



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.17-T7N-R63W

Walcker AC17-09 Pad Sec.17-T7N-R63W

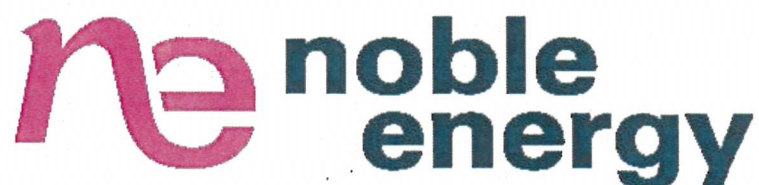
Walcker AC17-09

Wellbore #1

Noble Walcker AC17-09 Plan #1 (1-10-12)

Anticollision Report

08 February, 2012



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.17-T7N-R63W
Reference Site: Walcker AC17-09 Pad Sec.17-T7N-R63W
Site Error: 0.0ft
Reference Well: Walcker AC17-09
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Noble Walcker AC17-09 Plan #1 (1-10-12)

Local Co-ordinate Reference: Well Walcker AC17-09
TVD Reference: WELL @ 4811.0ft (Original Well Elev)
MD Reference: WELL @ 4811.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference	Noble Walcker AC17-09 Plan #1 (1-		
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 center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 1/10/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	9,002.4	Noble Walcker AC17-09 Plan #1 (1-10-12)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Walcker AC17-09 Pad Sec.17-T7N-R63W						
Travelers Ins 43-17 #1 (P&A) - Wellbore #1 - Design #1	7,505.3	7,500.0	42.8	9.1	1.270	Level 3, CC, ES, SF

Offset Design Walcker AC17-09 Pad Sec.17-T7N-R63W - Travelers Ins 43-17 #1 (P&A) - Wellbore #1 - Design #1													
Survey Program: 0-MWD													
Reference													
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	5.44	174.9	16.7	175.7				
100.0	100.0	97.0	97.0	0.1	0.1	5.44	174.9	16.7	175.7	175.4	0.22	793.398	
200.0	200.0	197.0	197.0	0.3	0.3	5.44	174.9	16.7	175.7	175.0	0.67	263.138	
300.0	300.0	297.0	297.0	0.6	0.6	5.44	174.9	16.7	175.7	174.5	1.12	157.247	
400.0	400.0	397.0	397.0	0.8	0.8	5.44	174.9	16.7	175.7	174.1	1.57	112.126	
500.0	500.0	497.0	497.0	1.0	1.0	5.44	174.9	16.7	175.7	173.6	2.02	87.126	
600.0	600.0	597.0	597.0	1.2	1.2	5.44	174.9	16.7	175.7	173.2	2.47	71.241	
700.0	700.0	697.0	697.0	1.5	1.5	5.44	174.9	16.7	175.7	172.7	2.92	60.256	
800.0	800.0	797.0	797.0	1.7	1.7	5.44	174.9	16.7	175.7	172.3	3.36	52.206	
900.0	900.0	897.0	897.0	1.9	1.9	5.44	174.9	16.7	175.7	171.8	3.81	46.053	
1,000.0	1,000.0	997.0	997.0	2.1	2.1	5.44	174.9	16.7	175.7	171.4	4.26	41.198	
1,100.0	1,100.0	1,097.0	1,097.0	2.4	2.4	5.44	174.9	16.7	175.7	170.9	4.71	37.268	
1,200.0	1,200.0	1,197.0	1,197.0	2.6	2.6	5.44	174.9	16.7	175.7	170.5	5.16	34.023	
1,300.0	1,300.0	1,297.0	1,297.0	2.8	2.8	5.44	174.9	16.7	175.7	170.0	5.61	31.298	
1,400.0	1,400.0	1,397.0	1,397.0	3.0	3.0	5.44	174.9	16.7	175.7	169.6	6.06	28.977	
1,500.0	1,500.0	1,497.0	1,497.0	3.3	3.3	5.44	174.9	16.7	175.7	169.1	6.51	26.977	
1,600.0	1,600.0	1,597.0	1,597.0	3.5	3.5	14.03	174.9	16.7	174.8	167.9	6.96	25.116	
1,659.2	1,659.2	1,656.2	1,656.2	3.6	3.6	14.15	174.9	16.7	173.5	166.3	7.23	24.014	
1,700.0	1,700.0	1,697.0	1,697.0	3.7	3.7	14.24	174.9	16.7	172.4	165.0	7.41	23.273	
1,800.0	1,799.9	1,796.9	1,796.9	3.9	3.9	14.47	174.9	16.7	169.7	161.9	7.86	21.599	
1,900.0	1,899.9	1,896.9	1,896.9	4.2	4.2	14.71	174.9	16.7	167.0	158.7	8.31	20.107	
2,000.0	1,999.8	1,996.8	1,996.8	4.4	4.4	14.95	174.9	16.7	164.3	155.6	8.76	18.768	
2,100.0	2,099.8	2,096.8	2,096.8	4.6	4.6	15.21	174.9	16.7	161.7	152.5	9.21	17.560	
2,200.0	2,199.8	2,196.8	2,196.8	4.8	4.8	15.47	174.9	16.7	159.0	149.3	9.66	16.464	
2,300.0	2,299.7	2,296.7	2,296.7	5.1	5.0	15.74	174.9	16.7	156.3	146.2	10.11	15.466	
2,400.0	2,399.7	2,396.7	2,396.7	5.3	5.3	16.02	174.9	16.7	153.6	143.1	10.56	14.554	

