



WESLEY D. HANSEN Consulting Petroleum Geologist

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LITHOLOGY STRIP LOG

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: VAL Energy, Inc. #1-23 Schmaderer

API: 15-153-21239

Location: 1983' FNL, 969' FEL of Section 23-4S-32W

License Number: 5822

Region: Rawlins County, Kansas

Spud Date: 8-30-2019

Drilling Completed: 9-05-2019

Surface Coordinates: 1983' FNL, 969' FEL of Section 23-4S-32W

Bottom Hole Vertical hole

Coordinates:

Ground Elevation (ft): 2944'

K.B. Elevation (ft): 2949'

Logged Interval (ft): 3500

To: RTD

Total Depth (ft): 4600'

Formation: Mississippian at RTD

Type of Drilling Fluid: Chemical - displaced at 3519'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: VAL Energy, Inc.

Address: 125 N. Market

Suite 1110

Wichita, KS 67202-1728

GEOLOGIST

Name: Wesley D. Hansen

Company: Wesley D. Hansen - Consulting Petroleum Geologist

Address: 212 N. Market, Suite 257

Wichita, KS 67202

Cellular: 316-772-6188

COMMENTS

Contractor: WW Drilling Rig 10
Pusher: Ricky Hilgers

Surface Casing: 8 5/8" set at 292' w/220 sx
Production Casing: P&A

Mud by: MudCo - Reid Atkins was the engineer.

DST's by: Trilobite - Shawn Wheelbarger was the tester.

Logs by: Pioneer Wireline (DIL, CN-CD, MEL) - Justin Henrickson was the engineer.

Deviation Surveys: 1/4 deg. @292'; 1/4 deg. @1011'; 3/4 deg. @1455'; 1/2 deg. @1955'; 1/2 deg. @2472'; 3/4 deg. @2980'; 1/2 deg. @4000'; 1/2 deg. @4600'

BIT RECORD

Bit #	Size	MFG	Type	Depth Out	Footage Cut	Hours on bit
1	12 1/4"	STC	Tooth	292'	292'	2.5
2	7 7/8"	STC	F27IY	4600'	4308'	88 3/4

FORMATION TOPS AND STRUCTURAL COMPARISON

FORMATION	SAMPLE TOPS		LOG TOPS		COMPARISON WELL Samuel Gary #1-19 Schmidt 1750' FNL, 330' FWL of 19-4-31W 2814' KB
	Depth	Datum	Depth	Datum	
	2949'	KB	2949'	KB	
Anhydrite	2682'	+267	2684'	+265	2568' +246
B/Anhydrite	2719'	+230	2718'	+231	2600' +214
Topeka	3770'	-821	3772'	-823	3658' -844
Heebner Shale	3889'	-940	3888'	-939	3778' -964
Lansing	3932'	-983	3934'	-985	3823' -1009
Muncie Creek Sh.	4036'	-1087	4038'	-1089	3927' -1113
Stark Shale	4108'	-1159	4106'	-1157	3995' -1181
Hushpuckney Sh.	4141'	-1192	4138'	-1189	4025' -1211
BKC	not picked		4162'	-1213	4050' -1236
Pawnee	4286'	-1337	4284'	-1335	4160' -1346
Fort Scott	4312'	-1363	4312'	-1363	4198' -1384
Cherokee Shale	4340'	-1391	4338'	-1389	4218' -1404
Mississippian Chert	4488'	-1539	4492'	-1543	4378' -1564
Mississippian Lime	4516'	-1567	4516'	-1567	4398' -1584
RTD					
LTD	4600'	-1651	4600'	-1651	

DRILL STEM TESTS

DST No. 1 Lansing "C" and "D"
Interval: 3950'-4000'
Times: 30-45-30-60
Recovery: 91' OSM (3%o, 97%r)
FP: 18-37/41-51 SIP: 1124-1118
HP: 1974-1904 BHT: 126 deg. F

