

NOV 09 2015

Permit Information:

Well Name: Ophelia 27 No. 707H

Location:

SL: 2420' FNL & 1135' FWL, Section 27, T-26-S, R-33-E, Lea Co., N.M.

BHL: 2411' FSL & 1278' FWL, 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
12.25"	0 - 1,100'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
8.75"	0-10,750'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
6.125"	0'-17,190'	4.5"	13.5#	HCP-110	BTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
1,100'	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)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
10,750' DV Tool @ 5,000'	350	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)
	250	15.6	1.18	Stage 1 Tail: Class H + 0.2% CPT-51 + 0.3% CPT-20
	650	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)
	200	14.8	1.33	Stage 2 Tail: Class C + 0.2% CPT-19
17,190'	600	13.5	1.51	Class H + 3% Salt + 1% Bentonite + 0.35% CPT-19 + 0.80% CPT-15 + 0.25% CPT-503P + 0.40% CPT-35 (TOC @ 10,250')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,100'	Fresh - Gel	8.6-8.8	28-34	N/c
1,100' - 10,750'	Oil Base	8.7-9.4	58-68	N/c - 6
10,750' - 11,904'	Oil Base	8.7-9.4	58-68	N/c - 6
11,904' - 17,190' Lateral	Oil Base	9.0-9.5	58-68	N/c - 6

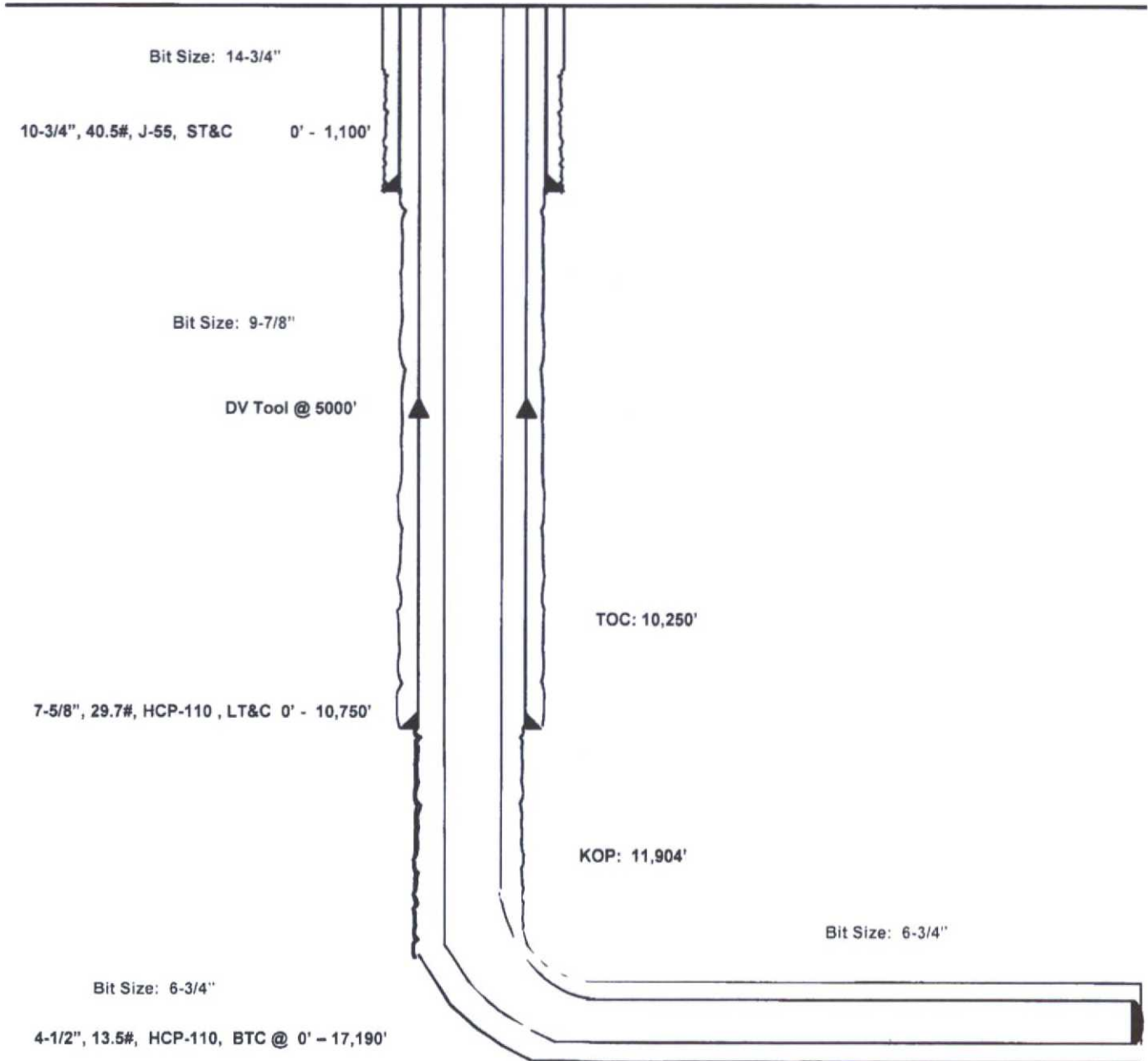
Ophelia 27 #707H

Lea County, New Mexico
Proposed Wellbore

2420' FNL
1135' FWL
Section 27
T-26-S, R-33-E

API: 30-025-*****

KB: 3,290'
GL: 3,265'



Lateral: 17,190' MD, 12,390' TVD

BH Location: 2411' FSL & 1278' FWL
Section 22
T-26-S, R-33-E



Lea County, NM (NAD 27 NME)

Ophelia 27 #707H

Precision 612

Plan #0.1



Azimuths to Grid North
True North: -0.41°
Magnetic North: 8.80°
Magnetic Field
Strength: 47881.6nT
Dip Angle: 95.85°
Date: 10/26/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction: Add 0.80°
To convert a Magnetic Direction to a True Direction: Add 7.21° East
To convert a True Direction to a Grid Direction: Subtract 0.41°

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

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone: New Mexico East 300°
System Datum: Mean Sea Level

WELL DETAILS: #707H

Ground Level: 3255.0
KB = 25 @ 3290.0m (Precision 612)
Northing: 370004.00 Easting: 738271.50 Latitude: 32° 0' 53.731 N Longitude: 103° 32' 52.823 W

SECTION DETAILS

Sec	MD	Inc	Az	TVD	+/- S	+/- W	Dip	TFace	VFace	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4800.0	0.00	0.00	4800.0	0.0	0.0	0.00	0.00	0.0		
3	4870.6	1.71	141.70	4870.6	-2.0	1.6	1.00	141.70	-2.0		
4	11904.6	1.71	141.70	11904.6	-17.0	135.0	0.00	0.00	-167.9		
5	12685.0	90.00	358.60	12390.0	306.4	140.8	12.00	-142.08	309.8		
6	17190.5	90.00	358.60	12390.0	4831.0	109.0	0.00	0.00	4832.7		PSH, Ophelia 27 #707H

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+/- S	+/- W	Northing	Easting
FTP(Ophelia 27 #707H)	12390.0	106.0	142.0	370113.00	738413.00
PSH(Ophelia 27 #707H)	12390.0	4831.0	109.0	374835.00	738390.00

