

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **Cobalt Energy, LLC**

LEASE **Yale'A'1-24**

FIELD **Wildcat**

LOCATION **SW SE NW SW**

SEC **24** TWP **11** RGE **29W**

COUNTY **Gove** STATE **KS**

CONTRACTOR **Southwind #70**

SPUD **8-10-14** COMP **8-23-14**

RTD **4650** LTD **4655**

MUD UP **3426** TYPE MUD **Chem**

ELEVATIONS

KB **2833**

DF

GL **2821**

Measurements Are All From **KB**

CASING

SURFACE **8 5/8" @ 265'**

PRODUCTION **DVA,**

ELECTRICAL SURVEYS
CN4/ODL, DIL, MEL

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION		
				A	B	C
Anhydrite	2366'	2370'	+463	478		
Base Anhydrite	2403'	2402'	+431	447		
Heebner	3923'	3925'	-1092	-1076		
Lansing	3960'	3960'	-1135	-1111		
Stark	4182'	4186'	-1353	-1338		
BKC	4239'	4236'	-1403	-1393		
Fl. Scott	4437'	4438'	-1605	-1596		
Cherokee	4464'	4464'	-1631	-1622		
Mississipi	4528'	4529'	-1696			
RTD	4650		-1817			
LTD		4655	-1822			
RTD	4750					

REFERENCE WELLS FOR STRUCTURE

A **Cobalt Gillespie Trust #1-27X 27-11-29W**

B

C

REMARKS

BASED ON STRUCTURAL POSITION, DST'S AND LOGS, IT WAS RECOMMENDED AND CONFIRMED TO PLUG THIS TEST HOLE.

It spect fully

LEGEND



Anhydrite Salt Sandstone Shale Carb sh Limestone Ool.Lime Chert Dolomite

DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Decreases

5" 10" 15" 20" 25"

