

COMPANY Berexco LLC WELL
 LEASE Timothy NO. 2-16
 LOCATION 1644' FSL + 351' FWL
 SEC. 16 TWP. 22S RNG. 34W
 COUNTY Finney STATE Kansas
 FIELD Wildcat

ELEVATIONS
 KB 2969
 DF 2967
 GL 2957

MEASUREMENTS ARE ALL FROM KB

CASING RECORD
878' of 1700 w/ 775 SX.
 ___ of ___ w/ ___ SX.
 ___ of ___ w/ ___ SX.
 ___ of ___ w/ ___ SX.

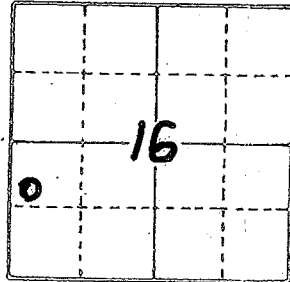
EL. LOG AR. IND. SP. GR
DENNELT GR. CALIPER
ML. SONIC. DIPMETER

CONTRACTOR Beredco Drig Rig #1
 COMM. 6-5-2014 COMP. 6-23-2014
 RTD 4850 LTD 4847
 No. of DST'S 5 No. of CORES None

SAMPLES SAVED FROM 2400 TO TD
 DRILLING TIME KEPT FROM 2400 TO TD
 SAMPLES EXAMINED FROM 2400 TO TD
 GEOLOGICAL SUPERVISION FROM 2400 TO TD
 GEOLOGIST ON WELL Edwin H. Grieves

FORMATION TOPS

	SAMPLE	LOG	SUBSEA
<u>Reider</u>	<u>2525</u>	<u>2521</u>	<u>+ 447</u>
<u>Base Heebner</u>	<u>3766</u>	<u>3772</u>	<u>- 803</u>
<u>Lansing Fm</u>	<u>3811</u>	<u>3826</u>	<u>- 857</u>
<u>Kansas City "A"</u>	<u>4142</u>	<u>4138</u>	<u>- 1169</u>
<u>BKC</u>	<u>4258</u>	<u>4256</u>	<u>- 1287</u>
<u>Marmaton Fm</u>	<u>4286</u>	<u>4282</u>	<u>- 1313</u>
<u>Pawnee</u>	<u>4371</u>	<u>4364</u>	<u>- 1359</u>
<u>Ft Scott</u>	<u>4399</u>	<u>4396</u>	<u>- 1427</u>
<u>Cherokee Fm</u>	<u>4414</u>	<u>4410</u>	<u>- 1441</u>
<u>Morrow</u>	<u>4628</u>	<u>4610</u>	<u>- 1641</u>
<u>Mississippi</u>	<u>4691</u>	<u>4690</u>	<u>- 1721</u>
<u>St Louis "C"</u>	<u>4711</u>	<u>4711</u>	<u>- 1742</u>
<u>TD</u>	<u>4850</u>	<u>4847</u>	



API# 15-055-22311

REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 2400 feet to total depth.

Thank you for
 Edwin's
 Geo log

C1 = METHANE
 C2 = ETHANE
 C3 = PROPANE
 C4 = BUTANE
 C5 = PENTANE
 C6 = HEXANE

LITHOLOGY
 SANDSTONE
 LIMESTONE
 SHALE
 GYPSUM
 SLTSTONE
 DOLOMITE
 GRANITE WASH
 ANHY & GYP
 CHRONOLOGICAL
 HOT WIRE BY
 TOTAL GAS VOLUME