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

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Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Offset Design Walcker AC17-09 Pad Sec.17-T7N-R63W - Travelers Ins 43-17 #1 (P&A) - Wellbore #1 - Design #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,500.0	2,499.7	2,496.7	2,496.7	5.5	5.5	16.31	174.9	16.7	151.0	140.0	11.01	13.716		
2,600.0	2,599.6	2,596.6	2,596.6	5.7	5.7	16.61	174.9	16.7	148.3	136.8	11.46	12.945		
2,700.0	2,699.6	2,696.6	2,696.6	6.0	5.9	16.93	174.9	16.7	145.6	133.7	11.91	12.232		
2,800.0	2,799.5	2,796.5	2,796.5	6.2	6.2	17.25	174.9	16.7	143.0	130.6	12.36	11.571		
2,900.0	2,899.5	2,896.5	2,896.5	6.4	6.4	17.59	174.9	16.7	140.3	127.5	12.81	10.957		
3,000.0	2,999.5	2,996.5	2,996.5	6.6	6.6	17.94	174.9	16.7	137.7	124.4	13.26	10.385		
3,100.0	3,099.4	3,096.4	3,096.4	6.9	6.8	18.30	174.9	16.7	135.0	121.3	13.71	9.852		
3,200.0	3,199.4	3,196.4	3,196.4	7.1	7.1	18.68	174.9	16.7	132.4	118.2	14.16	9.352		
3,300.0	3,299.3	3,296.3	3,296.3	7.3	7.3	19.07	174.9	16.7	129.8	115.2	14.61	8.883		
3,400.0	3,399.3	3,396.3	3,396.3	7.6	7.5	19.48	174.9	16.7	127.2	112.1	15.06	8.443		
3,500.0	3,499.3	3,496.3	3,496.3	7.8	7.7	19.91	174.9	16.7	124.5	109.0	15.51	8.029		
3,600.0	3,599.2	3,596.2	3,596.2	8.0	8.0	20.35	174.9	16.7	121.9	106.0	15.96	7.639		
3,700.0	3,699.2	3,696.2	3,696.2	8.2	8.2	20.81	174.9	16.7	119.3	102.9	16.41	7.271		
3,800.0	3,799.2	3,796.2	3,796.2	8.5	8.4	21.30	174.9	16.7	116.7	99.9	16.86	6.923		
3,900.0	3,899.1	3,896.1	3,896.1	8.7	8.6	21.81	174.9	16.7	114.1	96.8	17.31	6.593		
4,000.0	3,999.1	3,996.1	3,996.1	8.9	8.9	22.34	174.9	16.7	111.6	93.8	17.76	6.281		
4,100.0	4,099.0	4,096.0	4,096.0	9.2	9.1	22.89	174.9	16.7	109.0	90.8	18.22	5.984		
4,200.0	4,199.0	4,196.0	4,196.0	9.4	9.3	23.47	174.9	16.7	106.4	87.8	18.67	5.703		
4,300.0	4,299.0	4,296.0	4,296.0	9.6	9.5	24.08	174.9	16.7	103.9	84.8	19.12	5.435		
4,400.0	4,398.9	4,395.9	4,395.9	9.8	9.8	24.72	174.9	16.7	101.4	81.8	19.57	5.180		
4,500.0	4,498.9	4,495.9	4,495.9	10.1	10.0	25.40	174.9	16.7	98.9	78.8	20.02	4.938		
4,600.0	4,598.8	4,595.8	4,595.8	10.3	10.2	26.11	174.9	16.7	96.4	75.9	20.47	4.707		
4,700.0	4,698.8	4,695.8	4,695.8	10.5	10.4	26.85	174.9	16.7	93.9	72.9	20.92	4.486		
4,800.0	4,798.8	4,795.8	4,795.8	10.7	10.7	27.64	174.9	16.7	91.4	70.0	21.38	4.276		
