

OPERATOR

Company: Younger Energy Company
 Address: 9415 E. Harry
 Suite 403, Bldg. 400
 Wichita, KS 67207

Contact Geologist:
 Contact Phone Nbr: 316-681-2542
 Well Name: Mosier Bauer Unit #1
 Location: Sec. 27 - T21S - R15W
 API: 15-145-21820-0000
 Pool:
 State: Kansas

Field: Hurray North
 Country: USA



Scale 1:240 Imperial

Well Name: Mosier Bauer Unit #1
 Surface Location: Sec. 27 - T21S - R15W
 Bottom Location:
 API: 15-145-21820-0000
 License Number: 30705
 Spud Date: 7/28/2016 Time: 12:00 AM
 Region: Pawnee County
 Drilling Completed: 8/4/2016 Time: 8:50 PM
 Surface Coordinates: 2250' FSL & 2550' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 1957.00ft
 K.B. Elevation: 1970.00ft
 Logged Interval: 3200.00ft To: 4010.00ft
 Total Depth: 4010.00ft
 Formation: Arbuckle
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 Latitude:
 N/S Co-ord: 2250' FSL
 E/W Co-ord: 2550' FWL

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: Duke Drilling Company
 Rig #: 7
 Rig Type: mud rotary
 Spud Date: 7/28/2016 Time: 12:00 AM
 TD Date: 8/4/2016 Time: 8:50 PM
 Rig Release: Time:

ELEVATIONS

ELEVATIONS

K.B. Elevation: 1970.00ft
K.B. to Ground: 13.00ft

Ground Elevation: 1957.00ft

NOTES

Due to results of Drill Stem Test #1, the operator ran 5 1/2" production casing to further test the Simpson Sand through perforations and stimulation.

A Bloodhound gas detection system operated by Bluestem Labs was employed on this well. ROP and gas data were imported into this report as well as gamma ray and caliper data from the electrical log suite.

Respectfully submitted,
Keith Reavis


Younger Energy Company daily drilling report

DATE	7:00 AM DEPTH	REMARKS
08/02/2016	3314	Geologist Keith Reavis on location @ 0815 hrs, 3314 ft, drilling ahead Reset extractor, Queen Hill, Heebner, Toronto, Douglas, Lansing
08/03/2016	3759	drilling ahead, Lansing, BKC, conglomerate, Viola, Simpson, short trip, drill Simpson Sand, show in sand warrants test, TOH for DST #1,
08/04/2016	3889	conducting DST #1, pipe strap was 4.7 ft long to the board, rec 2200' oil wait on tanker, reverse out into tanker, trip out and lay down tools, back in hole w/bit, ctch, resume drilling Arbuckle, rathole to TD, ctch, TOH for open hole logs, logging truck got lost and stuck
08/05/2016	4010	cat out logging truck, on location and running in hole with tools @ 0210 hrs complete logging operations, geologist off location @ 0545 hrs

Younger Energy Company well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Mosier Bauer Unit #1					Younger - Jost #1-27				F & M - Jost #1			
2250' FSL & 2550' FWL					875' FSL & 987' FWL				SE SW SW			
Sec. 27-T21S-R15W					Sec. 27-T21S-R15W				Sec. 27-T21S-R15W			
1970 KB					1972	KB	Structural Relationship		1976	KB	Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Queen Hill	3261	-1291	3262	-1292	3266	-1294	3	2	3261	-1285	-6	-7
Heebner	3363	-1393	3364	-1394	3370	-1398	5	4	3365	-1389	-4	-5
Douglas	3398	-1428	3399	-1429	3404	-1432	4	3	3400	-1424	-4	-5
Brown Lime	3470	-1500	3473	-1503	3478	-1506	6	3	3475	-1499	-1	-4
Lansing	3480	-1510	3483	-1513	3488	-1516	6	3	3484	-1508	-2	-5
Lansing G	3570	-1600	3572	-1602	3580	-1608	8	6	3575	-1599	-1	-3
Lansing H	3604	-1634	3606	-1636	3614	-1642	8	6	3610	-1634	0	-2
Stark	3660	-1690	3669	-1699	3669	-1697	7	-2	3664	-1688	-2	-11
Base KC	3709	-1739	3713	-1743	3720	-1748	9	5	3713	-1737	-2	-6
Conglomerate	3801	-1831	3801	-1831	3804	-1832	1	1	3806	-1830	-1	-1
Viola	3818	-1848	3822	-1852	3820	-1848	0	-4	3824	-1848	0	-4
Simpson	3837	-1867	3842	-1872	3858	-1886	19	14	3853	-1877	10	5
Arbuckle	3890	-1920	3894	-1924	3911	-1939	19	15	3901	-1925	5	1
Total Depth	4010	-2040	4012	-2042	3986	-2014	-26	-28	3905	-1929	-111	-113

