

COMPANY Berexco LLC
 LEASE RA NO. 2-6
 LOCATION 1800' FSL + 1780' FWL
 SEC. 6 TWP. 29S RING. 40W
 COUNTY Stanton STATE Kansas
 FIELD Arroyo Northeast

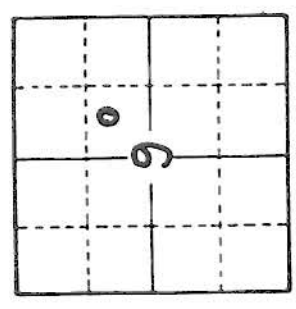
ELEVATIONS
 KB 3333
 DF 3331
 GL 3321
 MEASUREMENTS ARE ALL FROM KB

CONTRACTOR Berexco Drilling Rig #1
 COMM. 8-11-2016 COMP. _____
 RTD _____ LTD _____
 No. of DST'S _____ No. of CORES _____

GAISING RECORD
 898' of 1702' w/ 730 SX.
 EL. LOG ACT RES. SPGR
 Der. Alents GR. Caliper
 M.L. Sonic

SAMPLES SAVED FROM 3500 TO TD
 DRILLING TIME KEPT FROM 3500 TO TD
 SAMPLES EXAMINED FROM 3500 TO TD
 GEOLOGICAL SUPERVISION FROM 3500 TO TD
 GEOLOGIST ON WELL Edwin H. Grievens

FORMATION TOPS	SAMPLE	LOG	SUBSEA
<u>Base Hechmer</u>	<u>3707</u>		
<u>Kansing</u>	<u>3766</u>		
<u>Marionston</u>	<u>4365</u>		
<u>Ft. Scott</u>	<u>4542</u>		
<u>Morrow Fm</u>			
<u>St Genevieve</u>			
<u>St. Louis</u>			
<u>TD</u>			



APT #15-187-21332

REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 3500 feet to total depth.

*Thank you
 Edwin H. Grievens
 Geologist*

LITHOLOGY
 SANDSTONE
 LIMESTONE
 SHALE
 CHERT

SILTSTONE
 DOLOMITE
 GRANITE WASH
 ANHY & GYP

CHROMATOGRAPH
 HOT WIRE BY
 TOTAL GAS VOLUME

C1 = METHANE
 C2 = ETHANE
 C3 = PROPANE
 C4 = ISOBUTANE
 C5 = BUTANE
 C6 = ISOPENTANE
 C7 = PENTANE

SANDSTONE
LIMESTONE
SHALE
CHERT

SANDSTONE
DOLOMITE
GRANITE WASH
ANNY & GYP

HOT WIRE BY
TOTAL GAS VOLUME

C4 = ISOBUTANE
C5 = BUTANE
C6 = ISOPENTANE
C7 = PENTANE

DRILL TIME
SCALE
5 10 15

SAMPLE DESCRIPTION

GAS SCALE

10 100 1000

Interbedded Limestones
 ① Faster Drly. Lms. trs. to ext. tan. wht. to crm. chlk + lt. tan to tan, grayish. IP's; crypto to v. vfn. xln.; trs. sub-chlk, sub-sucro to v. sucro.; trs. to zbn. phantom oolites for trs. to zbn. oolites IP's; dul. lt. yel. fluor.; No Cut; zbn. pr. to fr. + hv. trs. gd. to excel. micro-pp por + prob. inter v. por.
 ② Slower Drly Lms. tanish lt. gray, grayish. tan to tan; crypto. to v. vfn. xln.; trs. sub-chlk, sub-sucro + packstn; dul. yel. to dul. lt. yel. fluor.
 No Cut; No Vis Porosity

