

OPERATOR

Company: Palmer Oil, Inc.
 Address: 3118 N. Cummings Road
 P.O. Box 399
 Garden City, KS 67846

Contact Geologist: Kevin Wiles
 Contact Phone Nbr: 620-275-9231
 Well Name: UPC #23-6
 Location: Sec. 23 - T32S - R37W
 Pool: Stevens County
 State: Kansas

API: 15-189-22830-0000
 Field: Willis
 Country: USA

Scale 1:240 Imperial

Well Name: UPC #23-6
 Surface Location: Sec. 23 - T32S - R37W
 Bottom Location:
 API: 15-189-22830-0000
 License Number: 34904
 Spud Date: 1/13/2013 Time: 00:00
 Region: Stevens County
 Drilling Completed: 1/20/2013 Time: 20:30
 Surface Coordinates: 1600' FSL & 2300' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 3112.00ft
 K.B. Elevation: 3124.00ft
 Logged Interval: 4600.00ft To: 6500.00ft
 Total Depth: 6500.00ft
 Formation: Mississippian
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 1600' FSL
 E/W Co-ord: 2300' 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 #: 9
 Rig Type: mud rotary Time: 00:00
 Spud Date: 1/13/2013 Time: 20:30
 TD Date: 1/20/2013 Time:
 Rig Release:

ELEVATIONS

K.B. Elevation: 3124.00ft Ground Elevation: 3112.00ft
 K.B. to Ground: 12.00ft

NOTES

Drill stem testing, sample examination and electrical log analysis indicated no commercial hydrocarbons in the UPC #23-6, however, the operator elected to run 5 1/2" casing and utilize this well for saltwater injection and secondary recovery.

A Bloodhound gas detection system operated by Bluestem Environmental was employed during the drilling of this well. ROP and gas data was imported from said system into this report. Gamma ray and caliper curves from the electrical log suite were also imported. Electrical log tops were generally from 3-5 ft. low to sample tops picked from ROP, however, no curves were shifted to provide an exact match.


Respectfully submitted,
 Keith Reavis

Palmer Oil, Inc.
daily drilling report

DATE	7:00 AM DEPTH	REMARKS
01/17/2014	4912	Geologist Keith Reavis on location @ 1100 hrs, 5230 ft, drilling ahead Cherokee, short trip at 5455 ft., resume drilling 2115 hrs
01/18/2014	5961	drilling ahead, Morrow, bit trip @ 6100', out with PDC in with button, resume drilling @ 1800 hrs, Morrow, Chester
01/19/2014	6221	drilling ahead, Chester, St. Gen, St. Louis, show and gas kick warrant DST, cfs/ctch, TOH w/bit for DST #1
01/20/2014	6400	Tripping bit and tools, conduct DST #1, complete DST #1, successful test, TH w/PDC bit, rathole to TD 6500 ft, ctch, TOH for logs
01/21/2014	6500	TOH for logs, conduct logging operations, geologist off location 0600 hrs

Palmer Oil, Inc.
well comparison sheet

DRILLING WELL				COMPARISON WELL				COMPARISON WELL				
Palmer - UPC #23-6				EOG - UPC #23-1				Palmer - UPC #23-4				
1600' FSL & 2300' FWL				2310' FSL & 1830' FWL				900' FSL & 2120' FWL				
Sec. 23 -T32S - R37W				Sec. 23 -T32S - R37W				Sec. 23 -T32S - R37W				
3124 KB				3133 KB				3126 KB				
				Structural Relationship				Structural Relationship				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sample	Log	Log	Sub-Sea	Sample	Log	
Base Heebner	4143	-1019	4147	-1023	4150	-1017	-2	-6	4142	-1016	-3	-7
Lansing	4263	-1139	4268	-1144	4271	-1138	-1	-6	4264	-1138	-1	-6
Marmaton	4932	-1808	4932	-1808	4940	-1807	-1	-1	4924	-1798	-10	-10
Cherokee	5120	-1996	5125	-2001	5126	-1993	-3	-8	5120	-1994	-2	-7
Morrow	5632	-2508	5635	-2511	5630	-2497	-11	-14	5635	-2509	1	-2
Morrow LS mark	5928	-2804	5931	-2807	5932	-2799	-5	-8	5936	-2810	6	3
St. Gen	6213	-3089	6214	-3090	6216	-3083	-6	-7	6218	-3092	3	2
St. Louis	6306	-3182	6304	-3180	6304	-3171	-11	-9	6304	-3178	-4	-2
St. Louis B	6359	-3235	6368	-3244	6367	-3234	-1	-10	6366	-3240	5	-4
Total Depth	6500	-3376	6496	-3372	6499	-3366	-10	-6	6502	-3376	0	4



