



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

**Job No. AB-CD-12345678
Survey Date: 11 January 2013**

True North Directional Services Inc. Anticollision Report

18 August 2015

Minimum Distance Proximity Scan (Highside Reference)

Scan Range: 0.00m to 1,638.78m Measured Depth
Scan Radius is 500.00m. Clearance Factor cutoff is Unlimited.



True North
Directional Services Inc.



Company:	Anglian Oil Company Ltd.	Local Co-ordinate Reference:	Well AA16
Project:	Northern Lights	TVD Reference:	RKB @ 629.61m (Mean Sea Level)
Reference Structure:	AA Pad	MD Reference:	Local RKB
Structure Error:	0.00m	North Reference:	Grid North
Reference Well:	AA16	Survey Calculation Method:	Minimum Curvature
Well Error:	1.50m	Output errors are at:	2.00 Sigma
Reference wellbore:		Database:	Example Projects Database
Reference Survey:	MWD Run #4	Offset TVD Reference:	629.61m (Mean Sea Level)

Reference:	AA Pad, AA16, MWD Run #4	Interpolation Method:	30.00m
Filter Type:	None	Error Model:	ISCWSA
Depth Range:	0.00m to 1,638.78m Measured Depth	Scan Method:	Minimum Distance
Scan Radius:	500.00m	Error Surface:	Elliptical Conic
Clearance Factor:	Unlimited	Casing Model:	Not applied
Warning Levels:	2.00 Sigma		

Survey Program for:	AA Pad, AA16, MWD Run #4		
From (m)	To (m)	Tool Name	Description
0.00	240.00	GYRO-NS	North Seeking Gyro MS
240.00	1,638.78	MWD	MWD

Summary - Filter: Minimum Clearance Factor						
Structure Name Offset Well - Profile	Reference Measured Depth (m)	Offset Measured Depth (m)	Distance		Separation Factor	Warning
			Between Centres (m)	Between Ellipses (m)		
AA Pad						
AA01, Run #1	1,638.78	1,403.99	552.98	459.04	5.89	
AA02, Gyro Survey Data	304.09	240.04	92.56	84.47	11.45	
AA02, MWD Run #1	180.00	240.04	86.66	79.23	11.66	
AA02, MWD Run #2	1,638.78	1,401.17	475.41	387.16	5.39	
AA02, MWD Run #3	1,638.78	1,406.82	475.45	386.83	5.36	
AA02, MWD Run #4	1,638.78	1,543.28	496.99	404.44	5.37	
AA03, As Drilled Surveys	1,638.78	1,486.64	636.39	541.68	6.72	
AA04, As Drilled Surveys	1,638.78	1,511.77	157.21	66.34	1.73	
AA05, As Drilled Surveys	1,638.78	1,521.56	236.99	138.80	2.41	
AA06, As Drilled Surveys	323.52	324.76	2.21	14%	0.38	STOP DRILLING NOW
AA07, As Drilled Surveys	1,638.78	1,670.72	8.73	40%	0.01	STOP DRILLING NOW
AA08, As Drilled Surveys	1,638.78	1,452.44	474.64	377.63	4.89	
AA09, As Drilled Surveys	1,638.78	1,428.97	637.47	545.12	6.90	
AA10, As Drilled Surveys	930.00	748.66	398.05	365.36	12.18	
AA10, Sidetrack Surveys	1,638.78	1,445.92	396.44	299.75	4.10	
AA11, As Drilled Surveys	1,638.78	1,615.01	75.67	13.41	1.22	Execute Shut-In Procs
AA12, As Drilled Surveys	1,638.78	1,454.58	550.58	454.96	5.76	
AA13, SAGD Producer	1,638.78	1,479.73	315.94	217.58	3.21	
AA14, SAGD Injector	1,638.78	1,428.13	317.37	220.64	3.28	
AA15, As Drilled Surveys	1,638.78	1,465.72	236.08	141.05	2.48	
AA17, As Drilled Surveys	1,638.78	1,561.32	157.94	65.25	1.70	
AA18, As Drilled Surveys	1,638.78	1,404.79	394.20	298.08	4.10	



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All station coordinates were calculated using the Minimum Curvature method.
All data is in metres 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.

