

TITUS

OIL GAS LLC

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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

434H

Plan #1-Rev0

Anticollision Report

31 May, 2019

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Reference	Plan #1-Rev0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum separation factor of 12.00	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

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

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A01 Todd DSU						
Todd 2-24S-31E State 202H - 202H - Plan #1-Rev0	1,500.00	1,499.00	44.90	38.44	6.951 CC	
Todd 2-24S-31E State 202H - 202H - Plan #1-Rev0	1,600.00	1,599.31	45.24	38.37	6.585 ES	
Todd 2-24S-31E State 202H - 202H - Plan #1-Rev0	2,100.00	2,099.29	49.69	40.79	5.582 SF	
Todd 2-24S-31E State 203H - 203H - Plan #1-Rev0	1,500.00	1,499.00	75.32	68.86	11.660 CC, ES	
Todd 2-24S-31E State 203H - 203H - Plan #1-Rev0	1,600.00	1,597.76	77.41	70.54	11.272 SF	
Todd 2-24S-31E State 207H - 207H - Plan #1-Rev0	1,500.00	1,500.00	60.00	53.54	9.285 CC, ES	
Todd 2-24S-31E State 207H - 207H - Plan #1-Rev0	1,600.00	1,598.46	62.35	55.48	9.079 SF	
Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0	5,195.43	5,196.41	30.81	7.99	1.350 Level 3, CC	
Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0	6,100.00	6,100.91	32.86	5.81	1.215 Level 2, ES	
Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0	6,400.00	6,400.88	34.36	5.94	1.209 Level 2, SF	
Todd 2-24S-31E State 405H - 405H - Plan #1-Rev0	1,500.00	1,500.00	29.90	23.44	4.627 CC, ES	
Todd 2-24S-31E State 405H - 405H - Plan #1-Rev0	16,930.55	16,757.21	679.60	491.79	3.618 SF	

Offset Design		A01 Todd DSU - Todd 2-24S-31E State 202H - 202H - Plan #1-Rev0										Offset Site Error: 0.00 usft	
Survey Program: 0-MWD												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
900.00	900.00	899.00	899.00	1.88	1.88	-0.13	44.90	-0.10	44.90	41.14	3.76	11.933	
1,000.00	1,000.00	999.00	999.00	2.11	2.10	-0.13	44.90	-0.10	44.90	40.69	4.21	10.660	
1,100.00	1,100.00	1,099.00	1,099.00	2.33	2.33	-0.13	44.90	-0.10	44.90	40.24	4.66	9.632	
1,200.00	1,200.00	1,199.00	1,199.00	2.56	2.55	-0.13	44.90	-0.10	44.90	39.79	5.11	8.785	
1,300.00	1,300.00	1,299.00	1,299.00	2.78	2.78	-0.13	44.90	-0.10	44.90	39.34	5.56	8.075	
1,400.00	1,400.00	1,399.00	1,399.00	3.01	3.00	-0.13	44.90	-0.10	44.90	38.89	6.01	7.471	
1,500.00	1,500.00	1,499.00	1,499.00	3.23	3.23	-0.13	44.90	-0.10	44.90	38.44	6.46	6.951 CC	
1,600.00	1,599.99	1,599.31	1,599.30	3.43	3.44	121.72	44.55	-1.34	45.24	38.37	6.87	6.585 ES	
1,631.22	1,631.19	1,630.63	1,630.60	3.49	3.50	121.59	44.29	-2.25	45.49	38.50	6.99	6.508	
1,700.00	1,699.93	1,699.62	1,699.53	3.62	3.63	120.52	43.48	-5.12	45.95	38.69	7.25	6.336	
1,800.00	1,799.87	1,799.82	1,799.51	3.81	3.83	116.32	41.69	-11.42	46.20	38.55	7.64	6.043	
1,900.00	1,899.82	1,899.78	1,899.05	4.01	4.05	109.01	39.21	-20.20	46.49	38.43	8.05	5.772	
2,000.00	1,999.76	1,999.53	1,998.29	4.21	4.27	100.66	36.44	-29.97	47.61	39.14	8.47	5.618	
2,100.00	2,099.70	2,099.29	2,097.53	4.41	4.50	92.84	33.67	-39.75	49.69	40.79	8.90	5.582 SF	
2,200.00	2,199.64	2,199.05	2,196.77	4.62	4.74	85.77	30.90	-49.52	52.62	43.29	9.34	5.637	
2,300.00	2,299.58	2,298.81	2,296.00	4.83	4.98	79.52	28.13	-59.29	56.27	46.50	9.77	5.759	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

