

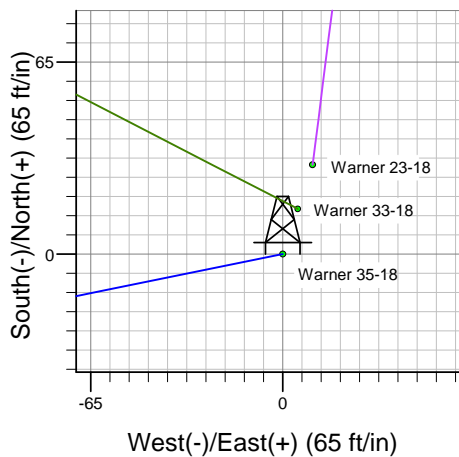
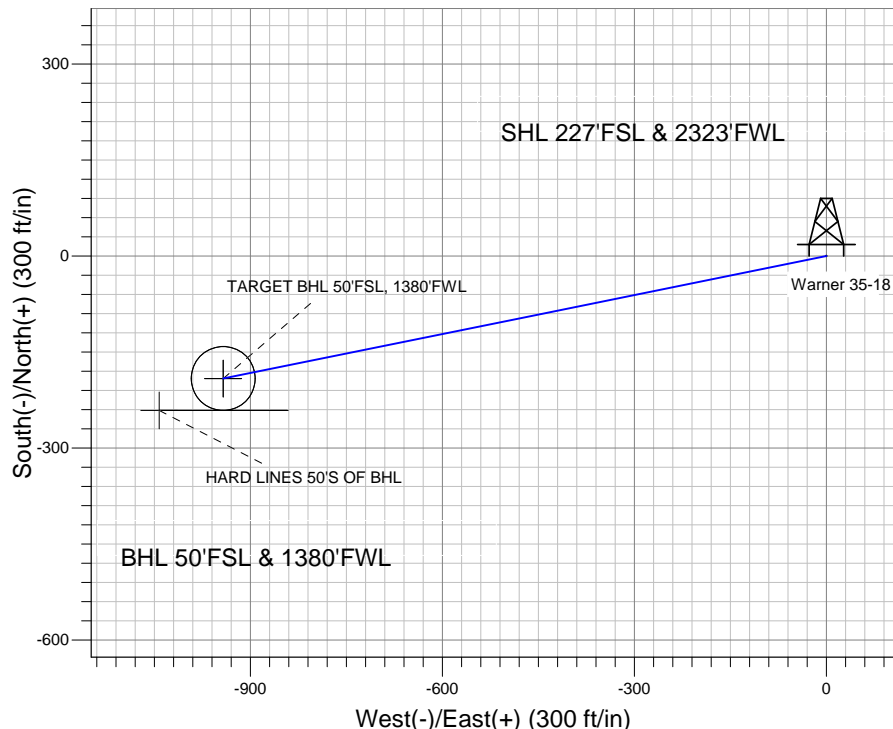
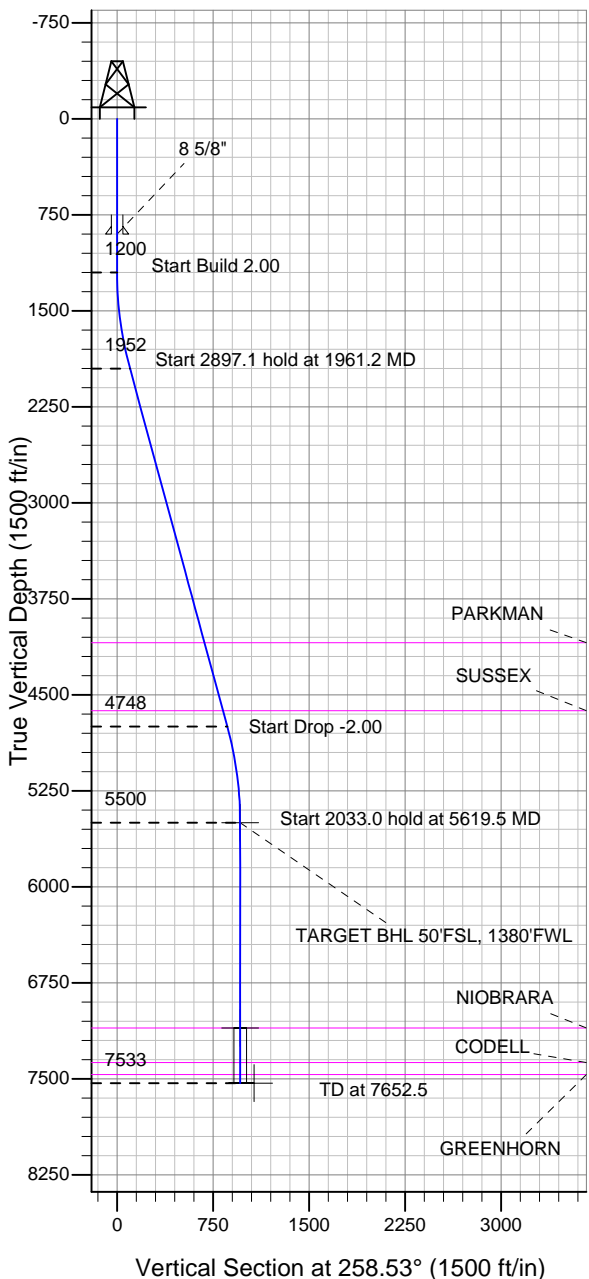
ENSIGN

Directional

Well Name: Warner 35-18

Surface Location: Warner 36-18 Pad Sec.18-T2N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4993.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1291870.58 3221555.65 40.131861 -104.707621
 Original Well Elev WELL @ 5007.0ft (Original Well Elev)

