

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-40025
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator Devon Energy Production Company, L.P.		6. State Oil & Gas Lease No.
3. Address of Operator 333 W. Sheridan, Oklahoma City, OK 73102 Linda Good 405-552-6558		7. Lease Name or Unit Agreement Name Longboard PWU 20
4. Well Location Unit Letter <u>E</u> <u>1500</u> feet from the <u>North</u> line and <u>355</u> feet from the <u>West</u> line Section <u>20</u> Township <u>25S</u> Range <u>31E</u> NMPM Eddy County		8. Well Number <u>1H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3340' GR		9. OGRID Number 6137
		10. Pool name or Wildcat Parkway, 3rd Bone Spring ss

WILDCAT 6-06 22380020; B.S. <97913>

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: Recompletion ☒

OTHER: Spud Report ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Devon Energy Production Co., L.P. respectfully requests permission to recomplate this well per the attached procedure.

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 19 2014

RECEIVED

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE: Linda Good TITLE: Regulatory Compliance Specialist DATE: 11/19/2014

Type or print name: Linda Good E-mail address: linda.good@devn.com PHONE: 405-552-6558
For State Use Only

APPROVED BY: T. C. Spurd TITLE: "Geologist" DATE: 11-20-2014

Conditions of Approval (if any):

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

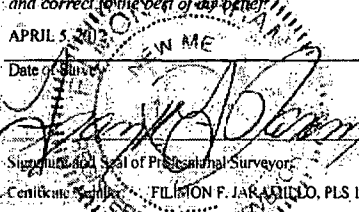
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

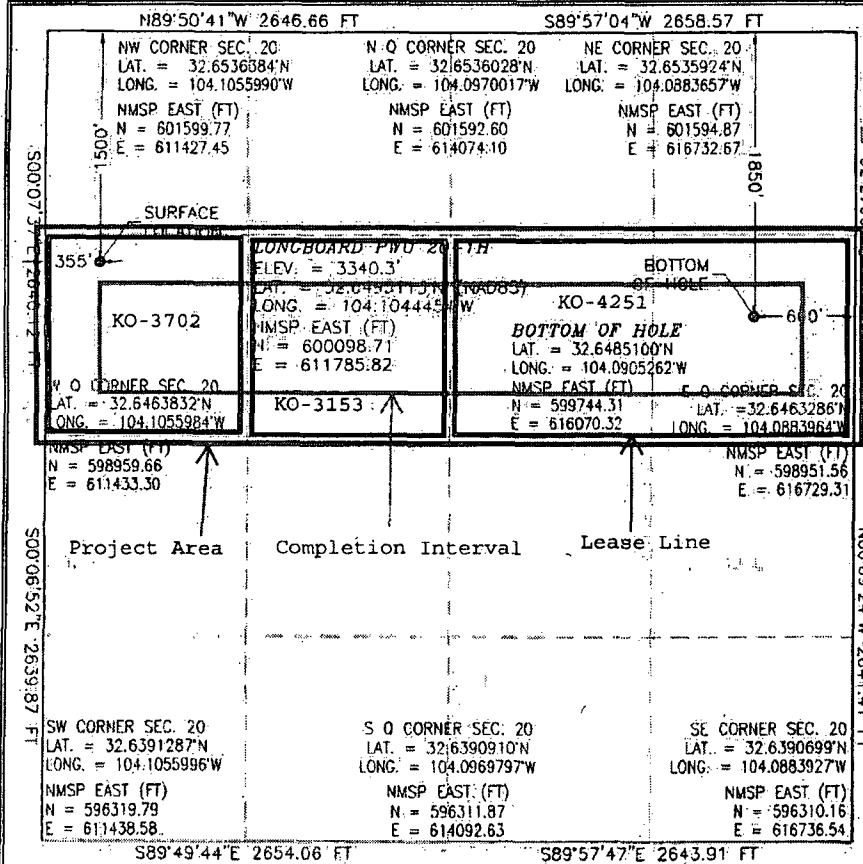
Form C-102
Revised October 15, 2009
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-40025		² Pool Code 97913		³ Pool Name Wildcat G-06 S2530020; Bone Spring	
⁴ Property Code 39110		⁵ Property Name LONGBOARD PWU 20		⁶ Well Number 1H	
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.		⁹ Elevation 3340.3	
¹⁰ Surface Location					
UL or lot no. E	Section 20	Township 19 S	Range 29 E	Lot Idn	Feet from the 1500
				North/South line NORTH	Feet from the 355
				East/West line WEST	County EDDY
¹¹ Bottom Hole Location If Different From Surface					
UL or lot no. H	Section 20	Township 19 S	Range 29 E	Lot Idn	Feet from the 1850
				North/South line NORTH	Feet from the 660
				East/West line EAST	County EDDY
¹² Dedicated Acres 160.00		¹³ Joint or Infill		¹⁴ Consolidation Code	
				¹⁵ Order No.	

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
Signature  Printed Name Linda Good	Date 11/20/2014
¹⁷ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
Date of Survey APRIL 5, 2013	
Signature and Seal of Professional Surveyor  Certificate No. FILMON F. JARAMILLO, PLS 12797 Survey No. 1001	



RECOMPLETION LONGBOARD PWU 20-1H

Longboard Recompletion

<u>Hole Size</u>	<u>Setting Depth</u>	<u>OD Csg</u>	<u>Csg Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>COMMENT</u>
17 1/2	300	13 3/8	0 to 300	48#	STC	H-40	Existing Well
12 1/4	2,735	9 5/8	0 to 2735	40#	LTC	J-55	Existing Well
8 3/4	9,150	7	0 to 9150	29#	BTC	P-110	Existing Well
6 1/8	13,600	4 1/2	7700 to 13600	13.5#	BTC	P-110	Proposed Recompletion

ASSUMPTIONS AND SCOPE OF WORK INCLUDE:

Current Status:

17 1/2" hole, 13 3/8" 48# H-40 ST&C set at 300'

12 1/4" hole, 9 5/8" 40# J-55 set @ 2735'

9150' of 7" 20# P-110 on top:

PBTD in casing @ 9146'

Mill Window in 7" @ 9133' – 9141'

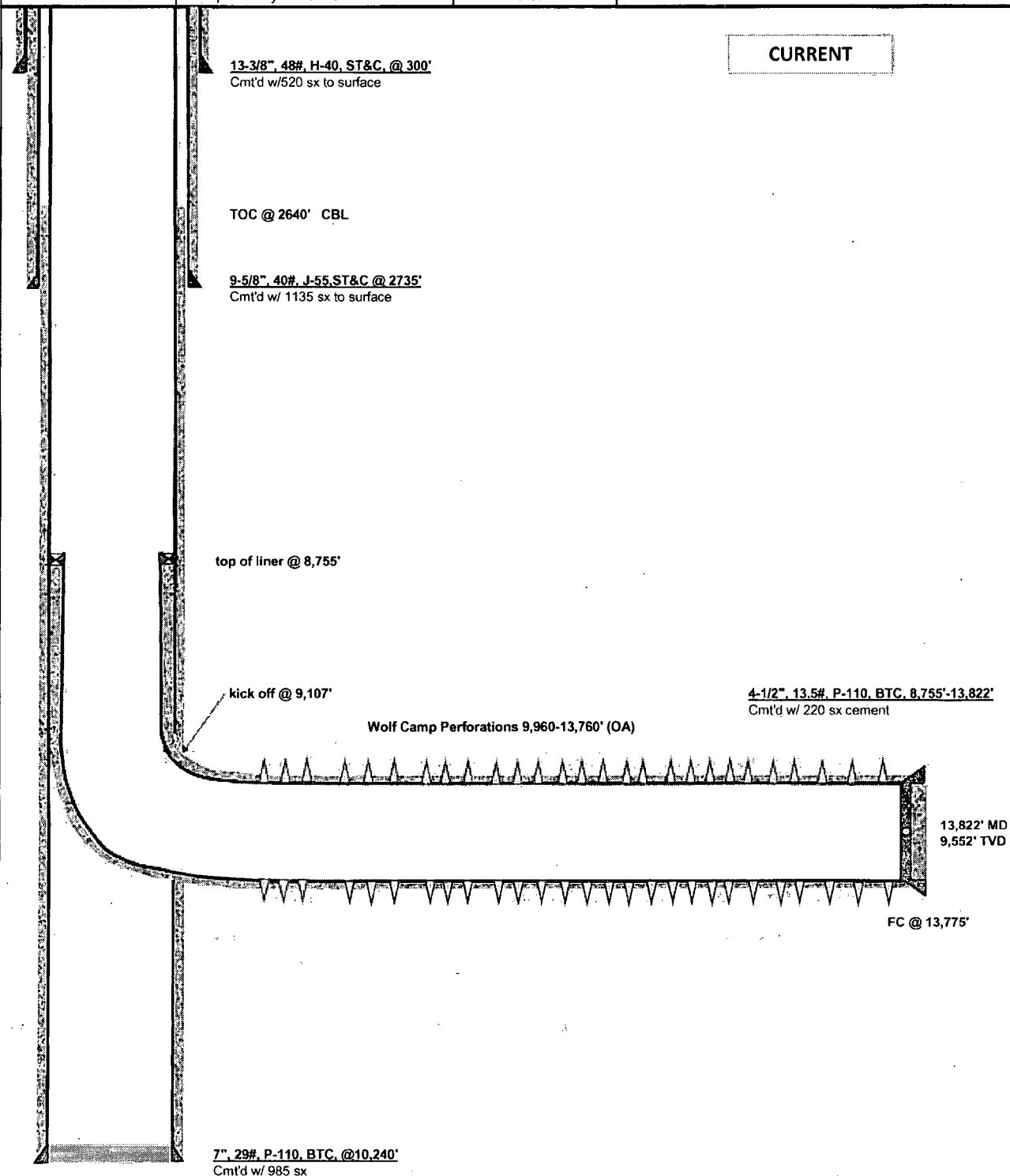
6 1/8" hole, 4 1/2" 13.5# P-110 BTC Liner set @ 8755' – 13820'

GENERAL PROCEDURE:

- 1 Prep well with WO rig; ie, pull tbg, abandon below liner top at 8755', and remove Tubinghead Adapter. Install temporary night cap.
- 2 MI X RU Drlg Rig; NU BOP & Test
- 3 RU WL and RIH w/ 10K CIBP and dump 2 sx cement, Test casing to 500 psi for 30 min. Submit to NMOCD. RD WL
- 4 PU 4" DP and GIH to 8695' and tag TOC; circ BU; POH strapping and racking back
- 5 GIH w/Retrievable Whipstock; RU Scientific and RIH w/Gyro; orient Retrievable Whipstock & Set; POH w/WL.
- 6 GIH w/section mill and cut window at 8200'; POH & LD Tools
- 7 GIH w/Curve BHA & build curve to Landing Point (EOC = 8961'); POH
- 8 GIH w/Lateral BHA & drill 4500' lateral
- 9 Circ CUC; POH to run csg
- 10 GIH w/4-1/2", 13.50 ppf, P-110 Production Casing w/Liner Hanger; Finish GIH on DP
- 11 Circ 2 BU; Set Liner Hanger at 7700'; Cement production casing; release off Liner Hanger; POH 5 stands; circ clean
- 12 GIH w/rock bit; clean out cement to Liner Hanger & dress off TOL
- 13 POH LDDP
- 14 RD & RR

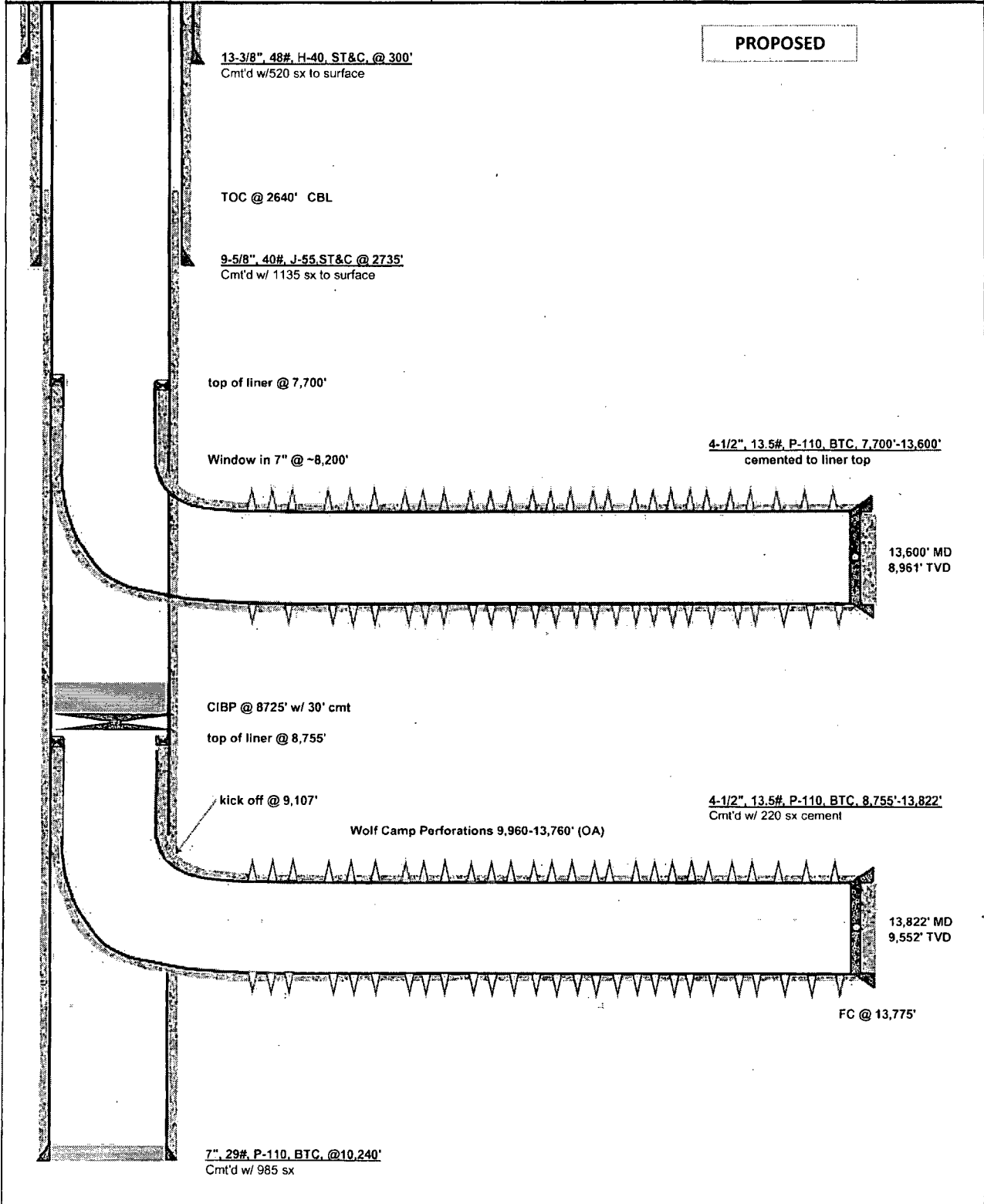
DEVON ENERGY PRODUCTION COMPANY LP

Well Name: Longboard PWU 20-1H		Field: Parkway West	
Location: SEC 20 T19S R29E		County: EDDY	State: NM
Elevation: 3365 KB; 3340 GL; 25' KB to GL		Spud Date: 7/30/12	Compl Date:
API#: 30-015-40025	Prepared by: Brent Schroder	Date: 11/19/14	Rev:



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devon

Longboard PWU 10 1H RE
Eddy Co, NM

Plan Data for Longboard PWU 10 1H RE Lat

Plan Point Information:									
Dogleg Severity Unit: */100,000ft									
Position offsets from Slot centre									
MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	VSec	DLS
(USft)	(")	(")	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)
8400.00	2.54	143.24	8391.95	-38.73	-108.88	599885.52	611569.89	-191.03	0.86
8407.58	2.54	142.98	8399.44	-39.00	-108.68	599885.25	611578.06	-196.83	0.35
8422.58	3.23	104.75	8414.43	-39.37	-108.07	599884.88	611578.70	-190.22	13.33
8427.58	3.23	104.75	8419.42	-39.44	-108.88	599884.81	611578.97	-189.95	0.80
9297.91	90.16	89.78	8961.11	-45.14	-383.96	599879.11	612144.73	383.79	10.00
13554.68	98.16	89.78	8949.88	-28.64	-4648.61	599895.61	616401.38	4648.47	0.00

