



RECEIVED

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DISTRICT II-ARTESIA O.C.D.

Titus Oil & Gas Production, LLC

Eddy County, NM (NAD83-NME)

A01 Todd DSU

Todd 2-24S-31E State 434H - Slot 434H

434H

Plan: Plan #1-Rev0

Standard Planning Report

31 May, 2019

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Company:	Titus Oil & Gas Production, LLC	TVD Reference:	3508+25 @ 3533.00usft
Project:	Eddy County, NM (NAD83-NME)	MD Reference:	3508+25 @ 3533.00usft
Site:	A01 Todd DSU	North Reference:	Grid
Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Wellbore:	434H		
Design:	Plan #1-Rev0		

Project	Eddy County, NM (NAD83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	A01 Todd DSU		
Site Position:	Map	Northing:	451,484.10 usft
From:		Easting:	722,093.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Grid Convergence:	0.31 °

Well	Todd 2-24S-31E State 434H - Slot 434H		
Well Position	+N/-S	-44.70 usft	Northing:
	+E/-W	1.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
		Ground Level:	3,508.00 usft

Wellbore	434H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	5/30/2019	6.83
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,727.80667262

Design	Plan #1-Rev0		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			356.38

Plan Survey Tool Program	Date	5/31/2019
Depth From	Depth To	
(usft)	(usft)	
Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,930.04 Plan #1-Rev0 (434H)
		MWD
		MWD - Standard

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,631.22	1.97	237.98	1,631.19	-1.19	-1.91	1.50	1.50	0.00	237.98	
10,373.99	1.97	237.98	10,368.81	-160.39	-256.52	0.00	0.00	0.00	0.00	
10,505.21	0.00	0.00	10,500.00	-161.58	-258.43	1.50	-1.50	0.00	180.00	A01N06-EON (434H)
11,381.71	0.00	0.00	11,376.50	-161.58	-258.43	0.00	0.00	0.00	0.00	
12,283.11	90.14	356.25	11,949.46	411.55	-295.99	10.00	10.00	0.00	356.25	
12,459.27	90.14	359.77	11,949.02	587.58	-302.11	2.00	0.00	2.00	89.98	
16,930.55	90.14	359.77	11,938.00	5,058.80	-319.80	0.00	0.00	0.00	0.00	A01N06-PBHL (434H)

