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:	Ward #1-31 (SE)		
Location:	Sec. 31 - T28S - R30W	API:	15-069-20402-0000
Pool:		Field:	Wildcat
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	Ward #1-31 (SE)		
Surface Location:	Sec. 31 - T28S - R30W		
Bottom Location:			
API:	15-069-20402-0000		
License Number:	5316		
Spud Date:	10/16/2012	Time:	00:00
Region:	Gray County		
Drilling Completed:	10/25/2012	Time:	10:30
Surface Coordinates:	2445' FSL & 1370' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	2808.00ft		
K.B. Elevation:	2821.00ft		
Logged Interval:	3400.00ft	To:	5485.00ft
Total Depth:	5485.00ft		
Formation:	Morrow/Mississippian		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:		Latitude:	
N/S Co-ord:	2445' FSL		
E/W Co-ord:	1370' 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:	Sterling Drilling Company		
Rig #:	Rig #5		
Rig Type:	mud rotary		
Spud Date:	10/16/2012	Time:	00:00
TD Date:	10/25/2012	Time:	10:30
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation:	2821.00ft	Ground Elevation:	2808.00ft
K.B. to Ground:	13.00ft		

NOTES

Due to negative drill stem tests, it was determined that the Ward #1-31 be plugged and abandoned as a dry test.

A Tooke Daq gas detection system operated by Sterling Drilling was employed on this well. ROP and gas data were imported into this mudlog. The caliper and gamma ray were also imported from the electrical log data. Sample formation picks were generally within 2-4 ft. of actual electrical log tops, these 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,
Keith Reavis

Falcon Exploration, Inc

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
10/20/2012		Geologist Keith Reavis on location @ 1700 hrs, 3505 ft., drilling ahead Stotler, Tarkio
10/21/2012	4135	drilling Topeka, Lecompton, Tooke Daq computer crashed, pull up, circ, wait on replacement computer, resume drilling 0935 hrs, drill Douglas, Lansing
10/22/2012	5064	drilling base KC, Marmaton, Pawnee, Cherokee, bit trip @ 5064', 0630 hrs, out with PDC, in with button, ctch, resume drlg., Cherokee, Morrow
10/23/2012	5235	drilling Morrow, Chester, stop, TOH for DST #1, conduct and complete DST #1, successful test, out w/tools TIH w/bit, ctch, resume drilling
10/24/2012	5359	drilling St. Gen, St. Louis, show in St. Louis warrants test, ctch, TOH w/ bit in w/tools, conducting DST #2
10/25/2012	5449	complete DST #2, TIH w/bit, rathole ahead to TD of 5485 @ 1030 hrs conduct and complete logging operations, geologist released 2050 hrs

Falcon Exploration, Inc.

well comparison sheet

	DRILLING WELL Ward #1-31 (SE) 2445' FSL & 1370' FEL Sec 31-T28S-R30W 2821 KB				COMPARISON WELL James Koehn No. 1-31 (NW) 2310' FNL & 1670' FWL Sec 31-T28S-R30W 2842 KB		Structural Relationship		COMPARISON WELL Sherlyn Koehn No. 1-31 (SW) 1700' FSL and 2000' FWL Sec 31-T28S-R30W 2842 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Stotler	3536	-715	3534	-713	3542	-700	-15	-13	3544	-702	-13	-11
Tarkio	3602	-781	3602	-781	3609	-767	-14	-14	3611	-769	-12	-12
Topeka	3804	-983	3804	-983	3813	-971	-12	-12	3817	-975	-8	-8
Heebner	4140	-1319	4140	-1319	4148	-1306	-13	-13	4154	-1312	-7	-7
Douglas	4181	-1360	4178	-1357	4189	-1347	-13	-10	4197	-1355	-5	-2
Lansing	4249	-1428	4249	-1428	4260	-1418	-10	-10	4264	-1422	-6	-6
Stark	4629	-1808	4628	-1807	4648	-1806	-2	-1	4654	-1812	4	5
Marmaton	4770	-1949	4764	-1943	4776	-1934	-15	-9	4776	-1934	-15	-9
Pawnee	4875	-2054	4768	-1947	4875	-2033	-21	86	4888	-2046	-8	99
Cherokee	4912	-2091	4909	-2088	4915	-2073	-18	-15	4926	-2084	-7	-4
Morrow	5136	-2315	5131	-2310	5135	-2293	-22	-17	5148	-2306	-9	-4
Morrow Sand	5169	-2348	5168	-2347	5159	-2317	-31	-30	5172	-2330	-18	-17
Chester	5238	-2417	5231	-2410	5216	-2374	-43	-36	5237	-2395	-22	-15
St. Gen	5272	-2451	5270	-2449	5296	-2454	3	5	5306	-2464	13	15
St. Louis por	5386	-2565	5384	-2563	5402	-2560	-5	-3	5425	-2583	18	20
Total Depth	5485	-2664	5484	-2663	5549	-2707	43	44	5519	-2677	13	14

