

OPERATOR

Company: Murfin Drilling Company, Inc.
 Address: 250 N. Water
 Suite 300
 Wichita, KS 67202
 Contact Geologist: Shauna Gunzelman
 Contact Phone Nbr: 316-267-3241
 Well Name: Showalter #1-17
 Location: Sec. 17 - T16S - R32W
 Pool:
 State: Kansas
 API: 15-171-20897-0000
 Field: Wildcat
 Country: USA



Scale 1:240 Imperial

Well Name: Showalter #1-17
 Surface Location: Sec. 17 - T16S - R32W
 Bottom Location:
 API: 15-171-20897-0000
 License Number: 30606
 Spud Date: 7/28/2012 Time: 00:00
 Region: Scott County
 Drilling Completed: 8/2/2012 Time: 21:40
 Surface Coordinates: 1980' FNL & 1400' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 3002.00ft
 K.B. Elevation: 3013.00ft
 Logged Interval: 3610.00ft To: 4770.00ft
 Total Depth: 4770.00ft
 Formation: Mississippian
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 1980' FNL
 E/W Co-ord: 1400' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
 Address: 3420 22nd Street
 Great Bend, KS 67530
 Phone Nbr: 620-617-4091
 Logged By: KLG #136 Name: Keith Reavis

CONTRACTOR

Contractor: Murfin Drilling Company, Inc
 Rig #: 21
 Rig Type: mud rotary
 Spud Date: 7/28/2012 Time: 00:00
 TD Date: 8/2/2012 Time: 21:40
 Rig Release: Time:

ELEVATIONS

K.B. Elevation: 3013.00ft
 K.B. to Ground: 11.00ft

Ground Elevation: 3002.00ft

NOTES

After evaluation of drill stem tests and electrical logs, it was determined by the operator that the Showalter #1-17 should be plugged and abandoned as a dry hole.

The gamma ray and caliper curves were imported into this mudlog from the electrical log data. Sample tops were generally 2 to 3 ft high to measured log tops. No curves were shifted to provide an exact match, but rather left as recorded in the field.

The samples from this well were saved and will be available for review at the Kansas Geological Survey Well Sample Library located in Wichita, KS.

Respectfully submitted
 Keith Reavis

Murfin Drilling Company

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
07/30/2012		Geologist Keith Reavis on location @ 2310 hrs, 3598 ft.
07/31/2012	3676	Bit trip at 3610', out with PDC in with tri-cone - on bottom and drilling ahead, Topeka, Queen Hill, Heebner, Toronto
08/01/2012	4081	drilling Lansing, cfs B zone, C-E, show in B warrants test, short trip, ctch and TOH for DST #1, conduct DST #1, complete DST #1, successful test
08/02/2012	4173	TIH w/bit, resume drilling, cfs F zone, cfs H zone, cfs J zone, stop in Stark, Operator calls for test of I - J zones, ctch, TOH, conduct DST #2
08/03/2012	4293	complete DST #2, successful test, out w/tools, in w/bit, resume drilling base KC, Marmaton, Pawnee
08/04/2012	4525	cfs Pawnee, shows in Marmatone warrant condemnation test, short trip, ctch, TOH w/bit in w/tools, conducting DST #3 - misrun, packer failure, TOH and reset packer interval, back in w/tools, conduct and complete DST #4, successful test, TIH w/bit, resume drilling, Ft. Scott, Cherokee
08/05/2012	4620	drilling Cherokee, Johnson Zone, show in Johnson warrants DST, TOH w/bit conduct and complete DST #5, successful test, TIH w/bit, resume drilling Atoka, show warrants test, start OOH w/bit
08/06/2012	4634	conduct and complete DST #6, successful test, TIH w/bit, resume drilling Morrow, Mississippian, rathole to TD for logs
08/07/2012	4770	conduct and complete logging operations, done @ 0700 hrs

Murfin Drilling Company

well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Murfin - Showalter #1-17 1980' FNL & 1400' FWL Sec. 17 - T16S - R32W					Murfin - Agnes #1-7 1650' FNL & 330' FEL Sec. 7 - T16S - R32W				Grand Mesa - Hoeme #1-4 2650' FSL & 1413' FWL Sec. 4 - T16S - R32W			
3013 KB					3021 KB		Structural Relationship		3004 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Topeka	3728	-715	3731	-718	3726	-705	-10	-13	3720	-716	1	-2
Queen Hill	3897	-884	3899	-886	3896	-875	-9	-11	3890	-886	2	0
Heebner	3962	-949	3962	-949	3958	-937	-12	-12	3952	-948	-1	-1
Lansing	4002	-989	4003	-990	3997	-976	-13	-14	3996	-992	3	2
Lansing G	4122	-1109	4124	-1111	4120	-1099	-10	-12	4120	-1116	7	5
Muncie Creek	4168	-1155	4174	-1161	4169	-1148	-7	-13	4164	-1160	5	-1
Stark	4258	-1245	4272	-1259	4262	-1241	-4	-18	4255	-1251	6	-8
Base KC	4341	-1328	4352	-1339	4339	-1318	-10	-21	4338	-1334	6	-5
Marmaton	4407	-1394	4404	-1391	4402	-1381	-13	-10	4404	-1400	6	9
Pawnee	4488	-1475	4487	-1474	4480	-1459	-16	-15	4471	-1467	-8	-7
Cherokee	4554	-1541	4554	-1541	4549	-1528	-13	-13	4541	-1537	-4	-4

Johnson	4596	-1583	4593	-1580	4592	-1571	-12	-9	4584	-1580	-3	0
Atoka	4622	-1609	4619	-1606	4616	-1595	-14	-11	4610	-1606	-3	0
Morrow Sand	4650	-1637	4654	-1641	4643	-1622	-15	-19	4626	-1622	-15	-19
Mississippian	4670	-1657	4671	-1658	4648	-1627	-30	-31	4671	-1667	10	9
Total Depth	4770	-1757	4772	-1759	4800	-1779	22	20	4783	-1779	22	20

