



Company: OWL SWD Operating, LLC Job Number: 04-1-19-2596 Calculation Method Minimum Curvature
Well: Kimberly SWD #1 Mag (Grid): 6.33° Proposed Azimuth 0.0
Location: Lea Co, NM Dir Driller: Eugene Lopez Depth Reference 28'
Rig: Patterson 242 FST: Tommy Tie Into: Assumed Vertical
Job Date: 3/18/19 - 4/23/2019

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	0.00	0.00	0.00	0	0.00	0.00	0.00 0	0.00 0					
1	111	0.48	253.83	111	111.00	-0.13	0.13 S	0.45 W	0.46	253.83	0.43	0.43	228.68
2	158	0.40	198.11	47	158.00	-0.34	0.34 S	0.69 W	0.77	243.64	0.89	-0.17	-118.55
3	247	0.88	251.02	89	246.99	-0.86	0.86 S	1.43 W	1.67	239.03	0.80	0.54	59.45
4	337	1.41	242.49	90	336.97	-1.59	1.59 S	3.07 W	3.45	242.52	0.62	0.59	-9.48
5	427	1.93	246.54	90	426.94	-2.71	2.71 S	5.44 W	6.07	243.52	0.59	0.58	4.50
6	523	2.51	254.62	96	522.86	-3.91	3.91 S	8.95 W	9.76	246.39	0.69	0.60	8.42
7	615	2.64	248.70	92	614.77	-5.21	5.21 S	12.86 W	13.88	247.94	0.32	0.14	-6.43
8	706	2.20	239.30	91	705.69	-6.87	6.87 S	16.32 W	17.70	247.18	0.65	-0.48	-10.33
9	797	2.20	239.82	91	796.62	-8.64	8.64 S	19.33 W	21.17	245.92	0.02	0.00	0.57
10	890	2.20	244.12	93	889.55	-10.31	10.31 S	22.48 W	24.73	245.35	0.18	0.00	4.62
11	981	2.20	243.16	91	980.49	-11.86	11.86 S	25.61 W	28.22	245.14	0.04	0.00	-1.05
12	1073	2.24	245.00	92	1072.42	-13.42	13.42 S	28.81 W	31.79	245.02	0.09	0.04	2.00
13	1180	1.93	248.56	107	1179.35	-14.96	14.96 S	32.39 W	35.68	245.20	0.31	-0.29	3.33
14	1273	1.98	244.69	93	1272.29	-16.22	16.22 S	35.30 W	38.85	245.32	0.15	0.05	-4.16
15	1367	0.66	173.59	94	1366.27	-17.46	17.46 S	36.70 W	40.64	244.57	1.99	-1.40	-75.64
16	1462	0.79	141.68	95	1461.26	-18.51	18.51 S	36.24 W	40.69	242.94	0.44	0.14	-33.59
17	1555	0.75	145.76	93	1554.25	-19.52	19.52 S	35.50 W	40.51	241.19	0.07	-0.04	4.39
18	1649	0.79	139.44	94	1648.25	-20.52	20.52 S	34.73 W	40.34	239.42	0.10	0.04	-6.72
19	1745	0.92	139.40	96	1744.24	-21.61	21.61 S	33.80 W	40.11	237.41	0.14	0.14	-0.04
20	1839	1.01	131.75	94	1838.22	-22.73	22.73 S	32.69 W	39.82	235.18	0.17	0.10	-8.14
21	1933	1.14	134.47	94	1932.21	-23.94	23.94 S	31.40 W	39.49	232.68	0.15	0.14	2.89
22	2028	1.32	127.62	95	2027.18	-25.27	25.27 S	29.86 W	39.12	229.76	0.24	0.19	-7.21
23	2123	1.36	120.06	95	2122.16	-26.50	26.50 S	28.02 W	38.57	226.59	0.19	0.04	-7.96
24	2218	1.58	119.97	95	2217.13	-27.72	27.72 S	25.91 W	37.94	223.07	0.23	0.23	-0.09
25	2313	1.63	107.23	95	2312.09	-28.78	28.78 S	23.48 W	37.14	219.22	0.38	0.05	-13.41
26	2408	1.93	96.42	95	2407.04	-29.35	29.35 S	20.60 W	35.86	215.06	0.47	0.32	-11.38
27	2502	2.33	94.75	94	2500.98	-29.69	29.69 S	17.13 W	34.28	209.98	0.43	0.43	-1.78
28	2597	2.77	98.44	95	2595.88	-30.19	30.19 S	12.93 W	32.84	203.19	0.49	0.46	3.88
29	2691	2.81	98.09	94	2689.77	-30.84	30.84 S	8.40 W	31.97	195.24	0.05	0.04	-0.37