Plan Data for Longboard PWU 10 1H RE Lat

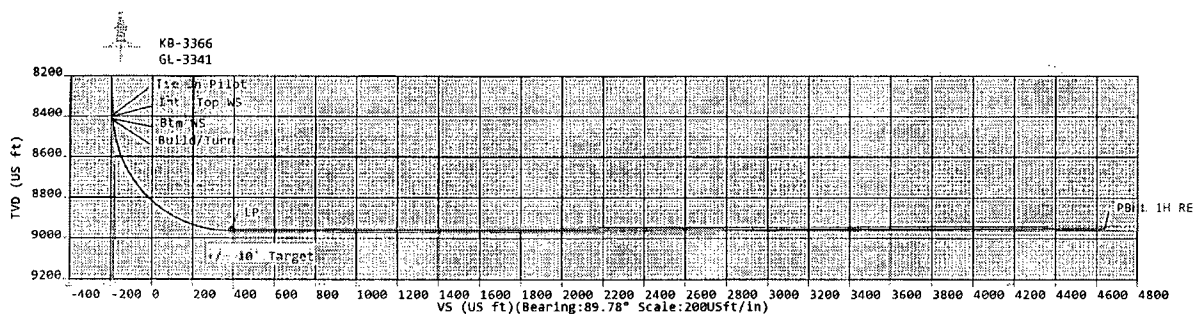
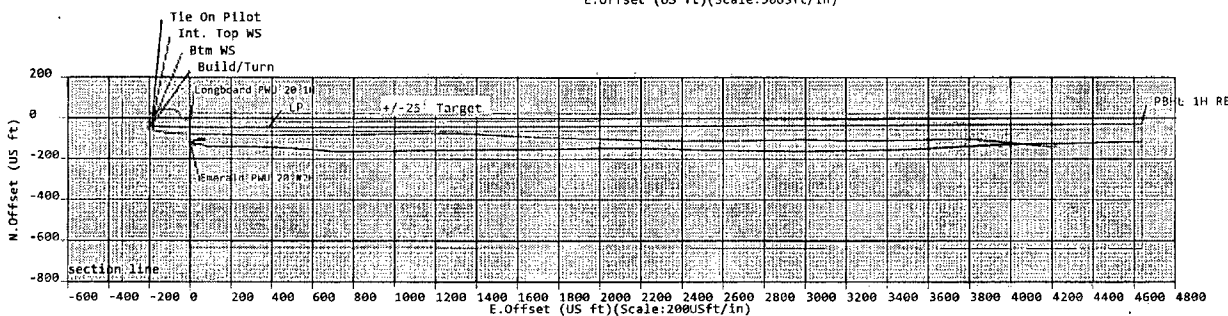
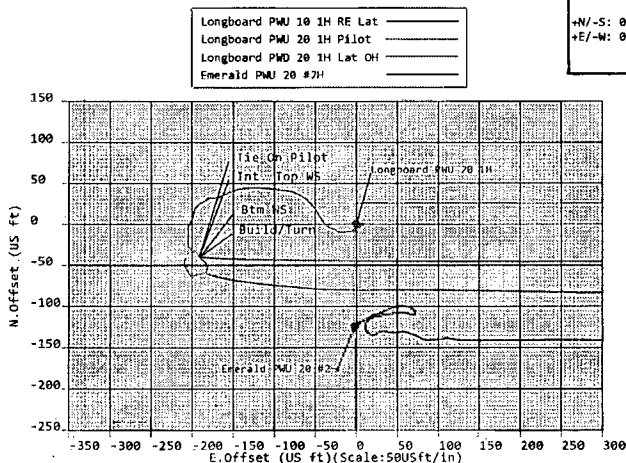
Target Set Information:
Name: Longboard PWU 10 1H RE
Position offsets from Slot centre
Name TVD +N/-S +E/-W Northing Easting Shape Comment
(USft) (USft) (USft) (USft) (USft)
PBHL 1H RE 8949.00 -28.64 4648.61 599895.61 616401.38 Cuboid

Plan Data for Longboard PWU 10 1H RE Lat

Slot: Longboard PWU 20 1H
Position:
Offset is from Site centre
+N/-S: 0.00USft Northing: 599924.25USft Latitude: 32°38'56.5"
+E/-W: 0.00USft Easting: 611760.77USft Longitude: -104°6'16.3"
Elevation Above VRD: 3341.00USft

Plan Data for Longboard PWU 10 1H RE Lat

Well: Longboard PWU 10 1H RE Lat
Type: Side-Track
File Number:
Plan Folder: P1 Plan: P1.V2
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft Azimuth: 89.78°
+E/-W: 0.00USft
Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
BGM 48437(nf) 7.61° 60.39° 2014-12-15



Sign Off: Russell Joyner

5D Plan Report

Devon Energy

Field Name: *Eddy Co, NM (Nad 83 NME)*
Site Name: *Longboard PWU 20 1H*
Well Name: *Longboard PWU 10 1H RE Lat*
Plan: *P1:V2*

19 November 2014



Weatherford®

Longboard PWU 10 1H RE Lat

Field Name Eddy Co, NM (Nad 83 NME)	Map Units : US ft		Company Name : Devon Energy	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
	Comment :			
Site Name Longboard PWU 20 1H	Units : US ft	North Reference : Grid	Convergence Angle : 0.12	
	Position	Northing : 599924.25 US ft	Latitude : 32° 38' 56.51"	
		Easting : 611760.77 US ft	Longitude : -104° 6' 16.30"	
	Elevation above Mean Sea Level: 3341.00 US ft			
	Comment :			
Slot Name Longboard PWU 20 1H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft	Northing : 599924.25 US ft	Latitude : 32° 38' 56.51"	
	+E / -W : 0.00 US ft	Easting : 611760.77 US ft	Longitude : -104° 6' 16.30"	
	Slot TVD Reference : Ground Elevation			
	Elevation above Mean Sea Level : 3341.00 US ft			
	Comment :			
Well Name Longboard PWU 10 1H RE Lat	Type : Sidetrack	UWI :	Plan : P1:V2	
	Parent : Longboard PWU 20 1H Pilot	Tie Point Method : MD	Tie Point : 8400.00 US ft	
	Rig Height Drill Floor : 25.00 US ft	Comment :		
	Relative to Mean Sea Level: 3366.00 US ft			
	Closure Distance : 4640.7 US ft	Closure Azimuth : 90.3536°		
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 89.78°	
	Magnetic Parameters			
	Model : BGGM	Field Strength : 48437.7nT	Dec : 7.61°	Dip : 60.39°
			Date : 15/Dec/2014	

Target Set

Name : Longboard PWU 10 1H RE
Number of Targets : 1

Comment :

Target Name: PBHL 1H RE	Position (Relative to Slot centre)		
Shape: Cuboid	+N / -S : 28.64US ft	Northing : 599895.61 US ft	Latitude : 32° 38' 56.13"
	+E / -W : 4640.61 US ft	Easting : 616401.38US ft	Longitude : -104° 5' 22.02"
	TVD (Drill Floor) : 8949.00 US ft		
Orientation	Azimuth : 89.80°	Inclination : -0.16°	
Dimensions	Length : 8520.00 US ft	Breadth : 50.00 US ft	Height : 20.00 US ft