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palmer Oil Inc. **23-32s-37w Stevens Co.KS**

3118 N Cummings Rd **UPC 23-6**
 Garden City KS
 67846 Job Ticket: 56735 **DST#: 1**
 ATTN: Keith Reavis Test Start: 2014.01.19 @ 02:48:15

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:18:00
 Time Test Ended: 13:37:30

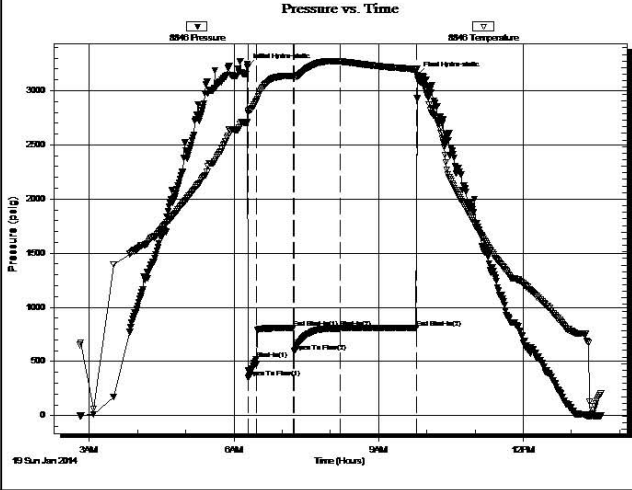
Test Type: Conventional Bottom Hole (Initial)
 Tester: Mke Roberts
 Unit No: 65

Interval: **6354.00 ft (KB) To 6400.00 ft (KB) (TVD)**
 Total Depth: 6400.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Reference Elevations: 3124.00 ft (KB)
 3112.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 8846 Inside

Press@RunDepth: 807.19 psig @ 6355.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.01.19 End Date: 2014.01.19 Last Calib.: 2014.01.20
 Start Time: 02:48:15 End Time: 13:37:30 Time On Btm: 2014.01.19 @ 06:16:45
 Time Off Btm: 2014.01.19 @ 09:48:15

TEST COMMENT: IF:BOB in 1 min.
 IS:No return blow
 FF:BOB in 2 min.
 FS:No retrurn blow



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	3219.73	143.29	Initial Hydro-static
2	352.85	146.69	Open To Flow (1)
11	521.86	149.72	Shut-In(1)
58	808.54	157.39	End Shut-In(1)
59	593.32	157.31	Open To Flow (2)
116	807.19	161.85	Shut-In(2)
211	808.81	159.50	End Shut-In(2)
212	3145.34	157.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1118.00	mcw 5%w 95%w	13.97
248.00	w cm 30%w 70%w	3.48
310.00	mud 100%w	4.35
0.00	GIP = 62 ft.	0.00

Gas Rates

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

ROCK TYPES

Clystgy
 sdY lmst
 Lmst fw<7
 Lmst fw7>
 shale, gry
 Carbon Sh
 shale, red
 Ss
 Slst