3600

Base Heebner
3707-374

3700

— Sh v. dk. gray to black-carb —
 Lms. trs. wht. to crm. chlk + crm. to lt. tan; crypto. to v. vfn. xln.; sub-chlk sub-sucro. to trs. sucro.; dul. yel. to dul. lt. yel. fluor.; No Cut scattered trs. v. pr. micro-pp por
 Lms. med. to lt. gray-shly. to grayish tan to tan; crypto to vfn. xln.; trs. sub-chlk + or shly. sub-sucro + packstn.; dul. yel. fluor. IP's; No Cut
 No Vis. Porosity

Cl

Cl

3700

Sh v. dk. gry. to black - carb

3707-374

Lms. tes. wlst. to crm - chlk + crm. to
H. tan; crypto. to v. v. fn. xln. subchlk
sub-sucro. to tes sucro. dul. yel.
to dul. H. yel. fluor. No cut
scattered tes. v. pr. micro-pp por

Lms. med. to lt. gray - shly. to grayish tan
to tan; crypto to v. v. fn. xln. subchlk
or shly. sub-sucro. + packstn. ;
dul. yel. fluor. IP's; No cut
No Vis. Porosity

sh. H. to med. + tes dk. gry. ;
slit to extaly calc

Lansing Fm
3766-433

Interbedded Limestones

3800

① Slower Drlg. Lms. H. to med. gry
slit to faly shly to tan; crypto
to v. v. fn. xln. ; sub-chlk or shly
sub-sucro. packstn to TRS.
sub-lithogr. ; scattered tes to
TRS. phantom, oolitic to oolitic
IP's; dul. yel. fluor. ; No cut;
No Vis Porosity

② Faster Drlg Lms. tes. wht. crm to
tan-chlk + grayish tan to tan
crypto to v. v. fn. xln. ; subchlk
sub-sucro to sucro + tes
packstn. ; slit to faly. phantom
oolitic to oolitic IP's; dul. yel. to
dul. H. yel. fluor. ; No cut
scattered TRS to hvy tes.
PR. to TR. micro-pp por. +
poss. interalu por. IP's

③ tes. chert gry to tan; opaque

3900

Lms. faly. to extaly. wht. to cem chlk. +
grayish tan to tan. crypto. to v. v. fn.
xln. ; tes sub-chlk, sub-sucro to
v. sucro + tes packstn. ; slit to faly
oolitic or phantom oolitic
slit to faly or autom oolitic

Lms. faly. to extly. wht. to cream chlk. +
 grayish tan to tan; crypto. to v. utn.
 xln.; trs sub-chlk, sub-succo to
 v. succro + trs packsta, slt to faly
 oolitic / or phatom oolitic / or
 slt to faly phatom oolitic to
 trs oolitic; dul yel to yel.
 fluor; No cut; abn pr, fr, gd to
 excel micro-pp interxl por
 w/huy trs to abn pr to fr + tr
 gd oolitic por

4000

C1

Lms. lt. to med gray slt to v. shly,
 + grayish tan to tan; sub-chlk / or shly
 sub-succro + packsta; trs dul yel
 fluor. IP's; No cut; No vis por

Interbedded Limestones

① Faster Drlg. Lms. huy tan. to
 extra abn. wht. to cream-chlk. +
 cream, lt. tan to tan; crypto. to v. utn.
 xln.; v. to extly. oolitic
 + or frly. to v. oolitic; matrix
 sub-chlk. sub-succro. + packsta
 dul. lt. to yel + dul yel to yel. fluor
 No cut; abn pr, fr, gd to excel
 oolitic por. + trs pr to pr
 micro-pp por. IP's; Quest Perm.

4100

② Lms. lt. to med. gray slt to v. shly
 + grayish. tan to tan; crypto. to
 v. v. tan xln.; sub-chlk. / or shly,
 sub-succro. + packsta; trs dul.
 yel. fluor. IP's; No cut
 No vis por

C1

4200

4200

Lms. lt. med. to tan dk gray to
v. dk. gray. - sli to very shly
w/ tan. tanish gray, grayish tan
to sli trs tan; Crypto to trs
v. v. fin. l. j sub-chlk for shly;
sli trs. sub-sucro + packstr. j
v. sli trs. dul. yel fluor. IP's
No cut; No vis porosity

C1

C1

Sh. lt. med. dk to v. dk gray
extrly. calc grading to shly. lms.

