

JAMES C. MUSGROVE
Petroleum Geologist
212 Main Street
P.O. Box 215
Clifton, KS 67525

Office (620) 588-4250

Res. Clifton (620) 587-3444

Damar Resources
Drilling Unit #1
SE-SW-SW-NE (2525' FNL & 2115' FEL)
Section 21-13s-17w
Ellis County, KS
Page 1

5 1/2" Production Casing Set

Contractor: Discovery Drilling Company (Rig #1)
Commenced: October 24, 2013
Completed: November 1, 2013
Elevation: 1996' K.B; 1994' D.F; 1988' G.L.
Casing program: Surface; 8 5/8" @ 1230'
Production 5 1/2" @ 3674'
Sample: Samples saved and examined 2900' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 2900 ft to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were six (6) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Pioneer Energy Services; Dual Induction, Compensated Neutron/Density and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	1223	+773
Base Anhydrite	1269	+727
Topeka	3014	-1018
Heebner	3255	-1259
Toronto	3276	-1280
Lansing	3300	-1304
Base Kansas City	3524	-1528
Arbuckle	3539	-1543
Rotary Total Depth	3675	-1629
Log Total Depth	3675	-1629

(All tops and zones corrected to Electric Log measurements).

SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

TOPEKA SECTION

3014-3030' Limestone; brown/gray, fossiliferous, dense, poorly developed porosity.
3045-3052' Limestone; gray, slightly dolomitic, poor visible porosity, trace poor spotty light brown stain, no free oil and no odor in fresh samples.

- 3067-3084' Limestone; tan, finely crystalline, fossiliferous, chalky in part, no show.
- 3100-3118' Limestone; gray, tan, finely crystalline, fossiliferous, slightly cherty, no shows.
- 3187-3200' Limestone; white/gray, finely crystalline, few fossiliferous, plus amber chert, no shows.
- 3208-3220' Limestone; white, gray, slightly fossiliferous, chalky, poor brown and black stain, no free oil and faint odor in fresh samples.

TORONTO SECTION

- 3276-3290' Limestone; tan, gray, chalky, finely crystalline, poor intercrystalline type porosity, brown stain, no free oil and no odor in fresh samples.

LANSING SECTION

- 3300-3308' Limestone; tan, gray, finely crystalline, chalky, poor porosity, no shows.
- 3313-3326' Limestone; white, gray, chalky, few cherty, no shows.
- 3325-3338' Limestone; white/gray, slightly chalky, scattered vuggy type porosity, trace stain, show of free oil and questionable odor in fresh samples.

Drill Stem Test #1 3250-3340'

Times: 5-60-30-30

Blow: Weak

Recovery: 7' mud

Pressures:

ISIP	386	psi
FSIP	108	psi
IFP	16-16	psi
FFP	17-20	psi
HSH	1595-1567	psi

- 3346-3356' Limestone; white, gray, finely crystalline, few fossiliferous, chalky in part, brown spotty stain, no show of free oil and no odor in fresh samples, plus white chert.
- 3370-3376' Limestone; gray, white, finely oolitic, chalky, gray and brown stain and saturation, show of free oil and questionable odor in fresh samples.
- 3382-3390' Limestone; white/cream, oolitic/fossiliferous, slightly chalky, brown stain, trace of free oil and faint odor.
- 3393-3406' Limestone; as above, sub oomoldic in part, chalky, poorly developed porosity, trace stain, weak show of free oil and no odor in fresh samples.

Drill Stem Test #2 3325-3411'

Times: 5-60-45-45

Blow: Weak

Recovery: 10' oil spotted mud

Pressures: ISIP 340 psi
FSIP 273 psi
IFP 15-18 psi
FFP 20-29 psi
HSH 1647-1637 psi

3432-3446' Limestone; white, few fossiliferous, chalky, poor porosity, poor stain, no show of free oil and no odor in fresh samples, plus amber/gray chert.

3462-3470' Limestone; white, gray, finely crystalline, fossiliferous in part, scattered pinpoint porosity, trace brown stain and black stain, weak show of free oil and faint odor in fresh samples.

3474-3482' Limestone; white/cream, finely crystalline, finely fossiliferous, chalky, scattered porosity, light brown stain, trace of free oil and good odor in fresh samples.

3490-3500' Limestone; white, gray, cream, finely crystalline, few fossiliferous, poor visible porosity, no shows.

Drill Stem Test #3 3416-3515'

Times: 5-60-45-45

Blow: Weak

Recovery: 2' mud, show of oil

Pressures: ISIP 726 psi
FSIP 294 psi
IFP 17-18 psi
FFP 19-23 psi
HSH 1699-1645 psi

3515-3525' Limestone; white, gray, chalky, few cherty, dense.

ARBUCKLE SECTION

3539-3563' Dolomite; white, gray, fine and medium crystalline, scattered intercrystalline porosity, brown and golden stain/saturation, show of free oil and good odor in fresh samples, plus trace tan, sucrosic, dolomite, few sandy, fair stain, saturation, show of free oil.

Drill Stem Test #4 3523-3563'

Times: 5-60-45-45

Blow: Surface

Recovery: 29' oil cut mud
 (5% oil, 95% mud)
 1' heavy oil cut mud
 (45% oil, 55% mud)

Pressures: ISIP 1037 psi
 FSIP 821 psi
 IFP 18-21 psi
 FFP 22-32 psi
 HSH 1773-1701 psi

3563-3578' Dolomite; as above, sucrosic, scattered porosity, good stain and saturation, show of free oil and fair/good odor in fresh samples.

3578-3586' Dolomite; gray, tan, sucrosic, good pinpoint and intercrystalline type porosity, good stain and saturation, show of free oil, trace white chert.

3586-3610' Dolomite; white/gray and cream finely crystalline, poor visible, plus white chalk, trace black dead stain, no free oil and no odor.

3610-3630' Dolomite; as above, plus white chert, trace pink finely crystalline dolomite, no shows.

3630-3640' Dolomite; white, medium crystalline, fair porosity, plus amber and gray chert.

3640-3650' Dolomite; pink and gray, white, finely crystalline, slightly cherty, dense, plus white chalk.

3650-3675' Dolomite; as above, fair to good porosity, no shows, plus white chert.

Rotary Total Depth 3675 (-1679)
 Log Total Depth 3675 (-1679)

Remarks: Drill Stem Tests #5 & #6 were straddle tests.

Drill Stem Test #5 3556-3582'

Misrun – plugged tool

Drill Stem Test #6 3557-3581'

Times: 5-60-60-90

Blow: Good (7 1/2")

Final Flow: Weak to fair (5 1/2")

Recovery: 7' clean oil
8' mud cut oil
(40% mud, 60% oil)
125' slightly oil cut mud
(3% oil, 97% mud)

Pressures:	ISIP	1079	psi
	FSIP	1031	psi
	IFP	70-163	psi
	FFP	70-82	psi
	HSH	1812-1749	psi

Recommendations:
5 1/2" production casing was set and cemented on the Dreiling Unit #1.

Respectfully submitted;


James C. Musgrove,
Petroleum Geologist