Anadarko, Weld County CO



FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
4093.0	4179.8	PARKMAN
4623.0	4729.1	SUSSEX
7103.0	7222.5	NIOBRARA
7373.0	7492.5	CODELL
7466.0	7585.5	GREENHORN



Azimuths to True North
 Magnetic North: 8.84°

Magnetic Field
 Strength: 53022.0nT
 Dip Angle: 66.85°
 Date: 3/14/2011
 Model: IGRF2010

Well Name: Warner 35-18 Lat/Long: 40.131861 -104.707621

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 50'FSL, 1380'FWL	5500.0	-191.2	-942.6	40.131336	-104.710992	Point
TARGET CIRCLE 50'FSL, 1380'FWL	7103.0	-191.2	-942.6	40.131336	-104.710992	Circle (Radius: 50.0)
HARD LINES 50'S OF BHL	7533.0	-241.2	-1042.6	40.131199	-104.711350	Polygon

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	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1961.2	15.22	258.53	1952.3	-20.0	-98.5	2.00	258.53	100.5	
4	4858.3	15.22	258.53	4747.7	-171.2	-844.1	0.00	0.00	861.3	
5	5619.5	0.00	0.00	5500.0	-191.2	-942.6	2.00	180.00	961.8	TARGET BHL 50'FSL, 1380'FWL
6	7652.5	0.00	0.00	7533.0	-191.2	-942.6	0.00	0.00	961.8	

CASING DETAILS

TVD	MD	Name	Size
900.0	900.0	8 5/8"	8-5/8

Warner 36-18 Pad Sec.18-T2N-R65W
 Warner 35-18
 Plan #1 (3-14-11)
 12:40, March 15 2011



Directional

Anadarko, Weld County CO

SEC.18-T2N-R65W

Warner 36-18 Pad Sec.18-T2N-R65W

Warner 35-18

Wellbore #1

Plan: Plan #1 (3-14-11)

Standard Planning Report

15 March, 2011

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Project	SEC.18-T2N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Warner 36-18 Pad Sec.18-T2N-R65W			
Site Position:		Northing:	1,291,900.91 ft	Latitude:	40.131944
From:	Lat/Long	Easting:	3,221,565.45 ft	Longitude:	-104.707585
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.51 °

Well	Warner 35-18					
Well Position	+N/-S	-30.2 ft	Northing:	1,291,870.58 ft	Latitude:	40.131861
	+E/-W	-10.1 ft	Easting:	3,221,555.65 ft	Longitude:	-104.707621
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,993.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/14/2011	8.84	66.85	53,022

Design	Plan #1 (3-14-11)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	258.53

