

**OPERATOR**

Company: Falcon Exploration, Inc.  
 Address: 125 N. Market  
 Suite 1252  
 Wichita, KS 67202  
 Contact Geologist: Brian Fisher  
 Contact Phone Nbr: 316-262-1378  
 Well Name: Kenneth Dirks #2-8  
 Location: Sec. 8 - T28S - R30W  
 Pool:  
 State: Kansas

API: 15-069-20364-0000  
 Field: Renegade SW  
 Country: USA

Scale 1:240 Imperial

Well Name: Kenneth Dirks #2-8  
 Surface Location: Sec. 8 - T28S - R30W  
 Bottom Location:  
 API: 15-069-20364-0000  
 License Number: 5316  
 Spud Date: 2/11/2012  
 Region: Gray County  
 Drilling Completed: 2/23/2012  
 Surface Coordinates: 330' FSL & 2520' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2809.00ft  
 K.B. Elevation: 2819.00ft  
 Logged Interval: 3500.00ft  
 Total Depth: 5548.00ft  
 Formation: Morrow/Mississippian  
 Drilling Fluid Type: Chemical/Fresh Water Gel

Time: 23:15  
 Time: 02:45  
 To: 5548.00ft

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 N/S Co-ord: 330' FSL  
 E/W Co-ord: 2520' FEL

Latitude:

**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: Val Energy  
 Rig #: 7  
 Rig Type: mud rotary  
 Spud Date: 2/11/2012  
 TD Date: 2/23/2012  
 Rig Release:

Time: 23:15  
 Time: 02:45  
 Time:

**ELEVATIONS**

K.B. Elevation: 2819.00ft  
 K.B. to Ground: 10.00ft

Ground Elevation: 2809.00ft

**NOTES**

Due to the results of Drill Stem Test #1, 5 1/2" production casing was set and cement to test the Morrow Sand through perforations and stimulation.

A Bloodhound gas detector supplied by Bluestem Environmental was employed on this well from the Chase Group to TD. Penetration rate and gas curves were imported into this log.

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

Respectfully submitted,  
 Keith Reavis

## Falcon Exploration, Inc daily drilling report

DATE	7:00 AM DEPTH	REMARKS
02/16/2012		Geologist Keith Reavis on location @ 1910 hrs, 3395 ft., drilling ahead check bloodhound system, set up, drill Stotler
02/17/2012	3724	drilling ahead, Tarkio, Bern, Topeka, Lecompton, Heebner, Douglas
02/18/2012	4409	drilling ahead, Lansing, light plant went down 1045 pm, stop, circ @ 4800 ft
02/19/2012	4865	resume drilling at 0410 hrs, Marmaton, Pawnee, Cherokee, bit trip @ 5015 ft
02/20/2012	5127	drilling ahead, Cherokee, Morrow, cfs Morrow sand, show and gas kick warrant DST, TOH, conducting and complete DST #1, successful test
02/21/2012	5141	out with test tools, in w/bit, condition hole, resume drilling Mississippian show in St. Louis warrants DST
02/22/2012	5364	TOH w/bit and in with tools for DST #2, conducting and complete DST #2, successful test, back in hole w/bit, resume drilling
02/23/2012	5548	TD @ 5548 ft., 0245 hrs, ctch, TOH, conduct and complete logging operations. geologist off location at 1330 hrs.

## Falcon Exploration, Inc. well comparison sheet

Formation	DRILLING WELL K. Dirks #2-8 330' FSL & 2520' FEL Sec. 8 T28S R30W 2819 KB				COMPARISON WELL K. Dirks #1-8 2090' FSL & 440' FEL Sec. 8 T28S R30W 2819 KB				COMPARISON WELL Lanterman #1-8 2030' FNL & 370' FEL Sec. 8 T28S R30W 2821 KB			
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Structural Relationship	Log	Sub-Sea	Structural Relationship	Sample	Log
Stotler	3532	-713	3533	-714	3530	-711	-2 -3	3532	-711	-2 -3		
Tarkio	3604	-785	3598	-779	3602	-783	-2 4	3603	-782	-3 3		
Topeka	3804	-985	3803	-984	3800	-981	-4 -3	3804	-983	-2 -1		
Lecompton	3967	-1148	3968	-1149	3965	-1146	-2 -3	3967	-1146	-2 -3		
Heebner	4148	-1329	4149	-1330	4146	-1327	-2 -3	4146	-1325	-4 -5		
Lansing	4249	-1430	4246	-1427	4251	-1432	2 5	4249	-1428	-2 1		
Stark	4608	-1789	4612	-1793	4610	-1791	2 -2	4606	-1785	-4 -8		
Marmaton	4736	-1917	4752	-1933	4741	-1922	5 -11	4743	-1922	5 -11		
Pawnee	4835	-2016	4838	-2019	4841	-2022	6 3	4837	-2016	0 -3		
Cherokee	4883	-2064	4886	-2067	4885	-2066	2 -1	4881	-2060	-4 -7		
Morrow Sand	5110	-2291	5117	-2298	5124	-2305	14 7	5118	-2297	6 -1		
Miss St. Gen.	5214	-2395	5217	-2398	5216	-2397	2 -1	5244	-2423	28 25		
St. Lo B Por.	5340	-2521	5341	-2522	5342	-2523	2 1	5345	-2524	3 2		
Salem	5496	-2677	5498	-2679	5497	-2678	1 -1	np				
Total Depth	5548	-2729	5550	-2731	5528	-2709	-20 -22	5406	-2585	-144 -146		