DST #1

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: WARD1-31SEDST1

TIME ON: 08:41
TIME OFF: 16:56

Company FALCON EXPLORATION, INC. Lease & Well No. WARD #1-31 (SE)
Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.
Elevation 2821 KB Formation MORROW Effective Pay Ft. Ticket No. T113
Date 10-23-12 Sec. 31 Twp. 28 S Range 30 W County GRAY State KANSAS
Test Approved By KEITH REAVIS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 5134 ft. to 5235 ft. Total Depth 5235 ft.
Packer Depth 5129 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 5134 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Depth of Selective Zone Set

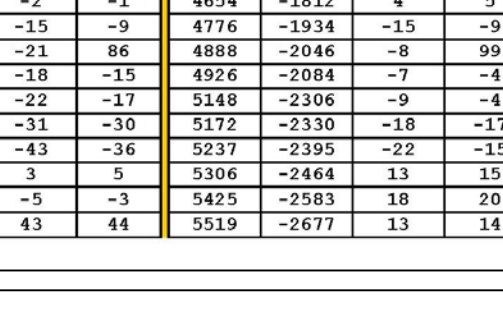
Top Recorder Depth (Inside) 5115 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 5232 ft. Recorder Number 11030 Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 55 Drill Collar Length 331 ft. I.D. 2 1/4 in.
Weight 9.2 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
Chlorides 2,400 P.P.M. Drill Pipe Length 4770 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 37 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 61' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW, BUILIDING TO 1/4 INCH. (NOBB)
2nd Open: VERY WEAK SURFACE BLOW THROUGHOUT PERIOD. (NOBB)

Recovered 30 ft. of MUD
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks:

TOOL SAMPLE: 100% MUD



Time Set Packer(s) 10:55 AM A.M. P.M. Time Started Off Bottom 1:50 PM A.M. P.M. Maximum Temperature 118 deg.

Initial Hydrostatic Pressure (A) 2481 P.S.I.
Initial Flow Period Minutes 5 (B) 12 P.S.I. to (C) 17 P.S.I.
Initial Closed In Period Minutes 90 (D) 374 P.S.I.
Final Flow Period Minutes 40 (E) 23 P.S.I. to (F) 30 P.S.I.
Final Closed In Period Minutes 40 (G) 48 P.S.I.
Final Hydrostatic Pressure (H) 2478 P.S.I.

DST #2

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544

TIME ON: 16:16 10-24-12

(800) 542-7313

TIME OFF: 00:40 10-25-12

DRILL-STEM TEST TICKET

FILE: WARD1-31SEDST2

Company FALCON EXPLORATION, INC. Lease & Well No. WARD #1-31 (SE)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2821 KB Formation MISS.-ST. LOUIS Effective Pay ____ Ft. Ticket No. T114

Date 10-24-12 Sec. 31 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By KEITH REAVIS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 5377 ft. to 5416 ft. Total Depth 5416 ft.

Packer Depth 5372 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Packer Depth 5377 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 5358 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 5413 ft. Recorder Number 11030 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 50 Drill Collar Length 331 ft. I.D. 2 1/4 in.