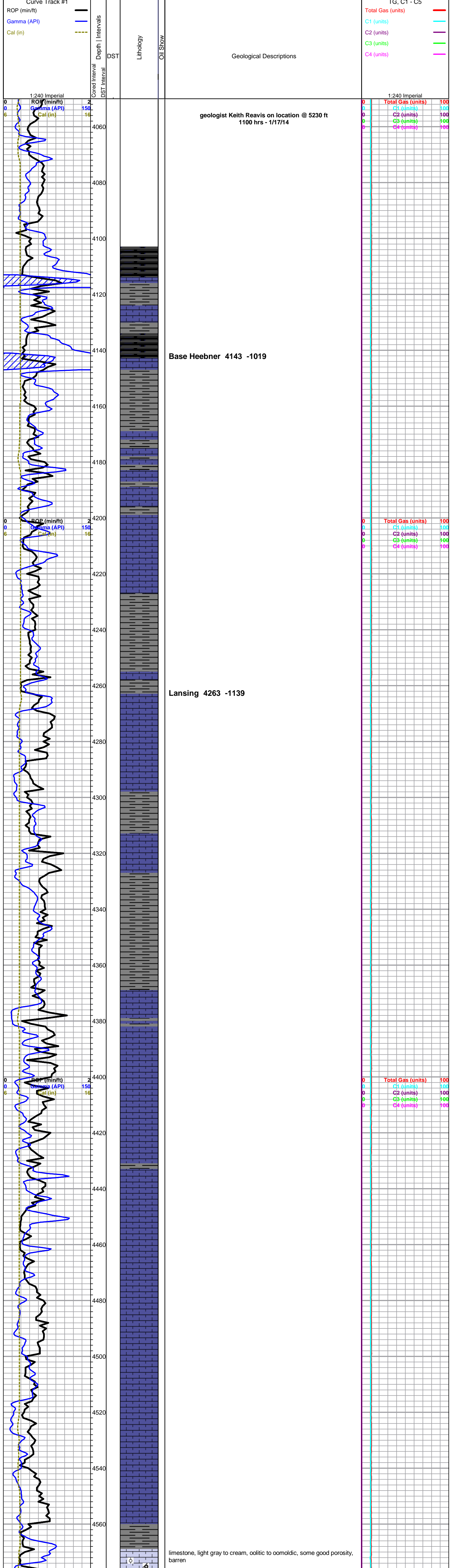
ACCESSORIES

<p>MINERAL</p> <ul style="list-style-type: none"> — Argillaceous ⊥ Calcareous ▲ Chert, dark △ Dolomitic ∩ Glauconite × Mineral Crystals P Pyrite • Sandy △ Chert White 	<p>FOSSIL</p> <ul style="list-style-type: none"> ∩ Bioclastic or Fragmental F Fossils < 20% ∩ Oolite ∩ Pellets ∩ Oomoldic 	<p>STRINGER</p> <ul style="list-style-type: none"> ▬ Dolomite ▬ Limestone ▬ Shale 	<p>TEXTURE</p> <ul style="list-style-type: none"> C Chalky
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OTHER SYMBOLS