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

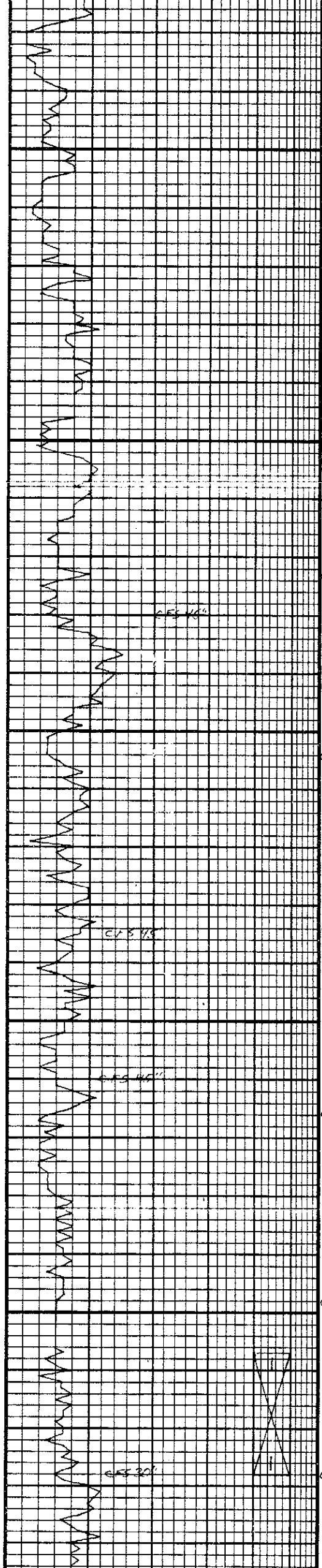
OIL SHOWS

REMA

ANHYDRITE
2366 +464

2400

BASE
2402 +402



3900

HEZEMER
3923-1090

3960-1127

4000

4100

DEV 1

SH, BLK, GRAY
LS TAN, F XTLN, F OSS, BR TL
SL HRD, FEW PLS, SGT LG VLS
F.W.S

LS, GRV, HRD, F XTLN, CI BR TL
F OSS, VP SGT XTLN, US
SGT CRM, WHT CHT

LS, CRM, F XTLN, BR TL, FEW
PSS V ECL- W WHT D, MS

SH, BLK, GRAY
CMT WHT, SGT F OSS, FRESH
PSS SHARP, NC

SH, GRV
LS, WHT, F XTLN, HRD, F OSS,
VP F.W.S

LS, WHT, F XTLN, BR TL
PSS V ECL- W WHT D, MS

LS, WHT, F XTLN, HRD, F OSS,
VP F.W.S

SH, GRV

LS, WHT, VP XTLN, HRD, F OSS,
VP F.W.S

LS, AA INCR MED F OSS

SH, GRV, SA SWAY
LS, WHT, CRM, F XTLN, BR TL, F OSS
+ FRAGS, P XTLN, SGT
SGT WHT FRESH CHT, W WHT

LS, LT GRV, VP XTLN, VP F OSS,
MED HRD, F.W.S

SH, LT + BK GRV
LS, WHT, CRM, F XTLN, M HRD, STRKS
OF G, L XTLN, F, G, CIL STAG, VP
SGT LT CRM BRK, SGT PSS CHLKY W
FAIR FC, CRM BRK, MOSTLY LP EDGE
STAG, W BY SHC PSS, FEW PSS RUBBER
NO BUBBLE, BK RAN - BLN CIL

LS, RUFF, F XTLN, HRD, F.W.S

LS, CRM, F XTLN, HRD, SML F OSS,
FRAGS, VP F.W.S, NC

LS, WHT, F XTLN, HRD, ABIN F OSS,
OCLS, W WHT D, F.W.S

LS, WHT, HLY XTLN, G XTLN,
HRD, W.S

LS, WHT, FRESH, AN V F OSS
CASTS, W.S

SH, BLK, GRV

LS, RAN, TAN, F XTLN, S HRD,
SL BR TL, SGT F OSS, F.W.S

LS, WHT, F XTLN, M MED XTLN, W
M HRD, LT FLUOR STAG, MICRO
FC, BK, MED BRN CIL SPIS,
V SLT SHC GAS BBL, F.W.S

LS, AA INCR BRN HUGH STAG

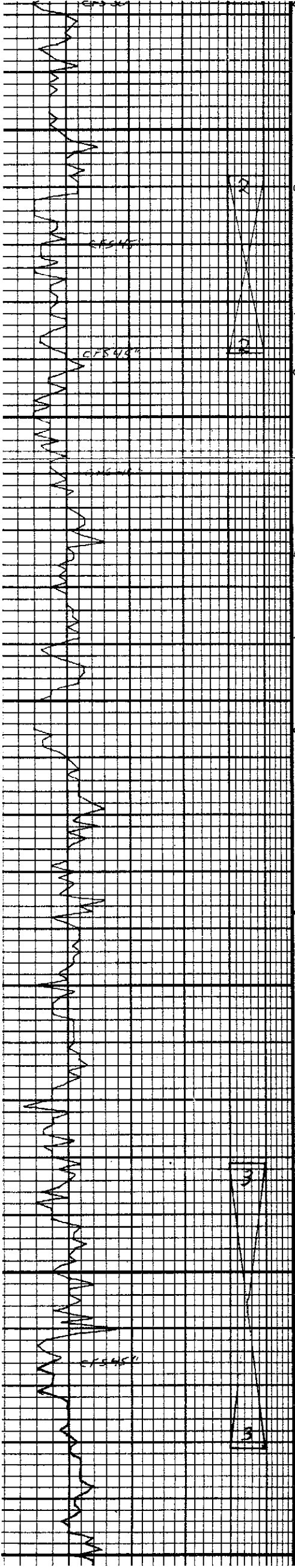
SLI CRM, GRV

LS, CRM, SML, SL SWAY, HRD, F W
FRAC STAG, W WHT D, NC OVR

7 AM 8-10-11
BRG 0 455
MUD CHECK
VIS 53
CHLOR 1800
FILT 30

AST #1 4107-
30-30-3
IF 2" Ho, dead
FF dead
REC 15' M W/O
FF 23-24, 25-
SIP: 1045-1961
FPI: 2012-1967

