30-015-42632

Apache
EXPLORING WHAT'S POSSIBLE

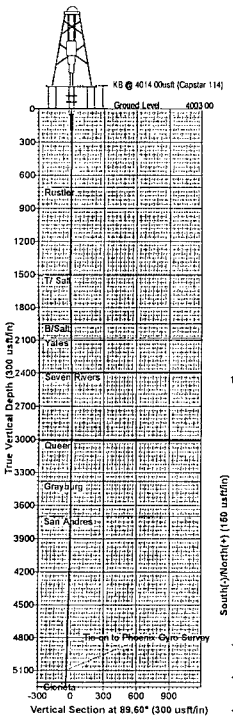
Project: Eddy County, NM (NAD27 NME)
Site: Hummingbird Federal Com
Well: #2H
Wellbore: WB1/Job #1410362
Design: Plan #4 04-16-15
Rig: Capstar 114

PHOENIX TECHNOLOGY SERVICES

T G M

Azimuths to Grid North
True North: -0.27°
Magnetic North: 7.26°

Magnetic Field
Strength: 48621.7snT
Dip Angle: 60.87°
Date: 4/7/2015
Model: HDGM



WELL DETAILS

Ground Level: 4003.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	677354.10	654281.50	32° 51' 40.03477 N	103° 49' 51.21461 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	5100.00	2.20	313.33	5099.11	29.59	-40.06	0.00	0.00	-39.85		Tie-on to Phoenix Gyro Survey
2	5418.28	2.20	313.33	5417.15	37.98	-48.95	0.00	0.00	-48.68		KOP, Begin 12°/100' Build & Turn
3	6179.28	89.60	94.75	5908.79	10.39	424.31	12.00	141.41	424.38		LP, Begin 3°/100' Turn
4	6351.08	89.60	89.60	5910.00	3.88	595.93	3.00	-90.06	595.94		Hold 89.61° Inc, 89.60° Azm
5	10607.26	89.60	89.60	5940.00	33.90	4851.90	0.00	0.00	4852.02	PBHL-Hummingbird #2H v3	TD at 10607.26' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Hummingbird #2H v3	5940.00 - plan hits target center	33.90	4851.90	677388.00	659133.40	32° 51' 40.13817 N	103° 48' 54.33131 W	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
5209.00	5200.67	Glorieta		
5282.00	5263.03	Yeso (Paddock)		
5734.00	5750.36	Blinebry		
5910.00	6350.95	Blinebry Landing		
5940.00	10607.26	Blinebry Toe		

LEGEND

- - - - #3H, WB1/Job #1410363, Plan #2 11-03-14 V0
——— #1H, WB1/Job #1410314, Surveys (Capstar 114) V0
- - - - #4H, WB1/Job #1410364, Plan#1 02-28-14 V0
- - - - #6H, WB1/Job #1410366, Plan#1 02-28-14 V0
- - - - #5H, WB1/Job #1410365, Plan#1 02-28-14 V0
——— #2H, WB1/Job #1410362, Surveys (Capstar 114) V0
- - - - Plan #4 04-16-15

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

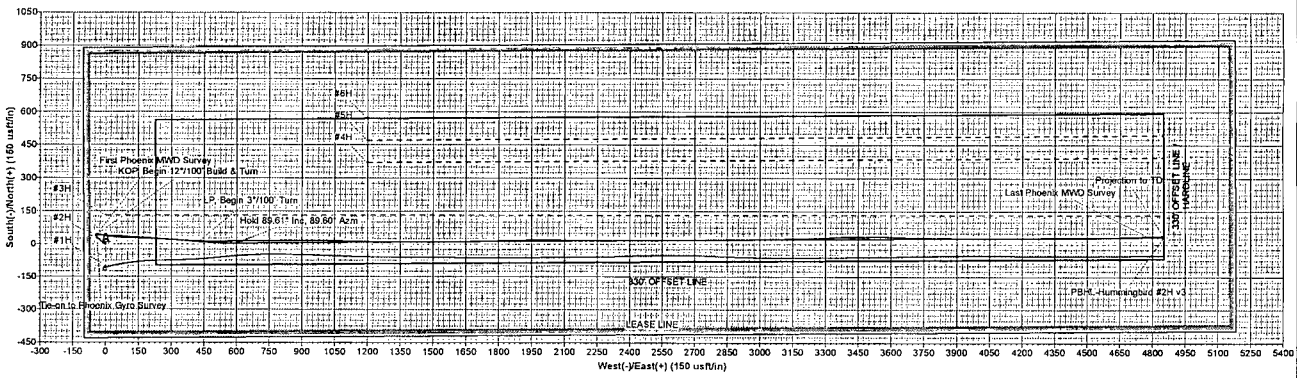
Local Origin: Well #2H, Grid North

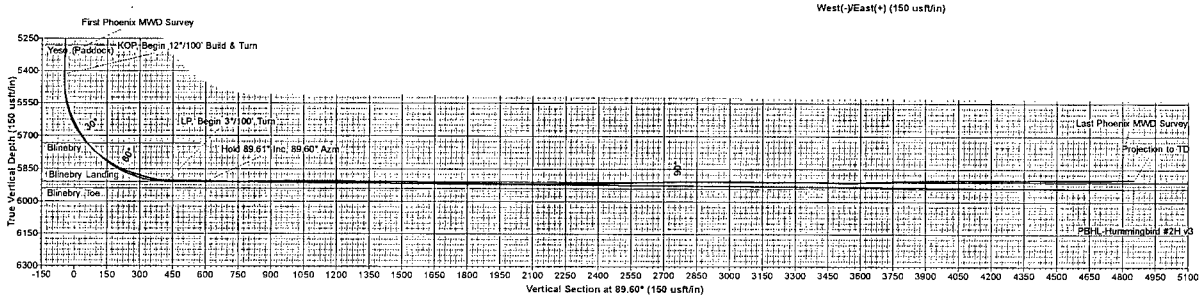
Latitude: 32° 51' 40.03477 N
Longitude: 103° 49' 51.21461 W

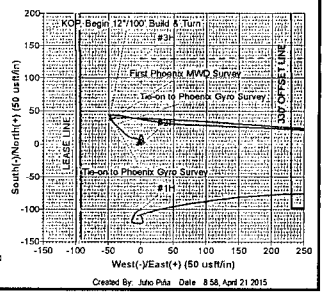
Grid East: 654281.50
Grid North: 677354.10
Scale Factor: 1.000

Geomagnetic Model: HDGM
Sample Date: 07-Apr-15
Magnetic Declination: 7.53°
Dip Angle from Horizontal: 60.87°
Magnetic Field Strength: 48622

To convert a Magnetic Direction to a Grid Direction, Add 7.26°
To convert a Magnetic Direction to a True Direction, Add 7.53° East
To convert a True Direction to a Grid Direction, Subtract 0.27°







Created By: John Pike Date: 8:58, April 21 2015