



**Anglian Oil Company Ltd.  
Northern Lights, AA Pad, AA16, Slot 09, Run #4**

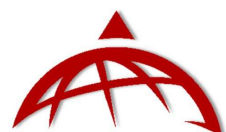
**Job No. AB-CD-12345678  
Survey Date: 23 September 2017**

## **True North Directional Services Inc. Anticollision Report**

**19 November 2025**

Minimum Distance Proximity Scan (Highside Reference)

Scan Range: 0.00ft to 5,371.72ft Measured Depth  
Scan Radius is 1,200.00ft. Clearance Factor cutoff is Unlimited.



**True North**  
Directional Services Inc.



<b>Company</b>	Anglian Oil Company Ltd.	<b>Local Co-ordinate Reference:</b>	Well AA16
<b>Project:</b>	Northern Lights	<b>TVD Reference:</b>	RKB @ 2,065.65ft (Mean Sea Level)
<b>Reference Site:</b>	AA Pad	<b>MD Reference:</b>	Local RKB
<b>Site Error:</b>	16.40ft	<b>North Reference:</b>	Grid North
<b>Reference Well:</b>	AA16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.83ft	<b>Output errors are at:</b>	2.00 Sigma
<b>Reference wellbore:</b>	Lateral #1	<b>Database:</b>	Example Project Database
<b>Reference Survey:</b>	Run #4	<b>Offset TVD Reference:</b>	2,065.65ft (Mean Sea Level)

<b>Reference</b>	AA Pad, AA16, Run #4	<b>Interpolation Method:</b>	100.00ft
<b>Filter Type:</b>	None	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00ft to 5,371.72ft Measured Depth	<b>Scan Method:</b>	Minimum Distance
<b>Scan Radius:</b>	1,200.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Clearance Factor:</b>	Unlimited	<b>Casing Model:</b>	Not applied
<b>Warning Levels:</b>	2.00 Sigma		

Survey Program for:		AA Pad, AA16, Run #4	
From (ft)	To (ft)	Tool Name	Description
0.00	981.26	GYRO-NS	OWSG Gyrocompass Gyro
981.26	2,508.28	MWD	MWD
2,508.28	3,926.69	MWD	MWD
3,926.69	5,371.72	MWD+IFR1+FDIR	MWD+IFR1+FDIR

## Summary - Filter: Minimum Clearance Factor

Site Name Offset Well - Profile	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
<b>AA Pad</b>						
AA01, Run #1	5,371.72	4,612.55	1,815.49	1,578.46	7.66	
AA02, Gyro Survey Data	981.26	787.53	292.76	265.85	10.88	
AA02, MWD Run #1	600.00	787.53	277.90	253.48	11.38	
AA02, MWD Run #2	5,371.72	4,606.19	1,560.88	1,342.20	7.14	
AA03, As Drilled Surveys	5,371.72	4,888.59	2,089.39	1,846.17	8.59	
AA04, As Drilled Surveys	5,371.72	4,970.50	516.78	273.01	2.12	
AA05, As Drilled Surveys	5,371.72	5,003.05	779.39	522.05	3.03	
AA06, As Drilled Surveys	1,100.00	1,105.79	5.73	55%	0.45	STOP DRILLING NOW
AA07, As Drilled Surveys	5,371.72	5,492.48	45.24	6%	0.94	STOP DRILLING NOW
AA08, As Drilled Surveys	5,371.72	4,772.92	1,558.96	1,307.91	6.21	
AA09, As Drilled Surveys	5,371.72	4,691.46	2,092.67	1,857.13	8.88	
AA10, As Drilled Surveys	1,400.00	1,444.61	334.63	307.28	12.24	
AA10, Sidetrack Surveys	5,371.72	4,770.02	1,302.63	1,049.63	5.15	
AA11, As Drilled Surveys	5,371.72	5,310.43	251.85	48.84	1.24	Execute Shut-In Procs
AA12, As Drilled Surveys	5,371.72	4,780.77	1,808.04	1,561.54	7.33	
AA13, SAGD Producer	5,371.72	4,865.20	1,038.35	781.87	4.05	
AA14, SAGD Injector	5,371.72	4,690.82	1,042.39	791.92	4.16	
AA15, As Drilled Surveys	5,371.72	4,824.76	775.62	526.23	3.11	
<b>BB Pad</b>						
BB02, Leg #2 - Design #1	3,100.00	5,583.85	1,698.75	1,449.55	6.82	
BB02, Leg #7 - Design #1	3,100.00	6,407.47	386.41	157.75	1.69	
BB02, Leg #4 - Design #1	3,100.00	5,792.38	1,179.40	945.43	5.04	
BB02, Leg #3 - Design #1	3,100.00	5,661.27	1,449.01	1,210.91	6.09	
BB02, Leg #6 - Design #1	3,200.00	6,150.80	643.75	412.64	2.79	
BB02, Leg #8 - Design #1	3,400.00	6,284.65	136.42	35%	0.65	STOP DRILLING NOW
BB02, Leg #5, Run #1	3,600.00	5,530.42	914.30	682.63	3.95	
BB03, Design #1 - U-Zontal	5,371.72	10,349.18	1,204.30	806.79	3.03	



<b>Company</b>	Anglian Oil Company Ltd.	<b>Local Co-ordinate Reference:</b>	Well AA16
<b>Project:</b>	Northern Lights	<b>TVD Reference:</b>	RKB @ 2,065.65ft (Mean Sea Level)
<b>Reference Site:</b>	AA Pad	<b>MD Reference:</b>	Local RKB
<b>Site Error:</b>	16.40ft	<b>North Reference:</b>	Grid North
<b>Reference Well:</b>	AA16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.83ft	<b>Output errors are at:</b>	2.00 Sigma
<b>Reference wellbore:</b>	Lateral #1	<b>Database:</b>	Example Project Database
<b>Reference Survey:</b>	Run #4	<b>Offset TVD Reference:</b>	2,065.65ft (Mean Sea Level)

Ellipse error terms are uncorrelated across survey tool tie-on points.  
Ellipse separations were reported only if both profiles contained survey tool information.  
Calculated ellipses incorporate combined structure and well surface errors where appropriate.  
The summary shows the data line where the minimum clearance factor is located.  
Distance between Ellipsoids is the actual separation distance between ellipsoids.  
Distance Between Centres is the straight line distance between ellipsoid centres.  
Probability is set at 2 sigma.  
Clearance Factor = Distance Between Profiles / (Distance Between Profiles - Ellipse Separation)

All station coordinates were calculated using the Minimum Curvature method.  
All data is in feet (us survey) unless otherwise stated. Directions and coordinates are relative to Grid North.  
Vertical depths are relative to RKB. Northings and Eastings are relative to Well AA16.

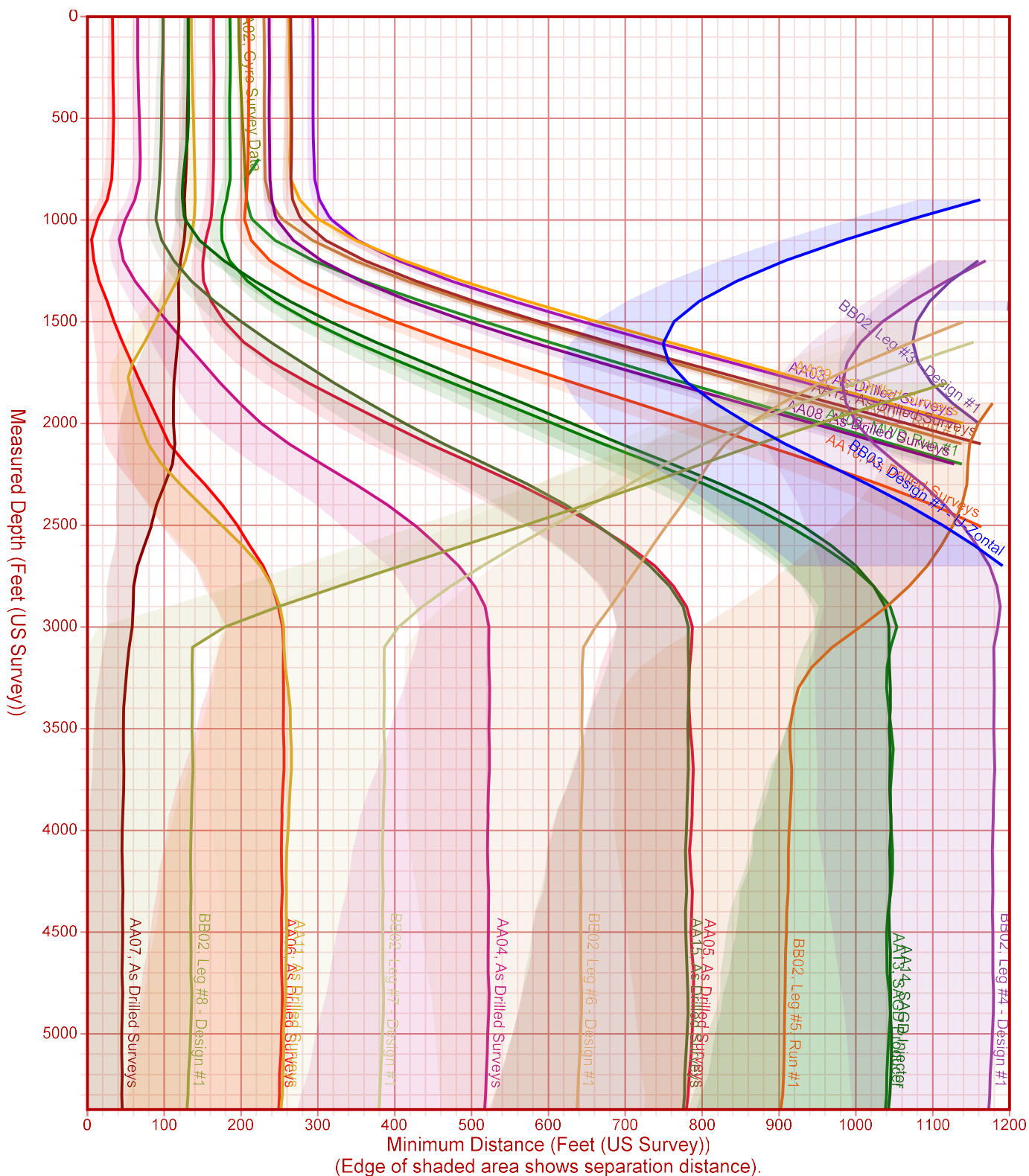
Coordinate system is Universal Transverse Mercator, Zone 12 North.  
Central meridian is -111.00°. Grid convergence at surface is 1.18°.

### Profile Sections

Survey: Run #1 from 0.00ft to 981.26ft  
Survey: Run #2 from 981.26ft to 2,508.28ft  
Survey: Run #3 from 2,508.28ft to 3,926.69ft  
Survey: Run #4 from 3,926.69ft to 5,371.72ft



Company	Anglian Oil Company Ltd.	Local Co-ordinate Reference:	Well AA16
Project:	Northern Lights	TVD Reference:	RKB @ 2,065.65ft (Mean Sea Level)
Reference Site:	AA Pad	MD Reference:	Local RKB
Site Error:	16.40ft	North Reference:	Grid North
Reference Well:	AA16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.83ft	Output errors are at:	2.00 Sigma
Reference wellbore:	Lateral #1	Database:	Example Project Database
Reference Survey:	Run #4	Offset TVD Reference:	2,065.65ft (Mean Sea Level)

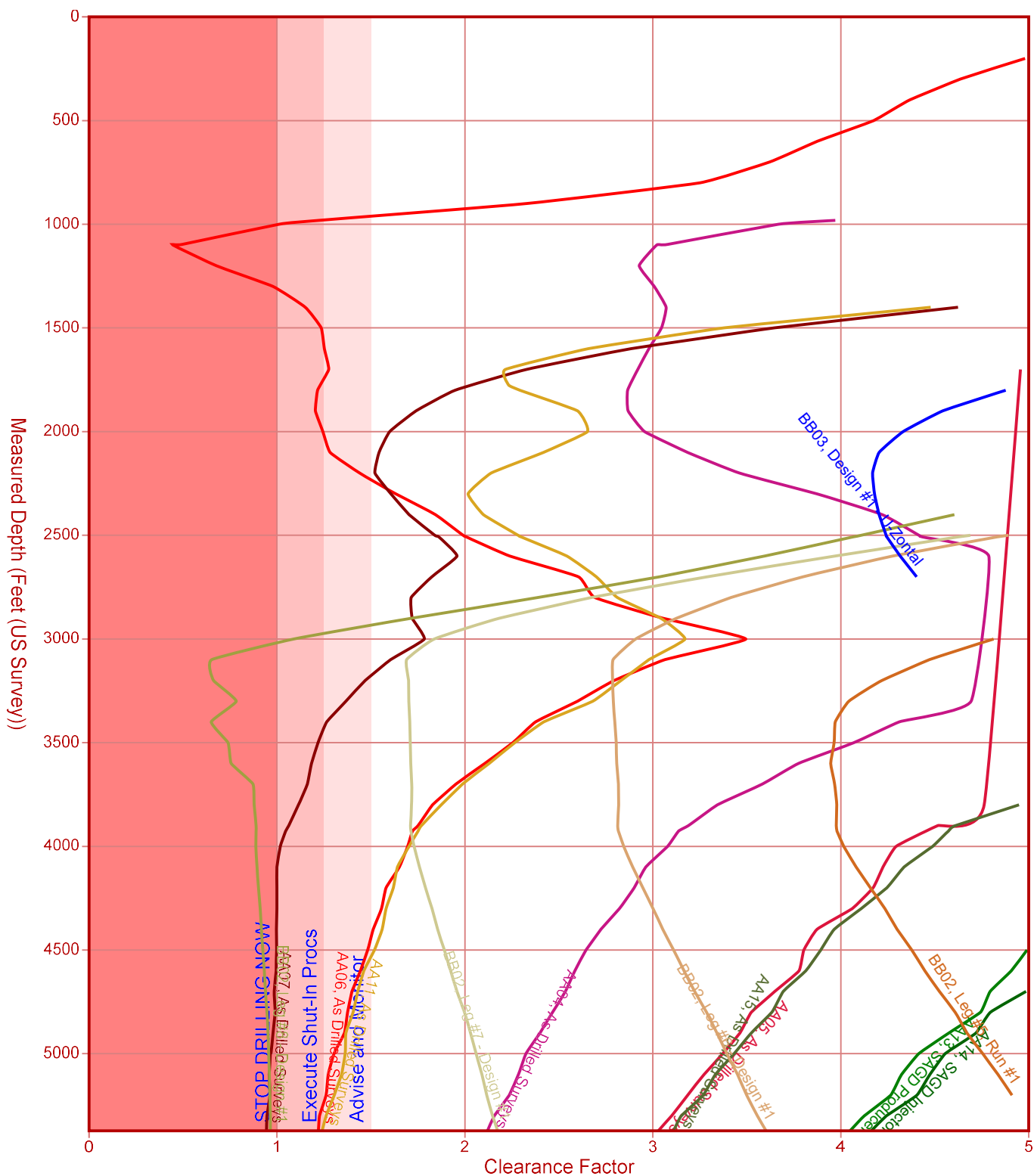




True North Directional Services Inc.  
Anticollision Report



Company	Anglian Oil Company Ltd.	Local Co-ordinate Reference:	Well AA16
Project:	Northern Lights	TVD Reference:	RKB @ 2,065.65ft (Mean Sea Level)
Reference Site:	AA Pad	MD Reference:	Local RKB
Site Error:	16.40ft	North Reference:	Grid North
Reference Well:	AA16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.83ft	Output errors are at:	2.00 Sigma
Reference wellbore:	Lateral #1	Database:	Example Project Database
Reference Survey:	Run #4	Offset TVD Reference:	2,065.65ft (Mean Sea Level)



