

Permit Information:

Well Name: Gem 36 State Com No. 3H

Location:

SL: 220' FSL & 2175' FEL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

BHL: 230' FNL & 2040' FEL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 - 800'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-3700'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	3700' - 4800'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-14,085'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
800'	300	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
4,800'	700	12.7	2.22	Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
14,085'	375	10.8	3.67	60:40:0 Class C + 15.0 pps BA-90 + 4% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA-10A + 0.80% ASA-301 + 2.55% R-21 + 8.0 pps LCM-1
	400	11.8	2.38	50:50:10 Class H + 0.80% FL-52 + 0.30% ASA-301 + 0.40% SMS + 2.0% Salt + 0.30% R-21 + 3.0 pps LCM-1 + 0.25 pps Celloflake
	1300	14.2	1.28	50:50:2 Class H + 0.65% FL-52 + 0.45% CD-32 + 0.10% SMS + 2.0% Salt

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 800'	Fresh - Gel	8.6-8.8	28-34	N/c
800' - 4,800'	Brine	10.0-10.2	28-34	N/c
4,800' - 8,801'	Cut Brine	8.4-9.0	28-34	N/c
8,801' - 14,085' Lateral	Cut Brine	9.0-9.5	40-42	8-10

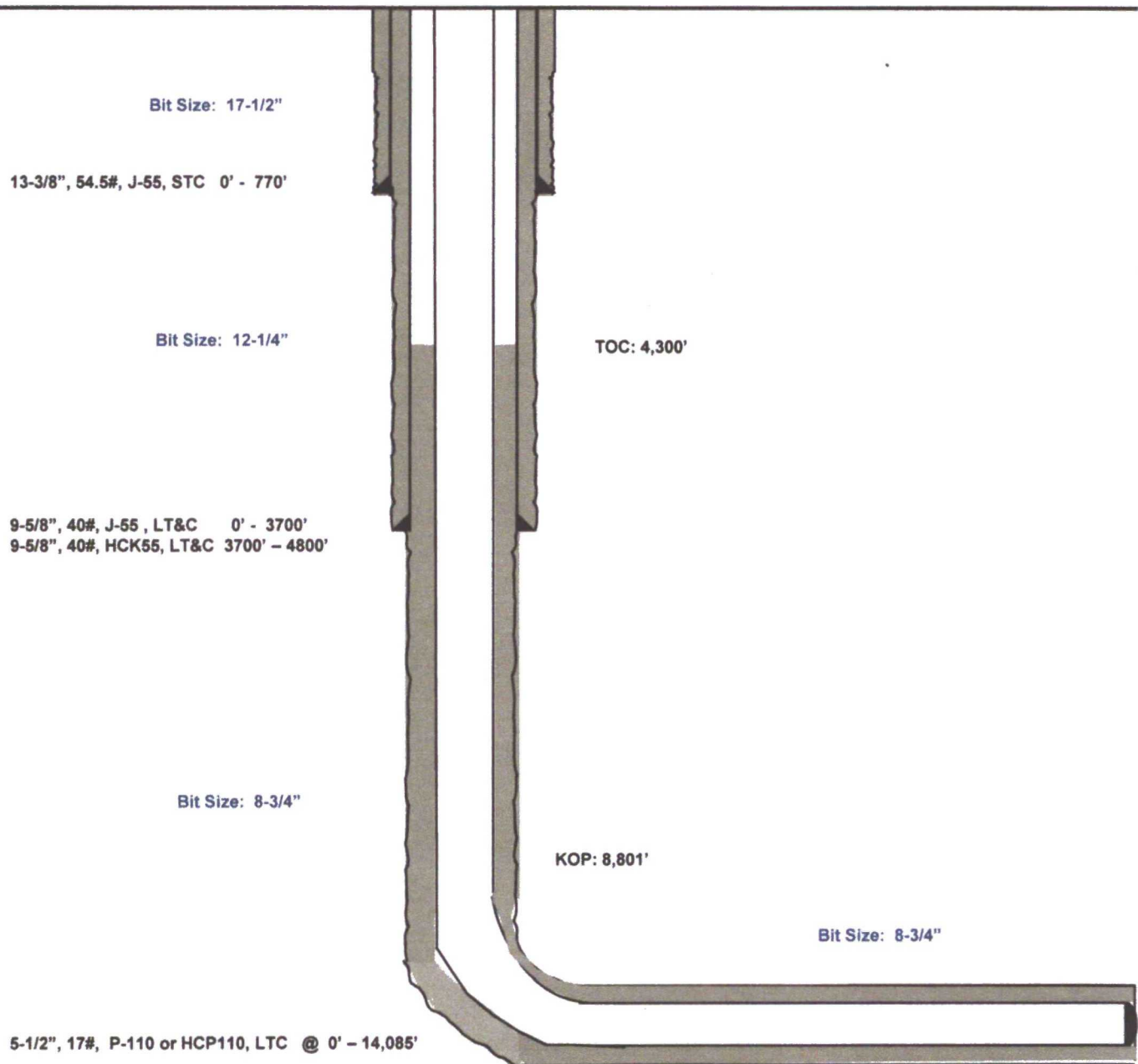
**Gem 36 State Com #3H
Lea County, New Mexico**

**220' FSL
2175' FEL
Section 36
T-25-S, R-32-E**

Proposed Wellbore

API: 30-025-

**KB: 3,394'
GL: 3,369'**



Lateral: 14,085' MD, 9,291' TVD

**BH Location: 230' FNL & 2040' FEL
Section 36
T-25-S, R-32-E**