HARDROCK
Consulting, Inc.

Geologic Report

Drilling Time and Sample Log

Operator **Downing-Nelson Oil Company**

Lease **Marion-Ochs** No. **1-3**

API # **15-083-21821-0000**

Field **Wildcat**

Location **1680' FNL & 850' FWL**

Sec. **3** Twp. **24s** Rge. **25w**

County **Hodgeman** State **Kansas**

Elevation
KB **2537'**
DF
GL **2529'**

Casing Record
Surface
8 5/8" @ 223'
Production
None

Electrical Surveys
CNL/CDL, DIL
MEL, BHCS

Formation	**Log Tops**	**Sample Tops**	**Struct Comp**
Anhydrite	1709' +829	1700' +830	+13
Base	1722' +816	1732' +805	NA
Heebner	4047' -1509	4044' -1506	+12
Lansing	4114' -1576	4112' -1574	+17
Stark	4418' -1880	4414' -1876	NA
BKc	4530' -1992	4529' -1991	NA
Marmaton	4550' -2012	4549' -2011	NA
Pawnee	4620' -2082	4618' -2080	NA
Fort Scott	4650' -2112	4648' -2118	NA
Cherokee	4658' -2120	4660' -2122	NA
Mississippian	4793' -2255	4792' -2254	+5
Warsaw	4910' -2372	4908' -2370	NA
Osage	5002' -2464	5002' -2464	NA
Gilmore City	5164' -2626	5153' -2615	NA
Viola	5296' -2758	5292' -2754	NA
Total Depth	5311' -2773	5310' -2772	

Reference Well For Structural Comparison **Falcon Exploration, Inc. Tubbs #1**
3300' FSL & 1980' FEL Sec. 2 T24s R25w Hodgeman Co. Kansas

Drilling Contractor	**Discovery Drilling, Inc.**		**Rig #3**
Commenced	7-22-2012	Completed	7-31-2012
Samples Saved From	4000'	To	RTD
Drilling Time Kept From	3900'	To	RTD
Samples Examined From	4000'	To	RTD
Geological Supervision From	4200'	To	RTD

Displacement **3800'** Mud Type **Chemical**

Summary and Recommendations

The location for the Marion-Ochs #1-3 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. No significant oil shows were encountered throughout the well. After all gathered data had been examined the decision was made to plug and abandon the Marion-Ochs #1-3 well.

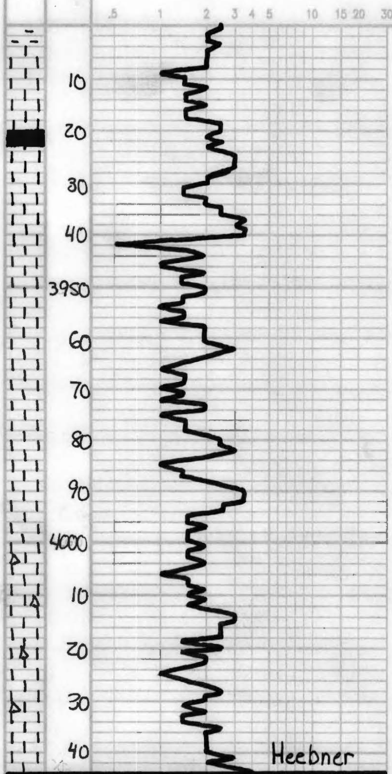
Respectfully Submitted,

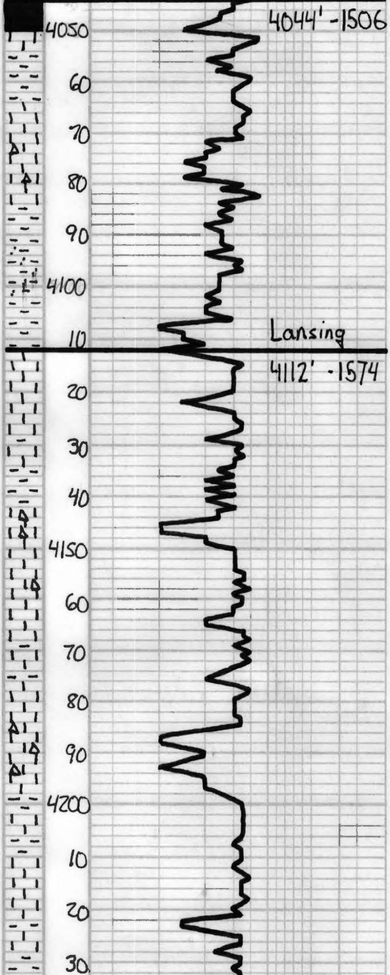
Jason T Alm
Hard Rock Consulting, Inc.

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool.Lime	Chert	Dolomite
▥	▦	░	▤	▓	▦	▦	▦	▨

LITHOLOGY	DEPTH	DRILLING TIME (Logarithmic Scale)	SAMPLE DESCRIPTIONS	REMARKS
	10			Geo on Loc 10:00 p.m. 7-27-2012
	20			
	30			
	40			
	3950			
	60			
	70			
	80			
	90			
	4000		Ls· Lt. Gry, Fn xln w/ Poor vugsy? interxln φ, Barren, Mottled Gry Sh's, △: Wht·Gry	
	10			
	20		Ls· ala, Mostly DNS	
	30			
	40	Heebner	Ls· a/a	





Sh- Blk, Carb. Fissile

Sh- Grn- Brn

Ls- Wht- Tan,. Fn- Med xln
w/ Scat poor interxln & Fair
vussy φ. Barren, Sl. Pyrite
Δ- Lt- Gry

Sh- Grn- Brn, V. Silty in pert.

Sh- Gry- Grn- Brn

Ls- Tan,. Fn- Subxln, DNS,
Sl. Fossil

Sh- Gry

Sh- Gry- Brn

Ls- Tan- Offwh, Fn- Med xln
w/ Fair interxln φ. Barren,
Sl. Fossil, Sl. Δ- Wht

Ls- a/a, DNS

Sh- Gry

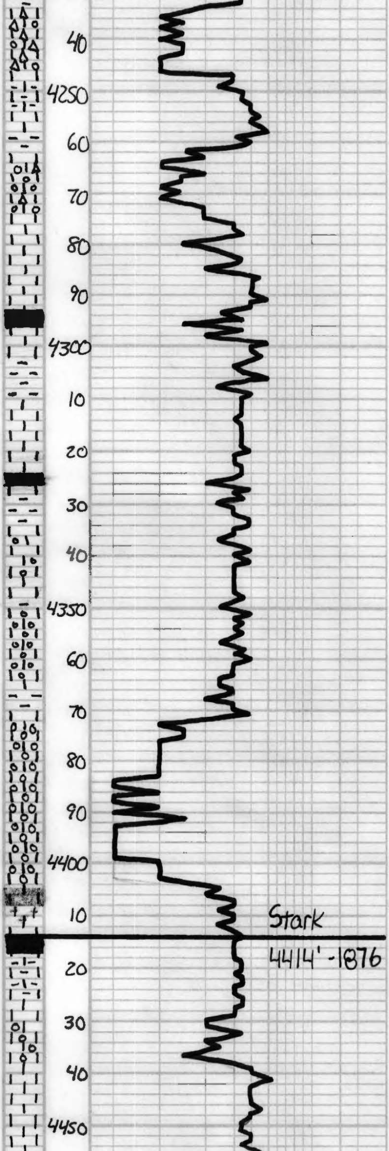
Ls- Offwh, Tan, Fn- Medxln w/
Fair- Good interxln & Scat. vussy
φ. Barren, Sl. Ool. Δ- Wht

Sh- Drk Gry- Blk

Sh- Gry

Ls- Offwh, Subxln, DNS,
Sl. Ool.

Sh- Brn- Gry



Ls- Wht- Tan, Fn-xln, Ool. w/ Fair scat. oom & Poor-Fair vugg φ. Barren. Heavy ∆- Wht

Ls- ala, DNS, Few Pcs Mottled Drk Gry Ls

Sh- Brn- Gry

Ls- Offwh- Tan, Fn- Subxln w/ Fair vugsy φ. Barren, Sl. ∆- Wht- Gry. V. Chalky; Sl. scat. oom φ

Ls- ala, Mostly DNS

Sh- Blk, Carb.

