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GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co, Inc.
WELL Rita #1-18
FIELD Wildcat
LOCATION 2535' FNL & 688' FEL
SEC. 18 TWP. 13s RGE. 19w
COUNTY Ellis
STATE Kansas
OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #3
COMM: COMP: 5-11-12

PRODUCTION D&A
ELEVATION KB 2140 DF GL 2132

Drilling Measured From: KB
Samples Saved From 3200 To: TD
Drilling Time From 3050 To: TD
Samples Examined From: 3200 To: TD
Geological Supervision From 3050 To Total Depth
Wellsite Geologist Marc Downing
Electrical Surveys Superior
CNL/CDL
DIL
MEL
Sonic

CASING RECORD

SURF: 8 5/8" @ 220 PROD: None
TOTAL DEPTH DRILLERS: 3850'
TOTAL DEPTH LOG 3851'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRICAL LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	NA	1450	+690	+3
Base Anhydrite	NA	1490	+650	+1
Topeka	3191	3190	-1050	-6
Heebner	3430	3430	-1290	-9
Toronto	3447	3447	-1307	-6
LKC	3477	3476	-1336	-9
BKC	3701	3700	-1560	+5
Arbuckle	3760	3759	-1619	-8

REFERENCE WELL FOR STRUCTURE DNOCI
Rosie #3-7 335' FSL & 1980' FWL Sec. 7-13s-19w

DAILY PENETRATION / BIT RECORD

DRILL STEM TESTS

REMARKS AND RECOMMENDATIONS

LEGEND

Anhydrite, Salt, Sandstone, Shale, Carb sh, Limestone, Ool.Lime, Chert, Dolomite

DRILLING TIME IN MINUTES PER FOOT — Rate of Penetration Decreases — 5" 10" 15" 20" 25" | DEPTH | LITHOLOGY | SAMPLE DESCRIPTIONS | OIL SHOWS | REMARKS