SHORT TRIP 2
STRAP: 4132.5
BOARD: 4128.8
LONG 3.69



DEV 1°

SLT STN, GRAY

STRAP: 4132.55
BOARD: 4128.87
LONG 3.68

D/DLO, LIMP, SL SUCCR, HRD, 1P/W
FRAC STNG, NSFO, NO ODOR
SCT WHT CHI W/ FILMY STNG

7 AM 8-19-14
DRLG @ 4156'

LS, WHT, TAN, F XT LN, V HRD,
TITE, NS

SH, GRAY SLTY, GRN
LS, TAN, LI GRAY, VE XT LN, HRD,
DMS, TITE, NS

20' LS

LS, FEW Pcs (4) - CHLKY W/ FLOOR
STNG, WHT FXT LN LS W/ G CIL
STNG, FEW BRN FO SPTS W/ GAS BBLS

FAIT
CBER

STARK
4182 - 41349

SH, DK GRAY

MUD CHECK
VIS: 50 WT: 9
CHLOR: 1.500 LCM
FLT: 8.8

4200

LS, WHT, F-M XT LN, HRD, FOSS,
TITE, NS

LS, LT GRAY, BUFF, F XT LN, MED
HRD, ABUN FOSS, FAIR FINS

LS, GRAY, VE XT LN, DMS, HRD

DST # 11, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50

SH, GRAY, BRN/GRAY, BLK

IF: WK BLO, dead 2'

