14902 Henry Rd. • Houston, TX 77060
Telex 792699 • Fax 713-820-9341
Tel. 713-820-5908

Geoservices, Inc.

August 3, 1992

State of New Mexico
Oil Conservation Commission
District III
1000 Rio Brazos Road
Aztec, New Mexico, 87410

Surveying Company:	Geoservices, Inc. 14902 Henry Rd. Houston, TX 77060
Surveys performed by:	Mr. John Luckert MWD Field Engineer
Survey dates:	June 25, 1992 through July 10, 1992
Survey Method:	Electromagnetic MWD
Operator:	Bright & Company 10100 Reunion Pl., Suite 735 San Antonio, TX 78216 (512) 341-9773
Well Id:	Cuba Mesa Unit 35-1 Sandoval County, New Mexico

The above information and attached 73 directional surveys are true and correct to the best of my knowledge. The data for these surveys and the calculations performed were in accordance with the standards and procedures set forth by Geoservices.

Jeffry Wilson / Operations Manager
Geoservices, Inc.

F. D. Wilkins / Notary Public

F. D. WILKINS
MY COMMISSION EXPIRES
February 3, 1996

Geoservices-Directional — Deviation report

Well : CUBA MESA 35-1
Field : RIO PUERCO
Company : BRIGHT & COMPANY

Coordinates RECTANGULAR

Well head :		Target :		Impact :	
X =	0.00	X =	0.00	X =	0.00
Y =	0.00	Y =	0.00	Y =	0.00
Z =	0.0	Z =	0.0	Z =	0.0

Horizontal displacement 0.00 ft
Total vertical depth 0.00 ft — Kick off point 0.00 ft
Magnetic declination 11.50 deg — Convergence 0.00 deg
Horizontal projection computed in azimuth North 353.90 deg. (NW 6.10)