Well path created using minimum curvature

SD Plan Report

Salient Points (Relative to Slot centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	B.Rate (°/100 US ft)	T.Rate (°/100 US ft)	T.Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.24	168.24	100.00	-0.21	0.04	0.04	0.24	0.24	0.00	168.24	
200.00	0.15	29.82	200.00	-0.30	0.15	0.15	0.37	-0.09	-138.42	195.78	
300.00	0.26	322.21	300.00	-0.00	0.08	0.08	0.25	0.11	-67.61	258.03	
400.00	0.37	254.60	400.00	0.09	-0.37	-0.37	0.36	0.11	-67.61	250.81	
500.00	0.28	339.56	500.00	0.23	-0.77	-0.77	0.44	-0.09	84.96	141.08	
600.00	0.18	64.51	600.00	0.53	-0.71	-0.71	0.32	-0.10	84.95	145.83	
700.00	0.83	75.76	699.99	0.78	0.13	0.13	0.65	0.65	11.25	14.33	
800.00	1.48	87.01	799.97	1.02	2.12	2.13	0.69	0.65	11.25	24.91	
900.00	1.21	90.54	899.94	1.08	4.47	4.47	0.28	-0.27	3.53	164.70	
1000.00	0.95	94.07	999.93	1.01	6.35	6.35	0.27	-0.26	3.53	167.41	
1100.00	0.62	97.16	1099.92	0.88	7.71	7.72	0.33	-0.33	3.09	174.23	
1200.00	0.28	100.25	1199.91	0.77	8.49	8.49	0.34	-0.34	3.09	177.46	
1300.00	0.29	147.93	1299.91	0.51	8.87	8.87	0.23	0.01	47.68	111.57	
1400.00	0.30	195.62	1399.91	0.05	8.93	8.93	0.24	0.01	47.69	111.65	
1500.00	0.43	216.91	1499.91	-0.50	8.63	8.63	0.19	0.13	21.29	57.19	
1600.00	0.56	238.20	1599.90	-1.06	7.99	7.99	0.22	0.13	21.29	65.70	
1700.00	0.93	236.90	1699.90	-1.76	6.90	6.89	0.37	0.37	-1.30	356.73	
1800.00	1.30	235.61	1799.88	-2.85	5.28	5.27	0.37	0.37	-1.29	355.47	
1900.00	1.33	237.96	1899.85	-4.10	3.36	3.35	0.06	0.03	2.35	62.09	
2000.00	1.36	240.31	1999.82	-5.31	1.35	1.33	0.06	0.03	2.35	62.64	
2100.00	1.26	242.12	2099.80	-6.41	-0.66	-0.68	0.11	-0.10	1.81	158.42	
2200.00	1.16	243.94	2199.77	-7.37	-2.54	-2.56	0.11	-0.10	1.82	159.89	
2300.00	1.34	251.08	2299.75	-8.19	-4.55	-4.58	0.24	0.18	7.14	44.48	
2400.00	1.52	258.22	2399.72	-8.84	-6.96	-6.99	0.25	0.18	7.14	48.32	
2500.00	1.37	262.58	2499.69	-9.27	-9.44	-9.48	0.19	-0.15	4.36	145.93	
2600.00	1.22	266.93	2599.66	-9.48	-11.69	-11.73	0.18	-0.15	4.35	148.92	
2700.00	1.22	267.60	2699.64	-9.58	-13.82	-13.85	0.01	0.00	0.67	90.33	
2800.00	1.23	268.26	2799.62	-9.66	-15.95	-15.99	0.02	0.01	0.66	55.00	
2900.00	1.14	275.71	2899.60	-9.59	-18.01	-18.05	0.18	-0.09	7.45	123.98	
3000.00	1.04	283.16	2999.58	-9.28	-19.89	-19.92	0.17	-0.10	7.45	128.89	
3100.00	1.10	291.51	3099.56	-8.73	-21.66	-21.70	0.17	0.06	8.35	73.16	
3200.00	1.15	299.86	3199.54	-7.87	-23.43	-23.46	0.17	0.05	8.35	77.24	
3300.00	1.28	296.47	3299.52	-6.88	-25.30	-25.32	0.15	0.13	-3.39	329.36	
3400.00	1.40	293.07	3399.49	-5.90	-27.42	-27.44	0.14	0.12	-3.40	324.76	
3500.00	1.43	289.15	3499.46	-5.01	-29.72	-29.74	0.10	0.03	-3.92	285.25	
3600.00	1.47	285.24	3599.43	-4.27	-32.14	-32.16	0.11	0.04	-3.91	290.05	
3700.00	2.15	303.17	3699.38	-2.90	-34.95	-34.96	0.88	0.68	17.93	48.98	
3800.00	2.84	321.10	3799.28	0.05	-38.07	-38.07	1.03	0.69	17.93	57.71	
3900.00	3.95	325.68	3899.11	4.83	-41.57	-41.55	1.14	1.11	4.58	16.02	
4000.00	5.06	330.26	3998.80	11.50	-45.70	-45.66	1.17	1.11	4.58	20.25	
4100.00	4.99	324.12	4098.41	18.85	-50.44	-50.37	0.54	-0.07	-6.14	259.53	
4200.00	4.93	317.98	4198.04	25.57	-55.86	-55.77	0.53	-0.06	-6.14	260.50	
4300.00	4.18	308.83	4297.73	31.05	-61.58	-61.46	1.04	-0.75	-9.15	219.59	
4400.00	3.43	299.68	4397.51	34.81	-67.02	-66.88	0.96	-0.75	-9.15	214.49	
4500.00	2.93	294.28	4497.35	37.34	-71.95	-71.80	0.58	-0.50	-5.40	208.25	
4600.00	2.43	288.88	4597.24	39.08	-76.28	-76.13	0.56	-0.50	-5.40	204.11	
4700.00	2.58	283.89	4697.15	40.31	-80.47	-80.32	0.26	0.15	-4.99	302.01	
4800.00	2.74	278.90	4797.04	41.22	-85.02	-84.86	0.28	0.16	-4.99	302.13	
4900.00	3.32	276.73	4896.90	41.93	-90.26	-90.09	0.59	0.58	-2.17	347.73	
5000.00	3.90	274.56	4996.70	42.54	-96.52	-96.36	0.60	0.58	-2.17	345.66	
5100.00	4.23	275.15	5096.45	43.14	-103.59	-103.42	0.33	0.33	0.59	7.52	
5200.00	4.55	275.74	5196.15	43.87	-111.21	-111.04	0.32	0.32	0.59	8.33	
5300.00	4.63	272.23	5295.83	44.42	-119.18	-119.01	0.29	0.08	-3.51	284.14	
5400.00	4.71	268.71	5395.50	44.48	-127.32	-127.15	0.30	0.08	-3.52	283.84	
5500.00	4.18	263.85	5495.20	44.00	-135.05	-134.88	0.65	-0.53	-4.86	212.99	
5600.00	3.66	258.99	5594.97	43.00	-141.81	-141.64	0.62	-0.52	-4.86	210.17	
5700.00	3.35	253.24	5694.78	41.55	-147.74	-147.58	0.47	-0.31	-5.75	225.75	

5D Plan Report

Salient Points (Relative to Slot centre, TVD relative to Drill Floor)											Comment
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	B.Rate (°/100 US ft)	T.Rate (°/100 US ft)	T.Face (°)	
5800.00	3.04	247.48	5794.62	39.69	-152.98	-152.83	0.45	-0.31	-5.76	223.15	
5900.00	2.81	244.27	5894.49	37.61	-157.64	-157.50	0.28	-0.23	-3.21	213.86	
6000.00	2.58	241.05	5994.38	35.46	-161.82	-161.68	0.28	-0.23	-3.22	211.75	
6100.00	2.29	250.02	6094.29	33.69	-165.67	-165.54	0.48	-0.29	8.97	131.69	
6200.00	2.00	258.99	6194.22	32.67	-169.26	-169.13	0.44	-0.29	8.97	135.24	
6300.00	1.93	264.18	6294.17	32.17	-172.65	-172.52	0.19	-0.07	5.19	114.05	
6400.00	1.86	269.38	6394.11	31.98	-175.94	-175.82	0.19	-0.07	5.20	114.74	
6500.00	1.98	253.95	6494.06	31.48	-179.23	-179.10	0.53	0.12	-15.43	275.28	
6600.00	2.09	238.52	6593.99	30.05	-182.44	-182.33	0.56	0.11	-15.43	273.57	
6700.00	2.06	238.78	6693.93	28.17	-185.53	-185.42	0.03	-0.03	0.26	162.71	
6800.00	2.03	239.03	6793.86	26.33	-188.59	-188.49	0.03	-0.03	0.25	163.56	
6900.00	1.88	234.99	6893.81	24.47	-191.45	-191.36	0.20	-0.15	-4.04	220.57	
7000.00	1.74	230.94	6993.76	22.58	-193.97	-193.89	0.19	-0.14	-4.05	220.41	
7100.00	2.63	207.64	7093.68	19.59	-196.22	-196.14	1.24	0.89	-23.30	303.01	
7200.00	3.51	184.34	7193.54	14.50	-197.51	-197.46	1.51	0.88	-23.30	293.18	
7300.00	3.46	200.42	7293.36	8.62	-198.80	-198.76	0.98	-0.05	16.08	100.93	
7400.00	3.40	216.50	7393.18	3.41	-201.62	-201.60	0.96	-0.06	16.08	101.57	
7500.00	3.03	195.77	7493.03	-1.52	-204.10	-204.10	1.21	-0.37	-20.73	242.18	
7600.00	2.66	175.03	7592.91	-6.37	-204.61	-204.64	1.09	-0.37	-20.74	240.07	
7700.00	2.50	180.84	7692.81	-10.87	-204.45	-204.49	0.31	-0.16	5.81	124.34	
7800.00	2.34	186.66	7792.72	-15.07	-204.71	-204.77	0.29	-0.16	5.82	125.95	
7900.00	2.45	182.43	7892.63	-19.24	-205.04	-205.11	0.21	0.11	-4.23	299.77	
8000.00	2.56	178.20	7992.54	-23.61	-205.06	-205.15	0.22	0.11	-4.23	298.63	
8100.00	3.13	147.82	8092.42	-28.15	-203.54	-203.64	1.59	0.57	-30.38	275.09	
8200.00	3.70	117.45	8192.25	-31.95	-199.22	-199.34	1.87	0.57	-30.37	271.94	
8300.00	3.12	130.34	8292.07	-35.20	-194.28	-194.42	0.96	-0.58	12.89	133.42	
8400.00	2.54	143.24	8391.95	-38.73	-190.88	-191.03	0.86	-0.58	12.90	138.64	Tie On Pilot
8407.50	2.54	142.98	8399.44	-39.00	-190.68	-190.83	0.15	-0.00	-3.47	269.87	Int. Top WS
8422.50	3.23	104.75	8414.43	-39.37	-190.07	-190.22	13.33	4.61	-254.87	270.00	Btm WS
8427.50	3.23	104.75	8419.42	-39.44	-189.80	-189.95	0.00	0.00	0.00	0.00	Build/Turn
9297.91	90.16	89.78	8961.11	-45.14	383.96	383.79	10.00	9.99	-1.72	345.01	LP
13554.60	90.16	89.78	8949.00	-28.64	4640.61	4640.47	0.00	0.00	0.00	0.00	PBHL 1H RE

