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GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

OPERATOR SHAKESPEARE OIL COMPANY, INC.

LEASE POPE #1-20

FIELD WILDCAT

LOCATION 1250' FNL & 1206' FEL

SEC. 20 TWP. 13 RGE. 32^W

COUNTY LOGAN STATE KANSAS

CONTRACTOR H. D. DRILLING, LLC RIG #2

CONNL. 7-22-11 COMP. 8-04-11

RTD. 4730' LOG TO 4732'

SAMPLES SAVED FROM 3800' TO T.D.

DRILLING TIME KEPT FROM 3800' TO T.D.

SAMPLES OBTAINED FROM 3800' TO T.D.

GEOLOGICAL SUPERVISOR FROM 3600' TO T.D.

FLUID UP 3562' TYPE MUD CHEMICAL

API # 15-109-21021-00-00

FORMATION	LOG		SAMPLE		DEPTH, FEET
	TOP	DATUM	TOP	DEPTH	
BASE ANHYDRITE	2530	(+504)	2530	(+504)	-1
HEEBNER	3972	(-938)	3972	(-938)	+3
LANSING	4008	(-974)	4015	(-981)	+10
MUNCIE CREEK	4167	(-1133)	4167	(-1133)	-3
STARK SHALE	4257	(-1223)	4256	(-1222)	-6
HUSHPOCKNEY	4288	(-1254)	4286	(-1252)	-1
PAWNEE	4452	(-1418)	4451	(-1417)	+8
CHEROKEE SHALE	4533	(-1499)	4532	(-1498)	+10
JOHNSON ZONE	4576	(-1542)	4576	(-1542)	+12
MISSISSIPPIAN	4639	(-1605)	4639	(-1605)	+22

ELEVATION

KB 3034'

DF

CL 3024'

Measurements Are All

From KB,

CASING RECORD

SURFACE 8 5/8" SET @ 224'

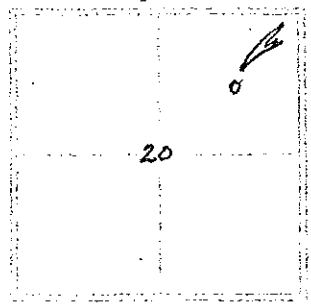
3% CaCl₂-2% GEL

PRODUCTION NOT APPLICABLE

WELL LOG SURVEYS

WEATHERFORD

CND; DI/SP; PE; CALIPAR.
MICRO & SONIC



REFERENCE WELL FOR STR. INFO. COMPARISON

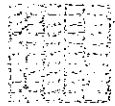
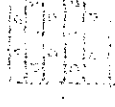

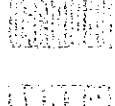
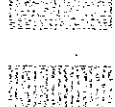
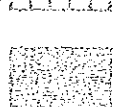
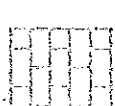
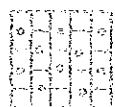
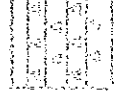
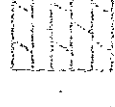
SOCO - BADGER #2-16 SEC: 16-15-32^W
LOGAN Co., KS.

REMARKS AS A RESULT OF THE NEGATIVE DST'S; SAMPLE EXAMINATION; LACK OF ZONE DEVELOPMENT
 & E-LOG EVALUATION IT WAS RECOMMENDED & AGREED UPON BY ALL PARTIES CONCERNED THAT THIS WELL
 BE PLUGGED & ABANDONED. ON 8-03-11.