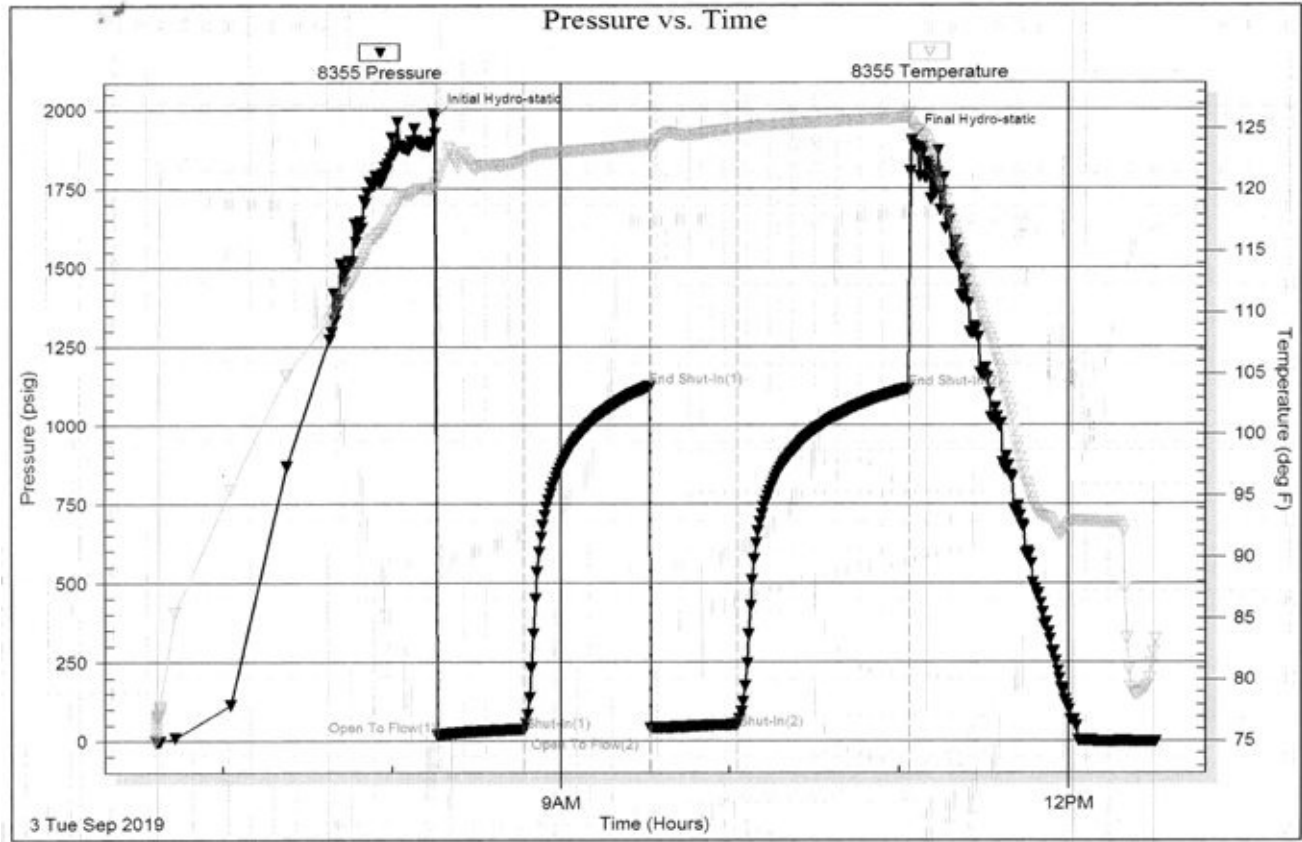
IFP: weak blow built to 1 1/4 inches
ISIP: no return blow
FFP: weak surface blow, built to 1/4 inch
FSIP: no return blow

Serial #: 8355

Val Energy Inc

Schmaderer #1-23

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 66030

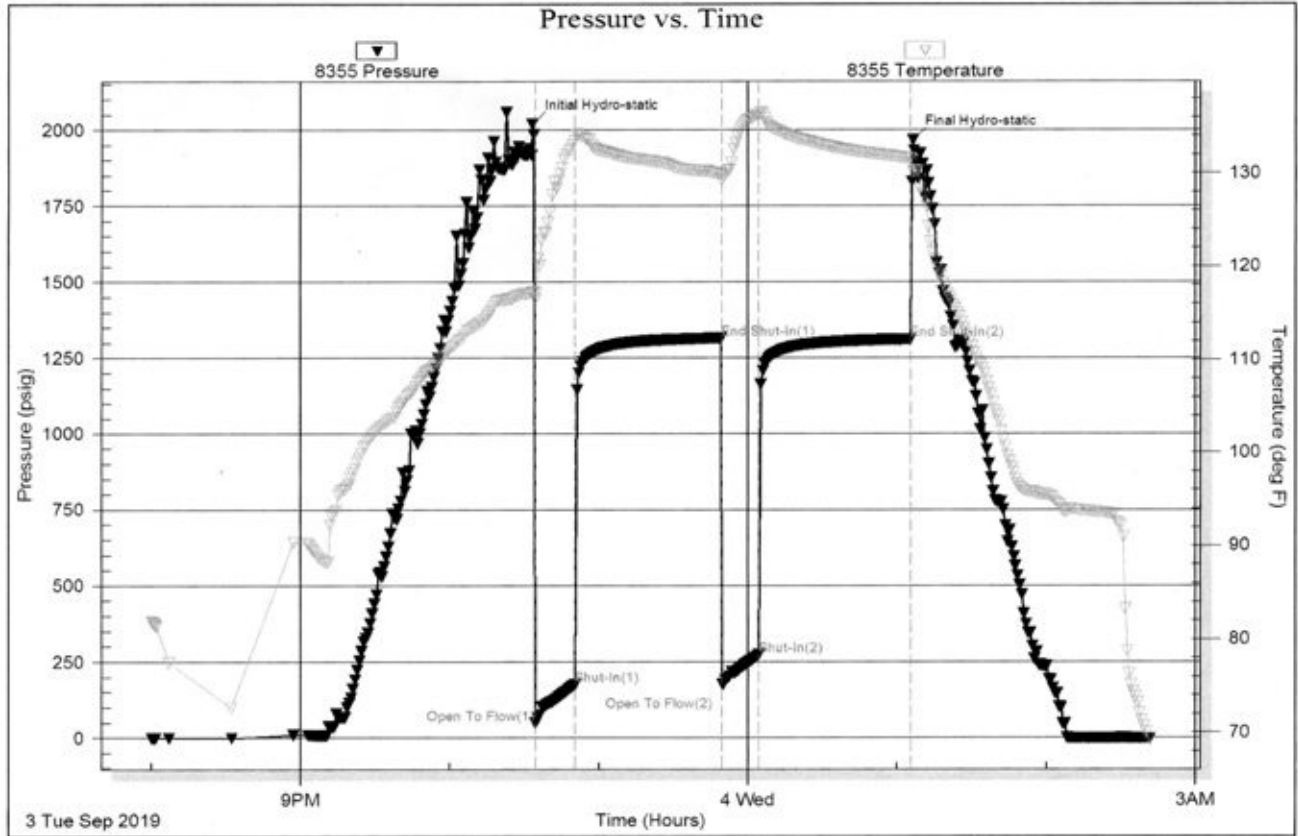
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DRILL STEM TESTS