**Drill Stem Test #1**

**RICKETTS TESTING** (620) 326-5830 Page 1

Company: Falcon Exploration, Inc.  
 Address: 125 North Market, Suite 1252  
 CSZ: Wichita, KS 67202  
 Attn: Keith Reavis

Lease Name: Kenneth Dirks  
 Lease #: 2-8  
 Legal Desc: W/2 SW SW SE  
 Section: 8  
 Township: 28S  
 County: Gray  
 Drilling Cont: Val Drilling #7

Job Ticket: 3463  
 Range: 30W  
 State: KS

Comments: Field: Wildcat

**GENERAL INFORMATION**

Test #1: Jimmy Ricketts  
 Tester: Conventional Bottom Hole  
 Test Type: Successful Test  
 # of Packers: 2.0  
 Packer Size: 6 3/4

Mud Type: Gel Chem  
 Mud Weight: 9.1  
 Filtrate: 7.2  
 Viscosity: 57.0  
 Chlorides: 1400

Chokes: 3/4  
 Hole Size: 7 7/8  
 Top Recorder #: 13767  
 Mid Recorder #: w1022  
 Bott Recorder #: w1119

Mileage: 216  
 Standby Time: 4  
 Extra Equipment: Jars, Safety Joint, and Cir. Pin  
 Time on Site: 7:30 AM  
 Tool Picked Up: 10:30 AM  
 Tool Layed Dwn: 1:00 AM

Elevation: 2809.00  
 Kelley Bushings: 2819.00

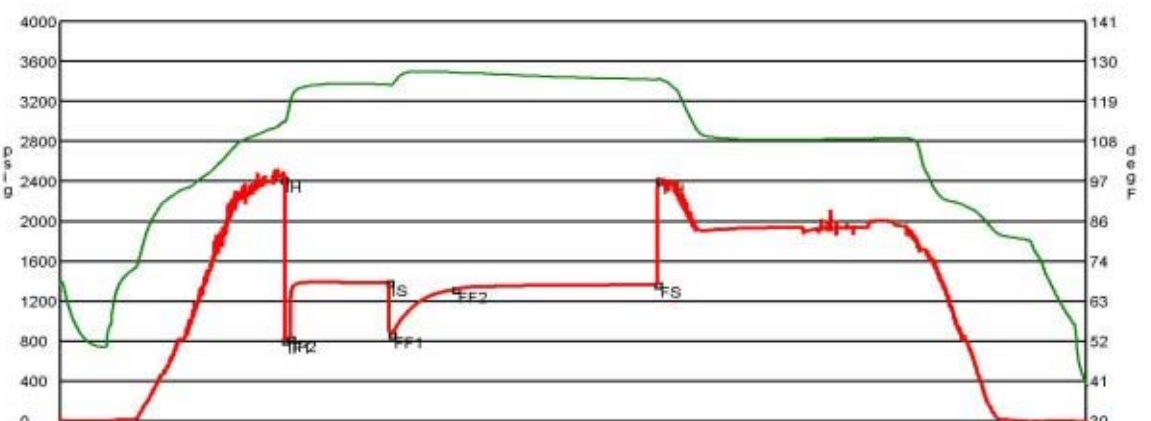
Start Date/Time: 2/20/2012 9:52 AM  
 End Date/Time: 2/21/2012 1:26 AM

Formation: Morrow Sand  
 Interval Top: 5075.0  
 Anchor Len Below: 52.0  
 Bottom: 5127.0  
 Total Depth: 5127.0  
 Blow Type: Strong blow throughout initial flow period. Strong blow back 20 minutes into initial shut-in period with gas to surface at 28 minutes. Strong blow throughout final flow period. Strong blow back during final shut-in period. Times: 5, 90, 60, 184. API gravity of oil was 22.

