

**OPERATOR**

Company: American Warrior, Inc.  
 Address: 3118 Cummings Road  
 P.O. Box 399  
 Garden City, KS 67846  
 Contact Geologist: Kevin Wiles  
 Contact Phone Nbr: 620-275-2963  
 Well Name: Blaesi #4-6  
 Location: Sec. 6 - T15S - R41W  
 API: 15-199-20410-0000  
 Pool: Kansas  
 State: Kansas  
 Field: Okeson NW Ext.  
 Country: USA

Scale 1:240 Imperial

Well Name: Blaesi #4-6  
 Surface Location: Sec. 6 - T15S - R41W  
 Bottom Location: API: 15-199-20410-0000  
 License Number: 4058  
 Spud Date: 7/14/2014  
 Region: Wallace County  
 Drilling Completed: 7/22/2014  
 Surface Coordinates: 335' FSL & 1112' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 3771.00ft  
 K.B. Elevation: 3780.00ft  
 Logged Interval: 4000.00ft  
 Total Depth: 5200.00ft  
 Formation: Mississippian  
 Drilling Fluid Type: Chemical/Fresh Water Gel  
 Time: 4:45 PM  
 Time: 10:00 PM  
 To: 5200.00ft

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 Latitude:  
 N/S Co-ord: 335' FSL  
 E/W Co-ord: 1112' 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: Logan Walker  
 Name:

**CONTRACTOR**

Contractor: Duke Drilling Company, Inc  
 Rig #: 4  
 Rig Type: mud rotary  
 Spud Date: 7/14/2014  
 TD Date: 7/22/2014  
 Rig Release:  
 Time: 4:45 PM  
 Time: 10:00 PM  
 Time:

**ELEVATIONS**

K.B. Elevation: 3780.00ft  
 K.B. to Ground: 9.00ft  
 Ground Elevation: 3771.00ft

**NOTES**

Due to favorable results of DST #1, it was determined that 5 1/2" production casing be set and cemented and the Blaesi #4-6 be further tested through perforations and stimulation in the Morrow Sand.

An MBC gas detection unit was employed on this well, however, after getting stuck during the short trip at 4704', oil was used to get loose and this rendered the unit fairly useless for the remainder of the well do to mud contamination.

All log tops on this well were consistently 4-7 ft. low to measured log top. The gamma ray and caliper curves were imported into this mudlog from the electrical log suite. No curves were not shifted to provide an exact match, but rather left as recorded in the field.

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

Respectfully submitted  
 Logan Walker and Keith Reavis


**American Warrior, Inc.**  
**daily drilling report**

DATE	7:00 AM DEPTH	REMARKS
07/19/2014	4269	Geologist Logan Walker on location @ 0717 hrs, 4273 ft, drilling ahead
07/20/2014	4663	drilling ahead, LKC and Marmaton, short trip @4704, stuck in hole, pump down oil, got loose, back on bottom, resume drilling
07/21/2014	4837	drilling ahead Cherokee and Morrow, show in Morrow Sand warrants test, TOH for DST #1, conducting DST #1
07/22/2014	4985	complete DST #1, successful test, TIH w/bit, resume drilling, TD @ 5200' 2200 hrs, ctc, TOH for logs
07/23/2014	5200	complete logging operations, TIH to lay down, geologist off loc 1000 hrs

**American Warrior, Inc.**  
**well comparison sheet**

DRILLING WELL					COMPARISON WELL				COMPARISON WELL					
Blaesi #4-6					Blaesi #2-6				Blaesi #1-6					
335' FSL & 1112' FSL					1260' FSL & 450' FEL				2490' FSL & 1370' FEL					
Sec 6-T15S-R41W					Sec 6-T15S-R41W				Sec 6-T15S-R41W					
3780 KB					3772 KB				3782 KB					
					Structural Relationship				Structural Relationship					
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Log	Sub-Sea	Sample	Log	Log
Lansing	4207	-427	4210	-430							4214	-432	5	2
Marmaton	4558	-778	4562	-782	4553	-781	3	-1			4564	-782	4	0
Pawnee	4648	-868	4654	-874	4635	-863	-5	-11			4651	-869	1	-5
Cherokee	4716	-936	4720	-940	4701	-929	-7	-11			4710	-928	-8	-12
Morrow Shale	4945	-1165	4949	-1169	4938	-1166	1	-3			4950	-1168	3	-1
Morrow Sand	4958	-1178	4966	-1186	4948	-1176	-2	-10			4986	-1204	26	18
Morrow Lime	5055	-1275	5059	-1279	5042	-1270	-5	-9			5042	-1260	-15	-19
Mississippian	5117	-1337	5110	-1330	not reached						5096	-1314	-23	-16
Total Depth	5200	-1420	5194	-1414	5120	-1348	-72	-66			5150	-1368	-52	-46

