

Max R. Lovely

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Ritchie Exploration
 LEASE #1 Ramsey Trust 15B
 FIELD Unknown
 LOCATION 1258'FNL, 1735'FWL
 SEC 15 TWP 19 RGE 31W
 COUNTY Scott STATE KS

ELEVATIONS
 KB 2960
 DF _____
 GL 2952
 Measurements Are All
 From KB

CONTRACTOR WW #12
 SPUD 6-13-19 COMP 6-26-19
 RTD 4690 LTD 4691
 MUD UP 3420 TYPE MUD Chem

CASING
 SURFACE 8 7/8 @ 251'
 PRODUCTION _____
 ELECTRICAL SURVEYS
 DI _____ MICRO _____
 COMP NID SONIC _____

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION		
				A	B	C
Anhydrite	2272	2268	692	688	693	683
Base Anhydrite	2290	2286	674	671	675	665
Stotler	3530	3529	-569	-572	-564	-577
Heehner	3920	3918	-958	-963	-952	-965
Lansing	3961	3958	-998	-1005	-995	-1007
Muncie	4142	4140	-1180	-1188	-1169	-1191
BKC	4321	4323	-1363	-1367	-1354	-1372
Altamont	4371	4377	-1417	-1422	-1405	-1422
Pawnee	4448	4450	-1490	-1492	-1484	-1497
Ft. Scott	4493	4499	-1539	-1537	-1528	-1543
Cherokee	4514	4520	-1560	-1558	-1548	-1563
Johnson	4557	4560	-1600	-1600	-1589	-1604
Miss	4584	4590	-1630	-1638	-1616	-1639
Spargen	4610	4610	-1650	-1651	-1634	-1653