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,961.2	15.22	258.53	1,952.3	-20.0	-98.5	2.00	2.00	0.00	258.53	
4,858.3	15.22	258.53	4,747.7	-171.2	-844.1	0.00	0.00	0.00	0.00	
5,619.5	0.00	0.00	5,500.0	-191.2	-942.6	2.00	-2.00	0.00	180.00	TARGET BHL 50'F!
7,652.5	0.00	0.00	7,533.0	-191.2	-942.6	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.80	258.53	1,240.0	-0.1	-0.3	0.3	2.00	2.00	0.00
1,280.0	1.60	258.53	1,280.0	-0.2	-1.1	1.1	2.00	2.00	0.00
1,320.0	2.40	258.53	1,320.0	-0.5	-2.5	2.5	2.00	2.00	0.00
1,360.0	3.20	258.53	1,359.9	-0.9	-4.4	4.5	2.00	2.00	0.00
1,400.0	4.00	258.53	1,399.8	-1.4	-6.8	7.0	2.00	2.00	0.00
1,440.0	4.80	258.53	1,439.7	-2.0	-9.8	10.0	2.00	2.00	0.00
1,480.0	5.60	258.53	1,479.6	-2.7	-13.4	13.7	2.00	2.00	0.00
1,520.0	6.40	258.53	1,519.3	-3.5	-17.5	17.9	2.00	2.00	0.00
1,560.0	7.20	258.53	1,559.1	-4.5	-22.1	22.6	2.00	2.00	0.00
1,600.0	8.00	258.53	1,598.7	-5.5	-27.3	27.9	2.00	2.00	0.00
1,640.0	8.80	258.53	1,638.3	-6.7	-33.0	33.7	2.00	2.00	0.00
1,680.0	9.60	258.53	1,677.8	-8.0	-39.3	40.1	2.00	2.00	0.00
1,720.0	10.40	258.53	1,717.1	-9.4	-46.1	47.1	2.00	2.00	0.00
1,760.0	11.20	258.53	1,756.4	-10.8	-53.5	54.6	2.00	2.00	0.00
1,800.0	12.00	258.53	1,795.6	-12.4	-61.4	62.6	2.00	2.00	0.00
1,840.0	12.80	258.53	1,834.7	-14.2	-69.8	71.2	2.00	2.00	0.00
1,880.0	13.60	258.53	1,873.6	-16.0	-78.7	80.3	2.00	2.00	0.00
1,920.0	14.40	258.53	1,912.4	-17.9	-88.2	90.0	2.00	2.00	0.00
1,960.0	15.20	258.53	1,951.1	-19.9	-98.2	100.2	2.00	2.00	0.00
1,961.2	15.22	258.53	1,952.3	-20.0	-98.5	100.5	2.00	2.00	0.00
2,000.0	15.22	258.53	1,989.7	-22.0	-108.5	110.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,040.0	15.22	258.53	2,028.3	-24.1	-118.8	121.2	0.00	0.00	0.00
2,080.0	15.22	258.53	2,066.9	-26.2	-129.1	131.7	0.00	0.00	0.00
2,120.0	15.22	258.53	2,105.5	-28.3	-139.4	142.2	0.00	0.00	0.00
2,160.0	15.22	258.53	2,144.1	-30.4	-149.7	152.7	0.00	0.00	0.00
2,200.0	15.22	258.53	2,182.7	-32.5	-160.0	163.2	0.00	0.00	0.00
2,240.0	15.22	258.53	2,221.3	-34.5	-170.3	173.7	0.00	0.00	0.00
2,280.0	15.22	258.53	2,259.9	-36.6	-180.6	184.2	0.00	0.00	0.00
2,320.0	15.22	258.53	2,298.5	-38.7	-190.9	194.8	0.00	0.00	0.00
2,360.0	15.22	258.53	2,337.1	-40.8	-201.2	205.3	0.00	0.00	0.00
2,400.0	15.22	258.53	2,375.7	-42.9	-211.5	215.8	0.00	0.00	0.00
2,440.0	15.22	258.53	2,414.3	-45.0	-221.7	226.3	0.00	0.00	0.00
2,480.0	15.22	258.53	2,452.9	-47.1	-232.0	236.8	0.00	0.00	0.00
2,520.0	15.22	258.53	2,491.5	-49.2	-242.3	247.3	0.00	0.00	0.00
2,560.0	15.22	258.53	2,530.1	-51.2	-252.6	257.8	0.00	0.00	0.00
2,600.0	15.22	258.53	2,568.7	-53.3	-262.9	268.3	0.00	0.00	0.00
2,640.0	15.22	258.53	2,607.3	-55.4	-273.2	278.8	0.00	0.00	0.00
2,680.0	15.22	258.53	2,645.9	-57.5	-283.5	289.3	0.00	0.00	0.00
2,720.0	15.22	258.53	2,684.4	-59.6	-293.8	299.8	0.00	0.00	0.00
2,760.0	15.22	258.53	2,723.0	-61.7	-304.1	310.3	0.00	0.00	0.00
2,800.0	15.22	258.53	2,761.6	-63.8	-314.4	320.8	0.00	0.00	0.00
2,840.0	15.22	258.53	2,800.2	-65.9	-324.7	331.3	0.00	0.00	0.00
2,880.0	15.22	258.53	2,838.8	-68.0	-335.0	341.8	0.00	0.00	0.00
2,920.0	15.22	258.53	2,877.4	-70.0	-345.3	352.3	0.00	0.00	0.00
2,960.0	15.22	258.53	2,916.0	-72.1	-355.6	362.8	0.00	0.00	0.00
3,000.0	15.22	258.53	2,954.6	-74.2	-365.9	373.3	0.00	0.00	0.00
3,040.0	15.22	258.53	2,993.2	-76.3	-376.2	383.8	0.00	0.00	0.00
3,080.0	15.22	258.53	3,031.8	-78.4	-386.4	394.3	0.00	0.00	0.00
3,120.0	15.22	258.53	3,070.4	-80.5	-396.7	404.8	0.00	0.00	0.00
3,160.0	15.22	258.53	3,109.0	-82.6	-407.0	415.3	0.00	0.00	0.00
3,200.0	15.22	258.53	3,147.6	-84.7	-417.3	425.8	0.00	0.00	0.00
3,240.0	15.22	258.53	3,186.2	-86.7	-427.6	436.3	0.00	0.00	0.00
3,280.0	15.22	258.53	3,224.8	-88.8	-437.9	446.8	0.00	0.00	0.00
3,320.0	15.22	258.53	3,263.4	-90.9	-448.2	457.3	0.00	0.00	0.00
3,360.0	15.22	258.53	3,302.0	-93.0	-458.5	467.8	0.00	0.00	0.00
3,400.0	15.22	258.53	3,340.6	-95.1	-468.8	478.3	0.00	0.00	0.00
3,440.0	15.22	258.53	3,379.2	-97.2	-479.1	488.9	0.00	0.00	0.00
3,480.0	15.22	258.53	3,417.8	-99.3	-489.4	499.4	0.00	0.00	0.00
3,520.0	15.22	258.53	3,456.4	-101.4	-499.7	509.9	0.00	0.00	0.00
3,560.0	15.22	258.53	3,495.0	-103.5	-510.0	520.4	0.00	0.00	0.00
3,600.0	15.22	258.53	3,533.6	-105.5	-520.3	530.9	0.00	0.00	0.00