**DST #1**



**TRIOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

American Warrior Inc. **6-15s-41w Wallace, KS**  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Logan Walker  
**Blaesi #4-6**  
 Job Ticket: 59104 **DST#: 1**  
 Test Start: 2014.07.21 @ 22:25:15

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**GENERAL INFORMATION:**

Formation: **Morrow Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:52:15  
 Time Test Ended: 07:32:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Mke Roberts  
 Unit No: 65

Interval: **4908.00 ft (KB) To 4985.00 ft (KB) (TVD)**  
 Total Depth: 4985.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Reference Elevations: 3780.00 ft (KB)  
 3771.00 ft (CF)  
 KB to GR/CF: 9.00 ft

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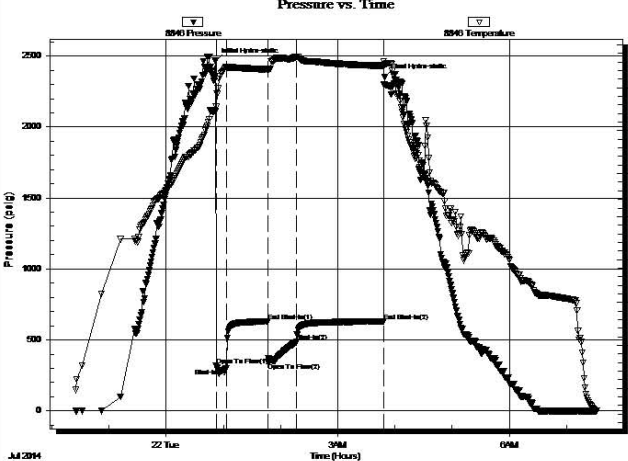
**Serial #: 8846** Inside

Press@RunDepth: 485.54 psig @ 4910.00 ft (KB)  
 Start Date: 2014.07.21 End Date: 2014.07.22  
 Start Time: 22:25:15 End Time: 07:32:00  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.07.22  
 Time On Btm: 2014.07.22 @ 00:51:45  
 Time Off Btm: 2014.07.22 @ 03:49:00

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**TEST COMMENT:** IF:BOB in 1 min. GTS in 9 min.  
 IS:Bled off for 10 min. BOB in 3 min.  
 FF:BOB instantly GTS TSTM  
 FS:Bled off for 10 min. BOB in 4 min.

**Pressure vs. Time**



**PRESSURE SUMMARY**

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2464.04	134.50	Initial Hydro-static
1	320.48	135.56	Open To Flow (1)
12	300.68	144.25	Shut-In(1)
55	630.28	144.25	End Shut-In(1)
55	341.35	144.10	Open To Flow (2)
85	485.54	147.17	Shut-In(2)
177	629.82	145.14	End Shut-In(2)
178	2349.84	145.22	Final Hydro-static

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**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	GIP= 3688	0.00
340.00	gcm 4%g 96%w	4.77
186.00	w cgm 10%w 15%g 25%w 50%o	2.61
62.00	w cog 30% w 30% o 40%g	0.87
310.00	mogw 10%w 10%o 20%g 60%w	4.35
248.00	mcow g 3%w 17%o 25%w 55%g	3.48

