

Devon Energy Corporation

Project: Lea County, NM (NAD 83)
Site: Sec 32 T. 24 S., R.32E.
Well: Chincoteague 32 ST Com 5H
Wellbore: Wellbore #1

HALLIBURTON
Sperry Drilling

Plan: Plan#2 110714 RevA1 (Chincoteague 32 ST Com 5H/Wellbore #1)
HP212

WELL DETAILS: Chincoteague 32 ST Com 5H

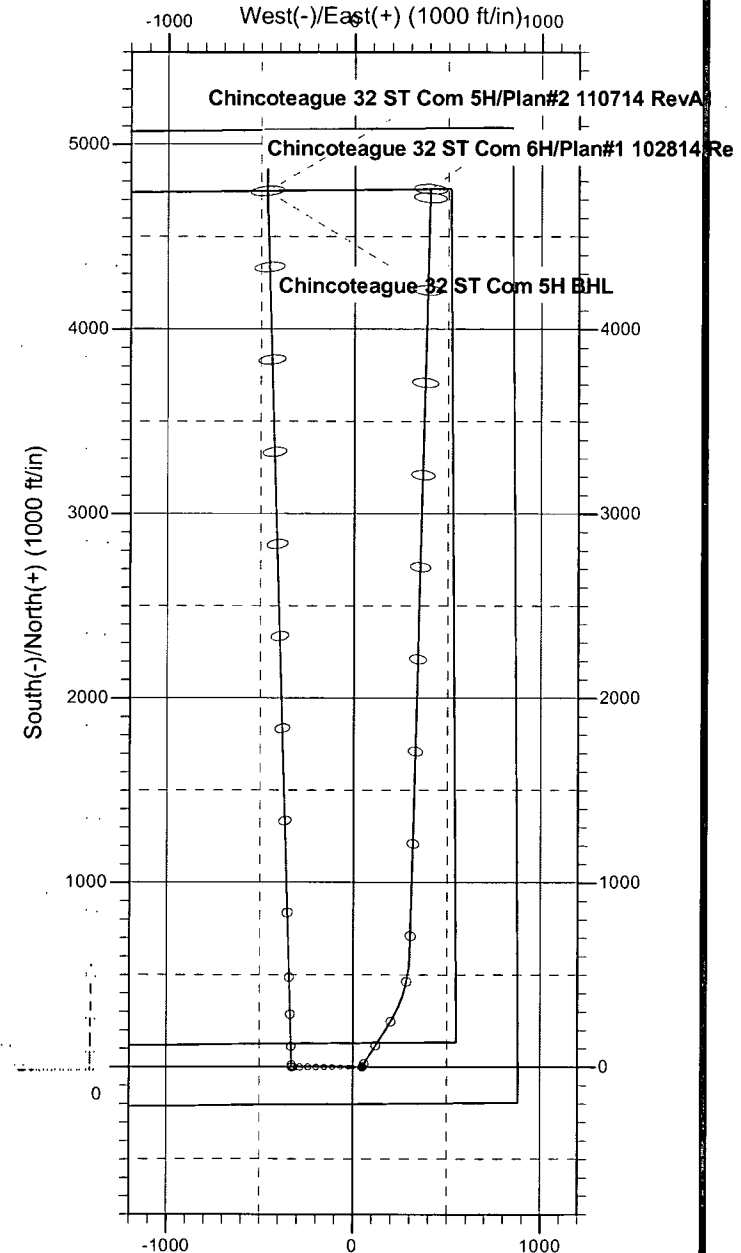
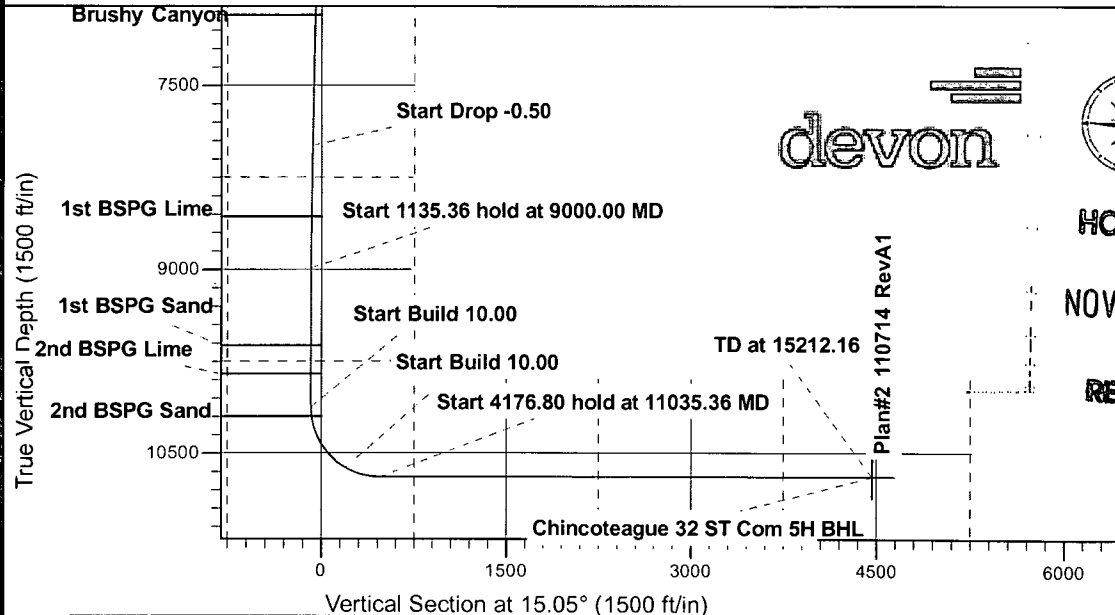
Ground Level:	3470.40
Northing	425164.88
Easting	740102.77
Latitude	32° 10' 2.012 N
Longitude	103° 41' 27.483 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	
5000.00	5.00	270.00	4999.37	0.00	-21.80	1.00	270.00	-5.66	
8000.00	5.00	270.00	7987.95	0.00	-283.27	0.00	0.00	-73.55	
9000.00	0.00	0.00	8986.68	0.00	-326.88	0.50	180.00	-84.88	
10135.36	0.00	0.00	10122.04	0.00	-326.88	0.00	0.00	-84.88	
10735.36	60.00	358.32	10618.24	286.36	-335.29	10.00	358.32	189.47	Chincoteague 32 ST Com 5H BHL
11035.36	90.00	358.32	10695.00	572.71	-343.71	10.00	0.00	463.82	
15212.16	90.00	358.32	10695.00	4747.71	-466.45	0.00	0.00	4463.74	Chincoteague 32 ST Com 5H BHL