DEPTH	SAMPLE DESCRIPTIONS	REMARKS
3050		
3100		
50		
3200	LS: wht, fn xln, subxln in prt. Scat fass, All prx + dns.	
	Sh: gry	
	LS: wht, fn xln, suc in prt, gd intxln ø, many chlky ex, All NS. No Od.	
	Sh: gry	
	Sh: drk gry	
50	LS: tan, md xln, foss. Fr int fossø trng subxln + chlky, NS.	
	LS: Same AIA, subxln. Mostly prø.	
	LS: wht-tan, md xln, trng mtld, subxln-chlky, v chlky w/ depth. All NS, No Od. Scat chts.	
3300	Sh: Black Carb	
	Sh: gry + brn	
	LS: tan-wht, ool, dns.	
	Sh: gry	
	LS: wht, fn xln, sltly suc. Fr intxlnø w/ tan + wht chts. All NS, trng prø w/ depth. Scat ool throughout.	
	Sh: gry	
50	LS: wht, fn xln, dns, prø.	
	Sh: Black Carb	
	Sh: gry	
	LS: tan-wht, subxln-chlky. 2-3 Foss ex w/ Fr stn + lvng SFO in prø, tite, No Od. Trng dns w/ NS	
	Sh: gry	
3400	LS: wht, fn xln, subxln-chlky. All NS.	
	LS: tan, fn-md xln, trng mtld w/ gry foss chts. All NS, No Od.	
	Sh: Black Carb	
	Sh: gry	Vis: 51 Wt: 8.8
50	LS: wht, vfn xln, dns w/ No visø, NS.	DST #1 3488-3536 30-30-45-45 I.F.- 1½" blow F.F.- 8" blow IFP: 34-29 FFP: 29-32 SIP: 96-340 HP: 1700-1639 Rec: 93' GIP 30' OCM 15%o
	Sh: gry	
	LS: tan-wht, fn xln, dns	
	Sh: gry w/ brn	
	LS: tan-wht, fn-md xln, prø, scat resid stn w/ rare sptld SFO, No Od.	DST #2 3532-3559 30-30-30-30 IFP: 22-24 FFP: 25-27 SIP: 869-803 HP: 1717-1675 Rec: 15' mud w/ oil spts.
3500	Sh: lt gry	
	LS: wht-lt tan, sltly suc, fn xln. scat fr vugø, Few sml oø ex. Fr sqtsd w/ fr SFO when broken. Fnt Od. Fr amt subxln ex.	
	Sh: gry	
	LS: tan, md-crs xln, v foss. Fr int fossø, sltly tite. gd sat stn, fr-gd SFO, fr-gd Od. Free oil on cup.	DST #3 3563-3596 45-45-45-45 I.F.- BOB 26 min F.F.- BOB 43½ min IFP: 24-73 FFP: 84-121 SIP: 839-783 HP: 1780-1692 Rec: 290' MW 90%w BHT: 119° Chlor: 52K
	Sh: gry	
50	LS: tan, fn-md xln, dns w/ prø.	
	LS: wht-lt tan, md xln, dolom w/ fr amt foss. gd intxln + vugø, scat tite ex. gd sat w/ gd SFO, sptly in prt. Fr amt chlky ex, gd Od, Free oil on cup.	
	Sh: gry	
	LS: tan-wht, md xln, ool. pr-fr int oolø, Few sml vugs. Fr-gd stn, sptld SFO, Fr Od. Rx sltly tite.	DST #4 3596-3654 45-45-45-45 I.F.- 5½" blow F.F.- 4¼" blow IFP: 26-44 FFP: 55-70 SIP: 1073-999 HP: 1758-1694 Rec: 115' MW 86%w BHT: 113° Chlor: 36K
	LS: wht, fn xln, mostly subxln, scat suc-dolom ex w/ Few frag foss. Fr stn, sptld SFO, lt-fr Od.	
	LS: wht-lt tam, trng md xln, foss, scat fr vugø, mostly tite. Fr-gd stn, fr-gd SFO, lt-fr Od.	
	Sh: Black Carb	
3600	LS: tan-brn, md-crs xln, tot foss, scat ool. Fr-gd int fossø, fr-gd sat stn, fr SFO, fr-gd Od. Fr amt subxln-chlky ex.	
	Sh: gry	
	LS: wht, fn-md xln, scat foss. Fr vug + intxlnø, fr blk stn w/ sptld blk SFO, lt-fr Od, scat asphlt inclusions. Free oil on cup.	
	Sh: gry	
	LS: wht-tan, fn-md xln, sltly dolom w/ few foss. Fr intxln-vugø, scat ool. Fr stn w/ fr SFO when broken. Friable in prt. Fnt Od.	
50	LS: wht, md xln, scat foss, sub xln. Scat resid stn, NSFO, No Od. Trng dns w/ prø.	
	LS: Mostly AIA, prø + dns, NS.	
	Sh: gry	
	LS: wht, fn-md xln, subxln inprt, All NS.	
3700	Sh: brn w/ some red.	
	Sh: AIA w/ gry	
	Sh: gry	
	LS: tam, md xln, dns.	DST #5 3741-3778 45-45-30-30 I.F.- 2½" blow F.F.- Dead IFP: 20-21 FFP: 24-24 SIP: 443-63 HP: 1887-1840 Rec: 8' GO 90%o 12' OCM 10%o BHT: 116°
50	Sh: gry w/ brn	
	Dolo: tan-brn, fn-md rhom xln, gd intxlnø, scat vugs. Tot sat blk w/ gd SFO, Fr Od, Free oil on cup.	
	Dolo: Same AIA, more tite ex, prø. gd sat stn, gd SFO. Rx trng sltly chlky w/ depth, Fr Od.	
	Dolo: wht-tam, md-crs rhom xln, pr intxlnø, scat sml vugs. pr-fr lvng blk stn, lvng SFO, lt-fr Od. Rx mostly tite.	
3800	Dolo: wht, md rhom xln, scat fr vugø, fr-gd SFO, fr sat, lt Od. Rx chlky in prt. Scat tam + org chts.	
	Dolo: wht, md rhom xln, fr amt chlky ex, scat vugs. Fr SFO in ø, trng sltly lvng, No Od.	
	Dolo: md rhom xln, prø, mostly tite. Scat lvng stn, rare SFO, No Od. pink + org, tan-wht cht.	
50	Dolo: wht-tam, same lt pink. md rhom xln, mostly barren, prø, wht-tam cht, No Od.	

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