

Revised Permit Information 2/21/18:

FEB 23 2018

Well Name: Gem 36 State Com No. 709H

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Location:

SL: 220' FSL & 1193' FWL, Section 36, T-25-S, R-32-E, Lea Co., N.M.

BHL: 230' FNL & 340' FWL, 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
14.75"	0 - 909'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
8.75"	0' - 11,200'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0'-16,083'	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
909'	485	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)
	310	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
11,200'	250	14.8	1.38	Class C + 5% Gypsum + 3% CaCl ₂ (Via Bradenhead, TOC @ Surface)
	2000	14.8	1.38	Class C + 5% Gypsum + 3% CaCl ₂ (Via Bradenhead)
	550	14.4	1.20	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P
16,083'	750	14.2	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,700')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 909'	Fresh - Gel	8.6-8.8	28-34	N/c
909' - 11,200'	Brine	8.8-10.0	28-34	N/c
11,200' - 10,801'	Oil Base	10.0-11.5	58-68	3 - 6
10,801' - 16,083' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Gem 36 State Com #709H

220' FSL
1193' FWL
Section 36
T-25-S, R-32-E

Lea County, New Mexico
Proposed Wellbore
Revised 2/21/18
API: 30-025-44267

KB: 3,372'
GL: 3,347'

Bit Size: 17-1/2"
13-3/8", 54.5#, J-55, ST&C 0' - 909'

Bit Size: 8-3/4"

7-5/8", 29.7#, HCP-110, FlushMax III
0' - 11,200'

Bit Size: 6-3/4"

5-1/2", 17#, HCP-110, LTC @ 0' - 16,083'

TOC: 10,700'

KOP: 10,801'

Bit Size: 6-3/4"

HOBBS OCD

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Lateral: 16,083' MD, 11,243' TVD

BH Location: 230' FNL & 340' FWL
Section 36
T-25-S, R-32-E