30	2786	1.89	61.26	95	2784.70	-30.42	30.42 S	4.72 W	30.78	188.83	1.81	-0.97	-38.77
31	2881	2.11	61.09	95	2879.64	-28.82	28.82 S	1.82 W	28.88	183.61	0.23	0.23	-0.18
32	3069	2.46	58.89	188	3067.49	-25.06	25.06 S	4.66 E	25.49	169.46	0.19	0.19	-1.17
33	3164	2.59	57.75	95	3162.40	-22.86	22.86 S	8.23 E	24.30	160.21	0.15	0.14	-1.20
34	3258	3.52	37.36	94	3256.26	-19.44	19.44 S	11.77 E	22.72	148.80	1.51	0.99	-21.69
35	3352	2.07	26.98	94	3350.15	-15.63	15.63 S	14.29 E	21.18	137.55	1.63	-1.54	-11.04
36	3446	0.79	356.93	94	3444.12	-13.47	13.47 S	15.03 E	20.18	131.87	1.53	-1.36	351.01



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37	3540	0.66	356.75	94	3538.11	-12.28	12.28 S	14.96 E	19.36	129.38	0.14	-0.14	-0.19
38	3634	0.79	357.63	94	3632.11	-11.09	11.09 S	14.91 E	18.58	126.66	0.14	0.14	0.94
39	3729	0.75	357.10	95	3727.10	-9.82	9.82 S	14.85 E	17.80	123.47	0.04	-0.04	-0.56
40	3824	0.79	352.18	95	3822.09	-8.55	8.55 S	14.73 E	17.03	120.13	0.08	0.04	-5.18
41	3918	0.88	359.74	94	3916.08	-7.18	7.18 S	14.64 E	16.30	116.15	0.15	0.10	8.04
42	4013	0.97	6.68	95	4011.07	-5.66	5.66 S	14.73 E	15.78	111.01	0.15	0.09	-371.64
43	4107	1.01	6.15	94	4105.05	-4.04	4.04 S	14.91 E	15.45	105.17	0.04	0.04	-0.56
44	4201	1.14	2.64	94	4199.04	-2.28	2.28 S	15.04 E	15.21	98.64	0.15	0.14	-3.73
45	4295	1.32	1.23	94	4293.01	-0.27	0.27 S	15.11 E	15.11	91.02	0.19	0.19	-1.50
46	4389	1.36	3.96	94	4386.99	1.93	1.93 N	15.21 E	15.33	82.78	0.08	0.04	2.90
47	4483	1.41	2.02	94	4480.96	4.20	4.20 N	15.32 E	15.89	74.69	0.07	0.05	-2.06
48	4578	1.36	3.43	95	4575.93	6.49	6.49 N	15.43 E	16.74	67.19	0.06	-0.05	1.48
49	4671	1.50	4.10	93	4668.90	8.80	8.80 N	15.59 E	17.90	60.54	0.15	0.15	0.72
50	4766	0.50	98.40	95	4763.89	9.98	9.98 N	16.08 E	18.93	58.17	1.70	-1.05	99.26
51	4860	0.50	106.10	94	4857.89	9.81	9.81 N	16.88 E	19.53	59.84	0.07	0.00	8.19
52	4954	0.40	103.90	94	4951.89	9.62	9.62 N	17.60 E	20.05	61.34	0.11	-0.11	-2.34
53	5048	0.50	94.20	94	5045.88	9.51	9.51 N	18.32 E	20.65	62.57	0.13	0.11	-10.32
54	5143	0.20	112.10	95	5140.88	9.42	9.42 N	18.89 E	21.11	63.51	0.33	-0.32	18.84
55	5237	0.10	90.40	94	5234.88	9.35	9.35 N	19.13 E	21.29	63.94	0.12	-0.11	-23.09
56	5331	0.09	335.13	94	5328.88	9.42	9.42 N	19.18 E	21.37	63.84	0.17	-0.01	260.35
57	5426	0.09	365.40	95	5423.88	9.56	9.56 N	19.15 E	21.41	63.47	0.05	0.00	31.86
58	5519	0.13	337.13	93	5516.88	9.73	9.73 N	19.12 E	21.45	63.02	0.07	0.04	-30.40
59	5614	0.20	21.30	95	5611.88	9.99	9.99 N	19.14 E	21.59	62.44	0.15	0.07	-332.45
60	5709	0.20	349.40	95	5706.88	10.30	10.30 N	19.17 E	21.76	61.74	0.12	0.00	345.37
61	5803	0.20	4.50	94	5800.88	10.63	10.63 N	19.15 E	21.90	60.97	0.06	0.00	-366.91
62	5897	0.30	17.70	94	5894.88	11.03	11.03 N	19.24 E	22.17	60.18	0.12	0.11	14.04
63	5991	0.40	21.50	94	5988.88	11.57	11.57 N	19.43 E	22.61	59.24	0.11	0.11	4.04
64	6085	0.40	23.60	94	6082.87	12.17	12.17 N	19.68 E	23.14	58.27	0.02	0.00	2.23