Weight 9.4 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 3,000 P.P.M. Drill Pipe Length 5013 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 39 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW, THROUGHOUT PERIOD. (NOBB)

2nd Open: NO BLOW AT START OF PERIOD. WEAK SURFACE BLOW AFTER FLUSHED TOOL. (NOBB)

Recovered 40 ft. of M W/TR. OIL, TRACE OIL, 100% MUD

Recovered ____ ft. of ____

Recovered ____ ft. of ____

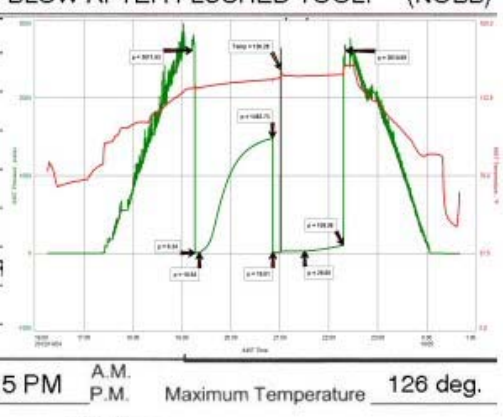
Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: 10 MIN. INTO FINAL FLOW, WE FLUSHED TOOL & GOT SUR

TOOL SAMPLE: 2% OIL, 98% MUD



Time Set Packer(s) 7:15 PM A.M. P.M. Time Started Off Bottom 10:15 PM A.M. P.M. Maximum Temperature 126 deg.

Initial Hydrostatic Pressure			(A)	2612 P.S.I.		
Initial Flow Period	Minutes	5	(B)	6 P.S.I. to (C)	11 P.S.I.	
Initial Closed In Period	Minutes	90	(D)	1483 P.S.I.		
Final Flow Period	Minutes	40	(E)	17 P.S.I. to (F)	30 P.S.I.	
Final Closed In Period	Minutes	45	(G)	108 P.S.I.		
Final Hydrostatic Pressure			(H)	2611 P.S.I.		

ROCK TYPES

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

ACCESSORIES

MINERAL: Argillaceous; Chert, dark; Dolomitic; Mineral Crystals; Pyrite; Chert White; Mica

FOSSIL: Bioclastic or Fragmental; Fossils < 20%; Oolite; Pellets; Oomoldic

STRINGER: Sandstone; Siltstone; Shale; green shale; red shale; carb shale

TEXTURE: C Chalky; CX Cryptocrystalline; L Lithogr

OTHER SYMBOLS

MISC: 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

Curve Track #1: ROP (min/ft); Gamma (API); Cal (in)

Depth | Intervals (Cored Interval; DST Interval)

DST

Lithology

Oil Show

Geological Descriptions

TG, C1 - C5: Total Gas (units); C1 (units); C2 (units); C3 (units); C4 (units)

1:240 Imperial

ROP (min/ft) 0–3; Gamma (API) 0–150; Cal (in) 6–16

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

3420: limestone, gray/green, grainy microcrystalline, fossiliferous, dense, no shows

Elevation 2821' KB

Surface Casing 8 5/8" set @ 1893' KB

3440: limestone, gray/green, microcrystalline, grainy, fossiliferous, with limestone, cream to light gray, micorcrystalline, fossiliferous, grainy, chalky, some secondary calcite, abundant chalk

3460

depth correction

3480: as above

3500

NOTE: no samples caught from 3500-3580', sample hand left rig

3520

Stotler 3536 -715

3540

3560

3580: limestone, mixed cream to gray, microcrystalline fossiliferous, gray/green lithographic cryptocrystalline, reddish brown shaley, argillaceous, fossiliferous, mixed shales

samples resumed @ 3600'

3600

Tarkio 3602 -781

limestone, tan to light gray, microcrystalline, fossiliferous to grainy bioclastic, poor visible porosity, flood chalk in samples, some scattered tan chert, no shows

3620

3640: limestone, cream to light gray, grainy, fossiliferous, with limestone, pale green, grainy to sub-sucrosic, slightly fossiliferous, mixed shales, some chalk, no shows

3660

3680: limestone, gray, mottled, grainy bioclastic and fossiliferous, chalky, with limestone, gray green, fossiliferous, argillaceous to shaley, no shows

limestone, next 3 samples, very fine, mixed fossiliferous limestone, grainy, no shows

limestone, mixed gray to gray green, cream to white, fossiliferous, poor visible porosity, slightly chalky, no shows