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
3880	Clean oil	0% 0ft	100% 3880ft	0% 0ft	0% 0ft
125	Gas in pipe	100% 125ft	0% 0ft	0% 0ft	0% 0ft
190	Heavy mud cut oil	0% 0ft	58% 110.2ft	0% 0ft	42% 79.8ft

DST Fluids: 0



Date	Time	Pressure	Temp	
2/20/2012 1:14:10 PM	3.369444	2420.39	113.002	Initial Hydro-static
IF1 2/20/2012 1:16:00 PM	3.4	808.115	113.126	Initial Flow (1)
IF2 2/20/2012 1:20:30 PM	3.475	825.23	118.064	Initial Flow (2)
IS 2/20/2012 2:50:30 PM	4.975	1383.305	123.507	Initial Shut-In
FF1 2/20/2012 2:52:40 PM	5.011111	868.744	123.391	Final Flow (1)
FF2 2/20/2012 3:50:50 PM	5.980556	1316.459	126.855	Final Flow (2)
FS 2/20/2012 6:54:50 PM	9.047222	1367.083	124.92	Final Shut-In
FH 2/20/2012 6:57:10 PM	9.086111	2405.489	125.074	Final Hydro-static



**GAS FLOWS**

Min Into IFP	Min Into FFP	Gas Flows	Pressure	Choke
0	10	19.90 mcf	10.00 h2o	0.50 in
0	20	12.50 mcf	4.00 h2o	0.50 in
0	30	9.45 mcf	7.00 h2o	0.38 in
0	40	4.30 mcf	6.50 h2o	0.25 in
0	50	3.95 mcf	5.50 h2o	0.25 in
0	60	3.37 mcf	4.00 h2o	0.25 in

**Drill Stem Test #2**

**RICKETTS TESTING**

(620) 326-5830

Page 1

Company Address CSZ Attn.	<b>Falcon Exploration, Inc. 125 North Market, Suite 1252 Wichita, KS 67202 Keith Reavis</b>	Lease Name Lease # Legal Desc Section Township County Drilling Cont	<b>Kenneth Dirks 2-8 W/2 SW SW SE 8 28S Gray Val Drilling #7</b>	Job Ticket Range State	<b>3463 30W KS</b>
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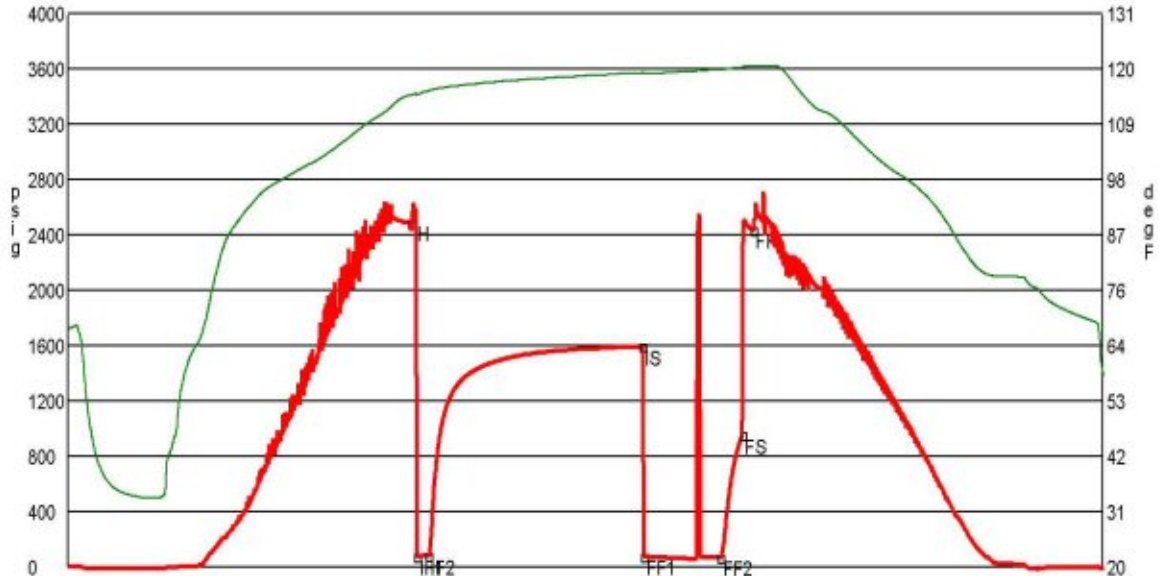
Comments **Field: Wildcat**

**GENERAL INFORMATION**

Test # 2 Tester Test Type # of Packers Mud Type Mud Weight Filtrate Drill Collar Len Wght Pipe Len	<b>Jimmy Ricketts Conventional Bottom Hole Successful Test 2.0 Gel Chem 9.1 6.4 0 0</b>	Test Date Packer Size Viscosity Chlorides Bottom Between	<b>2/22/2012 6 3/4 49.0 1400 0</b>	Chokes Top Recorder # Mid Recorder # Bott Recorder #	<b>3/4 13767 w1022 wv1023</b>	Hole Size Approved By Mileage Standby Time Extra Equipmnt Time on Site Tool Picked Up Tool Layed Dwn	<b>7 7/8  0 0 Jars &amp; Safety Joint 2:30 AM 3:00 AM 9:00 AM</b>
Formation Interval Top Anchor Len Below Total Depth Blow Type	<b>Saint Louis 5308.0 56.0 5364.0 Weak blow building to 1/2 inch initial flow period. No blow final flow period. Flushed tool 23 minutes into final flow period but did no good. Times: 5, 90, 32, 10.</b>	Start Date/Time End Date/Time	<b>2/22/2012 2:46 AM 2/22/2012 9:59 AM</b>	Elevation Kelley Bushings	<b>2809.00 2819.00</b>		