65	6179	0.60	34.20	94	6176.87	12.88	12.88 N	20.09 E	23.87	57.34	0.23	0.21	11.28
66	6274	0.57	37.53	95	6271.86	13.67	13.67 N	20.66 E	24.77	56.51	0.05	-0.03	3.51
67	6368	0.70	49.20	94	6365.86	14.41	14.41 N	21.38 E	25.78	56.01	0.19	0.14	12.41
68	6469	1.10	80.00	101	6466.85	14.98	14.98 N	22.80 E	27.28	56.69	0.61	0.40	30.50
69	6564	1.60	88.00	95	6561.82	15.19	15.19 N	25.02 E	29.27	58.74	0.56	0.53	8.42
70	6659	2.11	87.30	95	6656.77	15.32	15.32 N	28.10 E	32.00	61.40	0.54	0.54	-0.74
71	6753	1.54	88.42	94	6750.72	15.43	15.43 N	31.09 E	34.71	63.60	0.61	-0.61	1.19
72	6847	1.71	86.70	94	6844.68	15.55	15.55 N	33.75 E	37.16	65.26	0.19	0.18	-1.83
73	6941	1.98	89.70	94	6938.63	15.64	15.64 N	36.77 E	39.96	66.96	0.30	0.29	3.19
74	7036	2.10	92.24	95	7033.57	15.58	15.58 N	40.15 E	43.07	68.80	0.16	0.13	2.67



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75	7131	1.63	96.90	95	7128.52	15.35	15.35 N	43.24 E	45.88	70.46	0.52	-0.49	4.91
76	7225	1.20	98.30	94	7222.50	15.05	15.05 N	45.54 E	47.96	71.72	0.46	-0.46	1.49
77	7268	1.20	98.30	43	7265.49	14.92	14.92 N	46.43 E	48.76	72.19	0.00	0.00	0.00
78	7320	1.40	94.90	52	7317.47	14.78	14.78 N	47.60 E	49.84	72.75	0.41	0.38	-6.54
79	7414	1.50	95.40	94	7411.44	14.57	14.57 N	49.97 E	52.05	73.74	0.11	0.11	0.53
80	7508	1.70	95.40	94	7505.41	14.32	14.32 N	52.58 E	54.50	74.76	0.21	0.21	0.00
81	7602	1.80	94.90	94	7599.36	14.06	14.06 N	55.44 E	57.20	75.76	0.11	0.11	-0.53
82	7696	2.00	96.10	94	7693.31	13.76	13.76 N	58.54 E	60.14	76.77	0.22	0.21	1.28
83	7791	2.40	100.50	95	7788.24	13.23	13.23 N	62.15 E	63.54	77.99	0.46	0.42	4.63
84	7885	1.90	83.80	94	7882.17	13.04	13.04 N	65.63 E	66.91	78.77	0.85	-0.53	-17.77
85	7980	1.10	79.40	95	7977.14	13.37	13.37 N	68.09 E	69.39	78.89	0.85	-0.84	-4.63
86	8074	0.20	163.40	94	8071.13	13.38	13.38 N	69.03 E	70.31	79.03	1.17	-0.96	89.36
87	8169	0.60	124.70	95	8166.13	12.94	12.94 N	69.48 E	70.68	79.45	0.49	0.42	-40.74
88	8263	1.40	111.80	94	8260.12	12.23	12.23 N	70.95 E	72.00	80.22	0.88	0.85	-13.72
89	8358	1.00	90.80	95	8355.10	11.79	11.79 N	72.86 E	73.81	80.81	0.62	-0.42	-22.11
90	8451	1.10	92.30	93	8448.08	11.74	11.74 N	74.56 E	75.48	81.05	0.11	0.11	1.61
91	8546	1.40	80.90	95	8543.06	11.89	11.89 N	76.62 E	77.54	81.18	0.41	0.32	-12.00
92	8640	0.80	48.00	94	8637.04	12.51	12.51 N	78.24 E	79.24	80.92	0.90	-0.64	-35.00
93	8734	1.00	315.50	94	8731.03	13.54	13.54 N	78.15 E	79.32	80.17	1.39	0.21	284.57
94	8828	0.20	59.90	94	8825.03	14.20	14.20 N	77.72 E	79.01	79.64	1.14	-0.85	-271.91
95	8922	0.20	99.80	94	8919.03	14.26	14.26 N	78.03 E	79.32	79.64	0.15	0.00	42.45
96	9016	0.10	116.50	94	9013.03	14.19	14.19 N	78.26 E	79.54	79.72	0.12	-0.11	17.77
97	9110	0.40	129.90	94	9107.03	13.95	13.95 N	78.59 E	79.81	79.94	0.32	0.32	14.26
98	9204	1.10	126.00	94	9201.02	13.20	13.20 N	79.57 E	80.66	80.58	0.75	0.74	-4.15
