

30-025-43752

CAZA OPERATING

SURVEY REPORT

SIOUX 36 STATE #1H

NABORS 893

6/22/2017



The **Ultimate Partner** In Wellbore Placement

SURVEY REPORT

SIOUX 36 STATE #1H

COMPUTED SURVEYS

CUSTOMER
PROJECT
FIELD

Caza Operating
Caza Operating
WolfCamp

SDI JOB NO.
SDI DISTRICT
SDI KIT/UNIT

OP:001593
Midland
MWD-00271-M

SITE INFORMATION

Site Name
Lat/Long
Northing
Easting

Sioux 36 State #1H
32° 5' 38.232" N, 103° 19' 42.433" W
399,367 ft
852,527.2 ft

Section
Township
Range

MAP INFORMATION

North Reference
Grid Correction
System
Datum
Map Zone

Grid North
-0.53 deg
US State Plane 1983
North American Datum 1983 (GRS 1980)
New Mexico East: 3001

**WELL INFORMATION**

Lat/Long
Northing
Easting
UWI

32° 5' 38.232" N, 103° 19' 42.433" W
399,367 ft
852,527.2 ft
30-025-43752

DEPTH AND ELEVATION REFERENCE

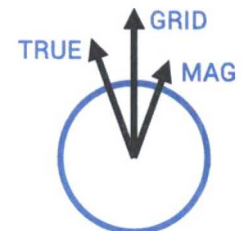
Ground Level
Reference Datum
Reference Height
Reference Elevation

3134 ft above Mean Sea Level
KB
27 ft above G.L.
3161 ft

VERTICAL SECTION REFERENCE

+N/-S
+E/-W
Proposal Direction
Calculation Method

0 ft
0 ft
179.62°
Minimum Curvature

**GEOMAGNETIC REFERENCE INFORMATION**

Local Gravity: 998.515 mG [computed]

MD	MODEL	DATE	DECLINATION	TRUE TO GRID	MAG TO GRID
0-16837 ft	HDGM2016	28 May 2017	6.75°	subtract 0.53°	add 6.22°

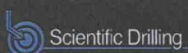
WELL NOTES**OPERATORS**

A. DAHMANI, A. MILLER

SDI Operator Name (Printed)

SIGNATURE

DATE



MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
184.00	2.17	267.24	183.96	0.14	-0.17	-3.48	1.18
368.00	3.53	268.40	367.72	0.41	-0.49	-12.63	0.74
552.00	5.90	259.60	551.09	2.18	-2.36	-27.59	1.34
738.00	6.50	253.12	736.00	6.83	-7.14	-47.07	0.50
897.00	2.97	230.93	894.45	11.96	-12.35	-58.89	2.47
1078.00	1.02	226.52	1075.33	15.99	-16.41	-63.69	1.08
1264.00	1.64	240.12	1261.28	18.43	-18.88	-67.20	0.37
1453.00	0.33	315.26	1450.25	19.38	-19.84	-69.94	0.84
1642.00	0.84	5.00	1639.24	17.60	-18.06	-70.20	0.36
1831.00	0.78	351.78	1828.22	14.93	-15.40	-70.26	0.10
2020.00	0.91	356.03	2017.20	12.15	-12.62	-70.55	0.08
2209.00	1.61	91.81	2206.17	10.75	-11.20	-68.00	1.02
2399.00	1.19	78.22	2396.11	10.46	-10.88	-63.40	0.28
2588.00	1.96	64.75	2585.04	8.72	-9.10	-58.57	0.45
2778.00	3.58	68.49	2774.81	5.21	-5.55	-50.12	0.86
2968.00	2.71	74.23	2964.53	1.88	-2.15	-40.28	0.49
3157.00	2.04	63.63	3153.36	-0.78	0.56	-32.96	0.42
3346.00	3.36	76.92	3342.15	-3.47	3.31	-24.55	0.77
3536.00	1.32	78.78	3531.98	-5.11	4.99	-16.97	1.07
3726.00	0.93	71.47	3721.95	-6.00	5.91	-13.35	0.22
3916.00	0.60	297.85	3911.94	-6.95	6.87	-12.76	0.74
4106.00	0.95	321.82	4101.92	-8.67	8.57	-14.61	0.25
4294.00	2.26	303.92	4289.84	-11.99	11.86	-18.65	0.74
4483.00	1.71	37.80	4478.77	-16.30	16.17	-20.01	1.55
4673.00	0.92	21.96	4668.72	-19.94	19.83	-17.70	0.45
4862.00	1.13	354.89	4857.69	-23.21	23.10	-17.30	0.28
5052.00	1.25	330.26	5047.65	-26.89	26.76	-18.49	0.27
5243.00	1.05	323.90	5238.61	-30.11	29.98	-20.55	0.12
5433.00	0.94	330.68	5428.58	-32.88	32.73	-22.33	0.08
5622.00	0.86	325.92	5617.56	-35.41	35.25	-23.88	0.06
5813.00	0.81	342.50	5808.54	-37.89	37.72	-25.09	0.13
6002.00	0.65	347.56	5997.52	-40.20	40.03	-25.72	0.09