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Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
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A01 Todd DSU - Todd 2-24S-31E State 202H - 202H - Plan #1-Rev0															
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
2,400.00	2,399.52	2,398.56	2,395.24	5.04	5.23	74.09	25.36	-69.07	60.49	50.29	10.21	5.928			
2,500.00	2,499.46	2,498.32	2,494.48	5.25	5.48	69.40	22.59	-78.84	65.19	54.55	10.64	6.127			
2,600.00	2,599.40	2,598.08	2,593.72	5.46	5.74	65.37	19.82	-88.62	70.27	59.19	11.08	6.344			
2,700.00	2,699.34	2,697.84	2,692.96	5.68	6.00	61.89	17.05	-98.39	75.65	64.13	11.51	6.570			
2,800.00	2,799.28	2,797.59	2,792.20	5.90	6.26	58.88	14.28	-108.17	81.26	69.31	11.95	6.799			
2,900.00	2,899.23	2,897.35	2,891.44	6.12	6.52	56.27	11.51	-117.94	87.08	74.68	12.39	7.027			
3,000.00	2,999.17	2,997.11	2,990.67	6.34	6.79	53.98	8.74	-127.71	93.05	80.21	12.83	7.252			
3,100.00	3,099.11	3,096.87	3,089.91	6.56	7.06	51.98	5.97	-137.49	99.15	85.87	13.27	7.470			
3,200.00	3,199.05	3,196.62	3,189.15	6.78	7.33	50.21	3.21	-147.26	105.35	91.64	13.72	7.681			
3,300.00	3,298.99	3,296.38	3,288.39	7.00	7.60	48.63	0.44	-157.04	111.65	97.49	14.16	7.885			
3,400.00	3,398.93	3,396.14	3,387.63	7.23	7.88	47.23	-2.33	-166.81	118.02	103.42	14.60	8.081			
3,500.00	3,498.87	3,495.89	3,486.87	7.45	8.15	45.97	-5.10	-176.59	124.45	109.41	15.05	8.270			
3,600.00	3,598.81	3,595.65	3,586.11	7.67	8.43	44.83	-7.87	-186.36	130.94	115.45	15.50	8.450			
3,700.00	3,698.75	3,695.41	3,685.35	7.90	8.71	43.80	-10.64	-196.14	137.48	121.53	15.94	8.622			
3,800.00	3,798.69	3,795.17	3,784.58	8.12	8.99	42.87	-13.41	-205.91	144.05	127.66	16.39	8.787			
3,900.00	3,898.64	3,894.92	3,883.82	8.35	9.27	42.02	-16.18	-215.68	150.66	133.82	16.84	8.945			
4,000.00	3,998.58	3,994.68	3,983.06	8.58	9.55	41.24	-18.95	-225.46	157.30	140.01	17.29	9.096			
4,100.00	4,098.52	4,094.44	4,082.30	8.80	9.83	40.52	-21.72	-235.23	163.97	146.23	17.74	9.241			
4,200.00	4,198.46	4,194.20	4,181.54	9.03	10.11	39.86	-24.49	-245.01	170.66	152.47	18.20	9.379			
4,300.00	4,298.40	4,293.95	4,280.78	9.26	10.39	39.25	-27.26	-254.78	177.37	158.73	18.65	9.512			
4,400.00	4,398.34	4,393.71	4,380.02	9.49	10.67	38.68	-30.03	-264.56	184.10	165.00	19.10	9.639			
4,500.00	4,498.28	4,493.47	4,479.25	9.72	10.96	38.15	-32.79	-274.33	190.85	171.30	19.55	9.760			
4,600.00	4,598.22	4,593.22	4,578.49	9.95	11.24	37.66	-35.56	-284.10	197.61	177.61	20.01	9.877			
4,700.00	4,698.16	4,692.98	4,677.73	10.17	11.52	37.20	-38.33	-293.88	204.39	183.93	20.46	9.988			
4,800.00	4,798.10	4,792.74	4,776.97	10.40	11.81	36.77	-41.10	-303.65	211.18	190.26	20.92	10.096			
4,900.00	4,898.05	4,892.50	4,876.21	10.63	12.09	36.37	-43.87	-313.43	217.98	196.60	21.37	10.199			
5,000.00	4,997.99	4,992.25	4,975.45	10.86	12.38	35.99	-46.64	-323.20	224.78	202.96	21.83	10.298			
5,100.00	5,097.93	5,092.01	5,074.69	11.09	12.66	35.64	-49.41	-332.98	231.60	209.32	22.28	10.393			
5,200.00	5,197.87	5,191.77	5,173.93	11.32	12.95	35.30	-52.18	-342.75	238.43	215.69	22.74	10.484			
5,300.00	5,297.81	5,291.53	5,273.16	11.55	13.23	34.99	-54.95	-352.52	245.26	222.06	23.20	10.572			
5,400.00	5,397.75	5,391.28	5,372.40	11.78	13.52	34.69	-57.72	-362.30	252.10	228.45	23.66	10.657			
5,500.00	5,497.69	5,491.04	5,471.64	12.01	13.81	34.40	-60.49	-372.07	258.95	234.84	24.11	10.739			
5,600.00	5,597.63	5,590.80	5,570.88	12.24	14.09	34.13	-63.26	-381.85	265.80	241.23	24.57	10.818			
5,700.00	5,697.57	5,690.55	5,670.12	12.47	14.38	33.88	-66.03	-391.62	272.66	247.63	25.03	10.894			
5,800.00	5,797.51	5,790.31	5,769.36	12.71	14.67	33.64	-68.80	-401.40	279.53	254.04	25.49	10.967			
5,900.00	5,897.46	5,890.07	5,868.60	12.94	14.96	33.40	-71.56	-411.17	286.40	260.45	25.95	11.038			
6,000.00	5,997.40	5,989.83	5,967.83	13.17	15.24	33.18	-74.33	-420.94	293.27	266.87	26.40	11.107			
6,100.00	6,097.34	6,089.58	6,067.07	13.40	15.53	32.97	-77.10	-430.72	300.15	273.28	26.86	11.173			
6,200.00	6,197.28	6,189.34	6,166.31	13.63	15.82	32.77	-79.87	-440.49	307.03	279.71	27.32	11.237			
6,300.00	6,297.22	6,289.10	6,265.55	13.86	16.11	32.58	-82.64	-450.27	313.91	286.13	27.78	11.299			
6,400.00	6,397.16	6,388.86	6,364.79	14.09	16.39	32.40	-85.41	-460.04	320.80	292.56	28.24	11.359			
6,500.00	6,497.10	6,488.61	6,464.03	14.33	16.68	32.22	-88.18	-469.82	327.69	298.99	28.70	11.417			
6,600.00	6,597.04	6,588.37	6,563.27	14.56	16.97	32.05	-90.95	-479.59	334.59	305.43	29.16	11.474			
6,700.00	6,696.98	6,688.13	6,662.51	14.79	17.26	31.89	-93.72	-489.37	341.49	311.86	29.62	11.528			
6,800.00	6,796.92	6,787.89	6,761.74	15.02	17.55	31.73	-96.49	-499.14	348.39	318.30	30.08	11.581			
6,900.00	6,896.87	6,887.64	6,860.98	15.25	17.84	31.58	-99.26	-508.91	355.29	324.75	30.54	11.633			
7,000.00	6,996.81	6,987.40	6,960.22	15.48	18.13	31.44	-102.03	-518.69	362.19	331.19	31.00	11.682			
7,100.00	7,096.75	7,087.16	7,059.46	15.72	18.42	31.30	-104.80	-528.46	369.10	337.64	31.46	11.731			
7,200.00	7,196.69	7,186.91	7,158.70	15.95	18.70	31.17	-107.56	-538.24	376.01	344.08	31.92	11.778			
7,300.00	7,296.63	7,286.67	7,257.94	16.18	18.99	31.04	-110.33	-548.01	382.92	350.53	32.39	11.824			
7,400.00	7,396.57	7,386.43	7,357.18	16.41	19.28	30.92	-113.10	-557.79	389.83	356.98	32.85	11.868			
7,500.00	7,496.51	7,486.19	7,456.41	16.65	19.57	30.80	-115.87	-567.56	396.75	363.44	33.31	11.911			

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7,600.00	7,596.45	7,585.94	7,555.65	16.88	19.86	30.68	-118.64	-577.33	403.66	369.89	33.77	11.953		
7,700.00	7,696.39	7,685.70	7,654.89	17.11	20.15	30.57	-121.41	-587.11	410.58	376.35	34.23	11.994		
9,500.00	9,495.33	9,532.85	9,494.33	21.30	25.00	29.79	-164.36	-738.70	508.02	465.59	42.44	11.972		
9,600.00	9,595.27	9,632.79	9,594.27	21.54	25.17	29.98	-164.36	-738.70	505.04	462.18	42.86	11.783		
9,700.00	9,695.21	9,732.88	9,694.37	21.77	25.33	30.18	-164.33	-738.70	502.07	458.78	43.29	11.598		
9,800.00	9,795.15	9,833.69	9,794.31	22.00	25.48	31.72	-152.62	-738.75	498.95	455.20	43.75	11.405		
9,900.00	9,895.10	9,925.00	9,880.91	22.23	25.57	35.19	-124.14	-738.86	497.09	452.82	44.27	11.229		
9,903.95	9,899.05	9,928.51	9,884.12	22.24	25.57	35.36	-122.72	-738.87	497.09	452.80	44.29	11.224		
10,000.00	9,995.04	10,003.03	9,949.49	22.47	25.62	39.59	-87.11	-739.01	499.83	455.08	44.75	11.169		
10,100.00	10,094.98	10,066.90	10,000.54	22.70	25.64	44.03	-48.80	-739.17	510.69	465.68	45.01	11.347		
10,200.00	10,194.92	10,118.50	10,037.76	22.93	25.65	48.04	-13.10	-739.31	532.13	487.26	44.87	11.859		

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Offset Design A01 Todd DSU - Todd 2-24S-31E State 203H - 203H - Plan #1-Rev0													Offset Site Error: 0.00 usft
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1,600.00	1,599.99	1,597.76	1,597.75	3.43	3.43	175.76	45.07	61.31	77.41	70.54	6.87	11.272	SF
1,631.22	1,631.19	1,628.54	1,628.51	3.49	3.49	176.33	44.84	62.19	78.93	71.95	6.98	11.301	
1,700.00	1,699.93	1,696.22	1,696.14	3.62	3.63	177.97	44.09	64.97	83.17	75.93	7.24	11.485	
1,800.00	1,799.87	1,794.30	1,794.01	3.81	3.82	-178.95	42.45	71.04	90.94	83.32	7.62	11.933	

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Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:		0.00 usft
Survey Program: 0-MWD													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	89.90	0.10	60.00	60.00	54.89	5.11	11.734			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	89.90	0.10	60.00	60.00	54.44	5.56	10.786			
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	89.90	0.10	60.00	60.00	53.99	6.01	9.979			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	89.90	0.10	60.00	60.00	53.54	6.46	9.285 CC, ES			
1,600.00	1,599.99	1,598.46	1,598.45	3.43	3.43	-148.35	-0.26	61.22	62.35	55.48	6.87	9.079 SF			
1,631.22	1,631.19	1,629.15	1,629.12	3.49	3.49	-148.54	-0.52	62.09	64.04	57.06	6.98	9.170			
1,700.00	1,699.93	1,696.64	1,696.55	3.62	3.63	-148.84	-1.35	64.85	68.85	61.62	7.24	9.514			
1,800.00	1,799.87	1,795.06	1,794.78	3.81	3.82	-148.75	-3.12	70.78	77.78	70.17	7.61	10.217			
1,900.00	1,899.82	1,894.61	1,894.09	4.01	4.03	-148.57	-5.07	77.33	87.27	79.26	8.00	10.903			
2,000.00	1,999.76	1,994.16	1,993.41	4.21	4.24	-148.43	-7.03	83.88	96.75	88.35	8.40	11.516			