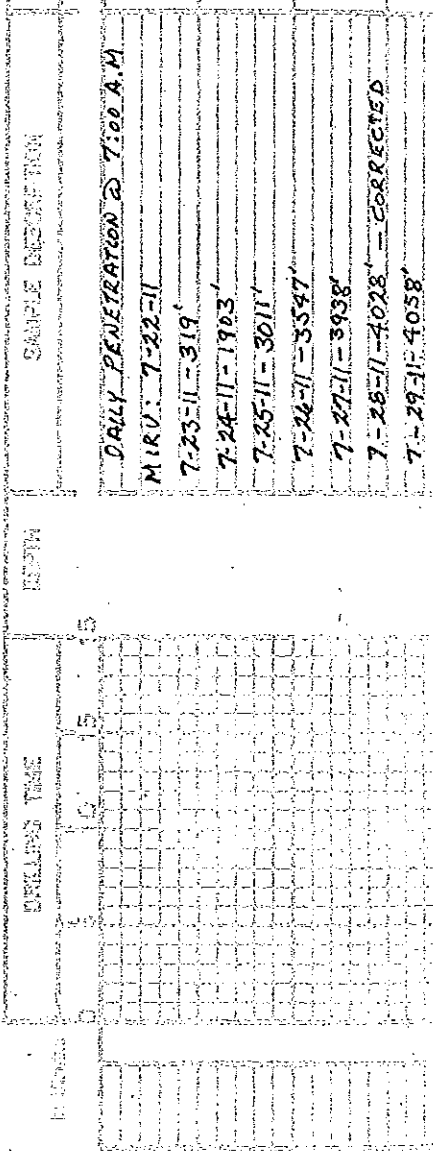
RESPECTFULLY SUBMITTED BY

Patrick J. Deenihan
 PATRICK J. DEENIHAN
 PETROLEUM GEOLOGIST

LEGEND

-  Sandstone
-  Shale
-  Limestone
-  Dolomite
-  Oil on Unconsolidated Columns
-  Gas
-  Oil
-  Water
-  Mudstone
-  Sandstone

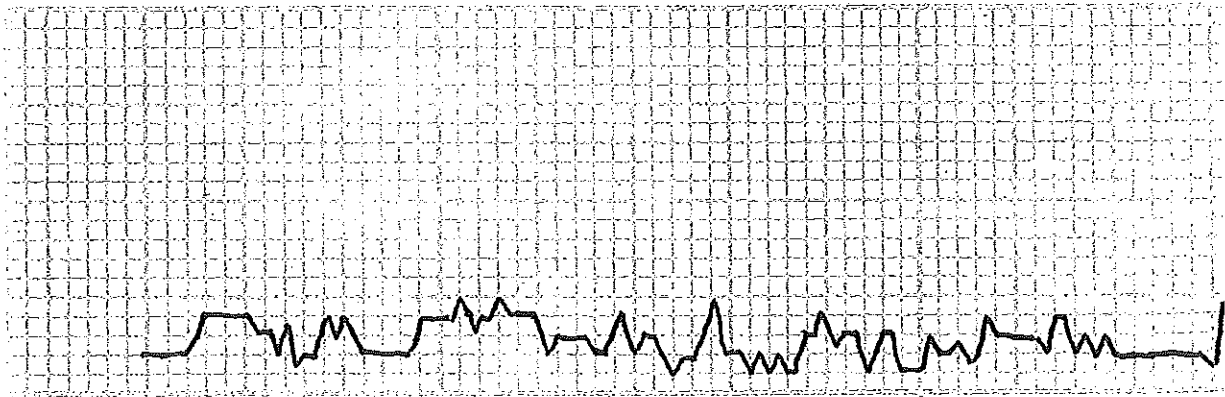
SCALE 1" = 100'



DAILY PENETRATION @ 7:00 A.M.
 M.I.V.: 7-22-11
 7-23-11 - 319'
 7-24-11 - 1903'
 7-25-11 - 3011'
 7-26-11 - 3547'
 7-27-11 - 3938'
 7-28-11 - 4028' - CORRECTED
 7-29-11 - 4058'

3800

50



SH, ABUND. VARI-COLOR

LS, DWT. CRM, CHALKY, SIL-FSSL

SH, BLACK GR, BED; ORG. & GRD

LS, CRM-TAN - CHALKY, FSSL TO POOL
F-FUSION - NO. SHOW

LS, -A/A

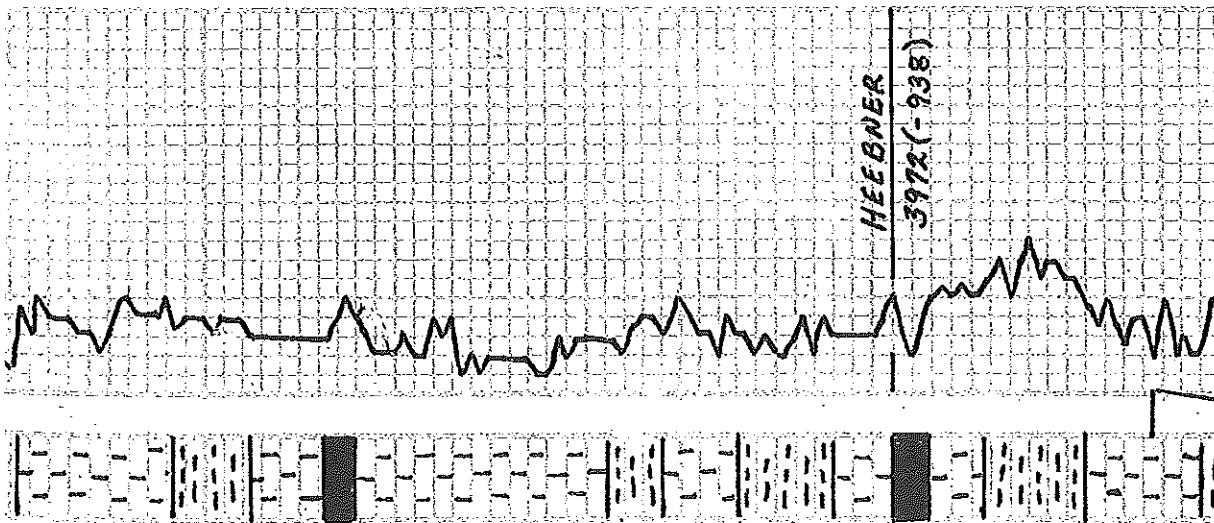
LS, A) A WITH FRESH QUARTZ GR
OR BUR. CHERT