Topeka 3804 -983

limestone, cream, fossiliferous to bioclastic, grainy, chalky, some scattered porosity, appx 40-50% chalk, some scattered gray chert, no shows

as above, increase in chalk

Tooke Daq Computer started freezing up here, skipping some drill time, thus recording long feet

limestone, mixed gray to cream, fossiliferous, some dense, flood of shales in samples

limestone, cream to gray, microcrystalline, fossiliferous, abundant chalk, influx gray fossiliferous chert, no shows

as above, some gray silty shales

limestone as above, some darker gray dense fossiliferous limestone, streaks gray silty shales, abundant chalk, no shows

limestone, mixed non-descript fossiliferous, some dark gray dense cherty fossiliferous

limestone, cream to light gray, chalky bioclastic to fossiliferous, poor visible porosity, abundant chalk, some dense limey gray and black shale, no shows

Tooke Daq computer crashed 4135 ft. - pull up & circ @ 0410 hrs - wait on replacement - resume drilling @ 0935 hrs 1021/12

shale kick

Heebner 4140 -1319

shale, black carbonaceous

shale, gray and green

limestone, cream to light gray, microcrystalline, fossiliferous, some vuggy porosity, slightly chalky, no visible shows

Douglas 4181 -1360

shale, green and gray, silty

limestone, gray to gray green, microcrystalline, lithographic, with: limestone, gray to tan, microcrystalline, grainy, fossiliferous, poor visible porosity, no shows

gray and green silty shale

Lansing 4249 -1428

limestone, cream to light gray, microcrystalline, fossiliferous, chalky in part, poor visible porosity, some large loose calcite crystals, some light gray chert, no show

gray silty limey to micaceous shale

B

G

F

0 ROP (min/ft) 3
0 Gamma (API) 150
6 Cal (in) 16

4300 4320 4340 4360 4380 4400 4420 4440 4460 4480 4500 4520 4540 4560 4580 4600 4620 4640 4660 4680 4700 4720 4740 4760 4780 4800 4820 4840 4860 4880

limestone, light gray to cream, microcrystalline, fossilifeorus, with limestone, gray, fossiliferous, dense, some shaley, no visible shows, some scattered frosted and gray cherts

limestone, poor samples here, very fine, grainy mixed fossiliferous, some interclast porosity, no visible shows, some faint fluoresence

Mud-Co Mud Ck
@ 4340'
1315 hrs 10/21/12
vis 49 wt 9.2
pv 16 yp 17
wl 9.2
cake 1/32
pH 9.0
chl 2500
cal 20
sol 6.3 lcm 2#
dmc $2480.75
cmc $12449.85

mixed fine limestone as above, limestones darker

samples improve in 4440 sample, limestone, dark gray, cryptocrystalline, dense fossiliferous to lithographic, with some limestone, cream, fossiliferous, trace lithographic, flood chalk in samples

limestone, tan, oolitic to oomoldic, some fair oomold porosity, no shows, fair even light green mineral fluoresence

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

limestone, cream to white, fine grainy bioclastic, very chalky, with gray grainy oolitic, some molds, poor overall visible porosity, flood chalk in samples, heavy white wash in samples, no shows, poor fluoresence

limestone, light gray, micro-cryptocrystalline, smooth lithographic, some soft, with shale, light gray, calcareous/limey, dense to brittle, some silty

limestone, limestone, light gray to cream, chalky fossilifeorus, with limestone, cream, oolitic, chalky, friable, trace oomoldic, poor overall porosity, no shows

limestone, tan to gray/green, microcrystalline, dense fossilifeorus, with limestone, cream to gray, chalky fossiliferous, no shows, some gray green fossiliferous cherts

grading to limestone, light gray to cream, microcrystalline, chalky fossiliferous, some gray green limestone as above, increase in chert, gray to gray/green fossilifeorus, sharp, fresh, no shows, some chalk

limestone, mixed chalky fossiliferous to bioclastic, abundant chalk in samples, some scattered pinpoint porosity, no shows