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
6190.00	0.64	3.91	6185.51	-42.29	42.12	-25.87	0.10
6380.00	0.48	5.66	6375.50	-44.14	43.97	-25.72	0.09
6570.00	0.36	12.81	6565.50	-45.50	45.33	-25.51	0.07
6759.00	0.44	45.65	6754.49	-46.57	46.41	-24.87	0.13
6949.00	0.64	49.08	6944.49	-47.76	47.61	-23.55	0.11
7139.00	0.60	57.98	7134.47	-48.97	48.83	-21.91	0.05
7328.00	0.64	63.80	7323.46	-49.95	49.82	-20.12	0.04
7498.00	0.86	78.77	7493.45	-50.60	50.48	-18.02	0.17
7688.00	0.93	120.85	7683.43	-50.07	49.97	-15.31	0.34
7877.00	0.91	118.02	7872.40	-48.57	48.49	-12.67	0.03
8067.00	0.72	185.70	8062.39	-46.67	46.59	-11.46	0.48
8257.00	1.08	192.61	8252.36	-43.75	43.67	-11.97	0.20
8446.00	1.29	188.60	8441.32	-39.92	39.84	-12.68	0.12
8635.00	1.04	156.79	8630.29	-36.24	36.16	-12.32	0.36
8825.00	1.25	135.08	8820.25	-33.17	33.11	-10.17	0.25
9014.00	2.20	128.22	9009.16	-29.44	29.40	-5.87	0.51
9151.00	2.30	128.07	9146.06	-26.09	26.08	-1.63	0.07
9303.00	2.57	126.17	9297.92	-22.17	22.19	3.52	0.18
9493.00	1.88	119.92	9487.78	-18.06	18.12	9.65	0.38
9682.00	0.97	104.90	9676.72	-16.07	16.17	13.89	0.51
9871.00	1.38	86.18	9865.68	-15.79	15.91	17.71	0.30
10061.00	2.05	83.56	10055.59	-16.29	16.44	23.38	0.35
10251.00	1.18	131.27	10245.52	-15.34	15.53	28.23	0.80
10441.00	1.30	137.42	10435.48	-12.44	12.64	31.16	0.09
10631.00	1.48	106.80	10625.42	-10.11	10.35	34.97	0.40
10820.00	1.31	86.92	10814.37	-9.50	9.76	39.47	0.27
11010.00	1.11	312.95	11004.35	-10.86	11.13	40.31	1.17
11200.00	0.94	340.14	11194.32	-13.59	13.85	38.43	0.27
11388.00	1.64	319.43	11382.27	-17.10	17.34	36.16	0.44
11577.00	1.56	320.24	11571.20	-21.15	21.37	32.76	0.04
11668.00	6.99	201.46	11661.98	-16.96	17.16	29.94	8.64
11700.00	7.02	212.59	11693.75	-13.51	13.70	28.17	4.24
11747.00	12.22	218.01	11740.07	-7.20	7.35	23.56	11.22

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
11795.00	18.12	209.17	11786.38	3.29	-3.18	16.79	13.15
11842.00	21.76	204.26	11830.56	17.57	-17.51	9.64	8.52
11890.00	24.31	195.11	11874.75	35.18	-35.16	3.41	9.14
11938.00	27.03	198.33	11918.01	55.04	-55.06	-2.60	6.38
11985.00	31.85	195.46	11958.93	77.10	-77.16	-9.27	10.67
12033.00	36.81	190.77	11998.56	103.41	-103.52	-15.33	11.71
12079.00	43.29	184.82	12033.77	132.68	-132.81	-19.24	16.34
12127.00	47.76	182.87	12067.39	166.83	-166.98	-21.52	9.75
12174.00	52.90	181.86	12097.39	202.95	-203.11	-22.99	11.06
12222.00	59.19	182.15	12124.18	242.71	-242.88	-24.39	13.11
12269.00	66.11	179.83	12145.77	284.42	-284.59	-25.09	15.37
12316.00	72.20	177.30	12162.48	328.31	-328.47	-23.97	13.90
12364.00	78.45	175.94	12174.64	374.65	-374.80	-21.22	13.29
12395.00	83.90	175.16	12179.39	405.20	-405.33	-18.85	17.78
12461.00	87.25	173.97	12184.48	470.73	-470.83	-12.61	5.38
12555.00	88.76	173.93	12187.76	564.21	-564.24	-2.71	1.60
12650.00	88.99	174.39	12189.62	658.76	-658.73	6.96	0.55
12746.00	89.50	176.19	12190.89	754.48	-754.40	14.84	1.94
12841.00	88.42	176.89	12192.61	849.32	-849.21	20.57	1.35
12936.00	88.19	177.23	12195.43	944.19	-944.04	25.44	0.44
13031.00	88.22	178.51	12198.41	1039.09	-1038.92	28.97	1.34
13126.00	87.55	178.03	12201.91	1134.00	-1133.82	31.83	0.87
13221.00	87.21	177.24	12206.25	1228.85	-1228.64	35.75	0.90
13315.00	87.18	179.49	12210.85	1322.70	-1322.48	38.42	2.39
13409.00	87.01	178.95	12215.62	1416.58	-1416.35	39.70	0.61
13504.00	88.86	180.74	12219.04	1511.51	-1511.28	39.96	2.71
13599.00	88.96	181.33	12220.85	1606.46	-1606.25	38.24	0.62
13693.00	88.83	181.20	12222.67	1700.41	-1700.21	36.17	0.20
13788.00	88.99	180.46	12224.47	1795.37	-1795.18	34.79	0.79
13883.00	88.56	180.84	12226.51	1890.33	-1890.15	33.71	0.61
13978.00	87.89	179.59	12229.45	1985.28	-1985.10	33.36	1.49
14072.00	87.11	179.69	12233.56	2079.19	-2079.01	33.94	0.83
14166.00	88.39	178.10	12237.25	2173.10	-2172.91	35.75	2.17