DRILL TIME SCALE
 SAMPLE DESCRIPTION
 GAS SCALE

CAJORENTI

WENT 8 011

WENT 8 011

DRILL TIME SCALE

SAMPLE DESCRIPTION

GAS SCALE

5 10 15

2400 2500 2600

10 100 1000

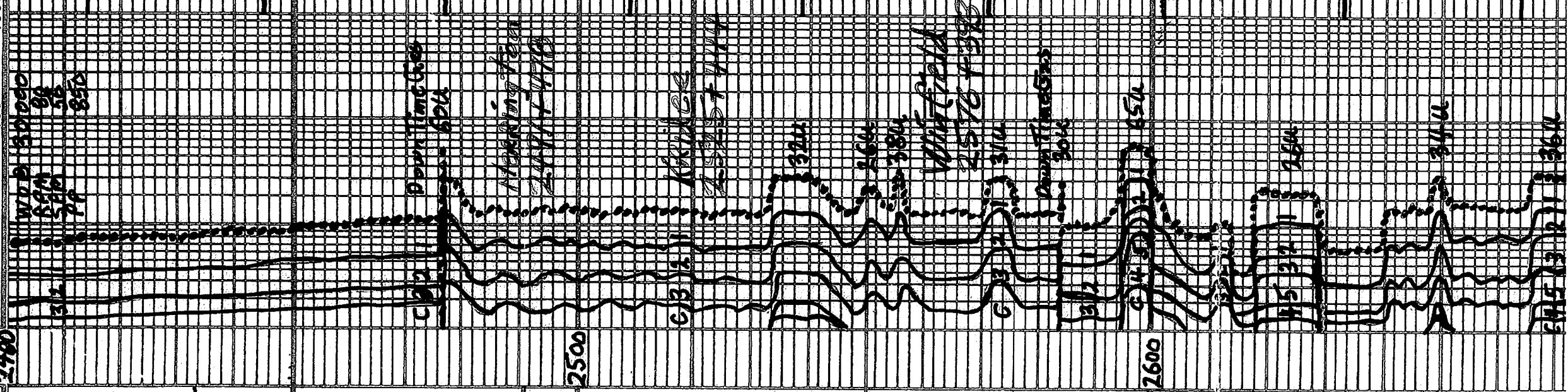
Dol w/w ater & Native Mud

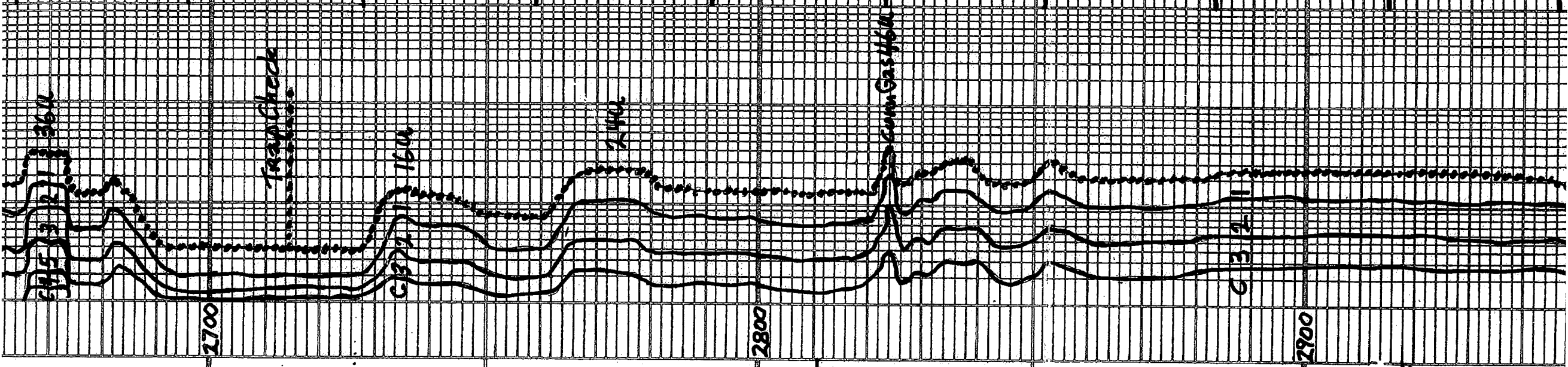
Interbedded Anhydrite, Gypsum & Shales
① Anhy. & Gyp. gry. to wht. crypto. to v. v. fn. xln. & massive xln. dual yellowish. wht. to whitish. yel. fluor. No cut. No Vis. for
② Sh. lt. gray, silty for sl. to very dolomitic IP's w/ Extr. abu. callings from above orange to brick red shs; sl. to earthy silty IP's