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Chincoteague 32 ST Com 5H BHL	10695.00	4747.71	-466.45	Point



NOV 13 2014

Job#
HP212

Devon Energy Corporation

Lea County, NM (NAD 83) Sec 32 T. 24 S., R.32E.

API#

Chincoteague 32 ST Com 5H

200' FSL & 880' FEL

Wellbore #1

Plan: Plan#2 110714 RevA1

Sperry Drilling Services Combo Report

07 November, 2014

Well Coordinates: 32° 10' 02.01" N
103° 41' 27.48" W

North American Datum 1983
New Mexico Eastern Zone
425,164.88 N
740,102.77 E

Ground Level: 3,470.40 ft

Local Coordinate Origin:

Centered on Well Chincoteague 32 ST Com 5H

Viewing Datum:

well @ 3495.40ft (HP212)

TVDs to System:

N

North Reference:

Grid

Unit System:

API US New

Version: 5000.1 Build: 70

Report Version: Midcon Combo v1.50

HALLIBURTON

Plan Report for Chincoteague 32 ST Com 5H - Plan#2 110714 RevA1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
0.00	0.00	0.00	3,495.40	0.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
100.00	0.00	0.00	3,395.40	100.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
200.00	0.00	0.00	3,295.40	200.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
300.00	0.00	0.00	3,195.40	300.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
400.00	0.00	0.00	3,095.40	400.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
500.00	0.00	0.00	2,995.40	500.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
600.00	0.00	0.00	2,895.40	600.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
700.00	0.00	0.00	2,795.40	700.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
750.00	0.00	0.00	2,745.40	750.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	Rustler
800.00	0.00	0.00	2,695.40	800.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
900.00	0.00	0.00	2,595.40	900.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,000.00	0.00	0.00	2,495.40	1,000.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,050.00	0.00	0.00	2,445.40	1,050.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	Top of Salt
1,100.00	0.00	0.00	2,395.40	1,100.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,200.00	0.00	0.00	2,295.40	1,200.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,300.00	0.00	0.00	2,195.40	1,300.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,400.00	0.00	0.00	2,095.40	1,400.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,500.00	0.00	0.00	1,995.40	1,500.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,600.00	0.00	0.00	1,895.40	1,600.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,700.00	0.00	0.00	1,795.40	1,700.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,800.00	0.00	0.00	1,695.40	1,800.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
1,900.00	0.00	0.00	1,595.40	1,900.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,000.00	0.00	0.00	1,495.40	2,000.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,100.00	0.00	0.00	1,395.40	2,100.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,200.00	0.00	0.00	1,295.40	2,200.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,300.00	0.00	0.00	1,195.40	2,300.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,400.00	0.00	0.00	1,095.40	2,400.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,500.00	0.00	0.00	995.40	2,500.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,600.00	0.00	0.00	895.40	2,600.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,700.00	0.00	0.00	795.40	2,700.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,800.00	0.00	0.00	695.40	2,800.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
2,900.00	0.00	0.00	595.40	2,900.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,000.00	0.00	0.00	495.40	3,000.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,100.00	0.00	0.00	395.40	3,100.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,200.00	0.00	0.00	295.40	3,200.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,300.00	0.00	0.00	195.40	3,300.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,400.00	0.00	0.00	95.40	3,400.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,500.00	0.00	0.00	-4.60	3,500.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,600.00	0.00	0.00	-104.60	3,600.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,700.00	0.00	0.00	-204.60	3,700.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
3,800.00	0.00	0.00	-304.60	3,800.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	