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

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

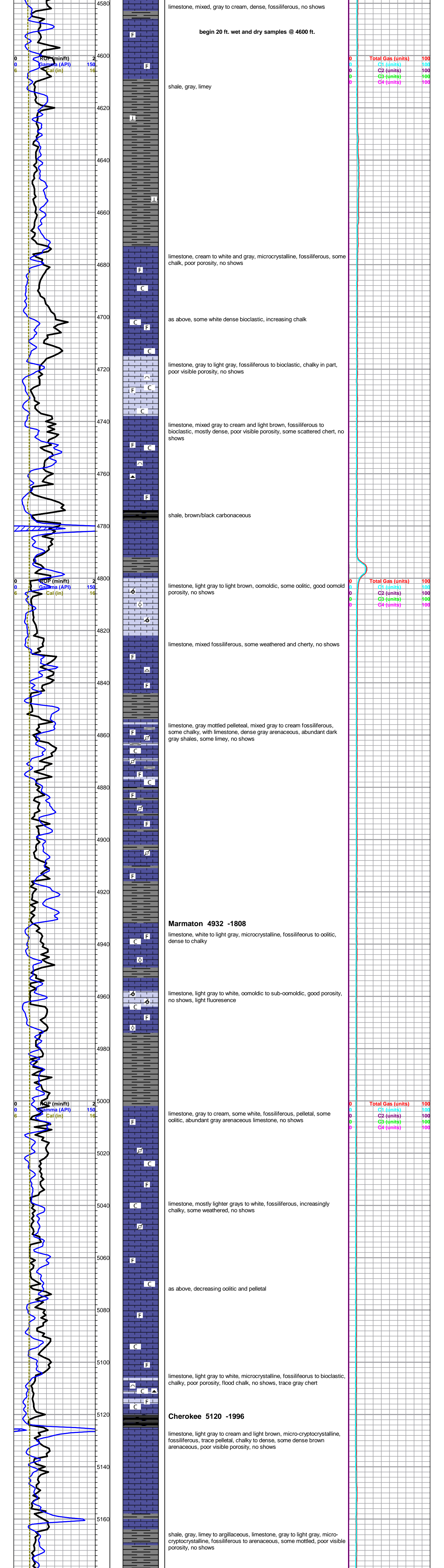


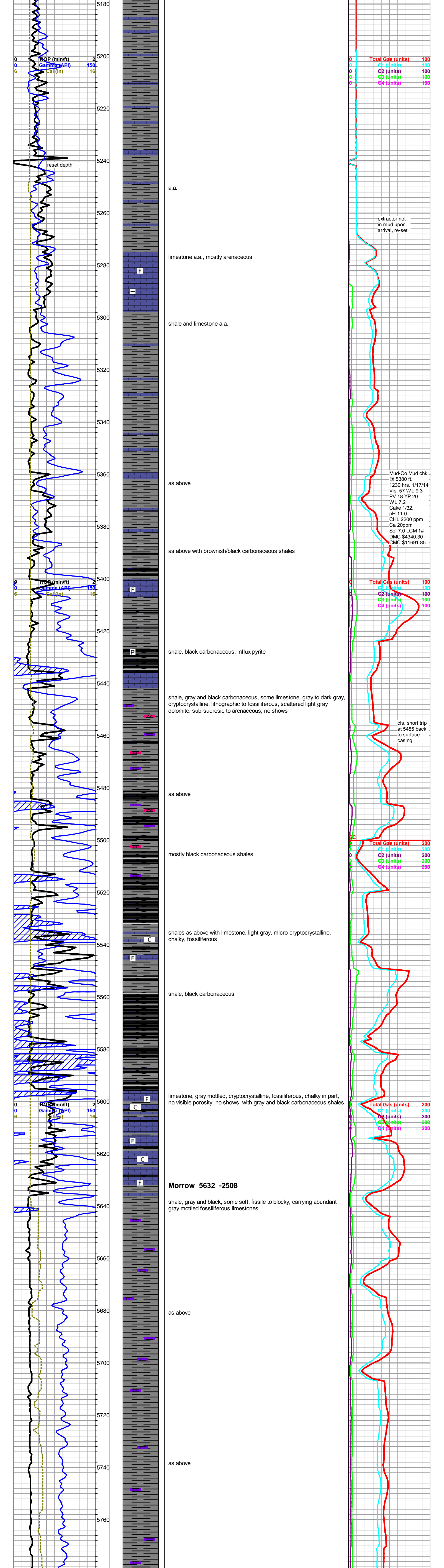
geologist Keith Reavis on location @ 5230 ft
1100 hrs - 1/17/14

