

MACKLIN M. ARMSTRONG

Geologist

License Number 743

316-209-5047

Scale 1:240 Imperial

Well Name: Spahr No. 1
Surface Location: Sec 21 T22S R23W
Bottom Location: 1300' FNL and 339' FEL
API: 15-083-21733
License Number: 34318
Spud Date: 12/26/2011 Time: 7:00 PM
Region: Hodgeman County, Kansas
Drilling Completed: 1/5/2012 Time: 9:24 PM
Surface Coordinates:
Bottom Hole Coordinates:
Ground Elevation: 2376.00ft
K.B. Elevation: 2389.00ft
Logged Interval: 3700.00ft To: 4758.00ft
Total Depth: 4758.00ft
Formation: Mississippi
Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: BEREXCO LLC
Address: 2020 North Bramblewood
Wichita, Kansas 67206
Contact Geologist: Jim Hickman
Contact Phone Nbr: 316-337-8331
Well Name: Spahr No. 1
Location: Sec 21 T22S R23W
Pool: Oil
State: Kansas
API: 15-083-21733
Field: Armstrong South
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: 99.84504
Latitude: 38.12771
N/S Co-ord:
E/W Co-ord:

LOGGED BY

Company:
Address: 100 South Ridge Road
Wichita, Kansas 67209
Phone Nbr: 316-209-5047
Logged By: Macklin M. Armstrong Name: Kansas License Number 743

CONTRACTOR

Contractor: BEREDCO
Rig #: 2
Rig Type: mud rotary

Rig type: mud rotary
 Spud Date: 12/26/2011
 TD Date: 1/5/2012
 Rig Release: 1/6/2012

Time: 7:00 PM
 Time: 9:24 PM
 Time: 5:00 PM

ELEVATIONS

K.B. Elevation: 2389.00ft
 K.B. to Ground: 13.00ft
 Ground Elevation: 2376.00ft

NOTES

Date	Depth at 7 am	Activity
12-26-11	MIRU	Spud at 7 pm
12-27-11	100	Drilling
12-28-11	498	Drilling
12-29-11	1707	Drilling
12-30-11	2639	Drilling
12-31-11	3322	Drilling
1-01-12	3850	Drilling
1-02-12	4345	Drilling
1-03-12	4621	CFS
1-04-12	4673	TIH for DST No. 1
1-05-12	4679	TIH for DST No. 2
1-06-12	4758	Logging
1-07-12	4758	P & A

Surface Casing: 8 5/8" 20# at 260'
 Production Casing: None Set

Deviation: 1272 - 1.75 deg; 2266 - 1.5 deg; 3260 - 1 deg; 4679 - Misrun; 4758 - 1.75 deg

Bit Record:	Make	Type	Depth In	Depth Out	Hours
	Smith	F27I	260	4758	113 1/2

Drill Stem Tests:

DST No. 1 4630 to 4673 Formation: Mississippi
 30-60-15-60

Recovery: 30' HOCM (20% Oil, 80% Mud)

IHP 2277 FHP 2268
 IFP 28-33 FFP 34-40
 ISIP 618 FSIP 787

Temp 125 deg

DST No. 2 4670 to 4679 Formation: Mississippi
 30-60-60-90

Recovery: 190' Muddy Water (Chl 23,000 ppm)

IHP 2244 FHP 2232
 IFP 23-45 FFP 51-103
 ISIP 1443 FSIP 1427

Temp 136 deg

Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3
Anhydrite	1624	1620	+769	-12	+15	+21
Heebner	3959	3959	-1570	-7	+15	+8
Toronto	3976	3874	-1585	-7	+24	+12
Lansing	4018	4016	-1627	-9	+13	+1
Swope	4283	4284	-1895	-8	+18	+3
Hertha	4334	4332	-1943	-16	+12	0
B/Kansas City	4395	4394	-2005	-11	+16	+3
Lenepah	4406	4404	-2015	-14	+17	-2
Altamont	4415	4414	-2025	-14	+27	+3
Upper Pawnee	4475	4476	-2087	-17	+9	-6
Lower Pawnee	4497	4497	-2108	-17	+10	-1
Fort Scott	4560	4560	-2171	-15	+10	-5
Cherokee Shale	4586	4586	-2197	-17	+7	-6
B/Cherokee Lime	4628	4628	-2239	-17	+10	-4
Mississippi	4653	4653	-2264	-27	+8	-9
Total Depth	4758	4758	-2369			