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	
A01 Todd DSU - Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0													0.00 usft	
Survey Program: 0-MWD													Offset Well Error:	
Reference				Offset		Semi Major Axis		Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)			
1,100.00	1,100.00	1,099.00	1,099.00	2.33	2.33	33.57	45.20	30.00	54.25	49.59	4.66	11.637		
1,200.00	1,200.00	1,199.00	1,199.00	2.56	2.55	33.57	45.20	30.00	54.25	49.14	5.11	10.614		
1,300.00	1,300.00	1,299.00	1,299.00	2.78	2.78	33.57	45.20	30.00	54.25	48.69	5.56	9.756		
1,400.00	1,400.00	1,399.00	1,399.00	3.01	3.00	33.57	45.20	30.00	54.25	48.24	6.01	9.026		
1,500.00	1,500.00	1,499.00	1,499.00	3.23	3.23	33.57	45.20	30.00	54.25	47.79	6.46	8.398		
1,600.00	1,599.99	1,600.27	1,600.26	3.43	3.44	155.53	44.56	28.85	54.29	47.42	6.87	7.904		
1,631.22	1,631.19	1,631.89	1,631.86	3.49	3.49	155.49	44.08	28.02	54.30	47.32	6.98	7.776		
1,700.00	1,699.93	1,701.26	1,701.17	3.62	3.63	155.10	42.64	25.44	53.84	46.60	7.24	7.438		
1,800.00	1,799.87	1,801.25	1,801.05	3.81	3.82	154.32	40.34	21.35	52.81	45.19	7.62	6.931		
1,900.00	1,899.82	1,901.24	1,900.93	4.01	4.02	153.50	38.05	17.27	51.79	43.78	8.01	6.466		
2,000.00	1,999.76	2,001.23	2,000.82	4.21	4.22	152.65	35.76	13.19	50.78	42.37	8.41	6.041		
2,100.00	2,099.70	2,101.23	2,100.70	4.41	4.43	151.77	33.46	9.11	49.78	40.97	8.81	5.651		
2,200.00	2,199.64	2,201.22	2,200.58	4.62	4.64	150.85	31.17	5.02	48.80	39.58	9.22	5.294		
2,300.00	2,299.58	2,301.21	2,300.46	4.83	4.85	149.90	28.88	0.94	47.82	38.19	9.63	4.966		
2,400.00	2,399.52	2,401.20	2,400.34	5.04	5.07	148.90	26.58	-3.14	46.86	36.82	10.05	4.664		
2,500.00	2,499.46	2,501.19	2,500.23	5.25	5.29	147.87	24.29	-7.22	45.92	35.45	10.47	4.386		
2,600.00	2,599.40	2,601.19	2,600.11	5.46	5.51	146.79	22.00	-11.30	44.99	34.09	10.90	4.129		
2,700.00	2,699.34	2,701.18	2,699.99	5.68	5.73	145.66	19.70	-15.39	44.08	32.75	11.33	3.892		
2,800.00	2,799.28	2,801.17	2,799.87	5.90	5.95	144.49	17.41	-19.47	43.18	31.43	11.76	3.673		
2,900.00	2,899.23	2,901.16	2,899.76	6.12	6.18	143.27	15.12	-23.55	42.31	30.12	12.19	3.470		
3,000.00	2,999.17	3,001.15	2,999.64	6.34	6.40	142.00	12.82	-27.63	41.45	28.82	12.63	3.282		
3,100.00	3,099.11	3,101.15	3,099.52	6.56	6.63	140.67	10.53	-31.72	40.62	27.55	13.07	3.107		
3,200.00	3,199.05	3,201.14	3,199.40	6.78	6.86	139.29	8.23	-35.80	39.81	26.29	13.52	2.945		
3,300.00	3,298.99	3,301.13	3,299.29	7.00	7.09	137.86	5.94	-39.88	39.02	25.06	13.96	2.795		
3,400.00	3,398.93	3,401.12	3,399.17	7.23	7.32	136.37	3.65	-43.96	38.26	23.85	14.41	2.655		
3,500.00	3,498.87	3,501.11	3,499.05	7.45	7.55	134.81	1.35	-48.04	37.52	22.66	14.86	2.525		
3,600.00	3,598.81	3,601.11	3,598.93	7.67	7.78	133.20	-0.94	-52.13	36.82	21.50	15.32	2.404		
3,700.00	3,698.75	3,701.10	3,698.82	7.90	8.01	131.52	-3.23	-56.21	36.14	20.37	15.77	2.291		
3,800.00	3,798.69	3,801.09	3,798.70	8.12	8.24	129.78	-5.53	-60.29	35.50	19.26	16.23	2.187		
3,900.00	3,898.64	3,901.08	3,898.58	8.35	8.48	127.98	-7.82	-64.37	34.89	18.19	16.69	2.090		
4,000.00	3,998.58	4,001.07	3,998.46	8.58	8.71	126.12	-10.11	-68.46	34.31	17.15	17.16	2.000		
4,100.00	4,098.52	4,101.07	4,098.34	8.80	8.94	124.19	-12.41	-72.54	33.78	16.15	17.62	1.916		
4,200.00	4,198.46	4,201.06	4,198.23	9.03	9.18	122.21	-14.70	-76.62	33.28	15.19	18.09	1.839		
4,300.00	4,298.40	4,301.05	4,298.11	9.26	9.41	120.17	-16.99	-80.70	32.82	14.26	18.56	1.768		
4,400.00	4,398.34	4,401.04	4,397.99	9.49	9.65	118.07	-19.29	-84.78	32.41	13.37	19.03	1.703		
4,500.00	4,498.28	4,501.03	4,497.87	9.72	9.88	115.92	-21.58	-88.87	32.04	12.53	19.51	1.642		
4,600.00	4,598.22	4,601.03	4,597.76	9.95	10.12	113.73	-23.87	-92.95	31.72	11.73	19.98	1.587		
4,700.00	4,698.16	4,701.02	4,697.64	10.17	10.35	111.49	-26.17	-97.03	31.44	10.98	20.46	1.537		
4,800.00	4,798.10	4,801.01	4,797.52	10.40	10.59	109.22	-28.46	-101.11	31.21	10.28	20.93	1.491 Level 3		
4,900.00	4,898.05	4,901.00	4,897.40	10.63	10.83	106.92	-30.75	-105.19	31.04	9.63	21.41	1.450 Level 3		
5,000.00	4,997.99	5,001.00	4,997.29	10.86	11.06	104.59	-33.05	-109.28	30.91	9.02	21.89	1.412 Level 3		
5,100.00	5,097.93	5,100.99	5,097.17	11.09	11.30	102.25	-35.34	-113.36	30.83	8.47	22.36	1.379 Level 3		
5,195.43	5,193.30	5,196.41	5,192.49	11.31	11.53	100.01	-37.53	-117.25	30.81	7.99	22.82	1.350 Level 3, CC		
5,200.00	5,197.87	5,200.98	5,197.05	11.32	11.54	99.90	-37.63	-117.44	30.81	7.97	22.84	1.349 Level 3		
5,300.00	5,297.81	5,300.97	5,296.93	11.55	11.77	97.56	-39.93	-121.52	30.84	7.53	23.31	1.323 Level 3		
5,400.00	5,397.75	5,400.96	5,396.81	11.78	12.01	95.22	-42.22	-125.61	30.92	7.13	23.79	1.300 Level 3		
5,500.00	5,497.69	5,500.96	5,496.70	12.01	12.25	92.89	-44.51	-129.69	31.05	6.79	24.26	1.280 Level 3		
5,600.00	5,597.63	5,600.95	5,596.58	12.24	12.49	90.59	-46.81	-133.77	31.23	6.50	24.73	1.263 Level 3		
5,700.00	5,697.57	5,700.94	5,696.46	12.47	12.72	88.32	-49.10	-137.85	31.46	6.27	25.20	1.249 Level 2		
5,800.00	5,797.51	5,800.93	5,796.34	12.71	12.96	86.09	-51.39	-141.93	31.74	6.08	25.66	1.237 Level 2		
5,900.00	5,897.46	5,900.92	5,896.23	12.94	13.20	83.90	-53.69	-146.02	32.07	5.94	26.13	1.227 Level 2		
6,000.00	5,997.40	6,000.92	5,996.11	13.17	13.44	81.76	-55.98	-150.10	32.44	5.85	26.59	1.220 Level 2		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.00 usft
A01 Todd DSU - Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0														Offset Well Error:	0.00 usft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
6,100.00	6,097.34	6,100.91	6,095.99	13.40	13.68	79.67	-58.27	-154.18	32.86	5.81	27.05	1.215	Level 2, ES		
6,200.00	6,197.28	6,200.90	6,195.87	13.63	13.92	77.63	-60.57	-158.26	33.32	5.81	27.51	1.211	Level 2		
6,300.00	6,297.22	6,300.89	6,295.76	13.86	14.15	75.65	-62.86	-162.35	33.82	5.85	27.97	1.209	Level 2		
6,400.00	6,397.16	6,400.88	6,395.64	14.09	14.39	73.73	-65.15	-166.43	34.36	5.94	28.42	1.209	Level 2, SF		
6,500.00	6,497.10	6,500.88	6,495.52	14.33	14.63	71.87	-67.45	-170.51	34.94	6.06	28.88	1.210	Level 2		
6,600.00	6,597.04	6,600.87	6,595.40	14.56	14.87	70.08	-69.74	-174.59	35.55	6.23	29.33	1.212	Level 2		
6,700.00	6,696.98	6,700.86	6,695.29	14.79	15.11	68.35	-72.03	-178.67	36.20	6.42	29.78	1.216	Level 2		