Plan Report for Chincoteague 32 ST Com 5H - Plan#2 110714 RevA1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Easting (ft)	Map Coordinates Northing (usft)	Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
3,900.00	0.00	0.00	-404.60	3,900.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,000.00	0.00	0.00	-504.60	4,000.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,100.00	0.00	0.00	-604.60	4,100.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,200.00	0.00	0.00	-704.60	4,200.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,300.00	0.00	0.00	-804.60	4,300.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,390.00	0.00	0.00	-894.60	4,390.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	Base of Salt
4,400.00	0.00	0.00	-904.60	4,400.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	
4,500.00	0.00	0.00	-1,004.60	4,500.00	0.00 N	0.00 E	425,164.88	740,102.77	0.00	0.00	Start Build 1.00 - 9 5/8"
4,600.00	1.00	270.00	-1,104.60	4,599.99	0.00 N	0.87 W	425,164.88	740,101.90	1.00	-0.23	
4,665.02	1.65	270.00	-1,169.60	4,665.00	0.00 N	2.38 W	425,164.88	740,100.39	1.00	-0.62	Bell Canyon
4,700.00	2.00	270.00	-1,204.56	4,699.96	0.00 N	3.49 W	425,164.88	740,099.28	1.00	-0.91	
4,800.00	3.00	270.00	-1,304.47	4,799.86	0.00 N	7.85 W	425,164.88	740,094.92	1.00	-2.04	
4,900.00	4.00	270.00	-1,404.28	4,899.68	0.00 N	13.96 W	425,164.88	740,088.81	1.00	-3.62	
5,000.00	5.00	270.00	-1,503.97	4,999.37	0.00 N	21.80 W	425,164.88	740,080.97	1.00	-5.66	Start 3000.00 hold at 5000.00 MD
5,100.00	5.00	270.00	-1,603.59	5,098.99	0.00 N	30.52 W	425,164.88	740,072.25	0.00	-7.92	
5,200.00	5.00	270.00	-1,703.21	5,198.60	0.00 N	39.23 W	425,164.88	740,063.54	0.00	-10.19	
5,300.00	5.00	270.00	-1,802.83	5,298.22	0.00 N	47.95 W	425,164.88	740,054.82	0.00	-12.45	
5,400.00	5.00	270.00	-1,902.45	5,397.84	0.00 N	56.67 W	425,164.88	740,046.11	0.00	-14.71	
5,500.00	5.00	270.00	-2,002.07	5,497.46	0.00 N	65.38 W	425,164.88	740,037.39	0.00	-16.98	
5,572.81	5.00	270.00	-2,074.60	5,570.00	0.00 N	71.73 W	425,164.88	740,031.04	0.00	-18.62	Cherry Canyon
5,600.00	5.00	270.00	-2,101.69	5,597.08	0.00 N	74.10 W	425,164.88	740,028.67	0.00	-19.24	
5,700.00	5.00	270.00	-2,201.30	5,696.70	0.00 N	82.81 W	425,164.88	740,019.96	0.00	-21.50	
5,800.00	5.00	270.00	-2,300.92	5,796.32	0.00 N	91.53 W	425,164.88	740,011.24	0.00	-23.77	
5,900.00	5.00	270.00	-2,400.54	5,895.94	0.00 N	100.24 W	425,164.88	740,002.53	0.00	-26.03	
6,000.00	5.00	270.00	-2,500.16	5,995.56	0.00 N	108.96 W	425,164.88	739,993.81	0.00	-28.29	
6,100.00	5.00	270.00	-2,599.78	6,095.18	0.00 N	117.67 W	425,164.88	739,985.10	0.00	-30.56	
6,200.00	5.00	270.00	-2,699.40	6,194.80	0.00 N	126.39 W	425,164.88	739,976.38	0.00	-32.82	
6,300.00	5.00	270.00	-2,799.02	6,294.42	0.00 N	135.11 W	425,164.88	739,967.67	0.00	-35.08	
6,400.00	5.00	270.00	-2,898.64	6,394.04	0.00 N	143.82 W	425,164.88	739,958.95	0.00	-37.34	
6,500.00	5.00	270.00	-2,998.26	6,493.66	0.00 N	152.54 W	425,164.88	739,950.23	0.00	-39.61	
6,600.00	5.00	270.00	-3,097.88	6,593.28	0.00 N	161.25 W	425,164.88	739,941.52	0.00	-41.87	
6,700.00	5.00	270.00	-3,197.50	6,692.90	0.00 N	169.97 W	425,164.88	739,932.80	0.00	-44.13	
6,800.00	5.00	270.00	-3,297.12	6,792.52	0.00 N	178.68 W	425,164.88	739,924.09	0.00	-46.40	
6,900.00	5.00	270.00	-3,396.74	6,892.14	0.00 N	187.40 W	425,164.88	739,915.37	0.00	-48.66	
6,932.99	5.00	270.00	-3,429.60	6,925.00	0.00 N	190.27 W	425,164.88	739,912.50	0.00	-49.41	Brushy Canyon
7,000.00	5.00	270.00	-3,496.36	6,991.76	0.00 N	196.11 W	425,164.88	739,906.66	0.00	-50.92	
7,100.00	5.00	270.00	-3,595.98	7,091.37	0.00 N	204.83 W	425,164.88	739,897.94	0.00	-53.19	
7,200.00	5.00	270.00	-3,695.60	7,190.99	0.00 N	213.55 W	425,164.88	739,889.23	0.00	-55.45	
7,300.00	5.00	270.00	-3,795.22	7,290.61	0.00 N	222.26 W	425,164.88	739,880.51	0.00	-57.71	
7,400.00	5.00	270.00	-3,894.84	7,390.23	0.00 N	230.98 W	425,164.88	739,871.79	0.00	-59.98	
7,500.00	5.00	270.00	-3,994.46	7,489.85	0.00 N	239.69 W	425,164.88	739,863.08	0.00	-62.24	