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)											Comment
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northings (US ft)	Easting (US ft)		
8400.00	2.54	143.24	8391.95	-38.73	-190.88	-191.03	0.00	599885.52	611569.89		Tie On Pilot
8407.50	2.54	142.98	8399.44	-39.00	-190.68	-190.83	0.15	599885.25	611570.09		Int. Top WS
8422.50	3.23	104.75	8414.43	-39.37	-190.07	-190.22	13.33	599884.88	611570.70		Btm WS
8427.50	3.23	104.75	8419.42	-39.44	-189.80	-189.95	0.00	599884.81	611570.97		Build/Turn
8500.00	10.41	94.34	8491.36	-40.46	-181.28	-181.44	10.00	599883.79	611579.49		
8600.00	20.39	92.03	8587.65	-41.76	-154.80	-154.96	10.00	599882.49	611605.97		
8700.00	30.38	91.21	8677.88	-42.92	-112.00	-112.17	10.00	599881.33	611648.77		
8800.00	40.38	90.76	8759.31	-43.88	-54.18	-54.35	10.00	599880.37	611706.59		
8900.00	50.38	90.47	8829.46	-44.63	16.90	16.73	10.00	599879.62	611777.67		
9000.00	60.38	90.26	8886.21	-45.14	99.08	98.91	10.00	599879.11	611859.85		
9100.00	70.37	90.08	8927.82	-45.40	189.87	189.70	10.00	599878.85	611950.64		
9200.00	80.37	89.92	8953.04	-45.40	286.51	286.33	10.00	599878.85	612047.28		
9297.91	90.16	89.78	8961.11	-45.14	383.96	383.79	10.00	599879.11	612144.73		LP
9300.00	90.16	89.78	8961.10	-45.14	386.06	385.88	0.00	599879.11	612146.83		
9400.00	90.16	89.78	8960.82	-44.75	486.06	485.88	0.00	599879.50	612246.83		
9500.00	90.16	89.78	8960.53	-44.36	586.05	585.88	0.00	599879.89	612346.82		
9600.00	90.16	89.78	8960.25	-43.97	686.05	685.88	0.00	599880.28	612446.82		
9700.00	90.16	89.78	8959.96	-43.59	786.05	785.88	0.00	599880.66	612546.82		
9800.00	90.16	89.78	8959.68	-43.20	886.05	885.88	0.00	599881.05	612646.82		
9900.00	90.16	89.78	8959.39	-42.81	986.05	985.88	0.00	599881.44	612746.82		
10000.00	90.16	89.78	8959.11	-42.42	1086.05	1085.88	0.00	599881.83	612846.82		
10100.00	90.16	89.78	8958.83	-42.03	1186.05	1185.88	0.00	599882.22	612946.82		
10200.00	90.16	89.78	8958.54	-41.65	1286.05	1285.88	0.00	599882.60	613046.82		

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor.)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
10300.00	90.16	89.78	8958.26	-41.26	1386.05	1385.88	0.00	599882.99	613146.82	
10400.00	90.16	89.78	8957.97	-40.87	1486.04	1485.88	0.00	599883.38	613246.81	
10500.00	90.16	89.78	8957.69	-40.48	1586.04	1585.88	0.00	599883.77	613346.81	
10600.00	90.16	89.78	8957.40	-40.10	1686.04	1685.88	0.00	599884.15	613446.81	
10700.00	90.16	89.78	8957.12	-39.71	1786.04	1785.88	0.00	599884.54	613546.81	
10800.00	90.16	89.78	8956.83	-39.32	1886.04	1885.87	0.00	599884.93	613646.81	
10900.00	90.16	89.78	8956.55	-38.93	1986.04	1985.87	0.00	599885.32	613746.81	
11000.00	90.16	89.78	8956.27	-38.54	2086.04	2085.87	0.00	599885.71	613846.81	
11100.00	90.16	89.78	8955.98	-38.16	2186.04	2185.87	0.00	599886.09	613946.81	
11200.00	90.16	89.78	8955.70	-37.77	2286.03	2285.87	0.00	599886.48	614046.80	
11300.00	90.16	89.78	8955.41	-37.38	2386.03	2385.87	0.00	599886.87	614146.80	
11400.00	90.16	89.78	8955.13	-36.99	2486.03	2485.87	0.00	599887.26	614246.80	
11500.00	90.16	89.78	8954.84	-36.61	2586.03	2585.87	0.00	599887.64	614346.80	
11600.00	90.16	89.78	8954.56	-36.22	2686.03	2685.87	0.00	599888.03	614446.80	
11700.00	90.16	89.78	8954.27	-35.83	2786.03	2785.87	0.00	599888.42	614546.80	
11800.00	90.16	89.78	8953.99	-35.44	2886.03	2885.87	0.00	599888.81	614646.80	
11900.00	90.16	89.78	8953.71	-35.06	2986.03	2985.87	0.00	599889.19	614746.80	
12000.00	90.16	89.78	8953.42	-34.67	3086.03	3085.87	0.00	599889.58	614846.80	
12100.00	90.16	89.78	8953.14	-34.28	3186.02	3185.87	0.00	599889.97	614946.79	
12200.00	90.16	89.78	8952.85	-33.89	3286.02	3285.87	0.00	599890.36	615046.79	
12300.00	90.16	89.78	8952.57	-33.50	3386.02	3385.87	0.00	599890.75	615146.79	
12400.00	90.16	89.78	8952.28	-33.12	3486.02	3485.87	0.00	599891.13	615246.79	
12500.00	90.16	89.78	8952.00	-32.73	3586.02	3585.87	0.00	599891.52	615346.79	
12600.00	90.16	89.78	8951.72	-32.34	3686.02	3685.87	0.00	599891.91	615446.79	
12700.00	90.16	89.78	8951.43	-31.95	3786.02	3785.87	0.00	599892.30	615546.79	
12800.00	90.16	89.78	8951.15	-31.57	3886.02	3885.87	0.00	599892.68	615646.79	
12900.00	90.16	89.78	8950.86	-31.18	3986.02	3985.87	0.00	599893.07	615746.79	
13000.00	90.16	89.78	8950.58	-30.79	4086.01	4085.87	0.00	599893.46	615846.78	
13100.00	90.16	89.78	8950.29	-30.40	4186.01	4185.87	0.00	599893.85	615946.78	
13200.00	90.16	89.78	8950.01	-30.01	4286.01	4285.87	0.00	599894.24	616046.78	
13300.00	90.16	89.78	8949.72	-29.63	4386.01	4385.86	0.00	599894.62	616146.78	
13400.00	90.16	89.78	8949.44	-29.24	4486.01	4485.86	0.00	599895.01	616246.78	
13500.00	90.16	89.78	8949.16	-28.85	4586.01	4585.86	0.00	599895.40	616346.78	
13554.60	90.16	89.78	8949.00	-28.64	4640.61	4640.47	0.00	599895.61	616401.38	PBHL 1H RE

5D Anti-Collision Report

Devon Energy

Field Name: *Eddy Co, NM (Nad 83 NME)*

Site Name: *Longboard PWU 20 1H*

Well Name: *Longboard PWU 10 1H RE Lat*

19 November 2014



Weatherford®


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Longboard PWU 10 1H RE Lat

Field Name	Map Units : US ft		Company Name : Devon Energy	
Eddy Co, NM (Nad 83 NME)	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)			
	Comment :			

Site Name	Units : US ft	North Reference : Grid	Convergence Angle : 0.12	
	Position	Northing : 599924.25 US ft	Latitude : 32° 38' 56.51"	
		Easting : 611760.77 US ft	Longitude : -104° 6' 16.30"	
	Longboard PWU 20 1H	Elevation above Mean Sea Level: 3341.00 US ft		

Comment :

Slot Name	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft	Northing : 599924.25 US ft	Latitude : 32° 38' 56.51"	
	+E / -W : 0.00 US ft	Easting : 611760.77 US ft	Longitude : -104° 6' 16.30"	
	Slot TVD Reference : Ground Elevation			
	Elevation above Mean Sea Level : 3341.00 US ft			

Comment :

Well Name	Type : Sidetrack	UWI :	Plan : Working Plan	
	Parent : Longboard PWU 20 1H Pilot	Tie Point Method : MD	Tie Point : 8407.00 US ft	
	Rig Height Drill Floor : 25.00 US ft	Comment :		
	Relative to Mean Sea Level: 3366.00 US ft			
	Closure Distance : 4640.7 US ft	Closure Azimuth : 90.3536°		
	Vertical Section (Position of Origin Relative to Slot)			
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 89.78°	
	Magnetic Parameters			

Model : BGGM	Field Strength : 48437.7nT	Dec : 7.61°	Dip : 60.39°	Date : 15/Dec/2014
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Collision / Uncertainty Analysis				
Primary Well	Start MD (US ft)	End MD (US ft)	Collision Risk Interval	No. of Std Deviations in Error Computation
Longboard PWU 10 1H RE Lat (p)	0.00	13554.11	100.00	2

Secondary Well Names

Longboard PWD 20 1H Lat OH (s)
 Longboard PWU 20 1H Pilot (s)
 Emerald PWU 20 #2H (s)

Anti Collision Report Terminology

S.Minor, S.Major : Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.