Well 1: BEREXCO LLC Clarence No. 1 E2 NE SW Sec 22 T22S R23W
 Well 2: Kennedy & Mitchell Sauter No. 37-597 C SW NE Sec 21 T22S R23W
 Well 3: Pickrell Drilling Company Spreier 'C' No. 1 C NE NW Sec 21 T22S R23W

Due to the low structural position, the results of the Drill Stem Tests, and the electric log calculations, it was decided to plug this test well.

Respectfully submitted,
 Macklin M. Armstrong

ROCK TYPES

Cht	Lmst fw7>	shale, gry	shale, red
Dolprim	shale, grn	Carbon Sh	

ACCESSORIES

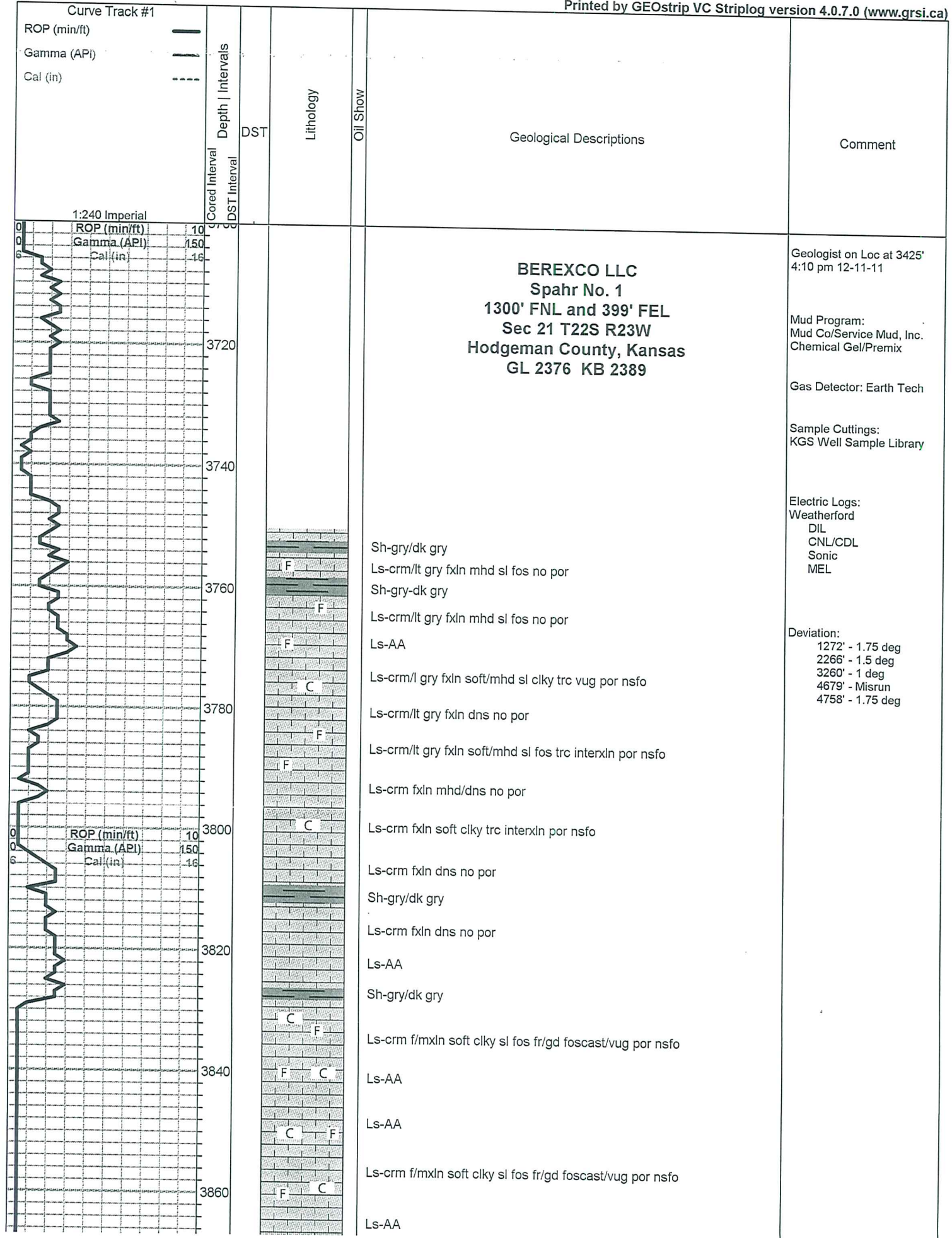
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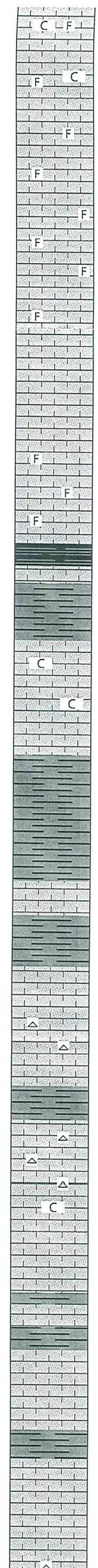
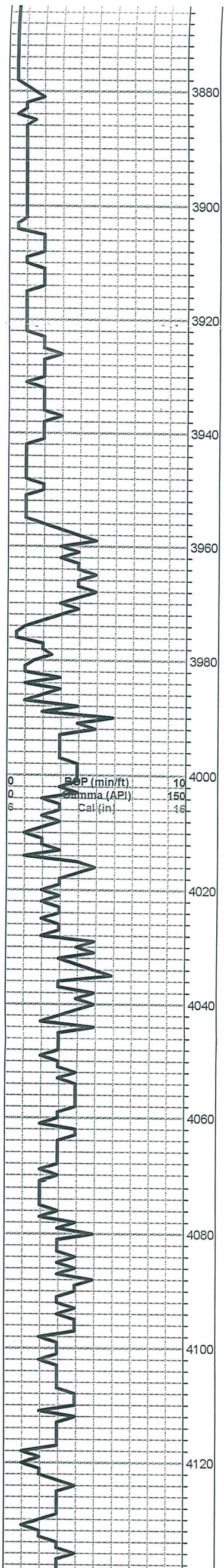
OTHER SYMBOLS