Interbedded Dolomites & Shales

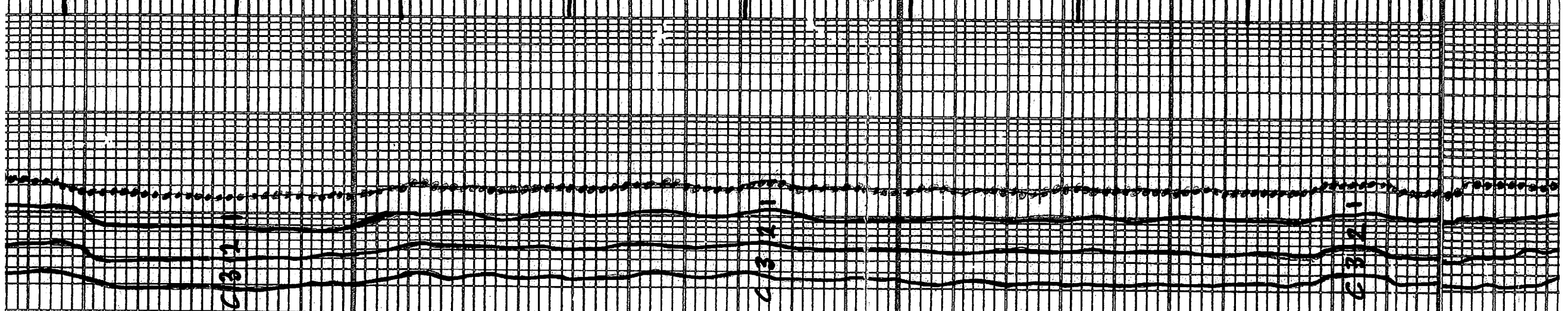
① Faster Drlg. Dolo lt. gray to tan v. v. fn. xln.; sub-sucro. to extely sucro; dup. n. to lt. yel. fluor. No cut; abu. pr. fa. gd. to excel. P.A. micro-pp & inter xln por
② Slower Drlg. Shly. Dob. lt. gray; v. to extely Shly. crypto to tes. v. v. fn. xln.; sub-chalk for Shly.; tan. sub-sucro. + packed str. w/ dual lt. yel. fluor. IP's; No cut. No Vis for

③ Sh. lt. to med. gray; shly. to extely. dolomitic IP's





Intercorrelated Dolomites & Shales
 similar 2491-2811 becoming
 sli. to extraly. Calc IP's
 with interbeds becoming
 Dolomitic limestones and
 Shales becoming sli. to extraly
 Calc IP's as well



C312

C311

C310

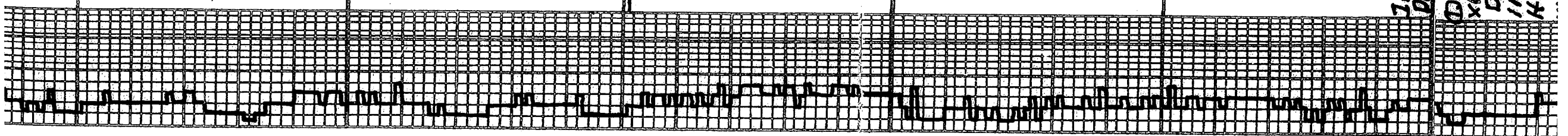
3000

3100

3200

Interbedded and/or Gradational
Dolomites, Limestones, Shales & Siltstones

D. Dolo. lt. gr. To tan, gray to v.v. fa
Xln. Sh. l. var. calc. IP's grading to
Dolo. Sh. for L. my. Dolo. subch. sh. sh.
IP's to sub-succro to succro + packstn
H. to brct. H. yel. fluor. IP's. No. Cut. j



Dolo. Shls for Lmy. Dolo., sub-shaly shly
 IP's to sub-sucro to sucro + packstn
 H. to brt. H. yel. fluor. IP's. No cut.
 with individual beds w/ huytes
 PR. to text. tes. gd. micro-pp and
 inter. sh. por.

① Lms. tes. to abn. wht. to com. ch. lls
 and ellm. to tan. grayish IP's.
 sl. to v. dolo. IP's to v. shly
 IP's; crypto. to v. v. shly.

