

**GEOLOGIST'S REPORT**  
**DRILLING TIME AND SAMPLE LOG**

Geologist on Well: Beth Isern & Cristina Goodrich

LEASE: Date: 6/3-20  
 FIELD: Beaver South

LOCATION: 2310 FNL & 1923 FEL

SFC: 20 TWSP 16 RGE 12w

COUNTRY: Britain STATE: Kansas

CONTRACTOR: American Eagle Drilling

SPUD: 6/23/11 COMP: 6/29/11

RTD: 3391 LTD: 3390

MUD UP: 2600 TYPE MUD: CHEMICAL

SAMPLES SAVED FROM: 2600 TO RTD

DRILLING TIME KEPT FROM: 2600 TO RTD

SAMPLES EXAMINED FROM: 2950 TO RTD

GEOLOGICAL SUPERVISION FROM: 2900

REFERENCE WELL: Demel #1 Palominho Petroleum

FORMATION: Palominho Petroleum

Sample Tops: E-log Tops

Formation: Sample Tops E-log Tops

Base Anhydrite: 834

Howard: 857

Topeka: 2698

Heebner Shale: 2736

Douglas: 3038

Brown Lime: 3095

Lansing: 3112

Arbuckle: 3380

RTD: 3391 LTD: 3390

CONDUCTOR: SURFACE: 8 5/8" @ 389

PRODUCTION: 5 1/2" @ 3385

ELEVATIONS: KG: 1921

Measurements are All From Kelly Bushing

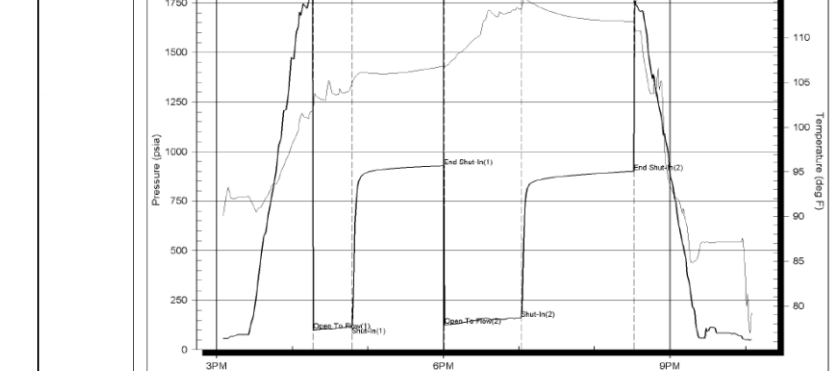
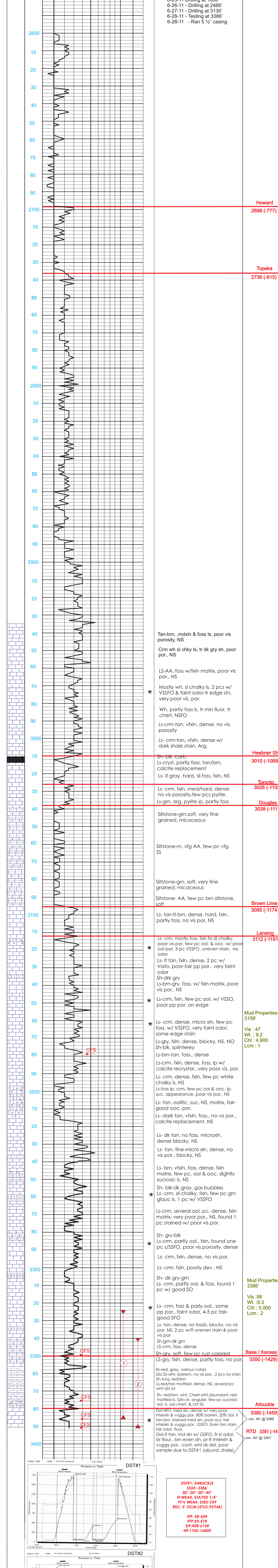
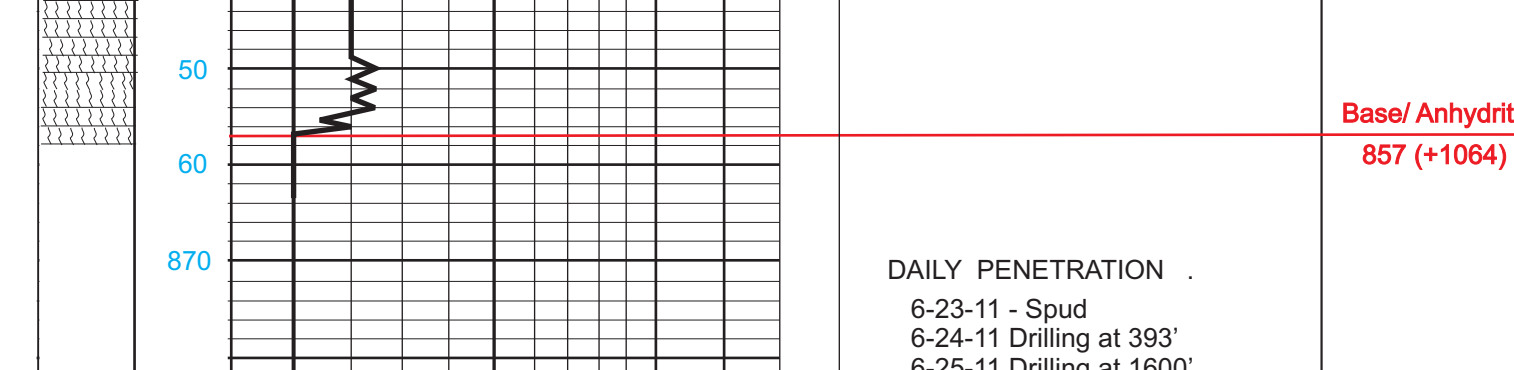
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LOG-TECH

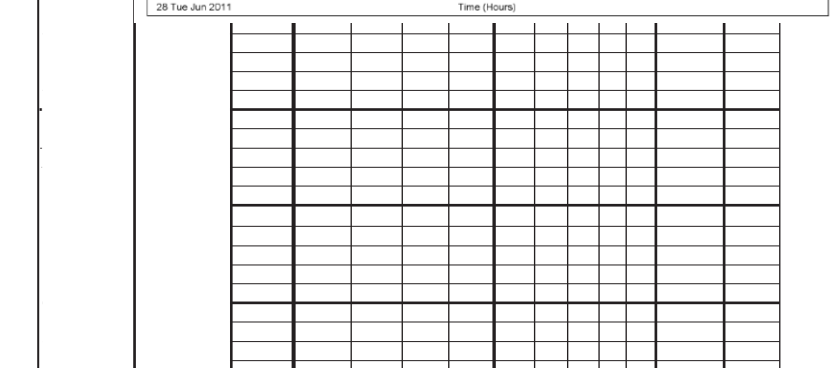
REMARKS: It was decided to run 5 1/2" production casing on the Demel #3-20 on the basis of the positive structural position to surrounding Arbuckle wells and development of the dolomite and also the positive results of DST#2.

Respectfully Submitted,  
 Beth Isern and Cristina Goodrich

**LEGEND**



**DST#1: ARBUCKLE**  
 3324'-3386'  
 30"-30"-30"-45"  
 IF:WEAK, STAYED 1 1/4"  
 FF:V WEAK, DIED OFF  
 REC: 5' OCM (5%O, 95%AM)



**DST#2: ARBUCKLE**  
 3345'-3391'  
 30"-75"-60"-90"  
 IF:WEAK, 1/2" IN 30", NO BB  
 FF: FAIR, 9 1/4" IN 40", NO BB  
 REC: 60' HOCM (40%O, 60%AM)

Mud Properties @ 3159' Vis: 47 Wt: 9.2 Chl: 4,900 Lcm: 1

Mud Properties @ 3386' Vis: .58 Wt: .93 Chl: 5,000 Lcm: 2

Mud Properties @ 3386' circ: 40' @ 3386'

RTD 3391 (-1470) circ: 40' @ 3391'