3,640.0	15.22	258.53	3,572.2	-107.6	-530.6	541.4	0.00	0.00	0.00
3,680.0	15.22	258.53	3,610.8	-109.7	-540.9	551.9	0.00	0.00	0.00
3,720.0	15.22	258.53	3,649.4	-111.8	-551.1	562.4	0.00	0.00	0.00
3,760.0	15.22	258.53	3,688.0	-113.9	-561.4	572.9	0.00	0.00	0.00
3,800.0	15.22	258.53	3,726.5	-116.0	-571.7	583.4	0.00	0.00	0.00
3,840.0	15.22	258.53	3,765.1	-118.1	-582.0	593.9	0.00	0.00	0.00
3,880.0	15.22	258.53	3,803.7	-120.2	-592.3	604.4	0.00	0.00	0.00
3,920.0	15.22	258.53	3,842.3	-122.3	-602.6	614.9	0.00	0.00	0.00
3,960.0	15.22	258.53	3,880.9	-124.3	-612.9	625.4	0.00	0.00	0.00
4,000.0	15.22	258.53	3,919.5	-126.4	-623.2	635.9	0.00	0.00	0.00
4,040.0	15.22	258.53	3,958.1	-128.5	-633.5	646.4	0.00	0.00	0.00
4,080.0	15.22	258.53	3,996.7	-130.6	-643.8	656.9	0.00	0.00	0.00
4,120.0	15.22	258.53	4,035.3	-132.7	-654.1	667.4	0.00	0.00	0.00
4,160.0	15.22	258.53	4,073.9	-134.8	-664.4	677.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,179.8	15.22	258.53	4,093.0	-135.8	-669.5	683.1	0.00	0.00	0.00
PARKMAN									
4,200.0	15.22	258.53	4,112.5	-136.9	-674.7	688.4	0.00	0.00	0.00
4,240.0	15.22	258.53	4,151.1	-139.0	-685.0	698.9	0.00	0.00	0.00
4,280.0	15.22	258.53	4,189.7	-141.0	-695.3	709.4	0.00	0.00	0.00
4,320.0	15.22	258.53	4,228.3	-143.1	-705.6	719.9	0.00	0.00	0.00
4,360.0	15.22	258.53	4,266.9	-145.2	-715.9	730.4	0.00	0.00	0.00
4,400.0	15.22	258.53	4,305.5	-147.3	-726.1	740.9	0.00	0.00	0.00
4,440.0	15.22	258.53	4,344.1	-149.4	-736.4	751.4	0.00	0.00	0.00
4,480.0	15.22	258.53	4,382.7	-151.5	-746.7	761.9	0.00	0.00	0.00
4,520.0	15.22	258.53	4,421.3	-153.6	-757.0	772.4	0.00	0.00	0.00
4,560.0	15.22	258.53	4,459.9	-155.7	-767.3	783.0	0.00	0.00	0.00
4,600.0	15.22	258.53	4,498.5	-157.8	-777.6	793.5	0.00	0.00	0.00
4,640.0	15.22	258.53	4,537.1	-159.8	-787.9	804.0	0.00	0.00	0.00
4,680.0	15.22	258.53	4,575.7	-161.9	-798.2	814.5	0.00	0.00	0.00
4,720.0	15.22	258.53	4,614.3	-164.0	-808.5	825.0	0.00	0.00	0.00
4,729.1	15.22	258.53	4,623.0	-164.5	-810.8	827.3	0.00	0.00	0.00
SUSSEX									
4,760.0	15.22	258.53	4,652.9	-166.1	-818.8	835.5	0.00	0.00	0.00
4,800.0	15.22	258.53	4,691.5	-168.2	-829.1	846.0	0.00	0.00	0.00
4,840.0	15.22	258.53	4,730.1	-170.3	-839.4	856.5	0.00	0.00	0.00
4,858.3	15.22	258.53	4,747.7	-171.2	-844.1	861.3	0.00	0.00	0.00
4,880.0	14.79	258.53	4,768.7	-172.4	-849.6	866.9	2.00	-2.00	0.00
4,920.0	13.99	258.53	4,807.4	-174.3	-859.3	876.8	2.00	-2.00	0.00
4,960.0	13.19	258.53	4,846.3	-176.2	-868.5	886.2	2.00	-2.00	0.00
5,000.0	12.39	258.53	4,885.3	-178.0	-877.2	895.1	2.00	-2.00	0.00
5,040.0	11.59	258.53	4,924.4	-179.6	-885.4	903.4	2.00	-2.00	0.00
5,080.0	10.79	258.53	4,963.7	-181.2	-893.0	911.2	2.00	-2.00	0.00
5,120.0	9.99	258.53	5,003.0	-182.6	-900.0	918.4	2.00	-2.00	0.00
5,160.0	9.19	258.53	5,042.5	-183.9	-906.6	925.0	2.00	-2.00	0.00
5,200.0	8.39	258.53	5,082.0	-185.1	-912.6	931.2	2.00	-2.00	0.00
5,240.0	7.59	258.53	5,121.6	-186.2	-918.0	936.7	2.00	-2.00	0.00
5,280.0	6.79	258.53	5,161.3	-187.2	-922.9	941.7	2.00	-2.00	0.00
5,320.0	5.99	258.53	5,201.0	-188.1	-927.3	946.2	2.00	-2.00	0.00
5,360.0	5.19	258.53	5,240.8	-188.9	-931.1	950.1	2.00	-2.00	0.00
5,400.0	4.39	258.53	5,280.7	-189.6	-934.4	953.4	2.00	-2.00	0.00
5,440.0	3.59	258.53	5,320.6	-190.1	-937.1	956.2	2.00	-2.00	0.00
5,480.0	2.79	258.53	5,360.5	-190.5	-939.3	958.4	2.00	-2.00	0.00
5,520.0	1.99	258.53	5,400.5	-190.9	-940.9	960.1	2.00	-2.00	0.00
5,560.0	1.19	258.53	5,440.5	-191.1	-942.0	961.2	2.00	-2.00	0.00
5,600.0	0.39	258.53	5,480.5	-191.2	-942.6	961.8	2.00	-2.00	0.00
5,619.5	0.00	0.00	5,500.0	-191.2	-942.6	961.8	2.00	-2.00	0.00
TARGET BHL 50'FSL, 1380'FWL									
5,640.0	0.00	0.00	5,520.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,680.0	0.00	0.00	5,560.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,720.0	0.00	0.00	5,600.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,760.0	0.00	0.00	5,640.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,680.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,720.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,760.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,920.0	0.00	0.00	5,800.5	-191.2	-942.6	961.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,840.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,880.5	-191.2	-942.6	961.