

**Marc A. Downing**  
**Consulting Petroleum Geologist**

**Geologic Report**  
**Drilling Time and Sample Log**

Operator <b>Downing-Nelson Oil Co., Inc.</b>		Elevation KB <b>2388</b> DF <b>2386</b> GL <b>2380</b>	
Lease <b>Tammy Riedel</b>		No. <b>1-26</b>	
API# <b>15-195-23089-0000</b>		Casing Record Surface <b>8 5/8" @ 222'</b>	
Field <b>Wakeoney</b>		Production <b>5 1/2" @ 4057'</b>	
Location <b>1555' FNL &amp; 1755' FWL</b>			
Electrical Surveys <b>CNDL, DIL MEL</b>			
Sec. <b>26</b>	Twp. <b>11s</b>	Rge. <b>23w</b>	
County <b>Trego</b>		State <b>Kansas</b>	
Formation	Sample tops	Log Tops	Datum Struct Comp
Top Anhydrite	1847	1848	+540 -12
Base Anhydrite	1889	1892	+496 -14
Topeka	3384	3383	-995 -5
Heebner	3604	3603	-1215 -9
Toronto	3625	3625	-1237 -9
LKC	3639	3639	-1251 -11
BKC	3870	3869	-1481 -9
Marmaton	3980	3980	-1592 -10
Cherokee Sh	4024	NA	-1636 -9
Total Depth	4057	4058	-1670

**Discovery Drilling, Rig #4**  
 Commenced **7-15-19** Completed **7-22-19**  
 Samples Saved From **3350** To **RTD**  
 Drilling Time Kept From **3250** To **RTD**  
 Samples Examined From **3350** To **RTD**  
 Geological Supervision From **3350** To **RTD**

Reference Well For Structural Comparison **DNOCI - Tammy 'A' #1**  
**2370' FNL & 2225' FWL, Sec. 26-11s-23w**

Respectfully Submitted,  
 Marc A. Downing

**Summary and Recommendations**  
 Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.

**ROCK TYPES**  
 Carbon Sh shale, red  
 Sandstone shale, gray  
 Limestone Limestone, tan

**ACCESSORIES**  
 Core Core  
 Tail pipe Tail pipe  
 Questionable Questionable  
 Dead Oil Dead Oil  
 Fluorescence Fluorescence

**STRINGER**  
 Sandstone Sandstone  
 Chert dark Chert dark  
 Chert white Chert white

**MINERAL**  
 Chert dark Chert dark  
 Sandy Sandy  
 Chert white Chert white

**OTHER SYMBOLS**  
 DST int  
 DST alt  
 Core  
 Tail pipe  
 Questionable  
 Dead Oil  
 Fluorescence

**OIL SHOWS**  
 Even Stn  
 Spotted Stn 50 - 75 %  
 Spotted Stn 25 - 50 %  
 Spotted Stn 1 - 25 %  
 Questionable Stn  
 Dead Oil Stn  
 Fluorescence

**Topoka 3384 (-996)**  
 LS: tan-lt brn, fXln, foss. Tight, all dns.

**LS: tan-off wht, fn xin, foss por, NS.**  
 Sh: gry  
 LS: wht, fn xin, gd int xin por, n ovis show. Silty chiky, becoming dns w/ gry cht.

**Sh: drk gry-blk**

**LS: tan, fn xin, foss in prt. Scat foss por, all NS.**  
 Sh: gry-brn  
 LS: wht, fn-md xin, frag foss. Fr int foss por, all NS, no od.

**LS: wht, fn-vfn xin, dns. Few frag foss, trng silty chiky. All NS.**  
 Sh: Black Carb  
 Sh: brn-lt brn

**LS: wht, fn xin w/ fr inbxin por, NS. Fr amt wht chiky inclusions, few pcs wht cht.**  
 Sh: gry  
 Sh: Black Carb

**LS: wht, fn-vfn xin, v dns. Inc amt cht.**  
 Sh: gry

**LS: wht-lt tan, fn-vfn xin, all v dns. Few frag foss.**  
 Sh: Black Carb

**LS: wht, fn xin, w/ gd inbxin por, NS. Scat wht subxin-chiky rx, All totally barren.**  
 Sh: gry

**LS: lt tan, fn xin w/ scat inbxin por. Ns, chiky to subxin rx.**  
 Sh: gry

**LS: wht, lt tan, foss w/ fr foss por. NS, scat wht subxin-chiky rx.**  
 Sh: gry

**Heebner 3604 (-1216)**  
 Sh: Black Carb

**Sh: brn-gry, v silty**

**Toronto 3625 (-1237)**  
 LS: wht-lt tan, v finly ool w/ fr ool por. Fr-gd SFO, ft-lt od, some gssy when broken.

**LKC 3639 (-1251)**  
 LS: tan, fn xin, v ool. Gd ool por w/ gd SFO, gssy, w/ gd-fr od, some tot sat.

**LS: wht, fn-v fn xin, all v dns w/ few frag foss.**  
 Sh: some black carb, trng drk gry

**LS: tan, fn xin, v ool w/ gd ool and lrg vug por. Gd SFO, even lt brn stn w/ fr od, few rx w/ fr ooc por, v scat.**  
 Sh: gry