**Gas Rates**

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

**ROCK TYPES**

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

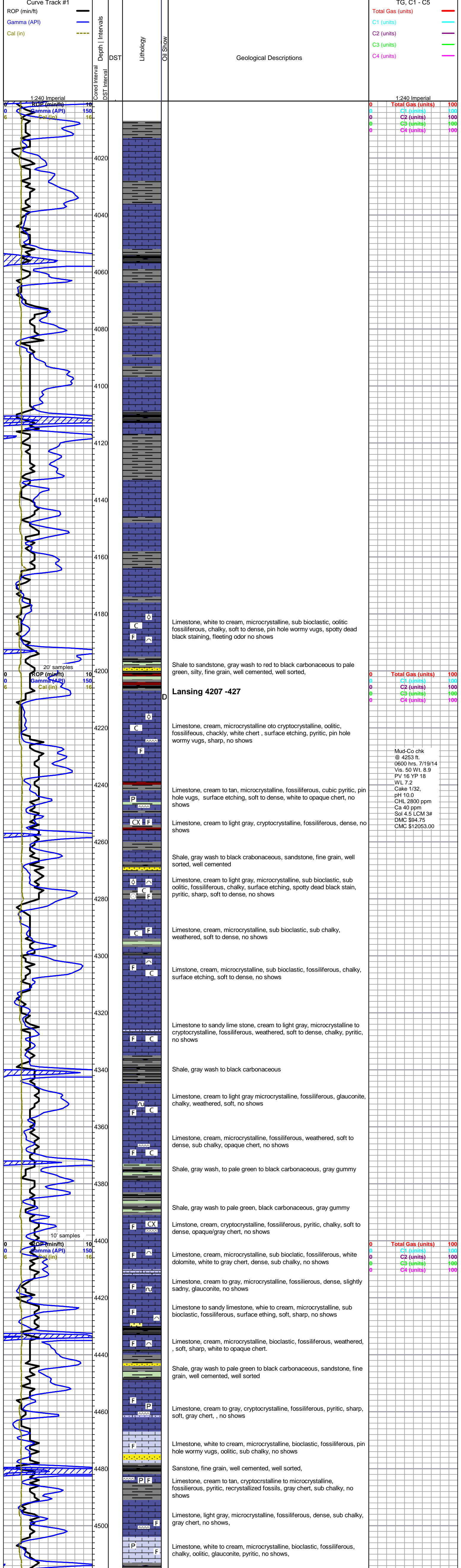
**ACCESSORIES**

**MINERAL**     **FOSSIL**     **STRINGER**     **TEXTURE**  
 ~ Glauconite     ~ Bioclastic or Fragmenta     ~ Chert     C Chalky

**OTHER SYMBOLS**

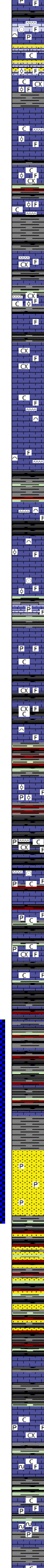
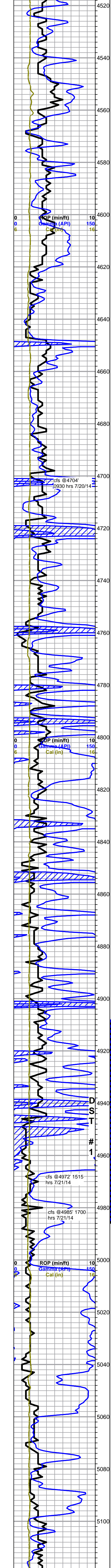
- Oil Show**
- Good Show
  - Fair Show
  - Poor Show
  - Spotted or Trace
  - Questionable Strn
  - D Dead Oil Strn
  - Fluorescence
  - \* Gas
- DST**
- DST Int
  - DST alt
  - Core
  - || tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)



Mud-Co chk  
 @ 4253 ft.  
 0600 hrs. 7/19/14  
 Vis. 50 Wt. 8.9  
 PV 16 YP 18  
 WL 7.2  
 Cake 1/32,  
 pH 10.0  
 CHL 2800 ppm  
 Ca 40 ppm  
 Sol 4.5 LCM 3#  
 DMC \$94.75  
 CMC \$12053.00





cryptocrystalline, fossiliferous, sub chalky, pyritic,

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, recrystallized fossils, dense, gray/opaque chert, no shows

Limestone to sandy limestone, cream to light gray, microcrystalline, oolitic, fossiliferous, sub chalky, recrystallized fossils, fine grain, well sorted, well cemented, no shows

Limestone, cream, cryptocrystalline, fossiliferous, oolitic, brown chert, recrystallized fossils, no shows,