PHI : Angle between high-side vector and semi-minor axis

TVD Spread : Total TVD range of the ellipsoid of uncertainty at the current location

ES : Distance between the extremities of the primary and secondary uncertainty ellipsoids in the direction Cr-Cr

T.Face to Sec : Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells

AC Filter Info: The following filter(s) have been applied: Separation Factor

5D Anti-Collision Report

Separation factors calculated using Pedal Curve (Independent Uncertainty). Well path created using minimum curvature.

Anti Collision Proximity Summary (TVD relative to Drill Floor)

Secondary Well Name	Pri MD (US ft)	Sec MD (US ft)	TVD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
Longboard PWU 20 1H Pilot (s)	8407.00	8407.00	8398.94	0.00	-0.56	0.00	SF (Hi)
Longboard PWD 20 1H Lat OH (s)	13182.00	13748.00	8950.01	614.67	533.37	7.56	
Emerald PWU 20 #2H (s)	13554.11	12066.09	8949.00	1076.20	1006.10	15.35	

Primary Well : Longboard PWU 10 1H RE Lat (p) (TVD Relative to Drill Floor ; All Azimuth Relative to GRID NORTH)

MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	Nearest Well	CC (US ft)	ES (US ft)	SF	Risk
8407.00	8398.94	82.01	17.79	17.53	Longboard PWU 20 1H Pilot (s)	0.00	-0.56	0.00	SF (Hi)
8507.00	8498.23	162.57	17.96	17.51	Longboard PWU 20 1H Pilot (s)	8.24	-27.29	0.23	SF (Hi)
8607.00	8594.16	171.01	18.09	17.14	Longboard PWU 20 1H Pilot (s)	33.08	-2.72	0.92	SF (Hi)
8707.00	8683.82	173.61	18.20	16.57	Longboard PWU 20 1H Pilot (s)	74.79	38.68	2.07	
8807.00	8764.49	174.66	18.37	15.79	Longboard PWU 20 1H Pilot (s)	132.47	96.13	3.64	
8907.00	8833.71	175.11	18.62	14.90	Longboard PWU 20 1H Pilot (s)	204.10	167.47	5.57	

Secondary Well : Longboard PWU 20 1H Pilot (s) (TVD Relative to Drill Floor (Primary) ; All Azimuth Relative to GRID NORTH)

Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
8407.00	8398.94	8407.00	82.01	17.26	17.14	0.00	-0.56	0.00	SF (Hi)
8507.00	8498.40	8506.55	162.57	17.37	17.24	8.24	-27.29	0.23	SF (Hi)
8607.00	8595.05	8603.30	171.01	17.47	17.35	33.08	-2.72	0.92	SF (Hi)
8707.00	8685.09	8693.42	173.61	17.57	17.47	74.79	38.68	2.07	
8807.00	8765.54	8773.94	174.66	17.69	17.60	132.47	96.13	3.64	
8907.00	8833.27	8841.70	175.11	17.82	17.73	204.10	167.47	5.57	

**Weatherford**

Weatherford Drilling Services

GeoDec4 v2.1.0.0

Report Date: November 19, 2014
Job Number: _____
Customer: Devon Energy
Well Name: Longboard PWU 20 1H RE
API Number: _____
Rig Name: _____
Location: Eddy Co, NM Nad83 NME
Block: _____
Engineer: RWJ

NAD83 / New Mexico East (ftUS)	NAD83 (1986)
Projected Coordinate System	Geodetic Coordinate System
Datum: North American Datum 1983 (1986)	Datum: North American Datum 1983 (1986)
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
EPSG: 2257	EPSG: 4269
North: 599924.25 US Survey Foot	Latitude: 32.649031 Degree
East: 611760.77 US Survey Foot	Longitude: -104.104527 Degree
Convergence: 0.12°	
Declination: 7.61°	
Total Correction: 7.49°	
Datum Transformation: none	

Geodetic Location WGS84

MSL Elevation = 0 m
Latitude = 32° 38' 56.51" N
Longitude = 104° 06' 16.30" W

Magnetic Declination = 7.61 deg	[True North Offset]
Local Gravity = .9988 g	Checksum = 6732
Local Field Strength = 48438 nT	Magnetic Vector X = 23719 nT
Magnetic Dip = 60.39 deg	Magnetic Vector Y = 3170 nT
Magnetic Model = bggm2014.dat	Magnetic Vector Z = 42114 nT
Run Date = December 15, 2014	Magnetic Vector H = 23930 nT

Signed: _____ Date: _____

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Longboard PWU 10 1H RE Lat

Field: Eddy Co. NM (Nad 83 NME)

Map Units: US ft
Vertical Reference: Mean Sea Level
Projected Coordinate: NAD83 / New Mexico East (ftUS)

Site: Longboard PWU 20 1H

Company Name: Devon Energy
Units: US ft
TVD Reference:
Position:

Northing:	599924.25US ft	Latitude:	32° 38' 56.51"
Easting:	611760.77US ft	Longitude:	-104° 6' 16.30"

North Reference: Grid **Convergence Angle:** 0.12
Elevation above Mean: 3341.00US ft
Comment:

Slot: Longboard PWU 20 1H

Position (Relative to Site centre)

+N/-S: 0.00US ft	Northing:	599924.25US ft	Latitude:	32° 38' 56.51"
+E/-W: 0.00US ft	Easting:	611760.77US ft	Longitude:	-104° 6' 16.30"

Elevation above Mean: 3341.00US ft
Comment:

Well: Longboard PWU 10 1H RE Lat

Type: Sidetrack **Rig Height (Drill):** 25.00US ft **Relative To**
File Number:
Parent: Longboard **Tie Point Method:** MD **Tie Point:** 8400.00 US ft
Plan Folder: P1 **Plan:** P1.V2
Comment: New Prog.
Closure Distance: 4640.7US ft **Closure Azimuth:** 90.3536°
Comment:

Vertical Section:
Position of Origin: +N/-S: 0.00US ft +E/-W: 0.00US ft
Vertical Section: 89.78°
Magnetic Parameters:
Model: BGGM **Field Strength:** 48437.7 nT **Declination:** 7.61° **Dip:** 60.39° **Date:** 15/Dec/2014 I75

Target Set: Longboard PWU 10 1H RE

Number of Targets: 1
Target: PBHL 1H RE
Position (Relative to Slot centre)

+N/-S: -28.64	Northing: 599895.61	Latitude: 32° 38' 56.13"
+E/-W: 4640.61	Easting: 616401.38	Longitude: -104° 5' 22.02"

TVD (Drill Floor): 8949.00 US ft
Shape: Cuboid
Orientation: **Inclination:** -0.16° **Azimuth:** 89.80°
Dimensions: **Length:** 8520.00 **Breadth:** 50.00 **Height:** 20.00

Casing Points: (Relative to Slot Centre, TVD: Relative to Drill Floor)

MD	Inc	Az	TVD	N.Offset	E.Offset	Northing	Easting	Name
(US ft)	(°)	(°)	(US ft)	(US ft)	(US ft)	(US ft)	(US ft)	

Wellpath created using minimum curvature

Salient Points: (Relative to Slot Centre, TVD: Relative to Drill Floor)

MD	Inc	Az	TVD	N.Offset	E.Offset	VS	DLS	B.Rate	T.Rate	T.Face	Comment
(US ft)	(°)	(°)	(US ft)	(US ft)	(US ft)	(US ft)	(°/100)	(°/100 US ft)	(°/100 US ft)	(°)	
0	0	0	0	0	0	0	0	0	0	0	
100	-0.24	168.24	100	-0.21	0.04	0.04	-0.24	-0.24	0	168.24	
200	-0.15	29.82	200	-0.3	0.15	0.15	-0.37	-0.09	138.42	195.78	
300	-0.26	322.21	300	0	-0.08	-0.08	-0.25	-0.11	-67.61	258.03	
400	-0.37	254.6	400	0.09	-0.37	-0.37	-0.36	-0.11	-67.61	250.81	
500	-0.28	339.56	500	0.23	-0.77	-0.77	-0.44	-0.09	84.96	141.08	