Marmaton
4365-1032

Lms. trs. wht. to cream-chlk +
lt. gray, CRM to tan; crypto. to
v. v. fin. l. j sub-chlk, sub-sucro,
to tan sucro, packstr and tan.
sub-litho gr. j dul. yel to dul. lt.
yel. fluor. IP's; No cut;
No vis por

4400

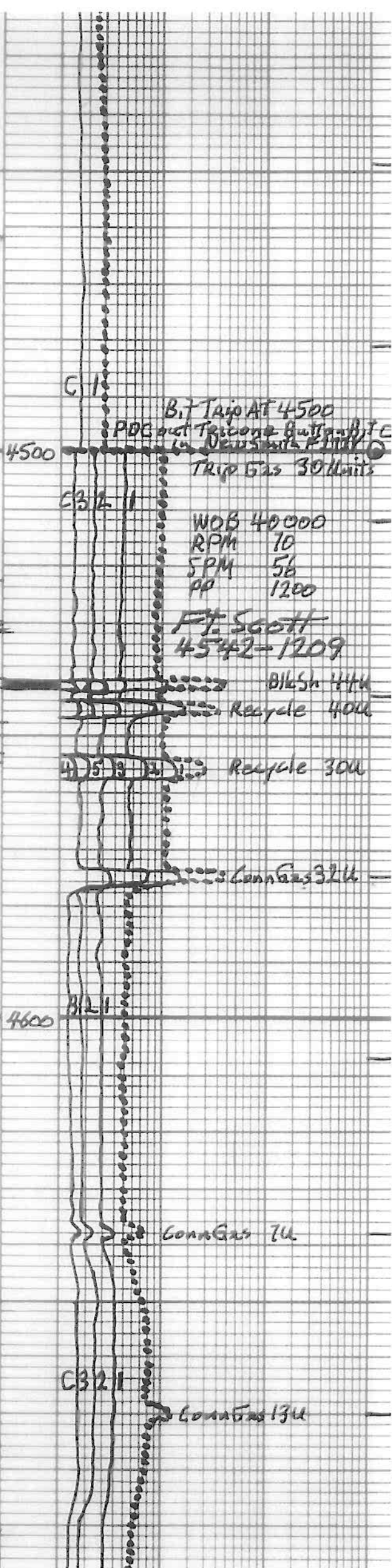
Lms. extra. abn. wht to cream-chlk + ft. tan
to tan; grayish. IP's; crypto. to v. v. fin. l.
sub-chlk, sub-sucro to sucro + packstr.
trs to huy trs. sli to v. calc. str. or trs
to huy trs. sli to v. calc. str. dul. lt.
yel. fluor. IP's; No cut; huy trs pte
to micro-ppt to intergr. p. p. r.
trs to huy trs, p. r. to v. calc. str.
por; Quest. Perm in calc. str.

- 4418-4462 Interbedded Lmsts
- (1) Faster Dely Lms. similar
4402-4418
- (2) Slower Dely Lms. similar
4365-4402

tas to hv. tas, pp to cr. calc. sh.
por; Quest. Perm. in calc. sh.

4418-4462 Interbedded Lms
① Faster Delg Lms. similar
4402-4448
② Slower Delg Lms. similar
4365-4402

Lms. lt. to med. gray. tanish lps
crypto to v. v. xln. sl. tas.
sub-sucrot + packstn; sl. tas
w/ dul. yel. fluor.; No cut;
No vis por.



4523-32 Lms. hv. tas. wbt. to crm chlk
+ crm to tan; crypto to v. v. xln.;
chlk, sub-chlk, sub-sucrot to sucrot
+ tas packstn. i. phant. oolitic lps to
oolitic lps. tas. f. dul. lt. yel. fluor.
No cut, No vis por; tas. chert; ta. q. p. p.
Lms. similar 4462-4523

Sh v. drk. gray to black carb
Sh. med to v. drk gray; extaly. calc.
grading to shly lms

Lms. w/ chert similar 4523-4532

4555-4905 Interbedded
Limestones and Shales

① Lms. sl. tas. wbt. to crm chlk lps
+ lt. gray. grading to tan; crypto
to v. v. xln.; chlk, subchlk,
sub-sucrot + packstn. i. phant.
oolitic to oolitic lps;
dul. lt. yel. lps to tas. lt. yel. fluor.
No cut; No vis por.

② Lms. lt. med to drk. gray-sl. to
extaly. shly. lps, grading to
calc shs. crypto. xln.; subchlk
+ / or shly. i. packstn + sub. lithoge

NO LAB, NO VIS. POR.

① Lms. lt. med to drk. gray-sli. to
extly. Shly. IP's, grading to
Calc Shs. crypto. xln.; subrotlle
+ or Shly. packsta + sub-lithoge
TAS. w/ dil. yel. fluor.; No cut
No Vis. POR.

② Sh. lt. med. drk to v. drk. gray
+ trs black; v. to extly. calc. IP's
grading to extly Shly Lmsts

4700

Conn Gas BU

Conn Gas BU

Conn Gas 12U

4800

B21

3 2 1 Conn Gas 18U

4900

Interbedded Limestones and
Shales similar 4555-4905
with zbn. interbeds
Shs. v. drk. gray to black-carb.

Blk Sh 19U

Blk Sh 18U

Blk Sh 22U

Interbedded Lmsts + Shales

- ① Lms. sl. tas. wht, crm to tan-chlky IP's + H. gray to tan; crypto. to v. f. xln. sub-chlk, sub-sucro + packstn. + 25 w/phatom oolites + foss. frags tas. w/dul. lt. yel. fluor; No Cut; No Vis Por.
- ② Lms. lt. med. to drk gray-sli. to extrly shly. gradng to cak. Shs. crypto. xln. sub-chlk to shly; packstn + sub-lithagr.; sl. tas v. dul. yel. fluor; No Cut; No Vis Por.
- ③ Shs. med, drk to v. drk. gray very to extrly Calc gradng to extrly shly. Lmsts
- ④ Shs v. drk gray to black-carb.

← Log Pick Morrow Fin Top →

Sh. med. gray., soft w/silky luster IP's + drk. gray. splintery IP's; tas pyrite; w/ tas to huytas thin interbeds Lms. lt. to med. gray. gradng to tan; crypto. to v. v. f. xln.; tas sl. to v. foss.; sub-sucro., packstn. to sub-lithogr.; tas dul lt. yel. fluor. IP's; No Cut; No Vis Por + v. sl. tas. siltstn. lt. gray to wht. + lt. green from glauc. + forchlorite dense, tight + hard; No fluor; No Cut; No Vis. Por Lmsts siltstn decreasing w/ depth

Blk Sh 184

Blk Sh 224

Blk Sh 304

5000

WOB 4000
RPM 70
SPM 56
PP 1100
WOB 3500
RPM 65
SPM 56
PP 1100

Morrow Fin
5036-1703

Blk Sh 274
Blk Sh 344

Morrow Sh
5082-1709

Poss Show
any of 1100
Count 25

5200

5200

5270-5357 Sh. med. gray, soft to v. soft + mushy w/ silky luster to drk. gray soft to splintery w/ sl. tzs. v. thin interbed sh. 1/4" to med. gray grading to tan; crypto to v.v. fn. sh. packsta to tzs. sub-lithogr. No fluor No cut; No vis por