99	9298	0.80	103.30	94	9295.01	12.52	12.52 N	80.94 E	81.90	81.20	0.51	-0.32	-24.15
100	9393	1.10	56.10	95	9389.99	12.88	12.88 N	82.34 E	83.34	81.11	0.85	0.32	-49.68
101	9486	3.00	69.30	93	9482.93	14.24	14.24 N	85.36 E	86.54	80.53	2.09	2.04	14.19
102	9580	3.20	72.50	94	9576.79	15.90	15.90 N	90.16 E	91.55	80.00	0.28	0.21	3.40
103	9674	2.60	75.10	94	9670.67	17.23	17.23 N	94.72 E	96.28	79.69	0.65	-0.64	2.77
104	9767	2.02	76.20	93	9763.60	18.17	18.17 N	98.35 E	100.02	79.53	0.63	-0.62	1.18
105	9858	1.20	105.00	91	9854.56	18.30	18.30 N	100.83 E	102.48	79.71	1.24	-0.90	31.65
106	9952	1.00	149.40	94	9948.55	17.34	17.34 N	102.20 E	103.66	80.37	0.91	-0.21	47.23
107	10045	1.10	155.90	93	10041.53	15.83	15.83 N	102.98 E	104.19	81.26	0.17	0.11	6.99
108	10140	1.30	142.00	95	10136.51	14.15	14.15 N	104.01 E	104.97	82.25	0.37	0.21	-14.63
109	10234	1.50	117.30	94	10230.48	12.74	12.74 N	105.76 E	106.53	83.13	0.67	0.21	-26.28
110	10328	2.30	95.70	94	10324.43	11.99	11.99 N	108.73 E	109.39	83.71	1.13	0.85	-22.98
111	10422	3.40	76.50	94	10418.31	12.45	12.45 N	113.32 E	114.00	83.73	1.53	1.17	-20.43
112	10517	3.50	72.50	95	10513.14	13.98	13.98 N	118.82 E	119.64	83.29	0.27	0.11	-4.21



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113	10611	4.30	63.50	94	10606.93	16.42	16.42 N	124.71 E	125.79	82.50	1.07	0.85	-9.57
114	10705	4.00	50.80	94	10700.68	20.06	20.06 N	130.41 E	131.94	81.25	1.03	-0.32	-13.51
115	10799	4.10	50.00	94	10794.45	24.30	24.30 N	135.52 E	137.68	79.84	0.12	0.11	-0.85
116	10839	4.30	50.50	40	10834.34	26.17	26.17 N	137.78 E	140.24	79.25	0.51	0.50	1.25
117	10933	3.25	40.40	94	10928.13	30.44	30.44 N	142.22 E	145.44	77.92	1.32	-1.12	-10.74
118	11028	2.10	27.00	95	11023.03	34.04	34.04 N	144.76 E	148.71	76.77	1.37	-1.21	-14.11
119	11122	1.10	13.10	94	11116.99	36.45	36.45 N	145.74 E	150.23	75.96	1.13	-1.06	-14.79
120	11217	1.40	258.00	95	11211.98	37.10	37.10 N	144.82 E	149.49	75.63	2.23	0.32	257.79
121	11311	1.90	270.60	94	11305.94	36.88	36.88 N	142.13 E	146.84	75.45	0.65	0.53	13.40
122	11405	2.70	286.00	94	11399.87	37.51	37.51 N	138.45 E	143.44	74.84	1.07	0.85	16.38
123	11499	2.37	350.51	94	11493.79	40.03	40.03 N	136.00 E	141.77	73.60	2.89	-0.35	68.63
124	11594	3.60	3.60	95	11588.66	44.95	44.95 N	135.86 E	143.10	71.69	1.47	1.29	-365.17
125	11687	4.00	8.40	93	11681.46	51.07	51.07 N	136.52 E	145.76	69.49	0.55	0.43	5.16
126	11783	3.60	344.50	96	11777.25	57.29	57.29 N	136.20 E	147.76	67.19	1.69	-0.42	350.10
127	11877	5.10	317.80	94	11870.99	63.23	63.23 N	132.61 E	146.91	64.51	2.64	1.60	-28.40
128	11971	4.00	315.60	94	11964.69	68.67	68.67 N	127.51 E	144.82	61.70	1.18	-1.17	-2.34
129	12066	2.90	320.00	95	12059.52	72.87	72.87 N	123.64 E	143.52	59.49	1.19	-1.16	4.63
130	12132	3.10	326.10	66	12125.43	75.63	75.63 N	121.58 E	143.18	58.11	0.57	0.30	9.24