Plan Report for Chincoteague 32 ST Com 5H - Plan#2 110714 RevA1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (usft)		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing	Easting	Northing	Easting			
7,600.00	5.00	270.00	-4,094.07	7,589.47	0.00 N	248.41 W	425,164.88	739,854.36	0.00	-64.50	
7,700.00	5.00	270.00	-4,193.69	7,689.09	0.00 N	257.12 W	425,164.88	739,845.65	0.00	-66.77	
7,800.00	5.00	270.00	-4,293.31	7,788.71	0.00 N	265.84 W	425,164.88	739,836.93	0.00	-69.03	
7,900.00	5.00	270.00	-4,392.93	7,888.33	0.00 N	274.55 W	425,164.88	739,828.22	0.00	-71.29	
8,000.00	5.00	270.00	-4,492.55	7,987.95	0.00 N	283.27 W	425,164.88	739,819.50	0.00	-73.55	Start Drop -0.50
8,100.00	4.50	270.00	-4,592.21	8,087.61	0.00 N	291.55 W	425,164.88	739,811.22	0.50	-75.70	
8,200.00	4.00	270.00	-4,691.93	8,187.33	0.00 N	298.96 W	425,164.88	739,803.81	0.50	-77.63	
8,300.00	3.50	270.00	-4,791.72	8,287.12	0.00 N	305.50 W	425,164.88	739,797.27	0.50	-79.33	
8,400.00	3.00	270.00	-4,891.56	8,386.96	0.00 N	311.17 W	425,164.88	739,791.60	0.50	-80.80	
8,500.00	2.50	270.00	-4,991.44	8,486.84	0.00 N	315.97 W	425,164.88	739,786.80	0.50	-82.05	
8,583.22	2.08	270.00	-5,074.60	8,570.00	0.00 N	319.30 W	425,164.88	739,783.47	0.50	-82.91	1st BSPG Lime
8,600.00	2.00	270.00	-5,091.37	8,586.76	0.00 N	319.89 W	425,164.88	739,782.88	0.50	-83.06	
8,700.00	1.50	270.00	-5,191.32	8,686.72	0.00 N	322.95 W	425,164.88	739,779.82	0.50	-83.86	
8,800.00	1.00	270.00	-5,291.29	8,786.69	0.00 N	325.13 W	425,164.88	739,777.64	0.50	-84.42	
8,900.00	0.50	270.00	-5,391.29	8,886.68	0.00 N	326.44 W	425,164.88	739,776.33	0.50	-84.76	
9,000.00	0.00	0.00	-5,491.29	8,986.68	0.00 N	326.88 W	425,164.88	739,775.90	0.50	-84.88	Start 1135.36 hold at 9000.00 MD
9,100.00	0.00	0.00	-5,591.28	9,086.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,200.00	0.00	0.00	-5,691.28	9,186.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,300.00	0.00	0.00	-5,791.28	9,286.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,400.00	0.00	0.00	-5,891.28	9,386.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,500.00	0.00	0.00	-5,991.28	9,486.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,600.00	0.00	0.00	-6,091.28	9,586.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,633.32	0.00	0.00	-6,124.60	9,620.00	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	1st BSPG Sand
9,700.00	0.00	0.00	-6,191.28	9,686.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,800.00	0.00	0.00	-6,291.28	9,786.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
9,863.32	0.00	0.00	-6,354.60	9,850.00	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	2nd BSPG Lime
9,900.00	0.00	0.00	-6,391.28	9,886.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
10,000.00	0.00	0.00	-6,491.28	9,986.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
10,100.00	0.00	0.00	-6,591.28	10,086.68	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	
10,135.36	0.00	0.00	-6,626.64	10,122.04	0.00 N	326.88 W	425,164.88	739,775.90	0.00	-84.88	Start Build 10.00
10,150.00	1.46	358.32	-6,641.28	10,136.68	0.19 N	326.88 W	425,165.07	739,775.89	10.00	-84.70	
10,200.00	6.46	358.32	-6,691.15	10,186.54	3.64 N	326.98 W	425,168.52	739,775.79	10.00	-81.39	
10,213.56	7.82	358.32	-6,704.60	10,200.00	5.33 N	327.03 W	425,170.21	739,775.74	10.00	-79.77	2nd BSPG Sand
10,250.00	11.46	358.32	-6,740.52	10,235.92	11.43 N	327.21 W	425,176.31	739,775.56	10.00	-73.93	
10,300.00	16.46	358.32	-6,789.03	10,284.42	23.48 N	327.57 W	425,188.36	739,775.20	10.00	-62.38	
10,350.00	21.46	358.32	-6,836.30	10,331.70	39.72 N	328.04 W	425,204.60	739,774.73	10.00	-46.82	
10,400.00	26.46	358.32	-6,881.97	10,377.37	60.01 N	328.64 W	425,224.89	739,774.13	10.00	-27.38	
10,450.00	31.46	358.32	-6,925.71	10,421.10	84.21 N	329.35 W	425,249.09	739,773.42	10.00	-4.20	
10,500.00	36.46	358.32	-6,967.16	10,462.56	112.12 N	330.17 W	425,277.00	739,772.60	10.00	22.54	
10,550.00	41.46	358.32	-7,006.03	10,501.42	143.54 N	331.10 W	425,308.42	739,771.68	10.00	52.64	
10,600.00	46.46	358.32	-7,042.00	10,537.40	178.22 N	332.12 W	425,343.10	739,770.66	10.00	85.87	