5300

A 5357-5397 Lms + Qtz Sdst 60% is 100% Lmgas grading to 5 to 10% being 100% Qtz grs. in faster dalg. Lms. H. gray to tan; v. fn. to med. + tas. coarse grs.; composed Lmgas, oolites + foss. fragm; grs. sub-sucro. to tessu. co. + packsta.; sl. to faly glauc or chloritic IP's; No fluor. No cut No vis por And Qtz Sdst. H. gray to tanish H. gray, greenish IP's from being sl. to faly glauc or chloritic IP's; v. fn. to v. fn w/tes. to med + sl. tzs coarse grs.; ang to tes sub-ang; pr to fr. sort; soft for lms filled; No fluor; No cut; v. sl. tzs. pr. micro-pp por. IP's

WOB 38000
RPM 70
SPM 56
PP 1100

MORROW L
5357-202

A

B. Sh. med. gray, soft, abn. w/ silky luster + abn. drk. gray, very splintery

C 5426 - Qtz Sdst H. gray, whitish gray to tanish gray, greenish IP's fr. m. tas to abn. glauc, or chlorite; v. v. fn to fn. gr. w/ huy tas. (slower dalg) to zon. (faster dalg) med to coarse gr. tas. Lmgas. + foss frag in slower dalg ang w/ tas. sub-ang. to sl. tas sub-ridg pr. to fr. sort; fr. oil oolite; tas pyr. IP's; No fluor. wet to huy tes yel. to yel. dry. fluor when air dried; flush. to good stem cuts IP's to good ring cuts IP's. slow dalg tas to huy tas pr to tes. fr. micro-pp to intergr. por; faster dalg. huy tas. to tes + fr. micro-pp to intergr. por; faster dalg. has abn loose Qtz gas

5400

MORROW K-1 SH
5426-2099

Show 686

Show 630

DST # 1
see below

C

C 45 321

4 5 3 2 1 Trip 629 156

DST # 1

see below

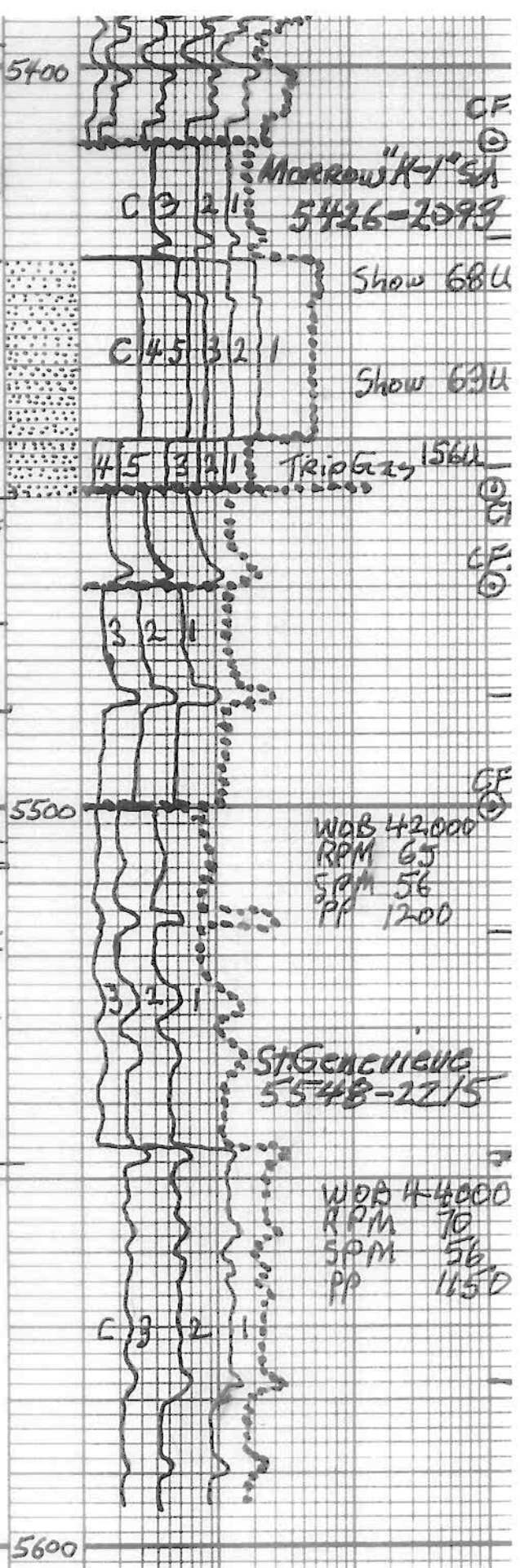
whish. gray. - tanish gray, greenish
 IP's from. fast to abn. glauc. or
 chlorite; v.v. to tota gr. w/
 hv. tas. (slower dalg) to con.
 (faster dalg) med to coarse gr.
 Trs. Lm gas. + fess frag in slower dalg
 ang w/ tas. sub-ang. to sil. tas sub-ridel
 pr. to fr. sort; fr. oil ader; tas
 pyr. IP's; No fluor. wet to hv. tas
 yel. to yel. d. n. chl. fluor when
 air d. rich; flush. to qd stem
 cuts IP's to good ring cuts IP's.
 slow dalg tas to hv. tas pr. tota. fr
 micro-ppt to intergr. por;
 faster. dalg. hv. tas. tota + tas qd
 micro-ppt to inter. gr. por; faster dalg.
 has abn loose Qtz gas