Surv no	Measured depth feet	Drift angle degree	Azimut magnt. degree	Azimut geogr. degree	Vertical depth feet	Horizntl prjction feet	Horizntl displcmt feet	Average Az(geo) degree	.Relative Coordinates. East/West feet	Nor/South feet	Dog leg dleg	dlgH /100ft	grB
Computation method :			Radius of curvature										
1	270.0	0.00	348.50	360.00	270.0	0.0	0.0	90.00	0.0 E	0.0 N	0.0	0.0	0.
2	355.0	0.14	251.99	263.49	355.0	0.1	0.1	311.75	0.1 W	0.1 N	0.2	-0.1	0.
3	417.0	0.10	81.71	93.21	417.0	-0.0	0.1	250.04	0.1 W	0.0 S	0.4	-0.6	-0.
4	573.0	2.02	175.88	187.38	573.0	-2.5	2.5	141.78	1.6 E	2.0 S	1.3	1.1	1.
5	635.0	0.55	166.33	177.83	634.9	-3.8	3.7	155.94	1.5 E	3.4 S	2.4	-0.3	-2.
6	697.0	0.30	280.90	292.40	696.9	-4.0	3.8	161.67	1.2 E	3.6 S	1.2	1.4	-0.
7	883.0	0.26	193.75	205.25	882.9	-4.3	3.9	173.70	0.4 E	3.9 S	0.2	-0.2	-0.
8	1008.0	0.17	104.47	115.97	1007.9	-4.7	4.3	172.44	0.6 E	4.3 S	0.2	-0.3	-0.
9	1070.0	0.34	315.11	326.61	1069.9	-4.6	4.2	170.35	0.7 E	4.2 S	0.8	1.5	0.
10	1132.0	0.44	198.08	209.58	1131.9	-4.5	4.2	175.16	0.4 E	4.2 S	1.1	-1.3	0.
11	1194.0	0.29	96.98	108.48	1193.9	-4.9	4.5	173.94	0.5 E	4.5 S	0.9	-1.0	-0.
12	1256.0	0.71	177.00	188.50	1255.9	-5.4	5.0	171.47	0.7 E	4.9 S	1.1	1.1	0.
13	1380.0	0.69	115.18	126.68	1379.9	-6.8	6.4	168.38	1.3 E	6.2 S	0.6	-0.6	-0.
14	1442.0	0.50	126.66	138.16	1441.9	-7.3	6.9	165.24	1.8 E	6.7 S	0.4	0.2	-0.
15	1567.0	1.08	124.94	136.44	1566.9	-8.7	8.5	159.76	2.9 E	7.9 S	0.5	-0.0	0.
16	1629.0	0.80	128.01	139.51	1628.9	-9.5	9.4	157.47	3.6 E	8.7 S	0.5	0.1	-0.
17	1691.0	1.23	151.80	163.30	1690.9	-10.5	10.5	156.84	4.1 E	9.6 S	1.0	0.7	0.
18	1753.0	1.20	122.79	134.29	1752.9	-11.7	11.8	155.95	4.8 E	10.8 S	1.0	-1.0	-0.
19	1849.0	1.34	144.44	155.94	1848.9	-13.6	13.9	154.31	6.0 E	12.5 S	0.5	0.5	0.
20	1911.0	0.93	134.58	146.08	1910.8	-14.7	15.1	154.04	6.6 E	13.6 S	0.7	-0.3	-0.
21	2098.0	1.41	124.43	135.93	2097.8	-17.9	18.8	151.42	9.0 E	16.5 S	0.3	-0.1	0.
22	2160.0	1.43	147.40	158.90	2159.8	-19.3	20.3	151.12	9.8 E	17.8 S	0.9	0.9	0.
23	2222.0	1.60	141.71	153.21	2221.8	-20.9	22.0	151.49	10.5 E	19.3 S	0.4	-0.2	0.
24	2284.0	1.62	138.80	150.30	2283.7	-22.5	23.7	151.51	11.3 E	20.9 S	0.1	-0.1	0.
25	2346.0	1.34	121.49	132.99	2345.7	-23.8	25.3	150.89	12.3 E	22.1 S	0.8	-0.7	-0.
26	2470.0	1.29	147.33	158.83	2469.7	-26.4	28.1	150.39	13.9 E	24.4 S	0.5	0.5	-0.
27	2533.0	1.26	126.21	137.71	2532.7	-27.6	29.5	150.29	14.6 E	25.6 S	0.7	-0.7	-0.
28	2719.0	1.91	140.93	152.43	2718.6	-32.1	34.6	149.52	17.6 E	29.8 S	0.4	0.2	0.
29	2781.0	1.42	132.72	144.22	2780.6	-33.7	36.4	149.46	18.5 E	31.4 S	0.9	-0.4	-0.
30	2843.0	2.08	119.94	131.44	2842.5	-35.3	38.3	148.89	19.8 E	32.8 S	1.2	-0.6	1.
31	2905.0	1.65	159.17	170.67	2904.5	-37.1	40.2	149.00	20.7 E	34.5 S	2.1	2.1	-0.
32	3030.0	1.27	152.30	163.80	3029.5	-40.3	43.3	150.31	21.4 E	37.6 S	0.3	-0.1	-0.
33	3092.0	1.53	163.61	175.11	3091.5	-41.8	44.7	150.95	21.7 E	39.1 S	0.6	0.4	0.
34	3216.0	1.10	129.99	141.49	3215.4	-44.5	47.5	151.38	22.7 E	41.7 S	0.7	-0.6	-0.
35	3278.0	1.09	162.10	173.60	3277.4	-45.7	48.7	151.53	23.2 E	42.8 S	1.0	1.0	-0.