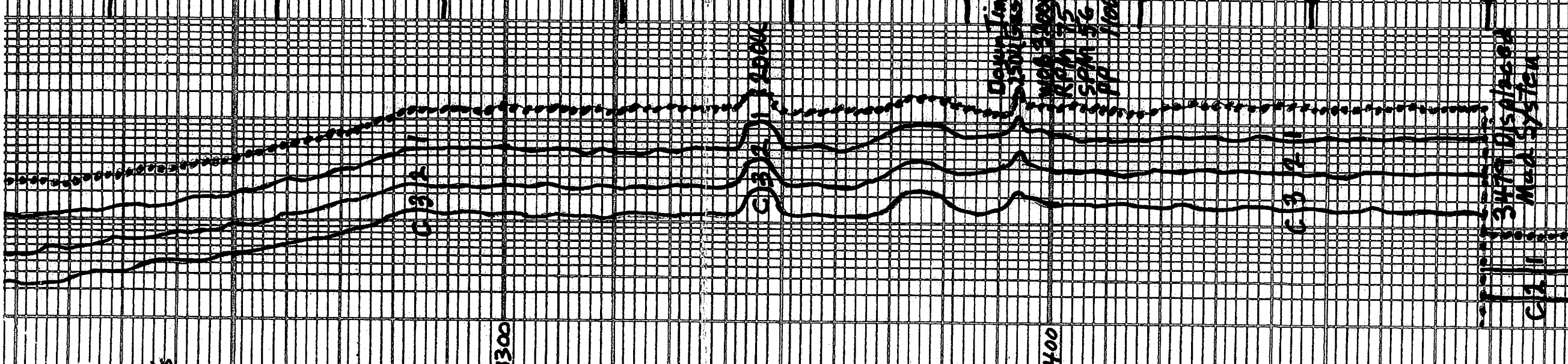
sub-ch. l. sub-sucro to sucro +
 packstn; oolitic IP's (tan to gray);
 D. ul. H. H. to brt. H. yel. fluor.
 No cut. with individual beds
 w/ abn. pe. fl. gd. + sl. tes. excel.
 micro-pp + inter. sh. por.

③ Shs med. to dek. gray; sl. to very
 calc. for silty IP's;

④ Siltstn. H. to med. gray; sl. to
 extly shly; sl. to v. calc IP's

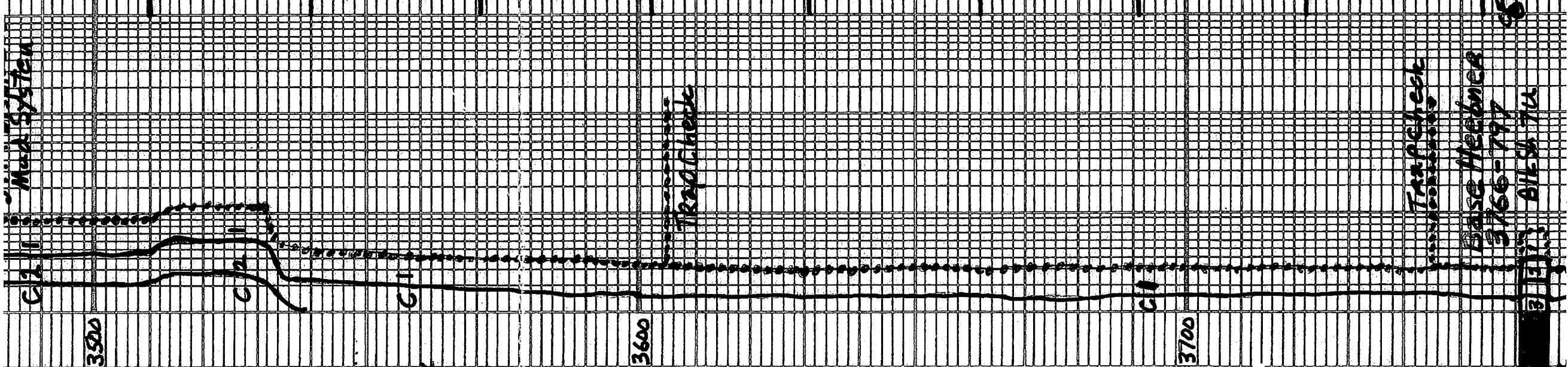
all samples w/ exte abn
 ORANGE to brick Red Shale
 Cavings from above
 Dalg w/ water + Native Mud