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Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
					Northing (ft)	Easting (ft)	Northing (usft)	Easting (usft)			
10,650.00	51.46	358.32	-7,074.82	10,570.22	215.91 N	333.22 W	425,380.79	739,769.55	10.00	121.98	
10,700.00	56.46	358.32	-7,104.23	10,599.62	256.31 N	334.41 W	425,421.19	739,768.36	10.00	160.69	
10,735.36	60.00	358.32	-7,122.84	10,618.24	286.36 N	335.29 W	425,451.24	739,767.48	10.00	189.47	Start Build 10.00
10,750.00	61.46	358.32	-7,130.00	10,625.39	299.12 N	335.67 W	425,464.00	739,767.10	10.00	201.70	
10,800.00	66.46	358.32	-7,151.94	10,647.33	344.01 N	336.99 W	425,508.89	739,765.78	10.00	244.71	
10,850.00	71.46	358.32	-7,169.88	10,665.28	390.65 N	338.36 W	425,555.53	739,764.41	10.00	289.39	
10,900.00	76.46	358.32	-7,183.69	10,679.08	438.66 N	339.77 W	425,603.54	739,763.00	10.00	335.39	
10,950.00	81.46	358.32	-7,193.26	10,688.65	487.70 N	341.21 W	425,652.58	739,761.56	10.00	382.37	
11,000.00	86.46	358.32	-7,198.51	10,693.91	537.39 N	342.67 W	425,702.27	739,760.10	10.00	429.98	
11,035.36	90.00	358.32	-7,199.60	10,695.00	572.71 N	343.71 W	425,737.59	739,759.06	10.00	463.82	Start 4176.80 hold at 11035.36 MD
11,100.00	90.00	358.32	-7,199.60	10,695.00	637.32 N	345.61 W	425,802.20	739,757.16	0.00	525.72	
11,200.00	90.00	358.32	-7,199.60	10,695.00	737.28 N	348.55 W	425,902.16	739,754.22	0.00	621.48	
11,300.00	90.00	358.32	-7,199.60	10,695.00	837.24 N	351.49 W	426,002.11	739,751.28	0.00	717.25	
11,400.00	90.00	358.32	-7,199.60	10,695.00	937.19 N	354.43 W	426,102.07	739,748.34	0.00	813.02	
11,500.00	90.00	358.32	-7,199.60	10,695.00	1,037.15 N	357.37 W	426,202.03	739,745.40	0.00	908.78	
11,600.00	90.00	358.32	-7,199.60	10,695.00	1,137.11 N	360.30 W	426,301.98	739,742.47	0.00	1,004.55	
11,700.00	90.00	358.32	-7,199.60	10,695.00	1,237.06 N	363.24 W	426,401.94	739,739.53	0.00	1,100.31	
11,800.00	90.00	358.32	-7,199.60	10,695.00	1,337.02 N	366.18 W	426,501.90	739,736.59	0.00	1,196.08	
11,900.00	90.00	358.32	-7,199.60	10,695.00	1,436.98 N	369.12 W	426,601.85	739,733.65	0.00	1,291.84	
12,000.00	90.00	358.32	-7,199.60	10,695.00	1,536.93 N	372.06 W	426,701.81	739,730.71	0.00	1,387.61	
12,100.00	90.00	358.32	-7,199.60	10,695.00	1,636.89 N	375.00 W	426,801.77	739,727.77	0.00	1,483.37	
12,200.00	90.00	358.32	-7,199.60	10,695.00	1,736.85 N	377.94 W	426,901.72	739,724.83	0.00	1,579.14	
12,300.00	90.00	358.32	-7,199.60	10,695.00	1,836.80 N	380.87 W	427,001.68	739,721.90	0.00	1,674.90	
12,400.00	90.00	358.32	-7,199.60	10,695.00	1,936.76 N	383.81 W	427,101.64	739,718.96	0.00	1,770.67	
12,500.00	90.00	358.32	-7,199.60	10,695.00	2,036.72 N	386.75 W	427,201.59	739,716.02	0.00	1,866.43	
12,600.00	90.00	358.32	-7,199.60	10,695.00	2,136.67 N	389.69 W	427,301.55	739,713.08	0.00	1,962.20	
12,700.00	90.00	358.32	-7,199.60	10,695.00	2,236.63 N	392.63 W	427,401.51	739,710.14	0.00	2,057.96	
12,800.00	90.00	358.32	-7,199.60	10,695.00	2,336.59 N	395.57 W	427,501.46	739,707.20	0.00	2,153.73	
12,900.00	90.00	358.32	-7,199.60	10,695.00	2,436.55 N	398.51 W	427,601.42	739,704.26	0.00	2,249.49	
13,000.00	90.00	358.32	-7,199.60	10,695.00	2,536.50 N	401.44 W	427,701.38	739,701.33	0.00	2,345.26	
13,100.00	90.00	358.32	-7,199.60	10,695.00	2,636.46 N	404.38 W	427,801.33	739,698.39	0.00	2,441.02	
13,200.00	90.00	358.32	-7,199.60	10,695.00	2,736.42 N	407.32 W	427,901.29	739,695.45	0.00	2,536.79	
13,300.00	90.00	358.32	-7,199.60	10,695.00	2,836.37 N	410.26 W	428,001.25	739,692.51	0.00	2,632.55	
13,400.00	90.00	358.32	-7,199.60	10,695.00	2,936.33 N	413.20 W	428,101.20	739,689.57	0.00	2,728.32	
13,500.00	90.00	358.32	-7,199.60	10,695.00	3,036.29 N	416.14 W	428,201.16	739,686.63	0.00	2,824.08	
13,600.00	90.00	358.32	-7,199.60	10,695.00	3,136.24 N	419.08 W	428,301.12	739,683.69	0.00	2,919.85	
13,700.00	90.00	358.32	-7,199.60	10,695.00	3,236.20 N	422.01 W	428,401.07	739,680.76	0.00	3,015.61	
13,800.00	90.00	358.32	-7,199.60	10,695.00	3,336.16 N	424.95 W	428,501.03	739,677.82	0.00	3,111.38	
13,900.00	90.00	358.32	-7,199.60	10,695.00	3,436.11 N	427.89 W	428,600.99	739,674.88	0.00	3,207.15	
14,000.00	90.00	358.32	-7,199.60	10,695.00	3,536.07 N	430.83 W	428,700.94	739,671.94	0.00	3,302.91	
14,100.00	90.00	358.32	-7,199.60	10,695.00	3,636.03 N	433.77 W	428,800.90	739,669.00	0.00	3,398.68	