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
14262.00	87.21	177.59	12240.93	2268.98	-2268.77	39.36	1.34
14356.00	89.29	180.29	12243.79	2362.92	-2362.70	41.10	3.62
14451.00	89.43	179.93	12244.85	2457.91	-2457.69	40.92	0.40
14546.00	90.27	183.04	12245.10	2552.85	-2552.65	38.45	3.40
14641.00	89.66	181.71	12245.16	2647.73	-2647.56	34.51	1.54
14736.00	89.56	181.68	12245.80	2742.67	-2742.52	31.70	0.11
14831.00	88.62	181.48	12247.30	2837.60	-2837.47	29.08	1.01
14926.00	88.35	182.20	12249.80	2932.50	-2932.39	26.03	0.81
15020.00	88.25	180.68	12252.59	3026.40	-3026.31	23.67	1.62
15115.00	89.23	180.72	12254.67	3121.36	-3121.28	22.50	1.02
15210.00	91.68	179.50	12253.92	3216.35	-3216.27	22.32	2.89
15305.00	91.61	180.24	12251.20	3311.31	-3311.23	22.55	0.78
15400.00	91.44	178.85	12248.66	3406.27	-3406.19	23.30	1.47
15495.00	91.45	179.67	12246.27	3501.24	-3501.15	24.53	0.87
15590.00	90.13	178.72	12244.96	3596.22	-3596.13	25.86	1.70
15685.00	89.50	177.97	12245.27	3691.20	-3691.09	28.60	1.04
15780.00	89.87	178.36	12245.80	3786.17	-3786.04	31.65	0.57
15874.00	89.66	179.33	12246.18	3880.16	-3880.02	33.54	1.06
15969.00	89.06	178.16	12247.24	3975.14	-3974.99	35.62	1.39
16064.00	88.35	178.62	12249.38	4070.09	-4069.93	38.29	0.89
16158.00	88.19	177.78	12252.22	4164.02	-4163.84	41.23	0.91
16253.00	88.08	178.94	12255.31	4258.94	-4258.74	43.95	1.22
16347.00	88.79	179.53	12257.88	4352.90	-4352.70	45.21	0.98
16442.00	90.10	180.64	12258.79	4447.89	-4447.69	45.07	1.81
16537.00	89.97	180.41	12258.74	4542.88	-4542.69	44.21	0.28
16632.00	91.58	181.20	12257.46	4637.85	-4637.67	42.88	1.89
16727.00	90.34	181.45	12255.87	4732.79	-4732.63	40.68	1.33
16821.00	90.54	181.11	12255.15	4826.75	-4826.60	38.59	0.42
16837.00	90.27	180.23	12255.04	4842.75	-4842.60	38.40	5.72

This survey is correct to the best of my knowledge and is supported by actual field data.
Steve Morris



CAZA OPERATING

SURVEY REPORT

SIOUX 36 STATE #1H

NABORS 893

6/22/2017



The **Ultimate Partner** In Wellbore Placement

CUSTOMER
PROJECT
FIELD

Caza Operating
Caza Operating
WolfCamp

SDI JOB NO.
SDI DISTRICT
SDI KIT/UNIT

OP.001593
Midland
MWD-00271-M

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Section
Township
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System
Datum
Map Zone

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North American Datum 1983 (GRS 1980)
New Mexico East: 3001



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Northing
Easting
UWI

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DEPTH AND ELEVATION REFERENCE

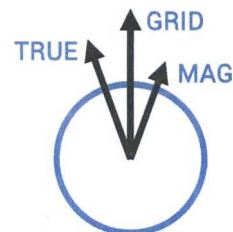
Ground Level
Reference Datum
Reference Height
Reference Elevation

3134 ft above Mean Sea Level
KB
27 ft above G.L.
3161 ft

VERTICAL SECTION REFERENCE

+N/-S
+E/-W
Proposal Direction
Calculation Method

0 ft
0 ft
179.62°
Minimum Curvature



GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 998.515 mG [computed]