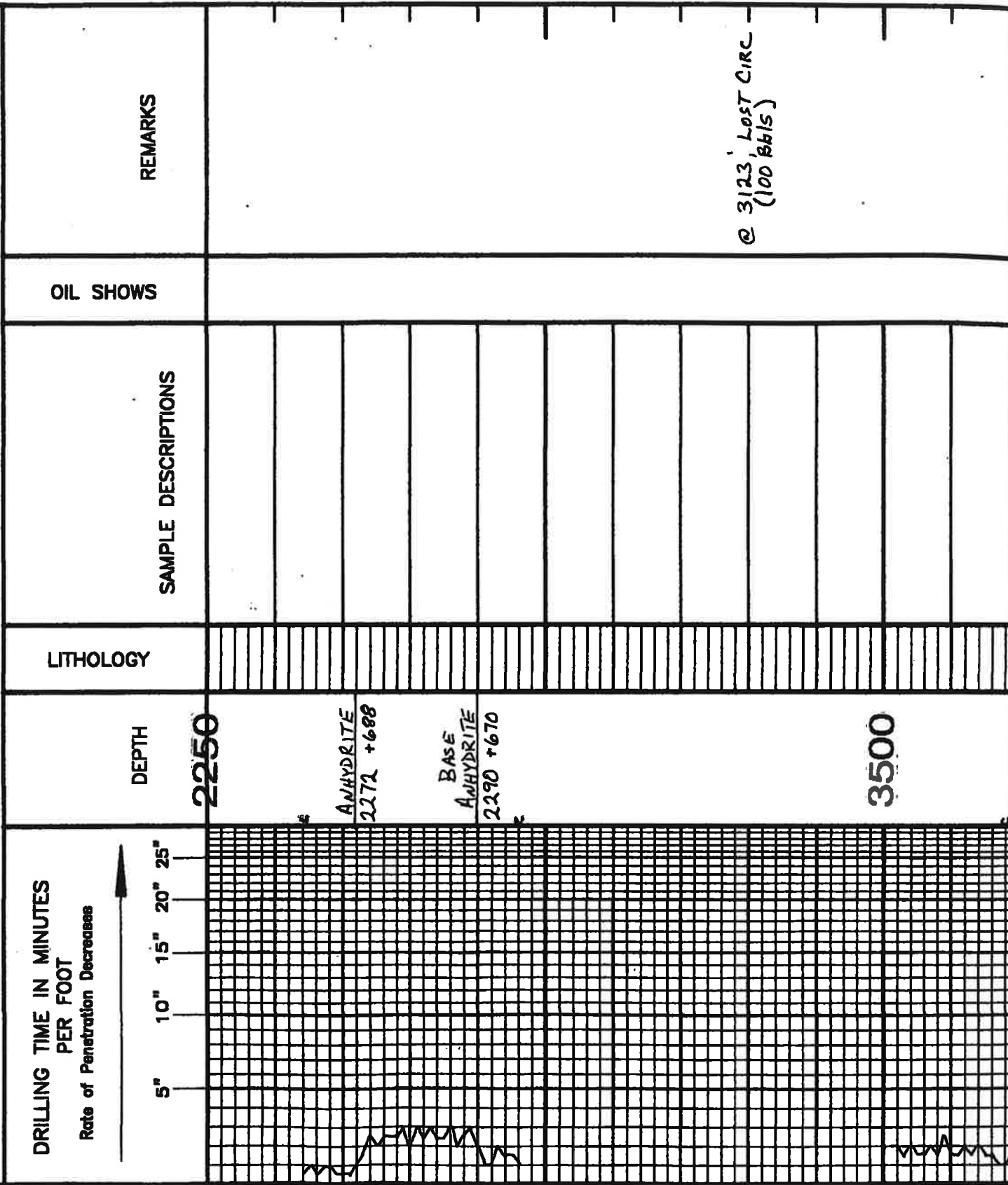
REFERENCE WELLS FOR STRUCTURE

- a Drilling #1 Houloose 1650'FSL, 1650'FWL 15-19-31W
- b FIML #1A Deardon 330'FNL, 330'FEI, 16-19-31W
- c Chief #1 Popp 990'FSL, 990'FWL 10-19-31W

REMARKS

LEGEND

-  Dolomite
-  Chert
-  Col. Lime
-  Limestone
-  Carb sh
-  Shale
-  Sandstone
-  Salt
-  Anhydrite



LOG 7710

STOTLER
3530 -570

7:41 AM 6-17-19
DRILLER 3580'