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Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (ft)	Comments
14,200.00	90.00	358.32	-7,199.60	10,695.00	3,735.98 N	436.71 W	428,900.86	739,666.06	0.00	3,494.44	
14,300.00	90.00	358.32	-7,199.60	10,695.00	3,835.94 N	439.65 W	429,000.81	739,663.12	0.00	3,590.21	
14,400.00	90.00	358.32	-7,199.60	10,695.00	3,935.90 N	442.58 W	429,100.77	739,660.19	0.00	3,685.97	
14,500.00	90.00	358.32	-7,199.60	10,695.00	4,035.85 N	445.52 W	429,200.73	739,657.25	0.00	3,781.74	
14,600.00	90.00	358.32	-7,199.60	10,695.00	4,135.81 N	448.46 W	429,300.68	739,654.31	0.00	3,877.50	
14,700.00	90.00	358.32	-7,199.60	10,695.00	4,235.77 N	451.40 W	429,400.64	739,651.37	0.00	3,973.27	
14,800.00	90.00	358.32	-7,199.60	10,695.00	4,335.72 N	454.34 W	429,500.60	739,648.43	0.00	4,069.03	
14,900.00	90.00	358.32	-7,199.60	10,695.00	4,435.68 N	457.28 W	429,600.55	739,645.49	0.00	4,164.80	
15,000.00	90.00	358.32	-7,199.60	10,695.00	4,535.64 N	460.22 W	429,700.51	739,642.55	0.00	4,260.56	
15,100.00	90.00	358.32	-7,199.60	10,695.00	4,635.60 N	463.15 W	429,800.47	739,639.62	0.00	4,356.33	
15,200.00	90.00	358.32	-7,199.60	10,695.00	4,735.55 N	466.09 W	429,900.42	739,636.68	0.00	4,452.09	
15,212.16	90.00	358.32	-7,199.60	10,695.00	4,747.71 N	466.45 W	429,912.58	739,636.32	0.00	4,463.74	TD at 15212.16 - Chincoteague 32 ST Com 3H BHL - Chincoteague 32 ST Com 5H BHL