6,800.00	6,796.92	6,800.85	6,795.17	15.02	15.35	66.68	-74.33	-182.76	36.88	6.65	30.23	1.220	Level 2		
6,900.00	6,896.87	6,900.84	6,895.05	15.25	15.59	65.07	-76.62	-186.84	37.59	6.91	30.68	1.225	Level 2		
7,000.00	6,996.81	7,000.84	6,994.93	15.48	15.83	63.52	-78.91	-190.92	38.33	7.20	31.12	1.231	Level 2		
7,100.00	7,096.75	7,100.83	7,094.81	15.72	16.07	62.03	-81.21	-195.00	39.09	7.52	31.57	1.238	Level 2		
7,200.00	7,196.69	7,200.82	7,194.70	15.95	16.30	60.60	-83.50	-199.09	39.88	7.87	32.01	1.246	Level 2		
7,300.00	7,296.63	7,300.81	7,294.58	16.18	16.54	59.23	-85.79	-203.17	40.69	8.23	32.46	1.254	Level 3		
7,400.00	7,396.57	7,400.80	7,394.46	16.41	16.78	57.91	-88.09	-207.25	41.53	8.63	32.90	1.262	Level 3		
7,500.00	7,496.51	7,500.80	7,494.34	16.65	17.02	56.64	-90.38	-211.33	42.39	9.04	33.35	1.271	Level 3		
7,600.00	7,596.45	7,600.79	7,594.23	16.88	17.26	55.42	-92.67	-215.41	43.27	9.47	33.79	1.280	Level 3		
7,700.00	7,696.39	7,700.78	7,694.11	17.11	17.50	54.26	-94.97	-219.50	44.16	9.93	34.24	1.290	Level 3		
7,800.00	7,796.33	7,800.77	7,793.99	17.34	17.74	53.14	-97.26	-223.58	45.07	10.40	34.68	1.300	Level 3		
7,900.00	7,896.28	7,900.76	7,893.87	17.58	17.98	52.06	-99.55	-227.66	46.00	10.88	35.12	1.310	Level 3		
8,000.00	7,996.22	8,000.76	7,993.76	17.81	18.22	51.03	-101.85	-231.74	46.95	11.38	35.57	1.320	Level 3		
8,100.00	8,096.16	8,100.75	8,093.64	18.04	18.46	50.04	-104.14	-235.83	47.91	11.90	36.01	1.331	Level 3		
8,200.00	8,196.10	8,200.74	8,193.52	18.27	18.70	49.08	-106.43	-239.91	48.88	12.43	36.45	1.341	Level 3		
8,300.00	8,296.04	8,300.73	8,293.40	18.51	18.94	48.17	-108.73	-243.99	49.87	12.98	36.90	1.352	Level 3		
8,400.00	8,395.98	8,400.72	8,393.28	18.74	19.18	47.29	-111.02	-248.07	50.87	13.53	37.34	1.362	Level 3		
8,500.00	8,495.92	8,500.72	8,493.17	18.97	19.42	46.45	-113.31	-252.15	51.88	14.10	37.78	1.373	Level 3		
8,600.00	8,595.86	8,600.71	8,593.05	19.20	19.66	45.63	-115.61	-256.24	52.90	14.68	38.23	1.384	Level 3		
8,700.00	8,695.80	8,700.70	8,692.93	19.44	19.90	44.85	-117.90	-260.32	53.94	15.27	38.67	1.395	Level 3		
8,800.00	8,795.74	8,800.69	8,792.81	19.67	20.14	44.10	-120.19	-264.40	54.98	15.86	39.11	1.406	Level 3		
8,900.00	8,895.69	8,900.68	8,892.70	19.90	20.38	43.38	-122.49	-268.48	56.03	16.47	39.56	1.416	Level 3		
9,000.00	8,995.63	9,000.68	8,992.58	20.14	20.62	42.68	-124.78	-272.56	57.09	17.08	40.00	1.427	Level 3		
9,100.00	9,095.57	9,100.67	9,092.46	20.37	20.86	42.01	-127.07	-276.65	58.15	17.71	40.45	1.438	Level 3		
9,200.00	9,195.51	9,200.66	9,192.34	20.60	21.10	41.36	-129.37	-280.73	59.23	18.34	40.89	1.448	Level 3		
9,300.00	9,295.45	9,300.65	9,292.23	20.84	21.34	40.73	-131.66	-284.81	60.31	18.97	41.34	1.459	Level 3		
9,400.00	9,395.39	9,400.64	9,392.11	21.07	21.58	40.13	-133.95	-288.89	61.40	19.62	41.78	1.470	Level 3		
9,500.00	9,495.33	9,500.64	9,491.99	21.30	21.82	39.55	-136.25	-292.98	62.50	20.27	42.23	1.480	Level 3		
9,600.00	9,595.27	9,600.63	9,591.87	21.54	22.06	38.99	-138.54	-297.06	63.60	20.93	42.67	1.490	Level 3		
9,700.00	9,695.21	9,700.62	9,691.76	21.77	22.30	38.45	-140.83	-301.14	64.71	21.59	43.12	1.501			
9,800.00	9,795.15	9,800.61	9,791.64	22.00	22.55	37.92	-143.13	-305.22	65.82	22.26	43.56	1.511			
9,900.00	9,895.10	9,900.60	9,891.52	22.23	22.79	37.42	-145.42	-309.30	66.94	22.93	44.01	1.521			
10,000.00	9,995.04	10,000.60	9,991.40	22.47	23.03	36.93	-147.71	-313.39	68.06	23.61	44.46	1.531			
10,100.00	10,094.98	10,100.59	10,091.28	22.70	23.27	36.46	-150.01	-317.47	69.19	24.29	44.90	1.541			
10,200.00	10,194.92	10,200.58	10,191.17	22.93	23.51	36.00	-152.30	-321.55	70.32	24.97	45.35	1.551			
10,300.00	10,294.86	10,300.57	10,291.05	23.17	23.75	35.55	-154.59	-325.63	71.46	25.67	45.80	1.560			
10,373.99	10,368.81	10,374.56	10,364.95	23.34	23.93	35.23	-156.29	-328.65	72.31	26.18	46.13	1.568			
10,400.00	10,394.80	10,400.56	10,390.93	23.39	23.99	35.09	-156.89	-329.72	72.68	26.44	46.24	1.572			
10,505.21	10,500.00	10,505.71	10,495.96	23.59	24.24	-88.27	-159.30	-334.01	75.67	29.03	46.64	1.622			
10,600.00	10,594.79	10,601.67	10,591.85	23.78	24.45	-89.71	-161.18	-337.35	78.95	31.96	46.99	1.680			
10,700.00	10,694.79	10,703.52	10,693.67	23.96	24.64	-90.25	-161.93	-338.69	80.26	32.91	47.35	1.695			
10,800.00	10,794.79	10,803.63	10,793.79	24.15	24.83	-90.25	-161.93	-338.69	80.26	32.53	47.73	1.682			
10,900.00	10,894.79	10,903.63	10,893.79	24.34	25.01	-90.25	-161.93	-338.69	80.26	32.15	48.11	1.668			
11,000.00	10,994.79	11,003.63	10,993.79	24.53	25.20	-90.25	-161.93	-338.69	80.26	31.77	48.49	1.655			
11,100.00	11,094.79	11,103.87	11,094.01	24.72	25.38	-89.57	-160.98	-338.64	80.21	31.33	48.88	1.641			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:		0.00 usft
Survey Program: 0-MWD											Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,141.45	11,136.24	11,145.29	11,135.24	24.79	25.44	-86.80	-157.11	-338.42	80.12	31.00	49.11	1.631	
11,200.00	11,194.79	11,202.40	11,191.40	24.90	25.53	-79.54	-146.92	-337.85	80.80	31.27	49.53	1.631	
11,300.00	11,294.79	11,293.65	11,278.24	25.09	25.63	-61.45	-119.22	-336.30	90.00	39.99	50.01	1.800	
11,381.71	11,376.50	11,360.52	11,338.49	25.25	25.68	-46.96	-90.36	-334.69	110.71	61.24	49.47	2.238	
11,400.00	11,394.79	11,374.57	11,350.70	25.28	25.69	-40.04	-83.42	-334.30	116.94	67.69	49.24	2.375	
11,450.00	11,444.63	11,412.33	11,382.63	25.37	25.72	-32.88	-63.29	-333.18	134.71	86.21	48.50	2.777	
11,500.00	11,493.95	11,450.00	11,413.09	25.46	25.74	-27.32	-41.18	-331.94	152.93	105.19	47.74	3.204	
11,550.00	11,542.38	11,485.42	11,440.34	25.54	25.75	-23.13	-18.59	-330.68	171.00	124.18	46.83	3.652	
11,600.00	11,589.55	11,520.95	11,466.22	25.61	25.76	-19.74	5.70	-329.32	188.58	142.62	45.96	4.103	
11,650.00	11,635.09	11,550.00	11,486.23	25.67	25.77	-17.33	26.72	-328.14	205.54	160.80	44.74	4.594	
11,700.00	11,678.67	11,590.38	11,512.21	25.73	25.78	-14.72	57.57	-326.42	221.36	177.09	44.27	5.001	
11,750.00	11,719.95	11,624.41	11,532.38	25.78	25.78	-12.81	84.94	-324.89	236.26	192.80	43.46	5.436	
11,800.00	11,758.61	11,658.06	11,550.68	25.83	25.79	-11.18	113.13	-323.31	250.04	207.34	42.70	5.856	
11,850.00	11,794.37	11,691.39	11,567.15	25.87	25.79	-9.77	142.05	-321.69	262.61	220.62	41.99	6.254	
11,900.00	11,826.94	11,724.44	11,581.79	25.91	25.80	-8.53	171.63	-320.04	273.92	232.58	41.34	6.626	