Drill Stem Test #1

	DRILL STEM TEST REPORT	
	YOUNGER ENERGY COMPANY	27-21S-15W PAWNEE
	9415 E. HARRY SUITE 402 BUILDING 400 WICHITA, KANSAS 67207-5083	MOSIER BAUER UNIT 1
	ATTN: KEITH REAVIS	Job Ticket: DST# 1 Test Start: 2016.08.03 @ 22:55:00

GENERAL INFORMATION:

Formation: **SIMPSON SAND**
 Deviated: No Whipslock: ft (KB)
 Time Tool Opened: 12:38:00
 Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1-45

Interval: **3707.00 ft (KB) To 3889.00 ft (KB) (TVD)**
 Total Depth: 3889.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches -ole Condition: Fair

Reference Elevations: 1970.00 ft (KB)
 1957.00 ft (CF)
 KB to GR/CF: 13.00 ft

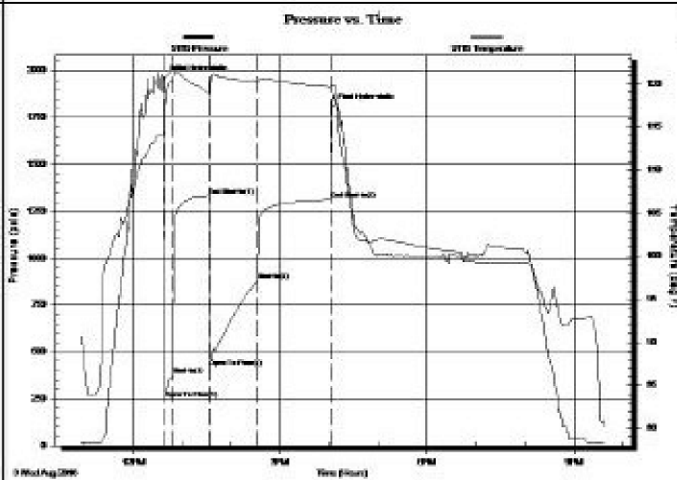
Serial #: 9119

Inside

Press@RunDepth: 1312.89 psia @ 3883.98 ft (KB)
 Start Date: 2016.08.03 End Date: 2016.08.03
 Start Time: 10:55:00 End Time: 21:38:00

Capacity: 5000.00 psia
 Last Calib.: 2016.08.04
 Time On Btm: 2016.08.03 @ 12:38:00
 Time Off Btm: 2016.08.03 @ 16:03:00

TEST COMMENT: 1ST OPENING 10 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES
 1ST SHUT-IN 45 MINUTES-WEAK SURFACE BLOW THROUGH OUT
 2ND OPENING 60 MINUTES-GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 3 MINUTES
 2ND SHUT IN 90 MINUTES-3 INCH BLOW BACK TO WEAK SURFACE BLOW