MD	MODEL	DATE	DECLINATION	TRUE TO GRID	MAG TO GRID
0-16837 ft	HDGM2016	28 May 2017	6.75°	subtract 0.53°	add 6.22°

WELL NOTES

OPERATORS

A. DAHMANI, A. MILLER

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
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184.00	2.17	267.24	183.96	0.14	-0.17	-3.48	1.18
368.00	3.53	268.40	367.72	0.41	-0.49	-12.63	0.74
552.00	5.90	259.60	551.09	2.18	-2.36	-27.59	1.34
738.00	6.50	253.12	736.00	6.83	-7.14	-47.07	0.50
897.00	2.97	230.93	894.45	11.96	-12.35	-58.89	2.47
1078.00	1.02	226.52	1075.33	15.99	-16.41	-63.69	1.08
1264.00	1.64	240.12	1261.28	18.43	-18.88	-67.20	0.37
1453.00	0.33	315.26	1450.25	19.38	-19.84	-69.94	0.84
1642.00	0.84	5.00	1639.24	17.60	-18.06	-70.20	0.36
1831.00	0.78	351.78	1828.22	14.93	-15.40	-70.26	0.10
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2399.00	1.19	78.22	2396.11	10.46	-10.88	-63.40	0.28
2588.00	1.96	64.75	2585.04	8.72	-9.10	-58.57	0.45
2778.00	3.58	68.49	2774.81	5.21	-5.55	-50.12	0.86
2968.00	2.71	74.23	2964.53	1.88	-2.15	-40.28	0.49
3157.00	2.04	63.63	3153.36	-0.78	0.56	-32.96	0.42
3346.00	3.36	76.92	3342.15	-3.47	3.31	-24.55	0.77
3536.00	1.32	78.78	3531.98	-5.11	4.99	-16.97	1.07
3726.00	0.93	71.47	3721.95	-6.00	5.91	-13.35	0.22
3916.00	0.60	297.85	3911.94	-6.95	6.87	-12.76	0.74
4106.00	0.95	321.82	4101.92	-8.67	8.57	-14.61	0.25
4294.00	2.26	303.92	4289.84	-11.99	11.86	-18.65	0.74
4483.00	1.71	37.80	4478.77	-16.30	16.17	-20.01	1.55
4673.00	0.92	21.96	4668.72	-19.94	19.83	-17.70	0.45
4862.00	1.13	354.89	4857.69	-23.21	23.10	-17.30	0.28
5052.00	1.25	330.26	5047.65	-26.89	26.76	-18.49	0.27
5243.00	1.05	323.90	5238.61	-30.11	29.98	-20.55	0.12
5433.00	0.94	330.68	5428.58	-32.88	32.73	-22.33	0.08
5622.00	0.86	325.92	5617.56	-35.41	35.25	-23.88	0.06
5813.00	0.81	342.50	5808.54	-37.89	37.72	-25.09	0.13
6002.00	0.65	347.56	5997.52	-40.20	40.03	-25.72	0.09

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ft	deg	deg	ft	ft	ft	ft	°/100ft
6190.00	0.64	3.91	6185.51	-42.29	42.12	-25.87	0.10
6380.00	0.48	5.66	6375.50	-44.14	43.97	-25.72	0.09
6570.00	0.36	12.81	6565.50	-45.50	45.33	-25.51	0.07
6759.00	0.44	45.65	6754.49	-46.57	46.41	-24.87	0.13
6949.00	0.64	49.08	6944.49	-47.76	47.61	-23.55	0.11
7139.00	0.60	57.98	7134.47	-48.97	48.83	-21.91	0.05
7328.00	0.64	63.80	7323.46	-49.95	49.82	-20.12	0.04
7498.00	0.86	78.77	7493.45	-50.60	50.48	-18.02	0.17
7688.00	0.93	120.85	7683.43	-50.07	49.97	-15.31	0.34
7877.00	0.91	118.02	7872.40	-48.57	48.49	-12.67	0.03
8067.00	0.72	185.70	8062.39	-46.67	46.59	-11.46	0.48
8257.00	1.08	192.61	8252.36	-43.75	43.67	-11.97	0.20
8446.00	1.29	188.60	8441.32	-39.92	39.84	-12.68	0.12
8635.00	1.04	156.79	8630.29	-36.24	36.16	-12.32	0.36
8825.00	1.25	135.08	8820.25	-33.17	33.11	-10.17	0.25
9014.00	2.20	128.22	9009.16	-29.44	29.40	-5.87	0.51
9151.00	2.30	128.07	9146.06	-26.09	26.08	-1.63	0.07
9303.00	2.57	126.17	9297.92	-22.17	22.19	3.52	0.18
9493.00	1.88	119.92	9487.78	-18.06	18.12	9.65	0.38
9682.00	0.97	104.90	9676.72	-16.07	16.17	13.89	0.51
9871.00	1.38	86.18	9865.68	-15.79	15.91	17.71	0.30
10061.00	2.05	83.56	10055.59	-16.29	16.44	23.38	0.35
10251.00	1.18	131.27	10245.52	-15.34	15.53	28.23	0.80
10441.00	1.30	137.42	10435.48	-12.44	12.64	31.16	0.09
10631.00	1.48	106.80	10625.42	-10.11	10.35	34.97	0.40
10820.00	1.31	86.92	10814.37	-9.50	9.76	39.47	0.27
11010.00	1.11	312.95	11004.35	-10.86	11.13	40.31	1.17
11200.00	0.94	340.14	11194.32	-13.59	13.85	38.43	0.27
11388.00	1.64	319.43	11382.27	-17.10	17.34	36.16	0.44
11577.00	1.56	320.24	11571.20	-21.15	21.37	32.76	0.04
11668.00	6.99	201.46	11661.98	-16.96	17.16	29.94	8.64
11700.00	7.02	212.59	11693.75	-13.51	13.70	28.17	4.24
11747.00	12.22	218.01	11740.07	-7.20	7.35	23.56	11.22

