Marc Downing
Consulting Petroleum Geologist
1411 Hawn, Ste. 677
Hays, Ks. 67601
Phone: 620-628-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co., Inc.

WELL Mitchell-Davignon # 2-32

FIELD Barbour

LOCATION 1496 FSL & 568 FEL

SEC. 32 TWP. 9s RGE. 23w

COUNTY Graham

STATE Kansas

OPERATOR'S DST, CORES, & COMPLETION TOTAL DEPTH LOGS: DST (#'s) 3 Cores (#'s) None Rtn'd

SURFACE CASING Size 8 5/8" @ 221' Cmtd. w/ 160 sx

CASING RECORD Production: 5 1/2" @ 4051' Cmtd. w/ 175 sx

ELEVATION KB 2749 DF GL 2741

PRODUCTION

DRILLING CONTRACTOR: Name Duke Drilling Co. Rig # 1

Spud Date 5-7-13 Date Reached TD 5-13-13

Completed: Dry Hole Oil Well Gas Well Input Well SWD Well

Plugged: D & A Oil & Gas Prod. Inj. Temp. Abd.

Elevation: GL KB DF Est. Comp. Date

Contractor: Duke Drilling Co., Inc. Rig # 1

Engineer: Marc Downing

Pusher: Mel Nelson

Geologist: Marc Downing

Mud Type: Chemical Fresh Water

Rig Time: Full Time Hitch

Samples Saved From: 3350' To: RTD

Drilling Time Kept From: 3350' To: RTD

Samples Examined From: 3350' To: RTD

Total Depth: Logger 4060' Driller 4060'

Formation at Total Depth: Arbuckle

Type Electric Log(s): Dual Induction, Dual Compensated Porosity, Microresistivity

Date Commenced Drilling: 5-7-13 Date Completed Drilling: 5-13-13

Remarks: Drilling Time kept from 3350' to RTD. Geological Supervision from 3350' to RTD.

Status: Oil Well

Sec. 32-9s-23w

Graham Co., Kansas

Elevation: 2749 KB

Contractor: Duke Drilling Co., Inc. Rig #1

Spud: 5-7-13

Completed: 5-13-13

Total Depth: Logger 4060' Driller 4060'

Casing Record: 8 5/8" @ 221' w/ 160 sx; 5 1/2" @ 4051' w/ 175 sx

Status: Oil Well

Production: Perf. & treated Arbuckle

Samples: 3350' to RTD

Drilling Time: 3350' to RTD

Electric Log Tops:

	Sample	Log	Datum
Toronto	3540	3540	-791
Lansing	3576	3576	-827
BKC	3793	3793	-1044
Arbuckle	4052	4052	-1303

Reference Well for Structure: Downing-Nelson Oil Inc. Mitchell-Davignon #2-32 Sec. 32-9s-23w

Formation	Sample Top	Elec. Log Top	Sub-Sea Datum	Structural Position
The Arbuckle Dolomite	4052	4052	-1303	
	4060	4060	-1311	
Toronto	3540	3540	-791	+4
	3556	3556	-807	+4
Lansing	3576	3576	-827	+4
BKC	3793	3793	-1044	+4
	3801	3801	-1052	+4
	3805	3805	-1056	+4
	4052	4052	-1303	+4

FORMATION TOPS AND STRUCTURAL POSITION

DRILL STEM TESTS

No.	Interval	Time	IHP	IFP	ISIP	FFP	FSIP	FHP	Recovery

RECORD OF FORMATION

No.	From	To	Thickness	Formation

RECORD OF CASING

Size	Wt.	Grade	Feet	Sacks	Cement	Type
8 5/8"			221'	160		
5 1/2"			4051'	175		

RECORD OF SHOTS

No.	From	To	Type	Amount	Result

RECORD OF TUBING

Size	Wt.	Grade	Feet	Packer	Depth

RECORD OF LINER

Size	Wt.	Grade	Feet	Sacks	Cement	Type

RECORD OF RECEIVERS

No.	Depth	Type	Manufacturer

RECORD OF SQUEEZE JOBS

No.	Depth	Sacks	Cement	Type

RECORD OF PERFORATIONS

No.	From	To	Type	Amount	Result

RECORD OF ACIDIZING & FRACTURING

No.	Depth	Type	Amount	Result

RECORD OF PLUGGING

No.	Depth	Sacks	Cement	Type

RECORD OF REMEDIAL WORK

No.	Depth	Type	Amount	Result

RECORD OF 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"

