

CROW FLATS 14

30-015-36350

EDDY, NEW MEXICO

LEASE & WELL

(Give Unit, Section, Township and Range)

~~CONFIDENTIAL~~

OPERATOR

CHESAPEAKE OPERATING, INC. 6100 NORTH WESTERN AVE
OKLAHOMA CITY, OKLAHOMA 73154 ATTN: LINDA GOOD

DRILLING CONTRACTOR

NABORS DRILLING USA, LP

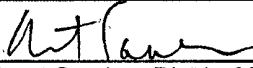
The Undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above-described well and that he has conducted deviation tests and obtained the following results:

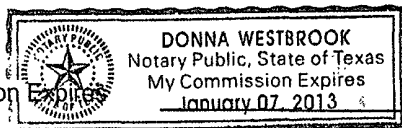
DEGREES @ DEPTH	DEGREES @ DEPTH	DEGREES @ DEPTH	DEGREES @ DEPTH
.75 374	.5 5185	32.4 6538	84.7 7039
.25 609	.5 5662	36.3 6539	86.9 7070
.5 888	.5 6169	40.3 6600	89.3 7101
.5 1173	.25 6645	44.3 6631	90.9 7117
.5 1460	1.0 6191	48.7 6663	92.34 7148
.75 1778	1.0 6245	53.5 6694	92.9 7196
1.0 1960	1.0 6224	57.9 6726	92.5 7226
1.0 2225	.6 6255	62.0 6757	93.01 7280
.75 2511	2.9 6286	65.7 6788	91.8 7344
1.0 2830	7.3 6319	76.5 6813	87.9 7408
1.0 3119	12.4 6350	68.8 6817	85.2 7472
.5 3404	16.3 6381	71.7 6850	85.0 7535
.75 3722	20.3 6412	74.0 6881	86.3 7592
1.0 4073	23.8 6444	78.8 6944	90.3 7656
.75 4360	26.5 6475	81.2 6976	91.7 7727
.75 4707	28.8 6506	83.1 7007	92.4 7791

Drilling Contractor

Nabors Drilling USA, LP

By


Brent Sanders-District Manager
Subscribed and sworn to before me this 9 day of March, 2009

Notary Public


My Commission

MIDLAND

County

TEXAS

RECEIVED

MAR 10 2009

BY: 



Actual Wellpath Report

No. 3H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Chesapeake Operating, Inc.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(CF) Sec 14, T16S, R28E	Wellbore	No. 3H AWB
Facility	Crow Flats 14 Fed No. 3H	Sidetrack from	No. 3 AWB at 6110.00 MD

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999913	Report Generated	12/26/2008 at 3:34:27 PM
Convergence at slot	0.11° East	Database/Source file	WA_Midland/No. 3H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	559809.80	697693.10	32°55'04.381"N	104°08'18.344"W
Facility Reference Pt			559809.80	697693.10	32°55'04.381"N	104°08'18.344"W
Field Reference Pt			559809.80	697693.10	32°55'04.381"N	104°08'18.344"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to Facility Vertical Datum	26.00ft
Horizontal Reference Pt	Slot	Rig on No. 3H SHL (RT) to Mean Sea Level	3639.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.07°

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Facility	Crow Flats 14 Fed No. 3H	Sidetrack from	No. 3 AWP at 6110.00 MD

WELLPATH DATA (523 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
10411.00	90.200	268.300	6670.45	3905.59	5.01	-3905.59	555904.56	697698.11	32°55'04.500"N	104°09'04.158"W	3905.59	270.074	0.16
10475.00	90.500	268.400	6670.06	3969.56	3.17	-3969.56	555840.59	697696.27	32°55'04.482"N	104°09'04.908"W	3969.56	270.046	0.49
10538.00	90.700	268.200	6669.40	4032.53	1.30	-4032.53	555777.63	697694.40	32°55'04.465"N	104°09'05.647"W	4032.53	270.018	0.45
10602.00	91.000	268.300	6668.45	4096.49	-0.65	-4096.50	555713.67	697692.45	32°55'04.447"N	104°09'06.397"W	4096.50	269.991	0.49
10666.00	91.400	268.700	6667.11	4160.45	-2.33	-4160.46	555649.71	697690.77	32°55'04.431"N	104°09'07.147"W	4160.46	269.968	0.88
10729.00	92.200	269.300	6665.13	4223.41	-3.43	-4223.42	555586.76	697689.67	32°55'04.421"N	104°09'07.886"W	4223.42	269.953	1.59
10793.00	92.900	269.300	6662.28	4287.34	-4.21	-4287.35	555522.83	697688.89	32°55'04.415"N	104°09'08.636"W	4287.35	269.944	1.09
10857.00	92.800	268.700	6659.10	4351.25	-5.32	-4351.26	555458.93	697687.78	32°55'04.405"N	104°09'09.386"W	4351.26	269.930	0.95
10951.00	92.700	269.000	6654.59	4445.12	-7.21	-4445.13	555365.06	697685.89	32°55'04.388"N	104°09'10.487"W	4445.14	269.907	0.34
10984.00	92.500	269.200	6653.09	4478.08	-7.73	-4478.09	555332.10	697685.37	32°55'04.383"N	104°09'10.874"W	4478.10	269.901	0.86
11047.00	92.500	270.000	6650.35	4541.02	-8.17	-4541.03	555269.17	697684.93	32°55'04.380"N	104°09'11.612"W	4541.04	269.897	1.27
11082.00	91.100	269.700	6649.25	4576.00	-8.26	-4576.01	555234.19	697684.84	32°55'04.380"N	104°09'12.022"W	4576.02	269.897	4.09
11137.00†	91.100	269.700	6648.19	4630.99	-8.55	-4631.00	555179.21	697684.56	32°55'04.378"N	104°09'12.667"W	4631.01	269.894	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 3H BHL		6663.00	5.10	-4321.38	555488.80	697698.20	32°55'04.508"N	104°09'09.035"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 3H AWP Ref Wellpath: No. 3H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1800.00	Gyrodata standard - Drop gyro or Multi-shot	GYRO	No. 3 AWP
1800.00	6180.00	NaviTrak (Standard)	ATLAS	No. 3 AWP
6180.00	11082.00	NaviTrak (Standard)	MWD	No. 3H AWP
11082.00	11137.00	Blind Drilling (std)	Projection to bit	No. 3H AWP