3600

START SAMPLES

MUD CHECK
VIS: 55 WT: 8.9
CHLOR: 2.000 LCM: 3
FILT: 6.4

LS, TAN, M XTLN, S M HRD,
GRNY TCT, B, NS

LS, WHT, CRM, F XTLN, M HRD,
CHKY, VP TITE, NS

LS, WHT, VF XTLN, M HRD, Pcs
DMS, NO VIS P, NS

LS, BRN, GRN, F XTLN, HRD, FOSS,
TITE, NS

LS, GRN, VF XTLN, V DMS, V HRD,
TITE, NS

LS, GRN, SOFT, V SHLY, NS

LS, TAN, BRN, F XTLN, BRTL, M HRD,
Pcs FOSS, P, NS

LS, LT GRN, TAN, F XTLN, SL DMS,
HRD, TITE, NS

SH, GRN

LS, GRN, TAN, F XTLN, Pcs DMS,
Pcs SL GRNY, HRD, TITE, NS

LS, BRN/GRN, CHKY, SOFT, NS

LS, WHT, F XTLN, M HRD, SL DMS,
NO VIS P, NS

LS, TAN, BRN, F M XTLN, Pcs GRNY,
HRD, NO VIS P, NS
Pcs TAN CHMT, SOFT
DRY
SMPL

LS, WHT, M XTLN, M XTLN, W/HRD, F-6
MIN FLUOR, F-6 & TITG
SET FOSS
DRY
SMPL

CHT, WHT, SHARP, FOSS, NS

LS, GRN, WHT, VF XTLN, HRD,
ABUN FOSS, TITE, NS

DIESEL
CONTAMINATED
SAMPLES



3700

3800

LS, GRAY, WHT, VF XTLN, HRD, ABOUT POSSIBLE, NS			
SM, GRAY			
LS, GRAY, F XTLN, V HRD, SCT WHT CHT + FRAGS, VP + TITE, NS			
LS, TAN, F XTLN, CRS TXY, BATTLE, F XTLN, NS			
CHALK			
LS, TAN, FORM XTLN, M HRD, AT ODOR, SET BRT FLUOR STN, NSFD, 1 PC			
LS, TAN, BRN, FORM XTLN, SOFT, SL CHLKY, G XTLN, NS			
SH, BLK, CARB			
LS, CRM, WHT, F XTLN, HRD, Pcs DNS, NO VIS P, NS			
CHT, WHT-TRIP, NO VIS P.			
CHT, WHT/GRY, FRESH, SHARP, NS			
LS, CRM, F XTLN, S-V HRD, SCT FOSS P, Pcs V FOSS, NS			
LS, A.A. Pcs SET CHT-WHT, NS			
LS, WHT, CRM, VF XTLN, V HRD, DNS, SCT WHT CHT-FRESH, NS			
LS, TAN/GRY, VF XTLN, DNS, M HRD, BRTL, NO VIS P, NS			
LS, A.A.			
LS, CRM, WHT, EXTLN, Pcs ALLGAL, S-M HRD, F P, Pcs FOSS + FRAGS, NS			
CHALK			
LS, GRY/TAN, VF XTLN, M HRD FEW SET LG XTLN, M HRD XTLN, NS			
LS, GRY/TAN, VF XTLN, M HRD, VG VUG P, NS			
SH, GRY			
LS, GRY, VF XTLN, DNS, HRD, TITE, NS			
LS, BDEF, F XTLN, HRD, V FOSS, Pcs W CMT'D OOL, TITE, NS			
CHT, WHT, FRESH, SHARP, Pcs SL FOSS, NS			
LS, BRN, FORM XTLN, HRD, SCT DOM P, NS			
LS, CRM/WHT, FORM XTLN, M HRD, SCT CRS XTLN, NS			
A.A.			
A.A.			
LS, BRN, VF XTLN, M HRD, G FLUOR STNG, GSFO ON BRK, G FLUOR + ODOR, BRT FLUOR FO, V LTFD, F P, NS FRONT, BRT FLUOR SH, BLK SH, GRY			
LS, BUFF, M-CRS XTLN, G XTLN P, M HRD, NS			
LS, BUFF, F XTLN, SL SUCR, F-G XTLN P, GSFO			
LS, TAN, F XTLN, SL REWI, SCT FOSS, F P, NS			

3900

HEERNER
3920 - 960

TORONTO
3936 - 976

LANSING
3961 - 1001

4000

4100

MURKIE
4142 - 1188

DEV 3/4

JET #1

7:AM 6-18-19
DRLC @ 4035'

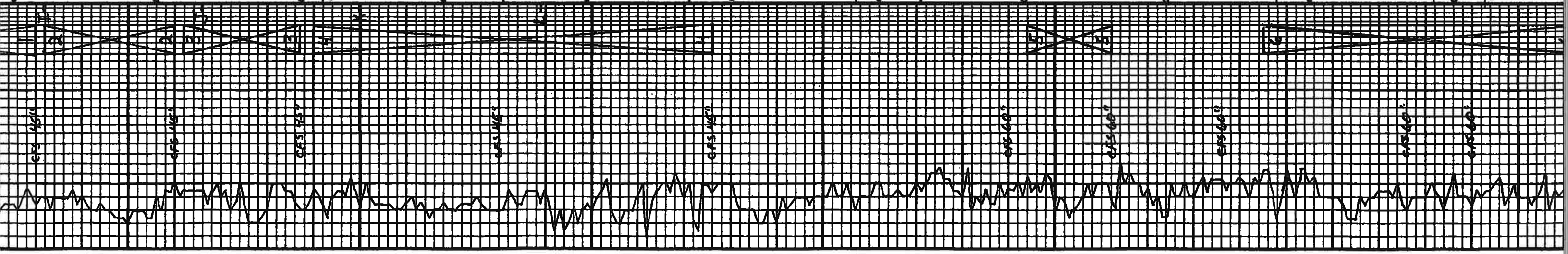
MUD CHECK
VLS: 64 WT: 9.0
CHLOR: 1,500 LCM: 3
FILT: 6.4