Sh med gray, soft w/ silky luster
 IP's w/ tas. laminations + v. thin beds
 wht, dense, rite + hard and Qtz sdsst
 similar to slower dalg 5426-5428
 5426 - 5428 No fluor, No cut
 No vis por No show

Sh med gray, soft w/ silky luster IP's
 w/ hv. tas. laminations + v. thin beds
 siltst. wht, dense, rite + hard +
 Qtz. sdsst similar to slower dalg 5426-5428
 No fluor, No cut, No vis por No show
 verigated km + sh conglomerate
 sh. gray, reds, + trs greens

Lms. gray, tan, reds + trs grn, crypto
 to v. u. n. i. tas sub-succo. padest.
 + tas sub-dithog. + abn. micro-oolitic
 sil. Qtz sh. - v. f. n. gr. - ang.; No fluor
 No cut; No vis por

Lms. w/ prob interbeds Shs
 Lms. grayish tan to tan, redish IP's
 crypto to v. u. n. x. n. i. abn
 micro-oolites + sil. to taly.
 Qtz sdy - v. f. n. gr. - ang.; matrix
 chlk, sub-chlk, sub-succo;
 trs chert orange appne
 No fluor, No cut; No vis por
 w/ prob thin beds sh. med to dk
 gray w/ trs reds + greens



Kelly Short

Mud Info.

Date	8-16 10:45A	8-17 7:55A	8-18 12:46P	8-19 10:45A	8-20 12:25P	8-21 10:20A
Depth	3368	4481	4732	5022	5360	5457
WT.	9.15	9.25	9.4	9.0	9.3	9.4
Vis	34	53	51	55	64	74
PV	4	16	16	18	18	20
YP	4	18	17	17	22	23
GS	4/5	17/50	16/47	17/54	19/59	19/59
WL	N/C	8.4	8.4	8.0	8.4	8.8
Cake	-	1/32	1/32	1/32	1/32	1/32
pH	7.0	9.5	9.5	9.0	9.0	9.0
chl	7700	2900	3300	2300	1400	2300
Ca	HVY	20	20	40	80	60
LCM	2	9	9	13	18	16

OPERATOR Berexco LLC LOCATION 1800' FSL + 1780' FWL
 LEASE RA NO. 2-6 SEC. Sec 6 TWP. 29S RANG. 40W
 ELEVATION 3333 KB RTD COUNTY Stanton STATE Kansas