Note: purple depths are Morrow Shale Tops

ROCK TYPES

	sdymst		Lmst fw7>		shale, gry		shale, red
	Lmst fw<7		shale, grn		Carbon Sh		Ss

ACCESSORIES

MINERAL

- ▲ Chert, dark
- ∩ Glauconite
- ✕ Mineral Crystals
- P Pyrite
- Silty
- △ Chert White

FOSSIL

- ∩ Bioclastic or Fragmental
- F Fossils < 20%
- Oolite
- ⊕ Pellets
- ⊕ Oomoldic

STRINGER

- Limestone
- Sandstone
- Siltstone
- Shale
- green shale
- red shale

TEXTURE

- C Chalky
- CX Cryptocrystalline
- L Lithogr

OTHER SYMBOLS

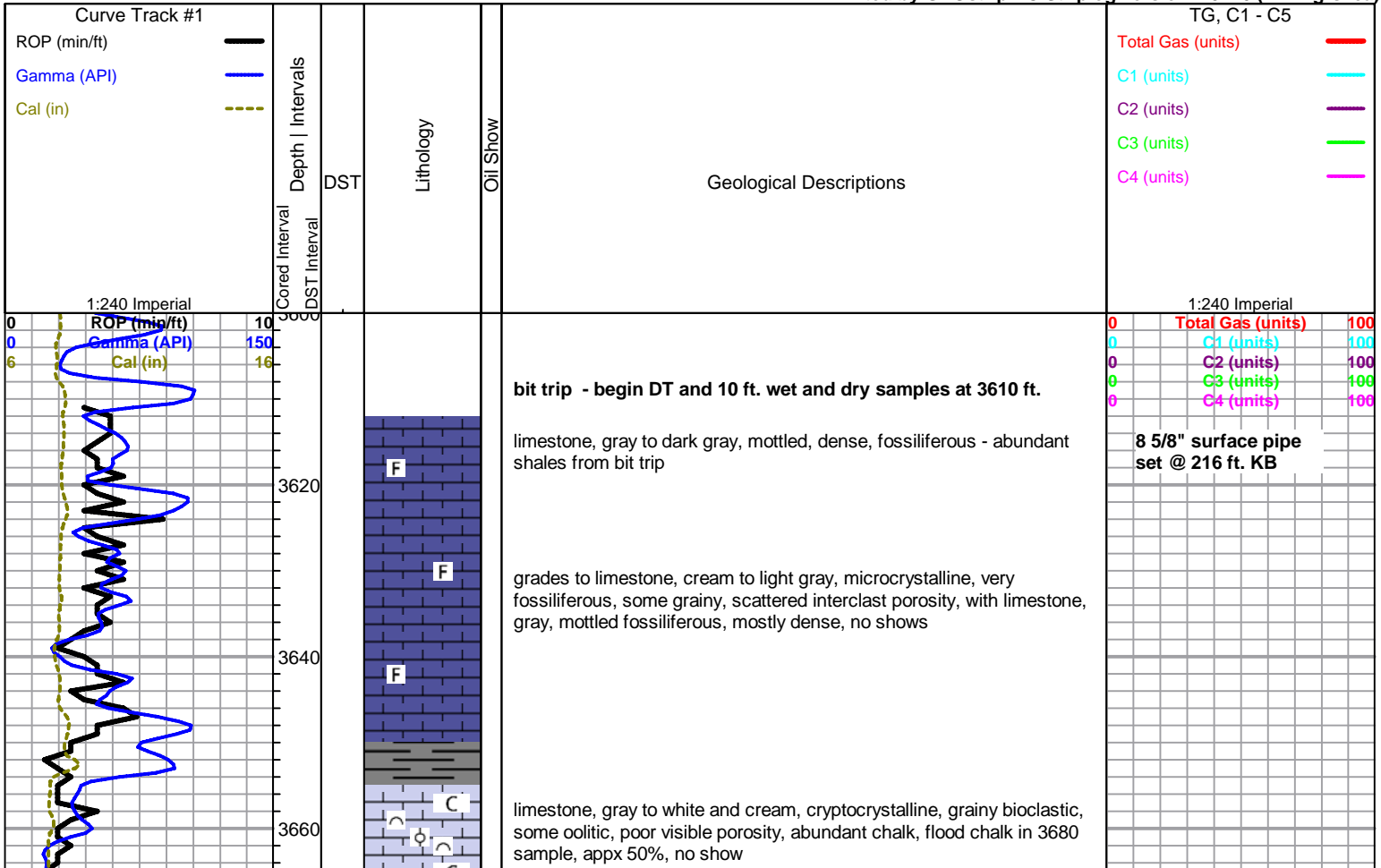
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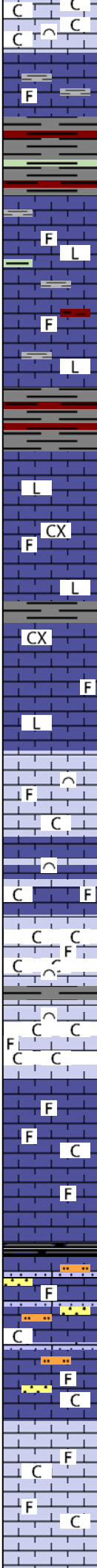
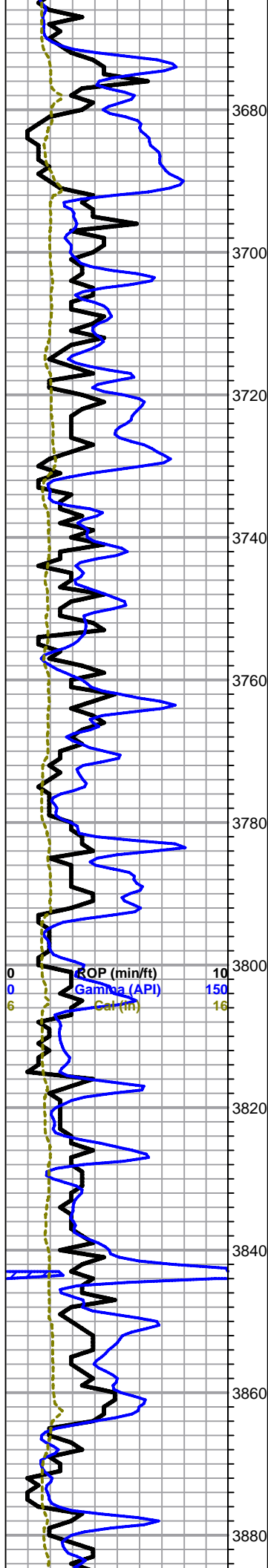
- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

