Max R. Lovely

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Ritchie Exploration
LEASE Fredrickson - Ashley Farms #1
FIELD Wildcat
LOCATION W/2 NW SW
SEC 32 TWSP 5 RGE 29W
COUNTY Decatur STATE KS
CONTRACTOR WW#2
SPUD 1-29-15 COMP 2-10-15
RTD 4420 LTD 4418
MUD UP 3385 TYPE MUD Chem

ELEVATIONS
KB 2754
DF
GL 2749
Measurements Are All From KB

CASING
SURFACE 8⅝" @ 220'
PRODUCTION 5½"

ELECTRICAL SURVEYS
DUAL IND, MICRO
COMP N/D

FORMATION TOPS AND STRUCTURAL POSITION

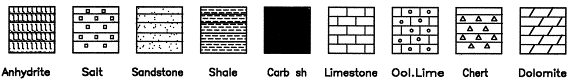
FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION A	B	C
Anhydrite	2491	2493	261	254		
Base Anhydrite	2528	2528	226	220		
Topeka	3625	3625	-871	-876		
Heebner	3800	3800	-1046	-1050		
Toronto	3828	3832	-1078	-1080		
Lansing	3842	3847	-1093	-1094		
Muncie	3942	3946	-1192	-1194		
Stark	4000	4002	-1248	-1252		
BKC	4048	4048	-1294	-1299		
Marmaton	4056	4058	-1304			
Myric	4203	4198	-1444			
FT Scott	4234	4242	-1488			
Cherokee SH	4250	4252	-1498			
Miss.	4361	4362	-1608			

REFERENCE WELLS FOR STRUCTURE

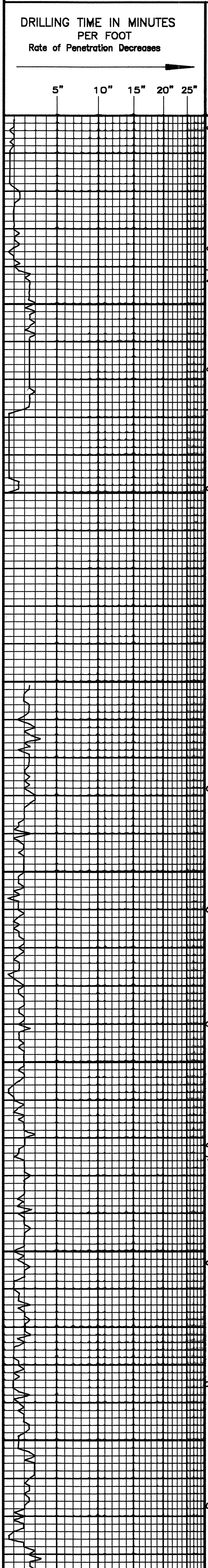
A Murfin #1-32 R&T Shaw NW SW NE 32-5-29W
B
C

REMARKS

LEGEND



LOG 7710



DEPTH

ANHYDRITE
2491 +263

2500

BASE
2528 +226

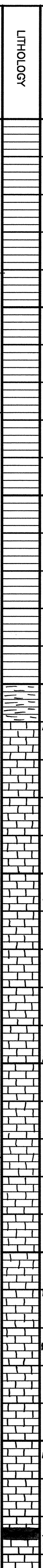
3500

3600

TOPEKA
3625 -871

3700

LITHOLOGY



SAMPLE DESCRIPTIONS

SH, GRY

LS. GRY/WHT, F→M XTLN, M HRD, FOSS, P Ø, NS

LS, TAN, BRN, GRY, VF→F XTLN, HRD, SL DNS, SCT FOSS, NS

LS. CRM, F XTLN, S→M HRD, NO VIS Ø, NS

LS. CRM, F XTLN, LG XTLS W/N, HRD, SL BRTTL, NO VIS Ø, NS

A.A.

LS. GRY, F XTLN, HRD, NO VIS Ø, NS

LS. LT GRY, F XTLN, BRTTL, NO VIS Ø, NS

A.A.