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
20	Drilling mud with trace oil	0%	0ft	trace	0%
DST Fluids		<b>0</b>			



Date	Time	Pressure	Temp	
IH	2/22/2012 5:08:20 AM	2.372222	2487.599	114.641
IF1	2/22/2012 5:11:10 AM	2.419444	75.997	114.715
IF2	2/22/2012 5:15:50 AM	2.497222	81.042	115.498
IS	2/22/2012 6:45:40 AM	3.994444	1592.49	119.156
FF1	2/22/2012 6:46:10 AM	4.002778	76.31	118.979
FF2	2/22/2012 7:18:20 AM	4.538889	70.1	119.804
FS	2/22/2012 7:27:40 AM	4.694444	953.327	120.148
FH	2/22/2012 7:32:00 AM	4.766667	2438.053	120.411

**ROCK TYPES**

Dolprim	Lmst fw<7	shale, gry	Ss
Dolsec	Lmst fw>7	Carbon Sh	Sltst
sdy lmst	shale, grn	shale, red	

**ACCESSORIES**

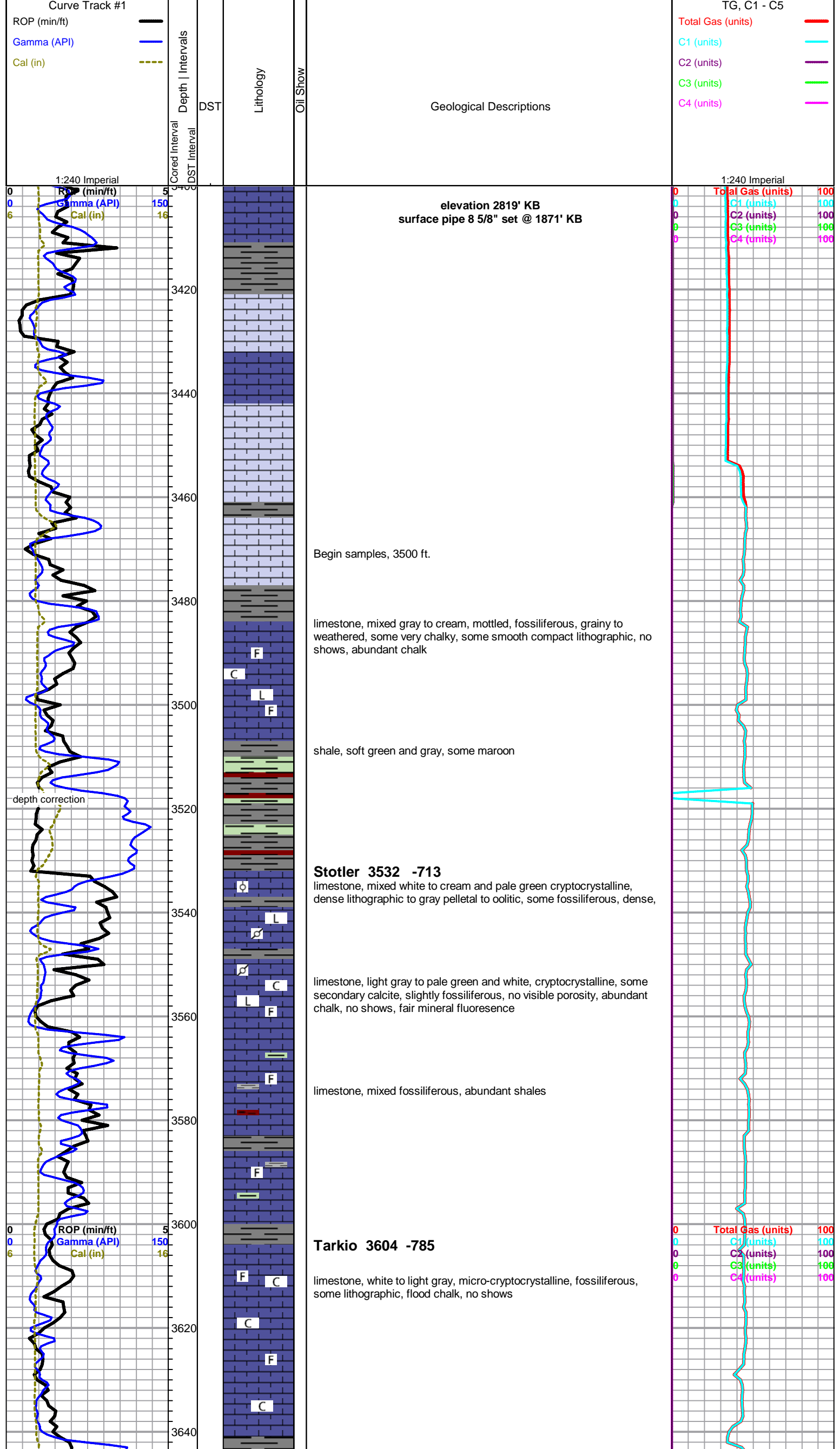
<b>MINERAL</b> - Argillaceous ▲ Chert, dark △ Dolomitic ∩ Glauconite P Pyrite △ Chert White	<b>FOSSIL</b> ∩ Bioclastic or Fragmental ∩ Bryozoa F Fossils < 20% ∩ Oolite ∩ Pellets ∩ Oomoldic	<b>STRINGER</b> - Dolomite - Limestone - Sandstone - Shale - green shale - red shale - carb shale	<b>TEXTURE</b> C Chalky L Lithogr
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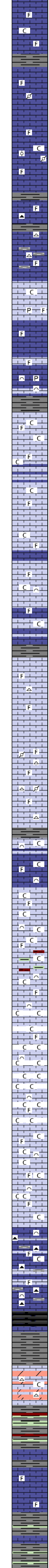
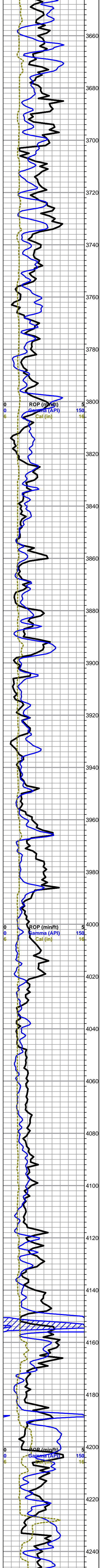
**OTHER SYMBOLS**

