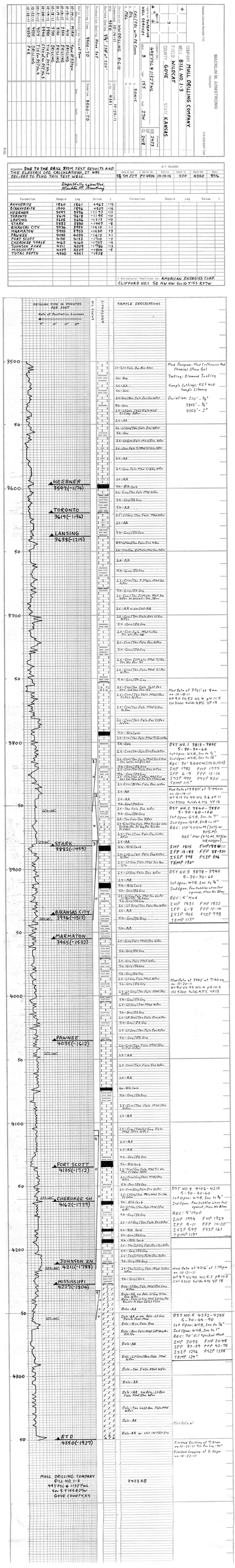

Kansas Geological Survey, KGS
MULL DRILLING COMPANY
WELL: BILL NO. 1-3
FIELD: WILDCAT
COUNTY: GOVE
STATE: KANSAS
MAGNUM SU ARMSTRONG
Geologist
DRILLING TIME AND SAMPLE LOG
DRILLING COMMENCED: 10-31-11
DRILLING COMPLETED: 11-7-11
SURFACE CASING: 8 5/8" @ 220' w/ 150 sx
PRODUCTION CASING: None Set
ELEVATION: 2423 KB
GL 2418
DF
KB 2423
LOCATION: 445' FSL & 1132' FWL
Sec. 8 Twp. 19S Rge. 27W
API # 15-063-21927-00-00
Drilling Contractor: MURFIN DRILLING RIG 10
Engineer: Kevin Sperry
Spud: 10-31-11 @ 9:30 PM
Rotary Total Depth: 4350
Logging Total Depth: 4350
Logging Engineer: Kevin Sperry
Logging Unit Number: 2
Type Electric Surveys: DUAL INDUCTION, DUAL COMPENSATED POROSITY, MICRO
Time Log Clerk: Kevin Sperry
Samples Saved: YES
Drill Time Kept: YES
Samples Examined: 3600-TD
Geological Supervision: 3600-TD
Remarks: DST #1 3813-3855 (Toronto) 30-60-60-120 Rec: 180' GOCM (15%G,15%O) IHP 1782 IFP 1779 ISIP 992 FSIP 920 IHT 1115 FFP 12-26 FFP 1779 FSIP 920 IHT 1115 FFP 12-26 FHP 1782 BHT 115°
DST #2 3940-3980 5-30-60-120 Rec: 5' MCM IHP 1915 IFP 18-28 ISIP 998 FSIP 996 IHT 1150 FFP 30-40 FHP 1922 BHT 115°
DST #3 3978-3990 5-30-30-60 Rec: 5' MCM IHP 1931 IFP 10-19 ISIP 965 FSIP 975 IHT 1127 FFP 20-29 FHP 1924 BHT 115°
DST #4 4106-4215 5-30-30-60 Rec: 5' MCM IHP 1996 IFP 9-11 ISIP 597 FSIP 161 IHT 1197 FFP 14-20 FHP 1924 BHT 115°
DST #5 4232-4265 5-30-60-90 Rec: 70' O,G,M Spotted Mud IHP 2093 IFP 32-39 FSIP 1288 IHT 1296 FFP 42-56 FHP 2048 BHT 129°
Mud Properties: Mud Co/Chemical Mud Chemist/Ryan Gel Testing: Diamond Testing Sample Catching: KCC Well Sample Catching
Deviation: 210' - ¾° 3965' - ¾° 4360' - 2°
Mud Data at 3980' at 7:45am on 10-29-11 wt 9.4 vis 46 wl 8.6 pH 11 Cl 5500 %sds 6.5% YP 16
Mud Data at 3992' at 7:00 am on 10-31-11 wt 9.0 vis 43 wl 8 pH 10.5 Cl 6200 %sds 4.5% YP 13
Mud Data at 4216' at 1:55pm on 11-3-11 wt 9.1 vis 46 wl 6.2 pH 10.5 Cl 6200 %sds 4.5% YP 15
Mud Data at 4350' at 7:30am on 11-7-11 wt 9.1 vis 47 wl 6.4 pH 10.5 Cl 6200 %sds 4.5% YP 15
Finished Drilling at 7:30am on 11-7-11 RU Pro Log Wireline
Finished Logging at 3:30pm on 11-7-11
Set 8 5/8" Surface Casing @ 220' w/ 150 sx Common 3% CC 2% Gel
Plug Hole w/ 40 sx 60/40 4% Gel
Plug Rat Hole w/ 15 sx
Release Rig @ 5:30pm on 11-7-11
Mud Co. Mull Drilling Co.
Logging Co. Murfin Drilling Co.
Cement Co. Allied Cementing Co.
Drilling Time Kept: YES
Samples Saved: YES
Geological Supervision: 3600-TD
Drilling Time: 3600-TD
Electric Logs: DUAL INDUCTION, DUAL COMPENSATED POROSITY, MICRO
Logging Engineer: Kevin Sperry
Logging Unit Number: 2
Logging Total Depth: 4350
Logging Time Kept: YES
Time Log Clerk: Kevin Sperry
Time Log Kept: YES
Sample Examination: YES
Geological Supervision: 3600-TD
Samples Saved: YES
Drilling Time Kept: YES
Time Log Clerk: Kevin Sperry
Logging Time Kept: YES
Logging Unit Number: 2
Logging Engineer: Kevin Sperry
Logging Total Depth: 4350
Logging Time Kept: YES
Logging Time Kept: YES
Logging Time Kept: YES