DST

- DST Int
- DST alt
- Core

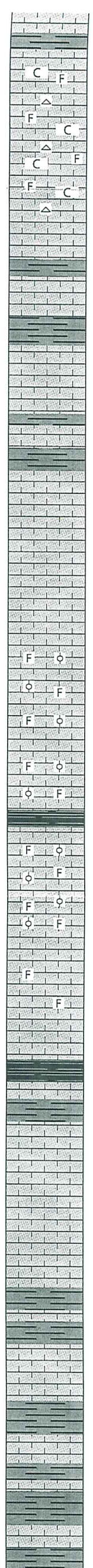
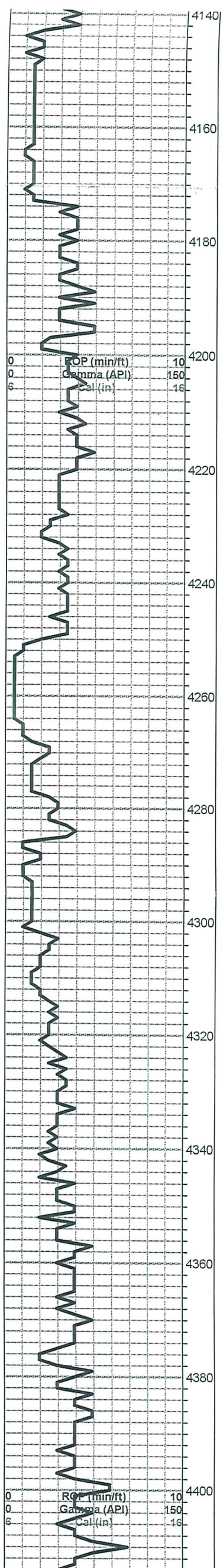
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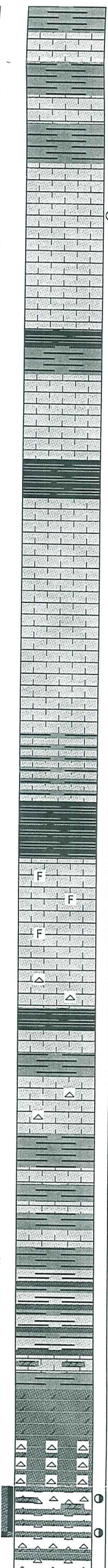
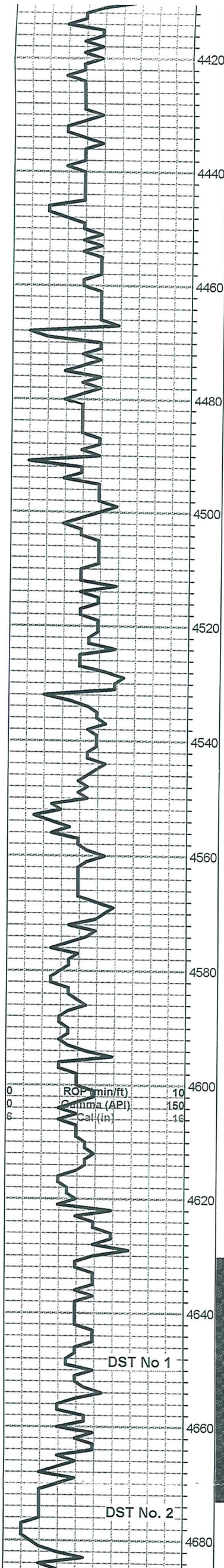
LS-AA
Ls-AA
Ls-crm/tan fxln mhd no por
Ls-crm/tan f/mxln soft sl fos trc interxln por nsfo
Ls-AA
Ls-crm/tan f/mxln mhd sl fos no por
Ls-AA
Ls-crm/tan f/mxln soft sl fos trc interxln por nsfo
Ls-crm/lt tan fxln dns no por
Ls-AA
Ls-AA
Ls-crm/tan f/mxln mhd sl fos trc interxln por nsfo
Ls-AA
-----Heebner 3959 -1570-----
Sh-blk carb
Ls-gry fxln dns no por
Sh-gry/dk gry
-----Toronto 3976 -1587-----
Ls-crm/lt tan fxln soft clky trc interxln por nsfo
Ls-AA
Ls-crm/tan fxln dns no por
Ls-crm/tan f/mxln mhd no por
Sh-gry/dk gry
Sh-AA
Sh-AA
-----Lansing 4018 -1629-----
Ls-crm/tan fxln mhd trc vug por nsfo
Sh-gry/dk gry
Ls-crm/lt gry fxln dns no por
Ls-crm/tan f/mxln mhd trc interxln por nsfo sm Cht-wt fsh opac
Ls-AA
Sh-gry/dk gry
Ls-crm/tan f/mxln mhd trc interxln por nsfo sm Cht-wt fsh opac
Ls-crm/lt tan f/mxln mhd no por sm Cht-AA
Ls-crm f/mxln mhd clky no por
Ls-crm/tan fxln mhd/dns no por
Ls-AA
Sh-gry/dk gry
Ls-crm fxln dns no por
Sh-gry/dk gry
Ls-crm fxln mhd/dns no por
Ls-crm/tan fxln dns no por
Sh-gry/dk gry
Ls-crm/tan fxln soft/mhd trc interxln por nsfo
Ls-crm/tan fxln dns no por
Ls-crm/tan fxln mhd trc interxln por nsfo
Ls-crm/tan fxln dns no por sm Cht-wt fsh opac