DST

- DST Int
- DST alt
- Core
- tail pipe

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limestone, gray to dark gray, dense mottled fossiliferous, abundant gray shale, red and some gray/green, soft

poor samples, some tight connections, gray cryptocrystalline limestone, lithographic, dense, with mixed grainy fossiliferous, abundant shale in samples, no show

Topeka 3728 -715

poor samples, abundant red and gray shales, some tan and gray grainy fossiliferous

limestone, tan to cream, cryptocrystalline, lithographic to slightly fossiliferous, with: limestone, gray to brown, small specimens, grainy, fossiliferous, some scattered pin-point porosity, no shows, shale cleaning up

limestone, tan to gray, microcrystalline, bioclastic to sub-sucrosic microcrystalline, with gray mottled fossiliferous, some very weathered, soft, chalky, abundant chalk, no shows

limestone, tan to cream and light gray, microcrystalline, bioclastic to fossiliferous, poor visible porosity, flood chalk in samples, 40-50%, no shows

limestone, light gray to cream, microcrystalline, fossiliferous, sub-sucrosic in part, chalky, poor visible porosity, no shows

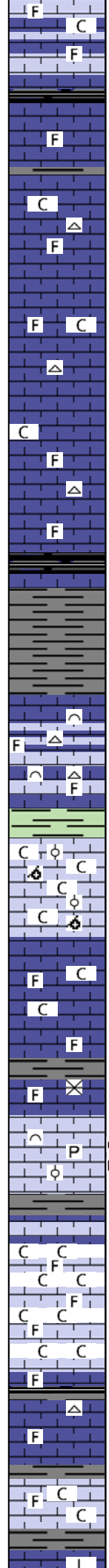
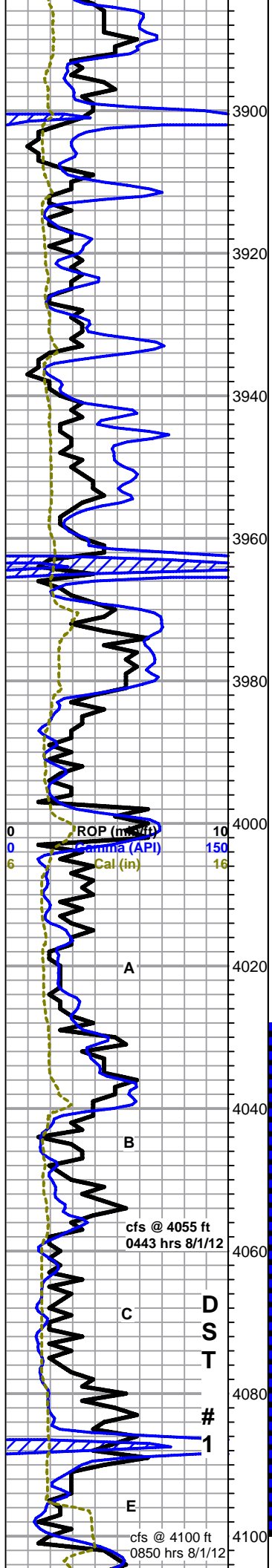
shale, black carbonaceous, some gold mica

limestone, light gray, chalky fossiliferous, some argillaceous, with very fine grain sandstone to siltstone, gray green, poor visible porosity, friable and soft, no shows

limestone, light gray to cream, microcrystalline, fossiliferous, grainy, chalky, some scattered interclast porosity, no shows, moderate chalk in samples

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

Morgan Mud chk @ 3849 ft.
1630 hrs. 7/31/12
Vis. 55 Wt. 9.3
PV 21 YP 14
WL 6.4
Cake 2/32,
pH 10.5
CHL 3000 ppm
Ca 10 ppm
Sol 7.2
LCM 7#
DMC \$2333.00
CMC \$12233.00



as above

Queen Hill 3897 -884

black carbonaceous shale

limestone, cream to light gray, microcrystalline, fossiliferous, chalky, some large clasts, some mottled, poor visible porosity, moderate chalk in samples, some scattered white to cream fossiliferous chert, no shows

as above

limestone, gray, mottled, chalky fossiliferous, moderate chalk

Heebner 3962 -949

shale, black carbonaceous

Toronto

limestone, light gray to cream, fossiliferous to bioclastic, some pin-point porosity, chalky, some chert inclusions, with: chert, light gray, fossiliferous, fresh, some chalk, faint fluorescence, no shows

Lansing 4002 -989

limestone, light gray, oolitic to oomoldic, cryptocrystalline slightly fossiliferous, some scattered moldic and interoolite porosity, appx 40% chalk in samples, barren, faint fluorescence

grades to light gray limestone, cryptocrystalline, dense, slightly fossiliferous, decreasing chalk, no shows, even light fluorescence

limestone, gray, microcrystalline, fossiliferous, dense, some secondary calcite, no shows

limestone, light gray, oolitic to bioclastic, chalky in part, pyritic in part, fair pinpoint porosity, even black gilsonitic staining in voids, show free oil on break, no odor, good milky white cut

chalk, 60% plus, with limestone, light gray, dense, fossiliferous, poor visible porosity, no shows

limestone, mixed gray to cream fossiliferous, poor visible porosity, no shows, with: chert, white, sharp, fresh, abundant shale