4,900.0	4,898.7	4,895.7	4,895.7	11.0	10.9	28.47	174.9	16.7	88.9	67.1	21.83	4.075		
5,000.0	4,998.7	4,995.7	4,995.7	11.2	11.1	29.35	174.9	16.7	86.5	64.2	22.28	3.883		
5,100.0	5,098.7	5,095.7	5,095.7	11.4	11.3	30.28	174.9	16.7	84.1	61.4	22.73	3.700		
5,200.0	5,198.6	5,195.6	5,195.6	11.7	11.6	31.26	174.9	16.7	81.7	58.5	23.18	3.524		
5,300.0	5,298.6	5,295.6	5,295.6	11.9	11.8	32.30	174.9	16.7	79.3	55.7	23.64	3.357		
5,400.0	5,398.5	5,395.5	5,395.5	12.1	12.0	33.40	174.9	16.7	77.0	52.9	24.09	3.197		
5,500.0	5,498.5	5,495.5	5,495.5	12.3	12.2	34.58	174.9	16.7	74.7	50.2	24.54	3.044		
5,600.0	5,598.5	5,595.5	5,595.5	12.6	12.5	35.83	174.9	16.7	72.4	47.4	25.00	2.898		
5,700.0	5,698.4	5,695.4	5,695.4	12.8	12.7	37.15	174.9	16.7	70.2	44.8	25.45	2.758		
5,800.0	5,798.4	5,795.4	5,795.4	13.0	12.9	38.57	174.9	16.7	68.0	42.1	25.90	2.625		
5,900.0	5,898.3	5,895.3	5,895.3	13.3	13.1	40.07	174.9	16.7	65.9	39.5	26.36	2.499		
6,000.0	5,998.3	5,995.3	5,995.3	13.5	13.4	41.68	174.9	16.7	63.8	36.9	26.81	2.378		
6,100.0	6,098.3	6,095.3	6,095.3	13.7	13.6	43.40	174.9	16.7	61.7	34.4	27.27	2.263		
6,200.0	6,198.2	6,195.2	6,195.2	13.9	13.8	45.23	174.9	16.7	59.7	32.0	27.72	2.154		
6,300.0	6,298.2	6,295.2	6,295.2	14.2	14.0	47.19	174.9	16.7	57.8	29.6	28.18	2.051		
6,400.0	6,398.1	6,395.1	6,395.1	14.4	14.3	49.27	174.9	16.7	55.9	27.3	28.63	1.954		
6,500.0	6,498.1	6,495.1	6,495.1	14.6	14.5	51.50	174.9	16.7	54.2	25.1	29.09	1.862		
6,600.0	6,598.1	6,595.1	6,595.1	14.9	14.7	53.88	174.9	16.7	52.5	22.9	29.55	1.776		
6,700.0	6,698.0	6,695.0	6,695.0	15.1	14.9	56.40	174.9	16.7	50.9	20.9	30.00	1.696		
6,800.0	6,798.0	6,795.0	6,795.0	15.3	15.2	59.09	174.9	16.7	49.4	19.0	30.46	1.622		
6,900.0	6,898.0	6,895.0	6,895.0	15.5	15.4	61.93	174.9	16.7	48.0	17.1	30.92	1.554		
7,000.0	6,997.9	6,994.9	6,994.9	15.8	15.6	64.93	174.9	16.7	46.8	15.4	31.37	1.492 Level 3		
7,100.0	7,097.9	7,094.9	7,094.9	16.0	15.8	68.09	174.9	16.7	45.7	13.9	31.83	1.435 Level 3		
7,200.0	7,197.8	7,194.8	7,194.8	16.2	16.1	71.39	174.9	16.7	44.7	12.4	32.29	1.385 Level 3		
7,300.0	7,297.8	7,294.8	7,294.8	16.5	16.3	74.83	174.9	16.7	43.9	11.2	32.74	1.341 Level 3		
7,400.0	7,397.8	7,394.8	7,394.8	16.7	16.5	78.38	174.9	16.7	43.3	10.1	33.20	1.303 Level 3		
7,500.0	7,497.7	7,494.7	7,494.7	16.9	16.7	82.03	174.9	16.7	42.8	9.1	33.65	1.272 Level 3		
7,505.3	7,503.0	7,500.0	7,500.0	16.9	16.7	82.22	174.9	16.7	42.8	9.1	33.68	1.270 Level 3, CC, ES, SF		