DST No. 2 Lansing "F" and "G"
 Interval: 3996'-4050'
 Times: 15-60-15-60
 Recovery: 172' HWCW (30w, 70m); 376' SWCW
 (9m, 91w), chl. 23,000
 FP: 49-175/178-272 SIP: 1315-1312
 HP: 2018-1965 BHT: 130 deg. F

IFP: 1 inch blow at open, BOB in 7 minutes, built to 24 1/4 inches
 ISIP: no return blow
 FFP: BOB in 7 minutes 45 seconds, built to 19 1/2 inches
 FSIP: no return blow

Serial #: 8355 Outside Val Energy Inc Schmaderer #1-23 DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 66031

Printed: 2019.09.04 @ 03:20:06

ROCK TYPES

	Congl		Lmst		Carb sh		Sltstn
	Igne		Salt		Dol		Shlyslts
	Anhy		Shale		Dtd		Sndy/siltyshale
	Cht		Shcol		Grayshale		Silty dolo
	Coal		Siltstone		Sandylms		Shy dolo
	Congl		red sst		Redshale		Shaly ls
	Gyp		Sst		Greenshale		Dolomite

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant

- Strom
- Fuss
- Oomold

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp

- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Sltly

- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsb
- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- red shale
- green shale
- Sltstn

STRINGER

- Anhy
- Arg

OTHER SYMBOLS

INTERVALS

- Core
- Dst
- Dst

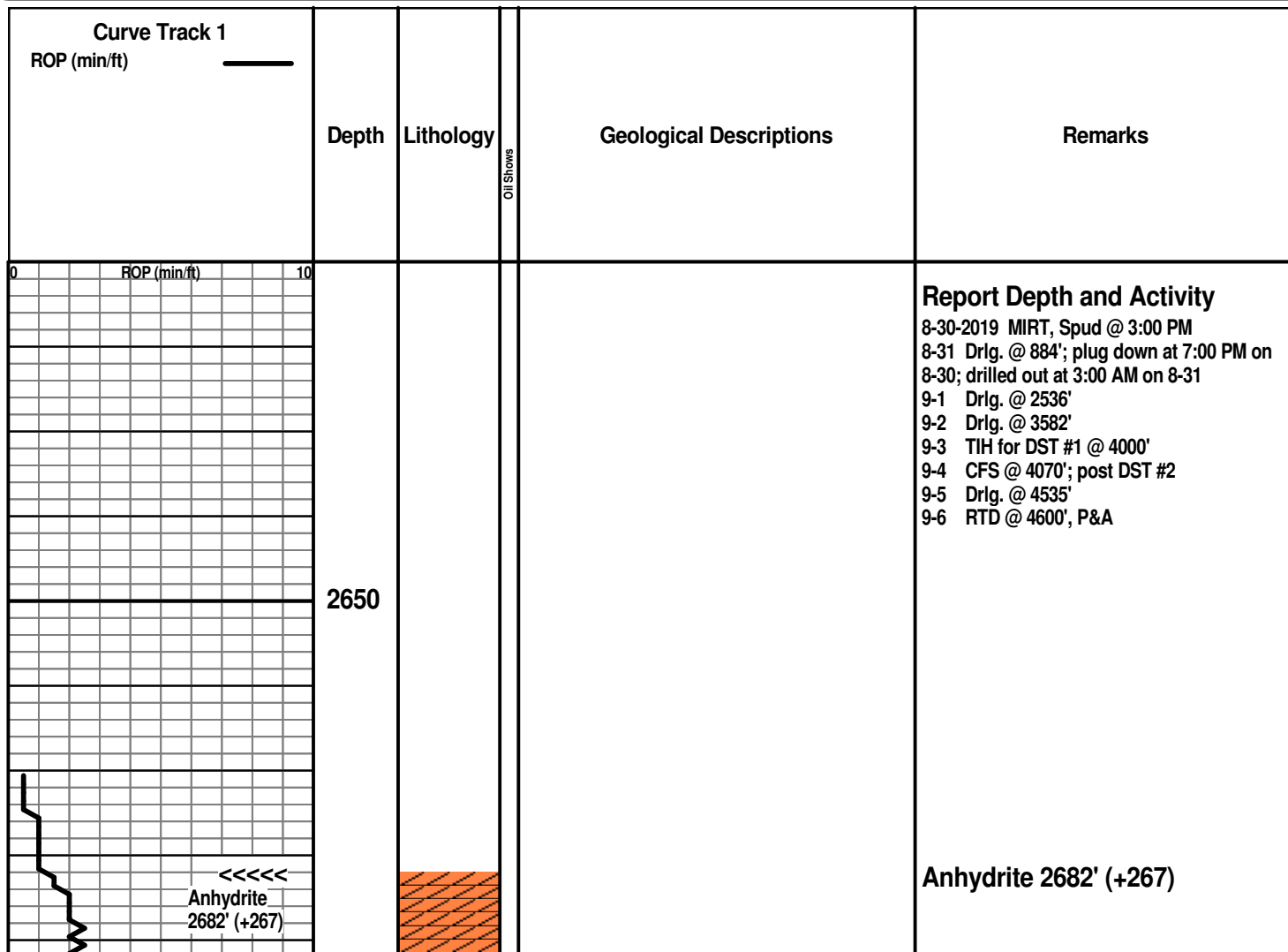
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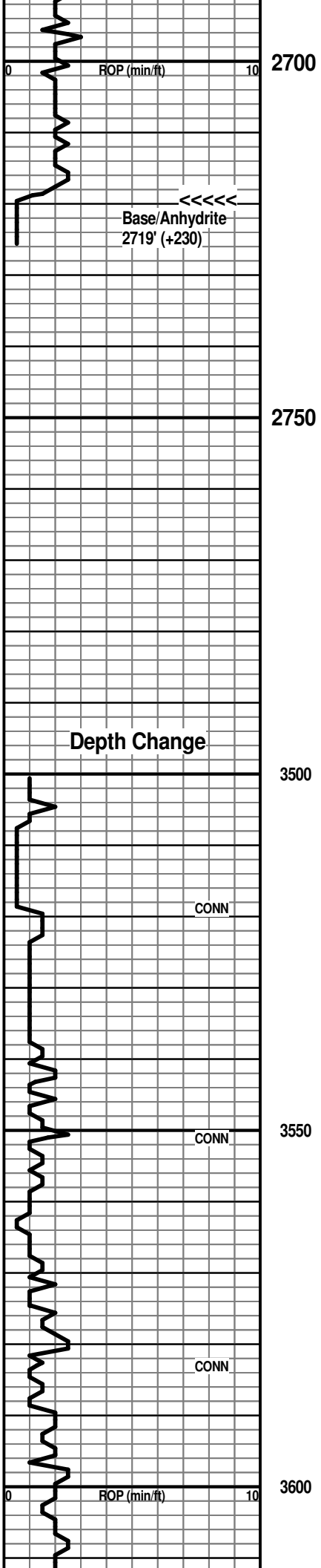
- Rft
- Dst top & bottom