limestone, as above

limestone, microcrystalline, light gray, cryptocrystalline, lithographic to slightly fossiliferous and chalky, no shows

shale gas
kick, reset lag
faster

Stark Shale 4629 -1808

shale, black to dark brown carbonaceous, dense

limestone, mixed fossiliferous with gray cryptocrystalline lithographic, no shows

as above

limestone, white to cream grainy bioclastic, with limestone, cream oolitic to oomoldic, some scattered oomold porosity, abundant gray shale with brown flecks, flood chalk in samples, no shows

limestone, mixed fossiliferous, gray mottled pellletal, abundant dark gray, dense fossiliferous, cherty with large clasts, gray shales and some chalk, no shows

Marmaton 4770 -1949

limestone, gray to pale green, crypto-microcrystalline, mottled fossiliferous, some large clasts, limestone, cream to light gray, bioclastic to fossiliferous, chalky, poor visible overall porosity, no shows, some chalk

limestone, gray to dark gray mottled, microcrystalline, fossiliferous, with limestone, light gray chalky, mottled fossiliferous with some pelletal, poor visible porosity, no shows, abundant gray shale

limestone, light gray to cream, microcrystalline, fossiliferous, chalky in part, mostly dense, no shows, some chalk

shale, black carbonaceous

shale kicks

Pawnee 4875 -2054

limestone, white to cream and light gray, microcrystalline, fossiliferous, with limestone, gray, dolomitic, arenaceous, some scattered gray fossiliferous chert, moderate chalk, no fluoresence, no shows

all kicks high to shale breaks, sped up AV on Tooke again

shale, black carbonaceous

Cherokee 4912 -2091

black carbonaceous shale

limestone, mixed gray to tan, crypto-microcrystalline, fossiliferous, some dense lithographic, abundant black and gray shales

as above

limestone, mixed white to gray and tan, fossiliferous, some white very chalky fossiliferous, abundant gray and black shales, no shows

as above

limestone, tan to gray, micro-cryptocrystalline, fossiliferous to lithographic, dense, trace pyritic, trace chert, with cream to white bioclastic, chalky, poor overall visible porosity, abundant shales as above, no shows

as above

limestone, gray, microcrystalline, dense, grainy, fossiliferous, with some brown cherty cryptocrystalline, no visible porosity, no shows, scattered gray-black shale

as above, some cream and gray very chalky limestone

as above, flood black and dark gray, dense limey shale, dark gray dense limestone, microcrystalline, cherty

limestone, dark gray, micro-cryptocrystalline, slightly fossilifeorus, cherty, dense, limestone, gray, mottled, grainy, dense fossiliferous, chert, black and dark gray fossiliferous, jagged, sharp, scattered dark gray to black limey shales - no fluoresence or shows

Morrow Shale 5136 -2315

shale, green, soft, pyritic in part, with light gray, soft micaceous silty shale

as above, influx dark gray to black to carbonaceous dense shales

as above, heavy gray wash in samples

Morrow Sand 5169 -2348

30 min sample - sandstone, quartz, fine to medium grain, sub-round to angular, well cemented, pyritic, poor visible porosity, barren, no fluoresence, with limestone, gray mottled, reworked bioclastic, some very pyritic with large clasts and some chert nodules, faint fluoresence, with some gray mottled rotten chert, no show, no odor in wet cup

60 min sample - decrease in sand, limestone and chert, marked increase in gray shale, heavy gray wash

shale, limestone and chert as above, sandstone as above, marked decrease in sand (stringers?), some mixed tan and gray bioclastic limestone, abundant pyrite, no shows, heavy gray sample wash

increasing limestone as above, more weathered, chert as above with dense light gray claystone, slightly argillaceous, shale and sand drops out, no shows

DST #1 5134-5235, 5-90-40-40, rec 30 ft mud, FP's 12-17# & 23-30 #, SIP's 374-48#, HSH 2481-2478#, BHT 118 deg F

