

4502 Spingess Circle / 516-630-0164 / WENNA, KS 67226

PATRICK J. DEENIHAN
 Licensed Geologist No. 254

GEOLOGIST'S REPORT
 DRILLING TIME AND SAMPLE LOG

OPERATOR BRITO OIL COMPANY, INC
 LEASE ZERR #1-1
 FIELD WILCOCHT
 LOCATION NW 1/4 SE 1/4 NE 5th (1800' x 2300' FAD)
 SEC. 1 TWP. 12S RGE. 33W
 COUNTY Logan STATE KANSAS

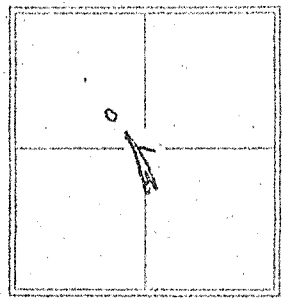
CONTRACTOR MURFIN DRILLING CO., INC. (RIG #21)
 COMM. 10-24-12 COMP. 11-03-12
 W.D. 4710' LOS TO 4708'
 SWAGES SWED FROM 3700' TO T.D.
 DRILLING TIME KEPT FROM 3700' TO T.D.
 SWAGES EXAMINED FROM 3700' TO T.D.
 GEOLOGICAL SUPERVISION FROM 3700' TO T.D.
 MUD UP TYPE MUD CHEMICAL
 WEL # 15-109-2136-00

FORMATION	TOP LOG	BATHY	TOP SAMPLE	DEPTH	STRUCT. CORRECTION
ANHYDRITE	2561	(+488)	2663	(+488)	+12
BASE/ANHY	2585	(+466)	2587	(+466)	+13
HEBER	3976	(-927)	3974	(-925)	+9
LANAS	4020	(-971)	4018	(-969)	+9
MARBLE LEEK	4158	(-1109)	4162	(-1113)	+10
STRK SHALE	4238	(-1189)	4238	(-1189)	+10
BRK	4308	(-1259)	4308	(-1259)	+10
MARSHALL	4334	(-1285)	4333	(-1284)	+10
Fort Scott	4495	(-1446)	4496	(-1447)	+11
CHOKOSE	4522	(-1473)	4524	(-1475)	+10
Johnson Sand	4564	(-1515)	4565	(-1516)	+11
Mississippi	4628	(-1579)	4630	(-1581)	+1

ELEVATION 3049'
 NO 3049
 DF 3038'
 Measurements Are All From K.B.

CASING RECORD
 SURFACE 8 5/8" @ 222'
 PRODUCTION 5 1/2" TO T.D.

WELL LOG SURVEYS
 DUAL INDUCTION,
 GR-CND - EMERALD
 LOG TECH



REMARKS: AS A RESULT OF STRUCTURAL POSITION, POSITIVE DST RESULTS E-LOG EVALUATIONS, IT WAS RECOMMENDED & AGREED UPON BY ALL PARTIES CONCERNED THAT PRODUCTION CSG BR SET ON THE ZERR 1-1 TO FURTHER EVALUATED THIS WELL.

RESPECTFULLY SUBMITTED,
PATRICK J. DEENIHAN
Patrick J. Deenihan
 PETROLEUM GEOLOGIST

Drilling Time Minutes/Foot	Depth	Gas Curve	LITH	Sample Descriptions	Remarks
0 5' 10' 15'	2500			10-24-12-MIRU 10-25-12-2221 10-26-12-2435' 10-27-12-3233' 10-28-12-4110' 10-29-12-4225' 10-30-12-4232' 10-31-12-4234' 11-01-12-4265' 11-02-12-4490' 11-03-12-4670'	

50

ANHYDRITE

2563 (+486)

ANHYDRITE

BASE/ANHY

2587 (+462)