LS. GRY, SCT BRN STRKS, BRTTL S→M HRD, ? VP Ø, NS

LS. WHT/GRY, F XTLN, HRD, FOSS, FOSS CASTS, NO APP Ø NS

LS. WHT, VF XTLN, DNS, HRD, TITE, NS

LS. CRM, LT GRY, CHLKY, SOFT, F→M XTLN, F→G XTLN Ø, NS

AA, REXTL'D FRACS

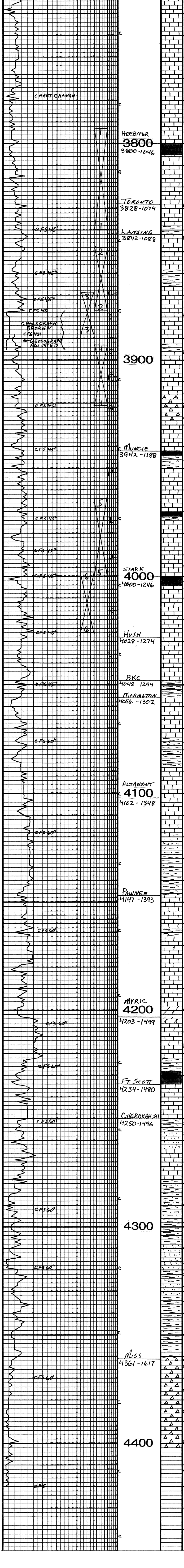
LS, GRY, TAN/CRM, F XTLN, M HRD, FEW FOSS, NO APP Ø NS

SH, BLK

LS. TAN, F XTLN, BRTTL, HRD, FOSS ALGAL, G Ø, NS

OIL SHOWS

REMARKS



A.A.

LS,GRY,F XTLN,Pcs DNS,MOST F→M XTLN + FOSS,NO VIS Ø,NS

LS,CRM,WHT,VF XTLN,V HRD,SCT FOSS,TITE,NS

LS,CRM,GRY,F→M XTLN,BRTTL,V FOSS,VP Ø,NS

SH,BLK,TR FOSS CASTS

LS,CRM,F XTLN,SL CHLKY,SOFT TO M HRD,NS

LS,WHT,CHLKY,SOFT,SL BRTTL,F Ø,NS

LS,BRN,F→M XTLN,HRD,SCT FOSS P Ø,NS

LS,WHT,M→CRS XTLN,HRD,VG INT XTLN Ø,VG S HVY BLK OIL FILL Ø,FEW DK FO N TRAY,TR SHO GAS,NO VIS ENERGY

20" G SHO FO N CUP,VG XTLN→VUGGY Ø,HVY SHO STNG + FO,SLOW G+OIL BLEED,MED→DK BRN OIL

LS,WHT,F XTLN,V CHLKY,SCT SOFT→HRD + DNS,NS

A.A.

SH,GRN,BURG

LS,WHT,CRM,VW CMT'D OOLS + LS FRAGS,HRD,TITE,NS

LS,WHT,IRREG SHAPE OOL,SML OOLS,VG OIL SAT Ø,?GAS BBLS,F SFD on BRK

LS,WHT,CRM,Pcs V SOFT + CHLKY,Pcs DNS,F→G STND XTLN Ø,FILMY VUGS,FSFO·BRK

LS,WHT,M GRNS,VG INT XTLN Ø,BRTTL,VG OIL FILL Ø,G FO ON BRK,MED DK FO SCT OIL FILM'D SML VUGS,NS GAS

SH,GRN

LS,TAN,F XTLN,HRD,SCT FAIR INT XTLN Ø,FAIR STNG,V LT SFO·BRK

LS,WHT,F XTLN CMT'D MED OOLS,VP Ø,NS

LS,WHT,CRM,F XTLN,V SL CHLKY HRD,F→G EDGE STNG,F→G FO ON BRK,Pcs W/G FO ON BRK

GRY,CHT,FOSS

CHT,WHT,V FOSS,NS

CHT,WHT,GRY,MILKY,SMOKE,OPAQ,NS

LS,WHT,F XTLN,M→V HRD,DNS NS

SH,BLK,GRY,SOFT

SH,GRY

LS,WHT,F XTLN,M HRD,SL CHLKY,NS

LS,GRY/TAN,F XTLN,M HRD,SL BRTTL,NS

LS,GRY,F XTLN,MED + LG FOSS + PBBLS W/N,NO VIS Ø,NS

SH,GRY

LS,WHT,F XTLN,V SHLY (RED) NS

A.A.