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

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Reference Wellbore: Wellbore #1
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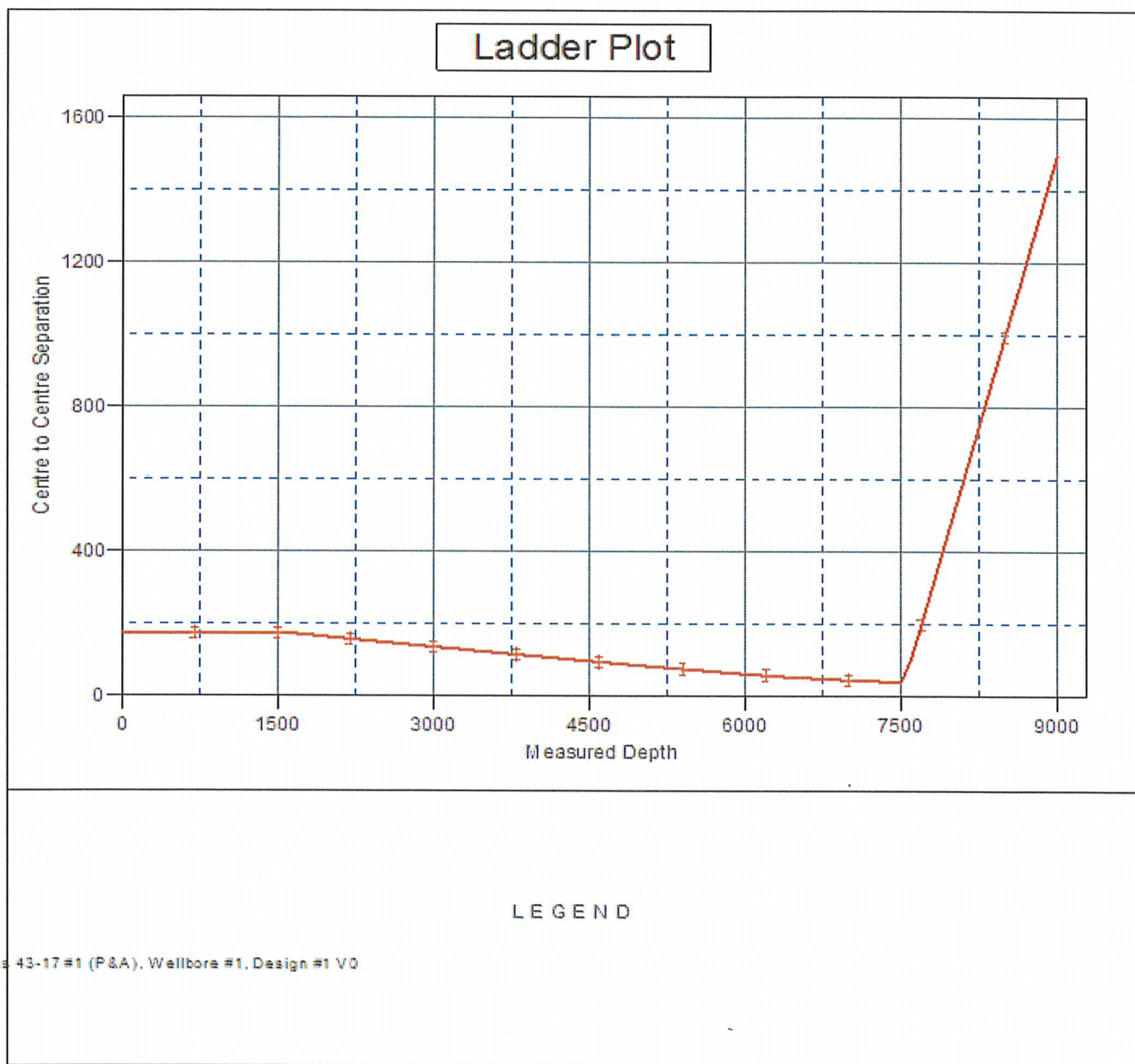
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Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

