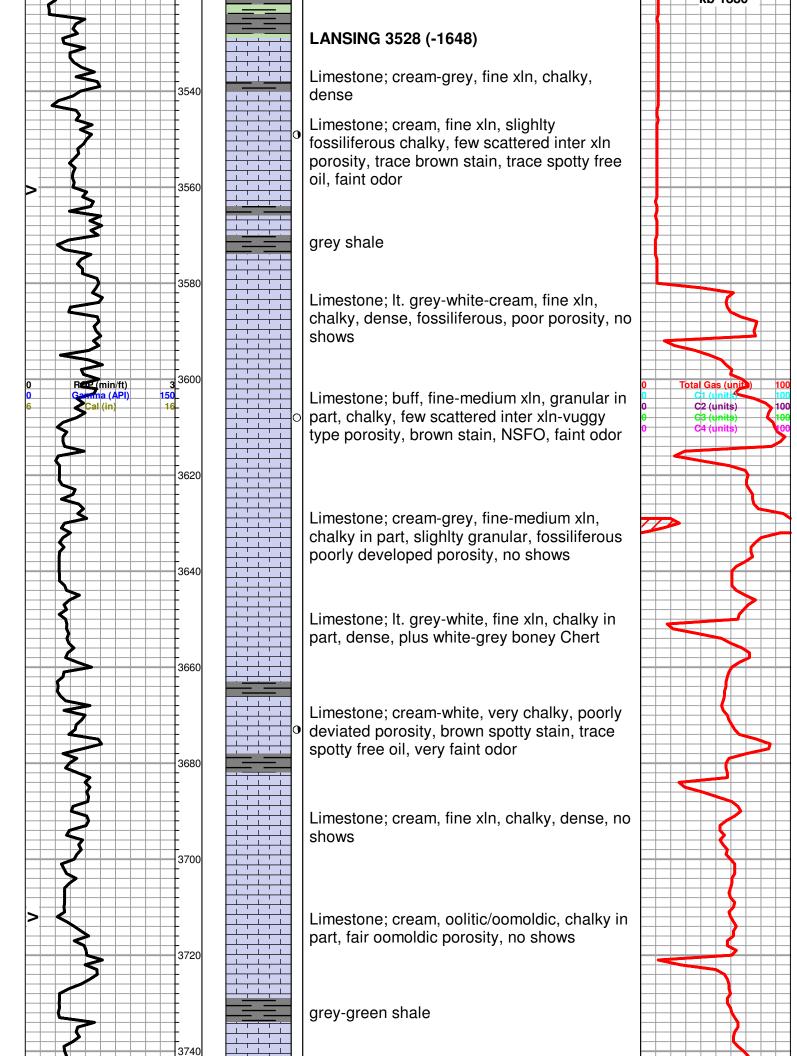
Shale as above

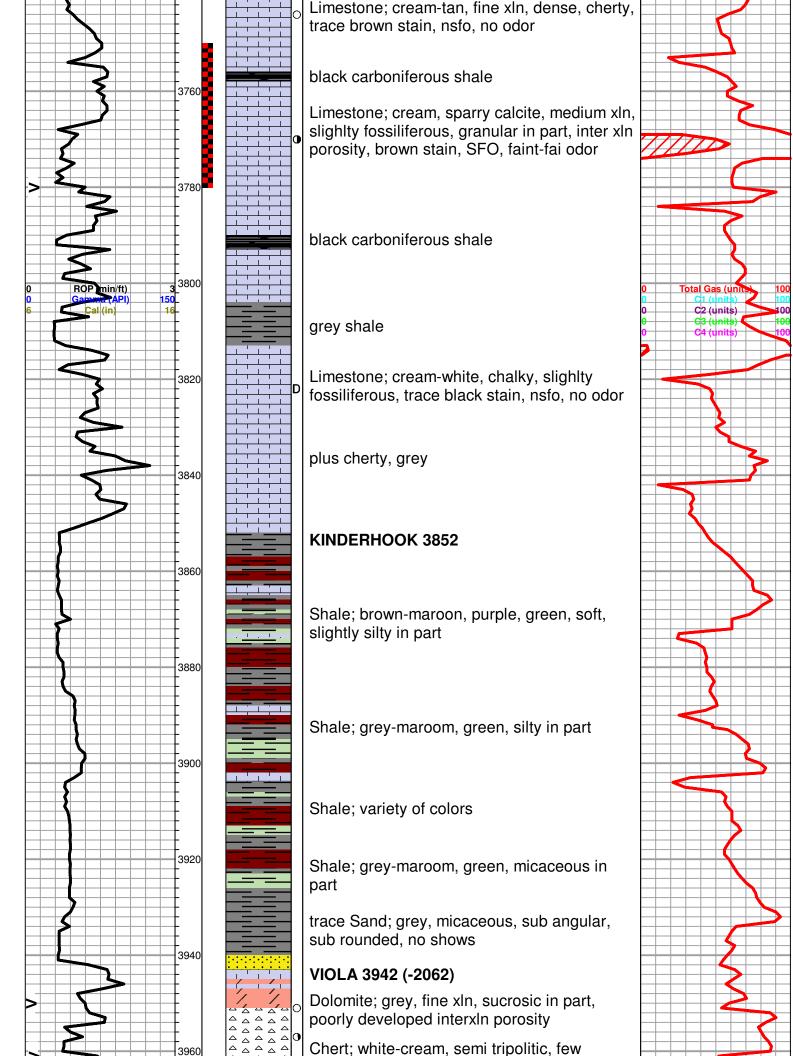
BROWN LIME 3500 (-1620)

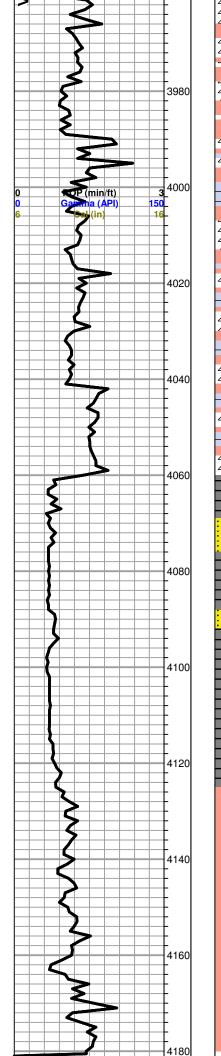
Limestone; tan-brown, fine xln, dense, cherty

grey shale









scattered porosity, trace golden brown stain, trace spotty free oil, very faint odor

 \bigtriangleup

ے' م م' م

 \triangle

 \triangle

> Chert as above plus Dolomite; cream, fine xln, sucrosic in part, interxIn porosity, trace brown stain, NSFO, very faint odor

Dolomite; as above, plus white, boney chert

Limestone; cream-grey, fine xln, chalky, dense

dolomite; lt. grey-buff, fine-medium xln, sucrosic in part, few with fair porosity, plus white-lt. grey Chert, boney, no shows

as above, plus Limestone; dense, cherty in part

SIMPSON SHALE 4060 (-2180)

Shale; grey, micaceous, silty in part

Sand; grey-clear, fine-medium grained, sub angular, sub rounded, micaceous, friable, fair inter granular porosity, questionable trace black stain, NSFO

Shale; grey-green, silty in part, waxey

Sand; grey, fine xln, dolomitic in part, few inter granular porosity, no shows

Shale; grey-greyish green, soft, micaceous

ARBUCKLE 4125 (-2245)

Dolomite; tan-buff, fine xln, sucrosic, few scattered vuggy-inter xln porosity, no shows

Dolomite; cream, buff, pinkish, fine xln, dense, few scattered porosity, no shows, plus Chert; white, boney

Dolomite; cream-lt. grey, fine-medium xln, poorly developed porosity, no shows, Chert as above

ROTARY TOTAL DEPTH 4180 (-2300)