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,040.0	0.00	0.00	5,920.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,080.0	0.00	0.00	5,960.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,120.0	0.00	0.00	6,000.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,160.0	0.00	0.00	6,040.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,080.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,120.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,160.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,200.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,240.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,280.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,320.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,360.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,520.0	0.00	0.00	6,400.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,440.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,480.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,520.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,560.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,600.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,640.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,680.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,840.0	0.00	0.00	6,720.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,880.0	0.00	0.00	6,760.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,920.0	0.00	0.00	6,800.5	-191.2	-942.6	961.8	0.00	0.00	0.00
6,960.0	0.00	0.00	6,840.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,880.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,040.0	0.00	0.00	6,920.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,080.0	0.00	0.00	6,960.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,120.0	0.00	0.00	7,000.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,160.0	0.00	0.00	7,040.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,080.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,222.5	0.00	0.00	7,103.0	-191.2	-942.6	961.8	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 50'FSL, 1380'FWL									
7,240.0	0.00	0.00	7,120.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,280.0	0.00	0.00	7,160.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,320.0	0.00	0.00	7,200.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,360.0	0.00	0.00	7,240.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,280.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,440.0	0.00	0.00	7,320.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,480.0	0.00	0.00	7,360.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,492.5	0.00	0.00	7,373.0	-191.2	-942.6	961.8	0.00	0.00	0.00
CODELL									
7,520.0	0.00	0.00	7,400.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,560.0	0.00	0.00	7,440.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,585.5	0.00	0.00	7,466.0	-191.2	-942.6	961.8	0.00	0.00	0.00
GREENHORN									
7,600.0	0.00	0.00	7,480.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,640.0	0.00	0.00	7,520.5	-191.2	-942.6	961.8	0.00	0.00	0.00
7,652.5	0.00	0.00	7,533.0	-191.2	-942.6	961.8	0.00	0.00	0.00
HARD LINES 50'S OF BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well Warner 35-18
Company:	Anadarko, Weld County CO	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site:	Warner 36-18 Pad Sec.18-T2N-R65W	North Reference:	True
Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-14-11)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 50'FSL	0.00	0.00	5,500.0	-191.2	-942.6	1,291,670.95	3,220,614.82	40.131336	-104.710992
- plan hits target center									
- Point									
TARGET CIRCLE 50'	0.00	0.00	7,103.0	-191.2	-942.6	1,291,670.95	3,220,614.82	40.131336	-104.710992
- plan hits target center									
- Circle (radius 50.0)									
HARD LINES 50'S OF	0.00	0.00	7,533.0	-241.2	-1,042.6	1,291,620.09	3,220,515.30	40.131199	-104.711350
- plan misses target center by 111.8ft at 7652.5ft MD (7533.0 TVD, -191.2 N, -942.6 E)									
- Polygon									
Point 1			7,533.0	0.0	0.0	1,291,620.09	3,220,515.30		
Point 2			7,533.0	0.0	200.0	1,291,621.87	3,220,715.28		