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Project:	Eddy County, NM (NAD83-NME)	MD Reference:	3508+25 @ 3533.00usft
Site:	A01 Todd DSU	North Reference:	Grid
Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Wellbore:	434H		
Design:	Plan #1-Rev0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	1.50	237.98	1,599.99	-0.69	-1.11	-0.62	1.50	1.50	0.00
1,631.22	1.97	237.98	1,631.19	-1.19	-1.91	-1.07	1.50	1.50	0.00
1,700.00	1.97	237.98	1,699.93	-2.45	-3.91	-2.20	0.00	0.00	0.00
1,800.00	1.97	237.98	1,799.87	-4.27	-6.83	-3.83	0.00	0.00	0.00
1,900.00	1.97	237.98	1,899.82	-6.09	-9.74	-5.46	0.00	0.00	0.00
2,000.00	1.97	237.98	1,999.76	-7.91	-12.65	-7.10	0.00	0.00	0.00
2,100.00	1.97	237.98	2,099.70	-9.73	-15.56	-8.73	0.00	0.00	0.00
2,200.00	1.97	237.98	2,199.64	-11.55	-18.48	-10.36	0.00	0.00	0.00
2,300.00	1.97	237.98	2,299.58	-13.37	-21.39	-12.00	0.00	0.00	0.00
2,400.00	1.97	237.98	2,399.52	-15.19	-24.30	-13.63	0.00	0.00	0.00
2,500.00	1.97	237.98	2,499.46	-17.01	-27.21	-15.26	0.00	0.00	0.00
2,600.00	1.97	237.98	2,599.40	-18.83	-30.12	-16.90	0.00	0.00	0.00
2,700.00	1.97	237.98	2,699.34	-20.66	-33.04	-18.53	0.00	0.00	0.00
2,800.00	1.97	237.98	2,799.28	-22.48	-35.95	-20.16	0.00	0.00	0.00
2,900.00	1.97	237.98	2,899.23	-24.30	-38.86	-21.80	0.00	0.00	0.00
3,000.00	1.97	237.98	2,999.17	-26.12	-41.77	-23.43	0.00	0.00	0.00
3,100.00	1.97	237.98	3,099.11	-27.94	-44.68	-25.06	0.00	0.00	0.00
3,200.00	1.97	237.98	3,199.05	-29.76	-47.60	-26.70	0.00	0.00	0.00
3,300.00	1.97	237.98	3,298.99	-31.58	-50.51	-28.33	0.00	0.00	0.00
3,400.00	1.97	237.98	3,398.93	-33.40	-53.42	-29.96	0.00	0.00	0.00
3,500.00	1.97	237.98	3,498.87	-35.22	-56.33	-31.60	0.00	0.00	0.00
3,600.00	1.97	237.98	3,598.81	-37.04	-59.25	-33.23	0.00	0.00	0.00
3,700.00	1.97	237.98	3,698.75	-38.86	-62.16	-34.86	0.00	0.00	0.00
3,800.00	1.97	237.98	3,798.69	-40.68	-65.07	-36.50	0.00	0.00	0.00
3,900.00	1.97	237.98	3,898.64	-42.51	-67.98	-38.13	0.00	0.00	0.00
4,000.00	1.97	237.98	3,998.58	-44.33	-70.89	-39.76	0.00	0.00	0.00
4,100.00	1.97	237.98	4,098.52	-46.15	-73.81	-41.40	0.00	0.00	0.00
4,200.00	1.97	237.98	4,198.46	-47.97	-76.72	-43.03	0.00	0.00	0.00
4,300.00	1.97	237.98	4,298.40	-49.79	-79.63	-44.67	0.00	0.00	0.00
4,400.00	1.97	237.98	4,398.34	-51.61	-82.54	-46.30	0.00	0.00	0.00
4,500.00	1.97	237.98	4,498.28	-53.43	-85.46	-47.93	0.00	0.00	0.00
4,600.00	1.97	237.98	4,598.22	-55.25	-88.37	-49.57	0.00	0.00	0.00
4,700.00	1.97	237.98	4,698.16	-57.07	-91.28	-51.20	0.00	0.00	0.00
4,800.00	1.97	237.98	4,798.10	-58.89	-94.19	-52.83	0.00	0.00	0.00
4,900.00	1.97	237.98	4,898.05	-60.71	-97.10	-54.47	0.00	0.00	0.00
5,000.00	1.97	237.98	4,997.99	-62.53	-100.02	-56.10	0.00	0.00	0.00
5,100.00	1.97	237.98	5,097.93	-64.36	-102.93	-57.73	0.00	0.00	0.00
5,200.00	1.97	237.98	5,197.87	-66.18	-105.84	-59.37	0.00	0.00	0.00

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5,300.00	1.97	237.98	5,297.81	-68.00	-108.75	-61.00	0.00	0.00	0.00
5,400.00	1.97	237.98	5,397.75	-69.82	-111.67	-62.63	0.00	0.00	0.00
5,500.00	1.97	237.98	5,497.69	-71.64	-114.58	-64.27	0.00	0.00	0.00
5,600.00	1.97	237.98	5,597.63	-73.46	-117.49	-65.90	0.00	0.00	0.00
5,700.00	1.97	237.98	5,697.57	-75.28	-120.40	-67.53	0.00	0.00	0.00
5,800.00	1.97	237.98	5,797.51	-77.10	-123.31	-69.17	0.00	0.00	0.00
5,900.00	1.97	237.98	5,897.46	-78.92	-126.23	-70.80	0.00	0.00	0.00
6,000.00	1.97	237.98	5,997.40	-80.74	-129.14	-72.43	0.00	0.00	0.00
6,100.00	1.97	237.98	6,097.34	-82.56	-132.05	-74.07	0.00	0.00	0.00
6,200.00	1.97	237.98	6,197.28	-84.38	-134.96	-75.70	0.00	0.00	0.00
6,300.00	1.97	237.98	6,297.22	-86.21	-137.88	-77.33	0.00	0.00	0.00
6,400.00	1.97	237.98	6,397.16	-88.03	-140.79	-78.97	0.00	0.00	0.00
6,500.00	1.97	237.98	6,497.10	-89.85	-143.70	-80.60	0.00	0.00	0.00
6,600.00	1.97	237.98	6,597.04	-91.67	-146.61	-82.24	0.00	0.00	0.00
6,700.00	1.97	237.98	6,696.98	-93.49	-149.52	-83.87	0.00	0.00	0.00
6,800.00	1.97	237.98	6,796.92	-95.31	-152.44	-85.50	0.00	0.00	0.00
6,900.00	1.97	237.98	6,896.87	-97.13	-155.35	-87.14	0.00	0.00	0.00
7,000.00	1.97	237.98	6,996.81	-98.95	-158.26	-88.77	0.00	0.00	0.00
7,100.00	1.97	237.98	7,096.75	-100.77	-161.17	-90.40	0.00	0.00	0.00
7,200.00	1.97	237.98	7,196.69	-102.59	-164.09	-92.04	0.00	0.00	0.00
7,300.00	1.97	237.98	7,296.63	-104.41	-167.00	-93.67	0.00	0.00	0.00
7,400.00	1.97	237.98	7,396.57	-106.23	-169.91	-95.30	0.00	0.00	0.00
7,500.00	1.97	237.98	7,496.51	-108.05	-172.82	-96.94	0.00	0.00	0.00
7,600.00	1.97	237.98	7,596.45	-109.88	-175.73	-98.57	0.00	0.00	0.00
7,700.00	1.97	237.98	7,696.39	-111.70	-178.65	-100.20	0.00	0.00	0.00
7,800.00	1.97	237.98	7,796.33	-113.52	-181.56	-101.84	0.00	0.00	0.00
7,900.00	1.97	237.98	7,896.28	-115.34	-184.47	-103.47	0.00	0.00	0.00
8,000.00	1.97	237.98	7,996.22	-117.16	-187.38	-105.10	0.00	0.00	0.00
8,100.00	1.97	237.98	8,096.16	-118.98	-190.30	-106.74	0.00	0.00	0.00
8,200.00	1.97	237.98	8,196.10	-120.80	-193.21	-108.37	0.00	0.00	0.00
8,300.00	1.97	237.98	8,296.04	-122.62	-196.12	-110.00	0.00	0.00	0.00
8,400.00	1.97	237.98	8,395.98	-124.44	-199.03	-111.64	0.00	0.00	0.00
8,500.00	1.97	237.98	8,495.92	-126.26	-201.94	-113.27	0.00	0.00	0.00
8,600.00	1.97	237.98	8,595.86	-128.08	-204.86	-114.90	0.00	0.00	0.00
8,700.00	1.97	237.98	8,695.80	-129.90	-207.77	-116.54	0.00	0.00	0.00
8,800.00	1.97	237.98	8,795.74	-131.73	-210.68	-118.17	0.00	0.00	0.00
8,900.00	1.97	237.98	8,895.69	-133.55	-213.59	-119.80	0.00	0.00	0.00
9,000.00	1.97	237.98	8,995.63	-135.37	-216.51	-121.44	0.00	0.00	0.00
9,100.00	1.97	237.98	9,095.57	-137.19	-219.42	-123.07	0.00	0.00	0.00
9,200.00	1.97	237.98	9,195.51	-139.01	-222.33	-124.71	0.00	0.00	0.00
9,300.00	1.97	237.98	9,295.45	-140.83	-225.24	-126.34	0.00	0.00	0.00
9,400.00	1.97	237.98	9,395.39	-142.65	-228.15	-127.97	0.00	0.00	0.00
9,500.00	1.97	237.98	9,495.33	-144.47	-231.07	-129.61	0.00	0.00	0.00
9,600.00	1.97	237.98	9,595.27	-146.29	-233.98	-131.24	0.00	0.00	0.00
9,700.00	1.97	237.98	9,695.21	-148.11	-236.89	-132.87	0.00	0.00	0.00
9,800.00	1.97	237.98	9,795.15	-149.93	-239.80	-134.51	0.00	0.00	0.00
9,900.00	1.97	237.98	9,895.10	-151.75	-242.72	-136.14	0.00	0.00	0.00
10,000.00	1.97	237.98	9,995.04	-153.58	-245.63	-137.77	0.00	0.00	0.00
10,100.00	1.97	237.98	10,094.98	-155.40	-248.54	-139.41	0.00	0.00	0.00
10,200.00	1.97	237.98	10,194.92	-157.22	-251.45	-141.04	0.00	0.00	0.00
10,300.00	1.97	237.98	10,294.86	-159.04	-254.36	-142.67	0.00	0.00	0.00
10,373.99	1.97	237.98	10,368.81	-160.39	-256.52	-143.88	0.00	0.00	0.00
10,400.00	1.58	237.98	10,394.80	-160.81	-257.20	-144.26	1.50	-1.50	0.00
10,505.21	0.00	0.00	10,500.00	-161.58	-258.43	-144.95	1.50	-1.50	0.00