Shale, gray wash to black carbonaceous

**Marmaton 4558 -778**

Limestone, cream to light gray, microcrystalline to cryptocrystalline, fossiliferous, oolitic, sub chalky, dense, no shows

Limestone, cream to tan, cryptocrystalline, sub bioclastic, oolitic, fossiliferous, soft to dense, sub chalky, no shows

Limestone, cream to light gray, microcrystalline, fossiliferous, white/opaque chert, oolitic, sub chalky, no shows

Limestone, cream, cryptocrystalline to microcrystalline, fossiliferous, pyritic, dense, opaque chert, no shows

Limestone, cream, cryptocrystalline, fossiliferous, chalky, sub oolitic, opaque chert, no shows

limestone, cream, microcrystalline, fossiliferous, quarts, soft to dense, no shows

**Pawnee 4648 -868**

Limestone, cream to light gray, cryptocrystalline, fossiliferous, quarts, dense, recrystallized fossils, no shows

Limestone, cream microcrystalline, bioclastic, fossiliferous, chalky, opaque chert, dense, no shows

Limestone, cream to light gray, microcrystalline, bioclastic fossiliferous, pyritic, white to brown chert, soft to dense, no shows

Shale, black to gray wash

Shale, red wash to gray to pale green to black, silty,

Limestone, cream to light gray, microcrystalline to cryptocrystalline, bioclastic, fossiliferous, pyritic, soft to dense, white/opaque chert weathered, no shows,

**Cherokee 4716 -936**

Limestone, cream to light gray, cryptocrystalline, fossiliferous, oolitic, chalky, quarts, surface etching, no shows

Limestone, cream to light gray to gray, cryptocrystalline, sub bioclastic, fossiliferous, oolitic, pyritic, surface etching, sub chalky, no shows

Limestone to sandy limestone, cream to gray, microcrystalline, fossiliferous, pyritic, sub chalky, surface etching, dense, no shows

Limestone, cream, light gray to gray, microcrystalline, fossiliferous, pyritic, surface etching, sub chalky, no shows

Limestone, light gray, cryptocrystalline, sub bioclastic, fossiliferous, sub chalky, pyritic, no shows

Limestone, tan to light gray, cryptocrystalline to microcrystalline, fossiliferous, chalky, brown chert, dense, no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, sub chalky, weathers, soft to dense, no shows

Shale, gray wash to red to pale green to black

Limestone, cream to light gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, oolitic, soft to dense, no shows,

Shale gray wash to red to black

Limestone, cream to tan, microcrystalline to cryptocrystalline, fossiliferous, chalky, white to brown chert, pyritic, dense, no shows

Limestone, cream to tan to light gray, microcrystalline, sub bioclastic, fossiliferous, white/brown chert, pyritic, chalky, soft to dense, weathered, no shows

Limestone, cream to tan, microcrystalline, sub bioclastic, fossiliferous, chalky, pyritic, weathered, soft to dense, no shows

Limestone, cream to tan, cryptocrystalline, fossiliferous, pyritic, chalky, weathered, soft to dense, no shows

Limestone, white to light gray, microcrystalline, sub bioclastic, fossiliferous, chalky, weathered, soft, no shows,

Shale, gray wash to red to pale green to black, Limestone stringers

**Morrow Shale 4945 -1165**

Shale, gray wash, silty, pyritic

**Morrow Sand 4958 -1178**

Sandstone, clear to frosted, quartz, fine to medium grain, fair to poor sorting, sub-round to angular, fair to poor cemented, fair porosity, abundant free pyrite, spotty free oil on break, faint fleeting odor

same as above, very gassy, better show of free oil on break, good fluorescence, good cut, fleeting odor

Shale, black wash to gray to red to pale green, sandstone same as above

**Morrow Lime 5055 -1275**

Limestone, cream to tan, cryptocrystalline, fossiliferous, chalky, pyritic, dense no shows

Limestone, cream to tan, microcrystalline, fossiliferous, chalky, glauconite, soft to dense, surface etching, weathered, no shows

Limestone, white to cream, microcrystalline, fossiliferous, pyritic, chalky, soft, weathered, no shows

Limestone, white to cream to tan, microcrystalline, fossiliferous, pyritic, glauconite, chalky, weathered soft, no shows

