

Saman Sharfaie

Petroleum Geologist

GEOLOGISTS'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Co., Inc.**
 LEASE: **CWA-C-1 #1-32**

FIELD: **Apache**
 LOCATION: **93° 07' 00" W 21° 00' 00" N**
 SEC: **32 TWP 2S RGE 36W**
 COUNTY: **Rawlins STATE Kansas**

CONTRACTOR: **Murfin Drilling #3**
 SPUD: **08/10/13 COMP 08/19/13**
 RTD: **4850' LTD 4853'**
 WUD UP: **3500' TYP WUD Chemical**

SAMPLES SAVED FROM: **3620' TO RTD**
 DRILLING TIME KEPT FROM: **3620' TO RTD**
 SAMPLING EXAMINED FROM: **3620' TO RTD**

GEOLOGICAL SUPERVISION FROM: **3.20'**
 REFERENCE WELL: **Murfin Drilling, APT #1-5**

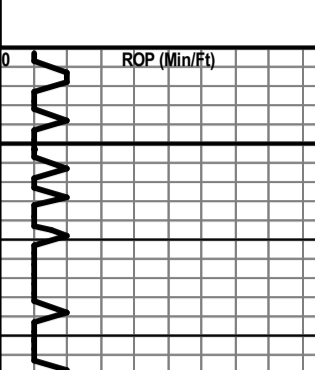
CONDUCTOR: **8-5/8" at 387'**
 SURFACE: **5-1/2" at 4853'**
 PRODUCTION: **3-1/2" at 4853'**

Measurements Are All From Kelly Bushing

DF: _____
 GL: **3358'**

ELEVATIONS
 KB 3363'

Formation	Sample Tops	EOB Tops	Start
Amblydite	3225 (+138)	3227 (+130)	-10
Basal Amblydite	3261 (+102)	3260 (+103)	-6
Neva	3720 (-537)	3728 (-565)	-9
Topeka	4081 (-718)	4086 (-723)	-6
Heebner	4242 (-879)	4246 (-883)	-7
Lansing	4291 (-928)	4292 (-929)	-3
BKC	4568 (-1205)	4569 (-1206)	-7
Pawnee	4695 (-1332)	4698 (-1335)	-11
Verdigris	4776 (-1413)	4776 (-1413)	-8



REMARKS: Due to fair shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,
 API #15-153-20934
 Saman Sharfaie
 Petroleum Geologist

*Tops have been adjusted to electric logs