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1955.74	114.41	Initial Hydro-static
1	250.72	113.85	Open To Fbw (1)
10	376.49	120.50	Shut-In (1)
55	1331.68	118.88	End Shut-In (1)
55	415.72	118.36	Open To Flow (2)
115	881.56	120.16	Shut-In (2)
204	1312.89	119.65	End Shut-In (2)
205	1806.75	119.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2200.00	CLEAN GASSY OIL 15 GAS 85 OIL	29.20
0.00	240 GAS IN THE PIPE	0.00
0.00	GRAVITY OF OIL 39 CORRECTED	0.00

Gas Rates

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

ROCK TYPES

Cht vari	Lmst fw>7	Carbon Sh	Ss
Dolprim	shale, grn	shale, red	
Lmst fw<7	shale, gry	Shcol	

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite
- Silty
- △ Chert White
- Mc Mica

FOSSIL

- ∩ Bioclastic or Fragments
- F Fossils < 20%
- ∅ Oolite
- ∩ Pellets
- ∩ Oomoldic

TEXTURE

- C Chalky
- L Lithogr

OTHER SYMBOLS

MISC

- Daily Report
- Digital Photo

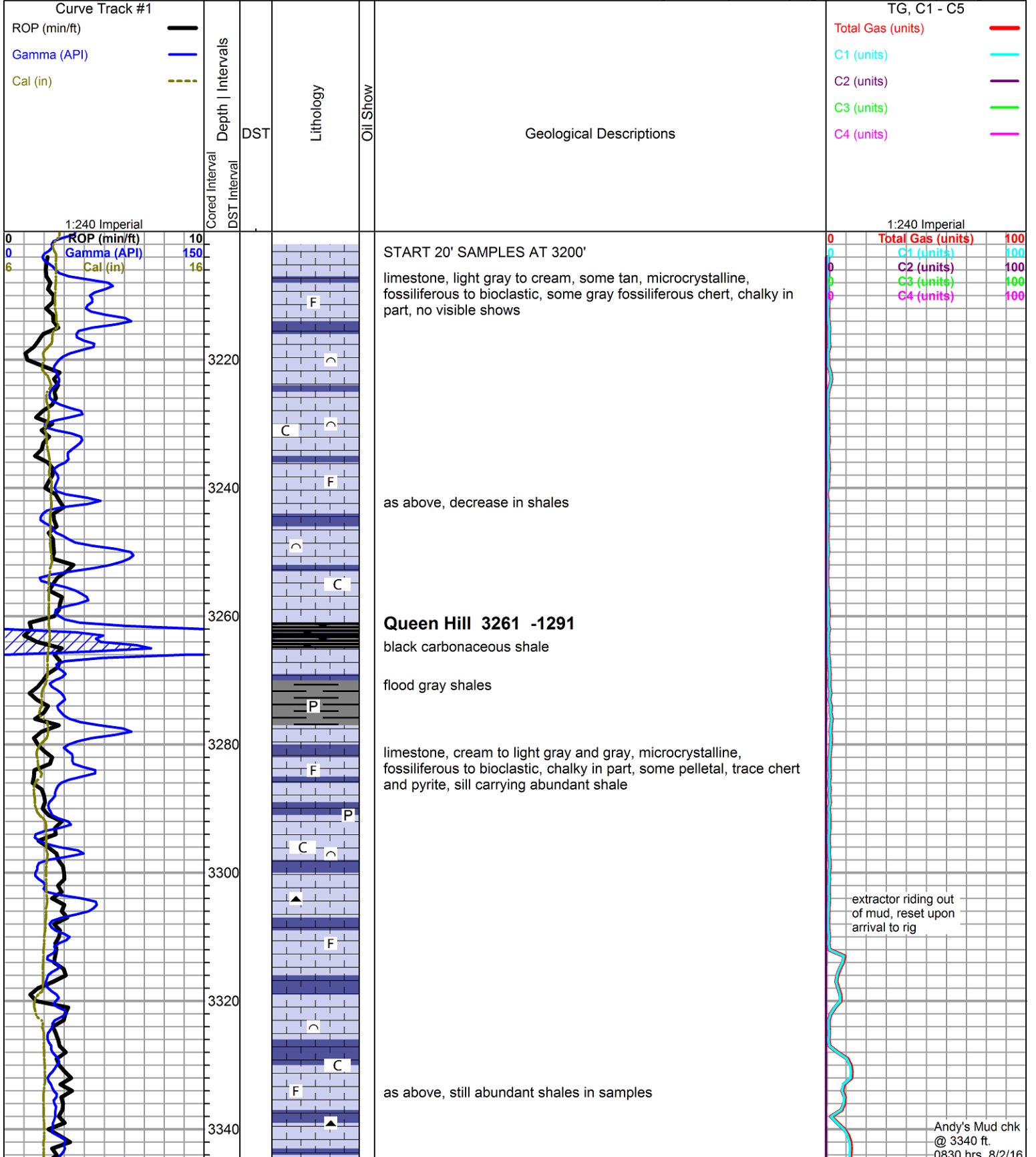
Oil Show

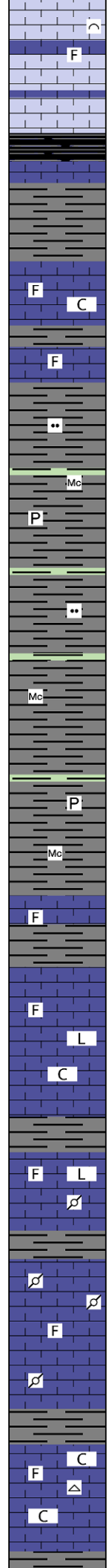
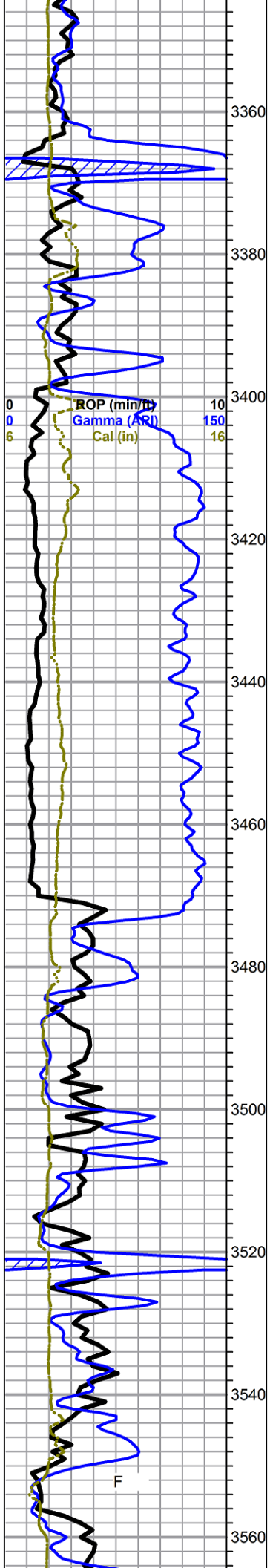
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace

DST

- DST Int
- DST alt
- Core
- tail pipe

- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- Gas
- tail pipe





Heebner 3363 -1393

shale, black carbonaceous

Toronto

limestone, white to gray, crypto-microcrystalline, fossiliferous, cherty to chalky, poor visible porosity, abundant chalk, no shows

Douglas 3398 -1428

shale, variabe gray, trace green, slightly micaceous and silty, soft, some scattered pyrite

BEGIN 10 FT SAMPLES AT 3460'

Brown Lime 3470 -1500

limestone, dark tan/gray, crypto-microcrystalline, fossiliferous, very dense, no shows

