



**Anglian Oil Company Ltd.
Northern Lights
AA Pad**

**True North Directional Services Inc.
Structure Report**



True North
Directional Services Inc.

Structure Report for AA Pad

Project:	Northern Lights
Project is centred on	
Ref. Map Coordinates:	6,789,012.34 N, 567,890.12 E
Ref. Geographical Coordinates:	61° 13' 52.9473" N, 109° 44' 08.0097" W
Structure:	AA Pad
Structure is centred on	
Ref. Map Coordinates:	6,789,358.01 N, 572,458.01 E
Ref. Northern Lights Project	345.67 N, 4,567.89 E
Centre:	
Ref. Geographical Coordinates:	61° 14' 01.1642" N, 109° 39' 01.3541" W
Vertical Reference:	Ground Level
Horizontal Reference:	AA Pad
Structure Elevation:	628.01m above Mean Sea Level
Structure Axis:	65.000°
Ground Level:	628.01m
Grid Convergence:	1.183°
Central Meridian:	-111.000°
Coordinate System:	Universal Transverse Mercator, Zone 12 North
North Reference:	Grid
Units:	Metres

Well Listing for AA Pad

Well Name	Slot ID	Elevation (m)	Northings (m)	Eastings (m)	Geographical Coordinates	
					Latitude	Longitude
AA01	Slot 02	629.61	6,789,393.65 N	572,463.46 E	61° 14' 02.3121" N	109° 39' 00.9395" W
AA02	Slot 03	629.61	6,789,384.59 N	572,467.68 E	61° 14' 02.0165" N	109° 39' 00.6688" W
AA03	Slot #10	629.61	6,789,385.81 N	572,422.98 E	61° 14' 02.0858" N	109° 39' 03.6638" W
AA04	Slot #07	629.61	6,789,348.34 N	572,484.59 E	61° 14' 00.8339" N	109° 38' 59.5858" W
AA05	Slot #15	629.61	6,789,340.49 N	572,444.11 E	61° 14' 00.6076" N	109° 39' 02.3100" W
AA06	Slot #08	629.61	6,789,339.27 N	572,488.81 E	61° 14' 00.5383" N	109° 38' 59.3151" W
AA07	Slot #18	629.61	6,789,313.31 N	572,456.79 E	61° 13' 59.7206" N	109° 39' 01.4978" W
AA08	Slot #12	629.61	6,789,367.68 N	572,431.43 E	61° 14' 01.4945" N	109° 39' 03.1223" W
AA09	Slot #01	629.61	6,789,402.71 N	572,459.23 E	61° 14' 02.6078" N	109° 39' 01.2103" W
AA10	Slot #13	629.61	6,789,358.62 N	572,435.66 E	61° 14' 01.1988" N	109° 39' 02.8515" W
AA11	Slot #17	629.61	6,789,322.37 N	572,452.56 E	61° 14' 00.0163" N	109° 39' 01.7686" W
AA12	Slot #11	629.61	6,789,376.75 N	572,427.21 E	61° 14' 01.7901" N	109° 39' 03.3930" W
AA13	Slot #14	629.61	6,789,349.56 N	572,439.88 E	61° 14' 00.9032" N	109° 39' 02.5808" W
AA14	Slot #05	629.61	6,789,366.46 N	572,476.14 E	61° 14' 01.4252" N	109° 39' 00.1273" W
AA15	Slot #06	629.61	6,789,357.40 N	572,480.36 E	61° 14' 01.1295" N	109° 38' 59.8566" W
AA16	Slot #09	629.61	6,789,330.21 N	572,493.04 E	61° 14' 00.2426" N	109° 38' 59.0443" W
AA17	Slot #16	629.61	6,789,331.43 N	572,448.34 E	61° 14' 00.3119" N	109° 39' 02.0393" W
AA18	Slot #04	629.61	6,789,375.53 N	572,471.91 E	61° 14' 01.7208" N	109° 39' 00.3980" W

All data is in metres unless otherwise stated.
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Profile Listing for AA Pad

Well Name	Profile Key	Parent Key	Active	Profile Type	Profile Name	Depth Range (m)	Date Created	Date Updated
AA01	43		Yes	Survey	Run #1	0.00m to 1,543.69m	24/06/2015	24/06/2015
	42		Yes	Plan	Design #1	0.00m to 1,565.96m	22/06/2015	24/06/2015
AA02	44		Yes	Survey	Gyro Survey Data	0.00m to 240.04m	24/06/2015	24/06/2015
	45	44	Yes	Survey	MWD Run #1	240.04m to 682.64m	24/06/2015	24/06/2015
	46	45	Yes	Survey	MWD Run #2	682.64m to 1,406.82m	24/06/2015	24/06/2015
	47	46	Yes	Survey	MWD Run #3	1,406.82m to 1,543.28m	24/06/2015	24/06/2015
	48	47	Yes	Survey	MWD Run #4	1,543.28m to 1,564.53m	24/06/2015	26/06/2015