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)		Name	(")	(")
900.0	900.0	8 5/8"		8-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth			Dip	Dip Direction
(ft)	(ft)	Name	Lithology	(°)	(°)
4,179.8	4,093.0	PARKMAN		0.00	
4,729.1	4,623.0	SUSSEX		0.00	
7,222.5	7,103.0	NIOBRARA		0.00	
7,492.5	7,373.0	CODELL		0.00	
7,585.5	7,466.0	GREENHORN		0.00	



Directional

Anadarko, Weld County CO

SEC.18-T2N-R65W

Warner 36-18 Pad Sec.18-T2N-R65W

Warner 35-18

Wellbore #1

Plan #1 (3-14-11)

Anticollision Report

15 March, 2011



Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Warner 35-18
Project:	SEC.18-T2N-R65W	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Warner 36-18 Pad Sec.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-14-11)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-14-11)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 3/15/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,652.5	Plan #1 (3-14-11) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Warner 36-18 Pad Sec.18-T2N-R65W						
Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)	200.0	200.0	16.1	15.4	23.887	CC
Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)	300.0	299.9	16.5	15.4	14.708	ES
Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)	400.0	399.5	18.5	17.0	11.786	SF

Offset Design Warner 36-18 Pad Sec.18-T2N-R65W - Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)												
Survey Program: 0-MWD												
Reference	Offset	Semi Major Axis		Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	18.21	15.3	5.0	16.1	16.1	0.00	N/A
100.0	100.0	100.0	100.0	0.1	0.1	18.21	15.3	5.0	16.1	15.9	0.22	71.661
200.0	200.0	200.0	200.0	0.3	0.3	18.21	15.3	5.0	16.1	15.4	0.67	23.887 CC
300.0	300.0	299.9	299.9	0.6	0.6	12.22	16.1	3.5	16.5	15.4	1.12	14.708 ES
400.0	400.0	399.5	399.3	0.8	0.8	-3.53	18.5	-1.1	18.5	17.0	1.57	11.786 SF
500.0	500.0	498.6	498.1	1.0	1.0	-21.40	22.4	-8.8	24.2	22.1	2.03	11.884
600.0	600.0	597.1	595.8	1.2	1.3	-34.81	27.9	-19.4	34.2	31.7	2.52	13.568
700.0	700.0	694.6	692.1	1.5	1.6	-43.31	34.8	-32.8	48.5	45.4	3.05	15.878
800.0	800.0	790.9	786.8	1.7	2.0	-48.62	43.1	-49.0	66.6	62.9	3.63	18.325
900.0	900.0	886.0	879.4	1.9	2.4	-52.04	52.7	-67.6	88.2	83.9	4.26	20.701
1,000.0	1,000.0	979.5	969.9	2.1	2.9	-54.35	63.6	-88.6	113.2	108.2	4.94	22.926
1,100.0	1,100.0	1,071.3	1,057.9	2.4	3.4	-55.96	75.5	-111.8	141.4	135.7	5.66	24.975
1,200.0	1,200.0	1,161.3	1,143.4	2.6	4.0	-57.13	88.5	-137.0	172.6	166.2	6.43	26.852
1,300.0	1,300.0	1,249.9	1,226.5	2.8	4.6	43.31	102.5	-164.1	205.7	199.9	5.84	35.225
1,400.0	1,399.8	1,337.3	1,307.6	3.0	5.2	42.94	117.4	-193.0	239.3	233.0	6.30	37.965
1,500.0	1,499.5	1,423.6	1,386.7	3.2	5.9	42.97	133.2	-223.7	273.3	266.5	6.79	40.273
1,600.0	1,598.7	1,508.8	1,463.7	3.4	6.6	43.26	149.9	-256.1	307.8	300.5	7.29	42.200
1,700.0	1,697.5	1,594.0	1,539.6	3.7	7.4	43.73	167.6	-290.5	342.7	334.8	7.84	43.714
1,800.0	1,795.6	1,687.8	1,622.8	4.0	8.4	44.49	187.6	-329.2	376.4	367.9	8.45	44.548
1,900.0	1,893.1	1,782.3	1,706.4	4.4	9.3	45.43	207.7	-368.2	407.9	398.8	9.12	44.740
1,961.2	1,952.3	1,840.3	1,757.8	4.6	9.9	46.09	220.0	-392.2	426.2	416.6	9.56	44.567
2,000.0	1,989.7	1,877.2	1,790.5	4.8	10.2	46.68	227.9	-407.4	437.6	427.7	9.87	44.353
2,100.0	2,086.2	1,972.2	1,874.6	5.2	11.2	48.07	248.1	-446.6	467.0	456.4	10.68	43.742
2,200.0	2,182.7	2,067.1	1,958.7	5.7	12.1	49.30	268.3	-485.7	496.7	485.2	11.53	43.086

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Warner 35-18
Project:	SEC.18-T2N-R65W	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Warner 36-18 Pad Sec.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-14-11)	Offset TVD Reference:	Offset Datum