BASE/ANHYDRITE

2700

RAN PDC BIT
BIT CHANGE TO
CONVENTIONAL @
3526' STRAP =
1.46 SHORT TO
BOARD

3100

SAMPLES 1-POOR
LOTS OF RECORD

✓

50

✓

SAMPLES WASHING, BRN

✓

3800

SH, BROWN GRN & GRY
SILT, W/LS, W/LS
BRN

LS, WHT - FSSS - DBL
SILT - NO SHOW

SH, VARICOLOR

50

LS, WHT - CRM - FSSS
SUB - CHALKY
NO SHOW

SH, GRY - GRN & BRN

LS, WHT - CRM - SILT - FSSS
SUB - CHALKY TO CHALKY
NO SHOW

MVD Co / SERVICE
VIS = 57, WT 9.3
WL = 8.0, CHL = 5000

3900

SH, GRY - BLACK - BRN

LS, WHT - GRY - FN - XLN
SILT - FSSS - NO SHOW

50

LS, WHT - LT GRY - SING
SILT - FSSS - FN - XLN
DENSE - NO SHOW

HEEBNER
3977 (-925)

HEEBNER

SH, BLACK CARB

LS, CRM - SING - SILT - FSSS

SH, BRN - GUMMY

TORONTO
4001 (-952)

4000

TORONTO

LS, WHT - GRN - SING - FN - XLN
SH - FSSS - VARY
DIRTY SANDS - SING
WASHING BRN WITH
GRY & GRN SANDS

LANING

LANING

4018 (-967)

LS, WH. CRSE. LT. GR. - Sing. - FSSC - 002 - 00M - 2 CHALKY. W) OR PFR

LS, WH. LT. GR. - Sing. - FSSC - 002 - 00M - 2 V - CHALKY - No. 0000

SH, GR. BROWN, GREEN

LS, WH. LT. GR. - Sing. - FSSC - 002 - 00M - 2 V - CHALKY - No. 0000

SH, VARI-COLOR

LS, WH. - Sing. - FSSC - INTER. 00M - V STRONG 0000, F. SLIP - 15 - FLUID LT. GOLD

SH, BROWN GUMMY

LS, WH. TO LT. GR. - FSSC - 002 - 00M - 2 V - CHALKY - 0000 - F - FEAR STRONG 0000

LS, WH. - INTER. IN CHALK DEEP IN STRONG

SH, BROWN VARI-COLOR

SH, BROWN

LS, WH. - STRONG - INTER. TO SUB-CHALKY

SH, BLACK CRIN. TO BROWN VARI-COLOR

LS, WH. CR. - Sing. - FSSC - 00M - TO F. - XLN - 0000 - 0000 - 0000 - SUB-CHALKY. W) OR PFR

SH, BLACK TO VARI-COLOR

LS, WH. - CR. - LT. GR. - Sing. - FSSC - 00M - F. - XLN - F. - XLN - 0000 - 0000 - 0000 - 0000

SH, VARI-COLOR

LS, CR. - Sing. - F. - XLN - FSSC - F. - G. INTER. FSSC - XLN - 0000 - 0000

SH, VARI-COLOR

LS, CR. - F. - XLN - FSSC - 00M - TO F. - XLN - 0000 - 0000 - 0000 - 0000 - 0000 - 0000

50

400

- CFS - 120"

- CFS - 90"

50

MUNCIE CRK 4162 (-1113)

MUNCIE CREEK

- CFS (90")

920

- CFS - 60"

STARK SHALE

STARK SH

DST #1 (4085-4110)
 30" 60" 60" 90"
 IF - 300 IN 5 MIN
 IS - RETURN 30"
 FF - 803 IN 3 MIN
 FS - RETURN 4 1/2"
 REC: 921' 600"
 (90% OIL, 10% G)
 60' OCWA (5% OIL; 5% WTR - 90% MVD)
 IHP: 2026 FHP: 1933
 IFP: 95/270
 FFP: 289/490
 SIP: 1215 FSSP: 1178
 CHL: 5,000 BHT 120
 GRAVITY 30

DST #2 (4150-4205)
 30" 45" 45" 90"
 IF: 303-9"
 IS: NO RETURN
 FF: 803-8"
 FS: RETURN 8"
 REC = 620' GIP,
 439' C90, (30% G; 70% OIL) 239' NC90 (20% G; 80% OIL) 140' MC90 (40% G; 60% OIL) 50' MVD
 IHP: 2117 FHP: 1992
 IFP: 25/147
 FFP: 160/247
 SIP: 1320 FSSP: 1318
 BHT: 122 - CHL 5,000
 GRAVITY 30

