

Marc A. Downing
Consulting Petroleum Geologist

Geologic Report
Drilling Time and Sample Log

Operator Downing-Nelson Oil Co., Inc.		Elevation KB 2186 DF 2184 GL 2178	
Lease Schmeidler Trust	No. 1-33	Casing Record Surface 8 5/8" @ 221' Production None Electrical Surveys None	
API# 15-051-26967-0000		Field Ellis	
Location 800' FSL & 2145' FWL			
Sec. 33	Twp. 12s	Rge. 20w	
County Ellis		State Kansas	
Formation	Sample tops	Log Tops	Datum
Top Anhydrite	1543		+643
Base Anhydrite	1589		+597
Topeka	3228		-1042
Heebner	3457		-1271
Toronto	3479		-1293
LKC	3494		-1308
BKC	3746		-1560
Marmaton	3805		-1619
Total Depth	3887		-1701

Struct Comp		Datum	
	-1		+643
	-3		+597
	NA		-1042
	+7		-1271
	+5		-1293
	+8		-1308
	+5		-1560
	FL		-1619

Reference Well For Structural Comparison **Cook & Galloway - Erbert #1**
 SW-SE-SW, Sec. 33-12s-20w

Summary and Recommendations
 Due to structural position and DST recovery, it was decided to plug and abandon the well. All significant shows were evaluated by DST and Ar buckle was not encountered.

Respectfully Submitted,
 Marc A. Downing

ROCK TYPES
 Carbon Sh shale, red
 shale, grey
 shale, green
 shale, tan
 Chert, dark
 Chert, white
 Chert, light

ACCESSORIES
 Stringer
 Red shale
 Card shale

OTHER SYMBOLS
 DST
 DST Int
 DST alt
 DST tail pipe

MISC
 Daily Report
 Digital Photo
 Document
 Folder
 Link
 Vertical Log File
 Horizontal Log File
 Core Log File
 Drill Cuttings Rpt

OIL SHOWS
 Even Stn
 Spotted Stn
 Spotted Stn
 Questionable Stn
 Dead Oil Stn
 Fluorescence

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Drilling Contractor **Discovery Drilling, Rig #4**
Commenced **9-7-19** **Completed** **9-14-19**
Samples Saved From **3200** **To** **RTD**
Drilling Time Kept From **3100** **To** **RTD**
Samples Examined From **3200** **To** **RTD**
Geological Supervision From **3200** **To** **RTD**

Comment
 Vis: 54 Wt: 8.9
 DST #1
 3485-3520
 30-30-30-30
 I.F. - Surf
 I.F.P. 15-16
 F.F. 19-19
 F.F.P. 63-65
 HP: 1688-1641
 Rec: OSM
 BHT: 107
 Vis: 52 Wt: 8.9
 DST #2
 3513-3528
 45-45-45-45
 I.F. - Surf
 I.F.P. 16-41
 F.F. 45-58
 F.F.P. 974-933
 HP: 1688-1653
 Rec: FO
 90' OCW (20% to 60% w)
 BHT: 111
 Chert: 49,000