Lansing 3480 -1510

limestone, white to light gray, cryptocrystalline, lithographic to slightly fossiliferous, no visible porosity, chalky, no shows

limestone, white to cream, cryptocrystalline, fossiliferous to sub-lithographic, chalky in part, mostly dense, with light gray chalky mottled pelletal, poor visible porosity, no shows

limestone, gray and tan, mottled, pelletal, dense cherty to weathered and chalky, poor visible porosity, no shows

grades to limestone, light gray, fossiliferous to lithographic, with flood of dark gray cherty pelletal in 3550 sample, no shows

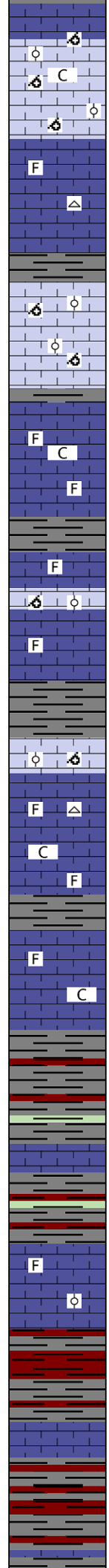
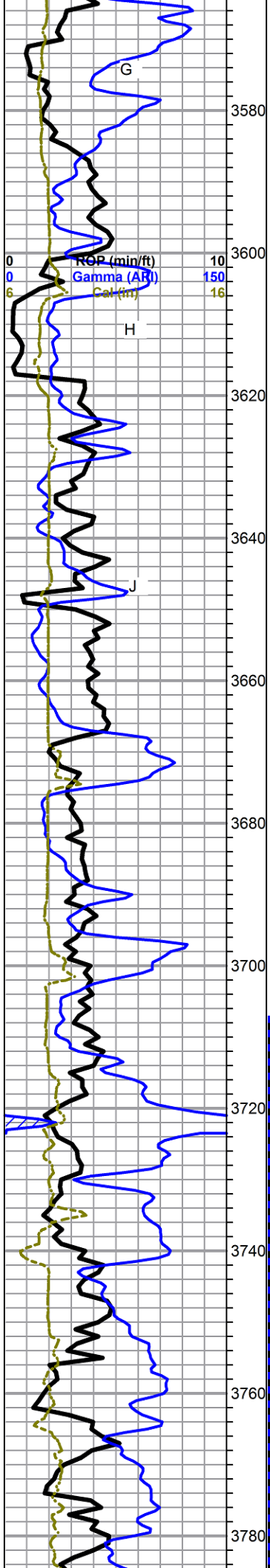
limestone, light gray to cream and tan, mostly cryptocrystalline, fossiliferous to sub-lithographic, fairly dense, abundant chalk, abundant chert, light gray, fossiliferous, no shows, poor fluorecence

Vis. 49 Wt. 9.0
 PV 16 YP 14
 WL 8.4
 Cake 1/32,
 pH 10.0
 CHL 1500 ppm
 Ca 20 ppm
 Sol 3.0 LCM 0#
 DMC \$2698.80
 CMC \$11030.50

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

deviation survey @ 3503'
 3/4 deg

re-set
 extractor



limestone, cream to light gray to white, fossiliferous to sub-lithographic, flattened oolitic to sub-oomoldic, some scattered mold porosity, chalky in part, moderate chalk in samples, no shows

limestone, mixed fossiliferous, dense to grainy, some chalk and scattered cherts, no shows

limestone, light gray, oomoldic to oolitic, some very good porosity, light yellow/green fluorescence, no odor or shows

limestone, mixed fossiliferous, carry abundant oolitic/oomoldic from above, moderate chalk, overall poor visible porosity, no shows

limestone, light gray to cream and white, fossiliferous, dense, with limestone, light gray, oomoldic to oolitic, some fair oomold porosity, mostly barren, 1 specimen with trace black stain, no odor, no show free oil