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
11795.00	18.12	209.17	11786.38	3.29	-3.18	16.79	13.15
11842.00	21.76	204.26	11830.56	17.57	-17.51	9.64	8.52
11890.00	24.31	195.11	11874.75	35.18	-35.16	3.41	9.14
11938.00	27.03	198.33	11918.01	55.04	-55.06	-2.60	6.38
11985.00	31.85	195.46	11958.93	77.10	-77.16	-9.27	10.67
12033.00	36.81	190.77	11998.56	103.41	-103.52	-15.33	11.71
12079.00	43.29	184.82	12033.77	132.68	-132.81	-19.24	16.34
12127.00	47.76	182.87	12067.39	166.83	-166.98	-21.52	9.75
12174.00	52.90	181.86	12097.39	202.95	-203.11	-22.99	11.06
12222.00	59.19	182.15	12124.18	242.71	-242.88	-24.39	13.11
12269.00	66.11	179.83	12145.77	284.42	-284.59	-25.09	15.37
12316.00	72.20	177.30	12162.48	328.31	-328.47	-23.97	13.90
12364.00	78.45	175.94	12174.64	374.65	-374.80	-21.22	13.29
12395.00	83.90	175.16	12179.39	405.20	-405.33	-18.85	17.78
12461.00	87.25	173.97	12184.48	470.73	-470.83	-12.61	5.38
12555.00	88.76	173.93	12187.76	564.21	-564.24	-2.71	1.60
12650.00	88.99	174.39	12189.62	658.76	-658.73	6.96	0.55
12746.00	89.50	176.19	12190.89	754.48	-754.40	14.84	1.94
12841.00	88.42	176.89	12192.61	849.32	-849.21	20.57	1.35
12936.00	88.19	177.23	12195.43	944.19	-944.04	25.44	0.44
13031.00	88.22	178.51	12198.41	1039.09	-1038.92	28.97	1.34
13126.00	87.55	178.03	12201.91	1134.00	-1133.82	31.83	0.87
13221.00	87.21	177.24	12206.25	1228.85	-1228.64	35.75	0.90
13315.00	87.18	179.49	12210.85	1322.70	-1322.48	38.42	2.39
13409.00	87.01	178.95	12215.62	1416.58	-1416.35	39.70	0.61
13504.00	88.86	180.74	12219.04	1511.51	-1511.28	39.96	2.71
13599.00	88.96	181.33	12220.85	1606.46	-1606.25	38.24	0.62
13693.00	88.83	181.20	12222.67	1700.41	-1700.21	36.17	0.20
13788.00	88.99	180.46	12224.47	1795.37	-1795.18	34.79	0.79
13883.00	88.56	180.84	12226.51	1890.33	-1890.15	33.71	0.61
13978.00	87.89	179.59	12229.45	1985.28	-1985.10	33.36	1.49
14072.00	87.11	179.69	12233.56	2079.19	-2079.01	33.94	0.83
14166.00	88.39	178.10	12237.25	2173.10	-2172.91	35.75	2.17

