

Permit Information:

Well Name: Gem 36 State Com No. 709H

OCD - HOBBS
12/06/2017
RECEIVED**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
17.5"	0 - 810'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' - 4,700'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 - 11,200'	7.625"	29.7#	HCP110	FXL	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. lb/gal	Yld Ft ³ /ft	Slurry Description
810'	697	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	333	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
4,700'	692	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	303	14.8	1.32	Tail: Class C + 0.13% C-20
11,200'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,200')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
16,083'	950	14.8	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 - 810'	Fresh - Gel	8.6-8.8	28-34	N/c
810' - 4,700'	Brine	10.0-10.2	28-34	N/c
4,700' - 11,200'	Oil Base	8.7-9.4	58-68	N/c - 6
11,200' - 16,083' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Gem 36 State Com #709H
Lea County, New Mexico

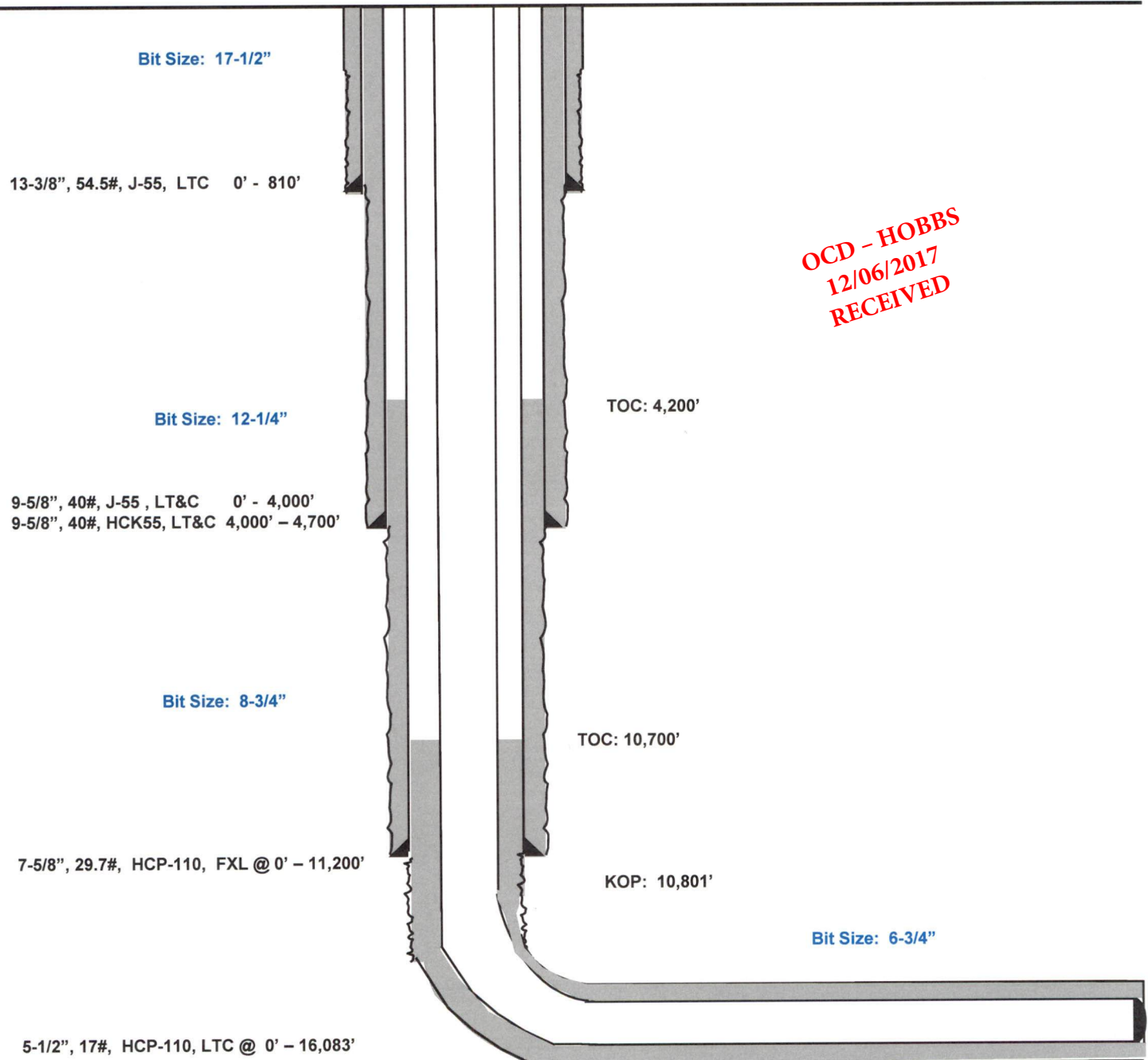
220' FSL
1193' FWL
Section 36
T-25-S, R-32-E

Proposed Wellbore

API: 30-025-*****

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

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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