Stark Shale

limestone, light gray, oomoldic to oolitic, some fair mold and solution vug porosity, 1 specimen good black staining, trace gas, fair fluorescence, no show free oil, no odor, good bright white milky cut

limestone, white to light gray, fossiliferous, micro-cryptocrystalline, dense to grainy, poor overall visible porosity, some scattered chert and chalk, no shows

limestone, white to light gray, mostly cryptocrystalline, fossiliferous, dense to chalky, moderate chalk in samples, poor visible porosity, no shows

Base KC 3709 -1739

mixed shales, mostly gray

a.a., samples beginning to wash red

limestone, mixed, cream to gray fossiliferous to flattened oolitic, pale gray grainy chalky, brown pelletal to oolitic, some chalk, no shows

red to maroon mottled shale, gray shale, some olive and lavender shales

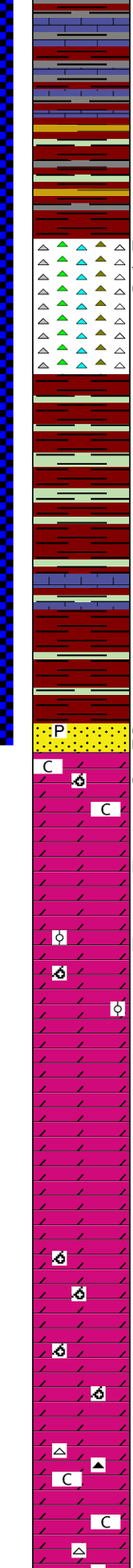
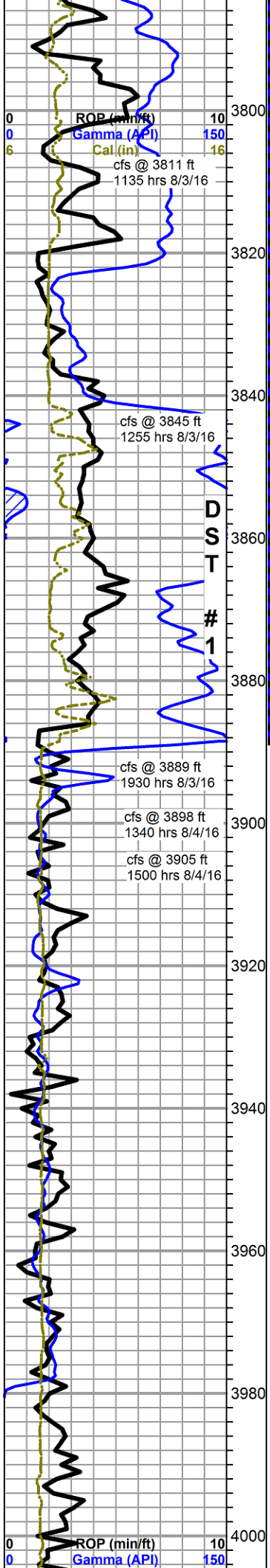
limestones a.a.

shales and limestone a.a.

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

re-adjust extractor

Andy's Mud chk
@ 3790 ft.
0830 hrs. 8/3/16
Vis. 48 Wt. 9.3
PV 14 YP 13
WL 9.2
Cake 1/32,
pH 9.5
CHL 2500 ppm



Conglomerate 3801 -1831

conglomerate shale, mostly brick red and maroon and lavender, other mixed shale, heavy red wash

Viola 3818 -1848

chert, white to cream and tan, translucent to opaque, with some red/rose, to orange and yellow, mostly fresh and sharp with some tripolitic edges to wholly tripolitic, slight staining, trace gas and oil droplets, faint fluorescence, good milky streaming cut, questionable odor

Simpson 3837 -1867

red shale with green mottling

grades to green shale with red mottling, green/gray shale, some maroon, waxy green shale

lower shale mostly red with green mottling, blocky, dense, some brown cherty microcrystalline limestone, very dense