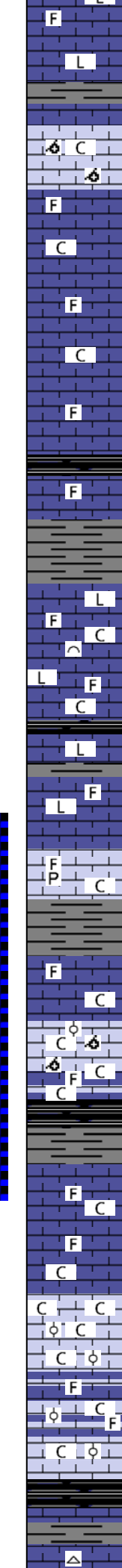
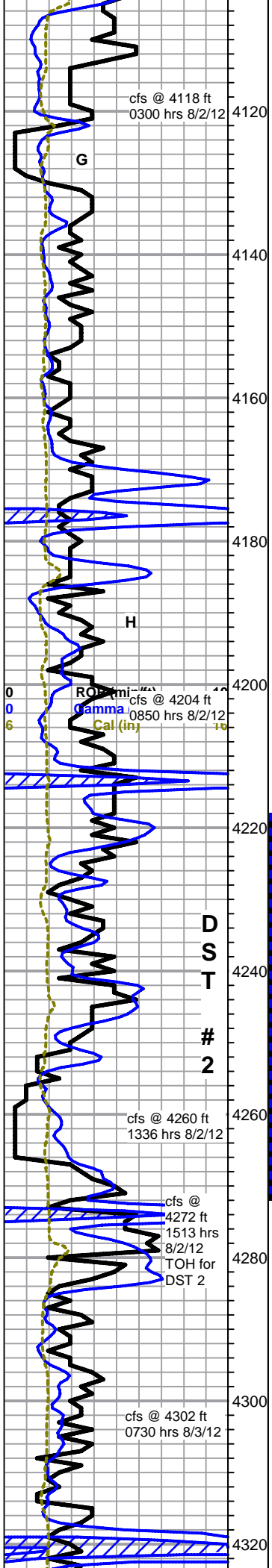
limestone, light gray, microcrystalline, grainy fossiliferous, dense, poor visible porosity, some fractures, no shows or odor, some scattered fair mineral fluorescence, abundant chalk

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

Showalter 1-17 dst 1.jpg

strap 0.51 ft short to board - deviation 1/2 deg

Morgan Mud chk @ 4100 ft. 1640 hrs 8/1/12



limestone, white to light gray, micro-crystalline, dense, slightly fossiliferous to lithographic, no shows

limestone, cream to light gray, oomoldic, good porosity, barren, no fluorescence, abundant chalk

limestone, cream to light gray and white, microcrystalline, fossiliferous, chalky, some small vugs, no shows, abundant chalk

a.a., with: limestone, blue/gray, cryptocrystalline, fossiliferous, some fractured, some large clasts

Muncie Creek 4168 -1155

limestone, gray to brown, dense fossiliferous

limestone, cream to light gray, gainy fossiliferous to bioclastic, very chalky, with limestone, gray, dnese lithographic, some scattered light gray chert, abundant chalk, no shows

limestone, gray to light brown, micro-cryptocrystalline, lithographic to fossiliferous, dense, with green and black shale, no shows

4240 sample - limestone, cream to white and light gray, fossiliferous, some very chalky and pyritic, scattered vugs with spotty dark brown edge to wormy staining, show stringy free oil, some gas bubbles, faint odor, no fluorescence, excellent milky white cut

limestone, pale green to gray, cryptocrystalline, dense, fossiliferous, abundant chalk, few scattered pieces with show similar to above (from above?)

cfs 30 min, limestone, light gray, oomoldic and oolitic, good oomold porosity, barren, flood chalk - 60 min sample, a.a. with abun. limestone, cream to gray, dense, fossiliferous, chalky in part, some scattered edge staining, no odor, no fluorescence

Stark 4258 -1245

shale, black carbonaceous, soft gray and green shale

limestone, gray to blue gray, mottled, fossiliferous, dense, no shows, abundant chalk and soft gray shale in 30 min sample, heavy gray wash - 60 min sample, a.a still abund oomoldic a.a.

Stark Log Top 4272 -1259

as above with tan to gray dense cherty fossiliferous, no shows

limestone, light gray, oolitic to flattened oolitic, dense to chalky, poor visible porosity, flood chalk, 40%+ in samples, no show or odor, pale fluorescence

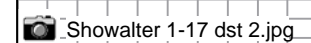
as above, with limestone, gray, dense, fossilifeorous, some secondary calcite crystals, no shows, abundant chalk

shale, black carbonaceous

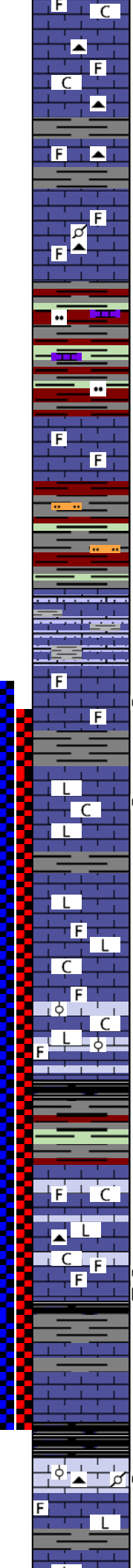
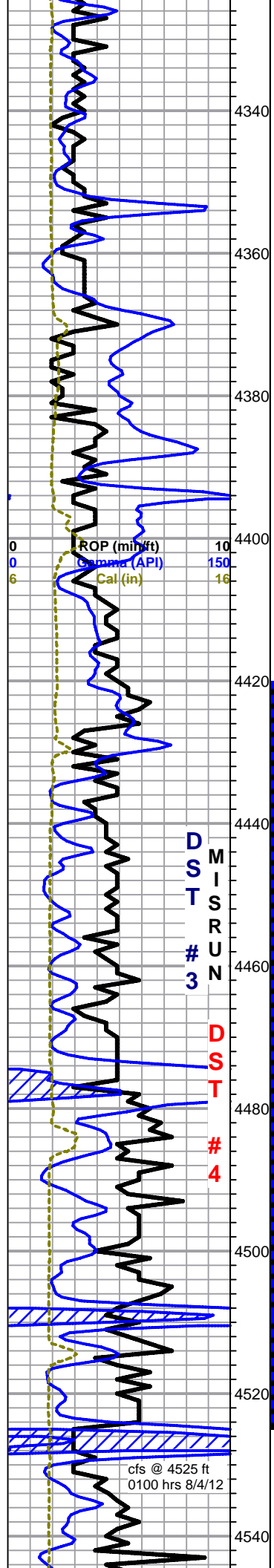
limestone, gray, microcrystalline, fossiliferous, grainy, grading to: limestone, gray to cream, fossiliferous, chalky, with chert, tan to smokey