600	0.18	64.51	600	0.53	0.71	0.71	0.32	0.1	84.95	145.83
700	0.83	75.76	699.99	0.78	0.13	0.13	0.65	0.65	11.25	14.33
800	1.48	87.01	799.97	1.02	2.12	2.13	0.69	0.65	11.25	24.91
900	1.21	90.54	899.94	1.08	4.47	4.47	0.28	-0.27	3.53	164.7
1000	0.95	94.07	999.93	1.01	6.35	6.35	0.27	-0.26	3.53	167.41
1100	0.62	97.16	1099.92	0.88	7.71	7.72	0.33	-0.38	3.09	174.23
1200	0.28	100.25	1199.91	0.77	8.49	8.49	0.34	-0.34	3.09	177.46
1300	0.29	147.93	1299.91	0.51	8.87	8.87	0.23	0.01	47.68	111.57
1400	0.3	195.62	1399.91	0.05	8.93	8.93	0.24	0.01	47.69	111.65
1500	0.43	216.91	1499.91	-0.5	8.63	8.63	0.19	0.13	21.29	57.19
1600	0.56	238.2	1599.9	1.06	7.99	7.99	0.22	0.13	21.29	65.7
1700	0.93	236.9	1699.9	1.76	6.9	6.89	0.37	0.37	1.3	356.73
1800	1.3	235.61	1799.88	2.85	5.28	5.27	0.37	0.37	1.29	355.47
1900	1.33	237.96	1899.85	4.1	3.36	3.35	0.06	0.03	2.35	62.09
2000	1.36	240.31	1999.82	5.31	1.35	1.33	0.06	0.03	2.35	62.64
2100	1.26	242.12	2099.8	6.41	0.66	0.68	0.11	-0.1	1.81	158.42
2200	1.16	243.94	2199.77	7.37	2.54	2.56	0.11	-0.1	1.82	159.89
2300	1.34	251.08	2299.75	8.19	4.55	4.58	0.24	-0.18	7.14	44.48
2400	1.52	258.22	2399.72	8.84	6.96	6.99	0.25	-0.18	7.14	48.32
2500	1.37	262.58	2499.69	9.27	9.44	9.48	0.19	-0.15	4.36	145.93
2600	1.22	266.93	2599.66	9.48	11.69	11.73	0.13	-0.15	4.35	148.92
2700	1.22	267.6	2699.64	9.58	13.82	13.85	0.01	0	0.67	90.33
2800	1.23	268.26	2799.62	9.66	15.95	15.99	0.02	0.01	0.66	55
2900	1.14	275.71	2899.6	9.59	18.01	18.05	0.18	-0.09	7.45	123.98
3000	1.04	283.16	2999.58	9.28	19.89	19.92	0.17	-0.1	7.45	128.89
3100	1.1	291.51	3099.56	8.73	21.66	21.7	0.17	0.06	8.35	73.16
3200	1.15	299.86	3199.54	7.87	23.43	23.46	0.17	0.05	8.35	77.24
3300	1.28	296.47	3299.52	6.88	25.3	25.32	0.15	0.13	3.39	329.36
3400	1.4	293.07	3399.49	5.9	27.42	27.44	0.14	0.12	3.4	324.76
3500	1.43	289.15	3499.46	5.01	29.72	29.74	0.1	0.03	3.92	285.25
3600	1.47	285.24	3599.43	4.27	32.14	32.16	0.11	0.04	3.91	290.05
3700	2.15	303.17	3699.38	2.9	34.95	34.96	0.88	0.68	17.93	48.98
3800	2.84	321.1	3799.28	0.05	38.07	38.07	1.03	0.69	17.93	57.71
3900	3.95	325.68	3899.11	4.83	41.57	41.55	1.14	1.11	4.58	16.02
4000	5.06	330.26	3998.8	11.5	45.7	45.66	1.17	1.11	4.58	20.25
4100	4.99	324.12	4098.41	18.85	50.44	50.37	0.54	0.07	6.14	259.53
4200	4.93	317.98	4198.04	25.57	55.86	55.77	0.53	-0.06	6.14	260.5
4300	4.18	308.83	4297.73	31.05	61.58	61.46	1.04	-0.75	9.15	219.53
4400	3.43	299.68	4397.51	34.81	67.02	66.88	0.96	-0.75	9.15	214.49
4500	2.93	294.28	4497.35	37.34	71.95	71.8	0.58	0.5	5.4	208.25
4600	2.43	288.88	4597.24	39.08	76.28	76.13	0.56	-0.5	5.4	204.11
4700	2.58	283.89	4697.15	40.31	80.47	80.37	0.76	0.15	4.99	302.01
4800	2.74	278.9	4797.04	41.22	85.02	84.86	0.28	0.16	4.99	302.13
4900	3.32	276.73	4896.9	41.93	90.26	90.09	0.59	0.58	2.17	347.73
5000	3.9	274.56	4996.7	42.54	96.52	96.36	0.6	0.58	2.17	345.66
5100	4.23	275.15	5096.45	43.14	103.59	103.42	0.33	0.33	0.59	7.52
5200	4.55	275.74	5196.15	43.87	111.21	111.04	0.32	-0.32	0.58	8.33
5300	4.63	272.23	5295.83	44.42	119.18	119.01	0.29	0.08	3.51	284.14
5400	4.71	268.71	5395.5	44.48	127.32	127.15	0.3	0.08	3.52	283.84
5500	4.18	263.85	5495.2	44	135.05	134.88	-0.65	0.53	4.86	212.99
5600	3.66	258.99	5594.97	43	141.8	141.64	0.62	-0.52	4.86	210.17
5700	3.35	253.24	5694.78	41.55	147.74	147.58	0.47	-0.31	5.75	225.75
5800	3.04	247.48	5794.62	39.69	152.98	152.83	0.45	-0.31	5.76	223.15
5900	2.81	244.27	5894.49	37.61	157.64	157.5	0.28	-0.23	3.21	213.86
6000	2.58	241.05	5994.38	35.46	161.82	161.68	0.28	-0.23	3.22	211.75
6100	2.29	230.02	6094.29	33.69	165.67	165.54	0.48	-0.29	8.97	131.69
6200	2	258.99	6194.22	32.67	169.26	169.13	0.44	-0.29	8.97	135.24
6300	1.93	264.18	6294.17	32.17	172.65	172.52	0.19	-0.07	5.19	114.05
6400	1.86	269.38	6394.11	31.98	175.94	175.82	0.19	-0.07	5.2	114.74
6500	1.98	253.95	6494.06	31.48	179.23	179.1	0.53	0.12	15.43	275.28
6600	2.09	238.52	6593.99	30.05	182.44	182.33	0.56	0.11	15.43	273.57
6700	2.06	238.78	6693.93	28.17	185.53	185.42	0.03	-0.03	0.26	162.71
6800	2.03	239.03	6793.86	26.33	188.59	188.49	0.03	-0.03	0.25	163.56
6900	1.88	234.99	6893.81	24.47	191.45	191.36	0.2	-0.15	4.04	220.57
7000	1.74	230.94	6993.76	22.58	193.97	193.89	0.19	0.14	4.05	220.41
7100	2.63	207.64	7093.68	19.59	196.22	196.14	1.24	0.89	23.3	303.01
7200	3.51	184.34	7193.54	14.5	197.51	197.46	1.51	0.88	23.3	293.18
7300	3.46	200.42	7293.36	8.62	198.8	198.76	0.98	-0.05	16.08	100.93
7400	3.4	216.5	7393.18	3.41	201.62	201.6	0.96	-0.06	16.08	101.57
7500	3.03	195.77	7493.03	1.52	204.1	204.1	1.21	-0.37	20.73	242.18
7600	2.66	175.03	7592.91	6.37	204.61	204.64	1.09	0.37	20.74	240.07
7700	2.5	180.84	7692.81	10.87	204.45	204.49	0.31	-0.16	9.81	124.34
7800	2.34	186.66	7792.72	15.07	204.71	204.77	0.29	-0.16	5.82	125.95
7900	2.45	182.43	7892.63	19.24	205.04	205.11	0.21	0.11	4.23	299.77

8000	2.56	178.2	7992.54	23.61	205.06	205.15	0.22	0.11	4.23	298.63	
8100	3.13	147.82	8092.42	28.15	203.54	203.64	1.59	0.57	30.38	275.09	
8200	3.7	117.45	8192.25	31.95	199.22	199.34	1.87	0.57	30.37	271.94	
8300	3.12	130.34	8292.07	35.2	194.28	194.42	0.96	-0.58	12.89	133.42	
8400	2.54	143.24	8391.95	38.73	190.88	191.03	0.86	-0.58	12.9	138.64	Tie On Pilot
8407.5	2.54	142.98	8399.44	39	190.68	190.83	0.15	0	3.47	269.87	Int: Top WS
8422.5	3.23	104.75	8414.43	39.37	190.07	190.22	13.33	4.61	254.87	270	Btm WS
8427.5	3.23	104.75	8419.42	39.44	189.8	189.95	0	0	0	0	Build/Turn
9297.91	90.16	89.78	8961.11	45.14	383.96	383.79	10	9.99	1.72	345.01	LP
13554.6	90.16	89.78	8949	28.64	4640.61	4640.47	0	0	0	0	PBHL 1H RE