Geological Descriptions
 LS: tan-brn, fr-vfn xin. Few rx stily subxln, mostly v dns w/ no vis por.
 LS: mostly ala, NS.
 Sh: gry
 LS: wht, vfn xin, suc in prt. Scat v gd inxln and pp pr por, some chiky rx. All barren w/ no od. Trng dns w/ pr por, some md xin.
 Sh: drk gry
 Sh: gry
 LS: tan-brn, md xin, foss. Mostly pr por and dns, all NS. Few subxln rx.
 LS: tan, md xin, foss ala. Some trng mtid w/ scat brn cht. Totally barren, no od.
 LS: fr amt tan, md xin, some stily suc. Trng fr amt chiky, mtid in prt, w/ scat inxln por. Totally barren, no od. Few pcs tan and wht cht.
 Sh: Black Carb
 Sh: gry w/ some lt grn, silty in prt.
 LS: wht, vfn-mic xin. Mostly dns w/ no vis por, few chiky rx. All NS.
 LS: wht, some lt tan. Fn xin, trng fr-md xin. Mostly pr por and dns, scat foss w/ lt tan-wht foss cht. All NS, no od.
 Sh: gry w/ brn
 LS: tan, md xin, dns.
 Sh: Black Carb
 Sh: gry
 LS: wht, fr-vfn xin, scat suc rx. Scat gd inxln por w/ fr amt subxln-chiky. Totally barren, no od.
 LS: wht, fr xin, few foss. No vis por and dns, NS.
 LS: wht, mostly tot ool, sml-md ool, foss. Gd int ool por w/ few sml vugs. Fr-gd sat stn w/ gd SFO, fr-gd od.
 LS: wht-tan, md xin, ool w/ foss. Mostly pr por, carrying some show from above. Rest dns w/ NS, no od. Fr amt shp blk foss cht.
Heebner 3457 (-1271)
 Sh: Black Carb
 Sh: gry w/ lt grn
Toronto 3479 (-1293)
 LS: wht, fr-vfn xin, few chiky rx, mostly dns w/ pr por. Totally barren, no od.
LKC 3494 (-1308)
 LS: wht, md xin, tot ool and frag foss. Scat gd int ool/foss por w/ fr amt gd vug por. Gd lt brn stn in por w/ gd SFO, lt-fr od.
 LS: wht w/ some lt tan, fr xin. V dns w/ no vis por, totally barren, no od. Scat wht-tan shp cht.
 Sh: drk gry w/ blk
 Sh: gry w/ brn
 LS: wht, md xin, v foss, dolomitic in prt, fr amt qtz inclusions. Gd vug and inxln por, some pp por. Gd sat stn w/ gd SFO, gssy in prt. Gd od, free oil on cup.
 Sh: gry
 LS: wht, scat ool rx w/ frag foss. Fr int ool and vug por w/ fr-gd stn and fr SFO in por. Many pcs wht foss cht, some shp, w/ rmbw stn and SFO on edge fracture, mostly barren. Lt od.
 Sh: drk gry w/ some blk
 Sh: gry
 LS: tan, fr-md xin, foss in prt. 1-2 rx w/ hvy-dead blk stn in pr vug por, mostly dns and barren, no od.
 LS: tan-wht, v ool w/ some frag foss. Scat fr int ool por w/ few sml vugs, mostly pr por and tight. Fr sat stn, uneven in prt, w/ fr SFO in por. Lt od.
 LS: wht, vfn xin, subxln-chiky, w/ scat pr-fr ooc por. Totally barren, no od.
 LS: wht-tan, fr xin, some md xin. Few subxln rx and scat sml vugs, mostly dns w/ no vis por. Fr amt shp cht, wht and tan-brn. All NS, no od.
 Sh: Black Carb
 Sh: gry
 LS: tan, fr-md xin, gran w/ some stily dolomitic. Fr-gd inxln por, some tight, w/ gd lt brn sat, fr SFO, lt od. Trng fr-vfn xin, vdns w/ no vis por, scat shp wht cht, foss in prt.
 Sh: drk gry
 Sh: gry
 LS: wht, fr-vfn xin. Scat inxln and pp por, mostly tight. Pr-fr uneven brn stn w/ rare spdt SFO, lt od.
 LS: wht, fr-vfn xin, dns w/ no vis por.
 Sh: gry
 LS: tan, tot ool. Fr ooc por w/ fr amt tight rx. Gd sat stn w/ gd SFO, gd strong od, free oil on cup.
 LS: tan-wht, fr-md xin, ool in prt. Dns w/ no vis por, NS.
 Sh: drk gry
 LS: tan, tot ool. Scat gd-vgd int ool por w/ sml vugs, vgd sat stn w/ gd-vgd SFO, gssy in prt. 2-3 rx w/ sml foss and fr vug por, gd blk sat w/ gd SFO. Fr-gd od, free oil on cup. Trng fr-md xin, ool in prt. Scat inxln por, mostly subxln w/ some chiky, mostly barren.
 Sh: Black Carb
 LS: wht-tan, fr xin, dns.
 Sh: gry w/ brn
 LS: ala
 Sh: brn
 Sh: brn w/ gry
 LS: tan, fr-md xin, dns. Scat shp org cht
Marmaton 3805 (-1619)
 LS: tan, fr-vfn xin, dolomitic in prt. Scat inxln por, mostly tight, w/ some fr lt brn sat, pr spdt SFO, int-no od. Fr amt tan and org shp cht.
 LS: some ala, trng less show, subxln in prt, fr amt cht ala. No od, NSFO.
 Sh: gry w/ some drk gry
 LS: wht-lt tan, suc in prt. Fr amt cht ala, all NS.
 Sh: gry w/ brn, carrying cht.
 Cht: multi-color, tan, wht, org. Mostly shp, some weath. 2-3 pcs w/ dead blk edge stn, rest totally barren
 Sh: gry w/ brn, carrying much cht, multi-color.
RTD 3887 (-1701)