Mud Data at 3906'
8:40 am 1-1-12
Wt 9.2
Vis 40
W/L 8.4
pH 10
Cht 5200
Sol 6.1%
YP 13
LCM 0



Sh-gry/dk gry
 Ls-crm/lt tan f/mxln soft sl fos sl clk fr interxln por nsfo
 Ls-AA sm Cht-AA
 Ls-crm/lt tan f/mxln soft sl fos sl clk fr interxln por nsfo sm Cht wt fsh opac
 Ls-AA sm Cht-AA
 Ls-crm/tan fxln dns no por
 Sh-gry/dk gry
 Ls-crm/tan fxln dns no por
 Sh-gry/dk gry
 Ls-tan fxln mhd trc interxln por nsfo
 Ls-tan fxln dns no por
 Sh-gry/dk gry
 Ls-tan fxln dns no por
 Sh-gry/dk gry
 Ls-tan/crm fxln mhd/dns no por
 Ls-tan/crm fxln mhd trc interxln por nsfo
 Ls-tan/crm fxln dns no por
 Ls-AA
 Ls-crm/tan fxln mhd fos ool and ooc gd ooc por nsfo
 Ls-AA
 Ls-crm/tan fxln dns no por
 Ls-crm/tan fxln mhd fos sl ool and ooc fr ooc por nsfo
 -----Swope 4283 -1894-----
 Ls-tan fxln dns no por
 Ls-crm fxln mhd fos sl ool and ooc fr ooc por nsfo
 Ls-AA
 Ls-crm/tan fxln mhd/dns no por
 Ls-crm fxln soft/mhd sl fos trc interxln por nsfo
 Ls-crm/tan fxln mhd/dns no por
 Sh-blk carb
 Ls-crm/tan fxln mhd/dns no por
 -----Hertha 4334 -1945-----
 Ls-crm/tan fxln mhd/dns no por
 Ls-AA
 Ls-crm/tan/lt gry fxln mhd/dns no por
 Ls-AA
 Sh-gry/dk gry
 Ls-crm/tan/lt gry fxln mhd/dns no por
 Sh-gry/dk gry
 Ls-tan fxln mhd trc interxln por nsfo
 Ls-tan fxln dns no por
 Sh-gry/dk gry
 Ls-crm/tan fxln mhd/dns no por
 -----B/KansasCity 4395 -2006-----
 Ls-crm/tan fxln dns no por
 Sh-gry/dk gry
 -----Lenepah 4406 -2017-----
 Ls-crm/tan fxln mhd/dns no por
 Sh-gry/dk gry