**DST**

	DST Int
	DST alt
	Core
	tail pipe

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





limestone, cream to white and gray, dense to chalky, fossiliferous, decrease in chalk in samples, no shows

limestone, gray to gray/green and brown, microcrystalline, dense, fossiliferous, some pelletal, cherty, no visible porosity, no shows

**Bern**  
limestone, mixed, grainy fossiliferous to pelletal, some very large clasts, dense, poor visible porosity, with some soft tan chalky oolitic, poor visible porosity, no shows

limestone, as above, flood gray and tan cherts

limestone, mixed gray, microcrystalline, fossiliferous, some arenaceous, chalky and pyritic in part, poor visible porosity, no shows, abundant chalk

as above, some scattered brown cherty fossiliferous limestone

limestone, light gray, grainy bioclastic, large clasts, some pyritic, poor visible porosity, no shows

**Topeka 3804 -985**  
limestone, white to gray, chalky, fossiliferous, poor visible porosity, no shows, some white and gray chert, abundant chalk

mixed chalky fossiliferous limestones, abundant chalk, cherts drop out

limestone, mixed chalky fossiliferous to bioclastic, some pelletal and very chalky

as above, some dary gray, dense, microcrystalline, very fossiliferous

Mud-Co Mud Ck @ 3886'  
1200 hrs 2/17/12  
vis 47 wt 9.2  
pv 13 yp 16  
wl 10.4  
cake 1/32  
pH 9.5  
chl 3100  
cal 20  
sol 6.3  
lcm 2#  
dmc \$66.15  
cmc \$10161.15

limestone, gray to cream, fossiliferous, microcrystalline, fairly dense, poor visible porosity, some scattered light gray cherts, abundant chalk, no shows

limestone, gray to light gray and cream, microcrystalline, fossiliferous, some pelletal, abundant chalk, flood light gray chert, sharp, fresh

**Lecompton 3967 -1148**  
limestone, light gray, microcrystalline, fossiliferous to bioclastic, chalky, poor visible porosity, no shows

as above, flood chalk, appx 30%

as above, influx green and red shales

limestone, cream to white and gray, chalky fossiliferous to bioclastic, some interclast porosity, appx 40-50% chalk in samples

limestone as above, with: limestone, gray, crypto-microcrystalline, dense, fossiliferous, marked decrease in chalk

mixed gray dense to chalky fossiliferous and lithographic limestones, influx abundant dark gray chert and dense limey dark gray shale

as above, limestone grading to gray fossiliferous to bioclastic, large clasts, no shows

**Heebner 4148 -1329**  
shale, black carbonaceous

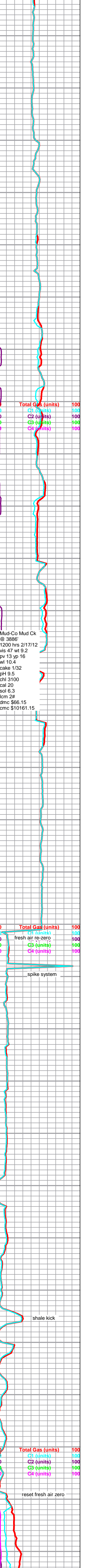
soft gray shale, heavy gray wash

**Toronto**  
limestone and dolomite, white, microcrystalline, with gray/green cryptocrystalline lithographic limestone, abundant chalk and light gray to cream fossiliferous cherts, no shows