Sh- Brn- Grn- Gry

Ls- Tan- Lt. Gry, Subxln, Sl. Mottled in Part. DNS, ∆- Wht- V. Ang.

Sh- Drk Gry- Blk

Sh- Brn- Gry

Ls- Tan, Subxln, Sl. ool. w/ scat. pinpoint ooc φ. Barren Mostly DNS

Sh- Gry- Grn

Ls- Tan- Gry- Heavily Mottled. Subxln, Ool. PKST. Mostly DNS, Many Gry Ooids

Sh- Gry

Ls- Tan- Gry- Wht- Mottled, Fn- Subxln, Ool. PKST w/ V. Good oom φ. Barren

Ls- Tan. Subxln, Ool. PKST w/ Excellent oom φ. Barren

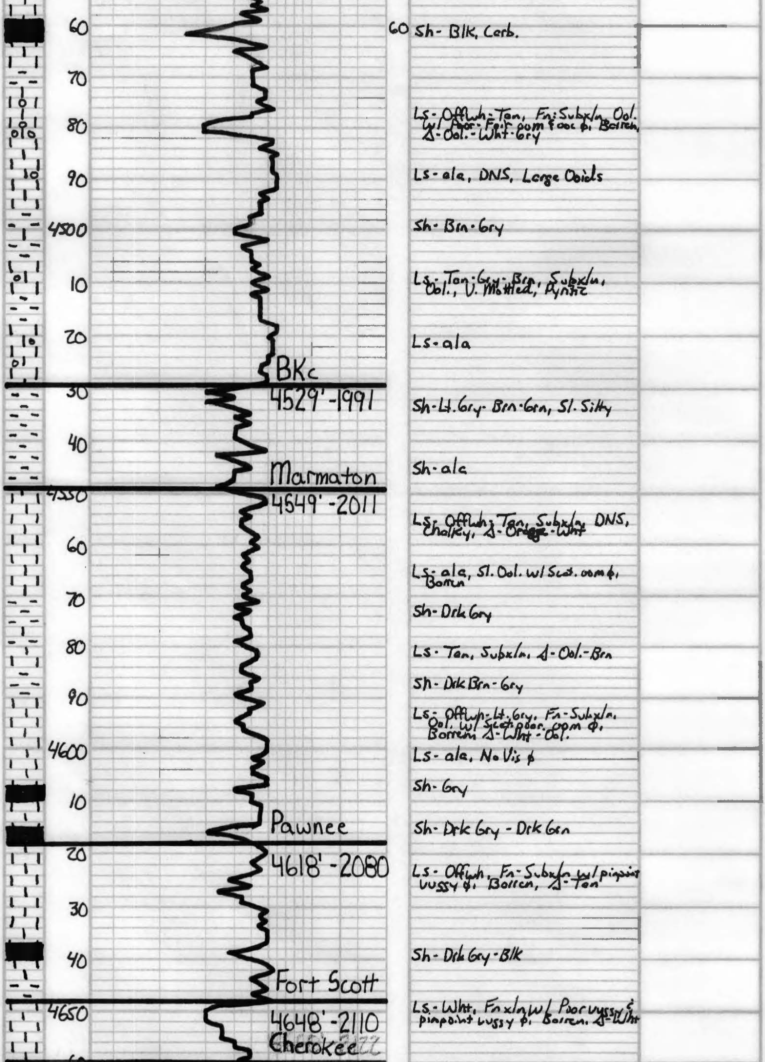
Ls- ala

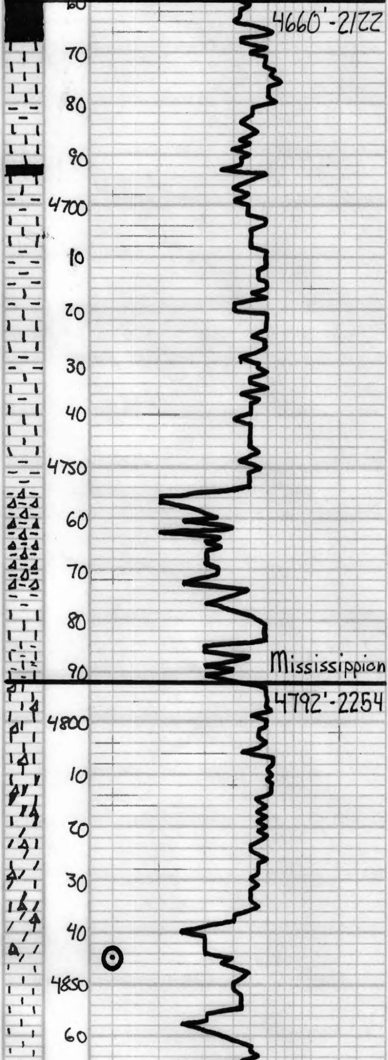
Sh- Blk, Carb.

IS Sh- Blk, Carb.

Ls- Tan- Gry- Mottled, Fn- Subxln Ool. w/ Scat. Fair oom φ. Barren

Ls- ala, DNS





55 Sh- Blk, Carb.

Ls- Offwh- Lt. Brn, Subx/n, Ool. in Part. DNS, Scat. Br Yel. Fluor.

Sh- Brn-Gry

Ls- Offwh-Tan, Subx/n w/ Few Scat. pinpoint vugs, Barren Sl. Yel. Fluor in Δ-Wht