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Wellbore:	434H		
Design:	Plan #1-Rev0		

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
A01N06-EON (434H)									
10,600.00	0.00	0.00	10,594.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
10,700.00	0.00	0.00	10,694.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
10,800.00	0.00	0.00	10,794.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
10,900.00	0.00	0.00	10,894.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
11,000.00	0.00	0.00	10,994.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
11,100.00	0.00	0.00	11,094.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
11,200.00	0.00	0.00	11,194.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
11,300.00	0.00	0.00	11,294.79	-161.58	-258.43	-144.95	0.00	0.00	0.00
11,381.71	0.00	0.00	11,376.50	-161.58	-258.43	-144.95	0.00	0.00	0.00
KOP: 11381.71' MD, 11376.50' TVD									
11,400.00	1.83	356.25	11,394.79	-161.29	-258.45	-144.66	10.00	10.00	0.00
11,450.00	6.83	356.25	11,444.63	-157.52	-258.70	-140.89	10.00	10.00	0.00
11,500.00	11.83	356.25	11,493.95	-149.44	-259.23	-132.79	10.00	10.00	0.00
11,550.00	16.83	356.25	11,542.38	-137.09	-260.03	-120.42	10.00	10.00	0.00
11,600.00	21.83	356.25	11,589.55	-120.59	-261.12	-103.87	10.00	10.00	0.00
11,650.00	26.83	356.25	11,635.09	-100.04	-262.46	-83.28	10.00	10.00	0.00
11,700.00	31.83	356.25	11,678.67	-75.61	-264.07	-58.80	10.00	10.00	0.00
11,750.00	36.83	356.25	11,719.95	-47.48	-265.91	-30.61	10.00	10.00	0.00
11,800.00	41.83	356.25	11,758.61	-15.87	-267.98	1.07	10.00	10.00	0.00
11,850.00	46.83	356.25	11,794.37	18.99	-270.26	36.00	10.00	10.00	0.00
11,900.00	51.83	356.25	11,826.94	56.82	-272.74	73.91	10.00	10.00	0.00
11,950.00	56.83	356.25	11,856.09	97.33	-275.40	114.52	10.00	10.00	0.00
12,000.00	61.83	356.25	11,881.59	140.23	-278.21	157.51	10.00	10.00	0.00
12,011.10	62.94	356.25	11,886.73	150.05	-278.86	167.34	10.00	10.00	0.00
A01N06-FTP (434H)									
12,050.00	66.83	356.25	11,903.24	185.19	-281.16	202.56	10.00	10.00	0.00
12,100.00	71.83	356.25	11,920.88	231.85	-284.22	249.32	10.00	10.00	0.00
12,150.00	76.83	356.25	11,934.39	279.88	-287.36	297.45	10.00	10.00	0.00
12,200.00	81.83	356.25	11,943.64	328.89	-290.58	346.57	10.00	10.00	0.00
12,250.00	86.83	356.25	11,948.58	378.53	-293.83	396.31	10.00	10.00	0.00
12,283.11	90.14	356.25	11,949.46	411.55	-295.99	429.40	10.00	10.00	0.00
EOC: 12283.11' MD, 11949.46' TVD									
12,300.00	90.14	356.59	11,949.42	428.41	-297.05	446.29	2.00	0.00	2.00
12,400.00	90.14	358.59	11,949.17	528.31	-301.26	546.27	2.00	0.00	2.00
12,459.27	90.14	359.77	11,949.02	587.58	-302.11	605.47	2.00	0.00	2.00