Strap - 4.70 ft long to board

sandstone, quartz, very fine grain, round to sub-angular, fair sorting, fairly cemented, fair inter-granular porosity, light brown stain, strong odor, slight show free oil, good sheen with oil droplets on break, good green fluorescence, slow white milky cut, with pyrite

Simpson Sand 3886 -1916

see sand description above

Arbuckle 3890 -1920

3890-3898 dolomite, light gray to cream, mostly crypto-microcrystalline barren, dense, trace solution etching with black stain, some scattered oomoldic, good porosity, light stain, bleeds free oil on break, yellow/green fluorescence, fair to poor cut, fair sour odor in wet cup, abundant caliche

3899-3913, dolomite, light gray, microcrystalline, sub-rhombic to rhombic, some good solution vug porosity, spotty to saturated black gilsonitic staining, with dense barren gray cryptocrystalline dolomite, no show free oil, sour odor, decrease in caliche

3913-3929 dolomite, light gray, cryptocrystalline, dense, dolomite, light gray, sub-rhombic, some oolitic, trace oomoldic, some pyritic, mostly barren with trace black dead stain

dolomites a.a., with increase in sub-rhombic, influx white microcrystalline rhombic, some intercrystalline porosity, some gray microcrystalline with good solution vugs, trace spotty black stain

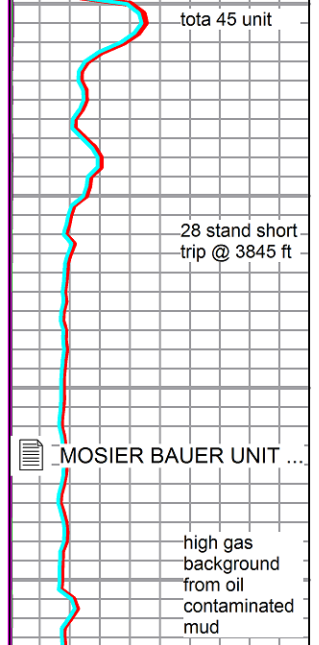
a.a.

dolomite, light gray to white, micro-fine crystalline, rhombic to sub-rhombic, fair intercrystalline and vuggy porosity, with abundant light gray to white oomoldic, good porosity, trace sandy dolomite, barren

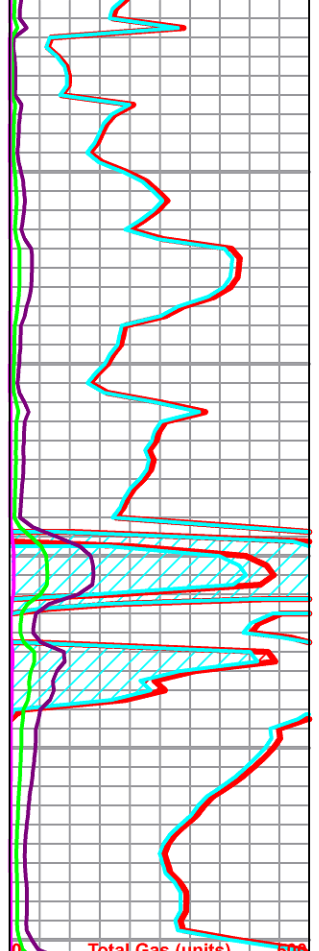
a.a.

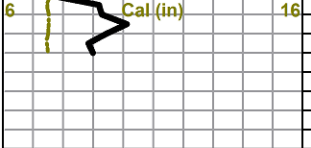
dolomite, white to light gray and tan, cryptocrystalline, dense, with micro to fine crystalline rhombic to sub-rhombic, poor porosity, dense, abundant white and smokey gray chert, sharp, fresh, abundant caliche, no shows

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



Total Gas (units)	500
C1 (units)	500
C2 (units)	100
C3 (units)	100
C4 (units)	100





Rotary TD 4010 ft @ 2050 hrs 8/4/16
ELI Wireline Services Log TD 4012 ft
complete logging operations 0520 hrs 8/5/16

