

Permit Information:

Well Name: Ophelia 27 No. 501H

Location:

SL: 2420' FNL & 1675' FEL, Section 27, T-26-S, R-33-E, Lea Co., N.M.

BHL: 2410' FSL & 1700' FEL, Section 22, T-26-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 - 860'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4000' - 5000'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-15,646'	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
860'	300	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)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,000'	800	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
15,646'	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 @ 4500')
	400	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 - 860'	Fresh - Gel	8.6-8.8	28-34	N/c
860' - 5,000'	Brine	10.0-10.2	28-34	N/c
5,000' - 10,542'	Cut Brine	8.4-9.0	28-34	N/c
10,542' - 15,646' Lateral	Cut Brine	9.0-9.5	40-42	8-10

AUG 19 2014

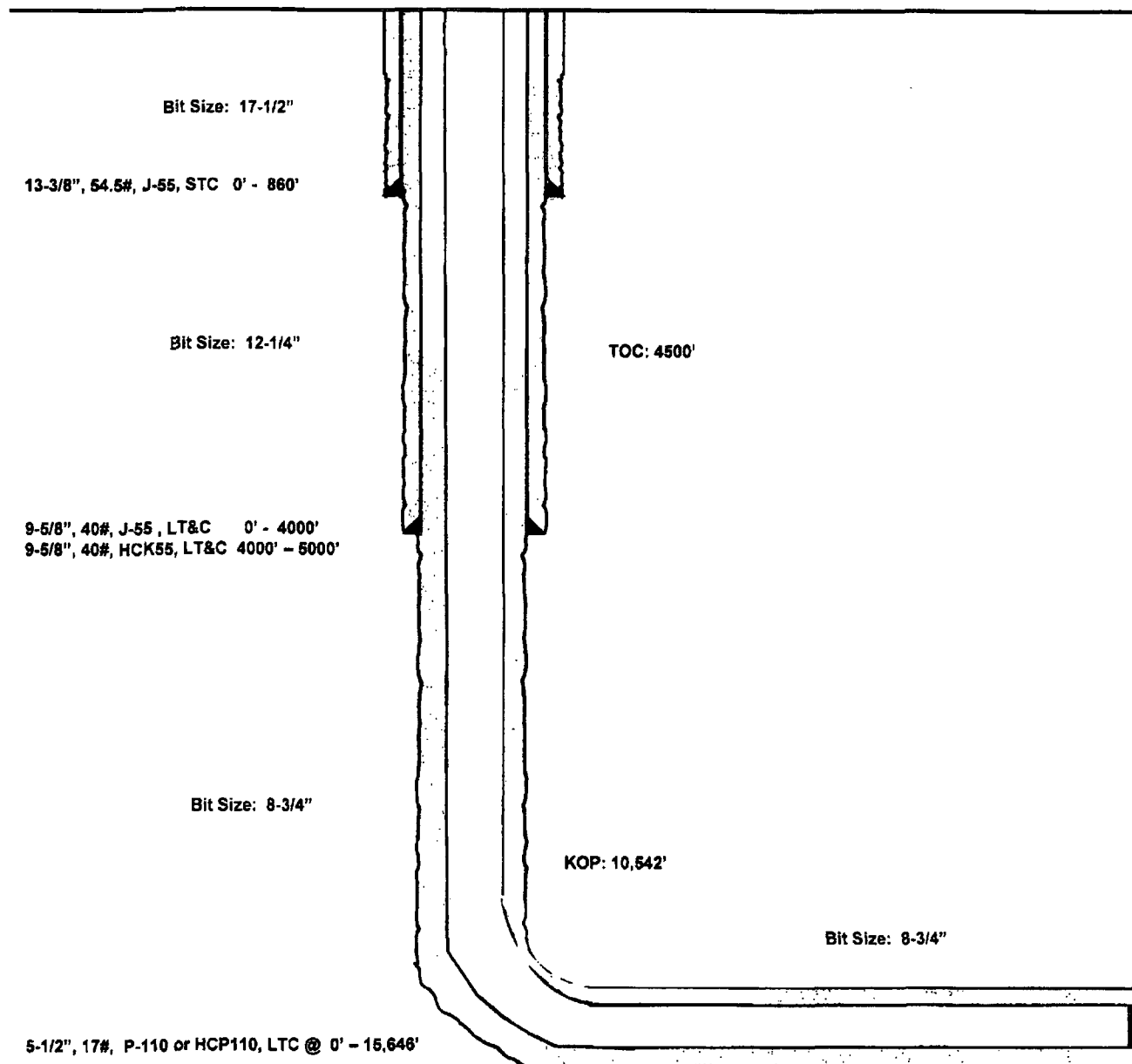
Ophelia 27 #501H
Lea County, New Mexico

2420' FNL
1675' FEL
Section 27
T-26-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,308'
GL: 3,283'



Lateral: 15,646' MD, 11,020' TVD

BH Location: 2410' FSL & 1700' FEL
Section 22
T-26-S, R-33-E



Lea County, NM (NAD 27 NME)

Ophelia 27 #501H

H&P 415

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 1866

Zone: New Mexico East 3001

System Datum: Mean Sea Level



Azimuths to Grid North

True North: 4.61°

Magnetic North: 6.78°

Magnetic Field

Strength: 68176.8 nT

Dip Angle: 83.02°

Date: 01/30/2014

Model: IGRF2010v4

To convert a Magnetic Direction to a Grid Direction, Add 6.78°

To convert a Magnetic Direction to a True Direction, Add 7.11° East

To convert a True Direction to a Grid Direction, Subtract 6.61°

WELL DETAILS: Ophelia 27 #501H

-N-8	-E-1W	Northing	Ground Level: 3233.8	Longitude	Spot
0.0	0.0	370000.00	Easting: 740750.00 32° 0' 0" N 102° 32' 23" W		

SECTION DETAILS

Sec	MD	Inc	Act	TVD	+N-8	+E-1W	Diag	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	10643.5	0.00	0.00	10643.5	0.0	0.0	0.00	0.00	0.0		
3	11262.8	90.00	369.80	11030.0	478.7	-26.7	12.00	328.80	477.0		
4	11385.1	90.00	389.00	11030.0	505.2	-26.6	0.00	90.01	989.6		
5	10644.0	90.00	389.00	11030.0	4250.0	-61.0	0.00	0.00	4250.4	PSH/COPH 27 #501H	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-8	+E-1W	Northing	Easting	Shape
PSH/COPH 27 #501H	11030.0	4250.0	-61.0	374830.00	740694.00	Point