**LS: tan, ool w/ tight ool por. Lt-fr SFO, fr od, lt gssy SFO becoming dns w/ lrg amt wht-gry cht.**  
 Sh: Black Carb

**LS: wht, fn xin, ool and foss. Pr por, v spdt stn, NSFO, no od, some chiky.**  
 Sh: gry

**LS: tan, fn xin, dolomitic w/ gd inbxin por, gd show lt brn gssy oil w/ even lt brn stn, strong od, some lrg vugs.**  
 Sh: gry w/ brn

**LS: tan, md xin w/ gd-v gd ool por. Gd SFO, fr od, some gd vug por w/ lt brn stn.**  
 Sh: Black Carb

**LS: trng bone wht, fn-vfn xin, v dns.**  
 Sh: gry

**LS: wht, fn xin, dns w/ no vis por. Scat shp tan-brn cht.**  
 Sh: Black Carb

**LS: wht-lt tan, fn xin. Mostly pr por and dns w/ NS, few rx w/ pr uneven stn in fr inbxin and pp por, NSFO, no od.**  
 Sh: gry

**LS: tan-whit, md xin, foss in prt, frag. Scat fr int xin por w/ pr stn and NSFO. Scat-fr amt subxin-chiky rx, all no od.**  
 Sh: gry

**LS: wht, fn-md xin, scat inbxin por w/ fr amt dead blk stn, NSFO, no od. Fr amt subxin-chiky rx and barren.**  
 Sh: Black Carb

**LS: wht-tan, fn xin. Fr-gd pp por, some inbxin por, w/ fr-gd spdt sat and spdt SFO, fr-gd od.**  
 Sh: Black Carb

**LS: wht, fn-md xin, pr por and dns. No vis por, NS.**  
**BKC 3870 (-1482)**  
 Sh: gry w/ scat lt brn

**LS: wht, fn xin, no vis por, NS**

**Sh: gry w/ scat brn**

**LS: wht, fn xin, silty in prt. Pr por and dns, NS.**  
 Sh: gry w/ inc amt brn-red

**LS: wht-tan, fn xin, dns.**  
 Sh: brn w/ gry

**LS: tan-whit, fn xin, pr por and dns. Few pcs tan-org cht.**  
 Sh: ala

**Marmaton 3980 (-1592)**  
 LS: tan, fn-vfn xin, suc in prt. Lt-fr od but no vis shows, pr por and v dns. Scat-fr amt tan-org cht.

**LS: tan, fn-vfn xin, suc in prt. Few rx subxin w/ scat-fr amt tan cht, totally barren, no od.**  
 Sh: drk gry w/ blk

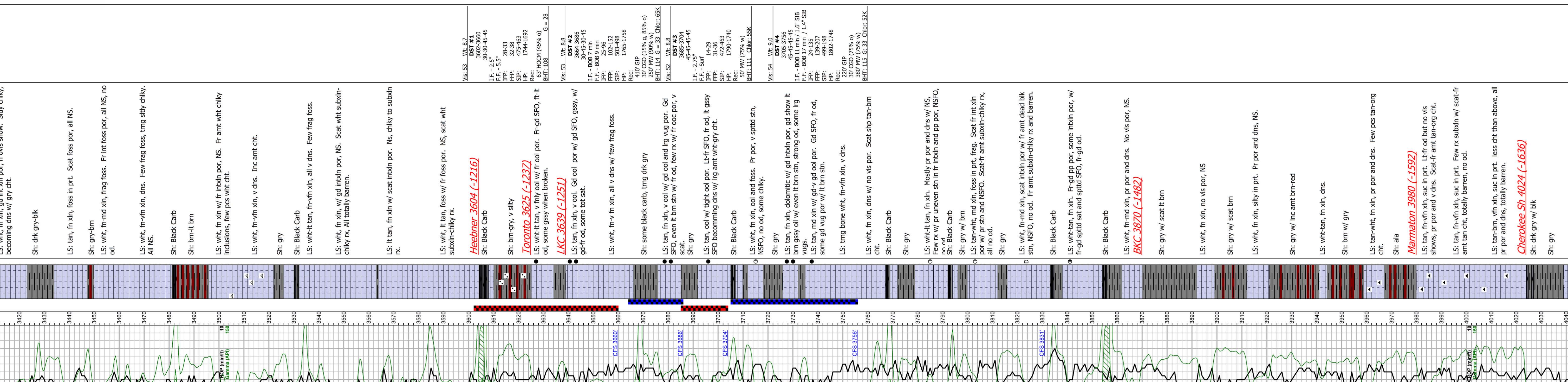
**LS: tan-brn, vfn xin, suc in prt. less cht than above, all pr por and dns, totally barren.**  
 Sh: gry

**Cherokee Sh 4024 (-1636)**  
 Sh: drk gry w/ blk

**Sh: gry**

**LS: wht-tan, dns w/ pr por. 2-3 ss clust, pr sort, fr-well rnd. Fry dirty and well cemented, totally barren no od.**  
 Sh: gry-lt gry, v soft

**RTD 4057 (-1669)**



Printed by GEOstrip VC Striplog version 4.08.15 (www.grsi.ca)