Structure Report for AA Pad
Profile Listing for AA Pad

Well Name	Profile Key	Parent Key	Active	Profile Type	Profile Name	Depth Range (m)	Date Created	Date Updated
AA03	6		Yes	Survey	As Drilled Surveys	0.00m to 1,625.09m	27/07/2012	12/12/2012
AA04	7		Yes	Survey	As Drilled Surveys	0.00m to 1,652.98m	18/10/2012	12/12/2012
AA05	8		Yes	Survey	As Drilled Surveys	0.00m to 1,643.00m	17/08/2012	12/12/2012
AA06	9		Yes	Survey	As Drilled Surveys	0.00m to 1,698.26m	22/10/2012	17/10/2014
AA07	10		Yes	Survey	As Drilled Surveys	0.00m to 1,740.00m	23/08/2012	12/12/2012
AA08	11		Yes	Survey	As Drilled Surveys	0.00m to 1,578.39m	09/08/2012	12/12/2012
AA09	12		Yes	Survey	As Drilled Surveys	0.00m to 1,576.12m	30/09/2012	14/12/2012
AA10	13		Yes	Survey	As Drilled Surveys	0.00m to 748.66m	10/08/2012	12/12/2012
	14	13	Yes	Survey	Sidetrack Surveys	748.66m to 1,587.00m	17/09/2012	12/12/2012
AA11	15		Yes	Survey	As Drilled Surveys	0.00m to 1,746.00m	19/08/2012	17/10/2014
AA12	16		Yes	Survey	As Drilled Surveys	0.00m to 1,536.00m	02/08/2012	12/12/2012
AA13	17		Yes	Survey	SAGD Producer	0.00m to 1,606.00m	14/08/2012	11/06/2015
AA14	18		Yes	Survey	SAGD Injector	0.00m to 1,570.62m	12/10/2012	11/06/2015
AA15	19		Yes	Survey	As Drilled Surveys	0.00m to 1,594.47m	14/10/2012	12/12/2012
AA16	21		Yes	Survey	MWD Run #1	0.00m to 304.09m	19/12/2012	29/06/2015
	22	21	Yes	Survey	MWD Run #2	304.09m to 770.02m	19/12/2012	29/06/2015
	23	22	Yes	Survey	MWD Run #3	770.02m to 1,201.65m	11/01/2013	29/06/2015
	41	23	Yes	Survey	MWD Run #4	1,201.65m to 1,638.78m	11/01/2013	29/06/2015
	20		Yes	Plan	Design #1	0.00m to 1,794.29m	18/12/2012	29/06/2015
AA17	24		Yes	Survey	As Drilled Surveys	0.00m to 1,696.00m	17/08/2012	12/12/2012
AA18	25		Yes	Survey	As Drilled Surveys	0.00m to 1,542.10m	09/10/2012	12/12/2012

Target Listing for AA Pad

Well Name	Target Key	Active	Shape	Target Name	Vert Depth (m)	Northings (m)	Eastings (m)	Date Created	Date Updated
AA01	6	Yes	Circle	AA01 LP	-143.01	6,789,619.50 N	572,777.43 E	28/11/2012	13/12/2012
	5	Yes	Circle	AA01 TD	-143.01	6,789,957.59 N	573,502.48 E	28/11/2012	26/06/2015
AA02	7	Yes	Circle	AA02 LP	-143.01	6,789,550.62 N	572,809.55 E	28/11/2012	13/12/2012
	8	Yes	Circle	AA02 TD	-143.01	6,789,888.72 N	573,534.59 E	28/11/2012	13/12/2012
AA03	22	Yes	Circle	AA03 LP	-128.01	6,789,695.63 N	572,741.93 E	29/11/2012	13/12/2012
	21	Yes	Circle	AA03 TD	-128.01	6,790,033.73 N	573,466.97 E	29/11/2012	13/12/2012
AA04	15	Yes	Circle	AA04 LP	-143.01	6,789,260.60 N	572,944.78 E	28/11/2012	13/12/2012
	16	Yes	Circle	AA04 TD	-143.01	6,789,598.70 N	573,669.83 E	28/11/2012	13/12/2012
AA05	24	Yes	Circle	AA05 LP	-128.01	6,789,333.11 N	572,910.97 E	30/11/2012	13/12/2012
	23	Yes	Circle	AA05 TD	-128.01	6,789,671.20 N	573,636.02 E	30/11/2012	13/12/2012
AA06	17	Yes	Circle	AA06 LP	-143.01	6,789,188.10 N	572,978.59 E	28/11/2012	13/12/2012
	18	Yes	Circle	AA06 TD	-143.01	6,789,526.19 N	573,703.64 E	28/11/2012	13/12/2012
AA07	20	Yes	Circle	AA07 LP	-128.01	6,789,115.59 N	573,012.40 E	29/11/2012	13/12/2012
	19	Yes	Circle	AA07 TD	-128.01	6,789,453.69 N	573,737.45 E	29/11/2012	13/12/2012