LS,BRN,ABUN FOSS,ALGAL,VG FOSS Ø,G OIL SAT Ø,GS MED BRN FO·BRK,SL GASSY,FAIR GSY OIL BLEED,

20" WHT,LT GRY,F XTLN,VG SHO DK OIL STNG,NO MUCH FO,Pcs CHLKY

SH,RED,GRY,GRN,BLK

LS,WHT,F XTLN,STRKS W/G STNG,FAIR XTLN Ø,SL CHLKY,FSFO·BRK

LS,TAN,VF XTLN W/LG XTLS W/N,G XTLN Ø,G EVEN STNG,FAIR SFO ON BRK,PP XTLN Ø,FEW FO SPTS N TRAY,SL SHO GAS BBLS

LS,LT GRY/WHT,F XTLN,HRD,SL BRTTL,NO VIS Ø,NS

LS,WHT,F XTLN,M HRD,SCT FOSS,NO Ø,NS

SH,GRY,BURG

LS,WHT,F XTLN,HRD,BRTTL,SL DNS,V FEW FOSS,NO VIS Ø NS

LS,TAN,F XTLN,HRD,DNS,TITE NS

SH,RED,GRN,GRY - FLOOD

LS,WHT,CHLKY,ROTTEN,SOFT,NS,Pcs LS W/RED SH STNG

LS,CRM,WHT,F→M GRNLR TXT,SOFT,BRTTL,SCT RED SH STN'D,?Ø,NS

LS,AA,SHLY

SLTSTN,SNDY,SML CLR GRNS,GRY,BRN

SH,RED,GRN/GRY

A.A.

LS,WHT,TAN,F XTLN,SCT PEL'S W/N,HRD,NO VIS Ø,NS

LS,BRN,F→M XTLN,HRD,NO VIS Ø NS

SH,GRY

LS,GRY,VF XTLN,DNS,S→M HRD,NO VIS Ø

LS,CRM,WHT,F XTLN,M XTLS W/N,SOFT,V BRTTL,NS

LS,TAN,BRN,VF XTLN,ABUN FOSS S→MED,FOSS,V HRD,TITE,NS

LS,CRM/TAN,F GRNLR,DOLO,M HRD,VP Ø,NS

DOLO,CRM,SL LMY,SOFT,FINE GRNLR,P Ø,NS

LS,GRY,F XTLN,WHT-MED XTLN,WHT STRKS W/N,HRD,SL BRTTL,NS

LS,GRY,F XTLN,HRD,DNS,TITE NS

SH,GRY

SH,BLK

LS,WHT,V LT GRY,TAN,VF XTLN,DNS,M HRD,TITE,NS

A.A.