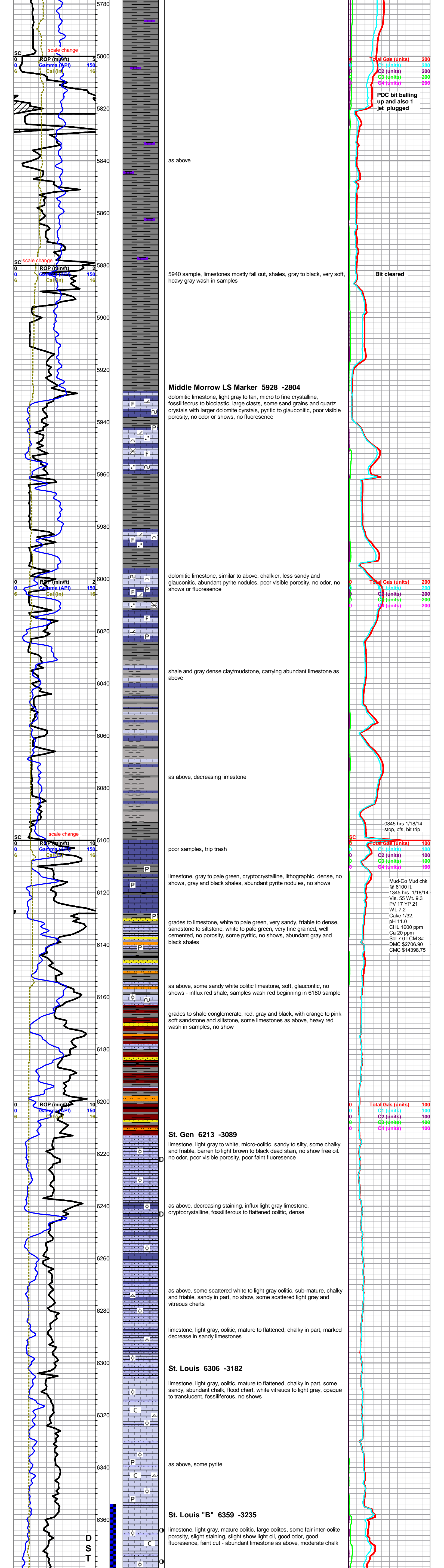
Base Heebner 4143 -1019

Lansing 4263 -1139

limestone, light gray to cream, oolitic to oomoldic, some good porosity, barren







as above

5940 sample, limestones mostly fall out, shales, gray to black, very soft, heavy gray wash in samples

Middle Morrow LS Marker 5928 -2804

dolomitic limestone, light gray to tan, micro to fine crystalline, fossiliferous to bioclastic, large clasts, some sand grains and quartz crystals with larger dolomite crystals, pyritic to glauconitic, poor visible porosity, no odor or shows, no fluorescence

dolomitic limestone, similar to above, chalkier, less sandy and glauconitic, abundant pyrite nodules, poor visible porosity, no odor, no shows or fluorescence

shale and gray dense clay/mudstone, carrying abundant limestone as above

as above, decreasing limestone

poor samples, trip trash

limestone, gray to pale green, cryptocrystalline, lithographic, dense, no shows, gray and black shales, abundant pyrite nodules, no shows

grades to limestone, white to pale green, very sandy, friable to dense, sandstone to siltstone, white to pale green, very fine grained, well cemented, no porosity, some pyritic, no shows, abundant gray and black shales

as above, some sandy white oolitic limestone, soft, glauconitic, no shows - influx red shale, samples wash red beginning in 6180 sample

grades to shale conglomerate, red, gray and black, with orange to pink soft sandstone and siltstone, some limestones as above, heavy red wash in samples, no show

St. Gen 6213 -3089

limestone, light gray to white, micro-oolitic, sandy to silty, some chalky and friable, barren to light brown to black dead stain, no show free oil. no odor, poor visible porosity, poor faint fluorescence

as above, decreasing staining, influx light gray limestone, cryptocrystalline, fossiliferous to flattened oolitic, dense

as above, some scattered white to light gray oolitic, sub-mature, chalky and friable, sandy in part, no show, some scattered light gray and vitreous cherts

limestone, light gray, oolitic, mature to flattened, chalky in part, marked decrease in sandy limestones

St. Louis 6306 -3182

limestone, light gray, oolitic, mature to flattened, chalky in part, some sandy, abundant chalk, flood chert, white vitreous to light gray, opaque to translucent, fossiliferous, no shows

as above, some pyrite

St. Louis "B" 6359 -3235

limestone, light gray, mature oolitic, large oolites, some fair inter-oolite porosity, slight staining, slight show light oil, good odor, good fluorescence, faint cut - abundant limestone as above, moderate chalk