11,950.00	11,856.09	11,750.00	11,591.92	25.95	25.81	-7.63	195.06	-318.73	284.05	243.51	40.54	7.007	
12,000.00	11,881.59	11,789.84	11,605.60	26.02	25.85	-6.43	232.40	-316.64	292.55	252.28	40.27	7.264	
12,050.00	11,903.24	11,822.27	11,614.80	26.16	25.93	-5.51	263.45	-314.91	299.81	259.94	39.87	7.519	
12,100.00	11,920.88	11,850.00	11,621.26	26.36	26.02	-4.78	290.37	-313.40	305.70	266.20	39.50	7.740	
12,150.00	11,934.39	11,886.74	11,627.80	26.58	26.18	-3.88	326.47	-311.38	310.05	270.69	39.37	7.876	
12,200.00	11,943.64	11,918.85	11,631.60	26.83	26.33	-3.13	358.30	-309.60	313.01	273.74	39.27	7.970	
12,250.00	11,948.58	11,950.00	11,633.58	27.10	26.48	-2.42	389.33	-307.87	314.50	275.22	39.29	8.005	
12,283.11	11,949.46	11,973.34	11,633.95	27.29	26.60	-1.91	412.63	-306.57	314.68	275.33	39.35	7.997	
12,300.00	11,949.42	11,988.20	11,633.89	27.39	26.67	-1.60	427.47	-305.78	314.65	275.26	39.39	7.989	
12,322.81	11,949.36	12,010.83	11,633.79	27.53	26.78	-1.17	450.08	-304.72	314.64	275.20	39.43	7.979	
12,400.00	11,949.17	12,087.74	11,633.45	28.00	27.17	-0.23	526.95	-302.46	314.72	275.10	39.62	7.943	
12,459.27	11,949.02	12,146.99	11,633.19	28.41	27.51	-0.01	586.19	-302.13	314.83	275.02	39.81	7.908	
12,500.00	11,948.92	12,187.72	11,633.01	28.71	27.79	-0.01	626.92	-302.29	314.91	274.95	39.96	7.881	
12,600.00	11,948.68	12,287.72	11,632.57	29.52	28.57	-0.01	726.92	-302.69	315.11	274.75	40.35	7.809	
12,700.00	11,948.43	12,387.72	11,632.14	30.42	29.44	-0.01	826.92	-303.08	315.30	274.50	40.79	7.729	
12,800.00	11,948.18	12,487.72	11,631.70	31.40	30.40	-0.01	926.92	-303.48	315.49	274.21	41.28	7.642	
12,900.00	11,947.94	12,587.72	11,631.26	32.45	31.43	-0.01	1,026.91	-303.87	315.68	273.86	41.82	7.549	
13,000.00	11,947.69	12,687.72	11,630.82	33.57	32.54	0.00	1,126.91	-304.27	315.87	273.48	42.40	7.450	
13,100.00	11,947.44	12,787.72	11,630.38	34.75	33.70	0.00	1,226.91	-304.66	316.07	273.05	43.02	7.347	
13,200.00	11,947.20	12,887.72	11,629.94	35.98	34.93	0.00	1,326.91	-305.06	316.26	272.58	43.68	7.240	
13,300.00	11,946.95	12,987.72	11,629.50	37.26	36.20	0.00	1,426.91	-305.45	316.45	272.07	44.38	7.130	
13,400.00	11,946.70	13,087.72	11,629.06	38.59	37.52	0.00	1,526.90	-305.85	316.64	271.53	45.12	7.018	
13,500.00	11,946.46	13,187.72	11,628.62	39.95	38.88	0.00	1,626.90	-306.24	316.84	270.95	45.89	6.904	
13,600.00	11,946.21	13,287.72	11,628.19	41.35	40.28	0.00	1,726.90	-306.64	317.03	270.33	46.70	6.789	
13,700.00	11,945.96	13,387.72	11,627.75	42.79	41.71	0.00	1,826.90	-307.03	317.22	269.69	47.53	6.674	
13,800.00	11,945.72	13,487.72	11,627.31	44.25	43.17	0.00	1,926.90	-307.43	317.41	269.01	48.40	6.558	
13,900.00	11,945.47	13,587.72	11,626.87	45.74	44.66	0.00	2,026.89	-307.82	317.61	268.31	49.30	6.443	
14,000.00	11,945.23	13,687.71	11,626.43	47.25	46.17	0.00	2,126.89	-308.22	317.80	267.58	50.22	6.328	
14,100.00	11,944.98	13,787.71	11,625.99	48.78	47.71	0.00	2,226.89	-308.61	317.99	266.82	51.17	6.215	
14,200.00	11,944.73	13,887.71	11,625.55	50.34	49.26	0.00	2,326.89	-309.01	318.18	266.05	52.14	6.103	
14,300.00	11,944.49	13,987.71	11,625.11	51.91	50.83	0.00	2,426.89	-309.40	318.38	265.24	53.13	5.992	
14,400.00	11,944.24	14,087.71	11,624.67	53.50	52.42	0.00	2,526.88	-309.80	318.57	264.42	54.15	5.883	
14,500.00	11,943.99	14,187.71	11,624.23	55.10	54.03	0.00	2,626.88	-310.19	318.76	263.58	55.19	5.776	
14,600.00	11,943.75	14,287.71	11,623.80	56.72	55.65	0.00	2,726.88	-310.59	318.95	262.71	56.24	5.671	
14,700.00	11,943.50	14,387.71	11,623.36	58.34	57.28	0.00	2,826.88	-310.98	319.15	261.83	57.31	5.568	
14,800.00	11,943.25	14,487.71	11,622.92	59.99	58.92	0.00	2,926.88	-311.38	319.34	260.93	58.41	5.468	
14,900.00	11,943.01	14,587.71	11,622.48	61.64	60.58	0.00	3,026.87	-311.77	319.53	260.02	59.51	5.369	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error: 0.00 usft	
Survey Program: 0-MWD														Offset Well Error: 0.00 usft	
A01 Todd DSU - Todd 2-24S-31E State 304H - 304H - Plan #1-Rev0															
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,000.00	11,942.76	14,687.71	11,622.04	63.30	62.24	0.00	3,126.87	-312.17	319.72	259.09	60.63	5.273			
15,100.00	11,942.51	14,787.71	11,621.60	64.97	63.91	0.00	3,226.87	-312.56	319.92	258.14	61.77	5.179			
15,200.00	11,942.27	14,887.71	11,621.16	66.65	65.59	0.00	3,326.87	-312.96	320.11	257.19	62.92	5.087			
15,300.00	11,942.02	14,987.71	11,620.72	68.33	67.28	0.00	3,426.87	-313.35	320.30	256.22	64.08	4.998			
15,400.00	11,941.77	15,087.71	11,620.28	70.03	68.98	0.00	3,526.87	-313.75	320.49	255.23	65.26	4.911			
15,500.00	11,941.53	15,187.71	11,619.85	71.73	70.68	0.00	3,626.86	-314.14	320.68	254.24	66.45	4.826			
15,600.00	11,941.28	15,287.71	11,619.41	73.43	72.39	0.00	3,726.86	-314.54	320.88	253.23	67.64	4.744			
15,700.00	11,941.03	15,387.71	11,618.97	75.15	74.11	0.00	3,826.86	-314.93	321.07	252.22	68.85	4.663			
15,800.00	11,940.79	15,487.71	11,618.53	76.86	75.83	0.00	3,926.86	-315.33	321.26	251.19	70.07	4.585			
15,900.00	11,940.54	15,587.71	11,618.09	78.59	77.55	0.00	4,026.86	-315.72	321.45	250.16	71.30	4.509			
16,000.00	11,940.29	15,687.71	11,617.65	80.31	79.28	0.00	4,126.85	-316.12	321.65	249.11	72.54	4.434			
16,100.00	11,940.05	15,787.71	11,617.21	82.05	81.01	0.00	4,226.85	-316.51	321.84	248.06	73.78	4.362			
16,200.00	11,939.80	15,887.71	11,616.77	83.78	82.75	0.00	4,326.85	-316.91	322.03	247.00	75.03	4.292			
16,300.00	11,939.55	15,987.71	11,616.33	85.52	84.49	0.00	4,426.85	-317.30	322.22	245.93	76.29	4.223			
16,400.00	11,939.31	16,087.71	11,615.90	87.27	86.24	0.00	4,526.85	-317.70	322.42	244.85	77.56	4.157			
16,500.00	11,939.06	16,187.71	11,615.46	89.01	87.99	0.00	4,626.84	-318.09	322.61	243.77	78.84	4.092			
16,600.00	11,938.82	16,287.71	11,615.02	90.76	89.74	0.00	4,726.84	-318.49	322.80	242.68	80.12	4.029			
16,700.00	11,938.57	16,387.71	11,614.58	92.52	91.50	0.00	4,826.84	-318.88	322.99	241.59	81.40	3.968			
16,800.00	11,938.32	16,487.71	11,614.14	94.27	93.26	0.00	4,926.84	-319.28	323.19	240.49	82.70	3.908			
16,900.00	11,938.08	16,587.71	11,613.70	96.03	95.02	0.00	5,026.84	-319.67	323.38	239.38	84.00	3.850			
16,930.55	11,938.00	16,618.25	11,613.57	96.49	95.55	0.00	5,057.38	-319.79	323.44	239.17	84.27	3.838			