3479 Displaced water + Native
 mud For Good Chemical Mud
 System



mud For Good Chemical Mud System

Mud System



Interbedded Limestones and scattered thin beds shales
 ① Faster Dalg. lms. trs. to zbn. wht to cream-chalk and tan, grayish lps crypto. to v.v. fn. xln, trs sub-zblk, sub-succo. to succo. + trs packstr huy. trs lps phanton op litic to trs. lps op + trs. dual lf. trs trs bat. H. yel. fluor. No lat. zbn. pr. to fr. + trs gd. to excel. micro-pp to interstr. por

② Slower Dalg. lms. H. gray to grayish-tan - sh. to fat sh. lps crypto to uv. fn. xln, trs sub-zblk + on shly, trs sub-succo, packstr. to sub-litho graphis, sub-lith. yel. fluor. lps, No lat. No U's por

③ Sh. med to dark gray + trs v. dark gray. — calc lps

— Sh. v. dark gray to black - carb
 lms. tan crypto to uv. fn. xln, trs sub-succo. + trs. dual lf. trs

Trap Check
 Base Medina
 3766-797
 A1584714

4026-35 Lms. tan grayish, IP's, crypt. to v. fin. x10
 v. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.
 4035-46 Lms. tan, grayish, IP's, crypt. to v. fin. x10
 v. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.
 4046-50 Lms. tan, grayish, IP's, crypt. to v. fin. x10
 v. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.

Lms. similar 4026-4035 w/ tan to tan
 phantoms oolites

Lms. tan to H. gray; crypto. to v. fin. x10;
 sub. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.

Lms. similar 4083-4100 w/ less
 oolitic & more oolitic

Lms. tan, grayish, IP's, crypto. to v. fin. x10
 tan, sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.

Sh. med to dark gray, sl. to ext. calc. IP's
 4042-75 Int. embedded Lmst's
 4042-75 Int. embedded Lmst's
 4042-75 Int. embedded Lmst's

Lms. tan to H. gray; crypto. to v. fin. x10
 sh. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.