Sh- Drk Gry- Blk

Ls- Tan-Gry, Subx/n, DNS, Ool, PKST in Part, Many Gry ooids.

Sh- Drk Gry- Grn

Ls- Tan-Gry, Subx/n. DNS

Sh- Gry- Grn

10 Ls- Offwh. Fn-Med x/n w/ scat. interx/n Poor φ, lt. spot. oil st. in φ. NSFO. No Odor Fair Yel. Fluor.

Sh- Grn- Gry- Yel. Δ- Yel.- Brn-Wht Few Pcs of Gr. Siltstone, Barren

50 ΔD- Sh- Wht- Tan Fresh Δ, Grn- Brn shales. No Cut Gr. No vis. φ Few Pcs Δ w/ lt. Yel. Fluor.

Ls- Wht- Offwh, Sl. Ool, Subx/n, DNS, Sl. Chalky, Few Pcs w/ small vugs. Barren

Ls- a/a, Shaley- Gry- Grn

Ls- Wht, Offwh, Subx/n, Few Scat. ool. Sl. Δ- Wht- Brn

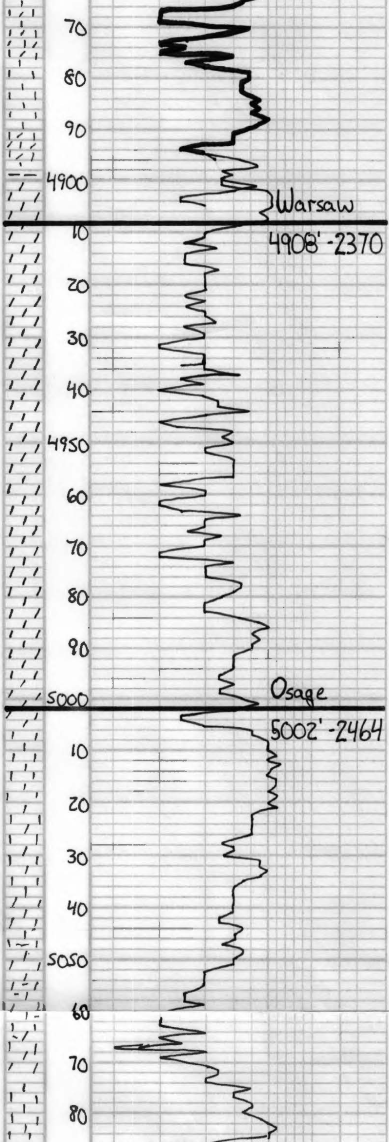
Ls- Sl. Dolo, Offwh-Tan, Fn-Subx/n, Few Pcs w/ small vugs. Mostly DNS, Barren. Δ Sl. ool. Tan- Wht- Clr. V. scat. dead oil st in vugs