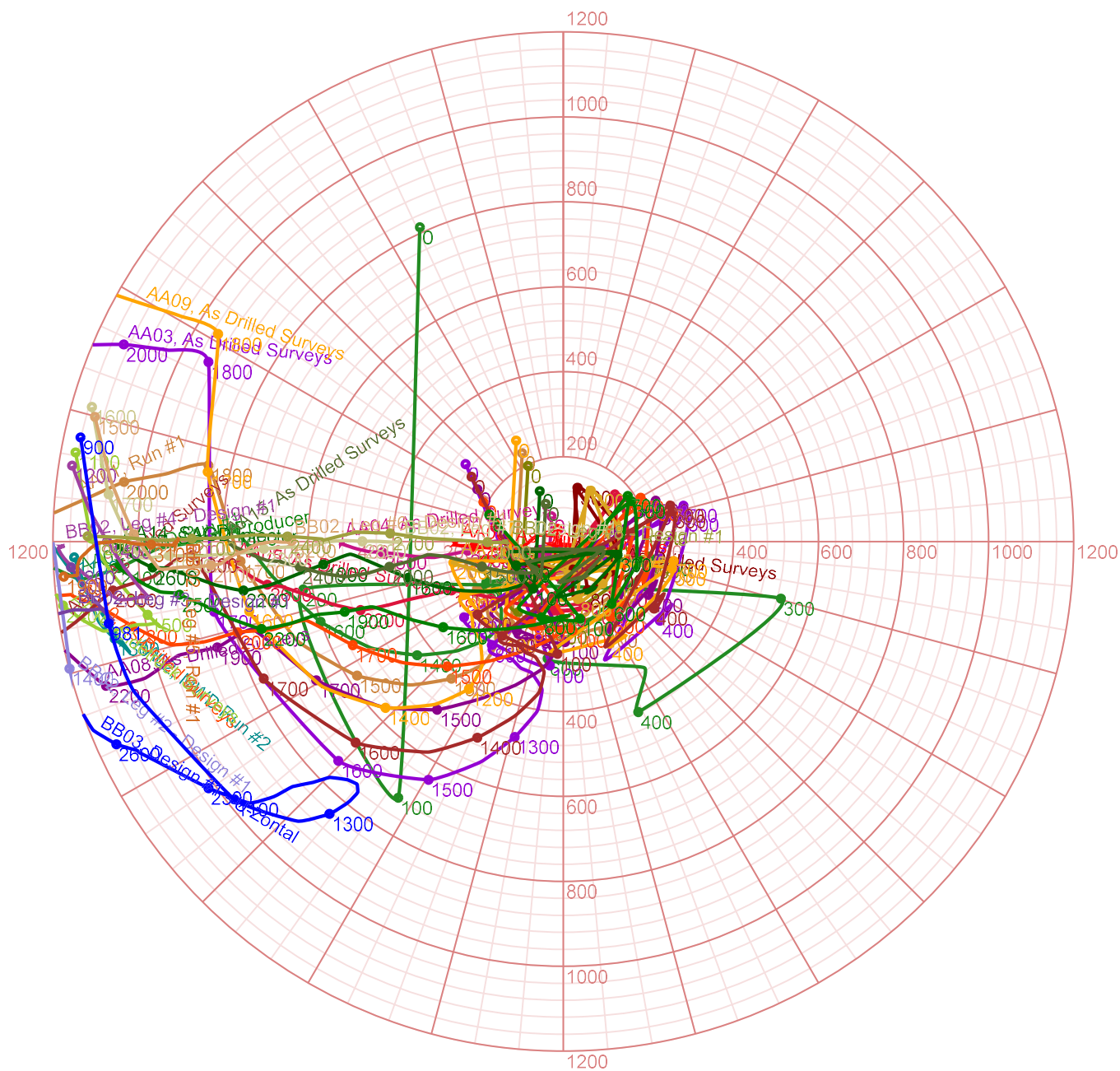


# True North Directional Services Inc.

## Anticollision Report



<b>Company</b>	Anglian Oil Company Ltd.	<b>Local Co-ordinate Reference:</b>	Well AA16
<b>Project:</b>	Northern Lights	<b>TVD Reference:</b>	RKB @ 2,065.65ft (Mean Sea Level)
<b>Reference Site:</b>	AA Pad	<b>MD Reference:</b>	Local RKB
<b>Site Error:</b>	16.40ft	<b>North Reference:</b>	Grid North
<b>Reference Well:</b>	AA16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.83ft	<b>Output errors are at:</b>	2.00 Sigma
<b>Reference wellbore:</b>	Lateral #1	<b>Database:</b>	Example Project Database
<b>Reference Survey:</b>	Run #4	<b>Offset TVD Reference:</b>	2,065.65ft (Mean Sea Level)





<b>Company</b>	Anglian Oil Company Ltd.	<b>Local Co-ordinate Reference:</b>	Well AA16
<b>Project:</b>	Northern Lights	<b>TVD Reference:</b>	RKB @ 2,065.65ft (Mean Sea Level)
<b>Reference Site:</b>	AA Pad	<b>MD Reference:</b>	Local RKB
<b>Site Error:</b>	16.40ft	<b>North Reference:</b>	Grid North
<b>Reference Well:</b>	AA16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.83ft	<b>Output errors are at:</b>	2.00 Sigma
<b>Reference wellbore:</b>	Lateral #1	<b>Database:</b>	Example Project Database
<b>Reference Survey:</b>	Run #4	<b>Offset TVD Reference:</b>	2,065.65ft (Mean Sea Level)

**Disclaimer Notice**

True North Directional Services Inc. makes no warranty of any kind with respect to the subject matter included herein or the completeness or accuracy of this document.

True North Directional Services Inc. are not responsible for any actions (or lack thereof) taken as a result of relying on or in any way using information contained in this document and in no event shall be liable for any damages resulting from reliance on or use of this information.