Int. embedded limestone w/ scattered
 oil shows similar 4042-4075

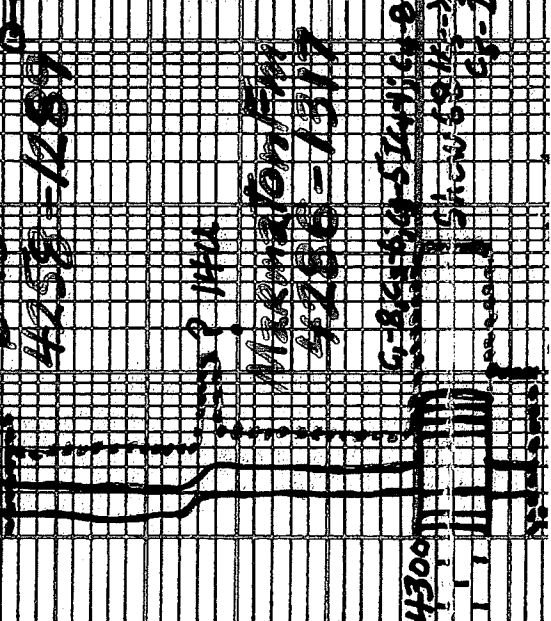
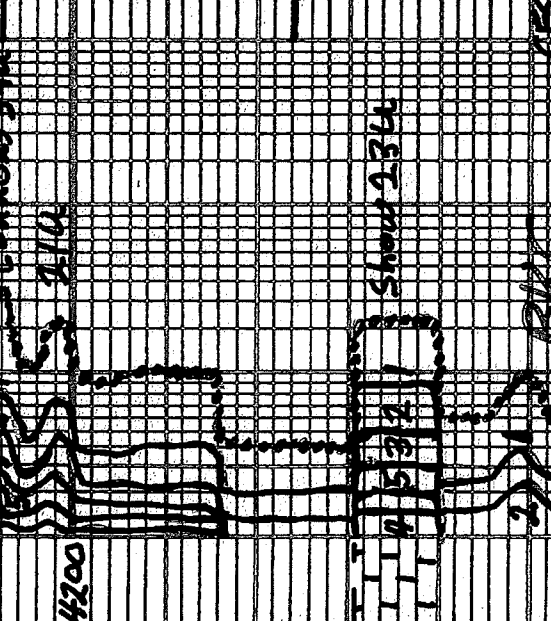
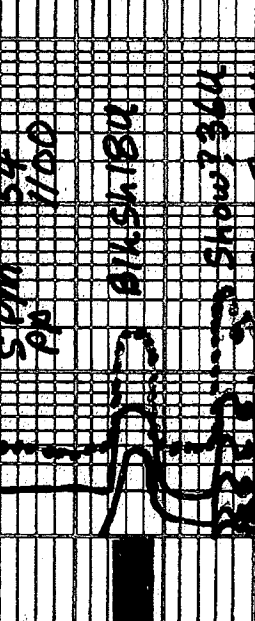
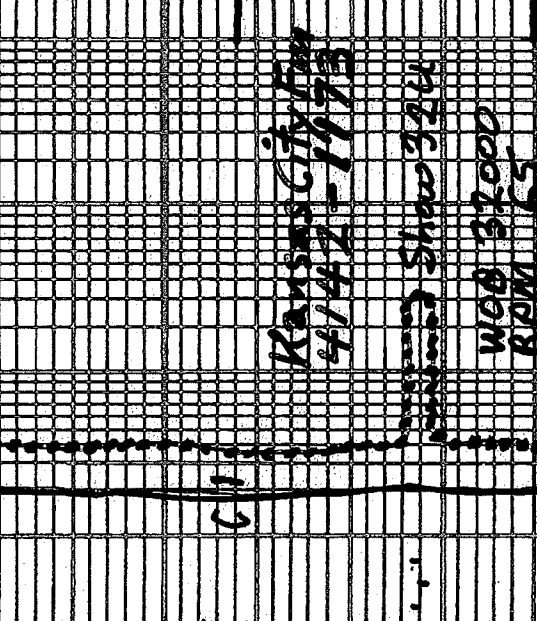
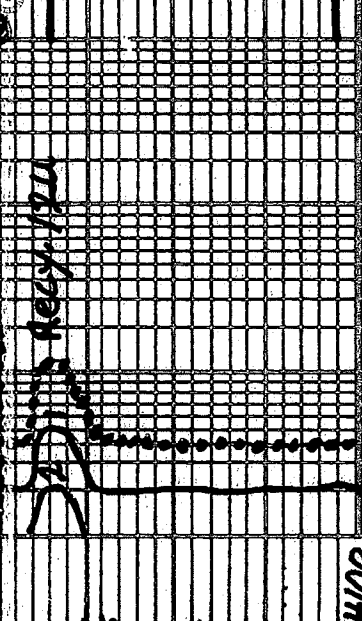
Lms. similar #2 description 4042-4075

Lms. tan to H. gray; crypto. to v. fin. x10
 sh. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.

4240-4258 Lms. similar 4216-4231

4258-4286 Sh. med. to v. dark gray;
 sl. to ext. calc. IP's

4300-08 Lms. tan, wh. to cream, chalk grayish, tan to tan
 crypto. to v. fin. x10; v. to ext. calc. IP's, crypt. to v. fin. x10
 sub. sub-chk, sub-succo. spachol. sh. No cut, No Vis Por.