12,500.00	90.14	359.77	11,948.92	628.30	-302.27	646.12	0.00	0.00	0.00
12,600.00	90.14	359.77	11,948.68	728.30	-302.66	745.95	0.00	0.00	0.00
12,700.00	90.14	359.77	11,948.43	828.30	-303.06	845.77	0.00	0.00	0.00
12,800.00	90.14	359.77	11,948.18	928.30	-303.45	945.60	0.00	0.00	0.00
12,900.00	90.14	359.77	11,947.94	1,028.30	-303.85	1,045.42	0.00	0.00	0.00
13,000.00	90.14	359.77	11,947.69	1,128.30	-304.25	1,145.25	0.00	0.00	0.00
13,100.00	90.14	359.77	11,947.44	1,228.30	-304.64	1,245.07	0.00	0.00	0.00
13,200.00	90.14	359.77	11,947.20	1,328.30	-305.04	1,344.89	0.00	0.00	0.00
13,300.00	90.14	359.77	11,946.95	1,428.29	-305.43	1,444.72	0.00	0.00	0.00
13,400.00	90.14	359.77	11,946.70	1,528.29	-305.83	1,544.54	0.00	0.00	0.00
13,500.00	90.14	359.77	11,946.46	1,628.29	-306.22	1,644.37	0.00	0.00	0.00
13,600.00	90.14	359.77	11,946.21	1,728.29	-306.62	1,744.19	0.00	0.00	0.00
13,700.00	90.14	359.77	11,945.96	1,828.29	-307.02	1,844.02	0.00	0.00	0.00
13,800.00	90.14	359.77	11,945.72	1,928.29	-307.41	1,943.84	0.00	0.00	0.00
13,900.00	90.14	359.77	11,945.47	2,028.29	-307.81	2,043.67	0.00	0.00	0.00
14,000.00	90.14	359.77	11,945.23	2,128.29	-308.20	2,143.49	0.00	0.00	0.00
14,100.00	90.14	359.77	11,944.98	2,228.29	-308.60	2,243.32	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Company:	Titus Oil & Gas Production, LLC	TVD Reference:	3508+25 @ 3533.00usft
Project:	Eddy County, NM (NAD83-NME)	MD Reference:	3508+25 @ 3533.00usft
Site:	A01 Todd DSU	North Reference:	Grid
Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Wellbore:	434H		
Design:	Plan #1-Rev0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,200.00	90.14	359.77	11,944.73	2,328.29	-308.99	2,343.14	0.00	0.00	0.00
14,300.00	90.14	359.77	11,944.49	2,428.28	-309.39	2,442.97	0.00	0.00	0.00
14,400.00	90.14	359.77	11,944.24	2,528.28	-309.79	2,542.79	0.00	0.00	0.00
14,500.00	90.14	359.77	11,943.99	2,628.28	-310.18	2,642.62	0.00	0.00	0.00
14,600.00	90.14	359.77	11,943.75	2,728.28	-310.58	2,742.44	0.00	0.00	0.00
14,700.00	90.14	359.77	11,943.50	2,828.28	-310.97	2,842.26	0.00	0.00	0.00
14,800.00	90.14	359.77	11,943.25	2,928.28	-311.37	2,942.09	0.00	0.00	0.00
14,900.00	90.14	359.77	11,943.01	3,028.28	-311.76	3,041.91	0.00	0.00	0.00
15,000.00	90.14	359.77	11,942.76	3,128.28	-312.16	3,141.74	0.00	0.00	0.00
15,100.00	90.14	359.77	11,942.51	3,228.28	-312.56	3,241.56	0.00	0.00	0.00
15,200.00	90.14	359.77	11,942.27	3,328.27	-312.95	3,341.39	0.00	0.00	0.00
15,300.00	90.14	359.77	11,942.02	3,428.27	-313.35	3,441.21	0.00	0.00	0.00
15,400.00	90.14	359.77	11,941.77	3,528.27	-313.74	3,541.04	0.00	0.00	0.00
15,500.00	90.14	359.77	11,941.53	3,628.27	-314.14	3,640.86	0.00	0.00	0.00
