TIM PRIEST
Petroleum Geologist
2101 CYPRESS
WICHITA, KANSAS 67226
(316) 263-1731

GEOLOGIC REPORT
DRILLING TIME AND SAMPLE LOG

OPERATOR: Lario Oil & Gas Company
LEASE: Morgan B-23
LOCATION: 2097' FNL 1287' FEL
COUNTY: Gove STATE: Kansas
SPUD: 3-13-14 COMP: 3-20-14
TOTAL DEPTH: 4900' ROTARY
CONTRACTOR: Duke Drilling Co. Rig #9
ELEVATION: 2470' KB 2465' DF 2462' GL
API#: 15-063-22-0-00
CASING: Surface: 8 5/8" @ 225' w/ 160 sks
Production: 4 1/2" @ 4900' w/ 175 sks
DRILLING TIME START FROM: 3800' IN RTD
SAMPLES START FROM: 3800' IN RTD
GEOLOGICAL SUPERVISION: 3800'IN RTD TO RTD
FORMATION TOPS: ELECTRICAL LOG: SAMPLE: In Washington
DRILLING CONTRACTOR: Duke Drilling Co. Rig #9
TOOLPUSHER: Jim Mitchell
DRILLER: Bill Mitchell
MUD: Chemical
MUD ENGINEER: Chemical
MUD WT: 9.2 VIS: 53
WL: 8.0 PH: 10.0
CHLORIDES: 1400
BIT RECORD: #1 7 7/8" Smith
DEVIATION TESTS: 1 1/4 @ 4900'
REMARKS:
Respectfully Submitted,
Tim Priest
Petroleum Geologist
API #15-171-21217-00-00

LEGEND

Shale, Limestone, Sandstone, Chert, Dolomite, Conglomerate, Coal, Gypsum, Shale, Oolite, Fossil, Cuttings, Core, Sample, Show, Dead Oil, Live Oil, Gas, Water

DRILLING TIME IN MINUTES PER FOOT
Hard Penetration

DEPTH	DRILLING TIME	SAMPLE DESCRIPTION	REMARKS
2450			Anhydrite 2420(+0473)
2500			Base Anhydrite 2450(+0443)
2550		La: crm. fr. wt. fos., p-f int oil & dk-brg pet. NS	
		La: crm-tan, fr. wt. fos, f int oil-dk pet. NS	
		La: crm-lt gry, fr. wt. fos., p-f int oil-pp pet. NS	
		La: gry, fr. wt. fos, show	
		Sh: blk, carb	
		La: crm-tan, fr. wt. wp, p-f int oil-pp pet. NS	
		Sh: gry, smthly	
		La: gry, fr. wt. fos, show	
		La: crm-tan, fr. wt. fos, oily, dead show	
2600		La: crm-gry, fr. wt. xl. fos, arg	
		Sh: blk	
		La: crm, fr. wt. fos, oily, p-f int oil-pp pet. NS	
		La: tan, fr. wt. fos, f int oil & fos fluo, pp. NS	
		Sh: gry blk	
		La: tan, fr. wt. fos, f int oil & fos fluo, pp. NS	
		La: crm-tan, fr. wt. fos, oily, show	Topeka 3587 (-1122)
		Sh: blk, carb	
		Sh: gry-dk gry, carb	Toronto 3602 (-1065)
2700		La: crm-lt gry, vfn xl, dmse	
		Sh: gry-dk gry, carb	
		La: crm-lt gry, fr. wt. fos, oily, p-f int oil & lt-brg pet. NS	Lansing 3630 (-1018)
		La: crm-lt gry, fr. wt. fos, oily, p-f int oil & lt-brg pet. NS	
		La: crm-lt gry, fr. wt. fos, oily, p-f int oil & lt-brg pet. NS	
		La: crm-lt gry, vfn xl, fos, fairly xxln & vfn oil-pp pet. NS	
		Sh: red-gry	
2800		La: crm, fr. wt. fos, oily, p-f int frag pet. NS	
		La: crm, fr. wt. fos, oily, p-f int oil-pp pet. NS & fos fluo, pp. NS	
		La: crm-gry, fr. wt. fos, show	
		La: crm-gry, fr. wt. fos, oily, p-f int oil & fos fluo, pp. NS	
		La: crm-gry, fr. wt. fos, show	
		Sh: gry-gry	
		La: crm-tan, vfn xl, fos, oily, dead show	
		Sh: gry	
		La: crm-tan, vfn xl, fos, oily, dead show	
		Sh: gry	
		La: crm-tan, fr. wt. fos, oily, p-f int oil & fos fluo, pp. NS	
		La: crm-tan, fr. wt. fos, oily, p-f int oil & fos fluo, pp. NS	
		Sh: gry	
		La: crm-tan, fr. wt. fos, p-f int oil & fos fluo, pp. NS	
		La: crm-gry, fr. wt. dolo, xl, oily, p-f int oil, pp. NS	
		La: tan-gry, vfn xl, dmse	
		La: crm-tan, fr. wt. xl, oolx, xl, oily, p-f int oil & lt-brg pet, NS	
		Sh: red-crm-gry	
2900		Sh: blk, carb	Muncie Creek 4207 (-1687)
		La: crm-tan, quartz, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		Sh: red-crm-gry, carb	
		La: crm-tan, fr. wt. fos-xl, oolx, oily, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		La: crm-tan, fr. wt. fos, oily, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		Sh: blk, carb	
		La: crm-gry, vfn xl, dmse	
		La: crm-tan, fr. wt. fos, oily, p-f int oil & lt-brg pet, spkl dkr, SPOT, f odor, dull fluor	
		Sh: gry-blk	
		La: crm-gry, fr. wt. fos, oily, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		Sh: blk, carb	
		La: crm-gry, vfn xl, dmse	
		Sh: gry-blk-gry	
		La: crm-lt gry, fr. wt. fos, oily, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		La: crm-lt gry, fr. wt. fos, oily, p-f int oil-pp pet, spkl dkr, SPOT, f odor, dull fluor	
		La: crm-lt gry, vfn xl, dmse