DST #1 4126-4180
30-45-45-60
IF: BOB 5^{min} 151: NO BB
FF: BOB 7^{min} FSI: NO BB
REC: 184' HMCW - 55% W
1134' SLMCW - 95% W
FP: 28-359, 364-598
SIP: 699-700
HP: 1988-1984

DST #2 4182-4210
30-45-45-60
IF: 3^{min} 151: NO BB
FF: 5^{min} FSI: NO BB
REC: 73' GIP
116' OIL
63' SLGCM - 7% GAS
FP: 12-45, 51-82
SIP: 726-681
HP: 2013-2011

39 STAD SHORT TRIP
STRAP 4209.05
BOARD 4206.43
LONG 2.62

6-19-19 7:AM



DEV #	LOG #	DESCRIPTION	TEST #	DATE	TIME	RESULTS
4200	4242	STARK	4242	1282	6-19-19 7:AM	DST #1 @ 4180' MUD CHECK VIS: 5.4 WT: 9.2 CHLOR: 2000 LCM: 2 FILT: 6.8
4300	4321	HUSHPOCKNEY	4321	1321	7:AM 6-20-19	DRLG @ 4225' MUD CHECK VIS: 5.2 WT: 9.2 CHLOR: 2,500 LCM: 2 FILT: 7.2
4300	4321	HUSHPOCKNEY	4321	1321	DST #3 4212-4237 30.45-45.60 IF: 4" ISI: NO BB FF: 3 1/2" FSI: NO BB REC: 53' SLOC MW 189' SLOC MW 1% W, 83% W FP: 12-77, 76-119 SIP: 640-639 HP: 2041-2043	
4300	4321	HUSHPOCKNEY	4321	1321	DST #4 4240-4326 30.45-45.60 IF: 1/2" @ 808.6 MIP, NO BB FF: 808.6 MIP, NO BB REC: 174' SLOC MW 210.48% W 862' SLOC MW-98% W FP: 30-302, 306-483 SIP: 614-615 HP: 2018-2018	
BKC	4321	1361	4321	1361	7:AM 6-21-19	DST #4 @ 4326' MUD CHECK VIS: 5.1 WT: 9.3 CHLOR: 2,000 LCM: 2 FILT: 6.4
MARMATON	4357	1397	4357	1397	DST #5 4394-4412 30.45-45.60 IF: 1" ISI: NO BB FF: DEAP. FLUSH. 34" FSI: NO BB REC: 65' H WCM - 35% W FP: 9.33, 33.59 SIP: 758-743 HP: 2131-2132 4410 DRG SMPL	
ALTAMOUNT	4371	1411	4371	1411	7:AM 6-22-19	DST #5 @ 4412' MUD CHECK VIS: 5.4 WT: 9.3 CHLOR: 2,500 LCM: 1 FILT: 6.8 DST #5 SHORT TRIP
4400	4448	PAWNEE	4448	1488	DST #6 4445-4512 30.45-30.45 IF: 3/4" ISI: NO BB FF: DEAP FSI: NO BB REC: 8' SLOC MW - 2% OIL FP: 12-20, 22-26 SIP: 941-857 HP: 2160-2157	
4400	4448	PAWNEE	4448	1488	DST #6 4445-4512 30.45-30.45 IF: 3/4" ISI: NO BB FF: DEAP FSI: NO BB REC: 8' SLOC MW - 2% OIL FP: 12-20, 22-26 SIP: 941-857 HP: 2160-2157	
4500	4482	MYRICK	4482	1522	7:AM 6-23-19	DRLG @ 4505'
4500	4493	FT. SCOTT	4493	1533	7:AM 6-23-19	DRLG @ 4505'