OIL SHOWS

- Even
- Spotted
- Quest.

- Trace
- Dead
- Gas show

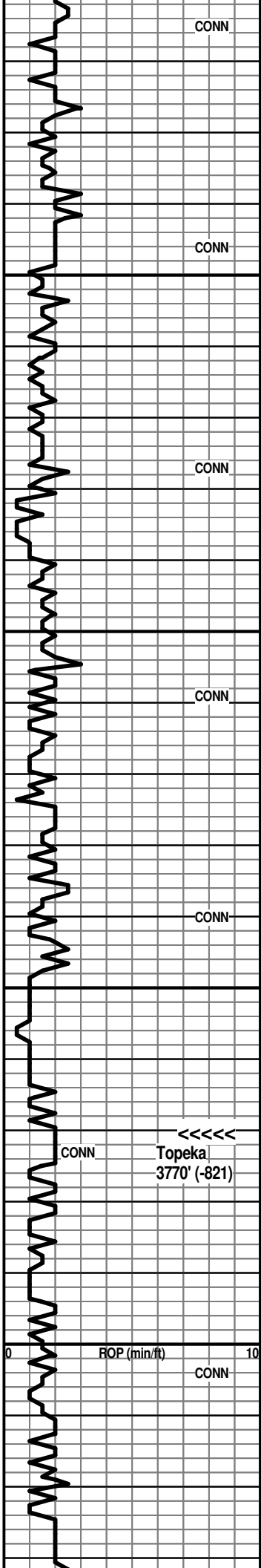




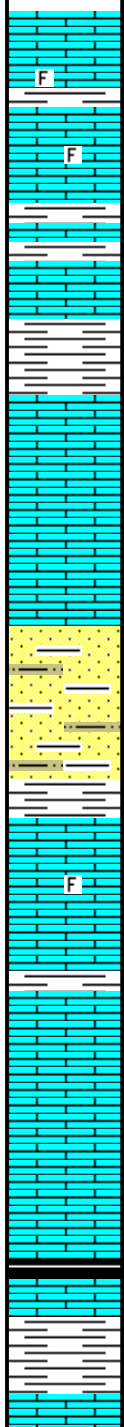
Base/Anhydrite 2719' (+230)

Geologist on location at 3180'

7:00 AM at 3582' on 9-2-2019
 MudCo Mud Check at 3584'
 7:30 AM on 9-2-2019
 wt vis wl pH chl
 8.7 50 8.8 11.5 500
 PV YP GelS lcm solids
 13 15 6/18 2# 3.6%



3650
3700
3750
3800



Ls: offwhite micxn, subchalky; tan mic-fnxln with some ppt and inter-particle por.; some tan gran/foss with inter-particle por., N.S.; Sh: interbedded gray and red

Ls: tan, lt brn foss/gran with some por. AA; lesser lt brn vfxln dense; Sh: incr. % AA

Ls: influx lt brn vf-cryptoxln, NVP; scatt. gray, med brn cryptoxln; some pink tinted shaly, dense; Sh: beds AA

Ls: various tan, lt gray, lt brn vf-cryptoxln; some gran with poor-NVP, N.S.; Sh: incr.% red

Ls: mix AA, occ white chalky; Sh: AA

Ls: offwhite, tan, some lt brn mic-vfxln dense; some tan gran with poor inter-particle por., N.S.; Sh: red-brn silty IP

Ls: various dense AA; Sh: streaks lt to med gray, red, red-brn

Sst: influx offwhite, lt gray vfg, sl micac.; red-brn silty shale and sandy siltst; Sh: dark red-brn, gray, lt green

very shaly mix AA with some new lt brn cryptoxln Ls

decr. Sh %; Ls: good influx tan, lt brn gran/foss with some inter-particle por.; lesser lt to med brn cryptoxln and occ white chalky, N.S.