TD 4850

7 7/8" Bit Info
 #1 New STC FI-18H 1700 4060
 #2 ReRun STC FI-18Y 4060 4850TD
 Cir. Points
 1. 3760 5. 4255 9. 4600
 2. 3960 6. 4313 10. 4650
 3. 4020 7. 4348 11. 4806
 4. 4060 8. 4385 12. 4850TD
 Dev. Surv
 1. 1710 1/2 3. 4255 3/4 5. 4850 1/2
 2. 4060 1/2 4. 4650 1/2

Daily Drilg Progress

1.	2025	7:00 AM	6-10-2014
2.	2400	2:29 PM	6-10-2014
3.	2645	7:00 AM	6-11-2014
4.	3244	7:00 AM	6-12-2014
5.	3706	7:00 AM	6-13-2014
6.	4060	7:00 AM	6-14-2014
7.	4060	7:00 AM	6-15-2014
8.	4255	7:00 AM	6-16-2014
9.	4313	7:00 AM	6-17-2014
10.	4313	7:00 AM	6-18-2014
11.	4385	7:00 AM	6-19-2014
12.	4526	7:00 AM	6-20-2014
13.	4650	7:00 AM	6-21-2014
14.	4697	7:00 AM	6-22-2014
15.	4850TD	7:00 AM	6-23-2014

DST #1 Lansing "G" 4018 - 4032
 IO v. weak surf. blow, built to 2 inches
 FO No Blow Max Temp 105°F
 Rec 5' 100% Mud with spotty oil

Tool Samp. 100% Mud w/ spotty oil
 IHP 1873# FFP 4 to 15 min 30 min
 IFP 1729# in 15 min FSIP 382 in 60 min
 ISIP 383# in 30 min FHP 1852#

DST #2 Kansas City "C" 4132 - 4255
 IO weak surf. blow built to 4 inches
 FO v. weak surf. blow built to 6 inches
 Rec 270' Sli. Mud cut XW 912 XW 92 Mud
 Chl 4400 ppm PIT Chl 4400 ppm pH 8.2
 R w. 22 @ 92°F Max Temp 108°F
 Tool Samp. Tr. Oil 1742 sulfate w/ tr 262 Mud
 IHP 2001# FFP 59 to 132 in 60 min
 IFP 8455# in 30 min FSIP 725# in 120 min
 ISIP 723# in 60 min FHP 1985#

DST #3 Maxamaton "B" 4295 - 4313
 IO BOB 5 min FO BOB 1 min
 Rec 1155' GIP + 120' Total Fluid
 30' sli. cut WCM 4% oil 32 w/ tr 932 Mud
 90' sli. Mud cut surf. w/ tr. Oil 88% w/ tr 145 Mud
 Chl 4800 ppm PIT Chl 4000 ppm
 pH 6.5 R w. 18276°F Max Temp 108°F
 Tool Samp. 302 oil 592 w/ tr 112 Mud
 IHP 1957# FFP 44 to 83 in 60 min
 IFP 19760# in 30 min FSIP 3012 in 120 min
 ISIP 290# in 60 min FHP 1950

DST #4 Pawnee 4365 - 4385
 IO surf. blow built to 10 1/2 inches
 FO w. surf. blow built to BOB 35 1/2 min
 Rec 635' GIP + 80' sli. w/ tr. cut mud w/ Seawater
 62 Gas Seawater Oil 122 w/ tr 822 Mud

FO w/ surf. blow built to BOB 35 1/2 min
 Rec 635' GIP + 80' sl. w/te cut mud by secum oil
 6% Gas Secum. Oil 12% w/te 82% Mud
 Chl 28000 ppm Pitchl 5100 ppm
 pH 8.5 Rw. 22 @ 84°F Max Temp 110°F
 Tool Sample Secum Oil 412 w/te 573 Mead
 IHP 2045# FFP 28 to 46 in 60 min
 IFP 876 to 25# in 30 min FSP 235# in 120 min
 ISIP 230# in 60 min FHP 2043

DST #5 MORROWSD 4606-4650
 TO BOB 30 Sec Blowback BOB
 FO BOB 45 Sec Blowback BOB
 Gas To Surface During ISIP
 Rec 1730' GIP + 2845 Total Fluid
 725' KGIO 232 G. 77% GRAV. 26% API
 1945' G. SI: MCO 1225 85% 0 3 M.
 175' G. TO CM 226 29% 0 69% M
 Tool Sample 98% oil 2% Mud

IHP 2151#
 IFP 324 to 829# in 30 min
 ISIP 1115# in 60 min
 FFP 858 to 1069# in 60 min
 FSP 1102# in 120 min

