

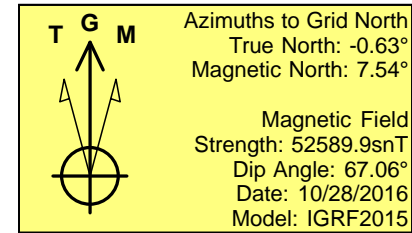
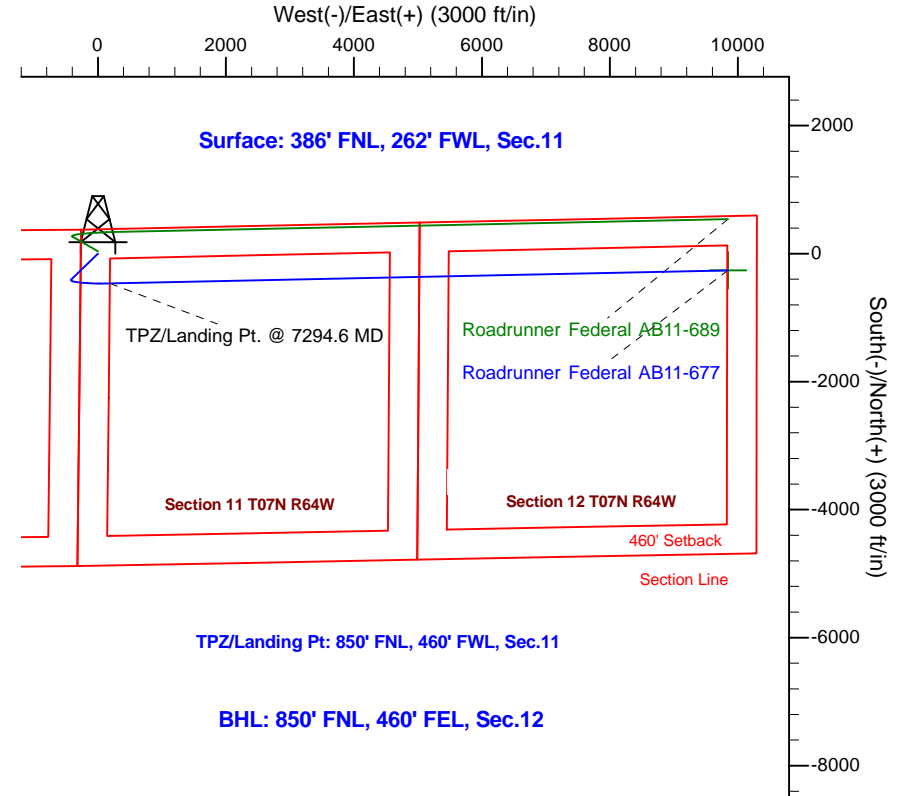
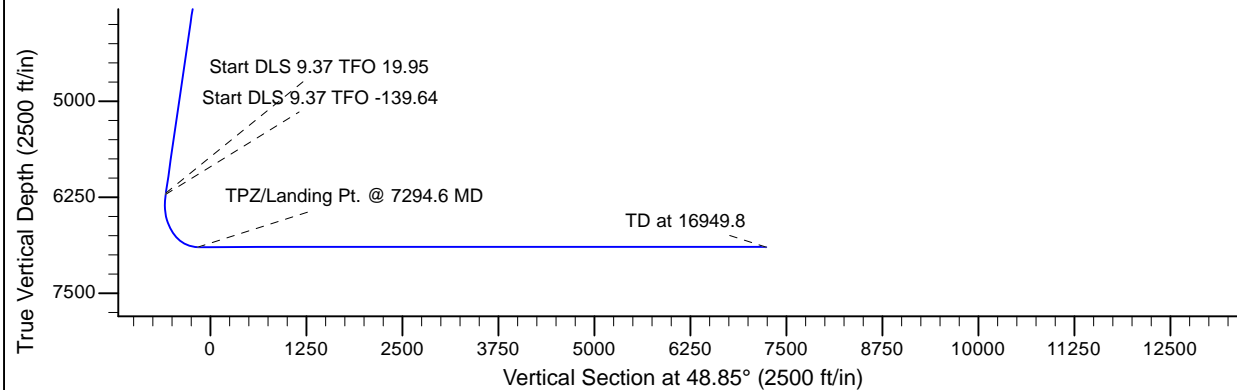
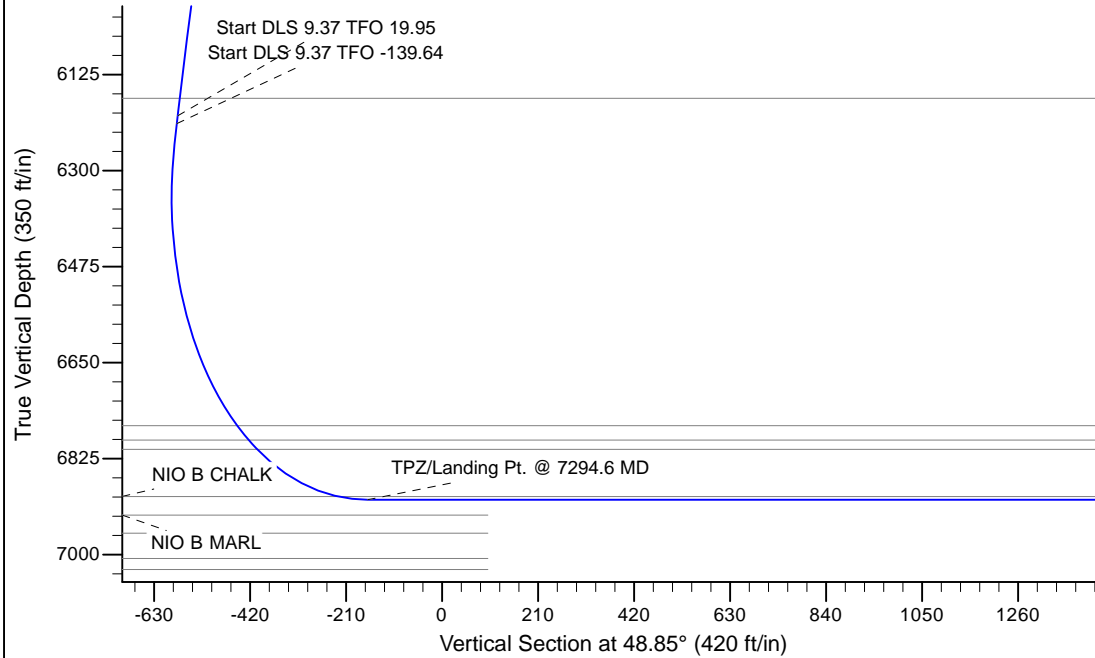
Project: Cummins
 Site: AB Section 11-T7N-R64W Weld County, CO
 Well: Roadrunner Federal AB11-677
 Wellbore: Original Drilling
 Design: APD - Rev 0

Northern Region - DJ Basin

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2412.5	8.25	226.00	2411.1	-20.6	-21.3	2.00	226.00	-29.6	
4	6241.0	8.25	226.00	6200.0	-402.2	-416.5	0.00	0.00	-578.3	
5	6255.7	9.55	228.82	6214.5	-403.7	-418.2	9.37	19.95	-580.6	
6	7294.6	90.00	88.79	6900.0	-465.0	190.0	9.37	-139.64	-162.9	
7	16949.8	90.00	88.79	6900.0	-261.4	9843.0	0.00	0.00	7239.9	Roadrunner Federal AB11-677 BHL 850'FNL, 460'FEL



WELL DETAILS: Roadrunner Federal AB11-677					
		Northing	Easting	Ground Elevation: 4851.0 Latitude	Longitude
0.0	0.0	1460659.14	3270812.98	40.5938200	-104.5248300
Plan: APD - Rev 0 (Roadrunner Federal AB11-677/Original Drilling)					
Created By: Shailey Jewell			Date: 9:09, February 06 2017		
OK to submit with 2A as per Noble Drilling 2/6/2017 9:14					