MUD COL SERVICE
 VIS: 51, WT 9.3
 WEL: 6.6, CHL 5000

DST #3 (-4208-4234)
 HOLE LOST FLUID - IN HOLE - SET PACKER - NO FLUID IN HOLE - PULLED TOOL THEN WENT BACK TO BOTTOM - WITH BIT TO BE CONSULTED

DST #4 (4208-4234)

4238 (-1189)

50

-CFS 60"

5

SH, BLACK CARB - W) VAR -
COLOR - ARGIL

SH, ABUND VARI-COLOR - ARGIL
SLUFF FROM HOLE PROBLEMS

SH, A)A

LS, GRN-FIN-XLN-G PPH-G
INTER-XLN P - FINE DDM
2% SOL - 2% SLT - 4000 -
SLI-FLYER - LOT OF SHALE
VARI-COLOR

SH, ABUND

LS, WHI, LT GRY-SING-FIN-XLN
V-G INTER-DOM-SLI-CHALKY
G-SLIP-STRONG, PDR - P-FLUO

30" - 45" 60" - 90"
IF: 304

IS: NO RETURN
FFI: 808 IN 224
FS: NO RETURN

REC: 30' F.O; 20' MUD
(15% GAS - 70% OIL;
15% Sol. Mud)

IHP: 2058 FHP: 1965
IFP: 15/30 FFP: 14/55
ISIP: 1234 FSIP: 1264
BNT: 112 CHL: 2000
GRAVITY: 32°

LS, A)A DECREASE IN SN
INCR IN DDM - CHALKY LS

DST # 5 (4235' - 4265')

30" - 45" - 45" - 60"
18" - 7"

IS - No Blow
FF - 3"
FS - NO BLOW

REC - 30' MCO, 6.95%
OIL 5.9% MUD 120' MUD
W) SOL 5% (TOP 90' MUD)
180' OCWM (2% OIL -
20% WTR - 78% MUD)

IHP: 2169 FHP: 1959
IFP: 15/92 FFP: 17/157
ISIP: 1273 FSIP: 1268
BNT: 118 CHL: 28,000
GRAVITY 39°

SH, DK GRY, TRC OF BLACK
VARI-COLOR

LS, WHI - SING - FIN-XLN
FSS - 4500 - F-P
F-MUD - FSS (W)
DRY - SUI-CHALKY

LS, A)A

SH, BLACK CARB - T.O
NO SAND - VARI-COLOR

SH, A)A - INCREASE
IN IS

BKC

BKC

4308 (-1259)

4300

MARMATON

MARMATON

4333 (-1287)

50

6

LS, WHI-SING - GRV
MOTT - FIN-XLN -
NO. SLOW - A)A

DST # 6 (4274' - 4308)

30" - 30" - 30" - 30"

IF: WK - DIED IN 13"

IS - NO RETURN
FF - NO BLOW
FS - NO RETURN

REC - 2' MUD

IHP: 2204 FHP: 2044
IFP: 15/18 FFP: 16/16
ISIP: 21 FSIP: 16/19
BNT: 119 CHL: 3000

LS, A)A (W) STRONG IN
CHALKY - SAMPLES
W) SOL - 2% SLT - 4000 -
SH, ABUND - VARI-COLOR

LS, - GRV - MOTT -
CRY 20 - XLN - N.S.

LS, GRN-TAN - GRV - SING
SLO-MOTT - NO SAND
SLI - PYRI -

DST # 7 (4431' - 4453)

30" - 30" - 30" - 30"

IF: WK - DIED IN 11"

IS: NO RETURN
FF: NO BLOW
FS: NO RETURN

REC: 3' MUD (W) OIL
SPOTS

IHP: 2106 FHP: 2288
IFP: 15/18 FFP: 19/22
ISIP: 1009 FSIP: 929
BNT: 118 CHL: 3000

SH, ABUND - VARI-COLOR

SH, A)A

LS, GRN-GRY - SING/
MOTT - MICRO-KLN

SH, VARI-COLOR

LS, WHI, LT GRV - SING -
SLO-MOTT - NO SAND

MUD CO., / 3ER VISC
NT: 9.3 - VIS: 61
WT: 9.2 - CHL: 3000
LCM: 6"