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Target Listing for AA Pad

Well Name	Target Key	Active	Shape	Target Name	Vert Depth (m)	Northings (m)	Eastings (m)	Date Created	Date Updated
AA08	30	Yes	Circle	Aa08 LP	-128.01	6,789,550.62 N	572,809.55 E	30/11/2012	13/12/2012
	29	Yes	Circle	AA08 TD	-128.01	6,789,888.72 N	573,534.59 E	30/11/2012	13/12/2012
AA09	3	Yes	Circle	AA09 LP	-143.01	6,789,695.63 N	572,741.93 E	28/11/2012	13/12/2012
	1	Yes	Circle	AA09 TD	-143.01	6,790,033.73 N	573,466.97 E	28/11/2012	13/12/2012
AA10	28	Yes	Circle	AA10 LP	-128.01	6,789,478.12 N	572,843.35 E	30/11/2012	13/12/2012
	27	Yes	Circle	AA10 TD	-128.01	6,789,816.21 N	573,568.40 E	30/11/2012	13/12/2012
AA11	32	Yes	Circle	AA11 LP	-128.01	6,789,188.10 N	572,978.59 E	30/11/2012	13/12/2012
	31	Yes	Circle	AA11 TD	-128.01	6,789,526.19 N	573,703.64 E	30/11/2012	13/12/2012
AA12	34	Yes	Circle	AA12 LP	-128.01	6,789,619.50 N	572,777.43 E	30/11/2012	13/12/2012
	33	Yes	Circle	AA12 TD	-128.01	6,789,957.60 N	573,502.47 E	30/11/2012	13/12/2012
AA13	26	Yes	Circle	AA13 LP	-128.01	6,789,405.61 N	572,877.16 E	30/11/2012	13/12/2012
	25	Yes	Circle	AA13 TD	-128.01	6,789,743.71 N	573,602.21 E	30/11/2012	13/12/2012
AA14	11	Yes	Circle	AA14 LP	-143.01	6,789,405.61 N	572,877.16 E	28/11/2012	13/12/2012
	12	Yes	Circle	AA14 TD	-143.01	6,789,743.71 N	573,602.21 E	28/11/2012	13/12/2012
AA15	13	Yes	Circle	AA15 LP	-143.01	6,789,333.11 N	572,910.97 E	28/11/2012	13/12/2012
	14	Yes	Circle	AA15 TD	-143.01	6,789,671.20 N	573,636.02 E	28/11/2012	13/12/2012
AA16	39	Yes	Circle	AA16 LP (1)	-176.47	6,789,205.23 N	572,633.12 E	19/12/2012	08/06/2015
	40	Yes	Circle	AA16 LP (2)	-143.01	6,789,090.24 N	572,958.02 E	19/12/2012	19/12/2012
	4	Yes	Polygon	AA16 LP	-143.01	6,789,115.59 N	573,012.40 E	28/11/2012	15/05/2013
	2	Yes	Polygon	AA16 TD	-143.01	6,789,453.69 N	573,737.45 E	28/11/2012	08/01/2013
AA17	36	Yes	Circle	AA17 LP	-128.01	6,789,260.60 N	572,944.78 E	30/11/2012	13/12/2012
	35	Yes	Circle	AA17 TD	-128.01	6,789,598.70 N	573,669.83 E	30/11/2012	13/12/2012
AA18	9	Yes	Circle	AA18 LP	-143.01	6,789,478.12 N	572,843.35 E	28/11/2012	13/12/2012
	10	Yes	Circle	AA18 TD	-143.01	6,789,816.21 N	573,568.40 E	28/11/2012	13/12/2012

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 Global Coordinates are relative to UTM-12N.

Structure Report for AA Pad

Slot Layout