LS, BRN, F-M XT LN, NODS W/N,
FOSS, V HRD, NO APP. NS

FF: dead, flush, clea
REC: 2' M

LS, WHT, GRAY, F XT LN, CM'D
FOSS, ABUN FOSS, TITE, NS

FT: 18-19, 19-20
SIP: 23-24
HF: 2046-2007

BKC
4239 - 4106

SLT STN, GRAY

D/DLO, GRAY, GRN/GRY, HRD
DMS, NS, SCT LS Pcs W/N

SH, BLK, GRAY, SLT STN, GRAY

LS, TAN, MED XT LN, HRD, LG FOSS
W/N, NO VIS. NS

LS, TAN, BRN, VE XT LN, V DMS,
V HRD, TITE, NS

LS, WHT, FXT LN, SL WEATH, RED SH
W/N, SL BRTL, NS

7 AM 8-20-14
DRLG @ 4283'

LS, CRM, VE XT LN, V HRD, W/N CM'D
COLS, ABUN COLS, NS

4300

SH GRAY/TAN, SL SLTY

LS, TAN, F XT LN, ABUN CM'D
FOSS, HRD, TITE

SH, GRAY

LS, BRN, F XT LN, DMS, HRD, TITE
NS

LS, TAN, F XT LN, HRD, ABUN
RE XTLD FRACS, NO VIS. NS

CHI TEACH WHT, ABUN RE XTLD
FRACS, NS

MUD CHECK
VIS: 63 WT:
CHLOR: 1.700 LCM
FLT: 9.5

CHI, SMORE, PEACH, WHT,
CREAM, FRESH, FRACT,
TCS SHARP, NS, NO OPCR

DST No 3 4331-
30-30-30-
REC: 5' 500

LS, WHT, F XT LN, SOFT-MED
HRD, ABUN FUSK + ASST
FOSS, FINS

IF WEAK DIED @
FF No blow, Flush-

LS, TAN, WHT, LG RE XTLD
FRACS, CRX XTLS W/N FRACS
G FRAC FILL. NS

IF: 21-21
FF: 20-24

LS, WHT, F-M X/N, HRD, GATE NO
G EVEN BRN OIL ST, G ORDER,
GASSY, LT BRN OIL, SL BLEED
FLUOR FO RANBN SPTS

ISIP: 30
FSIP: 31

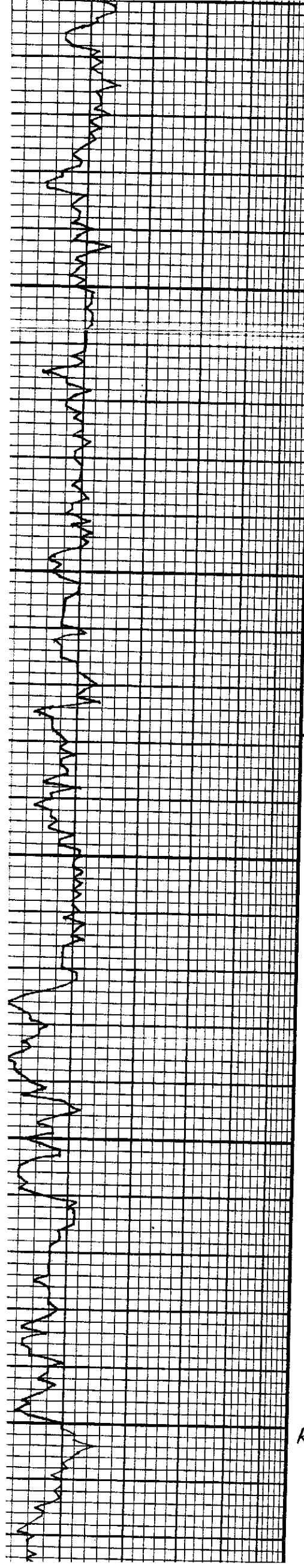
LS, TAN-GRY, F-M X/N, FOSS
DENSE NS.

SH, Blk Carb-Gray, Silty

4400

LS, WHT-CRM, FXT LN, FOSS T-H ST
VE HRD, FRACT

8-21-14



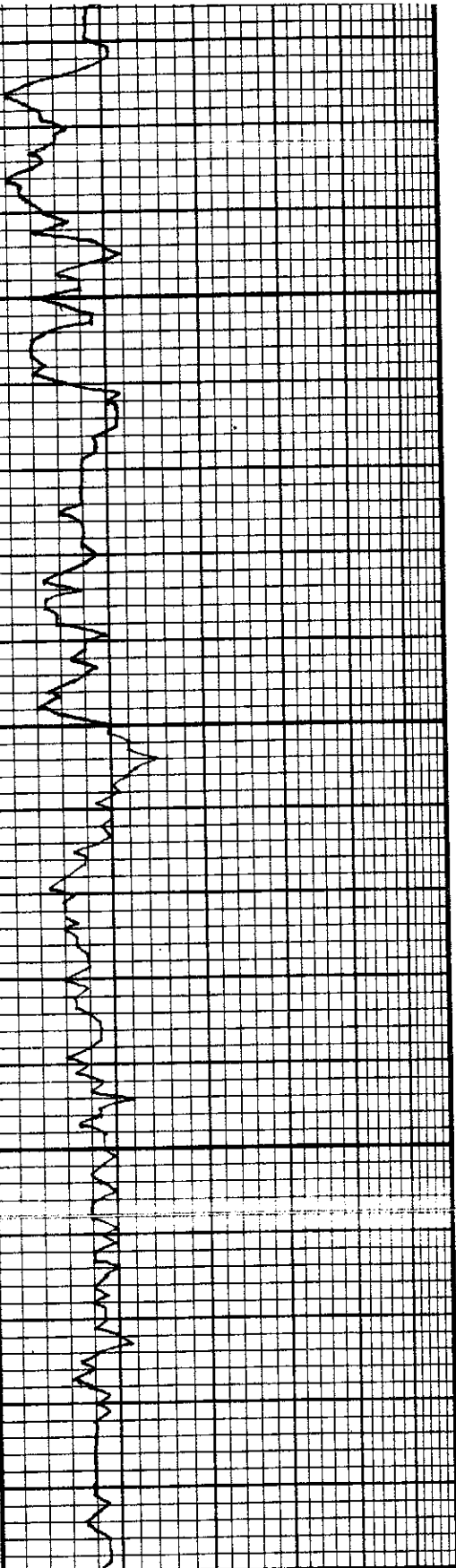
4400	sh. Blk-Gey-Silky
	sh. Blk-Grey
	ls. GRAY-TAN, FxN-Foss, DENSE
	sh - AA
F. SCOTT 4437-1604	sh. Blk Carb.
	ls. GRAY-DEM-F-MXN, Foss, DENSE sl pyritic, sl cherty No show
	ls. DEM-FxN, Foss, sl cherty, sl cherty, tight No show
	ls AA
Cherkaec sh 4464-1631	sh Blk-Carb-BRN-Grey
	ls. GRAY-DEM-F-MXN Foss Pyritic, sl cherty
	ls. wh-lt grey F-Microcrin, Foss cherty-Firm No show Poor TURITIC
	sh. BRN-Grey -
c 4500	ls. wh-Grey-F-MXN Foss. sl cherty A.S.
	sh BRN-Grey
	ls. wh-lt grey, FxN-Foss, No show
	sh. VARI-Color, cherty
	ls. AA
MISS. c 4528-1695	sh. Multi-Color ARG, Coag cherty T-F-Mgr SSC clusters
	ls. wh-lt grey F-MXN No show cherty.
	sh. GRAY-BRN-Grey
	ls. AA
	ls. wh-lt yellow-lt RED, FxN Foss, sl cherty No show
	ls AA
	ls. wh-F-MXN SACROSIC cherty, sl cherty No show POOR
	ls. AA No show
4600	ls. AA INCREASE wht OPAQUE chert No show
	ls. AA
	ls. wh-F-MXN SACROSIC cherty-Firm, cherty No show
	AA
	ls. AA Mostly-wh, OPAQUE chert
	AA
R.T.D. 4650	ls. wh-lt grey-FxN-Microcrin Foss, cherty, sharp, angular No show
	ls wh-TAN F-MXN, Foss wh opaque chert No show
	sh BRN-Grey