**Douglas**

limestone, light gray to cream, microcrystalline, fossiliferous, some large clasts, mostly dense, some chalky, poor visible porosity, no shows, trace chert

shale, soft gray and some green, heavy gray wash





**Lansing 4249 -1430**

limestone, white to cream, micro to cryptocrystalline, fossiliferous/bioclasic, smooth compact to grainy, with: chert, white to gray, fossiliferous, sharp, no shows, fairly even bright bluish/white fluorescence, abundant chalk

limestone, light gray to tan, grainy, chalky, some pinpoint porosity with: limestone, light gray, cryptocrystalline, dense, slightly fossiliferous to lithographic, no shows

limestone, mixed gray to brown mottled, fossiliferous, some pelletal and oolitic, some earthy/chalky mixed fossiliferous limestones, abundant chalk and mixed shale in samples, some brown and tan cherts

mixed limestone with flood mixed shale, pyrite nodules, some pyritic chert and limestone

grading to limestone, gray/brown mottled, very fossiliferous, mostly chalky, some dense, poor visible porosity, no shows

limestone, white to cream and light gray, crypto-microcrystalline, fossiliferous, bioclasic to lithographic, some weathered, abundant chalk, appx 30% in samples, no shows

limestone, cream to white, oolitic to pelletal to bioclasic, flood of tan oomoldic lower in porosity, very chalky, poor visible porosity, appx 50% chalk, no shows

limestone, gray, cryptocrystalline, fossiliferous, dense, pyritic, some pyrite bryozoans, gray limey shale, pyritic

limestone, cream to light gray, mostly cryptocrystalline, chalky, slight fossiliferous to lithographic, some pyritic, poor visible porosity, abundant chalk, no shows

**MUNCIE CREEK**

limestone, cream to gray, microcrystalline, fossiliferous, chalky, no shows, some chalk

as above, some tan pelletal

limestone, gray, weathered, fossiliferous, very chalky

light gray limey shale to shaley limestone, abundant light gray fossiliferous chert

chalky white to gray fossiliferous limestone, weathered, abundant chalk, no shows

limestone, mixed gray non-descript fossiliferous, abundant chalk

as above

**Stark Shale 4608 -1789**

gassy black carbonaceous shale

limestone, cream to light gray, cryptocrystalline, chalky, lithographic to slightly fossiliferous, with dolomite, cream, microcrystalline, poor visible porosity, no shows, abundant chalk

limestone, light gray to cream, cryptocrystalline, lithographic to fossiliferous, dense, no shows

limestone, fine oolitic, cream, dense, poor visible porosity, some gray grainy pelletal, flood of chalk, no shows

mixed dense limestones with some gray oolitic cherts

limestone, cream, oolitic to oomoldic, some fair porosity, some light fluorescence, no shows, abundant chalk

limestone, dark gray, cryptocrystalline, lithographic to fossiliferous, some large clasts, dense, no shows, some chert, with: gray limey shale and some black carbonaceous shales

as above, with: gray limey shale and some black carbonaceous shales

**Marmaton 4736 -1917**

limestone, gray to brown and cream, cryptocrystalline, fossiliferous to lithographic, poor visible porosity, abundant chalk, trace sucrosic tan microcrystalline dolomite

**Marmaton log top 4752**

grading to limestone, cream to tan, cryptocrystalline, mostly lithographic, some fossiliferous, fairly dense, chalk drops out, no shows, few scattered pieces with fair green mineral fluorescence

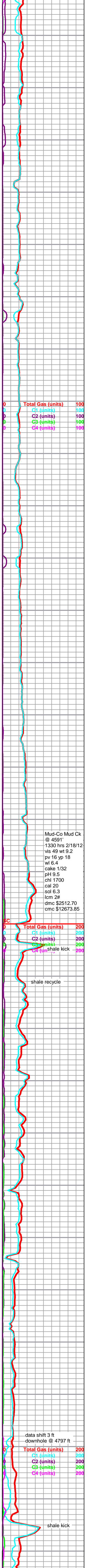
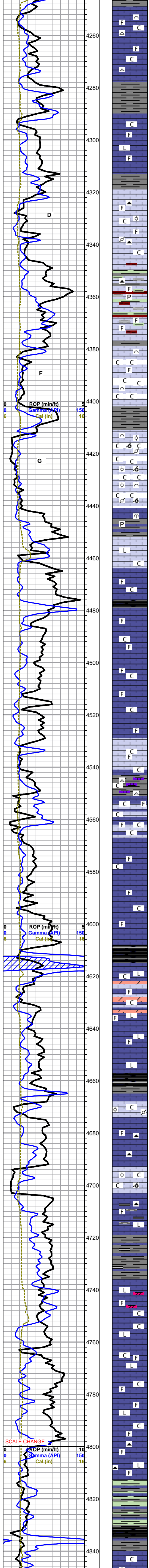
as above, increase in fossiliferous, slight influx chalk