SH, BLACK CRBS, DK GR

SH, DK GR, GR, ORG, BRN & GRN

LS, DWT. CRM, LT. GR - CHALKY, FUSION
FSSL

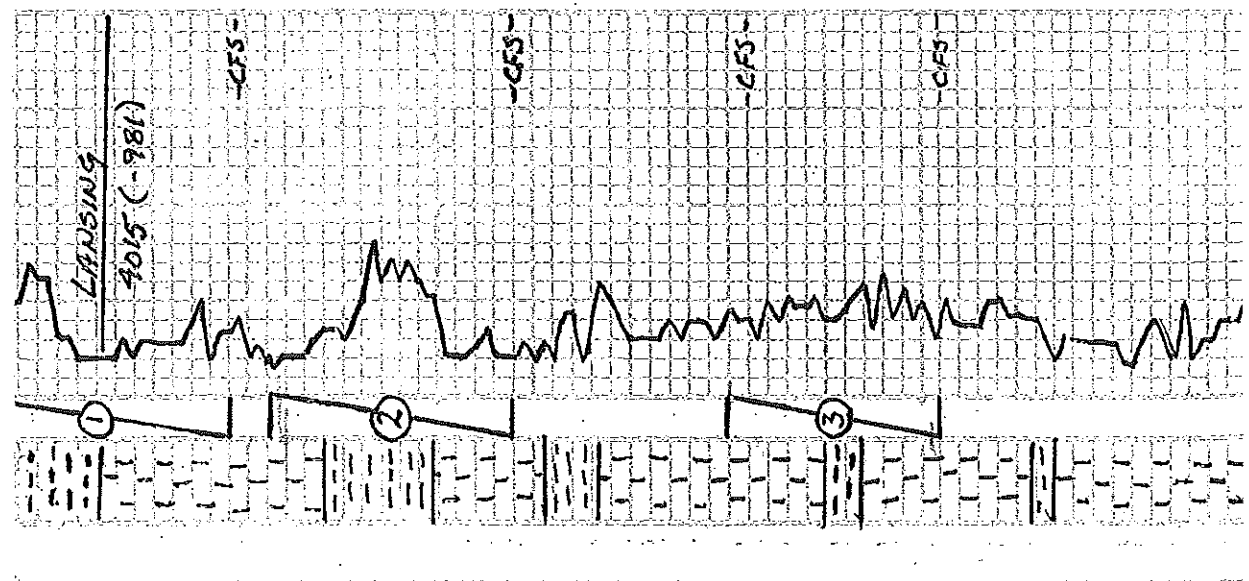
SH, ABUND. VARI-COLOR



3900

4000

<p>AS, WHT-SING-FSSL-COOL-CHALKY P-FD-XLN-NO SHDN</p>	<p>MUD CO. SERVICE MUD. INC. VIS: 51 WT: 9.2 WL: 8.8 CML: 5500 LCM: 2"</p>
<p>LS, A)A</p>	
<p>SH, GRAY & BLACK</p>	
<p>LS, GRN-LT GRN-SING/MOTT-CHALKY F-FD-XLN, TRC OF F-FSSL P</p>	
<p>SH, BLACK CARB</p>	
<p>LS, WHT-CRM-SING-CHALKY-FSSL F-FD-XLN-P-SMP-VERY SMARL</p>	
<p>LS, A)A V-P-SAMPLES</p>	
<p>SH, FLOOD OF CHOC. BRN GUMMY</p>	
<p>SH, GRYS & BRNS</p>	
<p>LS, WHT-CRM-SING-FSSL-FINELY CHALKY</p>	
<p>SH, BLACK CARB</p>	
<p>SH, BLACK, DK GRAY & GRAY</p>	
<p>SH, GRAY, BRN & GRN-TRC OF BLACK</p>	
<p>LS, WHT-CRM-SING-FSSL-COOL IN PT SU-CHALKY SAMPLE-N-SMARL SMALL BLACK DEBRIS IN SU RES-NEXT TO-NO OBER NO. MARK</p>	<p>PIPE STRAP = 31.5' SHORT TO BOARD; 30' CORRECTION MADE HOLE IN DRILL PIPE DEVIATION 3 1/2'</p> <p>DST # 1 3999' - 4028' IS" - 30" - 30" - 60" IF: 808 IN 30 SEC - No BB. FF: 808 IN 1 MIN - No BB. REC: 1054' OF 5W. (100% WTR) M.A. 2225 FIB. 1488</p>



SH., VARI-COLOR

ZS., WHIT-RT GRAY-SING-CHALKY-P-F
 FN-RUN-SILL-POOL-SAMPLES V-
 SMALL ASSES-35% POS 4) BRN
 TO BLACK EDGE ST-NO GOOD NO
 FLOOR

* NOTE: 25' OFF HILL AFTER DST #1

ZS., A/A-SAMPLE QUALITY GOOD

SH., ABUND VARI-COLOR

ZS., WHIT-TAN-SING-CHALK FN-RUN
 SHALLOW INTER-RUN B IN FEW
 POS. FISSILE SEAT AT BRN EDGE
 STR. TRC OF LEV-SOME FLOTTING
 OIL BEARS W-FRINT DOOR-P-SPTD
 FLOOR (AROUND WHIT FRESH CHERT
 W/NO SHOW)

SH., GRYS, E BRN

ZS., SOME WHITE-SING-FUN-RUN, FESS
 E CHALKY, FINTER-RUN-G-AB
 SHOW

SH., BLACK-DK GRY-GRY E BRN

ZS., WHIT-RT GRAY-SING-FN-RUN-SHALLOW
 INTER-RUN-G-SPLIT IN A FEW POS-F-400
 STAIN SEE ALL-SILL DOOR-P-FLOOR
 SUB-CHALKY

ZS., LT GRAY-SING-CHALKY-TO CRIPID
 XLN-NO SHOW

SH., BRN, GRAY, GRN

ZS., WH-CRM-SING-CHALKY-P-F-FN-RUN
 NO SHOW

ZS., WHIT CRM LG GRAY-SING-V-F-FESS
 TO MICRO-DOOR TRC OF WHIT-FRESH
 CHERT-NO SHOW

INT: 4000 FHP: 1194
 FFP: 910/1134 FFP: 1143/1194
 ISIP: 1192 FHP: 1194
 CHL: 25000 CHL: 5500 (SYS)
 BHT: 118°

DST #2 4033'-4058'
 30" x 30" x 45" x 90"
 IF: W/ SURF-BUILT TO 2 1/2" NO BB
 FF: BUILT TO 5" NO BB

REC: 248' OF SW (100% WTR)
 IHP: 2055 FHP: 1966
 IFP: 17/74 FFP: 75/105

ISIP: 1168 FHP: 1176
 CHL: 26000 CHL: 5000 (SYS)
 BHT: 117°

DEVIATION - MISRUN

DST #3 4080'-4102'
 15" x 30" x 15" x 30"
 IF: NO BLOW
 FF: FLUSHED TOOL-BLEW-DEAD

REC: 5' MUD
 IHP: 2106 FHP: 2033
 IFP: 15/11 FFP: 24/24
 ISIP: 24 FHP: 42
 CHL: 5000 (SYS) BHT: 111°

VIS: 54 WT: 9.1 WL: 8.8
 CHL: 5000 LCM: 20

TO MICRO-902 TRC OF WHI. FRESA
CHERT - NO SHOW

LS, ADA LAC IN CHERT

LS, WHI-CRM-SING-CHALKY-V.P.
MICRO-902 9- SAMPLE HAS NO
V.S. 9

LS, WHI-CRM-TAN-SING/ACT
CHALKY-TRC OF DENSE MICRO-902
NO SHOW

SH, BLACK CARB

SH, BRN, GRV-ABUA

LS, WHI-SING-CHALKY-P-FN-XLN-
OVERALL V. FINE. V. SL-FOUR STAIN
SEVERAL PCS - FRI-DK BRN TO BLK
NO FLUOR - NO OOR

LS, A7A WITH DENSE SMALL DOL. NO SHOW

SH, BLACK CARB

SH, VAR-COLOR

LS, WHI-CRM-SING-CHALKY-V-FN-XLN
DENSE MICRO-902 TRC OF FN-XLN
FRAGILE-FSLD-NO FRIE ON NO OOR
NO FLUOR - ABUND SWALE A7A

LS, ABUND BONE WHI-CHALKY TO MICRO
XLN-FEW PCS WITH OIL STAIN ON
CARB (WHI) - TRC OF MICRO FSL
TO MICRO-902 - V. FINE - NO SHOW

SH, BLACK CARB 4 ABUND. VAR-COLOR

SH, VAR-COLOR

LS, WHI-CRM-SING-CHALKY-P-FN-
XLN-NO SHOW

SH, VAR-COLOR

LS, WHI-CRM-AT GRV-SING-CHALKY
MICRO-FSLD-FINE-NO SHOW

SH, BLACK CARB

SH, GRV 3 BRN-AT 91

LS, WHI-SING-CHALKY-P-FN-XLN, NO

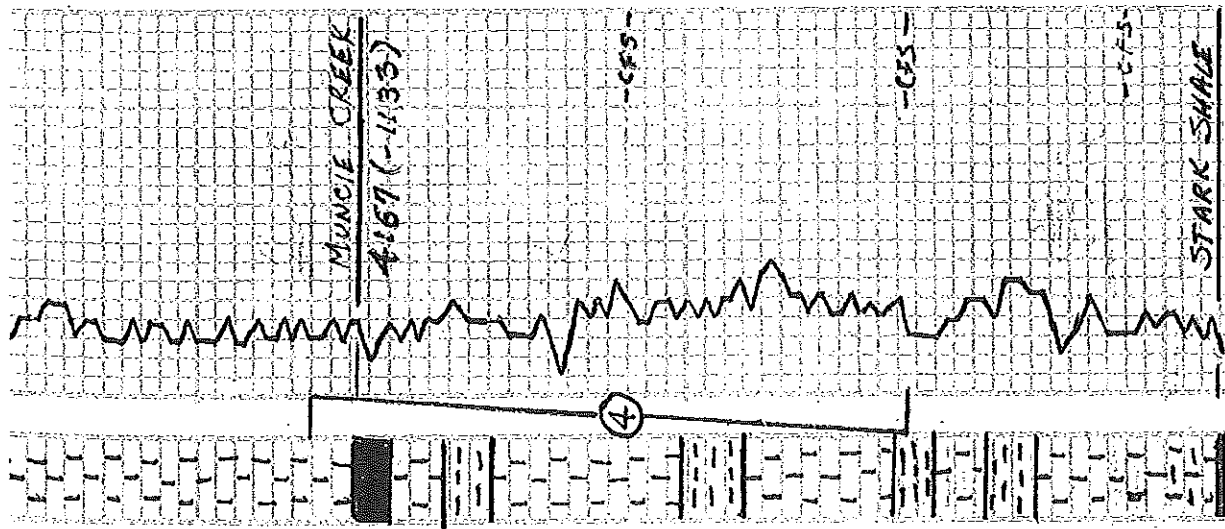
DST # 4 4162' - 4223'
30" x 30" x 30" - 30"
IF: NO BLOW
FF: NO BLOW FLUSHED TOOL-NO HEN

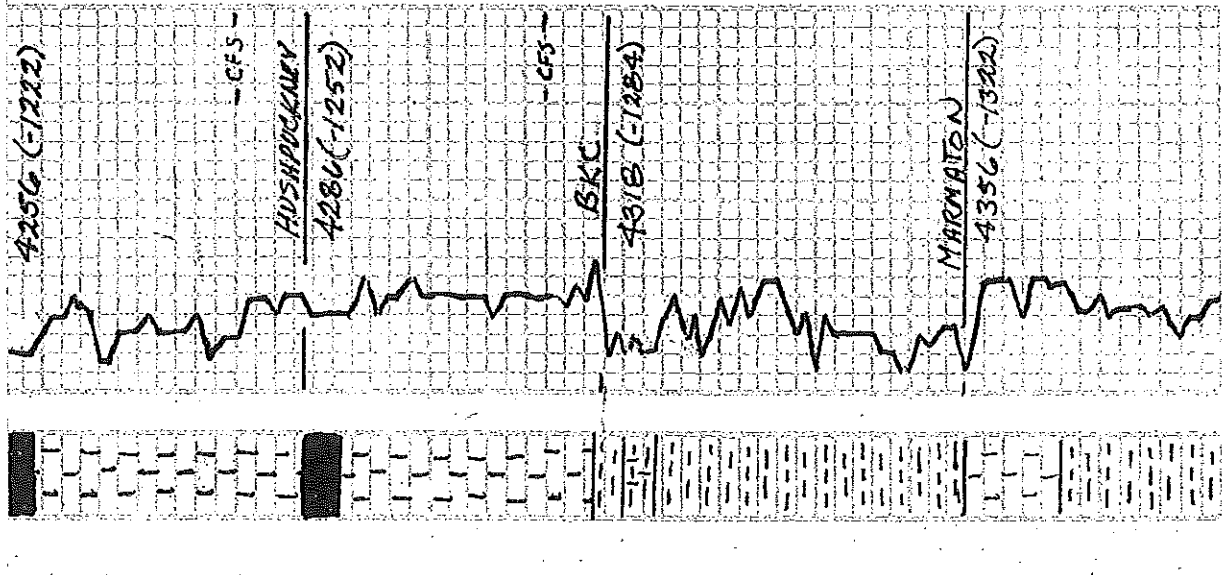
REC: 65 MUD

IHP: 2145 FHP: 2147
IFP: 36/62 FFF: 67/87
ISIP: 1164 FSIP: 1128
CHL: 6300 (WYS) BHT: 114°

VIS: 50 WT: 9.4 WL: 9.6
CHL: 6300 LCM: #

4200





4300

SM, BLACK CARB
 LS, WHT CRM, LT GRN - FN-XLN, P-FSSLD
 SUB CHALKY - TRC OF P-DENSE OOL
 P - No SHOW

LS, A) A) W) CRYSTO-XLN TO SU-CHERTY
 No SHOW

SM, BLACK CARB

LS, CRM - LT GRN - FN-XLN - TRC OF P-
 FSSLD - SUB CHALKY TO CHALKY
 No SHOW

SM, BLACK CARB
 LS, CRM - LT GRN - FN-XLN - SUB - AROUND
 OOL F OOL - FN-XLN - SUB - CHALKY
 No SHOW

LS, TAN - LT GRN - MICRO TO FN-XLN
 DENSE OOL - No VIS - P - No SHOW
 No SHOW

LS, LT GRN - TAN - BRN - SING - FN-XLN
 P-FSSLD - No SHOW

SM, AROUND VARI - COLOR

LS, TAN, BRN - FSSLD - P-OOL F OOL
 No SHOW - AROUND VARI - COLOR SM

SM, VARI - COLOR - PRED - CIRC - BRN

SM, (AS) ABOVE - PRED - LT BRN - SMP
 WASHES - BROWN

SM, A) A)

LS, LT BRN - LT GRN - FSSLD TO SUB-
 CHALKY - SM, BLACK, BRN, GRN, GRN
 F-ORANGE

LS, CRM - TAN, BRN - SMP - DENSE CRTD
 P-OOL - No SHOW

SM, GRY, DK GRY, BRN, MAROON, GRN
 BRN - ORANGE

SM, A) A)

VIS: 56 WT: 9.2 WL: 7.8
 CHL: 5300 LCM: 2^o

4400

4500

LS, CRIM-TAN-SING-DENSE-FM-XLN-P-ASSE
No. 5780 W

SH, VARI-COLOR

LS, WHI-CRM-GRY-FN-XLN-FSSE-DENSE
No. 5780 W

SH, GRYS & BRNS

LS, WHI-CRM-DE-GRY-SING-DENSE
FM-XLN-7% SUB-CHALKY-P. 00L
No. 5780 W

SM, ABOUND VARI-COLOR - PREDOM-GRY
& BRN

LS, CRM-TAN-BRN-SING/MOTT-V-P
FSSE (00L) - WHI-FM-XLN & SLI-FSSE
No. 5780 W

LS, A)A WITH CRM-SING-CRYPTO-XLN
To SUB-CHALKY No. 5780 W

SH, BLACK CARB

LS, WHI-CRM-SING-FSSE To FM-XLN -
MCO To BRN-EDGE STN - NO ODR - WFO
No. 000R - (WHI-FRESH CHERT)

LS, A)A SLI-FSSE CHERT

LS, WHI-CRM-TAN-LI-GRY-SING/MOTT -
FM-XLN-FSSE - WHI OPART CHERT To
CLEAR FRAS - No. 5780 W

LS, TAN-GRY-SING-P-FM-XLN, SLI -
SHOW OF CRM-FRESH CHERT - No. 5780 W

SH, BLACK CARB., GRYS

LS, WHI-CRM-TAN-SING/MOTT-F-FM-
XLN & ON EDGES-LI-BRN OIL STN
No. 000R - No. 5780 W To V-SLI-FRGE
FLOR

SH, BLACK CARB. - ABOUND GRYS

LS, CRM-GRY-SING-FM-XLN To BRN

DST # 5 4442' - 4534'
30" x 30" x 30" - 30"
(F: WK SURFACE BLOW - NO B.B.)
FF: No BLOW

REC: 10' MUD

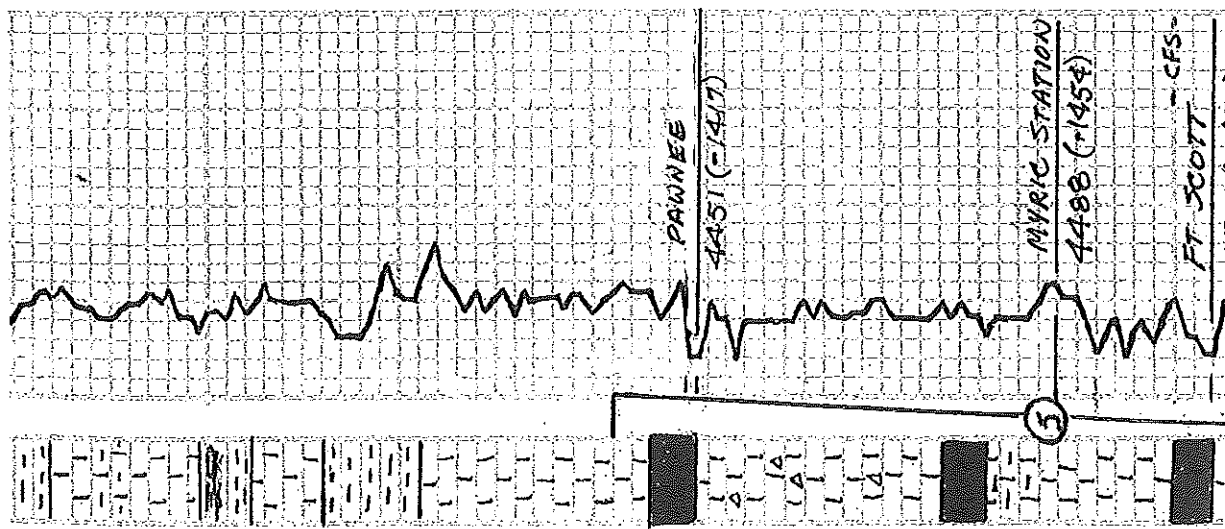
RHP: 2296 FHP: 2200

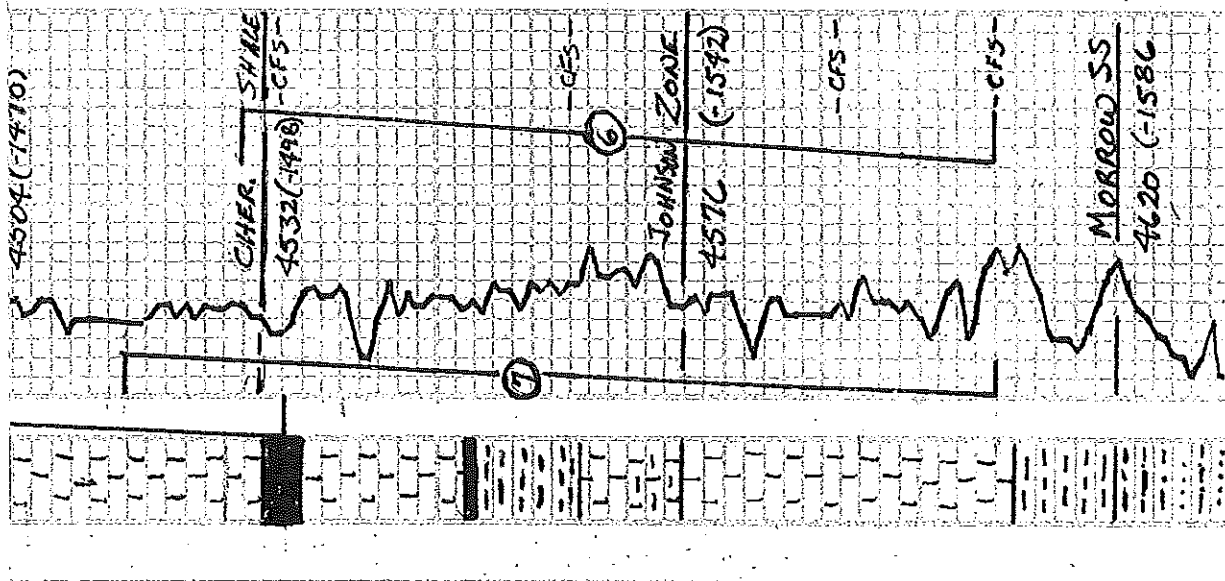
IFP: 53/56 FFP: 57/58

ISIP: 480 FSIP: 313

CHL: 5300 (STS) OHT: 119

DEV: 3/4°





4600

INTER. UNL. PDB - CRYPTO-XLN
 SU-ESSL - F-SHOW OF LI GRN LGO
 No LGO V-SU-DOB - F OIL SAT
 IN DRY SMP TO TO 1/4" FIRE IN
 DRY RES - SUB-CHALKY N/DEATH
 F-SATT FLUOR - COVER SMP DOORS
 TITE

LS, QNT LI GRV - SING - CRYPTO-XLN
 & CHALKY - NO SHOW

SH, BEIGE CARB

LS, LI GRV - SING - FESSL - P-PO-XLN
 DESS - FESSL

LS, -LI GRV - FU-XLN-SH-ESSL - V-SHARP
 ANGULAR - VUG 8" (FESSL) - ENERGY
 IN PART - SHALLOO - TO DEEP VUG WITH
 BRNNG BUCKLE TO - F-FAIR COLOR - 1/4"
 SAT-STA IN DRY SMP - FLUOR - P-DRU
 CHALKY N/7 DEPTH

SH, ABUND. VARI - COLOR

SH, GRAY - BRD GRU

LS - CRN-TAN - GRV - SING - MOTT -