1640 hrs. 8/1/12
 Vis. 57 Wt. 9.2
 PV 22 YP 16
 WL 6.4
 Cake 2/32,
 pH 10.5
 CHL 2200 ppm
 Ca 10 ppm
 Sol 6.4
 LCM 6#
 DMC \$3487.00
 CMC \$15720.00

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



Morgan Mud chk
 @ 4260 ft.
 1615 hrs. 8/2/12
 Vis. 58 Wt. 9.2
 PV 19 YP 16
 WL 6.4
 Cake 2/32,
 pH 10.5
 CHL 2100 ppm
 Ca 10 ppm
 Sol 6.4
 LCM 6#
 DMC \$884.00
 CMC \$16604.00



gray, spiculitic, no shows

Base KC 4341 -1328

limestone, mixed gray to cream, fossiliferous, some pelletal, trace pyritic, some secondary calcite, with some chert, tan and gray, fossiliferous, no shows

shale, reddish brown, very silty, micaceous, soft gray to green silty shale, red wash, with stingers limestone, gray/green to light gray, dense, fossiliferous, no shows

limestone as above

shale, reddish brown as above, with orange to brick red, lavender, gray and green, red wash in samples, with stringers siltstone, light gray, very dense and well cemented

Marmaton 4407 -1394

limestone, gray to light gray, argillaceous/sandy, with abundant soft gray sandy/silty shales, heavy gray wash in samples

4440 sample - limestone, brown to cream and tan, microcrystalline, dense to chalky, fossiliferous, some pin-point porosity and edge etching, slight staining, show heavy black oil on break, no odor, no fluorescence, fair cut

as above with abundant cream cryptocrystalline limestone, dense, mostly lithographic, some secondary calcite, trace spotty stain and cream very chalky limestone and chalk

limestone, cream to light gray, cryptocrystalline, some secondary calcite, dense, fossiliferous to lithographic, no shows, moderate chalk in samples

as above with cream to gray, some white, oolitic to flattened oolitic, chalky to dense, no shows

black carbonaceous with mixed brick red, gray and green shales

Pawnee 4488 -1475

limestone, gray to white, microcrystalline, fossiliferous, chalky, with limestone, gray, cryptocrystalline, lithographic, secondary calcite, no shows, some fair mineral fluorescence - moderate chalk, trace chert

4520 sample, flood brown and gray mottled fossiliferous limestone, 1 piece with pinpoint porosity, spotty stain, slight show scaley oil on break - with gray to cream and brown, earthy chalky limestone, abundant black carbonaceous shale, no other shows, faint fluor.

limestone, cream to light gray, microcrystalline, fossiliferous, some bryozoan frags, chalky to dense, no shows, abundant gray to tan translucent fossiliferous cherts, sharp, fresh, no shows

limestone, gray to tan, oolitic/pelletal, mostly dense, cherty, some chalky, scattered small inter-oolite vugs and solution vugs, some staining in vugs, trace free oil on break, no odor, no fluorescence, excellent cut, abundant gray oolitic -fossiliferous chert, some pyrite

limestone, cream to gray, micro-cryptocrystalline, lithographic to

Morgan Mud chk @ 4374 ft. 1250 hrs. 8/3/12 Vis. 58 Wt. 9.3 PV 20 YP 15 WL nr Cake 2/32, pH 9.5 CHL 3000 ppm Ca 10 ppm Sol 7.2 LCM 6#

0	Total Gas	DMC \$450.00
0	C1 (units)	CMC \$17054.00
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

Note: packer failure on DST #3

Showalter 1-17 dst 4.jpg

deveiation survey 1/4 deg

Morgan Mud chk @ 4525 ft. 1625 hrs. 8/4/12 Vis. 43 Wt. 9.3 PV 14 YP 18 WL 8.0 Cake 2/32, pH 9.5 CHL 3000 ppm

fossiliferous, mostly dense, some chalky, good mineral fluorescence, no shows or odor

Ca 10 ppm
Sol 7.2
LCM 4#
DMC \$252.00
CMC \$17306.00

Cherokee 4554 -1541

black carbonaceous shale

limestone, tan, pelletal, poor visible porosity, some pyritic, some friable but mostly dense, with limestones, mixed gray to cream fossiliferous to oolitic, dense to very chalky, no shows, faint even fluorescence

black carbonaceous and other mixed shales, mixed fossiliferous to oolitic limestones, dense to chalky, abundant pyrite nodules, no visible shows

Johnson Zone 4596 -1583

limestone, cream to tan, fossiliferous and oolitic, mostly cryptocrystalline, dense to weathered friable chalky, fair pinpoint porosity to wormy solution vugs, fair to spotty wormy saturated staining, fair show free oil, good odor, faint spotty fluorescence, slow streaming cut, some chalk, scattered chert

as above, with influx gray mottled pelletal, chalk/weathered, no show in this facies

Atoka 4622 -1609

4634 sample - light gray to cream, mostly bioclastic, abun. secondary calcite, grainy, chalky, glauconitic in part, some pinpoint porosity, no odor or stain, show clear oil droplets in tray, trace gas bubbles, bright green fluorescence, faint cut - cfs: influx gray limestone, cryptocrystalline, dense, slightly fossiliferous, some scattered vugs and fractures, staining in vugs, bleeding heavy dark free oil, good odor, faint fluorescence, excellent cut

bright green shale, pyritic, with limestone, mixed gray to blue/gray fossiliferous with some tan oolitic, pyritic, no shows, sandstone, quartz, white to pale green, very fine grain, pyritic, fair sorting and rounding, well cemented, barren

Morrow Sand 4658 -1645

sandstone, quartz, fine to very fine grain, angular to sub-round, poorly sorted, pyritic, friable to fairly cemented, saturated brown stain, loaded with asphalt-gilsonite, no show free oil, no odor, no fluorescence, no cut (slight halo)

Mississippian 4670 -1657

sandstone, quartz, white to light gray, very fine grain, well rounded and sorted, lime/chalk loaded, well cemented, to very sandy limestone, with streaks, limestone, tan, cryptocrystalline, slightly fossiliferous, very dense, no shows or fluorescence

as above, tan limestone drops out, with some sandstone as above but green, no shows, abundant orange chert

limestone, cream to gray, microcrystalline, chalky fossiliferous, no shows, some sand stringers as above, abundant chalk

as above

limestone, cream to light gray, flattened oolitic to oolitic, some fossiliferous, chalky, no visible porosity, no shows or fluorescence

(some sheen in 4770 sample, no odor or stain - pipe dope?)

as above

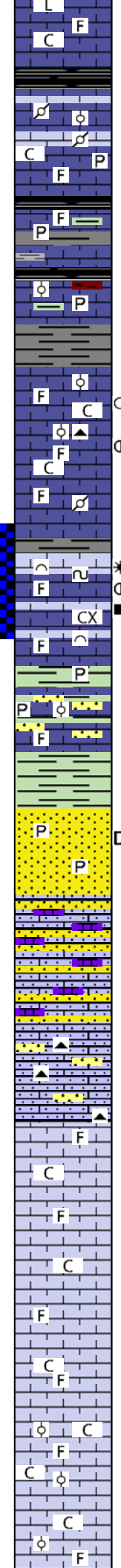
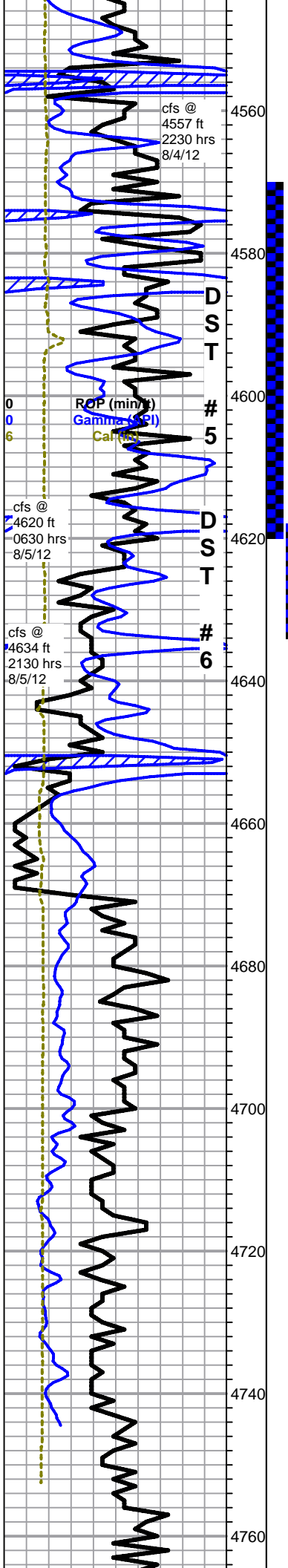
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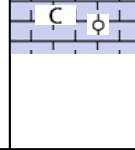
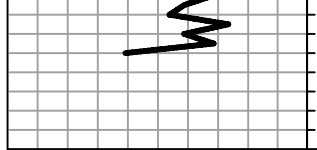
Showalter 1-17 dst 6.jpg

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

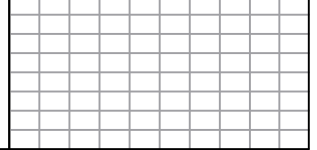
Morgan Mud chk
@ 4620 ft.
1530 hrs. 8/5/12
Vis. 56 Wt. 9.2
PV 18 YP 17
WL 7.6
Cake 2/32,
pH 10.0
CHL 3000 ppm
Ca 10 ppm
Sol 6.4
LCM 4#
DMC \$1378.00
CMC \$18684.00

Morgan Mud chk
@ 4698 ft.
1525 hrs. 8/6/12
Vis. 69 Wt. 9.2
PV 22 YP 21
WL 7.2
Cake 2/32,
pH 10.5
CHL 3400 ppm
Ca 10 ppm
Sol 6.4
LCM 6#
DMC \$1304.00
CMC \$19988.00





rotary TD @ 4770 ft. @ 2140 hrs 8/6/12
Pioneer Log TD 4772 ft.
Complete Logging Operation @ 0700 hrs 8/6/12





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Keith Reavis

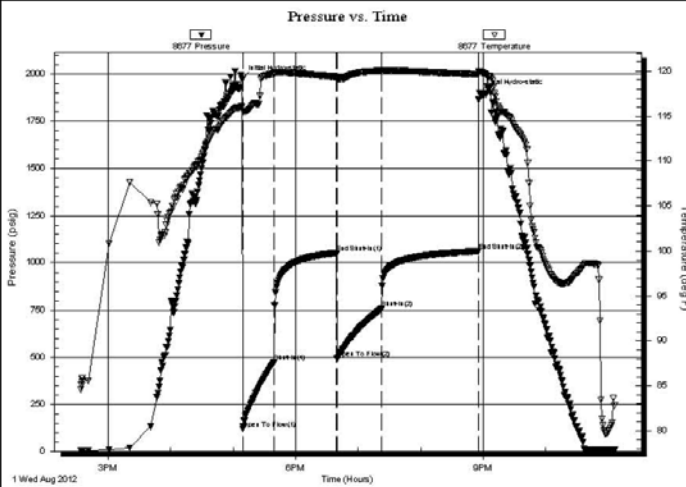
17 16s 32w Scott, KS
Showalter #1-17
 Job Ticket: 48970 **DST#: 1**
 Test Start: 2012.08.01 @ 14:34:00

GENERAL INFORMATION:

Formation: **LKC B - E**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:09:15
 Time Test Ended: 23:06:15
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bradley Walter
 Unit No: 53
Interval: 4028.00 ft (KB) To 4100.00 ft (KB) (TVD)
 Total Depth: 4100.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Reference Elevations: 3013.00 ft (KB)
 3002.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8677 Inside
 Press@RunDepth: 758.39 psig @ 4029.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.01 End Date: 2012.08.01 Last Calib.: 2012.08.01
 Start Time: 14:34:05 End Time: 23:06:15 Time On Btm: 2012.08.01 @ 17:08:45
 Time Off Btm: 2012.08.01 @ 20:56:30

TEST COMMENT: IF: BOB @ 2 min.
 IS: No return
 FF: BOB @ 4 min.
 FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1974.53	116.03	Initial Hydro-static
1	120.47	115.55	Open To Flow (1)
31	472.28	119.71	Shut-In(1)
91	1050.51	119.39	End Shut-In(1)
91	492.87	119.22	Open To Flow (2)
134	758.39	120.06	Shut-In(2)
227	1062.81	119.68	End Shut-In(2)
228	1903.21	119.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
850.00	smcw 2m 98w (oil spots in tool)	9.51
795.00	mcw 10m 90w	11.15

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Keith Reavis

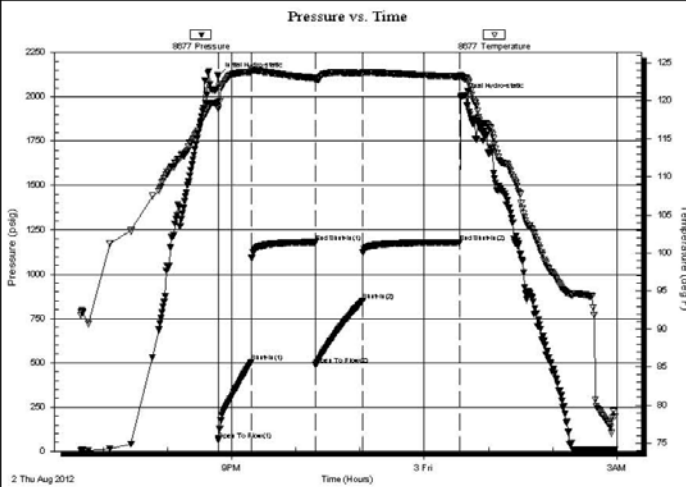
17 16s 32w Scott, KS
Showalter #1-17
Job Ticket: 48971 **DST#: 2**
Test Start: 2012.08.02 @ 18:32:00

GENERAL INFORMATION:

Formation: **LKC "I-J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:47:30
Time Test Ended: 02:51:00
Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 53
Interval: 4218.00 ft (KB) To 4272.00 ft (KB) (TVD)
Total Depth: 4272.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Reference Elevations: 3013.00 ft (KB)
3002.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8677 Inside
Press@RunDepth: 848.38 psig @ 4219.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.02 End Date: 2012.08.03 Last Calib.: 2012.08.03
Start Time: 18:39:05 End Time: 02:57:59 Time On Btm: 2012.08.02 @ 20:47:15
Time Off Btm: 2012.08.03 @ 00:34:15

TEST COMMENT: IF: BOB @ 3 min.
ISI: No return.
FF: BOB @ 4 min.
FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.30	119.74	Initial Hydro-static
1	61.79	118.91	Open To Flow (1)
31	503.11	123.79	Shut-In(1)
91	1178.99	123.01	End Shut-In(1)
92	489.37	122.75	Open To Flow (2)
135	848.38	123.63	Shut-In(2)
226	1179.75	123.20	End Shut-In(2)
227	2000.45	123.31	Final Hydro-static


Recovery

Length (ft)	Description	Volume (bbl)
630.00	mcw 10m 90w	6.42
1220.00	smcw 2m 98w	17.11

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests

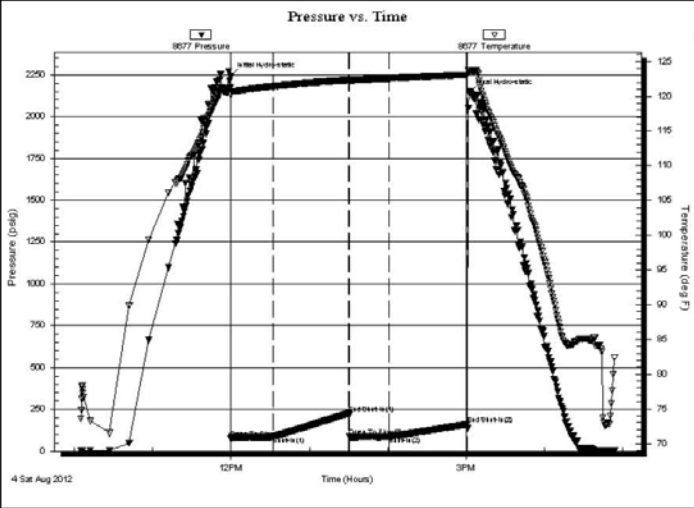
 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT	
	Murfin Drilling Co., Inc 250 N. Water Suite 300 Wichita, KS 67202 ATTN: Keith Reavis	17 16s 32w Scott, KS Showalter #1-17 Job Ticket: 48973 DST#: 4 Test Start: 2012.08.04 @ 10:05:00

GENERAL INFORMATION:

Formation: Marmaton-Pawnee Deviated: No Whipstock: ft (KB) Time Tool Opened: 12:00:00 Time Test Ended: 16:53:30	Test Type: Conventional Bottom Hole (Reset) Tester: Bradley Walter Unit No: 53
Interval: 4424.00 ft (KB) To 4525.00 ft (KB) (TVD) Total Depth: 4525.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good	Reference Elevations: 3013.00 ft (KB) 3002.00 ft (CF) KB to GR/CF: 11.00 ft