Flow Time	Flow Ck	Final Flow	MCFFD
10	1/4	inches H ₂ O	2.37
20	1/4		2.37
30	1/4		2.92
40	1/4		2.92
50	1/4		3.71
60	1/4		4.12

Mud Info:

Date	6-8	6-9	6-10	6-11	6-12	6-13	6-14	6-15
Wt	9.75	9.3	9.55	9.8	9.8	8.7	8.9	8.95
Vis	30	28	30	32	32	46	45	46
PV	3	1	2	3	3	14	14	14
YP	3	2	4	4	4	15	14	15
GS	3/4	1/2	3/4	3/4	3/4	1 1/4	1 3/4	1 1/2
WL	N/C	N/C	N/C	N/C	N/C	7.6	8.0	8.4
Cake	-	-	-	-	-	1/32	1/32	1/32
pH	7.0	7.0	7.0	7.0	7.0	10.5		10.5
Chl	1500	6600	4000	28800	2300	2900	2300	2300
Ca	1120	N/R	HVY	HVY	HVY	20	20	20
LCM	1/2	0	3 1/2	1 1/2	2	1 1/2	2	2

Date	6-16	6-17	6-18	6-19	6-20	6-21	6-23
Wt	9.0	9.0	9.0	9.25	9.0	9.0	9.0
Vis	48	50	45	62	50	60	54
PV	15	16	14	18	16	20	17
YP	15	16	14	18	16	20	17
GS	3/4	3/4	3/4	3/4	3/4	3/4	3/4
WL	N/C	N/C	N/C	N/C	N/C	N/C	N/C
Cake	-	-	-	-	-	-	-
pH	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Chl	1500	6600	4000	28800	2300	2900	2300
Ca	1120	N/R	HVY	HVY	HVY	20	20
LCM	1/2	0	3 1/2	1 1/2	2	1 1/2	2

Date	6-8 9:50A	6-9	6-10 9:35A	6-11 9:00A	6-12 8:35A	6-13 8:10A	6-14 7:55A	6-15 8:00A
Depth	1111 1200	N	1101 1100	1101 1100	1101 1100	1101 1100	1101 1100	1101 1100
WT	9.5	0	9.3	9.55	9.8	8.7	8.9	8.95
Vis	30	R	28	30	32	46	45	46
PV	3	P	1	2	3	14	14	14
YP	3	R	2	4	4	15	14	15
GS	3/4	T	1/2	3/4	3/4	15/46	13/43	14/43
N/C	N/C	R	N/C	N/C	N/C	7.6	8.0	8.4
Calc	-	-	-	-	-	1/32	1/32	1/32
pH	7.0	7W	7.0	7.0	7.0	10.5		10.5
CHI	1500	1120	6600	4000	2880	2300	2900	2300
Ca	1120	N ^c	HVY	HVY	HVY	20	20	20
LCM	1/2	T _h	0	3 1/2	1 1/2	2	1 1/2	2

Date	6-16 8:20A	6-17 8:30A	6-18 11:55A	6-19 11:55A	6-20 11:55A	6-21 11:55A	6-22 11:45P	6-23 5:40A
Depth	4255	4313	4325	4385	4560	4650	4787	4850
WT	9.0	9.1	9.1	9.25	9.1	9.1	9.0	9.1
Vis	48	50	45	62	50	60	54	48
PV	15	16	14	18	16	20	17	15
YP	16	18	15	21	17	20	18	16
GS	1/47	1/50	14/45	17/52	16/49	18/55	18/53	15/46
N/C	8.4	10.0	10.4	9.2	9.2	8.4	8.8	7.9
Calc	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
pH	10.0	9.5	9.0	10.5	10.5	11.0	11.0	11.0
CHI	4100	4000	4300	5100	2500	2800	4300	4300
Cz	20	20	20	20	20	20	20	20
LCM	2	2	2	2	2	2	2	2

OPERATOR Berexco LLC LOCATION 1644' FSL + 351' FWL
 LEASE Timothy SEC. 16 TWP 22 S RANG. 34 W
 ELEVATION 2969 HB RTD 4850 COUNTY Finney STATE Kansas