

HILLIARD OIL & GAS, INC.

McELVAIN-FEDERAL #1
Sec. 30, T-18-S, R-34-E
Lea County, New Mexico

CASING PROGRAM

<u>Surface Casing</u>	-	Set @ 350'
350'	-	13-3/8", 48#, H-40, ST&C
<u>Intermediate Casing</u>	-	Set @ 5200'
2200'	-	8-5/8", 24#, K-55, ST&C
3000'	-	8-5/8", 32#, K-55, ST&C
<u>Production Casing</u>	-	Set @ 15,000'
5000'	-	5-1/2", 17#, N-80, Buttress
3500'	-	5-1/2", 17#, N-80, LT&C
4800'	-	5-1/2", 20#, N-80, LT&C
1700'	-	5-1/2", 23#, N-80, LT&C

MUD PROGRAM

0 - 350'	Spud mud. Sufficient to clean hole and set casing.
350 - 1,600'	Light gel mud. Vis. 32-33
1,600 - 5,200'	Brine gel. 10.2 - 10.5#. Vis. 32-33.
5,200 - 10,000'	Fresh water
10,000 - 10,700'	Kcl - Brine water, 10.2#/gal.
10,700 - 12,800'	Kcl - Brine Polymer, 10#/gal, Vis. 32-34, WL 15 cc
12,800 - 15,000	Kcl - Brine Polymer, 10#/gal, Vis. 32-34, WL 5-10 cc