Serial #: 8677	Inside				
Press@RunDepth:	88.02 psig @	4425.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2012.08.04	End Date:	2012.08.04	Last Calib.:	2012.08.04
Start Time:	10:05:05	End Time:	16:53:29	Time On Btm:	2012.08.04 @ 11:59:45
				Time Off Btm:	2012.08.04 @ 15:02:00

TEST COMMENT: IF: 5", receded to 1/4". Packer seat failed initially then seated. Mud fell approx. 10' before packer set.
 IS: No return.
 FF: No blow.
 FSI: No return.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2240.38	121.32	Initial Hydro-static
1	75.68	120.17	Open To Flow (1)
33	88.95	121.45	Shut-In(1)
91	226.53	122.34	End Shut-In(1)
91	86.68	122.29	Open To Flow (2)
121	88.02	122.59	Shut-In(2)
181	161.19	123.08	End Shut-In(2)
183	2139.69	123.73	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
30.00	socm 2o 98m	0.15
70.00	mud 100m (oil spots)	0.34

* Recovery from multiple tests

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Keith Reavis

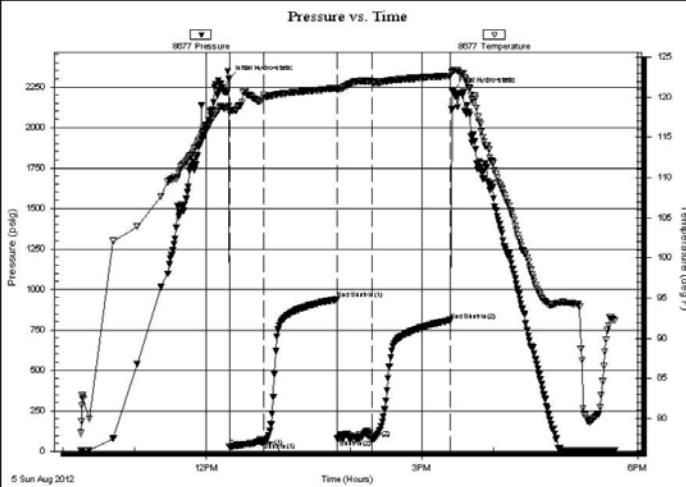
17 16s 32w Scott, KS
Showalter #1-17
Job Ticket: 48972 **DST#: 5**
Test Start: 2012.08.05 @ 10:15:00

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:19:00
Time Test Ended: 17:41:15
Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 53
Interval: 4570.00 ft (KB) To 4620.00 ft (KB) (TVD)
Total Depth: 4620.00 ft (KB) (TVD)
Reference Elevations: 3013.00 ft (KB)
3002.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good
KB to GR/CF: 11.00 ft

Serial #: 8677 Inside
Press@RunDepth: 73.07 psig @ 4571.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.05 End Date: 2012.08.05 Last Calib.: 2012.08.05
Start Time: 10:15:05 End Time: 17:41:14 Time On Btm: 2012.08.05 @ 12:18:45
Time Off Btm: 2012.08.05 @ 15:25:00

TEST COMMENT: IF: 1" blow.
ISI: No return.
FF: Surface blow.
FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2297.31	118.93	Initial Hydro-static
1	26.47	118.15	Open To Flow (1)
29	55.42	120.23	Shut-In(1)
90	939.07	121.13	End Shut-In(1)
91	81.65	120.89	Open To Flow (2)
120	73.07	121.91	Shut-In(2)
185	807.01	122.68	End Shut-In(2)
187	2222.65	123.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	socm 2o 98m	0.37

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Keith Reavis

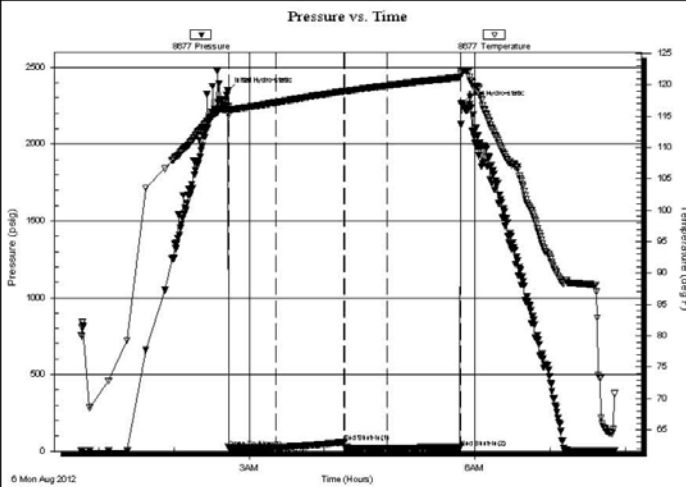
17 16s 32w Scott, KS
Showalter #1-17
Job Ticket: 48975 **DST#: 6**
Test Start: 2012.08.06 @ 00:46:00

GENERAL INFORMATION:

Formation: **Atoka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:43:30
Time Test Ended: 07:51:15
Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 53
Interval: **4618.00 ft (KB) To 4634.00 ft (KB) (TVD)**
Total Depth: 4634.00 ft (KB) (TVD)
Reference Elevations: 3013.00 ft (KB)
3002.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good
KB to GR/CF: 11.00 ft

Serial #: 8677 Inside
Press@RunDepth: 24.10 psig @ 4619.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.06 End Date: 2012.08.06 Last Calib.: 2012.08.06
Start Time: 00:46:05 End Time: 07:51:14 Time On Btm: 2012.08.06 @ 02:43:15
Time Off Btm: 2012.08.06 @ 05:49:00

TEST COMMENT: IF: Surface blow, Died @ 9 min.
ISI: No return.
FF: No blow
FSI: no return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2347.43	116.53	Initial Hydro-static
1	25.23	115.17	Open To Flow (1)
38	25.24	117.17	Shut-In(1)
93	59.55	118.97	End Shut-In(1)
93	25.20	118.95	Open To Flow (2)
127	24.10	119.88	Shut-In(2)
185	25.41	121.21	End Shut-In(2)
186	2259.90	122.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud 100m (oil puddle on top)	0.01

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests