

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Company Inc.**

LEASE **Carolyn A #2-24**

FIELD **Midcat**

LOCATION **1210'fsl & 1240'fel**

SEC **24** TWP **1S** RGE **37W**

COUNTY **Cherokee** STATE **Kansas**

CONTRACTOR **Murfin Drilling Co. Inc. Kit #3**

SPUD **6/22/2017** COMP **7/6/2017**

RTD **4/7/50'** LTD **4/752'**

WMD UP **3409'** TYPE WMD **Chemical**

SAMPLES SAVED FROM **3520'** TO **TD**

DRILLING TIME KEPT FROM **3520'** TO **TD**

SAMPLES EXAMINED FROM **3520'** TO **TD**

GEOLOGICAL SUPERVISION FROM **3471'**

GEOLOGIST ON WELL **Robert D. Hendrix**

Other methods used (approved previously)
Mudlogging/Sonic Logging/Wellbore Imager

FORMATION TOPS

ELECTRIC LOG

SAMPLE

Neiva **3623 (-371)** **3629 (-377)**

Foraker **3739 (-487)** **3743 (-491)**

Topeka **3967 (-765)** **3971 (-769)**

Oread **4094 (-832)** **4096 (-834)**

Lansing **4173 (-923)** **4169 (-917)**

BKC **4445 (-1193)** **4446 (-1194)**

Oakley **4653 (-1403)** **4655 (-1403)**

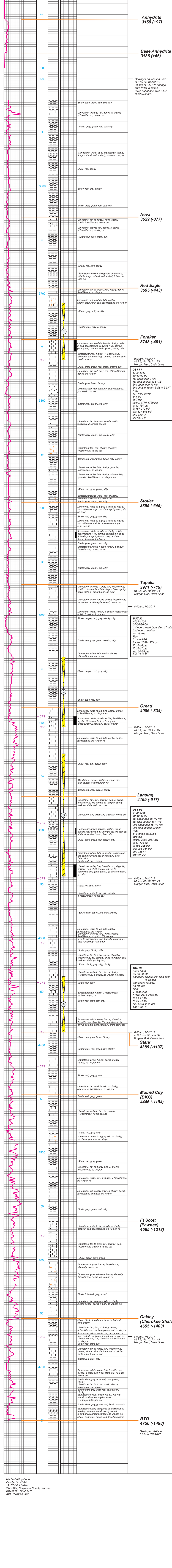
API# 15-023-21466

AP1# 15-023-21466

REMARKS:

LEGEND

	Anhydrite		Sandstone		Limestone		Shale		Carb Sh		Cherty LS		Chert		Dolomite
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DST #1
3709-3762
30-60-60-90
1st open: bob 9 min
1st shut in: built to 6 1/2"
2nd open: bob 11 min
2nd shut in: return built to 6 3/4"
Rec: 117' mco 30/70
54" co
260' gip
hydro: 1776-1759 psi
lf: 42-150 psi
ff: 157-272 psi
sip: 827-806 psi
bht: 131° F
gravity: 24°

DST #2
4039-4104
30-60-30-60
1st open: weak blow died 17 min
1st shut in: built to 8 1/2"
2nd open: no blow
no returns
Rec: 117' mco 4/96
hydro: 2052-1974 psi
lf: 42-166 psi
ff: 157-272 psi
sip: 827-806 psi
bht: 131° F

DST #3
4129-4245
30-60-60-90
1st open: bob 16 1/2 min
1st shut in: built to 11 1/4"
2nd open: bob 16 1/2 min
2nd shut in: bob 32 min
Rec: 514' gmco 15/20/65
496' gip
hydro: 2060-2057 psi
lf: 14-17 psi
ff: 155-225 psi
sip: 985-964 psi
bht: 136° F
gravity: 20°

DST #4
4326-4388
30-60-30-60
1st open: built to 3/4" died back in 18 min
2nd open: no blow
no returns
Rec: 7' osm 2/98
hydro: 2174-2110 psi
lf: 14-17 psi
ff: 20-24 psi
sip: 1223-1151 psi
bht: 138° F

DST #5
4389-4437
30-60-30-60
1st open: built to 3/4" died back in 18 min
2nd open: no blow
no returns
Rec: 7' osm 2/98
hydro: 2174-2110 psi
lf: 14-17 psi
ff: 20-24 psi
sip: 1223-1151 psi
bht: 138° F