DEPTH · LITHOLOGY · SAMPLE DESCRIPTIONS · OIL SHOWS · REMARKS

3450
3500
Toronto 3540(-1671)
3600
3700
Heebner 3787(-1718)
Toronto 3786(-1711)
LKC 3793(-1724)
3800
CFS
3900
Sh: Black Carb
Sh: gry
LS: wh/vf, fxln mdstn, Fossil. F-P oil cut for shin in vug & reshkn fractures.
Sh: dk gry
LS: wh/vf, fxln/vfxln, ppst, Shalestn in ppst, Fair to Poor oil Shw, Fair oil Tring in vugs & fract. Fair to P Stn, Spotted SFO, gd Odr.
Sh: dk gry - blk, trng brn
LS: fxln wh/vf, mod - coarse trng Foss wh/vf, Stky dolom, gd Vug & intra vugs, gd Stn wh Fr SFO, fr Odr.
Sh: wh/vf brn
LS: Wh/vf, fxln mdstn, Spot Foss & ool, Fair to poor intrafxln vugs, Fair vugs Fair Stn, gd Stn on fract Odr, Spotted SFO, fr Odr.
LS: wh/vf - lt gry, fxln mdstn, Scat Foss, dk brn Stn, Spotted SFO, fr Odr.
Sh: dk gry
LS: wh/vf, mod - coarse, mossy trng Foss, Fair to poor intrafxln vugs, Fair vug Stn, Spotted SFO, fr Odr.
LS: Mottled wh/dk gry, fxln/vfxln wh/vf, Scat Foss/oomoldic, Scat intrafxln vugs, Spotted SFO, fr Odr.
LS: wh/vf, Scat to Mod Foss, fr vugs, fr Intra Stn, trng chalky, Fr Odr.
LS: wh/vf, vfxln/micrx mdstn, Scat Fr vugs & wl Stn, Spotted SFO, Sl Odr. Scat Sandstn/ chalky ex.
Sh: Black Carb
Sh: gry
LS: wh/vf, mod - fxln, Scat Foss, Fair dolom in Spots, Fr vug & intrafxln, Fr Scat stn, Spotted SFO, Fr Odr.
Sh: dk gry
Sh: Brn
LS: brn/wh, mod - coarse, Tst Foss, fr intrafxln, Scat vugs, Fair fract Stn, Spotted SFO, Fr-P oil Odr. Some trng Stn fair to dolom ex.
Sh: gry wl brn
LS: wh/vf, mdy/dty Scat Foss & ool, Scat vugs wl pr poor Scat Fr Stn, Spotted SFO, Fr Odr.
Sh: dk gry
LS: wh/vf, mdy fxln, Scat Foss & ool, Scat vugs wl Fr-gd, fr brn oil Stn, Fr SFO, fr-gd Sandstn/ chalky Stn, Fr Odr.
Sh: gry
LS: wh/vf, fxln/mic chalky, Poor Spotted Stn, NSFO, No Odr.
Sh: gry wl brn
Sh: brn, wl gry
LS: brn, mdy fxln, ppst
RTD: 4060 (-1311)
LTD: 4060 (-1311)
4000
BKC 4021(-1552)
4050

OST #1
Vis: 70 wt: 9.0
3705 - 3834
30-45-30-45
I.F.- 648 9 min
F.F.- 8" blow
ISIP: 1105 - 1317
FFP: 1336 - 1488
HP: 1924 - 1797
Rec:
360' GIP
25' CO
230' GOCM 10% gy, 10% oil, 45% mud
120' GOCM 5% gy, 30% oil, 70% mud
420' TF
BHT: 118° Q=440 Chlor: 101K

OST #2
3950 - 3992
15-30-15-30
I.F.- 808 2 min
F.F.- 808 4 min
ISIP: 1115 - 1244
FFP: 1259 - 1340
HP: 1981 - 1924
Rec:
60' GIP
60' MCO
60' Mud wl Shows Oil
630' TF
BHT: 117° Chlor: 74K

OST #3
3994 - 3954
30-30-30-30
I.F.- 14" blow
F.F.- 14" blow
ISIP: 15 - 25
FFP: 26 - 30
HP: 1994 - 1973
Rec:
60' GIP
5' CO
35' MOGCM 5% oil, 20% mud
BHT: 111°

Marc Downing