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Offset Design: A01 Todd DSU - Todd 2-24S-31E State 405H - 405H - Plan #1-Rev0													Offset Site Error:
Survey Program: 0-MWD													0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning		Offset Well Error:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
700.00	700.00	700.00	700.00	1.43	1.43	90.00	0.00	29.90	29.90	27.03	2.87	10.434	
800.00	800.00	800.00	800.00	1.66	1.66	90.00	0.00	29.90	29.90	26.58	3.32	9.019	
900.00	900.00	900.00	900.00	1.88	1.88	90.00	0.00	29.90	29.90	26.14	3.76	7.942	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	90.00	0.00	29.90	29.90	25.69	4.21	7.095	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	90.00	0.00	29.90	29.90	25.24	4.66	6.411	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	90.00	0.00	29.90	29.90	24.79	5.11	5.847	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	90.00	0.00	29.90	29.90	24.34	5.56	5.375	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	90.00	0.00	29.90	29.90	23.89	6.01	4.973	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	90.00	0.00	29.90	29.90	23.44	6.46	4.627 CC, ES	
1,600.00	1,599.99	1,599.25	1,599.23	3.43	3.43	-148.21	-0.55	31.07	32.19	25.32	6.87	4.687	
1,631.22	1,631.19	1,630.18	1,630.15	3.49	3.49	-148.36	-0.95	31.91	33.83	26.85	6.98	4.846	
1,700.00	1,699.93	1,698.57	1,698.49	3.62	3.62	-148.43	-2.12	34.39	38.33	31.09	7.24	5.297	
1,800.00	1,799.87	1,798.35	1,798.18	3.81	3.82	-148.41	-3.89	38.16	45.02	37.40	7.62	5.910	
1,900.00	1,899.82	1,898.12	1,897.87	4.01	4.02	-148.40	-5.67	41.92	51.70	43.70	8.00	6.459	
2,000.00	1,999.76	1,997.90	1,997.56	4.21	4.22	-148.39	-7.45	45.69	58.39	49.99	8.40	6.951	
2,100.00	2,099.70	2,097.68	2,097.25	4.41	4.43	-148.38	-9.22	49.46	65.07	56.27	8.80	7.394	
2,200.00	2,199.64	2,197.45	2,196.94	4.62	4.64	-148.37	-11.00	53.23	71.76	62.55	9.21	7.793	
2,300.00	2,299.58	2,297.23	2,296.63	4.83	4.85	-148.37	-12.78	57.00	78.44	68.82	9.62	8.155	
2,400.00	2,399.52	2,397.01	2,396.32	5.04	5.06	-148.36	-14.55	60.77	85.13	75.09	10.03	8.484	
2,500.00	2,499.46	2,496.78	2,496.01	5.25	5.28	-148.36	-16.33	64.53	91.81	81.36	10.45	8.784	
2,600.00	2,599.40	2,596.56	2,595.70	5.46	5.50	-148.35	-18.11	68.30	98.50	87.62	10.87	9.058	
2,700.00	2,699.34	2,696.33	2,695.38	5.68	5.72	-148.35	-19.88	72.07	105.18	93.88	11.30	9.309	
2,800.00	2,799.28	2,796.11	2,795.07	5.90	5.94	-148.35	-21.66	75.84	111.87	100.14	11.73	9.541	
2,900.00	2,899.23	2,895.89	2,894.76	6.12	6.16	-148.35	-23.44	79.61	118.55	106.40	12.15	9.754	
3,000.00	2,999.17	2,995.66	2,994.45	6.34	6.38	-148.34	-25.21	83.37	125.24	112.65	12.59	9.951	
3,100.00	3,099.11	3,095.44	3,094.14	6.56	6.61	-148.34	-26.99	87.14	131.92	118.91	13.02	10.133	
3,200.00	3,199.05	3,195.22	3,193.83	6.78	6.83	-148.34	-28.77	90.91	138.61	125.16	13.45	10.303	
3,300.00	3,298.99	3,294.99	3,293.52	7.00	7.06	-148.34	-30.55	94.68	145.30	131.41	13.89	10.460	
3,400.00	3,398.93	3,394.77	3,393.21	7.23	7.28	-148.34	-32.32	98.45	151.98	137.65	14.33	10.607	
3,500.00	3,498.87	3,494.55	3,492.90	7.45	7.51	-148.34	-34.10	102.22	158.67	143.90	14.77	10.745	
3,600.00	3,598.81	3,594.32	3,592.59	7.67	7.74	-148.34	-35.88	105.98	165.35	150.15	15.21	10.874	
3,700.00	3,698.75	3,694.10	3,692.28	7.90	7.97	-148.33	-37.65	109.75	172.04	156.39	15.65	10.995	
3,800.00	3,798.69	3,793.87	3,791.97	8.12	8.19	-148.33	-39.43	113.52	178.72	162.63	16.09	11.108	
3,900.00	3,898.64	3,893.65	3,891.66	8.35	8.42	-148.33	-41.21	117.29	185.41	168.88	16.53	11.215	
4,000.00	3,998.58	3,993.43	3,991.34	8.58	8.65	-148.33	-42.98	121.06	192.09	175.12	16.98	11.316	
4,100.00	4,098.52	4,093.20	4,091.03	8.80	8.88	-148.33	-44.76	124.83	198.78	181.36	17.42	11.411	
4,200.00	4,198.46	4,192.98	4,190.72	9.03	9.11	-148.33	-46.54	128.59	205.46	187.60	17.86	11.501	
4,300.00	4,298.40	4,292.76	4,290.41	9.26	9.35	-148.33	-48.31	132.36	212.15	193.84	18.31	11.586	
4,400.00	4,398.34	4,392.53	4,390.10	9.49	9.58	-148.33	-50.09	136.13	218.83	200.08	18.76	11.667	
4,500.00	4,498.28	4,492.31	4,489.79	9.72	9.81	-148.33	-51.87	139.90	225.52	206.32	19.20	11.744	
4,600.00	4,598.22	4,592.08	4,589.48	9.95	10.04	-148.33	-53.64	143.67	232.21	212.56	19.65	11.817	
4,700.00	4,698.16	4,691.86	4,689.17	10.17	10.27	-148.33	-55.42	147.44	238.89	218.79	20.10	11.886	
4,800.00	4,798.10	4,791.64	4,788.86	10.40	10.50	-148.33	-57.20	151.20	245.58	225.03	20.55	11.953	
12,600.00	11,948.68	12,426.67	11,775.19	29.52	29.38	75.32	731.26	359.44	684.46	626.94	57.53	11.898	
12,700.00	11,948.43	12,526.67	11,774.91	30.42	30.30	75.31	831.26	358.92	684.35	625.08	59.27	11.546	
12,800.00	11,948.18	12,626.67	11,774.63	31.40	31.30	75.31	931.26	358.40	684.24	623.06	61.18	11.185	
12,900.00	11,947.94	12,726.67	11,774.35	32.45	32.36	75.30	1,031.26	357.88	684.13	620.90	63.22	10.821	
13,000.00	11,947.69	12,826.67	11,774.07	33.57	33.50	75.30	1,131.26	357.36	684.02	618.61	65.40	10.459	
13,100.00	11,947.44	12,926.67	11,773.79	34.75	34.69	75.29	1,231.26	356.84	683.90	616.21	67.69	10.103	
13,200.00	11,947.20	13,026.67	11,773.51	35.98	35.93	75.29	1,331.25	356.32	683.79	613.70	70.09	9.755	
13,300.00	11,946.95	13,126.67	11,773.23	37.26	37.22	75.28	1,431.25	355.80	683.68	611.09	72.59	9.419	
13,400.00	11,946.70	13,226.67	11,772.96	38.59	38.56	75.28	1,531.25	355.28	683.57	608.40	75.17	9.094	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

