Revised Permit Information 7/24/2019:

Well Name: Getty 5 Fed Com #505H

Location:

SHL: 249' FSL & 1849' FEL, Section 5, T-25-S, R-33-E, Lea Co., N.M.
BHL: 2539' FSL & 2309' FEL, Section 32, T-24-S, R-33-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' – 1,164'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0' – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,914'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0'– 11,114'	5.5"	20#	HCP-110	LTC	1.125	1.25	1.60
8.5"	11,114'– 18,311'	5.5"	20#	HCP-110	LTC	1.125	1.25	1.60

Variance is requested to waive the centralizer requirements for the 9-5/8" FJ casing in the 12-1/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 12-1/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" FJ casing in the 8-3/4" and 8-1/2" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the production hole interval to maximize cement bond and zonal isolation.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/sk	Slurry Description
1,164'	700	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 964')
4,914'	500	9.0	3.5	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	340	14.4	1.20	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,930')
18,311'	590	11.0	3.21	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,414')
	2,140	14.4	1.2	Tail: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,216')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,164'	Fresh - Gel	8.6-8.8	28-34	N/c
1,164' – 4,914'	Brine	8.6-8.8	28-34	N/c
4,914' – 18,311'	Oil Base	8.8-9.0	58-68	N/c - 6

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized.

249' FSL
1849' FEL
Section 5
T-25-S, R-33-E

Proposed Wellbore
Revised 7/24/2019

API: 30-025-46215

KB: 3,469'
GL: 3,444'