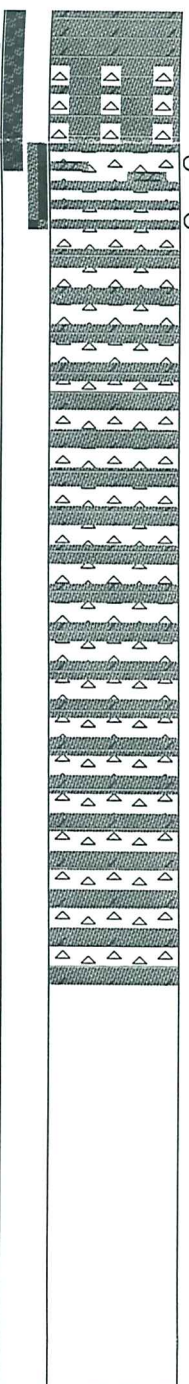
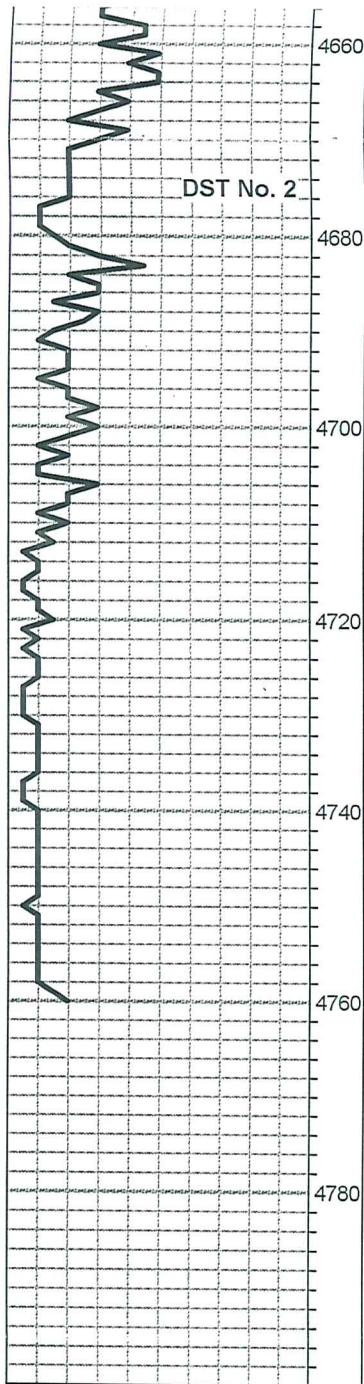
Mud Data at 4369'
 9:00 am 1-2-12
 Wt 9.6
 Vis 50
 WL 9.6
 pH 9
 Chl 5500
 Sol 9%
 YP 15
 LCM trc



Sh-gry/dk gry
 -----Altamont 4415 -2026-----
 Ls-crm/tan fxln mhd/dns no por
 Sh-gry/dk gry
 Ls-crm/tan fxln mhd/dns no por
 Sh-gry/dk gry
 Ls-crm fxln dns no por
 Ls-crm/tan fxln mhd no por mostly barren with 2 pcs of Ls-crm
 fxln mhd pr interxln por brn stn faint odor SSFO and Gas on brk
 Ls-crm/lt tan fxln dns no por
 Ls-AA
 Sh-blk carb
 ----- Upper Pawnee 4475 -2086 -----
 Ls-crm/tan/lt gry fxln mhd/dns no por
 Ls-crm/tan fxln mhd/dns no por
 Ls-AA
 Sh-blk carb
 ----- Lower Pawnee 4497 -2108 -----
 Ls-crm/tan fxln dns no por
 Ls-AA
 Ls-crm/tan fxln dns no por
 Ls-AA
 Ls-AA
 Ls-crm/tan/lt gry fxln dns sl shly no por and Sh-gry/dk gry
 Sh-blk carb
 ----- Fort Scott 4560 -2171 -----
 Ls-tan fxln mhd/dns sl fos no por
 Ls-tan fxln dns sl fos no por
 Ls-AA
 Ls-tan fxln dns no por sm Cht-tan fsh opac
 ----- Cherokee Shale 4586 -2197 -----
 Sh-blk carb
 Ls-tanfxln dns no por
 Sh-gry/dk gry
 Ls-tan fxln dns no por sm Cht-tan fsh opac
 Sh-grydk gry
 Ls-tan/brn fxln dns no por
 Sh-gry/dk gry
 Ls-tan/brn/lt gry fxln dns no por
 Sh-AA
 ----- B/Cherokee Lime 4628 -2239 -----
 Sh-gry/dk gry
 Sh-gry/dk gry/grn/red/mar sm blk
 Sh-AA
 Sh-gry/dk gry/grn/red/mar
 Ls-tan fxln dns no por sm Dolo-tan/lt gry fsln dns no por
 ----- Mississippi 4653 -2264 -----
 Dolo-tan/lt gry fxln dns lmy no por
 Dolo-crm/lt gry fxln to sl suc dns no por
 Dolo-AA sm Cht-wt fsh opac to semi trans nsfo
 Cht-wt/gry wt fsh opac to sl trans no stn nsfo trc brn spt stn
 in two pcs sm Dolo-AA
 Dolo-wt fxln mhd chty pr interxln por even to spt brn stn fr cut
 fr/gd fluor ssfo in few pcs on brk