WARD1-31 DST1.pdf

cfs samples - flood of light gray smooth soft shale, heavy light gray wash

limestone, gray to blue gray, very fossiliferous, large clasts, with limestone, cream to light gray, chalky, fossiliferous to pelletal, mixed gray shales, some green shale

shale, mixed gray to green, silty, with: siltstone, pale green, sandstone, pale green, very fine grain, well sorted and rounded, well cemented to friable, no shows

St. Gen 5272 -2451

limestone, white to light gray and pale green, micro-oolitic, sandy, dense to chalky, with some sandstone as above, pale green to white, no shows

limestone and sand as above, sand decreasing, with scattered spotty to saturated black gilsonitic staining, no show free oil, no odor, no fluoresence, carrying abundant gray shales in samples

as above

as above, shales dropping out beginning 5340 sample

limestone, as above, staining drops out, sands drop out, influx limestone, light gray, cryptocrystalline, lithographic, some scattered orange and tan cherts, sharp, fresh, no shows or odor, pale blue fluoresence

WARD1-31 DST2.pdf

DST #2 5377-5416, 5-90-40-45, rec. 40 ft mud w/tr. oil, FP's 6-11# & 17-30#, SIP's 1483-108#, HSH 2612-2611#, BHT 126 deg. F

St. Louis 5371

as above, decreasing lithographic, with influx white to light gray medium oolitic limestone, mature to slightly flattened, poor visible porosity, chalky, sandy and glauconitic in part, no shows, very faint fluoresence, some chalk in samples

St. Louis por. 5386 -2565

limestone, light gray to cream, mature medium oolitic, dense to chalky, some scattered fair inter-oolite porosity, light interoolite staining, slow bleeding some heavy free oil and gas bubbles, no odor, no fluoresence, faint cut

as above, decrease in show, in addition to orange chert, influx translucent and light gray translucent chert

poor samples, trip trash, mostly shales

still very poor shaley samples, morrow shale sluff?

shales start cleaning up in 5450 sample - limestone, mixed gray to cream and white flattened to mature oolitic, mostly dense, some chalky, gray to gray green micro-oolitic, sandy, some orange, gray and translucent frosted cherts, some chalk, still carrying abundant shale, no shows

oolitic limestone as above, chalkier, marked decrease in sandy facies, nearly drops out, shales drop out in cfs samples, no shows

Rotary TD 5485 ft. @ 1030 hrs 10/25/12
Pioneer Wireline TD 5484 ft
Complete logging operations 1945 hrs 10/25/12

bit trip @ 5064' out with PDC in with button strap 1.08' STB deviation survey - misrun

Mud-Co Mud Ck @ 5064'
1200 hrs 10/22/12
vis 60 wt 9.7
pv 22 yp 18
wl 6.0
cake 1/32
pH 10.5
chl 3200
cal 40
sol 8.0 lcm 2#
dmc $2571.60
cmc $15021.45

deviation survey 2 deg

Mud-Co Mud Ck @ 5235'
0845 hrs 10/23/12
vis 55 wt 9.2
pv 14 yp 18
wl 6.4
cake 1/32
pH 10.0
chl 2400
cal 40
sol 6.2 lcm 3#
dmc $1980.70
cmc $17002.15

change moisture filter at extractor

deviation survey 1 3/4 deg.

Mud-Co Mud Ck @ 5235'
1315 hrs 10/24/12
vis 50 wt 9.4
pv 18 yp 14
wl 8.0
cake 1/32
pH 10.0
chl 3000
cal 40
sol 7.6 lcm 1#
dmc $419.75
cmc $17421.90

Mud-Co Mud Ck @ 5485'
1315 hrs 10/24/12
vis 65 wt 9.2
pv 25 yp 20
wl 8.0
cake 1/32
pH 10.0
chl 3000
cal 40
sol 6.2 lcm 3#
dmc $78.80
cmc $17500.70

cfs @ 5146 ft. 1945 hrs 10/22/12

cfs @ 5156 ft 2120 hrs 10/22/12

sl. rough and bouncy drilling

cfs @ 5178 ft 2310 hrs 10/22/12

DST #1

cfs @ 5235 ft 0515 hrs 10/23/12

DST #2

cfs @ 5401 ft 1040 hrs 10/24/12

cfs @ 5416 ft 1310 hrs 10/24/12