SH,GRY,BRT GRN

SS,CLR GRNS,WHT+RED CMT'S,SUBANG,P SORT,MED→LG GRNS HRD,FAIR CMT'D,G Ø,SCT BLK MIN'S W/N,NS

LS,WHT,CRM,VF XTLN,HRD,V CHLKY,NS

SLTSTN,BURG,GRY,CLR GRNS

SH,BURG

SS,CLR QTZ,MED,SUBRND-SUB ANG,W SORT,VG Ø,NS

SS,V LG Pbbls,SL FROST,IRREG SHAPE,FAIR SORT,NS

SH,BURG-SNDY,GRN,GRY

SS,CLR GRNS,FINE,W SORT,SOFT→SL HRD,P CMT'D,G Ø,NS

SH,BURG

SH,WHT,TAN,BURG,MUSTARD,GRN

SH,AA,INCR TAN SLTSTN

CHT,MILKY,WEATH,SCT VUG Ø,NS

CHT,WHT,MILKY,FRESH,FOSS,NS

CHT,MILKY,LT YLLW,FRESH,SHARP,FOSS,NS

CHT,MILKY,WHT,YLLW,FOSS,FRESH,NS

CHT,WHT,CRM,YLLW,FOSS,NS OPAQ

CHT,CRM/TAN,LT YLLOW,TAN OPAQ FRESH,NS

BLK HVY OIL TR GAS

G ODOR NO FLUOR

LT ODOR

SL SHO GAS -14 Pcs LT ODOR

F→G ODOR FO N TRAY RAINBOW

5 pcs ? ODOR

LT/MED OIL

ABUN SHO RKS LT ODOR LT FLUOR LT ODOR ABUN SHO RKS

10 pcs V LT ODOR

V LT ODOR ABUN SHO

7:AM 2-5-15
DRLG @ 3750

SHORT TRIP 42 STNDS
DST#1 3793-3840
30·45·30·45
IF: 1½" ISI: NR
FF: DEAD FSI: NR
REC: 60' M W/OIL SPTS
FP: 9-37, 28-46
SIP: 1305-1301

STRAP 3840.33
BOARD 3845.67
SHORT 5.34'

DST#2 3848-3877
30·45·45·60
IF: BOB 7 MIN ISI: 5"
FF: BOB 12 MIN FSI: 5"
REC: 180' GIP
660' GFO · 27° GRAV
180' MGCO · 10% G, 50% OIL
840' TOTAL FLUID
TOOL - 100% FO
FP: 50-168, 183-302
SIP: 1170-1149

MUD CHECK
VIS: 66 WT: 8.9
CHLOR: 1,500 LCM: 1
FILT: 6.4

DST#3 3869-3888
30·45·45·60
IF: BOB 5" ISI: 6¼"
FF: BOB 11" FSI: 7"
REC: 240' GIP
690' GFO · 27.2° GRAV
180' GMCO · 10% G, 50% OIL
870' TOTAL FLUID
FP: 34-155, 169-283
SIP: 1166-1109

7:AM 2-6-15
CFS @ 3877'

7:AM 2-7-15
COND^N @ 3888'
VIS: 54 WT: 9.0
CHLOR: 1800 LCM: 1
FILT: 6.4

MUD CHECK
VIS: 56 WT: 9.0
CHLOR: 2,200 LCM: 1
FILT: 8.8

DST#4 3893-3921
30·45·45·60
IF: 4" ISI: NR
FF: 7" FSI: NR
REC: 60' GFO
120' GMCO · 5% G, 50% OIL
TOOL: 85% OIL 26.4° GRAV
FP: 8-46, 46-65
SIP: 1265-1230

DST#5 3964-4000
30·45·30·45
IF: 1"→½" ISI: NR
FF: dead, flush, dead FSI: NR
REC: 5' M W/OIL SPTS
FP: 8-9, 14-19
SIP: 247-376

7:AM 2-8-15
DST#5 @ 4000'
MUD CHECK
VIS: 61 WT: 9.2
CHLOR: 2,500 LCM: 2
FILT: 7.2

DST#6 3998-4026
30·45·30·45
IF: ½" ISI: NR
FF: dead, flush, dead FSI: NR
REC: 20' M W/OIL SPTS
FP: 23-26, 30-32
SIP: 705-615

7:AM 2-9-15
DRLG @ 4055

MUD CHECK
VIS: 63 WT: 9.0
CHLOR: 2,200 LCM: 2
FILT: 6.4

SH FLOOD - "STICKY"

7:AM 2-10-15
CFS @ 4319'

MUD CHECK
VIS: 59 WT: 9.2
CHLOR: 2,000 LCM: 1.5
FILT: 8.0

10 STND SHORT TRIP