15,600.00	90.14	359.77	11,941.28	3,728.27	-314.53	3,740.69	0.00	0.00	0.00
15,700.00	90.14	359.77	11,941.03	3,828.27	-314.93	3,840.51	0.00	0.00	0.00
15,800.00	90.14	359.77	11,940.79	3,928.27	-315.33	3,940.34	0.00	0.00	0.00
15,900.00	90.14	359.77	11,940.54	4,028.27	-315.72	4,040.16	0.00	0.00	0.00
16,000.00	90.14	359.77	11,940.29	4,128.27	-316.12	4,139.99	0.00	0.00	0.00
16,100.00	90.14	359.77	11,940.05	4,228.26	-316.51	4,239.81	0.00	0.00	0.00
16,200.00	90.14	359.77	11,939.80	4,328.26	-316.91	4,339.63	0.00	0.00	0.00
16,300.00	90.14	359.77	11,939.55	4,428.26	-317.30	4,439.46	0.00	0.00	0.00
16,400.00	90.14	359.77	11,939.31	4,528.26	-317.70	4,539.28	0.00	0.00	0.00
16,500.00	90.14	359.77	11,939.06	4,628.26	-318.10	4,639.11	0.00	0.00	0.00
16,600.00	90.14	359.77	11,938.82	4,728.26	-318.49	4,738.93	0.00	0.00	0.00
16,610.54	90.14	359.77	11,938.79	4,738.80	-318.53	4,749.46	0.00	0.00	0.00
A01N06-LTP (434H)									
16,700.00	90.14	359.77	11,938.57	4,828.26	-318.89	4,838.76	0.00	0.00	0.00
16,800.00	90.14	359.77	11,938.32	4,928.26	-319.28	4,938.58	0.00	0.00	0.00
16,900.00	90.14	359.77	11,938.08	5,028.26	-319.68	5,038.41	0.00	0.00	0.00
16,930.54	90.14	359.77	11,938.00	5,058.80	-319.80	5,068.89	0.00	0.00	0.00
TD: 16930.54' MD, 11938.00' TVD - A01N06-PBHL (434H)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
A01N06-EON (434H)	0.00	0.01	10,500.00	-161.58	-258.43	451,277.82	721,835.57	32.23929008	-103.74954219
- plan hits target center									
- Point									
A01N06-PBHL (434H)	0.00	0.00	11,938.00	5,058.80	-319.80	456,498.20	721,774.20	32.25364053	-103.74964890
- plan hits target center									
- Point									
A01N06-LTP (434H)	0.00	0.00	11,939.00	4,738.80	-318.60	456,178.20	721,775.40	32.25276092	-103.74965064
- plan misses target center by 0.22usft at 16610.54usft MD (11938.79 TVD, 4738.80 N, -318.53 E)									
- Point									
A01N06-FTP (434H)	0.00	0.00	11,950.00	118.20	-299.90	451,557.60	721,794.10	32.24005974	-103.74967140
- plan misses target center by 73.89usft at 12011.10usft MD (11886.73 TVD, 150.05 N, -278.86 E)									
- Point									

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Company:	Titus Oil & Gas Production, LLC	TVD Reference:	3508+25 @ 3533.00usft
Project:	Eddy County, NM (NAD83-NME)	MD Reference:	3508+25 @ 3533.00usft
Site:	A01 Todd DSU	North Reference:	Grid
Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Wellbore:	434H		
Design:	Plan #1-Rev0		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,381.71	11,376.50	-161.58	-258.43	KOP: 11381.71' MD, 11376.50' TVD
12,283.11	11,949.46	411.55	-295.99	EOC: 12283.11' MD, 11949.46' TVD
16,930.54	11,938.00	5,058.80	-319.80	TD: 16930.54' MD, 11938.00' TVD