Geoservices-Directional — Deviation report

Well : CUBA MESA 35-1
Field : RIO PUERCO
Company : BRIGHT & COMPANY

Computation method : Radius of curvature

Surv no	Measured depth feet	Drift angle degree	Azimut magnt. degree	Azimut geogr. degree	Vertical depth feet	Horizntl prjction feet	Horizntl displcmt feet	Average Az(geo) degree	.Relative Coordinates. East/West feet	Nor/South feet	Dog leg dleg	dlgH /100ft	grB
36	3340.0	1.38	153.97	165.47	3339.4	-47.0	49.9	152.00	23.4 E	44.1 S	0.5	-0.3	0.
37	3402.0	1.52	146.20	157.70	3401.4	-48.6	51.5	152.29	23.9 E	45.6 S	0.4	-0.3	0.
38	3589.0	1.36	151.56	163.06	3588.3	-53.1	56.1	152.97	25.5 E	50.0 S	0.1	0.1	-0.
39	3713.0	1.82	169.23	180.73	3712.3	-56.6	59.4	154.04	26.0 E	53.4 S	0.5	0.4	0.
40	3755.0	1.60	165.20	176.70	3754.2	-57.8	60.5	154.54	26.0 E	54.6 S	0.6	-0.3	-0.
41	3786.0	1.00	356.40	7.90	3785.2	-57.9	60.7	154.14	26.5 E	54.7 S	8.3	%-12.4	-
42	3818.0	6.10	348.70	0.20	3817.2	-56.0	59.0	153.18	26.6 E	52.7 S	16.0	-1.5	15.
43	3848.0	12.10	348.00	359.50	3846.8	-51.2	54.8	150.96	26.6 E	47.9 S	20.0	%189.4	2
44	3878.0	19.30	349.40	0.90	3875.6	-43.2	47.9	146.22	26.6 E	39.8 S	24.0	%-323.5	
45	3909.0	24.80	343.10	354.60	3904.4	-31.6	38.5	137.13	26.2 E	28.2 S	19.3	%428.3	1
46	3940.0	28.90	348.00	359.50	3932.0	-17.6	29.2	119.20	25.5 E	14.2 S	15.0	7.1	13.
47	3972.0	30.70	350.10	1.60	3959.8	-1.8	25.7	86.28	25.6 E	1.7 N	6.5	%-555.8	
48	4037.0	31.75	349.50	1.00	4015.4	31.6	44.1	36.74	26.4 E	35.4 N	1.7	-0.5	1.
49	4068.0	29.88	343.00	354.50	4042.0	47.5	57.3	26.71	25.8 E	51.2 N	12.3	%584.2	-
50	4099.0	32.13	339.50	351.00	4068.6	63.4	71.1	19.51	23.8 E	67.0 N	9.3	-5.8	7.
51	4129.0	37.00	342.00	353.50	4093.2	80.4	86.6	14.34	21.5 E	83.9 N	16.9	4.7	16.
52	4159.0	41.88	342.50	354.00	4116.4	99.5	104.7	10.67	19.4 E	102.8 N	16.3	1.1	16.
53	4190.0	46.38	341.00	352.50	4138.7	121.1	125.4	7.72	16.8 E	124.3 N	14.9	-3.4	14.
54	4221.0	51.50	341.00	352.50	4159.0	144.4	148.1	5.35	13.8 E	147.4 N	16.5	0.0	16.
55	4253.0	56.75	341.50	353.00	4177.8	170.3	173.5	3.48	10.5 E	173.2 N	16.4	1.3	16.
56	4284.0	61.75	342.00	353.50	4193.6	197.0	199.7	2.12	7.4 E	199.6 N	16.2	1.4	16.
57	4315.0	67.50	342.00	353.50	4206.9	225.0	227.5	1.06	4.2 E	227.4 N	18.5	0.0	18.
58	4346.0	73.00	342.50	354.00	4217.4	254.1	256.4	0.23	1.1 E	256.4 N	17.8	1.5	17.
59	4378.0	78.88	343.00	354.50	4225.1	285.2	287.3	359.59	2.1 W	287.3 N	18.4	1.5	18.
60	4415.0	85.50	343.00	354.50	4230.1	321.8	323.8	359.01	5.6 W	323.8 N	17.9	0.0	17.
61	4446.0	87.63	343.50	355.00	4232.0	352.7	354.7	358.64	8.4 W	354.6 N	7.0	1.6	6.
62	4477.0	86.75	343.50	355.00	4233.5	383.7	385.6	358.35	11.1 W	385.4 N	2.8	0.0	-2.
63	4508.0	85.63	344.00	355.50	4235.6	414.6	416.5	358.12	13.7 W	416.2 N	3.9	1.6	-3.
64	4540.0	85.63	344.00	355.50	4238.0	446.5	448.3	357.93	16.2 W	448.0 N	0.0	0.0	0.
65	4570.0	85.63	344.00	355.50	4240.3	476.4	478.2	357.78	18.5 W	477.9 N	0.0	0.0	0.
66	4602.0	85.13	344.50	356.00	4242.9	508.3	510.1	357.65	20.9 W	509.7 N	2.2	1.6	-1.
67	4633.0	87.00	345.00	356.50	4245.0	539.2	541.0	357.57	22.9 W	540.5 N	6.2	1.6	6.
68	4665.0	88.38	345.00	356.50	4246.3	571.1	573.0	357.51	24.8 W	572.4 N	4.3	0.0	4.
69	4697.0	88.00	345.00	356.50	4247.3	603.1	605.0	357.46	26.8 W	604.4 N	1.2	0.0	-1.
70	4727.0	87.25	345.00	356.50	4248.6	633.0	634.9	357.42	28.6 W	634.3 N	2.5	0.0	-2.
71	4759.0	88.00	345.00	356.50	4249.9	665.0	666.9	357.37	30.6 W	666.2 N	2.3	0.0	2.
72	4790.0	87.88	345.00	356.50	4251.0	695.9	697.9	357.33	32.5 W	697.1 N	0.4	0.0	-0.
73	4822.0	87.50	345.50	357.00	4252.3	727.8	729.9	357.31	34.3 W	729.0 N	1.9	1.6	-1.