**Mississippian (Log Top) 5110 -1330**

**Mississippian (Sample Top) 5117 -1337**

Mud-Co chk @ 4253 ft.  
 0415 hrs. 7/20/14  
 Vis. 64 Wt. 8.9  
 PV 18 YP 22  
 WL 8.8  
 Cake 1/32,  
 pH 10.0  
 CHL 3600 ppm  
 Ca 40 ppm  
 Sol 4.1 LCM 4#  
 DMC \$1286.75  
 CMC \$13339.75

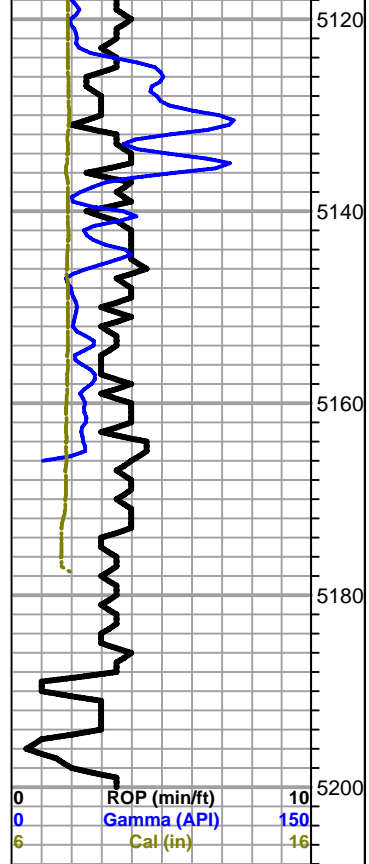
30 stand short  
 trip @ 4704',  
 Stuck 11,  
 stands out,  
 got loose with  
 oil in hole

Mud-Co chk @ 4796 ft.  
 0430 hrs. 7/21/14  
 Vis. 50 Wt. 8.8  
 PV 16 YP 15  
 WL 10.4  
 Cake 2/32,  
 pH 9.0  
 CHL 9000 ppm  
 Ca 40 ppm  
 Sol 3.0 LCM 3#  
 DMC \$296.25

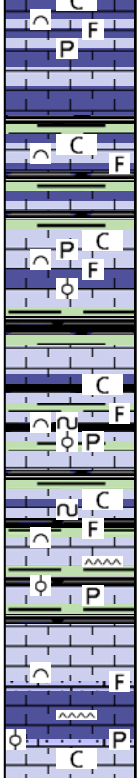
0	Total GCMC	\$13609.00	1
1	C1 (units)	100	100
0	C2 (units)	100	100
0	C3 (units)	100	100
0	C4 (units)	100	100

Mud-Co chk @ 4985 ft.  
 0530 hrs. 7/21/14  
 Vis. 48 Wt. 9.1  
 PV 15 YP 16  
 WL 8.8  
 Cake 1/32,  
 pH 10.0  
 CHL 7000 ppm  
 Ca 40 ppm  
 Sol 5.1 LCM 3#  
 DMC \$2624.75  
 CMC \$16233.75

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



0	ROP (min/ft)	10
0	Gamma (API)	150
6	Cal (in)	16



Limestone, white, cream to light gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, chalky, soft to dense, weathered, recrystallized fossils, no shows

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, chalky, weathered, soft to dense, no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, chalky, soft to dense, surface etching, , no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, glauconite, chalky, soft to dense, surface etching, weathered, no shows

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, glauconite, chalky, light gray chert, soft, surface etching, weathered, no shows

Limestone to sandy limestone, cream to light gray, microcrystalline to cryptocrystalline, bioclastic, fossiliferous, pyritic, micro oolitic, gray chert, chalky, surface etching, soft to dense, weathered, fine grain, no shows

**TD @5200' 2200 hrs 7/23/14**

Mud-Co chk @ 5200 ft. 0500 hrs. 7/23/14  
 Vis. 56 Wt. 9.2  
 PV 17 YP 21  
 WL 8.8  
 Cake 1/32, pH 10.0  
 CHL 7000 ppm  
 Ca 40 ppm  
 Sol 5.9 LCM 5#  
 DMC \$966.95  
 CMC \$17200.70

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