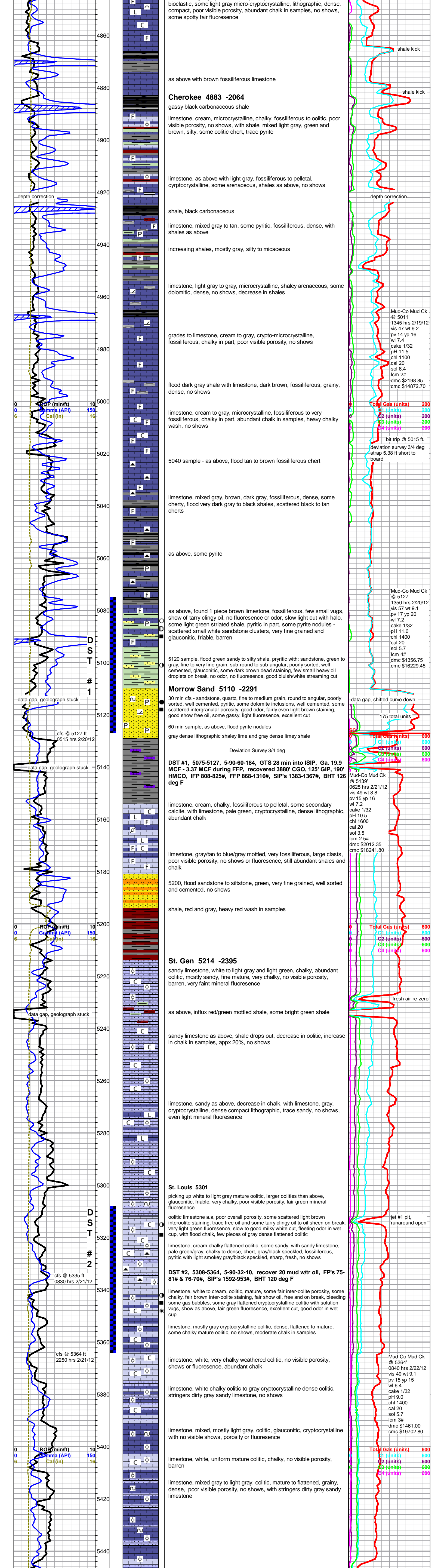
as above, influx chert, tan, translucent, fossiliferous

4830 sample, mostly shale, green to bright green and gray

**Pawnee 4835 -2016**

limestone, light gray to cream, cryptocrystalline, chalky fossiliferous to





bioclastic, some light gray micro-cryptocrystalline, lithographic, dense, compact, poor visible porosity, abundant chalk in samples, no shows, some spotty fair fluorescence

as above with brown fossiliferous limestone

**Cherokee 4883 -2064**

gassy black carbonaceous shale

limestone, cream, microcrystalline, chalky, fossiliferous to oolitic, poor visible porosity, no shows, with shale, mixed light gray, green and brown, silty, some oolitic chert, trace pyrite

limestone, as above with light gray, fossiliferous to pelletal, cryptocrystalline, some arenaceous, shales as above, no shows

shale, black carbonaceous

limestone, mixed gray to tan, some pyritic, fossiliferous, dense, with shales as above

increasing shales, mostly gray, silty to micaceous

limestone, light gray to gray, microcrystalline, shaley arenaceous, some dolomitic, dense, no shows, decrease in shales

grades to limestone, cream to gray, crypto-microcrystalline, fossiliferous, chalky in part, poor visible porosity, no shows

flood dark gray shale with limestone, dark brown, fossiliferous, grainy, dense, no shows

limestone, cream to gray, microcrystalline, fossiliferous to very fossiliferous, chalky in part, abundant chalk in samples, heavy chalky wash, no shows

5040 sample - as above, flood tan to brown fossiliferous chert

limestone, mixed gray, brown, dark gray, fossiliferous, dense, some cherty, flood very dark gray to black shales, scattered black to tan cherts

as above, some pyrite

as above, found 1 piece brown limestone, fossiliferous, few small vugs, show of tarry clingy oil, no fluorescence or odor, slow light cut with halo, some light green striated shale, pyritic in part, some pyrite nodules - scattered small white sandstone clusters, very fine grained and glauconitic, friable, barren

5120 sample, flood green sandy to silty shale, pyritic with: sandstone, green to gray, fine to very fine grain, sub-round to sub-angular, poorly sorted, well cemented, glauconitic, some dark brown dead staining, few small heavy oil droplets on break, no odor, no fluorescence, good bluish/white streaming cut

**Morrow Sand 5110 -2291**

30 min cfs - sandstone, quartz, fine to medium grain, round to angular, poorly sorted, well cemented, pyritic, some dolomite inclusions, well cemented, some scattered intergranular porosity, good odor, fairly even light brown staining, good show free oil, some gassy, light fluorescence, excellent cut

60 min sample, as above, flood pyrite nodules

gray dense lithographic shaley lime and gray dense limey shale

Deviation Survey 3/4 deg

**DST #1, 5075-5127, 5-90-60-184, GTS 28 min into ISIP, Ga. 19.9 MCF - 3.37 MCF during FFP, recovered 3880' CGO, 125' GIP, 190' HMCO, IFP 808-825#, FFP 868-1316#, SIP's 1383-1367#, BHT 126 deg F**

limestone, cream, chalky, fossiliferous to pelletal, some secondary calcite, with limestone, pale green, cryptocrystalline, dense lithographic, abundant chalk

limestone, gray/tan to blue/gray mottled, very fossiliferous, large clasts, poor visible porosity, no shows or fluorescence, still abundant shales and chalk