Offset Design Warner 36-18 Pad Sec.18-T2N-R65W - Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,300.0	2,279.2	2,162.1	2,042.8	6.1	13.1	50.40	288.5	-524.9	526.6	514.2	12.42	42.417	
2,400.0	2,375.7	2,257.1	2,126.9	6.6	14.0	51.37	308.7	-564.1	556.7	543.3	13.33	41.759	
2,500.0	2,472.2	2,352.0	2,211.0	7.1	15.0	52.25	328.9	-603.3	586.8	572.6	14.27	41.124	
2,600.0	2,568.7	2,447.0	2,295.2	7.7	15.9	53.04	349.1	-642.5	617.1	601.9	15.23	40.520	
2,700.0	2,665.1	2,542.0	2,379.3	8.2	16.9	53.76	369.3	-681.7	647.5	631.3	16.21	39.950	
2,800.0	2,761.6	2,637.0	2,463.4	8.7	17.8	54.41	389.5	-720.9	678.0	660.8	17.20	39.416	
2,900.0	2,858.1	2,731.9	2,547.5	9.2	18.8	55.01	409.7	-760.1	708.5	690.3	18.21	38.916	
3,000.0	2,954.6	2,826.9	2,631.6	9.8	19.7	55.55	429.9	-799.3	739.1	719.9	19.22	38.450	
3,100.0	3,051.1	2,921.9	2,715.7	10.3	20.7	56.06	450.1	-838.5	769.8	749.5	20.25	38.016	
3,200.0	3,147.6	3,016.8	2,799.9	10.9	21.6	56.53	470.3	-877.6	800.5	779.2	21.28	37.611	
3,300.0	3,244.1	3,111.8	2,884.0	11.4	22.6	56.96	490.5	-916.8	831.3	808.9	22.33	37.233	
3,400.0	3,340.6	3,206.8	2,968.1	12.0	23.6	57.36	510.7	-956.0	862.1	838.7	23.37	36.881	
3,500.0	3,437.1	3,301.8	3,052.2	12.5	24.5	57.73	530.9	-995.2	892.9	868.5	24.43	36.552	
3,600.0	3,533.6	3,396.7	3,136.3	13.1	25.5	58.08	551.1	-1,034.4	923.8	898.3	25.49	36.244	
3,700.0	3,630.1	3,491.7	3,220.4	13.6	26.4	58.41	571.3	-1,073.6	954.7	928.1	26.55	35.956	
3,800.0	3,726.5	3,586.7	3,304.6	14.2	27.4	58.71	591.5	-1,112.8	985.6	958.0	27.62	35.685	
3,900.0	3,823.0	3,681.6	3,388.7	14.7	28.3	59.00	611.7	-1,152.0	1,016.5	987.8	28.69	35.432	
4,000.0	3,919.5	3,776.6	3,472.8	15.3	29.3	59.27	631.9	-1,191.2	1,047.5	1,017.7	29.76	35.193	
4,100.0	4,016.0	3,871.6	3,556.9	15.8	30.3	59.53	652.1	-1,230.4	1,078.5	1,047.6	30.84	34.968	
4,200.0	4,112.5	3,966.5	3,641.0	16.4	31.2	59.77	672.3	-1,269.5	1,109.5	1,077.6	31.92	34.757	
4,300.0	4,209.0	4,061.5	3,725.1	16.9	32.2	59.99	692.5	-1,308.7	1,140.5	1,107.5	33.00	34.557	
4,400.0	4,305.5	4,156.5	3,809.3	17.5	33.1	60.21	712.7	-1,347.9	1,171.5	1,137.5	34.09	34.368	
4,500.0	4,402.0	4,251.5	3,893.4	18.1	34.1	60.41	732.9	-1,387.1	1,202.6	1,167.4	35.17	34.189	
4,600.0	4,498.5	4,346.4	3,977.5	18.6	35.1	60.61	753.1	-1,426.3	1,233.7	1,197.4	36.26	34.019	
4,700.0	4,595.0	4,441.4	4,061.6	19.2	36.0	60.79	773.3	-1,465.5	1,264.7	1,227.4	37.35	33.859	
4,800.0	4,691.5	4,536.4	4,145.7	19.7	37.0	60.97	793.5	-1,504.7	1,295.8	1,257.4	38.45	33.706	
4,858.3	4,747.7	4,591.8	4,194.8	20.1	37.5	61.07	805.3	-1,527.5	1,314.0	1,274.9	39.08	33.620	
4,900.0	4,788.0	4,631.3	4,229.8	20.3	37.9	61.37	813.7	-1,543.9	1,327.1	1,287.5	39.57	33.539	
5,000.0	4,885.3	4,725.9	4,313.5	20.7	38.9	62.01	833.8	-1,582.9	1,359.6	1,319.0	40.62	33.473	
5,100.0	4,983.3	4,819.8	4,396.8	21.0	39.8	62.55	853.8	-1,621.7	1,393.7	1,352.1	41.60	33.505	
5,200.0	5,082.0	4,913.1	4,479.4	21.3	40.8	63.00	873.7	-1,660.2	1,429.3	1,386.8	42.50	33.629	
5,300.0	5,181.1	5,005.6	4,561.3	21.5	41.7	63.37	893.3	-1,698.3	1,466.5	1,423.1	43.34	33.838	
5,400.0	5,280.7	5,097.2	4,642.4	21.8	42.7	63.66	912.8	-1,736.1	1,505.1	1,461.0	44.10	34.129	
5,500.0	5,380.5	5,187.7	4,722.6	21.9	43.6	63.90	932.1	-1,773.5	1,545.3	1,500.5	44.80	34.495	
5,600.0	5,480.5	5,277.2	4,801.8	22.0	44.5	64.08	951.1	-1,810.4	1,587.0	1,541.6	45.43	34.932	
5,619.5	5,500.0	5,294.5	4,817.2	22.1	44.6	-37.36	954.8	-1,817.5	1,595.3	1,549.8	45.55	35.025	
5,700.0	5,580.5	5,365.7	4,880.3	22.2	45.4	-37.91	969.9	-1,846.9	1,629.8	1,584.1	45.71	35.657	
5,800.0	5,680.5	5,454.3	4,958.7	22.3	46.3	-38.57	988.8	-1,883.5	1,672.9	1,627.0	45.92	36.430	
5,900.0	5,780.5	5,542.9	5,037.2	22.4	47.2	-39.19	1,007.6	-1,920.0	1,716.1	1,670.0	46.14	37.191	
6,000.0	5,880.5	5,631.5	5,115.6	22.5	48.1	-39.78	1,026.5	-1,956.6	1,759.5	1,713.1	46.37	37.942	
6,100.0	5,980.5	5,759.3	5,229.2	22.6	49.2	-40.58	1,053.3	-2,008.7	1,802.7	1,756.1	46.61	38.675	
6,200.0	6,080.5	5,986.7	5,436.8	22.8	50.9	-41.74	1,095.8	-2,091.1	1,841.1	1,794.2	46.90	39.254	
6,300.0	6,180.5	6,229.4	5,665.8	22.9	52.3	-42.66	1,132.7	-2,162.6	1,872.4	1,825.2	47.25	39.630	
6,400.0	6,280.5	6,485.3	5,913.6	23.0	53.4	-43.33	1,161.7	-2,219.0	1,895.9	1,848.3	47.63	39.806	
6,500.0	6,380.5	6,751.2	6,175.9	23.1	54.1	-43.76	1,181.1	-2,256.6	1,910.9	1,862.9	48.02	39.796	
6,600.0	6,480.5	7,022.7	6,446.7	23.3	54.5	-43.93	1,189.3	-2,272.5	1,917.2	1,868.8	48.41	39.607	
6,700.0	6,580.5	7,156.4	6,580.5	23.4	54.6	-43.93	1,189.5	-2,273.0	1,917.4	1,868.7	48.68	39.391	
6,800.0	6,680.5	7,256.4	6,680.5	23.5	54.6	-43.93	1,189.5	-2,273.0	1,917.4	1,868.4	48.92	39.193	
6,900.0	6,780.5	7,356.4	6,780.5	23.7	54.7	-43.93	1,189.5	-2,273.0	1,917.4	1,868.2	49.17	38.995	
7,000.0	6,880.5	7,456.4	6,880.5	23.8	54.7	-43.93	1,189.5	-2,273.0	1,917.4	1,867.9	49.42	38.797	
7,100.0	6,980.5	7,556.4	6,980.5	23.9	54.8	-43.93	1,189.5	-2,273.0	1,917.4	1,867.7	49.68	38.598	
7,200.0	7,080.5	7,656.4	7,080.5	24.1	54.9	-43.93	1,189.5	-2,273.0	1,917.4	1,867.4	49.93	38.399	