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,500.00	4,500.00	0.00	0.00	Start Build 1.00
5,000.00	4,999.37	0.00	-21.80	Start 3000.00 hold at 5000.00 MD
8,000.00	7,987.95	0.00	-283.27	Start Drop -0.50
9,000.00	8,986.68	0.00	-326.88	Start 1135.36 hold at 9000.00 MD
10,135.36	10,122.04	0.00	-326.88	Start Build 10.00
10,735.36	10,618.24	286.36	-335.29	Start Build 10.00
11,035.36	10,695.00	572.71	-343.71	Start 4176.80 hold at 11035.36 MD
15,212.16	10,695.00	4,747.71	-466.45	TD at 15212.16

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	15.05	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	15,212.16	Plan#2 110714 RevA1	MWD

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Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
4,500.00	4,500.00	9 5/8"	9-5/8	12-1/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	TVDSS (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
750.00	750.00	-2,745.40	Rustler		0.00	
1,050.00	1,050.00	-2,445.40	Top of Salt		0.00	
4,390.00	4,390.00	894.60	Base of Salt		0.00	
4,665.02	4,665.00	1,169.60	Bell Canyon		0.00	
5,572.81	5,570.00	2,074.60	Cherry Canyon		0.00	
6,932.99	6,925.00	3,429.60	Brushy Canyon		0.00	
8,583.22	8,570.00	5,074.60	1st BSPG Lime		0.00	
9,633.32	9,620.00	6,124.60	1st BSPG Sand		0.00	
9,863.32	9,850.00	6,354.60	2nd BSPG Lime		0.00	
10,213.56	10,200.00	6,704.60	2nd BSPG Sand		0.00	

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Chincoteague 32 ST Com 5H BHL ()									
- plan hits target center	0.00	0.00	10,695.00	4,747.71	-466.45	429,912.58	739,636.32	32° 10' 49.021 N	103° 41' 32.581 W
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	0.66 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 10,735.36 ft
Net Tortosity applicable to Plans:	0.66 °/100usft	Directional Difficulty Index:	6.014

Audit Info

SAP=346244

North Reference Sheet for Sec 32 T. 24 S., R.32E. - Chincoteague 32 ST Com 5H - Wellbore #1

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to well @ 3495.40ft (HP212). Northing and Easting are relative to Chincoteague 32 ST Com 5H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 0° 0' 0.000 N°

False Easting: 541,337.50usft, False Northing: 0.00usft, Scale Reduction: 0.99995434

Grid Coordinates of Well: 425,164.88 usft N, 740,102.77 usft E

Geographical Coordinates of Well: 32° 10' 02.01" N, 103° 41' 27.48" W

Grid Convergence at Surface is: 0.34°

Based upon Minimum Curvature type calculations, at a Measured Depth of 15,212.16ft

the Bottom Hole Displacement is 4,770.57ft in the Direction of 354.39° (Grid).

Magnetic Convergence at surface is: -7.04° (7 November 2014, . BGGM2014)