Interpolated Points: (Relative to Slot Centre, TVD Relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DLS (#/100)	Northing (US ft)	Easting (US ft)	Comment
8400	2.54	143.24	8391.95	38.73	190.88	191.03	0	599885.52	611569.89	Pilot
8407.5	2.54	142.98	8399.44	39	190.68	190.83	0.15	599885.25	611570.09	WS
8422.5	3.23	104.75	8414.43	39.37	190.07	190.22	13.33	599884.88	611570.7	Btm WS
8427.5	3.23	104.75	8419.42	39.44	189.8	189.95	0	599884.81	611570.97	n
8500	10.41	94.34	8491.36	40.45	181.28	181.44	10	599883.79	611573.49	
8600	20.39	92.03	8587.65	41.76	154.8	154.96	10	599882.49	611605.97	
8700	30.38	91.21	8677.88	42.92	112	112.17	10	599881.33	611648.77	
8800	40.38	90.76	8759.31	43.88	54.18	54.35	10	599880.37	611706.59	
8900	50.38	90.47	8829.46	44.63	16.9	16.73	10	599879.62	611777.67	
9000	60.38	90.26	8886.21	45.14	99.08	98.91	10	599879.11	611859.85	
9100	70.37	90.08	8927.82	45.4	189.87	189.7	10	599878.85	611950.64	
9200	80.37	89.92	8953.04	45.4	286.51	286.33	10	599878.85	612047.28	
9297.91	90.16	89.78	8961.11	45.14	383.96	383.79	10	599879.11	612144.73	LP
9300	90.16	89.78	8961.1	45.14	386.06	385.88	0	599879.11	612146.83	
9400	90.16	89.78	8960.82	44.75	486.06	485.88	0	599879.5	612246.83	
9500	90.16	89.78	8960.53	44.36	586.05	585.88	0	599879.89	612346.82	
9600	90.16	89.78	8960.25	43.97	686.05	685.88	0	599880.28	612446.82	
9700	90.16	89.78	8959.98	43.59	786.05	785.88	0	599880.66	612546.82	
9800	90.16	89.78	8959.68	43.2	886.05	885.88	0	599881.05	612646.82	
9900	90.16	89.78	8959.39	42.81	986.05	985.88	0	599881.44	612746.82	
10000	90.16	89.78	8959.11	42.42	1086.05	1085.88	0	599881.83	612846.82	
10100	90.16	89.78	8958.83	42.03	1186.05	1185.88	0	599882.22	612946.82	
10200	90.16	89.78	8958.54	41.65	1286.05	1285.88	0	599882.6	613046.82	
10300	90.16	89.78	8958.26	41.26	1386.05	1385.88	0	599882.99	613146.82	
10400	90.16	89.78	8957.97	40.87	1486.04	1485.88	0	599883.38	613246.81	
10500	90.16	89.78	8957.69	40.48	1586.04	1585.88	0	599883.77	613346.81	
10600	90.16	89.78	8957.4	40.1	1686.04	1685.88	0	599884.15	613446.81	
10700	90.16	89.78	8957.12	39.71	1786.04	1785.88	0	599884.54	613546.81	
10800	90.16	89.78	8956.83	39.32	1886.04	1885.87	0	599884.93	613646.81	
10900	90.16	89.78	8956.55	38.93	1986.04	1985.87	0	599885.32	613746.81	
11000	90.16	89.78	8956.27	38.54	2086.04	2085.87	0	599885.71	613846.81	
11100	90.16	89.78	8955.98	38.16	2186.04	2185.87	0	599886.09	613946.81	
11200	90.16	89.78	8955.7	37.77	2286.03	2285.87	0	599886.48	614046.8	
11300	90.16	89.78	8955.41	37.38	2386.03	2385.87	0	599886.87	614146.8	
11400	90.16	89.78	8955.13	36.99	2486.03	2485.87	0	599887.26	614246.8	
11500	90.16	89.78	8954.84	36.61	2586.03	2585.87	0	599887.64	614346.8	
11600	90.16	89.78	8954.56	36.22	2686.03	2685.87	0	599888.03	614446.8	
11700	90.16	89.78	8954.27	35.83	2786.03	2785.87	0	599888.42	614546.8	
11800	90.16	89.78	8953.99	35.44	2886.03	2885.87	0	599888.81	614646.8	
11900	90.16	89.78	8953.71	35.06	2986.03	2985.87	0	599889.19	614746.8	
12000	90.16	89.78	8953.42	34.67	3086.03	3085.87	0	599889.58	614846.8	
12100	90.16	89.78	8953.14	34.28	3186.02	3185.87	0	599889.97	614946.79	
12200	90.16	89.78	8952.85	33.89	3286.02	3285.87	0	599890.36	615046.79	
12300	90.16	89.78	8952.57	33.5	3386.02	3385.87	0	599890.75	615146.79	
12400	90.16	89.78	8952.28	33.12	3486.02	3485.87	0	599891.13	615246.79	
12500	90.16	89.78	8952	32.73	3586.02	3585.87	0	599891.52	615346.79	
12600	90.16	89.78	8951.72	32.34	3686.02	3685.87	0	599891.91	615446.79	
12700	90.16	89.78	8951.43	31.95	3786.02	3785.87	0	599892.3	615546.79	
12800	90.16	89.78	8951.15	31.57	3886.02	3885.87	0	599892.68	615646.79	
12900	90.16	89.78	8950.86	31.18	3986.02	3985.87	0	599893.07	615746.79	
13000	90.16	89.78	8950.58	30.79	4086.01	4085.87	0	599893.46	615846.78	
13100	90.16	89.78	8950.29	30.4	4186.01	4185.87	0	599893.85	615946.78	
13200	90.16	89.78	8950.01	30.01	4286.01	4285.87	0	599894.24	616046.78	
13300	90.16	89.78	8949.72	29.63	4386.01	4385.86	0	599894.62	616146.78	
13400	90.16	89.78	8949.44	29.24	4486.01	4485.86	0	599895.01	616246.78	
13500	90.16	89.78	8949.16	28.85	4586.01	4585.86	0	599895.4	616346.78	
13554.6	90.16	89.78	8949	28.64	4640.61	4640.47	0	599895.61	616401.38	RE

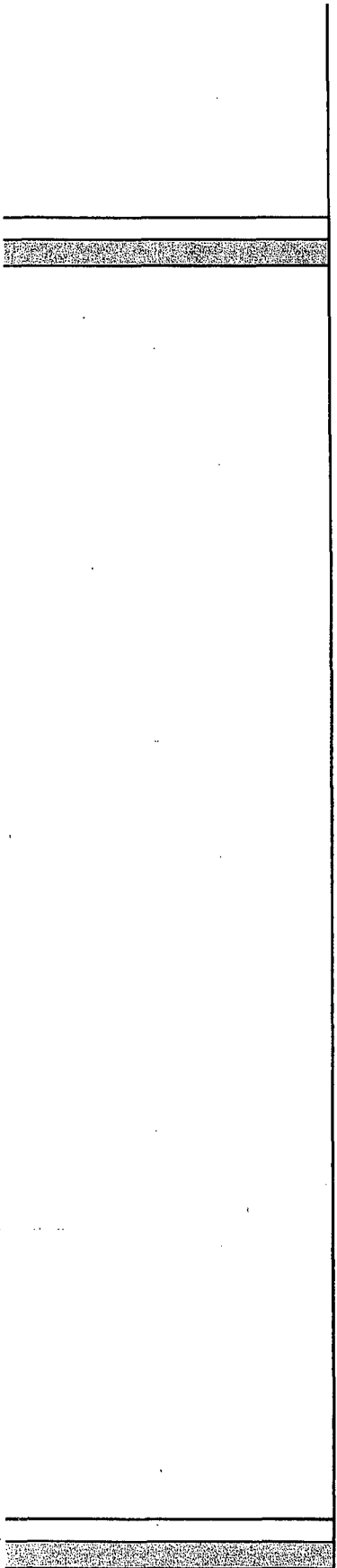
Formation Points: (Relative to Slot Centre, TVD Relative to Drill Floor)

MD	Inc	Az	TVD	N.Offset	E.Offset	Northing	Easting	Name	Comment
(US ft)	(°)	(°)	(US ft)	(US ft)	(US ft)	(US ft)	(US ft)		
Weatherford International Limited									

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5D 7:5.9 : 19 November 2014, 19:05:37 UTC	