Ls: tan, lt brn gran, poor-NVP; Sh: lt to med gray, red, red-brn (not abund)

Ls: flood offwhite, tan, lt gray mic-vfxln dense; lesser lt brn cryptoxln, N.S.

Ls: various dense AA; some gran with NVP; some white chalky

Ls: various dense AA with influx mottled med gray and med brn gran, NVP; Sh: scatt. black carb.

Ls: influx tan, offwhite, lt gray mic-vfxln dense; some white

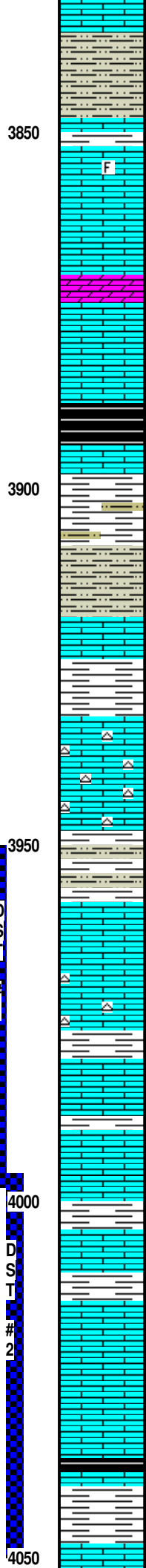
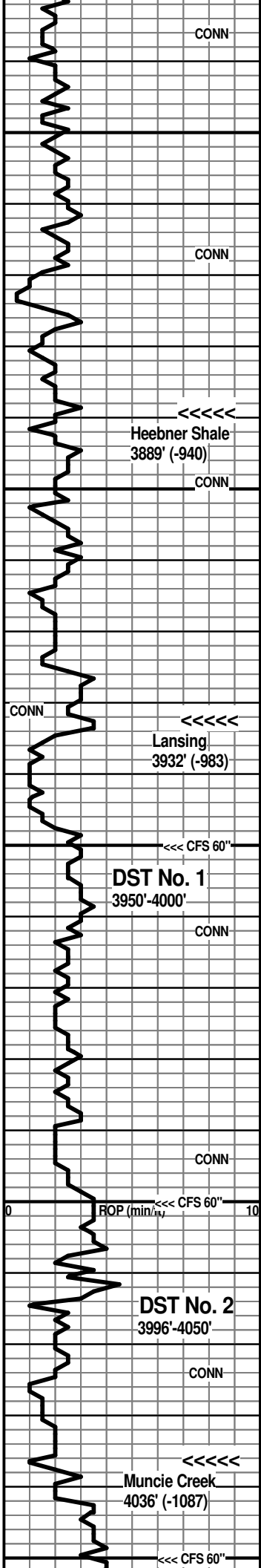
Start 10' wet and dry samples at 3700'

Topeka 3770' (-821)

vis 54 wt 8.8 lcm 2#

CONN
Topeka
3770' (-821)

CONN
ROP (min/ft)
CONN



subchalky to chalky, N.S.

Ls: various dense AA; influx Sst/Siltst: offwhite, lt gray, tan vsl micac., calcar.; Sh: incr. red, red-brn

Ls: various tan, lt gray, lt brn vfxln, gran and foss IP, poor-NVP; some mottled lt brn gran/foss, NVP; decr. Siltst AA; Sh: gray, red

Ls: flood offwhite, tan mic-vfxln dense, subchalky IP; lesser mottled red-brn gran, NVP; some white chalky

Ls: tan mic-vfxln dense AA, some fnxln; Dolo: tan fn-vfxln with some interxln and ppt por., N.S.

Ls: tan, offwhite mic-vfxln dense, subchalky to chalky IP; sl influx white chalky; decr. Dolo AA

Sh: black carbon.

Ls: flood med to dark brn cryptoxln

Ls: AA; Sh: good influx vc gray, black, red, red-brn, some green with Siltst: lt gray

flood Siltst: lt brn, red-brn, shaly and vf sandy IP; Sh: med to dark gray

Ls: good influx tan, offwhite mic-vfxln dense, subchalky and sl influx tan, lt gray vf-cryptoxln with poor-NVP with black pred. gilsonitic to tarry stain, nfo, no odor, no fluor., does cut (as expected)

Sh: flood red, red-brn, vc gray, black, silty red-brn; Ls: tan, offwhite dense and gray cryptoxln

Ls: flood offwhite chalky; strong influx mottled orange chert; other tan, lt brn gran Ls with ppt and some inter-particle por.; one chip in 40" CFS sample with trace brn stain, nfo, no fluor., no odor

Ls: pred. lt gray, lt brn cryptoxln; Sh: incr. % red-brn, gray

Sh: influx red-brn with Siltst: gray, lt red; Ls: tan, offwhite dense; gray, brn cryptoxln; 2-3 chips tan vfxln with spotty dead stain, nfo, no odor; occ gray cryptoxln, NVP with spotty dead stain

Ls: good influx tan mic-vfxln and tan gran with spotty dark brn stain, trace dark brn listless oil, nfo, no odor, no fluor., some inter-particle and vug. por.

Ls: flood offwhite, tan mic-vfxln dense, subchalky IP; scatt. offwhite chert; much decr. shows AA

Ls: very pred. tan, lt gray, offwhite mic-vfxln dense, subchalky IP; some vf-cryptoxln, NVP, N.S.; sl influx red-brn, red, occ brn shales

Ls: mix AA with influx lt to med brn, gray cryptoxln NVP, N.S.; minor shale mix AA

Ls: various cryptoxln AA; 3-4 chips tan vf-cryptoxln with spotty brn stain, nfo, no odor

Sh: red, red-brn, med to dark gray, occ green; Ls: influx tan, offwhite gran with inter-particle and vug por. with brn oily stain, trace dark brn listless oil, no odor

Ls: offwhite vfxln, silty and tan, offwhite fn gran, poor-NVP; lesser white chalky, N.S.; Sh: mix AA, decr. %

Ls: flood white chalky and tan, offwhite mic-vfxln dense, N.S.

Ls: mix AA with influx lt to med brn, gray cryptoxln, NVP, N.S.; 3 chips tan gran with inter-particle and vug por. with dark brn oily stain, trace dark brn oil, quest. odor, (cavings?); Sh: some dark gray to black carbon.

Ls: mix AA with Sh: influx red, red-brn, soft to firm

Ls: lt gray, med brn cryptoxln and tan, offwhite mic-vfxln dense; Sh: AA, lt gray

Heebner Shale 3889' (-940)

vis 51 wt 9.0 lcm 2#

Lansing 3932' (-983)

DST No. 1 Lansing "C" and "D"
Interval: 3950'-4000'
Times: 30-45-30-60
IFP: weak blow built to 1 1/4 inches
ISIP: no return blow
FFP: weak surface blow, built to 1/4 inch
FSIP: no return blow
Recovery: 91' OSM (3%o, 97%_m)
FP: 18-37/41-51 SIP: 1124-1118
HP: 1974-1904 BHT: 126 deg. F

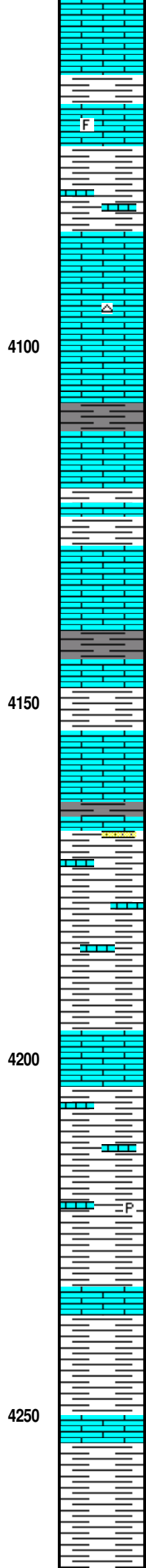
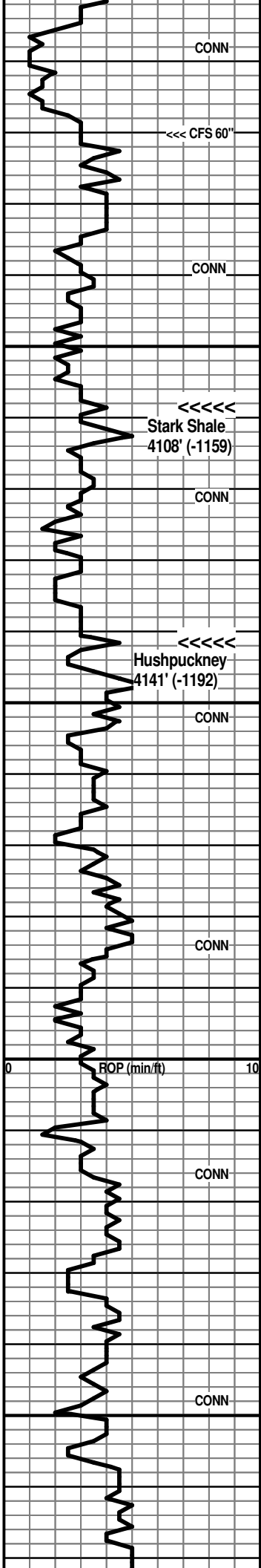
Pipe strap at 4000' was .02' long to board

7:00 AM at 4000' on 9-3-2019

MudCo Mud Check at 4000'
8:00 AM on 9-3-2019
wt vis wl pH chl
9.0 54 8.0 11.0 1000
PV YP GeIS lcm solids
19 15 10/24 1# 4.6%

Muncie Creek 4036' (-1087)

DST No. 2 Lansing "F" and "G"
Interval: 3996'-4050'
Times: 15-60-15-60
IFP: 1 inch blow at open, BOB in 7 minutes, built to 24 1/4 inches



Ls: flood tan vfxln dense and flood white chalky, N.S.; Sh: more dark gray

Ls: influx med brn cryptoxln

Ls: mix tan, offwhite mic-vfxln dense, occ foss.; lesser lt brn cryptoxln to gran IP, NVP, N.S.; Sh: dark red-brn, dark red-maroon