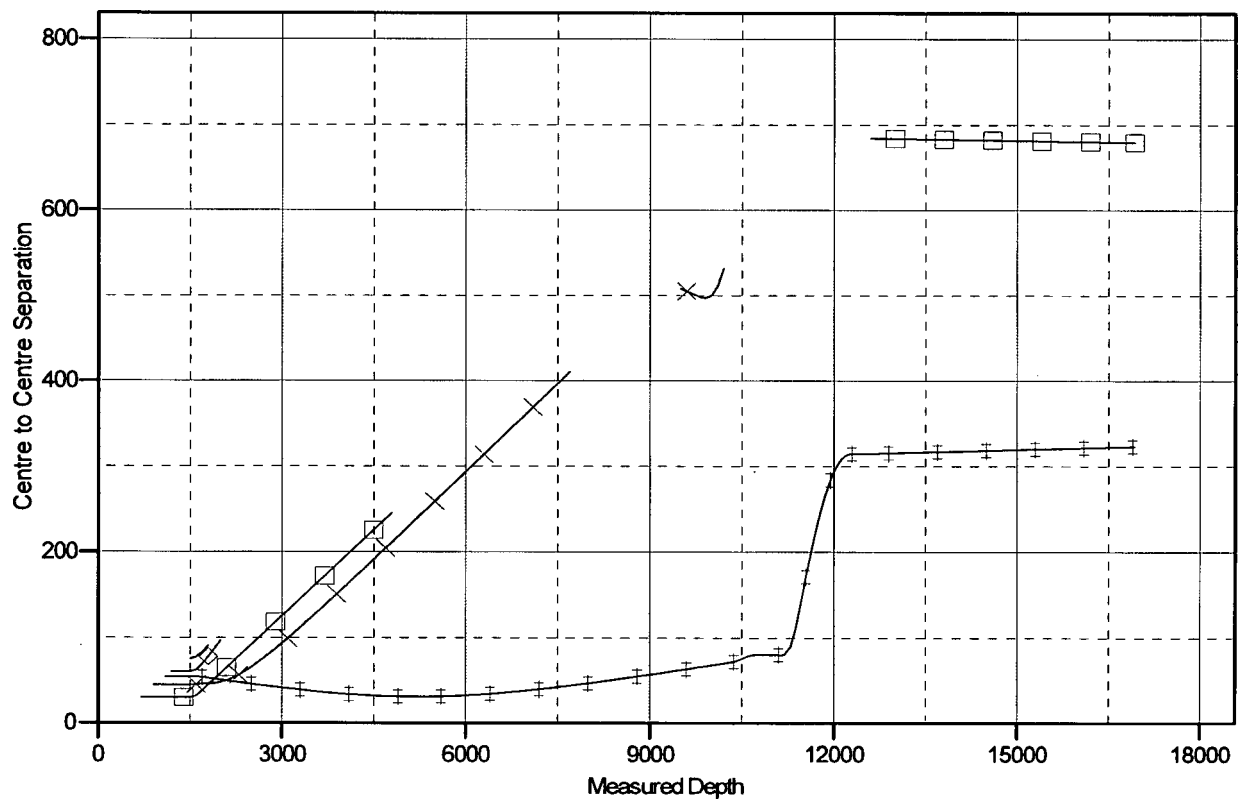
Offset Design													Offset Site Error:	0.00 usft
A01 Todd DSU - Todd 2-24S-31E State 405H - 405H - Plan #1-Rev0													Offset Well Error:	0.00 usft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,500.00	11,946.46	13,326.67	11,772.68	39.95	39.94	75.27	1,631.25	354.76	683.45	605.63	77.83	8.782		
13,600.00	11,946.21	13,426.67	11,772.40	41.35	41.34	75.26	1,731.25	354.24	683.34	602.79	80.55	8.483		
13,700.00	11,945.96	13,526.67	11,772.12	42.79	42.79	75.26	1,831.24	353.72	683.23	599.89	83.34	8.198		
13,800.00	11,945.72	13,626.67	11,771.84	44.25	44.26	75.25	1,931.24	353.20	683.12	596.93	86.19	7.926		
13,900.00	11,945.47	13,726.67	11,771.56	45.74	45.75	75.25	2,031.24	352.68	683.00	593.92	89.08	7.667		
14,000.00	11,945.23	13,826.67	11,771.28	47.25	47.27	75.24	2,131.24	352.16	682.89	590.86	92.03	7.420		
14,100.00	11,944.98	13,926.67	11,771.00	48.78	48.81	75.24	2,231.24	351.64	682.78	587.77	95.01	7.186		
14,200.00	11,944.73	14,026.67	11,770.72	50.34	50.37	75.23	2,331.24	351.12	682.67	584.63	98.04	6.963		
14,300.00	11,944.49	14,126.67	11,770.44	51.91	51.95	75.23	2,431.23	350.60	682.55	581.46	101.09	6.752		
14,400.00	11,944.24	14,226.67	11,770.16	53.50	53.54	75.22	2,531.23	350.07	682.44	578.26	104.18	6.550		
14,500.00	11,943.99	14,326.67	11,769.89	55.10	55.15	75.22	2,631.23	349.55	682.33	575.03	107.30	6.359		
14,600.00	11,943.75	14,426.67	11,769.61	56.72	56.77	75.21	2,731.23	349.03	682.22	571.77	110.45	6.177		
14,700.00	11,943.50	14,526.67	11,769.33	58.34	58.41	75.21	2,831.23	348.51	682.10	568.49	113.62	6.004		
14,800.00	11,943.25	14,626.67	11,769.05	59.99	60.05	75.20	2,931.22	347.99	681.99	565.18	116.81	5.839		
14,900.00	11,943.01	14,726.67	11,768.77	61.64	61.71	75.20	3,031.22	347.47	681.88	561.86	120.02	5.681		
15,000.00	11,942.76	14,826.67	11,768.49	63.30	63.37	75.19	3,131.22	346.95	681.77	558.52	123.25	5.532		
15,100.00	11,942.51	14,926.67	11,768.21	64.97	65.05	75.18	3,231.22	346.43	681.66	555.16	126.50	5.389		
15,200.00	11,942.27	15,026.67	11,767.93	66.65	66.73	75.18	3,331.22	345.91	681.54	551.78	129.76	5.252		
15,300.00	11,942.02	15,126.67	11,767.65	68.33	68.42	75.17	3,431.22	345.39	681.43	548.39	133.04	5.122		
15,400.00	11,941.77	15,226.67	11,767.37	70.03	70.11	75.17	3,531.21	344.87	681.32	544.99	136.33	4.997		
15,500.00	11,941.53	15,326.67	11,767.09	71.73	71.82	75.16	3,631.21	344.35	681.21	541.57	139.64	4.878		
15,600.00	11,941.28	15,426.67	11,766.82	73.43	73.53	75.16	3,731.21	343.83	681.09	538.14	142.96	4.764		
15,700.00	11,941.03	15,526.67	11,766.54	75.15	75.24	75.15	3,831.21	343.31	680.98	534.70	146.28	4.655		
15,800.00	11,940.79	15,626.67	11,766.26	76.86	76.96	75.15	3,931.21	342.79	680.87	531.25	149.62	4.551		
15,900.00	11,940.54	15,726.67	11,765.98	78.59	78.69	75.14	4,031.20	342.27	680.76	527.79	152.97	4.450		
16,000.00	11,940.29	15,826.67	11,765.70	80.31	80.42	75.14	4,131.20	341.75	680.65	524.32	156.33	4.354		
16,100.00	11,940.05	15,926.67	11,765.42	82.05	82.15	75.13	4,231.20	341.23	680.53	520.84	159.69	4.261		
16,200.00	11,939.80	16,026.67	11,765.14	83.78	83.89	75.13	4,331.20	340.71	680.42	517.35	163.07	4.173		
16,300.00	11,939.55	16,126.67	11,764.86	85.52	85.63	75.12	4,431.20	340.19	680.31	513.86	166.45	4.087		
16,400.00	11,939.31	16,226.67	11,764.58	87.27	87.38	75.12	4,531.20	339.66	680.20	510.36	169.84	4.005		
16,500.00	11,939.06	16,326.67	11,764.30	89.01	89.13	75.11	4,631.19	339.14	680.08	506.85	173.23	3.926		
16,600.00	11,938.82	16,426.67	11,764.02	90.76	90.88	75.10	4,731.19	338.62	679.97	503.34	176.63	3.850		
16,700.00	11,938.57	16,526.67	11,763.75	92.52	92.63	75.10	4,831.19	338.10	679.86	499.82	180.04	3.776		
16,800.00	11,938.32	16,626.67	11,763.47	94.27	94.39	75.09	4,931.19	337.58	679.75	496.30	183.45	3.705		
16,900.00	11,938.08	16,726.67	11,763.19	96.03	96.15	75.09	5,031.19	337.06	679.64	492.77	186.87	3.637		
16,930.55	11,938.00	16,757.21	11,763.10	96.49	96.69	75.09	5,061.73	336.90	679.60	491.79	187.81	3.618 SF		