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
14262.00	87.21	177.59	12240.93	2268.98	-2268.77	39.36	1.34
14356.00	89.29	180.29	12243.79	2362.92	-2362.70	41.10	3.62
14451.00	89.43	179.93	12244.85	2457.91	-2457.69	40.92	0.40
14546.00	90.27	183.04	12245.10	2552.85	-2552.65	38.45	3.40
14641.00	89.66	181.71	12245.16	2647.73	-2647.56	34.51	1.54
14736.00	89.56	181.68	12245.80	2742.67	-2742.52	31.70	0.11
14831.00	88.62	181.48	12247.30	2837.60	-2837.47	29.08	1.01
14926.00	88.35	182.20	12249.80	2932.50	-2932.39	26.03	0.81
15020.00	88.25	180.68	12252.59	3026.40	-3026.31	23.67	1.62
15115.00	89.23	180.72	12254.67	3121.36	-3121.28	22.50	1.02
15210.00	91.68	179.50	12253.92	3216.35	-3216.27	22.32	2.89
15305.00	91.61	180.24	12251.20	3311.31	-3311.23	22.55	0.78
15400.00	91.44	178.85	12248.66	3406.27	-3406.19	23.30	1.47
15495.00	91.45	179.67	12246.27	3501.24	-3501.15	24.53	0.87
15590.00	90.13	178.72	12244.96	3596.22	-3596.13	25.86	1.70
15685.00	89.50	177.97	12245.27	3691.20	-3691.09	28.60	1.04
15780.00	89.87	178.36	12245.80	3786.17	-3786.04	31.65	0.57
15874.00	89.66	179.33	12246.18	3880.16	-3880.02	33.54	1.06
15969.00	89.06	178.16	12247.24	3975.14	-3974.99	35.62	1.39
16064.00	88.35	178.62	12249.38	4070.09	-4069.93	38.29	0.89
16158.00	88.19	177.78	12252.22	4164.02	-4163.84	41.23	0.91
16253.00	88.08	178.94	12255.31	4258.94	-4258.74	43.95	1.22
16347.00	88.79	179.53	12257.88	4352.90	-4352.70	45.21	0.98
16442.00	90.10	180.64	12258.79	4447.89	-4447.69	45.07	1.81
16537.00	89.97	180.41	12258.74	4542.88	-4542.69	44.21	0.28
16632.00	91.58	181.20	12257.46	4637.85	-4637.67	42.88	1.89
16727.00	90.34	181.45	12255.87	4732.79	-4732.63	40.68	1.33
16821.00	90.54	181.11	12255.15	4826.75	-4826.60	38.59	0.42
16837.00	90.27	180.23	12255.04	4842.75	-4842.60	38.40	5.72

This survey is correct to the best of my knowledge and is supported by actual field data.
Steve Morris



CAZA OPERATING

SURVEY REPORT

SIOUX 36 STATE #1H

NABORS 893

6/22/2017



The **Ultimate Partner** In Wellbore Placement

CUSTOMER
PROJECT
FIELD

Caza Operating
Caza Operating
WolfCamp

SDI JOB NO.
SDI DISTRICT
SDI KIT/UNIT

OP.001593
Midland
MWD-00271-M

SITE INFORMATION

Site Name
Lat/Long
Northing
Easting

Sioux 36 State #1H
32° 5' 38.232" N, 103° 19' 42.433" W
399,367 ft
852,527.2 ft

Section
Township
Range

MAP INFORMATION

North Reference
Grid Correction
System
Datum
Map Zone

Grid North
-0.53 deg
US State Plane 1983
North American Datum 1983 (GRS 1980)
New Mexico East: 3001



WELL INFORMATION

Lat/Long
Northing
Easting
UWI

32° 5' 38.232" N, 103° 19' 42.433" W
399,367 ft
852,527.2 ft
30-025-43752

DEPTH AND ELEVATION REFERENCE

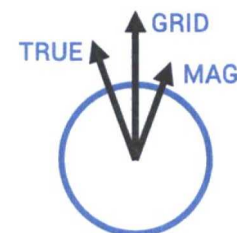
Ground Level
Reference Datum
Reference Height
Reference Elevation

3134 ft above Mean Sea Level
KB
27 ft above G.L.
3161 ft

VERTICAL SECTION REFERENCE

+N/-S
+E/-W
Proposal Direction
Calculation Method

0 ft
0 ft
179.62°
Minimum Curvature



GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 998.515 mG [computed]

MD	MODEL	DATE	DECLINATION	TRUE TO GRID	MAG TO GRID
0-16837 ft	HDGM2016	28 May 2017	6.75°	subtract 0.53°	add 6.22°

WELL NOTES

OPERATORS

A. DAHMANI, A. MILLER

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
184.00	2.17	267.24	183.96	0.14	-0.17	-3.48	1.18
368.00	3.53	268.40	367.72	0.41	-0.49	-12.63	0.74
552.00	5.90	259.60	551.09	2.18	-2.36	-27.59	1.34
738.00	6.50	253.12	736.00	6.83	-7.14	-47.07	0.50
897.00	2.97	230.93	894.45	11.96	-12.35	-58.89	2.47
1078.00	1.02	226.52	1075.33	15.99	-16.41	-63.69	1.08
1264.00	1.64	240.12	1261.28	18.43	-18.88	-67.20	0.37
1453.00	0.33	315.26	1450.25	19.38	-19.84	-69.94	0.84
1642.00	0.84	5.00	1639.24	17.60	-18.06	-70.20	0.36
1831.00	0.78	351.78	1828.22	14.93	-15.40	-70.26	0.10
2020.00	0.91	356.03	2017.20	12.15	-12.62	-70.55	0.08
2209.00	1.61	91.81	2206.17	10.75	-11.20	-68.00	1.02
2399.00	1.19	78.22	2396.11	10.46	-10.88	-63.40	0.28
2588.00	1.96	64.75	2585.04	8.72	-9.10	-58.57	0.45
2778.00	3.58	68.49	2774.81	5.21	-5.55	-50.12	0.86
2968.00	2.71	74.23	2964.53	1.88	-2.15	-40.28	0.49
3157.00	2.04	63.63	3153.36	-0.78	0.56	-32.96	0.42
3346.00	3.36	76.92	3342.15	-3.47	3.31	-24.55	0.77
3536.00	1.32	78.78	3531.98	-5.11	4.99	-16.97	1.07
3726.00	0.93	71.47	3721.95	-6.00	5.91	-13.35	0.22
3916.00	0.60	297.85	3911.94	-6.95	6.87	-12.76	0.74
4106.00	0.95	321.82	4101.92	-8.67	8.57	-14.61	0.25
4294.00	2.26	303.92	4289.84	-11.99	11.86	-18.65	0.74
4483.00	1.71	37.80	4478.77	-16.30	16.17	-20.01	1.55
4673.00	0.92	21.96	4668.72	-19.94	19.83	-17.70	0.45
4862.00	1.13	354.89	4857.69	-23.21	23.10	-17.30	0.28
5052.00	1.25	330.26	5047.65	-26.89	26.76	-18.49	0.27
5243.00	1.05	323.90	5238.61	-30.11	29.98	-20.55	0.12
5433.00	0.94	330.68	5428.58	-32.88	32.73	-22.33	0.08
5622.00	0.86	325.92	5617.56	-35.41	35.25	-23.88	0.06
5813.00	0.81	342.50	5808.54	-37.89	37.72	-25.09	0.13
6002.00	0.65	347.56	5997.52	-40.20	40.03	-25.72	0.09