 FUL-MAN TO FESSL - SU-CAL - SU-ESSL
 STA

LS, COA/DT GRV - TO GRV - SING - MOTT -
 FESSL TO 200' RES - OVA - F-SHLE
 IN VERY RES - G-DOB - F-SHLE TO
 SAT - (LT TO DK GRN) EN SEV. FOS
 SUB-CHALKY - SPITY FLUOR

LS, GRV - SING - FESSL -

SH, ABUND - VARI - COLOR

SS, & SH - SS - VARIOUS CLUSTERS -
 TO WH - CHALKY - SH, ABUND - KAR - CARB

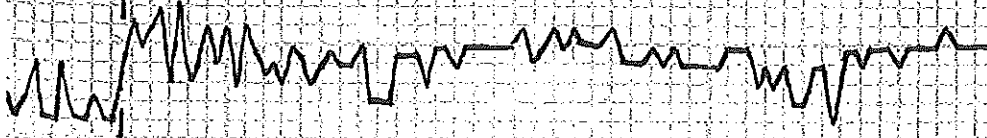
SS - MOTT - PIRAB - SH - GRV - P - 200' - 1100'

VIS: 65 WT: 9.3 WK: 7.8
 CHL: 5500 LCM: 20

DST #6 4528' - 4608'
 MIS RUN - PACKER FAILURE

DST #7 4518' - 4608'
 30" - 45" - 30" - 60"
 IFF: BUILT TO 1"
 FFP: No BLOW
 REC: 25' MUD
 IMP: 2366 FHP: 2247
 IFF: 68/72 FFP: 72/73
 ISIP: 215 FSIP: 154
 CHL: 5500 (SWS) BHT: 1240

MISSISSIPPIAN
4639 (-1605)



RTD = 4700'
REACHED @ 10:15 AM
ON 8-03-11

4700

SS, LIME CLEAR - SUB-ANG TO RD., CALC. MINS
TO QUANTITATIVE WIDTH - NO SHOW
(EN - SAN - 5 PSYRITIC W/DEPTH)

SS, A/A 2) ABUND. FREE OTS - TRC. OF
ORANGE FRESH - TRANSLUCENT CARRI
NO SHOW

LS, WHIT-COM = FAN-XLN TO CHALKY - STILL
CARRYING ORG. CHERT

LS, BONE WHITE - CHALKY - TO GRM
FN - TO MOO-KLN - NO SHOW

LS, A/A

LS, WHIT-AT TAN - CHALKY - FN - XLN

LS, WHIT-TAN & LT GRAY - FN - XLN - SU -
FSS - ABUND. SH, NO SHOW

LS, COM. THIN GRAY - SING - FN - XLN TO
SUB-CHALKY - NO SHOW

50

50