LS, A)A (W) INCR IN
CHALKY - SOL & DDM
IN PART -

LS - A)A

SH, GR - DK GRV

LS, WHI, LT GRV - FIN-XLN
WASHES - CHALKY

LS, A)A - CRYPTO-XLN

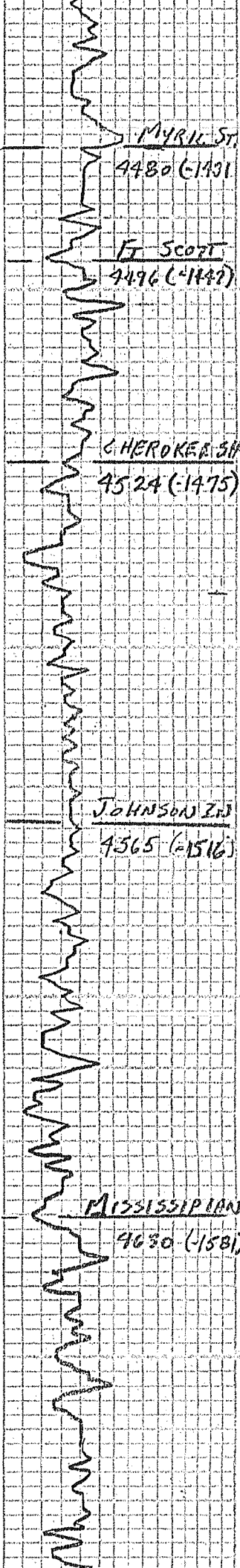
PAWNEE

PAWNEE

4442 (-1377)

50 - CFS - 90"
- CFS - 60"

7



MYRIC STATION

MYRIC ST.
4480 (1431)

FORT SCOTT

Ft SCOTT
4496 (1447) 4500

CHEROKEE SHALE

CHEROKEE SH
4524 (1475)

JOHNSON ZONE

JOHNSON ZONE
4565 (1516)

MISSISSIPPIAN

MISSISSIPPIAN
4630 (1581)

LS., A/A

SH., BLACK CARB

LS., WHIT-CRM-GRY-FN-
DENSE-TO-DOL-V-
CHALKY

SH., BLACK CARB-VARI-
COLOR

LS., CRM-TAN-FSSS, FN-
XLN-SLIC-DENSE DOL
POR-DEAD OR STN
SFI-ODOR, NO FLUOR

LS., CRM-SING-FSSS
DOL-TO-SUB-CHALKY
NO SHOW

SH., BLACK-CARB-DK
GRY

LS., WHIT-TAN-SING-
FN-XLN-CHALKY
NO SHOW

SH., GRYS-GRN-ARGIL

SH., GRYS-ABUND-VARI-
COLOR

LS., TAN-GRY-SING-FN-
FN-XLN-SUB-CHALKY
NO SHOW

LS., CRM-SING-FN-XLN
SFI-FSSS-GSLP-GD
ODOR-STRONG DOL
F-FLUOR ON EDGES

LS., CRM-TAN-SING-FN-XLN
SU-DOL TO DOL-GSFD
STRONG ODOR-F-FLUOR

LS., A/A - WASHES CHALKY

SH., VARI-COLOR

LS., CRM-GRY SFI-FSSS

SH., VARI-COLOR-V-DENSE
MICRO-XLN-SS-GLAUC
S-YELLOW

LS., CRM-LT GRY-FN-XLN
DENSE-SLI-CHALKY

LS., A/A - WASHES CHALKY
NO SHOW

SH., VARI-COLOR.

LS., WHIT CRM-FN-XLN
TO CHALKY-NO SHOW

LS., A/A

MUD CO / SERVICE
WT: 9.2 VIS: 52
WL: 8.0 CHI: 3400
LCM: 6 #

DST # 8 (4542'-4600')
30" - 30" - 30" - 30"
IF: WIK SURF-DIRAINITY
IS: NO RETURN BLOW
FE: NO BLOW
FB: NO RETURN BLOW
REC: 70 MUD W/ DOL SPT
IMP: 2282 FHP: 2877
IFP: 30/57 FFP: 60/82
ISIP: 1084 FSI: 1003
BNT: 120 CHI: 3400

MUD CO / SERVICE
WT: 9.2 VIS: 58
WL: 7.2 CHI: 3500
LCM: 6 #



W W W W W

4700

SM, GRY 3 - AR 67

SM, BER TO GRY 3 -

LS. WHT - CHALKY TO FN
X LN - NO JHOLD