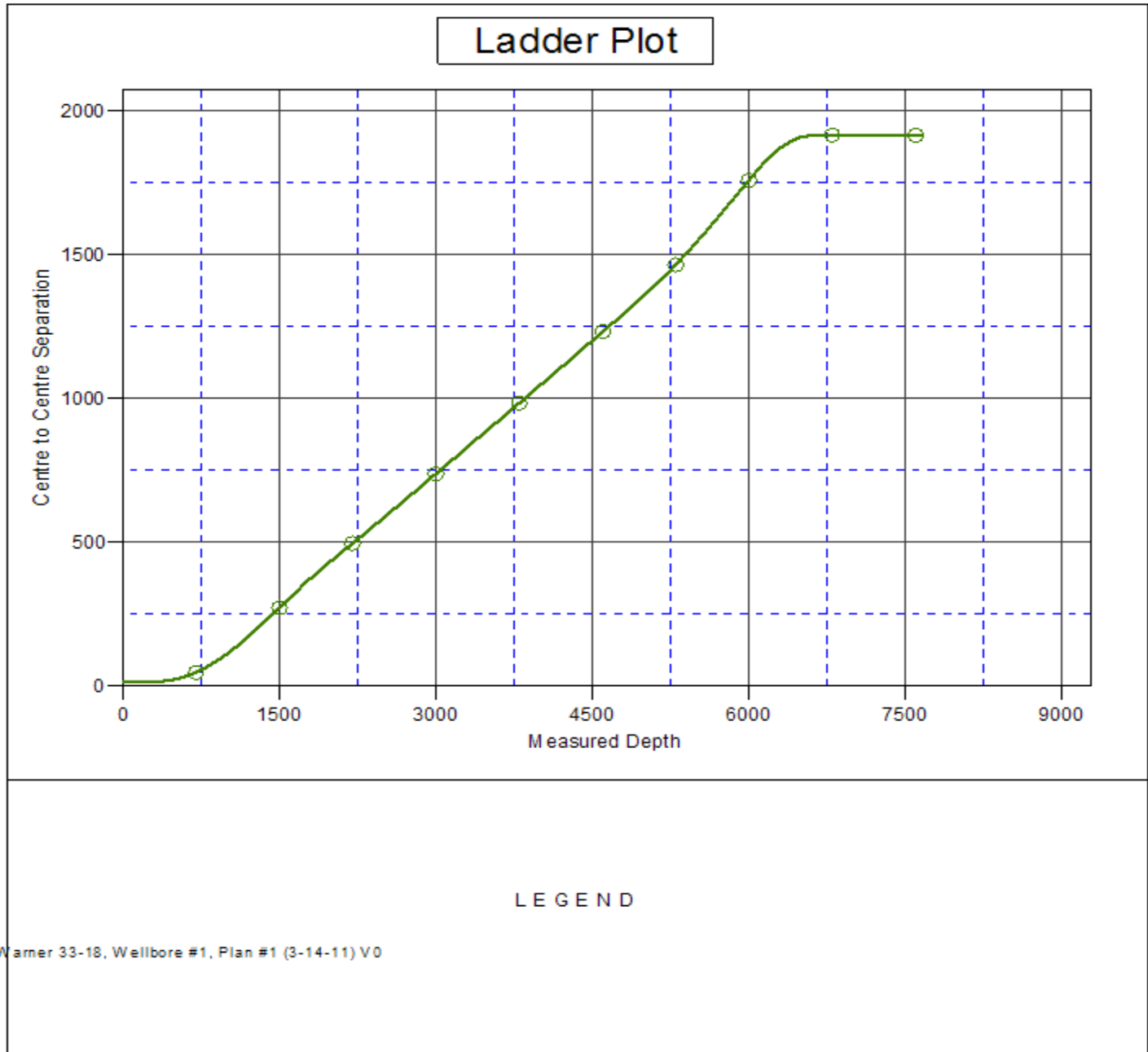
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Warner 35-18
Project:	SEC.18-T2N-R65W	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Warner 36-18 Pad Sec.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-14-11)	Offset TVD Reference:	Offset Datum

Offset Design Warner 36-18 Pad Sec.18-T2N-R65W - Warner 33-18 - Wellbore #1 - Plan #1 (3-14-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis			Distance									Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,300.0	7,180.5	7,756.4	7,180.5	24.2	54.9	-43.93	1,189.5	-2,273.0	1,917.4	1,867.2	50.19	38.201		
7,400.0	7,280.5	7,856.4	7,280.5	24.3	55.0	-43.93	1,189.5	-2,273.0	1,917.4	1,866.9	50.45	38.002		
7,500.0	7,380.5	7,956.4	7,380.5	24.5	55.1	-43.93	1,189.5	-2,273.0	1,917.4	1,866.6	50.72	37.804		
7,600.0	7,480.5	8,056.4	7,480.5	24.6	55.1	-43.93	1,189.5	-2,273.0	1,917.4	1,866.4	50.99	37.606		
7,652.5	7,533.0	8,108.9	7,533.0	24.7	55.2	-43.93	1,189.5	-2,273.0	1,917.4	1,866.2	51.13	37.502		

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Warner 35-18
Project:	SEC.18-T2N-R65W	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Warner 36-18 Pad Sec.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-14-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5007.0ft (Original Well Elev) Coordinates are relative to: Warner 35-18
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.51°



Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Warner 35-18
Project:	SEC.18-T2N-R65W	TVD Reference:	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Warner 36-18 Pad Sec.18-T2N-R65W	MD Reference:	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Warner 35-18	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-14-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5007.0ft (Original Well Elev) Coordinates are relative to: Warner 35-18
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.51°