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
6190.00	0.64	3.91	6185.51	-42.29	42.12	-25.87	0.10
6380.00	0.48	5.66	6375.50	-44.14	43.97	-25.72	0.09
6570.00	0.36	12.81	6565.50	-45.50	45.33	-25.51	0.07
6759.00	0.44	45.65	6754.49	-46.57	46.41	-24.87	0.13
6949.00	0.64	49.08	6944.49	-47.76	47.61	-23.55	0.11
7139.00	0.60	57.98	7134.47	-48.97	48.83	-21.91	0.05
7328.00	0.64	63.80	7323.46	-49.95	49.82	-20.12	0.04
7498.00	0.86	78.77	7493.45	-50.60	50.48	-18.02	0.17
7688.00	0.93	120.85	7683.43	-50.07	49.97	-15.31	0.34
7877.00	0.91	118.02	7872.40	-48.57	48.49	-12.67	0.03
8067.00	0.72	185.70	8062.39	-46.67	46.59	-11.46	0.48
8257.00	1.08	192.61	8252.36	-43.75	43.67	-11.97	0.20
8446.00	1.29	188.60	8441.32	-39.92	39.84	-12.68	0.12
8635.00	1.04	156.79	8630.29	-36.24	36.16	-12.32	0.36
8825.00	1.25	135.08	8820.25	-33.17	33.11	-10.17	0.25
9014.00	2.20	128.22	9009.16	-29.44	29.40	-5.87	0.51
9151.00	2.30	128.07	9146.06	-26.09	26.08	-1.63	0.07
9303.00	2.57	126.17	9297.92	-22.17	22.19	3.52	0.18
9493.00	1.88	119.92	9487.78	-18.06	18.12	9.65	0.38
9682.00	0.97	104.90	9676.72	-16.07	16.17	13.89	0.51
9871.00	1.38	86.18	9865.68	-15.79	15.91	17.71	0.30
10061.00	2.05	83.56	10055.59	-16.29	16.44	23.38	0.35
10251.00	1.18	131.27	10245.52	-15.34	15.53	28.23	0.80
10441.00	1.30	137.42	10435.48	-12.44	12.64	31.16	0.09
10631.00	1.48	106.80	10625.42	-10.11	10.35	34.97	0.40
10820.00	1.31	86.92	10814.37	-9.50	9.76	39.47	0.27
11010.00	1.11	312.95	11004.35	-10.86	11.13	40.31	1.17
11200.00	0.94	340.14	11194.32	-13.59	13.85	38.43	0.27
11388.00	1.64	319.43	11382.27	-17.10	17.34	36.16	0.44
11577.00	1.56	320.24	11571.20	-21.15	21.37	32.76	0.04
11668.00	6.99	201.46	11661.98	-16.96	17.16	29.94	8.64
11700.00	7.02	212.59	11693.75	-13.51	13.70	28.17	4.24
11747.00	12.22	218.01	11740.07	-7.20	7.35	23.56	11.22