Ls: more tan, lt gray gran, NVP

Ls: various tan, lt brn, gray cryptoxln to gran IP; Sh: mix AA with more dark red-maroon

Ls: pred. tan, lt gray mic-vfxln dense; lesser tan cryptoxln; 2-3 chips tan gran with spotty black dead stain, trace minute oil on break, no odor, nfo, tight; Sh: persistent red-brn dark red-maroon; scatt. offwhite opq chert

Ls: pred. tan vf-cryptoxln, NVP; 2-3 chips tan more fnxln, poor to NVP, with spotty brn stain, nfo, no odor (slough?); Sh: dark gray

Ls: mix tan, lt gray vf-cryptoxln; flood offwhite, tan mic-vfxln dense, N.S.; 2-3 chips with spotty brn stain, nfo, no odor, poor-NVP

Ls: mix lt gray, tan gran, NVP; lt gray, offwhite vfxln dense; 1-2 chips with spotty stain, nfo, no odor; Sh: dark red-brn, dark red-maroon, med to dark gray, grayish purple, silty dark red-brn

Ls: pred. tan, offwhite mic-vfxln; occ tan gran, poor-NVP; Sh: decr. % red-brn

Ls: dense AA; more tan, lt brn, lt gray gran, NVP, N.S.; occ med brn cryptoxln; Sh: incr. % med to dark gray, dark red-brn

Ls: various dense; more lt brn, gray cryptoxln

Ls: lt gray, tan gran, NVP; Sh: red-brn, lt gray, occ lt green; trace Sst: gray fg limy

Ls: offwhite, lt gray, tan gran and offwhite mic-vfxln dense; incr % Sh: red, dark red-brn, brn

pred. shale mix AA with various dense Ls's

Sh: red, red-brn, vc gray, silty IP, some pale green; Ls: beds of lt brn, lt gray cryptoxln; offwhite, tan mic-vfxln and some tan gran, N.S.

Ls: influx lt gray mic-vfxln dense; Sh: mix AA

predom. Sh: vc gray, red, red-brn with beds of various dense Ls's

shales with interbedded Ls's AA; some coarse gran dark brn Ls; occ shaly pyrite

flood Sh: vc gray, red, dark red-brn; decr. Ls %

Sh: red, red-brn, vc gray with Ls: beds of tan, gray cryptoxln to gran, N.S.

Sh: very pred. red, red-brn; lesser lt to med gray; Ls: minor med brn gran

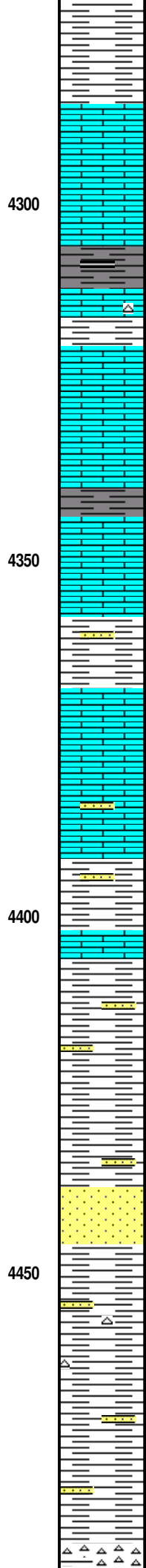
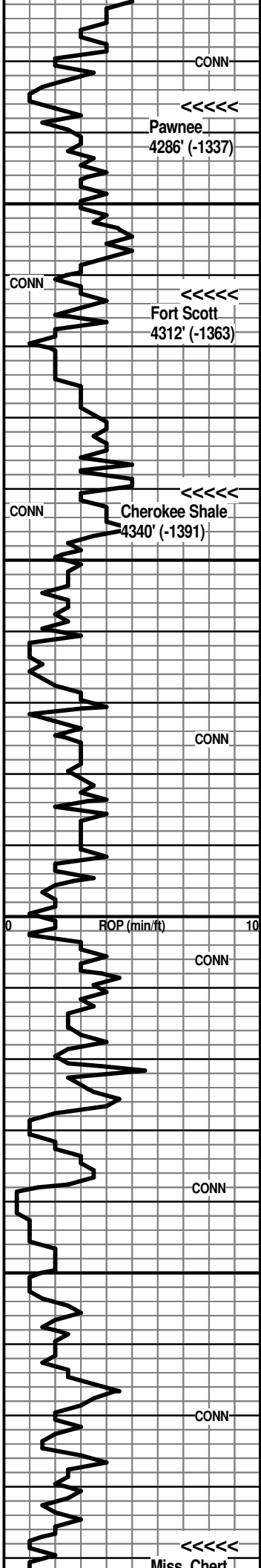
Sh: mix AA with some brn, yellow-brn; scatt. Ls's

ISIP: no return blow
 FFP: BOB in 7 minutes 45 seconds, built to 19 1/2 inches
 FSIP: no return blow
 Recovery: 172' HWCM (30w, 70m); 376' SWCW (9m, 91w), chl. 23,000
 FP: 49-175/178-272 SIP: 1315-1312
 HP: 2018-1965 BHT: 130 deg. F

7:00 AM at 4070' on 9-4-2019
 MudCo Mud Check at 4070'
 8:20 AM on 9-4-2019
 wt vis wl pH chl
 9.2 67 9.6 10.0 1500
 PV YP GelS lcm solids
 21 17 11/38 1# 5.9%