Total Gas (units) 200
C1 (units) 200
C2 (units) 200
C3 (units) 200
C4 (units) 200

PDC bit balling up and also 1 jet plugged

Bit cleared

Total Gas (units) 200
C1 (units) 200
C2 (units) 200
C3 (units) 200
C4 (units) 200

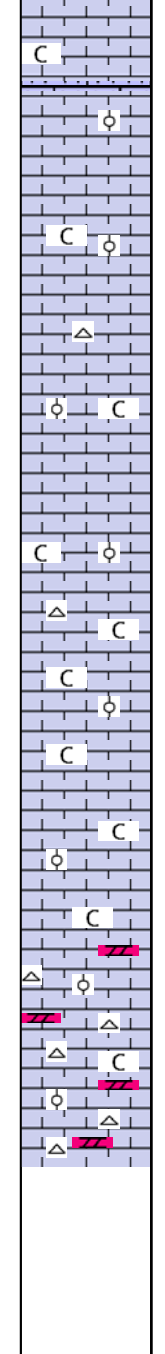
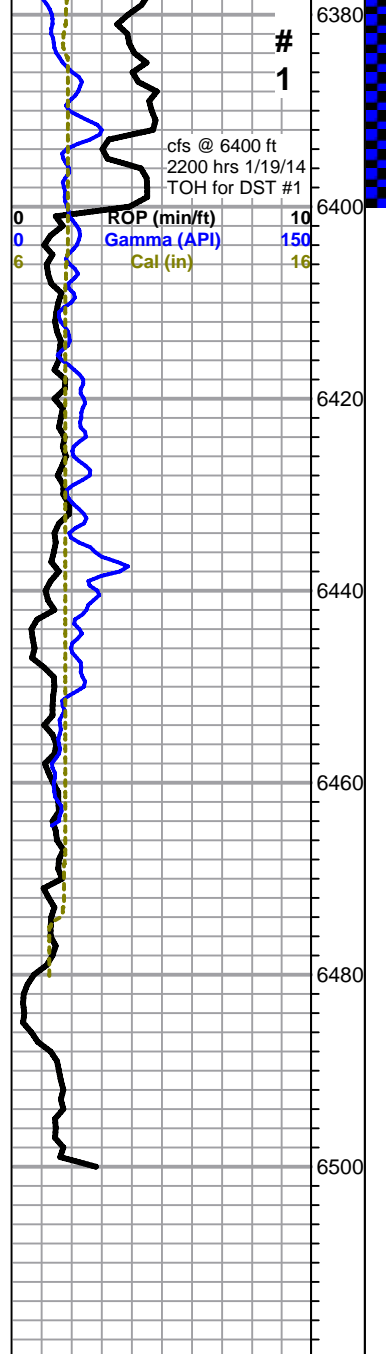
0845 hrs 1/18/14 stop, cfs, bit trip

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

Mud-Co Mud chk @ 6100 ft.
1345 hrs. 1/18/14
Vis. 55 Wt. 9.3
PV 17 YP 21
WL 7.2
Cake 1/32,
pH 11.0
CHL 1600 ppm
Ca 20 ppm
Sol 7.0 LCM 3#
DMC \$2706.90
CMC \$14398.75

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

D
S
T



as above, decrease show, no odor in cfs samples

RESUME DRILLING AFTER DST WITH PDC BIT

limestone, cream to light gray, oolitic, chalky, to darker gray cryptocrystalline, oolitic to flattened oolitic, dense, some scattered vitreous chert

oolitic limestone as above, increasingly chalky, abundant weathered chalky, abundant chalk in samples, poor visible porosity, no shows, trace chert

limestone as above, limestone as above, with flood chert, white to light gray, fresh/sharp to weathered, fossiliferous, with dirty gray arenaceous dolomite to dolomitic limestone, bright overall even yellow fluorescence, no shows

Rotary TD 6500 ft @ 2030 hrs 1/20/14
Pionerr Log TD 6496 ft
Complete Logging Operations 0530 hrs 1/21/14