Ls- Dolo- Wht- Offwh. Fn- Subx/n lt. mottled w/ Brn shale, DNS, Barren, Δ- Tan- Wht

Ls- Dolo- a/a, Wht- Lt. Gry

Ls- Dolo- Tan- Lt. Gry- Mottled. Fn- Sub x/n w/ Poor- Fair scat. vugsy φ. Barren. No Odor. No Fluor. Fossil, Δ- Tan- Wht

LS: wht, md- crs xln, sltly ool, v grain: frag sub xln- chalky, scat wht chert. v frag



Same AIA, trng wht dolo, md-crs xln, sltly suc. Same gd vugφ, Tot barren.

LS: Some AIA w/ tan-brn crs xln dolo. Scat Foss, prφ, dns.
Trng sucxln w/ depth, subxln in prt.

Dolo: tan-gry, crs xln, Foss, All vdns.

Dolo: tan-gry, gd vugφ w/ sub xln-chlky ox, All NS.

Dolo: AIA w/ scat dns ox, trng fr Amt chlky ox, lt gry.

Dolo: tan-lt gry. Fr-gd vugφ, Fr amt chlky ox, scat wht-tan chts.

Dolo: Some AIA w/ scat dns sm. prφ.

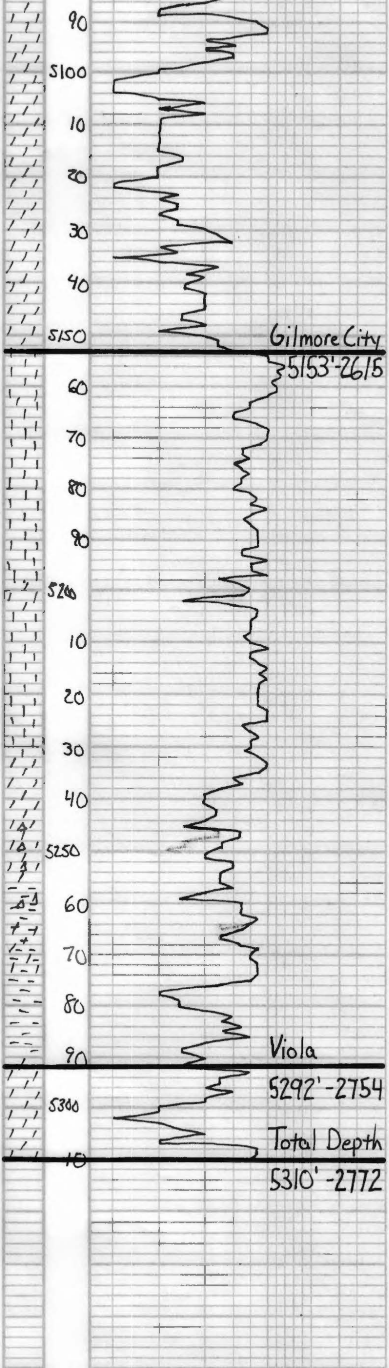
– scat lt gry Shales.

LS: Lt. grn fxln w/ salt + pepper glauconitic + gilsonite chips-

LS: Lt-Crm-Tan fxln w/ som glauconitic inclusions

LS w/ dolo. LS. grn fxln w/ few intbd shales grn

LS: Tan-fxln w/ lots wht chert + silty Brn shales - Red shales



dolo: Tan fxn dolo Ls.
w/ decreasing wht Δchert

Dolo: gm fxn, w/ much
wht Δchert All very sharp

Ls: Bone wht, chky to subxln
V. oolitic chky Ls.

Ls: wht w/ chert as above
few pcs tan dolomitic Ls.

Ls: wht chky Ls. Scatt
wht Δchert

Dolo: gm - fxn w/ gm Δ
chert, some vug ϕ in dolomite
(rowlue?)

Dolo: Tan vfxn vdse w/ much
crm opaque wht Δchert

sh: green, Toarquin
silty

Dolo: Tan fxn w/ good intxn ϕ
No vis show - No od