

Permit Information:

Well Name: Arch 28 State No. 601H

Location:

SL: 249' FNL & 330' FEL, Section 28, T-22-S, R-35-E, Lea Co., N.M.

BHL: 230' FSL & 33' FEL, Section 28, T-22-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 - 1,945'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,100'	9.625"	40#	J55	LTC	1.125	1.25	1.60
8.75"	0'-15,936'	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
1,945'	600	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
4,100'	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 (TOC @ Surface)
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
15,936'	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 (TOC @ 3,400')
	300	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 - 1,945'	Fresh - Gel	8.6-8.8	28-34	N/c
1,945' - 4,100'	Oil Base	8.7-9.4	58-68	N/c - 6
4,100' - 10,586'	Oil Base	8.7-9.4	58-68	N/c - 6
10,586' - 15,936' Lateral	Oil Base	9.0-9.5	58-68	N/c - 6

AUG 20 2015

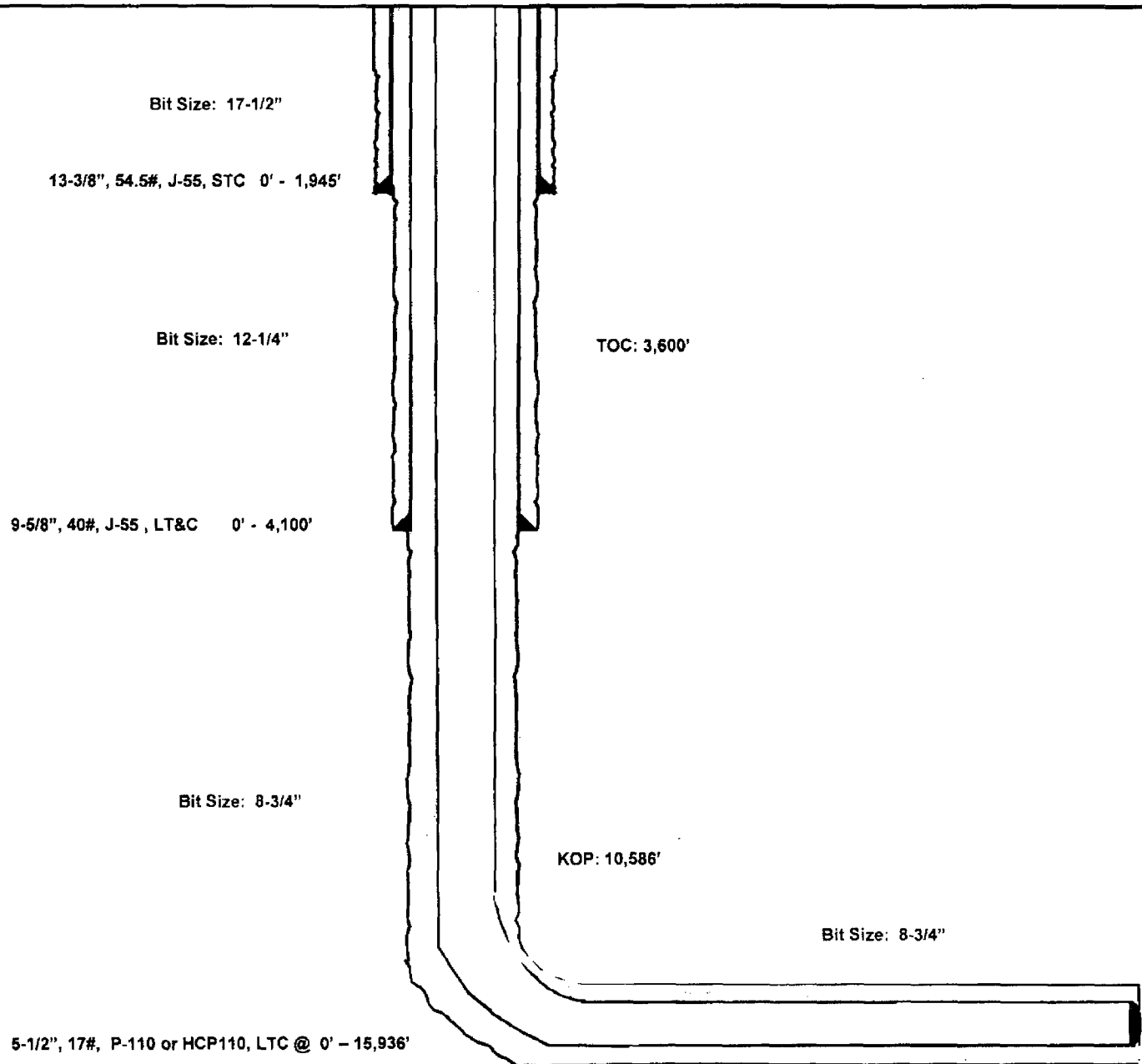
Arch 28 State #601H
Lea County, New Mexico

249' FNL
330' FEL
Section 28
T-22-S, R-35-E

Proposed Wellbore

API: 30-025-

KB: 3,562'
GL: 3,537'



Lateral: 15,936' MD, 11,175' TVD

BH Location: 230' FSL & 330' FEL
Section 28
T-22-S, R-35-E



Lea County, NM (NAD 27 NME)

Arch 28 State #601H

Precision 612

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1881
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #601H

Ground Level: 3637.0
KB = 25 @ 3562.0us# (Precision 612)
Northing: 499376.00 Easting: 798108.00 Latitude: 32° 22' 9.041" N Longitude: 103° 21' 52.454" W

Azimuths to Grid North
True North: -0.62°
Magnetic North: 6.50°

Magnetic Field
Strength: 48187.0nT
Dip Angle: 60.33°
Date: 2/2/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction Add 6.50°
To convert a Magnetic Direction to a True Direction Add 7.02° East
To convert a True Direction to a Grid Direction Subtract 0.52°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4500.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0	
3	4692.8	1.93	359.30	4692.7	3.2	0.0	1.00	359.30	-3.2	
4	10585.1	1.93	359.30	10582.8	201.5	-2.4	0.00	0.00	-201.5	
5	11505.4	90.00	179.49	11175.0	-371.1	2.6	10.00	-179.81	371.1	
6	15936.5	90.00	179.49	11175.0	-4802.0	42.0	0.00	0.00	4802.2	PBHL(arch 28 ST #601H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
STP(arch 28 ST #601H)	11175.0	-81.0	0.0	499286.00	798108.00
PBHL(arch 28 ST #601H)	11175.0	-4802.0	42.0	484874.00	798150.00