5200, flood sandstone to siltstone, green, very fine grained, well sorted and cemented, no shows

shale, red and gray, heavy red wash in samples

**St. Gen 5214 -2395**

sandy limestone, white to light gray and light green, chalky, abundant oolitic, mostly sandy, fine mature, very chalky, no visible porosity, barren, very faint mineral fluorescence

as above, influx red/green mottled shale, some bright green shale

sandy limestone as above, shale drops out, decrease in oolitic, increase in chalk in samples, appx 20%, no shows

limestone, sandy as above, decrease in chalk, with limestone, gray, cryptocrystalline, dense compact lithographic, trace sandy, no shows, even light mineral fluorescence

**St. Louis 5301**

picking up white to light gray mature oolitic, larger oolites than above, glauconitic, friable, very chalky, poor visible porosity, fair green mineral fluorescence

oolitic limestone a.a, poor overall porosity, some scattered light brown interoolite staining, trace free oil and some tarry clingy oil to oil sheen on break, very light green fluorescence, slow to good milky white cut, fleeting odor in wet cup, with flood chalk, few pieces of gray dense flattened oolitic

limestone, cream chalky flattened oolitic, some sandy, with sandy limestone, pale green/gray, chalky to dense, chert, gray/black speckled, fossiliferous, pyritic with light smoky gray/black speckled, sharp, fresh, no shows

**DST #2, 5308-5364, 5-90-32-10, recover 20 mud w/tr oil, FP's 75-81# & 76-70#, SIP's 1592-953#, BHT 120 deg F**

limestone, white to cream, oolitic, mature, some fair inter-oolite porosity, some chalky, fair brown inter-oolite staining, fair show oil, free and on break, bleeding some gas bubbles, some gray flattened cryptocrystalline oolitic with solution vugs, show as above, fair green fluorescence, excellent cut, good odor in wet cup

limestone, mostly gray cryptocrystalline oolitic, dense, flattened to mature, some chalky mature oolitic, no shows, moderate chalk in samples

limestone, white, very chalky weathered oolitic, no visible porosity, shows or fluorescence, abundant chalk

limestone, white oolitic to gray cryptocrystalline dense oolitic, stringers dirty gray sandy limestone, no shows

limestone, mixed, mostly light gray, oolitic, glauconitic, cryptocrystalline with no visible shows, porosity or fluorescence

limestone, white, uniform mature oolitic, chalky, no visible porosity, barren

limestone, mixed to light gray, oolitic, mature to flattened, grainy, dense, poor visible porosity, no shows, with stringers dirty gray sandy limestone

shale kick

shale kick

depth correction

Mud-Co Mud Ck @ 5011' 1345 hrs 2/19/12 vis 47 wt 9.2 pv 14 yp 16 wl 7.4 cake 1/32 pH 11.5 chl 1100 cal 20 sol 6.4 lcm 2# dmc \$2198.85 cmc \$14872.70

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

bit trip @ 5015 ft. deviation survey 3/4 deg strap 5.38 ft short to board

Mud-Co Mud Ck @ 5127' 1350 hrs 2/20/12 vis 57 wt 9.1 pv 17 yp 20 wl 7.2 cake 1/32 pH 11.0 chl 1400 cal 20 sol 5.7 lcm 4# dmc \$1356.75 cmc \$16229.45

data gap, shifted curve down

175 total units

Total Gas (units) 600  
C1 (units) 600  
C2 (units) 600  
C3 (units) 600  
C4 (units) 600

Mud-Co Mud Ck @ 5139' 0625 hrs 2/21/12 vis 49 wt 8.8 pv 15 yp 16 wl 7.2 cake 1/32 pH 10.5 chl 1600 cal 20 sol 3.5 lcm 2.5# dmc \$2012.35 cmc \$18241.80

Total Gas (units) 600  
C1 (units) 600  
C2 (units) 600  
C3 (units) 600  
C4 (units) 600

fresh air re-zero

jet #1 pit, runaround open

Mud-Co Mud Ck @ 5364' 0840 hrs 2/22/12 vis 49 wt 9.1 pv 15 yp 15 wl 6.4 cake 1/32 pH 9.0 chl 1400 cal 20 sol 5.7 lcm 3# dmc \$1461.00 cmc \$19702.80

Total Gas (units) 600  
C1 (units) 600  
C2 (units) 600  
C3 (units) 600  
C4 (units) 600

depth correction

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

data gap, geograph stuck

cfs @ 5127 ft. 0515 hrs 2/20/12

data gap, geograph stuck

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

data gap, geograph stuck

cfs @ 5335 ft 0830 hrs 2/21/12

cfs @ 5364 ft 2250 hrs 2/21/12

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

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