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													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
7,600.0	7,597.7	7,500.0	7,500.0	17.1	16.7	82.22	174.9	16.7	103.8	69.9	33.89	3.062		
7,700.0	7,697.6	7,500.0	7,500.0	17.4	16.7	82.22	174.9	16.7	199.2	165.1	34.12	5.838		
7,800.0	7,797.6	7,500.0	7,500.0	17.6	16.7	82.22	174.9	16.7	297.7	263.3	34.35	8.665		
7,900.0	7,897.6	7,500.0	7,500.0	17.8	16.7	82.22	174.9	16.7	396.9	362.3	34.58	11.477		
8,000.0	7,997.5	7,500.0	7,500.0	18.1	16.7	82.22	174.9	16.7	496.4	461.6	34.81	14.261		
8,100.0	8,097.5	7,500.0	7,500.0	18.3	16.7	82.22	174.9	16.7	596.1	561.1	35.04	17.013		
8,200.0	8,197.5	7,500.0	7,500.0	18.5	16.7	82.22	174.9	16.7	695.9	660.6	35.27	19.732		
8,300.0	8,297.4	7,500.0	7,500.0	18.8	16.7	82.22	174.9	16.7	795.7	760.2	35.50	22.417		
8,400.0	8,397.4	7,500.0	7,500.0	19.0	16.7	82.22	174.9	16.7	895.6	859.9	35.72	25.069		
8,500.0	8,497.3	7,500.0	7,500.0	19.2	16.7	82.22	174.9	16.7	995.5	959.5	35.95	27.688		
8,600.0	8,597.3	7,500.0	7,500.0	19.4	16.7	82.22	174.9	16.7	1,095.4	1,059.2	36.18	30.275		
8,700.0	8,697.3	7,500.0	7,500.0	19.7	16.7	82.22	174.9	16.7	1,195.3	1,158.9	36.41	32.829		
8,800.0	8,797.2	7,500.0	7,500.0	19.9	16.7	82.22	174.9	16.7	1,295.3	1,258.6	36.64	35.352		
8,900.0	8,897.2	7,500.0	7,500.0	20.1	16.7	82.22	174.9	16.7	1,395.2	1,358.3	36.87	37.843		
9,002.9	9,000.0	7,500.0	7,500.0	20.2	16.7	82.22	174.9	16.7	1,498.0	1,461.0	36.99	40.498		

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Project: SEC.17-T7N-R63W
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Reference Depths are relative to WELL @ 4811.0ft (Original Well Elev) Coordinates are relative to: Walcker AC17-09
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.68°



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