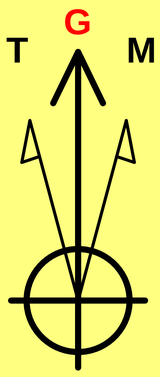
Company Name: Noble Energy Inc.
Rayglo A14-68-1HN
Weld County, CO
Rig: H&P #323
Created By: Dina Chance
Date: 5/11/2012

noble energy

DDC
The DIRECTIONAL DRILLING COMPANY



Azimuths to Grid North

Magnetic North: 8.01°

Magnetic Field
Strength: 53123.2snT
Dip Angle: 67.14°
Date: 3/21/2012
Model: IGRF2010

Rayglo A14-68-1HN
Weld County, CO
Q120235 & RM-12299

PROJECT DETAILS: Weld County, CO

Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	Colorado Northern Zone
System Datum:	Mean Sea Level

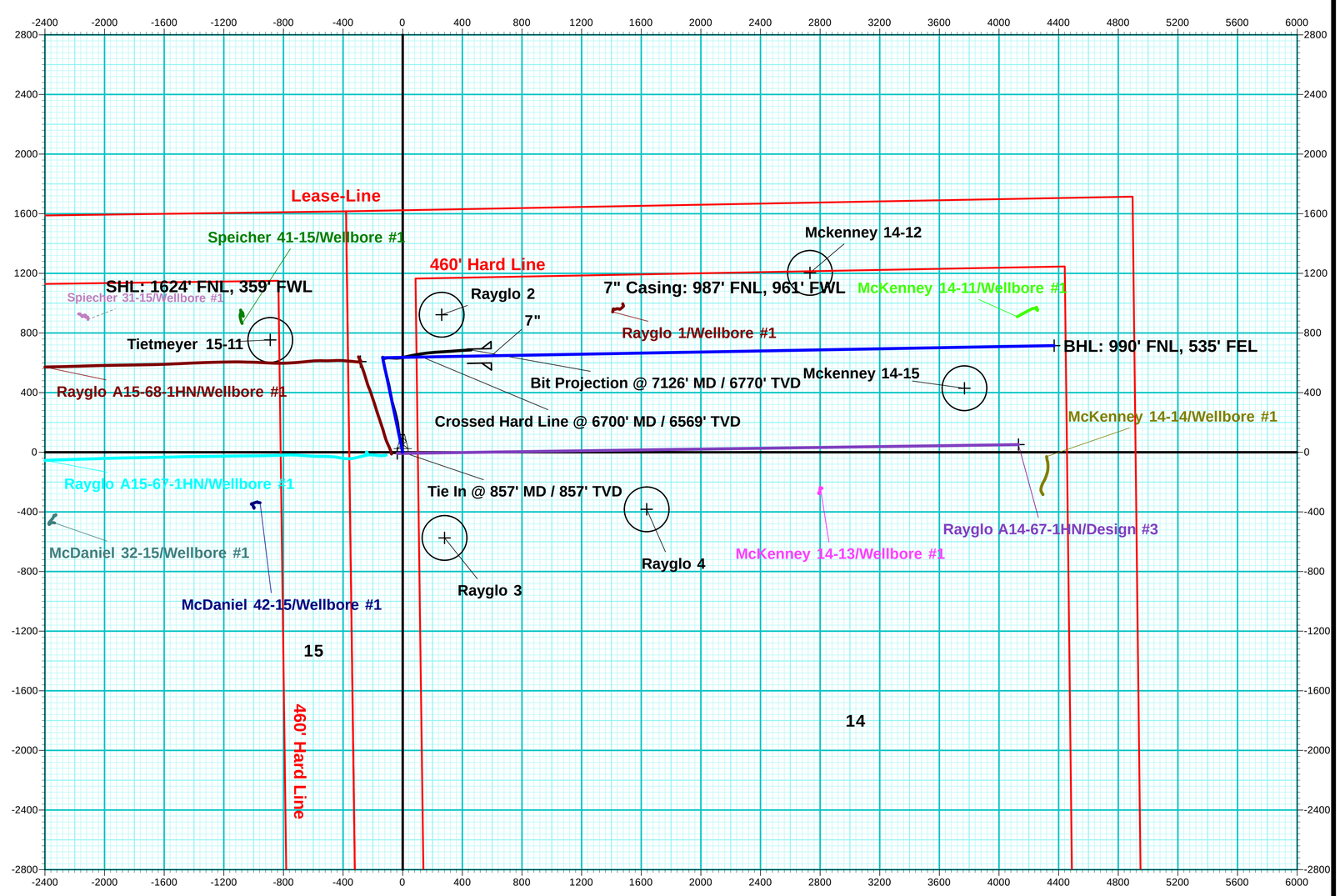
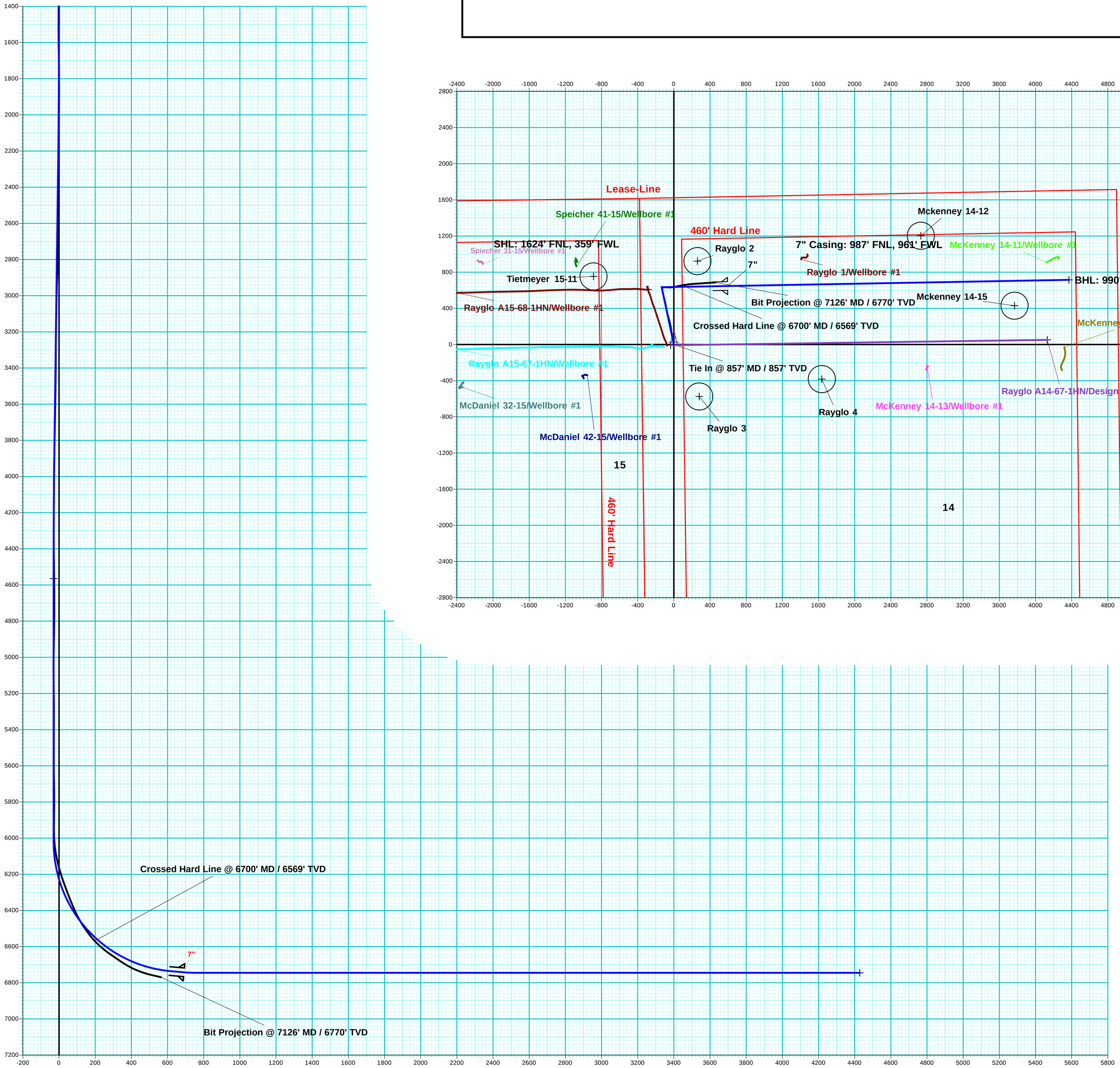
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP Rayglo A14-68-1HN - plan hits target center	4565.0	634.0	-134.0	1423099.21	3270912.65	40° 29' 26.607 N	104° 31' 33.444 W
PBHL Rayglo A14-68-1HN Design #3 - plan hits target center	6745.0	715.1	4370.3	1423180.35	3275416.94	40° 29' 26.916 N	104° 30' 35.136 W
PBHL Rayglo A14-68-1HN - plan misses target center by 5.7usft at 11017.0usft MD (6745.0 TVD, 715.1 N, 4370.3 E)	6750.7	715.1	4370.3	1423180.35	3275416.94	40° 29' 26.916 N	104° 30' 35.136 W

WELL DETAILS: Rayglo A14-68-1HN

Ground Level: 4741.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1422465.21	3271046.65	40° 29' 20.328 N	104° 31' 31.800 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
857.0	0.00	0.00	857.0	0.0	0.0	0.0	0.0	Tie In @ 857' MD / 857' TVD
6700.0	43.02	79.86	6568.8	654.7	93.1	610.5	901.2	Crossed Hard Line @ 6700' MD / 6569' TVD
7126.0	76.80	86.60	6769.6	686.8	459.5	825.1	1269.0	Bit Projection @ 7126' MD / 6770' TVD