

PERC DIRECTIONAL REPORT

WELLNAME: DOW "B" 28 FEDERAL #1
 FIELD: CEDAR LAKE EAST
 AFE NO.: 956013

WELL ID NO.: 956013
 API NO.: 30 016 28678

SURVEY TYPE: MSS MD: ANGLE: AZIMUTH: TVD:
 N/S: E/W: VS: TARGET:

MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
0	0.00	0.00	0	0.00	0.00	0.00	0.00
5.037	0.50	318.00	5.037	0.00	0.00	0.00	0.00
5.971	1.50	230.00	5.971	16.33	-14.71	16.33	0.01
6.992	2.50	36.00	6.992	11.50	-26.80	11.50	0.17
7.718	3.70	53.00	7.717	20.93	-23.85	20.93	0.39
8.232	3.70	21.00	8.229	47.84	4.07	47.84	0.21
8.585	3.60	25.00	8.582	73.31	23.26	73.31	0.40
8.682	2.60	34.00	8.679	93.99	32.03	93.99	0.08
8.746	2.20	33.00	8.743	98.57	34.54	98.57	1.14
8.843	2.30	25.00	8.839	100.80	36.03	100.80	0.63
8.939	1.80	3.00	8.935	104.13	37.66	104.13	0.34
9.003	1.60	5.50	8.999	107.38	38.76	107.38	0.96
9.089	1.50	358.00	9.095	109.27	38.89	109.27	0.33
9.186	1.10	348.00	9.192	111.86	38.98	111.86	0.24
9.280	0.70	338.00	9.286	114.04	38.74	114.04	0.47
9.384	1.10	342.00	9.380	115.45	38.32	115.45	0.47
9.477	1.40	83.00	9.473	116.83	37.81	116.83	0.44
9.571	1.70	11.00	9.567	117.82	38.68	117.82	2.08
9.633	1.80	10.00	9.629	119.33	40.06	119.33	1.98
9.927	0.75		9.923	121.19	40.41	121.19	0.17
10.396	0.50		10.392	127.66	41.21	127.66	0.36
10.632	0.75		10.628	132.78	41.21	132.78	0.05
11.407	1.25		11.403	137.53	41.21	137.53	0.06
11.812	1.75		11.808	147.57	41.21	147.57	0.08
12.205	2.25		12.201	158.17	41.21	158.17	0.12
12.392	2.00		12.388	171.89	41.21	171.89	0.13
				178.82	41.21	178.82	0.13