

Permit Information:

Well Name: Beowulf 33 State Com No. 301H

Location:

SL: 412' FSL & 380' FWL, Section 33, T-23-S, R-35-E, Lea Co., N.M.

BHL: 2410' FSL & 330' FWL, Section 28, T-23-S, R-35-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 - 1,440'	13.375"	40.5#	J55	STC	1.125	1.25	1.60
12.25"	0' - 5,600'	9.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
8.75"	0' - 17,443'	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
1,440'	700	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)
	300	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,600' DV Tool w/ ECP @ 3775'	400	10.8	3.68	Stage 1 Lead: Class C + 5% Gypsum + 30 pps SFA + 0.4% CPT-503P + 3.5% CPT-45 + 0.25% CPT-35 + 0.85% CPT-20 + 0.85% Citric Acid (TOC @ Surface)
	1250	15.6	1.20	Stage 1 Tail: Class H + 0.2% CPT-51 + 0.3% CPT-20
	100	12.7	1.90	Stage 2 Lead: Class C + 3% Salt + 0.6% Gel + 0.5% CPT-45 + 0.1% CPT-20 + 0.1% Citric Acid (TOC @ Surface)
	180	14.8	1.33	Stage 2 Tail: Class C + 0.2% CPT-19
17,443'	990	14.4	1.34	65:35 Class H + 0.2% C-20 + 0.75% C-41P + 0.05% CSA-1000 + 5% MagOx + 0.35% C-47B (TOC @ 10,600')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,440'	Fresh - Gel	8.6-8.8	28-34	N/c
1,440' - 5,600'	Brine	8.7-9.4	58-68	N/c - 6
5,600' - 9,502'	Brine	8.7-9.4	58-68	N/c - 6
9,502' - 17,443' Lateral	Oil Base	9.0-11.5	58-68	N/c - 6

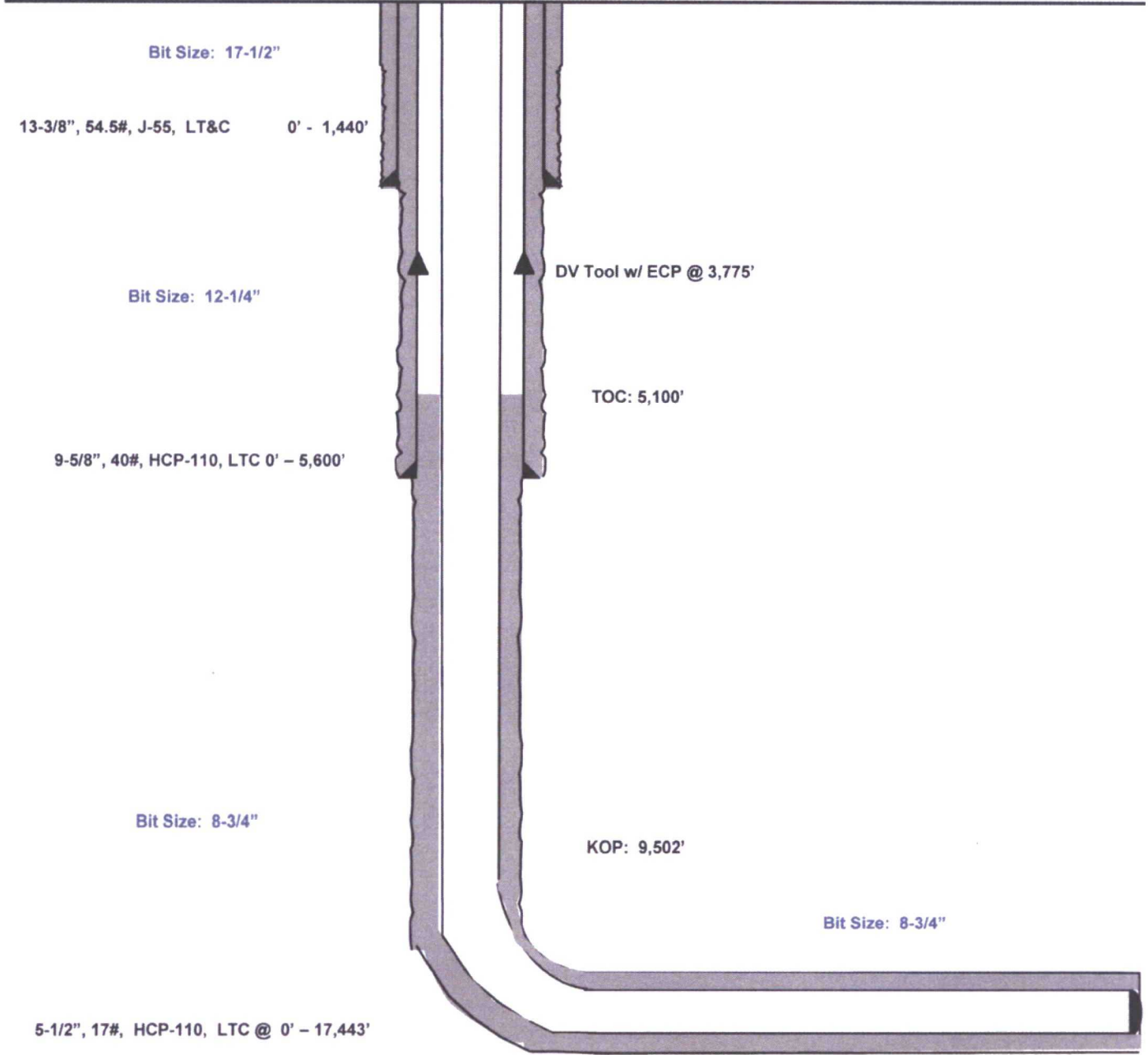
Beowulf 33 State Com #301H

Lea County, New Mexico
Proposed Wellbore

412' FSL
380' FWL
Section 33
T-23-S, R-35-E

API: 30-025-*****

KB: 3,443'
GL: 3,418'



Lateral: 17,443' MD, 10,000' TVD
BH Location: 2410' FSL & 330' FWL
Section 28
T-23-S, R-35-E