8-21-14
7:AM Drlg @
Mud check
VIS: 56 WT:
Lem #1 Filt
Chloe: 1,900

Mud check
VIS: 51 WT: 9
Lem: #1

Mud check
VIS: 60 WT: 5
Lem: Tee

8-22-14 7:AM
CIR @ 4650



4600

R.T.D.
4650

4700

R.T.D.
4750
DEPTH

LS. wh-F-MX/N SACROSIC. chalky, sl cherty No show FOSS &
LS, AA No show
LS, AA INCREASE wht OPAQUE chert No show
LS, AA
LS, wh-F-MX/N, SACROSIC chalky-Firm, cherty No show
AA
LS, AA Mostly wh, opaque chert
AA
LS. wh-Lt Grey-Fx/N-Umicox/N FOSS, cherty, sharp, angular No show
LS wh-TAN F-MX/N, FOSS wh opaque chert No show sh BEN-GRY
LS! A.A. wh-grey chert No show
LS: wh-TAN-MX/N-FOSS, sh chalky No show sh BEN-Grey, yellow, GEN
A.A.
sh: GRAY-BEN-Blk silt FOSS
LS. wh-F-MX/N, FOSS, chalky Firm cherty No show
LS A.A.
A.A.
LS wh-F-MX/N, very chalky sl cherty No & No show

Mud check
VIS: 60 w/1
Lcm: Tec.

8-22-14 7
Cie @ 4650

VIS: 57 w/1
Lcm # 1

5" 10" 15" 20" 25"
DRILLING TIME Minutes/Foot
Rate of Penetration Decreases

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR SOUTHWEST DRILLING
LEASE VALE "A" 1-24 IP
ELEVATION 2833 RTD 4750

LOCATION 3-1-1-24
SEC 24 TWP 11 RNG 25
COUNTY GOVE STATE KANSAS