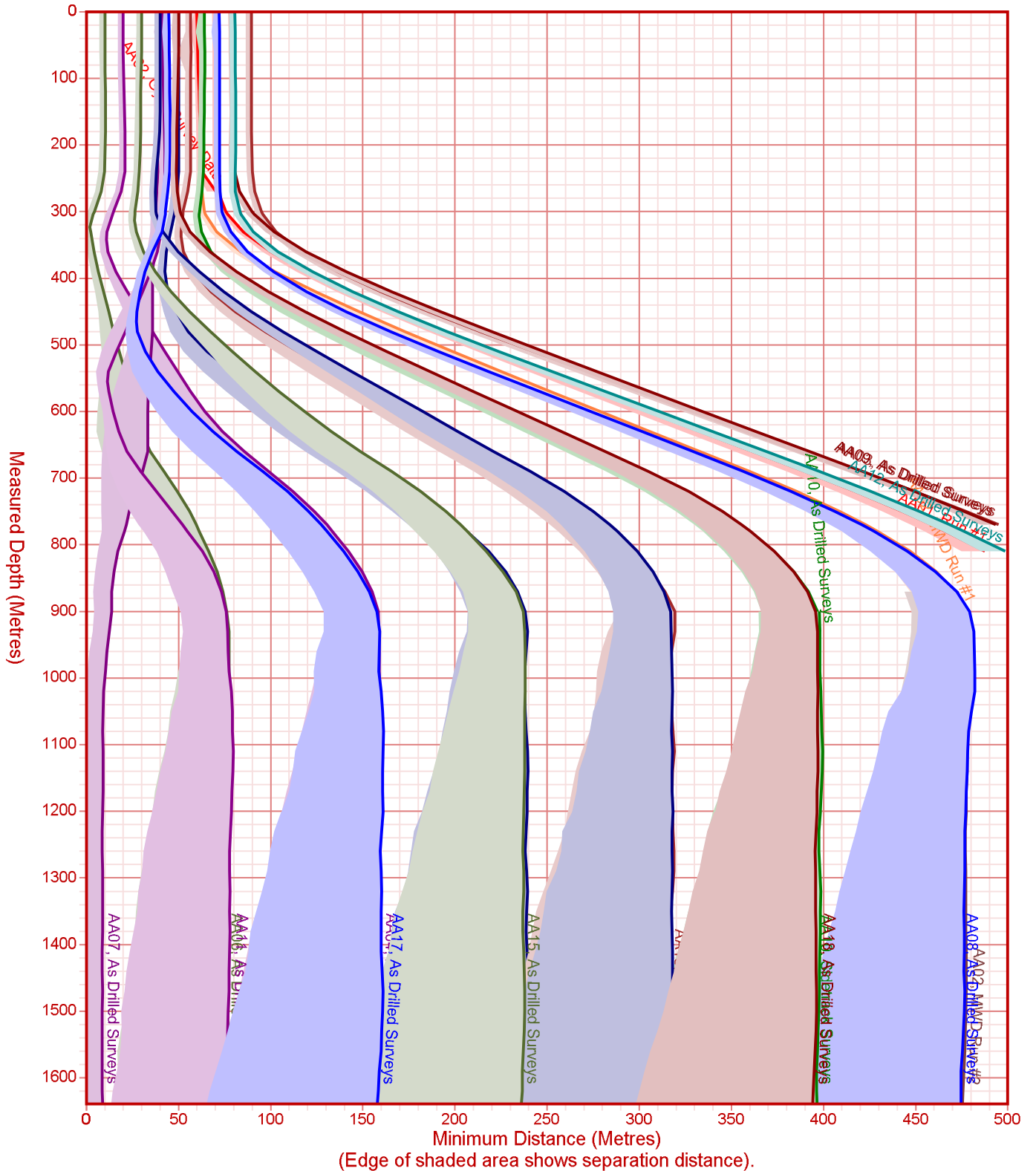
Coordinate system is Universal Transverse Mercator, Zone 12 North.
Central meridian is -111.000°. Grid convergence at surface is 1.184°.