BOGM (1945.0 to 2010.0) Dip: 60.81° Field: 49270.2 nT
 Magnetic North is 8.27 degrees East of True North (at 12/1/2008)
 Grid North is 0.11 degrees East of True North
 To correct azimuth from True to Grid subtract 0.11 degrees
 To correct azimuth from Magnetic to Grid add 8.17 degrees
 For example, if the Magnetic North Azimuth = 80 degs, then the Grid North Azimuth = $80 + 8.17 = 88.17$

True Vertical Depth (ft)
 Scale 1 inch = 559.201 ft

Vertical Section (ft)
 Azimuth 270.07° with reference 0.00 N, 0.00 E

No. 3H BHL

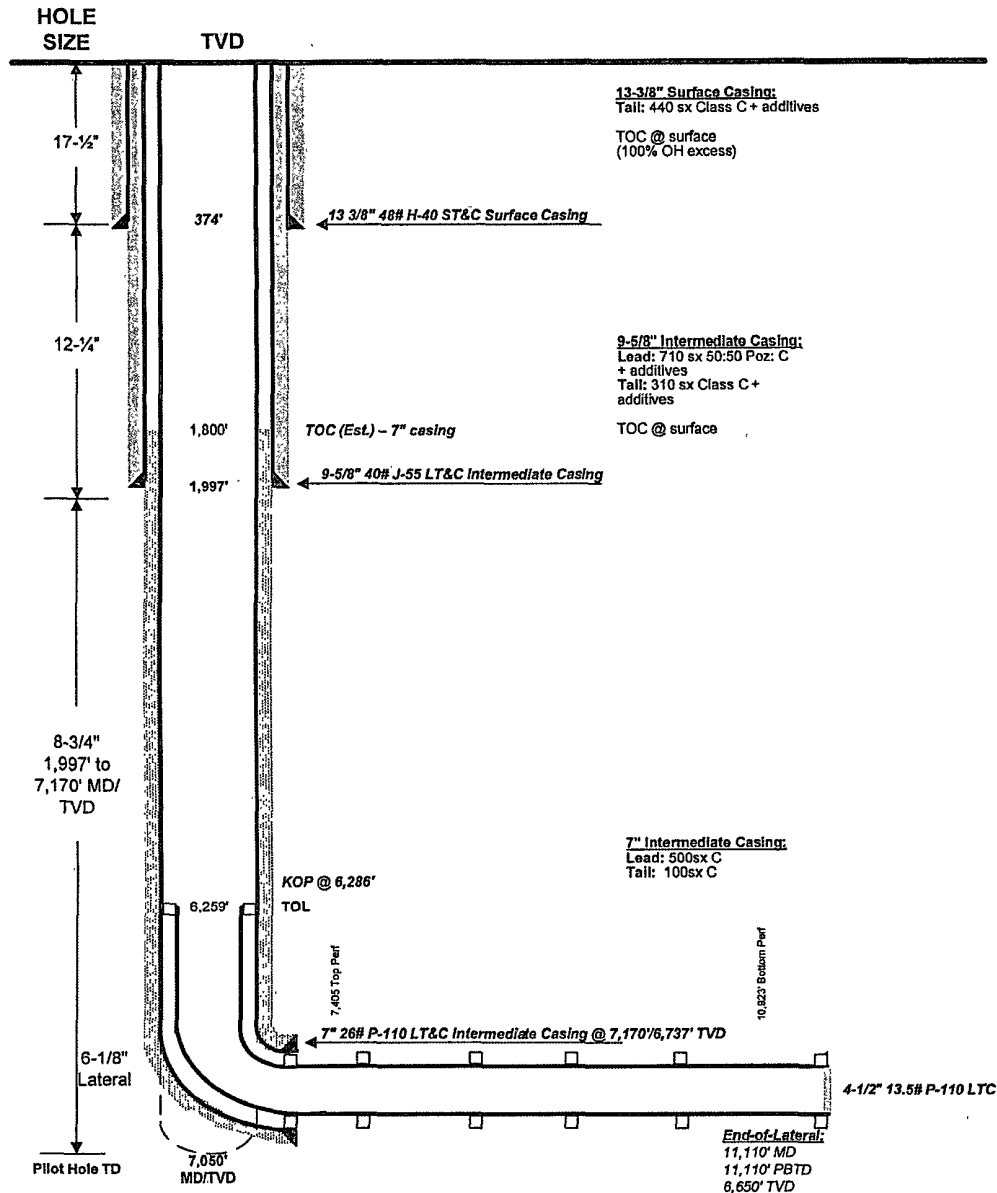
Scale 1 inch = 559.201 ft

CHESAPEAKE OPERATING INC

Well Schematic

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WELL : Crow Flats 14 Federal #3H
SHL : Section 14 - 16S - 28E, 660' FSL & 200' FEL
BHL : Section 14 - 16S - 28E, 646' FSL & 390' FWL
COUNTY : Eddy
STATE : New Mexico
FIELD : NW Shelf Project
ELEVATION : GL - 3,613' RKB - 3,639'



PREPARED BY: M. Bruce
APPROVED BY:

DATE: 4/6/09
DATE: