

PERC

DIRECTIONAL REPORT

WELLNAME: NEW MEXICO "N" STATE #10
FIELD: VACUUM ATOKA
AFE NO.: 665506

SUR 800/S & 510/W
BHL 388/S & 375/W
WELL ID NO.: 665506

3D-17s-35e

API NO.: 30 025 33434

SURVEY TYPE : MWD MD : 100 ANGLE : 0.55 AZIMUTH : 135.45 TVD : 100.00
N/S : -0.34 E/W : 0.34 VS : TARGET : 197.20

MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
100	0.55	135.45	100	-0.34	0.34		
200	0.52	148.76	200	-1.07	0.91	0.75	0.13
300	0.53	138.67	300	-1.81	1.45	1.29	0.09
400	0.89	148.61	400	-2.82	2.16	2.05	0.38
500	1.02	159.44	500	-4.31	2.88	3.27	0.22
600	1.02	158.94	600	-5.98	3.51	4.67	0.01
700	1.23	165.20	700	-7.84	4.11	6.28	0.24
800	1.40	180.65	800	-10.10	4.37	8.36	0.39
900	1.48	192.63	900	-12.59	4.07	10.82	0.31
1,000	1.51	191.67	1,000	-15.14	3.52	13.42	0.04
1,100	1.47	191.13	1,100	-17.68	3.01	16.00	0.04
1,200	1.46	193.07	1,200	-20.18	2.47	18.55	0.05
1,300	1.45	194.01	1,300	-22.65	1.88	21.08	0.03
1,400	1.46	193.61	1,400	-25.12	1.27	23.62	0.01
1,500	1.38	191.98	1,500	-27.53	0.72	26.09	0.09
1,600	1.33	192.87	1,600	-29.84	0.21	28.45	0.05
1,700	1.27	187.41	1,700	-32.07	-0.19	30.70	0.14
1,800	1.34	189.98	1,800	-34.32	-0.53	32.95	0.09
1,900	1.40	186.63	1,900	-36.69	-0.88	35.31	0.10
2,000	1.45	190.11	2,000	-39.15	-1.24	37.76	0.10
2,100	1.42	191.36	2,100	-41.61	-1.71	40.25	0.04
2,200	1.36	192.28	2,199	-43.98	-2.20	42.67	0.06
2,300	1.48	187.52	2,299	-46.42	-2.62	45.12	0.17
2,400	1.47	187.80	2,399	-48.97	-2.97	47.66	0.01
2,500	1.45	184.93	2,499	-51.51	-3.25	50.16	0.08
2,600	1.12	173.81	2,599	-53.74	-3.25	52.30	0.41
2,700	0.98	166.97	2,699	-55.54	-2.96	53.93	0.19
2,800	0.88	155.64	2,799	-57.08	-2.45	55.25	0.21
2,900	0.90	149.18	2,899	-58.45	-1.73	56.35	0.10
3,000	0.91	145.18	2,999	-59.78	-0.87	57.36	0.06
3,100	0.95	152.05	3,099	-61.16	-0.03	58.43	0.12
3,200	0.88	155.63	3,199	-62.59	0.68	59.59	0.09
3,300	0.79	154.70	3,299	-63.91	1.29	60.68	0.09
3,400	0.71	158.59	3,399	-65.11	1.81	61.67	0.09
3,500	0.71	165.83	3,499	-66.29	2.19	62.68	0.09
3,600	0.80	160.22	3,599	-67.55	2.57	63.77	0.12
3,700	0.88	174.15	3,699	-68.97	2.89	65.03	0.22
3,800	0.91	176.89	3,799	-70.53	3.01	66.48	0.05
3,900	0.90	194.09	3,899	-72.08	2.86	68.01	0.27
4,000	0.94	189.00	3,999	-73.65	2.54	69.61	0.09
4,100	1.14	189.74	4,099	-75.44	2.25	71.41	0.20
4,200	1.08	187.50	4,199	-77.36	1.95	73.32	0.07
4,300	1.04	186.06	4,299	-79.20	1.74	75.14	0.05
4,400	1.10	180.08	4,399	-81.06	1.64	76.95	0.13
4,500	1.12	181.19	4,499	-83.00	1.62	78.81	0.03
4,600	0.99	186.75	4,599	-84.83	1.49	80.59	0.17
4,700	0.89	188.54	4,699	-86.46	1.28	82.21	0.10
4,800	0.42	181.99	4,799	-87.59	1.15	83.33	0.48
4,900	0.32	238.10	4,899	-88.10	0.90	83.90	0.36
5,000	0.31	215.87	4,999	-88.47	0.50	84.37	0.12
5,100	0.29	173.94	5,099	-88.94	0.37	84.85	0.22
5,200	0.53	185.71	5,199	-89.65	0.35	85.54	0.25
5,300	0.53	171.61	5,299	-90.57	0.37	86.41	0.13
5,400	0.40	171.90	5,399	-91.38	0.49	87.14	0.13
5,500	0.41	165.54	5,499	-92.07	0.63	87.76	0.05

PERC**DIRECTIONAL REPORT**

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 FIELD: VACUUM ATOKA
 AFE NO.: 665506

WELL ID NO.: 665503
 API NO.: 30 025 33434

SURVEY TYPE : MWD MD : 100 ANGLE : 0.55 AZIMUTH : 135.45 TVD : 100.00
 N/S : -0.34 EW : 0.34 VS : TARGET : 197.20

MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
5,600	0.19	134.52	5,599	-92.53	0.84	88.14	0.27
5,700	0.36	133.62	5,699	-92.86	1.18	88.36	0.17
5,800	0.24	95.38	5,799	-93.10	1.62	88.46	0.23
5,900	0.35	100.82	5,899	-93.18	2.13	88.38	0.11
6,000	0.35	77.10	5,999	-93.17	2.73	88.19	0.14
6,100	0.33	66.38	6,099	-92.98	3.29	87.85	0.07
6,200	0.37	24.55	6,199	-92.57	3.69	87.34	0.25
6,300	0.48	46.93	6,299	-91.99	4.13	86.66	0.20
6,400	0.39	28.21	6,399	-91.41	4.59	85.96	0.17
6,500	0.50	38.42	6,499	-90.77	5.02	85.22	0.14
6,600	0.28	46.14	6,599	-90.25	5.47	84.60	0.23
6,700	0.45	28.94	6,699	-89.74	5.84	84.00	0.20
6,800	0.49	43.56	6,799	-89.09	6.32	83.23	0.13
6,900	0.61	37.16	6,899	-88.35	6.94	82.35	0.13
7,000	0.66	41.31	6,999	-87.50	7.64	81.32	0.07
7,100	0.71	29.40	7,099	-86.52	8.32	80.19	0.15
7,200	0.63	30.14	7,199	-85.51	8.90	79.05	0.08
7,300	0.74	23.38	7,299	-84.44	9.44	77.87	0.14
7,400	0.55	14.34	7,399	-83.38	9.81	76.75	0.21
7,500	0.58	358.62	7,499	-82.41	9.92	75.79	0.16
7,600	0.78	359.85	7,599	-81.23	9.91	74.66	0.20
7,700	0.97	349.16	7,699	-79.71	9.74	73.27	0.25
7,800	1.05	7.49	7,799	-77.97	9.70	71.62	0.33
7,898	1.29	356.03	7,897	-75.98	9.75	69.70	0.34
7,932	1.70	7.10	7,931	-75.10	9.78	68.85	1.47
8,003	0.50	195.10	8,002	-74.35	9.83	68.12	3.09
8,065	1.50	163.70	8,064	-75.39	9.99	69.07	1.78
8,128	0.60	134.10	8,127	-76.42	10.46	69.91	1.62
8,221	2.20	184.10	8,220	-78.54	10.68	71.87	2.01
8,253	3.40	183.70	8,252	-80.09	10.57	73.39	3.75
8,315	4.90	190.50	8,314	-84.53	9.97	77.80	2.54
8,376	6.30	195.50	8,374	-90.32	8.60	83.74	2.43
8,438	7.60	200.90	8,436	-97.43	6.23	91.23	2.34
8,501	8.90	201.60	8,498	-105.85	2.95	100.25	2.07
8,576	10.70	195.30	8,572	-117.96	-1.02	112.99	2.79
8,626	11.00	195.30	8,621	-127.04	-3.51	122.40	0.60
8,688	12.00	197.60	8,682	-138.89	-7.02	134.75	1.77
8,749	12.00	198.80	8,742	-150.94	-10.98	147.43	0.41
8,816	11.60	200.00	8,807	-163.86	-15.53	161.13	0.70
8,873	11.80	197.80	8,863	-174.80	-19.27	172.68	0.86
8,936	12.70	200.80	8,925	-187.40	-23.70	186.03	1.75
8,998	12.50	202.20	8,985	-199.99	-28.65	199.52	0.59
9,060	12.00	202.60	9,046	-212.15	-33.66	212.62	0.82
9,122	11.60	201.90	9,106	-223.88	-38.47	225.25	0.69
9,184	12.30	203.70	9,167	-235.71	-43.44	238.02	1.28
9,245	12.00	202.00	9,227	-247.54	-48.43	250.80	0.77
9,307	11.80	202.00	9,287	-259.40	-53.22	263.53	0.32
9,369	12.00	202.20	9,348	-271.24	-58.03	276.27	0.33
9,427	13.00	200.70	9,405	-282.93	-62.62	288.79	1.81
9,464	13.10	201.60	9,441	-290.72	-65.63	297.13	0.61
9,525	13.00	200.50	9,500	-303.57	-70.58	310.87	0.44
9,588	12.50	200.10	9,562	-316.61	-75.40	324.75	0.81
9,650	11.90	202.40	9,622	-328.82	-80.14	337.82	1.25
9,712	11.40	208.10	9,683	-340.14	-85.47	350.20	2.02
9,774	10.10	210.40	9,744	-350.23	-91.10	361.51	2.21

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 N/S : -0.34 E/W : 0.34 VS : TARGET : 197.20

MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
9,836	9.20	209.50	9,805	-359.24	-96.30	371.65	1.47
9,938	8.70	213.50	9,906	-372.77	-104.57	387.02	0.78
10,031	9.00	214.90	9,998	-384.60	-112.61	400.70	0.40
10,093	7.80	214.90	10,059	-392.03	-117.79	409.33	1.94
10,156	7.00	211.80	10,121	-398.80	-122.26	417.12	1.42
10,219	5.50	210.40	10,184	-404.66	-125.81	423.77	2.39
10,282	4.00	213.50	10,247	-409.10	-128.56	428.82	2.41
10,345	2.60	211.10	10,310	-412.16	-130.51	432.32	2.23
10,407	1.70	226.20	10,372	-414.00	-131.90	434.48	1.70
10,524	1.50	169.90	10,489	-416.71	-132.88	437.36	1.30
10,587	1.70	187.10	10,552	-418.44	-132.85	439.02	0.82
10,649	1.10	188.90	10,614	-419.95	-133.06	440.51	0.97
10,744	1.70	244.10	10,709	-421.46	-134.47	442.38	1.48
10,805	1.30	256.40	10,770	-422.02	-135.95	443.35	0.84
10,867	0.60	299.30	10,832	-422.03	-136.92	443.64	1.54
10,962	0.90	310.50	10,927	-421.30	-137.92	443.24	0.35
11,022	0.80	345.70	10,987	-420.59	-138.38	442.70	0.87
11,085	0.80	36.00	11,050	-419.80	-138.23	441.91	1.08
11,148	0.70	44.40	11,113	-419.17	-137.70	441.15	0.24
11,210	0.60	78.00	11,175	-418.84	-137.12	440.65	0.63
11,271	0.80	27.90	11,236	-418.39	-136.61	440.08	1.02
11,334	0.90	14.50	11,299	-417.52	-136.28	439.15	0.35
11,396	1.60	19.10	11,360	-416.24	-135.88	437.80	1.14
11,458	1.80	11.70	11,422	-414.46	-135.39	435.97	0.48
11,494	1.90	9.90	11,458	-413.32	-135.18	434.81	0.32
11,536	1.90	9.90	11,500	-411.95	-134.94	433.43	0.00