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3508+25 @ 3533.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.33333334

Coordinates are relative to: Todd 2-24S-31E State 434H - Slot 434H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.31°

Ladder Plot



LEGEND

Todd 2-24S-31E State 207H, 207 HP & n#1-Rev0V0
 Todd 2-24S-31E State 405H, 405 HP & n#1-Rev0V0
 Todd 2-24S-31E State 304H, 304 HP & n#1-Rev0V0

Company:	Titus Oil & Gas Production, LLC	Local Co-ordinate Reference:	Well Todd 2-24S-31E State 434H - Slot 434H
Project:	Eddy County, NM (NAD83-NME)	TVD Reference:	3508+25 @ 3533.00usft
Reference Site:	A01 Todd DSU	MD Reference:	3508+25 @ 3533.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Todd 2-24S-31E State 434H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	434H	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan #1-Rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3508+25 @ 3533.00usft

Offset Depths are relative to Offset Datum

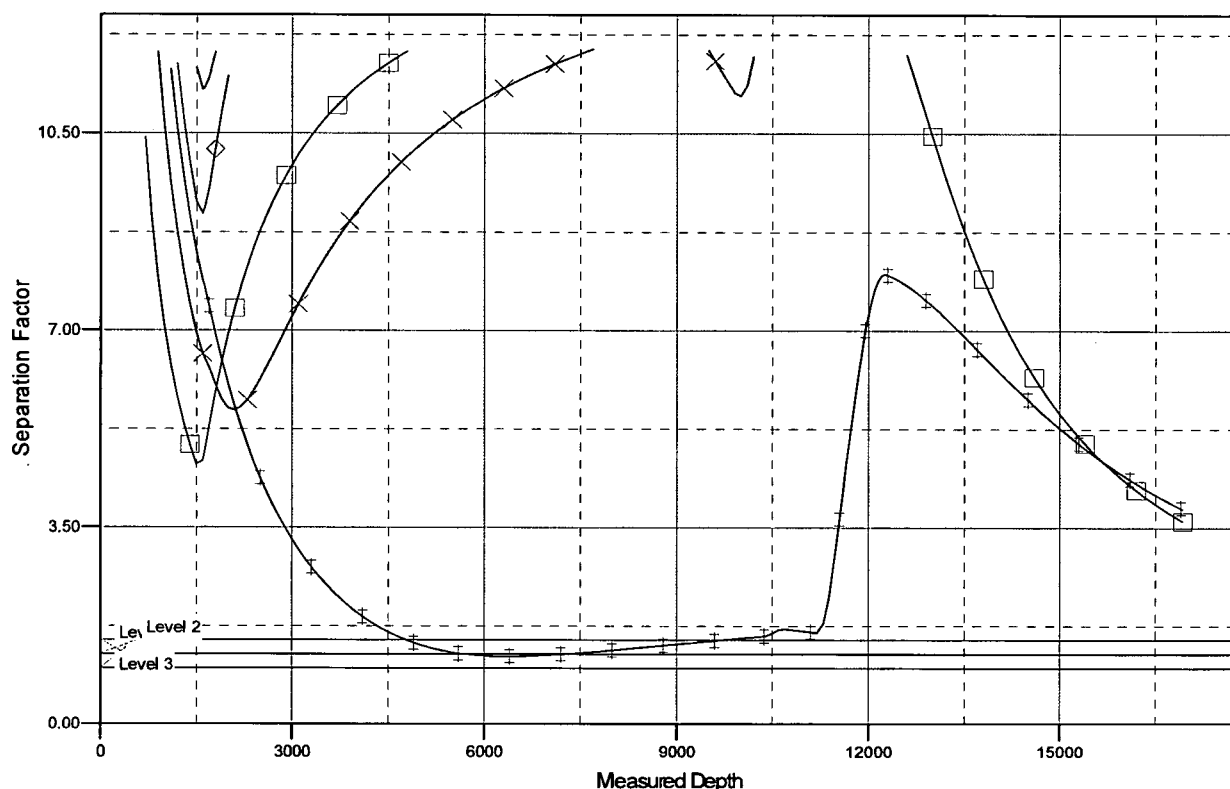
Central Meridian is -104.33333334

Coordinates are relative to: Todd 2-24S-31E State 434H - Slot 434H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.31°

Separation Factor Plot



LEGEND

Todd 2-24S-31E State 207H, 207 HP in P1-Rev0 V0
 Todd 2-24S-31E State 403H, 403 HP in P1-Rev0 V0
 Todd 2-24S-31E State 304H, 304 HP in P1-Rev0 V0

Titus Oil & Gas Production, LLC
Project: Eddy County, NM (NAD83-NME)
Site: A01 Todd DSU
Well: Todd 2-24S-31E State 434H
Wellbore: 434H
Plan: Plan #1-Rev0

North	East	Lat	Long	Slot
451439.40	722094.00	32.23973036	-103.74870353	434H

		Section Details							
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
3	1631.22	1.97	237.98	1631.19	-1.19	-1.91	1.50	237.98	-1.07
4	10373.99	1.97	237.98	10368.81	-160.39	-256.52	0.00	0.00	-143.88
5	10505.21	0.00	0.00	10500.00	-161.58	-258.43	1.50	180.00	-144.95
6	11381.71	0.00	0.00	11376.50	-161.58	-258.43	0.00	0.00	-144.95
7	12283.11	90.14	356.25	11949.46	411.55	-295.99	10.00	356.25	429.40
8	12459.27	90.14	359.77	11949.02	587.58	-302.11	2.00	89.98	605.47
9	16930.54	90.14	359.77	11938.00	5058.80	-319.80	0.00	0.00	5068.90



Azimuths to Grid North
True North: -0.31°
Magnetic North: 6.51°

Magnetic Field
Strength: 47727.8nT
Dip Angle: 60.02°
Date: 5/30/2019
Model: IGRF2015

PROJECT DETAILS: Eddy County, NM (NAD83-NME)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid
Grid Convergence: 0.31" West
KB Elevation: 3508+25 @ 3533.00usft
Elevation: 3508.00