Stark Shale 4108' (-1159)

Hushpuckney 4141' (-1192)



Sh: various AA; Ls: some tan, gray, lt brn dense

4300' spl - flood Ls: tan gran, poor-NVP; offwhite, tan mic-vfxln, white chalky; some tan fn gran with ppt por. N.S.; Sh: still common mix AA

Ls: mix tan, lt gray cryptoxln and offwhite, lt gray mic-vfxln dense, subchalky IP, occ chalky; Sh: lesser % med to dark gray, dark red-brn

Ls: mix AA; Sh: AA, some dark gray to black

Sh: more dark gray, black carbon., pale gray mushy; Ls: new dark brn and gray cryptoxln; other dense AA, more chalky; scatt. tan chert

Ls: various tan, gray, brn cryptoxln to gran IP; offwhite, tan dense; Sh: incr. % vc gray, lesser red-brn

pred. Ls: tan mic-vfxln dense; lesser various brn, gray mottled dense; decr. Sh: pred. lt to med gray

Ls: various tan, gray, brn gran IP, some cryptoxln, NVP; Sh: incr. med to dark gray, dark red-brn

Ls: pred. tan, offwhite mic-vfxln dense; lesser med to dark brn, gray-brn cryptoxln to gran IP, N.S.; trace Sst: lt brn med grnd clusters, tight, N.S.

still pred. various dense Ls's AA; Sh: vc gray, some splintery, some red-brn, dark red-maroon, trace yellow-brn; occ Sst: lt brn med grnd, NVP, N.S.

Ls: more tan, brn, gray cryptoxln with mix AA; Sh: vc gray, red-brn, trace lt green; Sst: lt gray med grnd, quartzitic, occ clusters AA, N.S.

Ls: mix offwhite, tan mic-vfxln dense and offwhite, tan, lt brn gran, poor-NVP; some white chalky, N.S.; occ lt gray Sst AA; Sh: mix AA, trace yellow/green

pred. Sh: vc gray, red-brn, red-maroon, soft mushy red-brn; Ls: new lt to med brn, lt gray cryptoxln

30' spl - flood Sh: multi-colored (red, red-brn, red-maroon, vc gray, grayish purple, lt green, some mottled); scatt. Sst: lt gray fg, sl glauc. with imbedded Ls clasts

Sh: flood vc gray, gray-green; lesser red-brn, red-maroon

Sh: strong influx red-brn, vc gray AA

Sh: flood multi-colored (red-brn, red-maroon, vc gray, gray-green, scatt. yellow and mottled yellow-purple); scatt. quartz grains, lt gray med to coarse

Sh: flood red-brn, red-maroon; Sst: trace wht vfg, soft; trace lt brn fn-med grnd subrnd-rnd, tight, shaly IP, N.S.

Sh: very pred. dark red-brn, dark red-maroon; scatt. qtz singletons; scatt. vari-colored chert

Sh: very pred. AA; lesser vc gray, gray-green; scatt. offwhite fg Sst, calcar., friable, N.S.

Sh: AA; trace dark yellow and mottled yellow/red

Sh: mix AA with trace white fg soft Sst; scatt. gray shaly fg Sst

20' spl - flood Chert: white, yellow, dark yellow fresh, some

Pawnee 4286' (-1337)

Fort Scott 4312' (-1363)

Cherokee Shale 4340' (-1391)

MudCo Mud Check at 4562'
7:30 AM on 9-5-2019
wt vis wl pH chl
9.5 58 8.0 10.0 2000
PV YP GelS lcn solids
14 18 12/42 1# 8.3%

Miss Chert 4488' (-1539)

Miss. Chert 4488' (-1539)

CONN

4500

white tripolitic with ppt por., N.S.; Sh: mix AA decr. %

Chert: mix AA with flood Sh: vc gray, grayish purple, some splintery, decr. red-brn

Sh: pred. red-brn; various cherts AA; occ Ls: tan, lt brn cryptoxln

Miss. Lime 4516' (-1567)

Miss. Lime 4516' (-1567)

CONN

Ls: incr. % tan vf-cryptoxln, occ gran; common shales and cherts AA

60' spl - Ls: influx tan, lt gray cryptoxln and offwhite gran, some inter-particle por., N.S.; Dolo: tan, lt gray medxln with interxln and vug. por., N.S.; common cherts and shales

7:00 AM at 4535' on 9-5-2019

4550

mix Ls's and Dolo AA, still cherty

Dolo: offwhite, gray, tan fnxln to cryptoxln; Ls: offwhite mic-vfxln dense

CONN

influx Ls: offwhite, tan mic-vfxln subchalky to occ chalky; lesser tan gran.; much decr. Dolo and chert

Ls: AA with scatt. Dolo and chert

Ls: pred offwhite, tan mic-vfxln dense, subchalky; some gran subchalky; scatt. offwhite opq chert and Dolo

4600

After review of samples, DST results and Elog evaluation, the decision was made to plug the #1-23 Schmaderer as a dry hole.

RTD reached at 9:45 AM on 9-5-2019
CFS 60" - short trip - CTCH 1.5 hours
Drop survey - TOFL

Respectfully submitted,

Wesley D. Hansen
Petroleum Geologist
Kansas License No. 418

RTD 4600' (-1651)
LTD 4600' (-1651)

ROP (min/ft) <<< CFS 60" 10