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
11795.00	18.12	209.17	11786.38	3.29	-3.18	16.79	13.15
11842.00	21.76	204.26	11830.56	17.57	-17.51	9.64	8.52
11890.00	24.31	195.11	11874.75	35.18	-35.16	3.41	9.14
11938.00	27.03	198.33	11918.01	55.04	-55.06	-2.60	6.38
11985.00	31.85	195.46	11958.93	77.10	-77.16	-9.27	10.67
12033.00	36.81	190.77	11998.56	103.41	-103.52	-15.33	11.71
12079.00	43.29	184.82	12033.77	132.68	-132.81	-19.24	16.34
12127.00	47.76	182.87	12067.39	166.83	-166.98	-21.52	9.75
12174.00	52.90	181.86	12097.39	202.95	-203.11	-22.99	11.06
12222.00	59.19	182.15	12124.18	242.71	-242.88	-24.39	13.11
12269.00	66.11	179.83	12145.77	284.42	-284.59	-25.09	15.37
12316.00	72.20	177.30	12162.48	328.31	-328.47	-23.97	13.90
12364.00	78.45	175.94	12174.64	374.65	-374.80	-21.22	13.29
12395.00	83.90	175.16	12179.39	405.20	-405.33	-18.85	17.78
12461.00	87.25	173.97	12184.48	470.73	-470.83	-12.61	5.38
12555.00	88.76	173.93	12187.76	564.21	-564.24	-2.71	1.60
12650.00	88.99	174.39	12189.62	658.76	-658.73	6.96	0.55
12746.00	89.50	176.19	12190.89	754.48	-754.40	14.84	1.94
12841.00	88.42	176.89	12192.61	849.32	-849.21	20.57	1.35
12936.00	88.19	177.23	12195.43	944.19	-944.04	25.44	0.44
13031.00	88.22	178.51	12198.41	1039.09	-1038.92	28.97	1.34
13126.00	87.55	178.03	12201.91	1134.00	-1133.82	31.83	0.87
13221.00	87.21	177.24	12206.25	1228.85	-1228.64	35.75	0.90
13315.00	87.18	179.49	12210.85	1322.70	-1322.48	38.42	2.39
13409.00	87.01	178.95	12215.62	1416.58	-1416.35	39.70	0.61
13504.00	88.86	180.74	12219.04	1511.51	-1511.28	39.96	2.71
13599.00	88.96	181.33	12220.85	1606.46	-1606.25	38.24	0.62
13693.00	88.83	181.20	12222.67	1700.41	-1700.21	36.17	0.20
13788.00	88.99	180.46	12224.47	1795.37	-1795.18	34.79	0.79
13883.00	88.56	180.84	12226.51	1890.33	-1890.15	33.71	0.61
13978.00	87.89	179.59	12229.45	1985.28	-1985.10	33.36	1.49
14072.00	87.11	179.69	12233.56	2079.19	-2079.01	33.94	0.83
14166.00	88.39	178.10	12237.25	2173.10	-2172.91	35.75	2.17

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
14262.00	87.21	177.59	12240.93	2268.98	-2268.77	39.36	1.34
14356.00	89.29	180.29	12243.79	2362.92	-2362.70	41.10	3.62
14451.00	89.43	179.93	12244.85	2457.91	-2457.69	40.92	0.40
14546.00	90.27	183.04	12245.10	2552.85	-2552.65	38.45	3.40
14641.00	89.66	181.71	12245.16	2647.73	-2647.56	34.51	1.54
14736.00	89.56	181.68	12245.80	2742.67	-2742.52	31.70	0.11
14831.00	88.62	181.48	12247.30	2837.60	-2837.47	29.08	1.01
14926.00	88.35	182.20	12249.80	2932.50	-2932.39	26.03	0.81
15020.00	88.25	180.68	12252.59	3026.40	-3026.31	23.67	1.62
15115.00	89.23	180.72	12254.67	3121.36	-3121.28	22.50	1.02
15210.00	91.68	179.50	12253.92	3216.35	-3216.27	22.32	2.89
15305.00	91.61	180.24	12251.20	3311.31	-3311.23	22.55	0.78
15400.00	91.44	178.85	12248.66	3406.27	-3406.19	23.30	1.47
15495.00	91.45	179.67	12246.27	3501.24	-3501.15	24.53	0.87
15590.00	90.13	178.72	12244.96	3596.22	-3596.13	25.86	1.70
15685.00	89.50	177.97	12245.27	3691.20	-3691.09	28.60	1.04
15780.00	89.87	178.36	12245.80	3786.17	-3786.04	31.65	0.57
15874.00	89.66	179.33	12246.18	3880.16	-3880.02	33.54	1.06
15969.00	89.06	178.16	12247.24	3975.14	-3974.99	35.62	1.39
16064.00	88.35	178.62	12249.38	4070.09	-4069.93	38.29	0.89
16158.00	88.19	177.78	12252.22	4164.02	-4163.84	41.23	0.91
16253.00	88.08	178.94	12255.31	4258.94	-4258.74	43.95	1.22
16347.00	88.79	179.53	12257.88	4352.90	-4352.70	45.21	0.98
16442.00	90.10	180.64	12258.79	4447.89	-4447.69	45.07	1.81
16537.00	89.97	180.41	12258.74	4542.88	-4542.69	44.21	0.28
16632.00	91.58	181.20	12257.46	4637.85	-4637.67	42.88	1.89
16727.00	90.34	181.45	12255.87	4732.79	-4732.63	40.68	1.33
16821.00	90.54	181.11	12255.15	4826.75	-4826.60	38.59	0.42
16837.00	90.27	180.23	12255.04	4842.75	-4842.60	38.40	5.72

This survey is correct to the best of my knowledge and is supported by actual field data.
Steve Morris