10 units total gas
 CFS at 4467' - 45"
 CFS at 4490' - 45"
 Mud Data at 4654'
 11:10 am 1-3-12
 Wt 9.45
 Vis 51
 WL 8
 pH 10.5
 Chl 5000
 Sol 8.2%
 YP 13
 LCM trc
 Mud Data at 4673'
 10:35 am 1-4-12
 Wt 9.5
 Vis 53
 WL 6.4
 pH 10.5
 Chl 7000
 Sol 8.1%
 YP 14
 LCM trc
 50 units total gas
 20 units total gas
 Mud Data at 4679'
 10:50 am 1-5-12
 Wt 9.4
 Vis 51
 WL 8.8
 pH 10
 Chl 6800
 Sol 7.4
 YP 13
 LCM trc
 CFS at 4621' - 60"
 CFS at 4643' - 60"
 CFS at 4654' - 60"
 CFS at 4664' - 60"
 CFS at 4670' - 60"
 CFS at 4673' - 60"
 CFS at 4676' - 60"
 CFS at 4679' - 90"

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



Dolo-cream/lt gry fxln to sl suc dns no por

Dolo-AA sm Cht-wt fsh opac to semi trans nsfo

Cht-wt/gry wt fsh opac to sl trans no stn nsfo trc brn spt stn in two pcs sm Dolo-AA

Dolo-wt fxln mhd chty pr interxln por even to spt brn stn fr cut fr/gd fluor ssfo in few pcs on brk

Cht-wt/gr wt fsh opac no por and Dolo-cream fxln to sl suc mhd sl chty no por

Cht & Dolo-AA

Cht-wt/gr wt fsh opac no por and Dolo-cream fxln to sl suc mhd sl chty no por

Cht & Dolo-AA

Cht-wt fsh opac no por and Dolo-cream fxln mhd no por

Cht & Dolo-AA

Cht-wt fsh opac no por and Dolo-cream fxln mhd sl chty no por

Cht & Dolo-AA

-----RTD 4758 -2369-----

CFS at 4664' - 60"

CFS at 4670' - 60"

CFS at 4673' - 60"

CFS at 4676' - 60"

CFS at 4679' - 90"

Pulled 25 stand short trip at 4673' then Cir for Test - 60"

Pipe strap at 4673' - 10' long

DST No. 1 4630 to 4673
30-60-15-60
1st Open: Weak sur blow, died in 20 min
2nd Open: No blow
Rec: 30' HOCM (20% Oil 80% Mud)
IHP 2277 FHP 2268
IFP 28-33 FFP 34-40
ISIP 618 FSIP 787
Temp 125 deg

DST No. 2 4670 to 4679
30-60-60-90
1st Open: Weak blow, built to 2"
2nd Open No blow
Rec: 190' MW (Chl 23,000)
IHP 2244 FHP 2232
IFP 23-45 FFP 51-103
ISIP 1443 FSIP 1427
Temp 136 deg

Finished Drilling at 9:24 pm on 1-5-12 Cir for Log - 120"

Finished Logging at 9:30 am on 1-6-12