Profile Sections

Survey: MWD Run #1 from 0.00m to 304.09m
Survey: MWD Run #2 from 304.09m to 770.02m
Survey: MWD Run #3 from 770.02m to 1,201.65m
Survey: MWD Run #4 from 1,201.65m to 1,638.78m

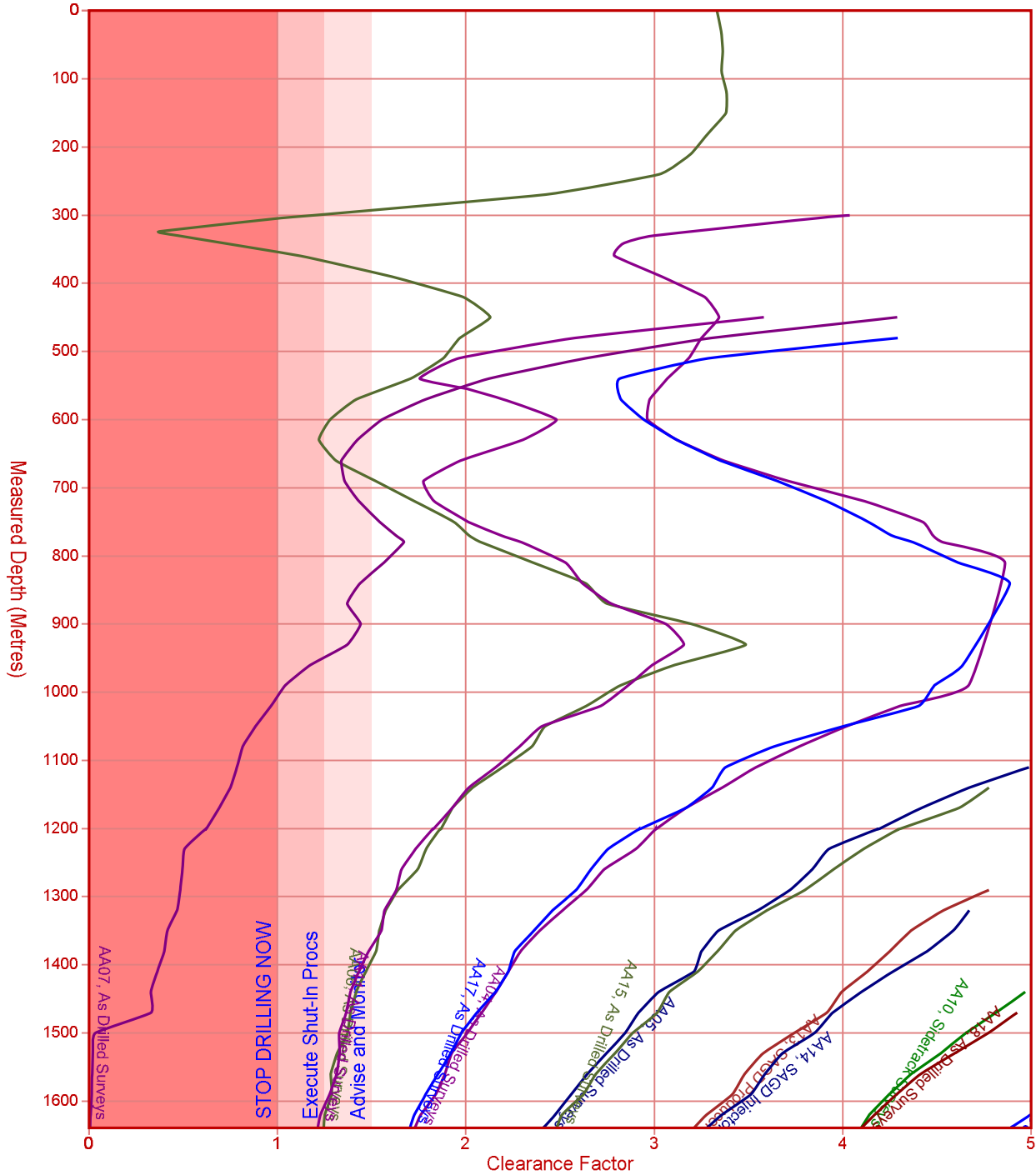


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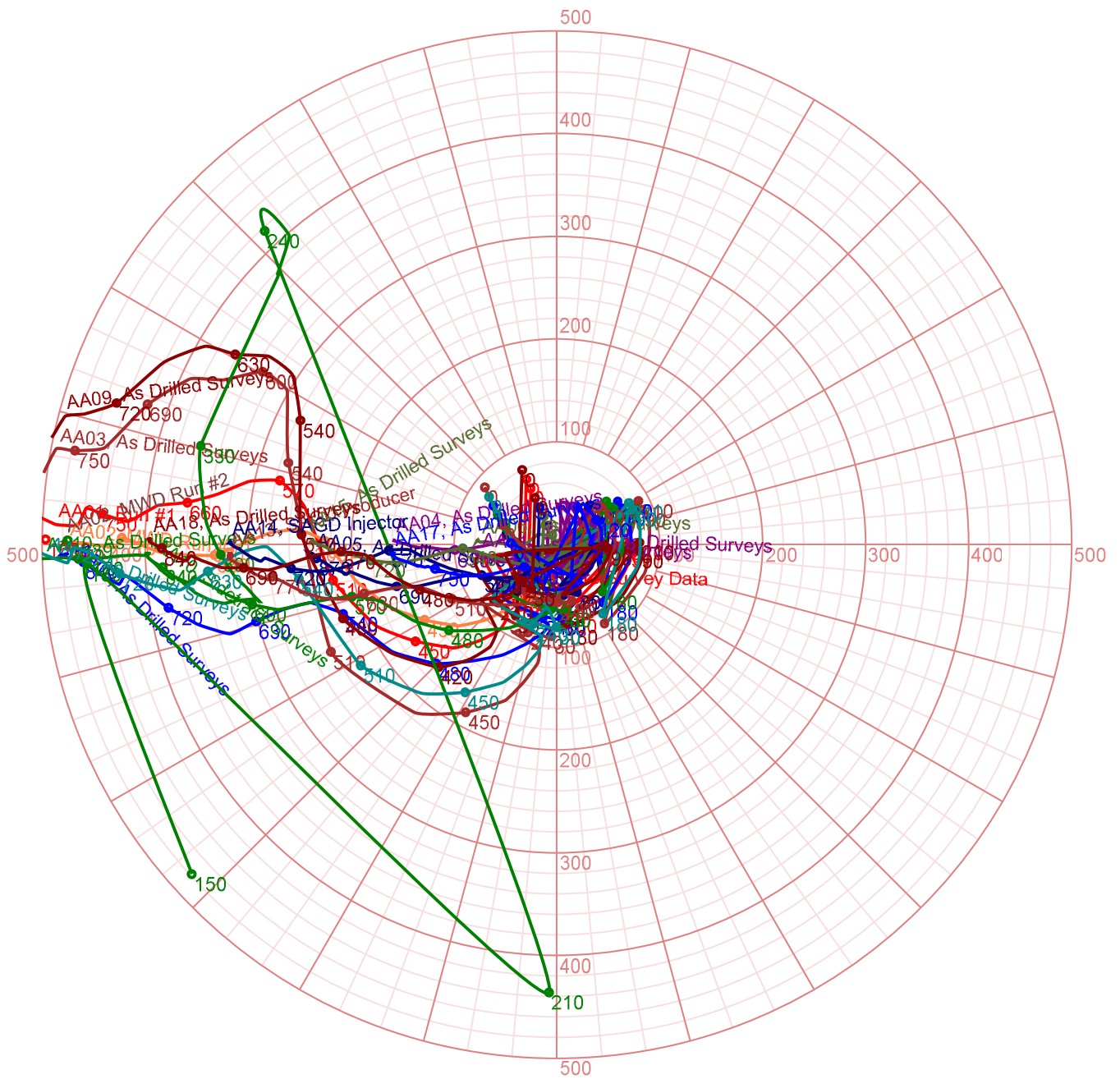


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