

MERRION

OIL & GAS

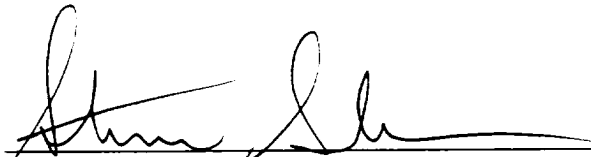
EMU H No. 3

A Section 14, T19N, R04W
Sandoval County, New Mexico

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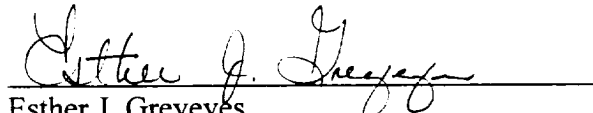
OIL CON. DIV.
DIST. 3

I, Steven S. Dunn, being first duly sworn, depose and state that the above and foregoing depth and hole deviation figures are true and correct to the best of my information and belief.


Steven S. Dunn

Subscribed and sworn before me this 12th day of August, 1996

State of New Mexico }
 } ss
County of San Juan }


Esther J. Greyeyes
Notary Public

My Commission Expires: August 7, 1998

Surveys

DIRECTIONAL SURVEY DATA

WELL NAME: EMU H #3				LOCATION: McKinley				RIG:			
TARGET AZIMUTH (0-360 DEG):				180.00				New Mexico			
								ELEV: 6.661 RKB			
NO.	MEAS DEPTH (FT.)	HOLE ANGLE (DEG)	HOLE AZIMUTH (0-360D)	TRUE VERTICAL DEPTH (FT.)	LAT +NORTH -SOUTH (FT.)	DEP +EAST -WEST (FT.)	CLOSURE (FT.)	TRUE VERTICAL SECTION (FT.)	DOGLEG SEVERITY (°/100')	+BUILD -DROP RATE (°/100')	WALK RATE -R/-L (°/100')
1	-	-	-	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2	100	0.14	38.31	100.00	0.10	0.08	0.12	(0.10)	0.00	0.14	38.31
3	200	0.22	336.02	200.00	0.37	0.07	0.37	(0.37)	0.00	0.08	297.71
4	300	0.54	209.18	300.00	0.13	(0.23)	0.27	(0.13)	0.69	0.32	(126.84)
5	400	0.69	214.23	399.98	(0.78)	(0.80)	1.12	0.78	0.00	0.15	5.05
6	500	0.94	186.31	499.96	(2.09)	(1.23)	2.43	2.09	0.46	0.25	(27.92)
7	600	1.07	184.88	599.93	(3.84)	(1.40)	4.08	3.84	0.00	0.13	(1.43)
8	700	1.05	178.04	699.90	(5.68)	(1.45)	5.86	5.68	0.00	(0.02)	(6.84)
9	800	0.89	168.99	799.87	(7.36)	(1.27)	7.47	7.36	0.00	(0.16)	(9.05)
10	900	0.86	157.02	899.84	(8.81)	(0.83)	8.85	8.81	0.00	(0.03)	(11.97)
11	1,000	0.71	149.78	999.82	(10.04)	(0.22)	10.04	10.04	0.00	(0.15)	(7.24)
12	1,100	0.81	138.75	1,099.81	(11.11)	0.55	11.12	11.11	0.00	0.10	(11.03)
13	1,200	0.80	169.60	1,199.79	(12.32)	1.15	12.38	12.32	0.43	(0.01)	30.85
14	1,300	0.79	159.82	1,299.77	(13.66)	1.51	13.74	13.66	0.00	(0.01)	(9.78)
15	1,400	0.56	154.71	1,399.76	(14.75)	1.96	14.88	14.75	0.00	(0.23)	(5.11)
16	1,500	0.39	213.64	1,499.75	(15.47)	1.98	15.60	15.47	0.49	(0.17)	58.94
17	1,600	0.40	215.97	1,599.74	(16.04)	1.58	16.12	16.04	0.00	0.01	2.33
18	1,700	0.44	216.18	1,699.74	(16.63)	1.15	16.67	16.63	0.00	0.04	0.21
19	1,800	0.33	178.91	1,799.74	(17.23)	0.93	17.25	17.23	0.27	(0.11)	(37.27)
20	1,900	0.32	192.17	1,899.73	(17.79)	0.88	17.81	17.79	0.00	(0.01)	13.26
21	2,000	0.29	173.37	1,999.73	(18.31)	0.85	18.33	18.31	0.00	(0.03)	(18.80)
22	2,100	0.65	130.17	2,099.72	(18.93)	1.31	18.98	18.93	0.48	0.36	(43.20)
23	2,200	0.61	123.62	2,199.71	(19.59)	2.19	19.71	19.59	0.00	(0.04)	(6.55)
24	2,300	0.62	143.97	2,299.70	(20.32)	2.95	20.54	20.32	0.00	0.01	20.35
25	2,400	0.43	127.69	2,399.69	(20.99)	3.56	21.29	20.99	0.00	(0.19)	(16.28)
26	2,500	0.46	144.91	2,499.68	(21.55)	4.09	21.93	21.55	0.00	0.03	17.22
27	2,600	0.51	156.33	2,599.68	(22.28)	4.50	22.73	22.28	0.00	0.05	11.42
28	2,700	0.86	197.45	2,699.66	(23.41)	4.45	23.83	23.41	0.58	0.35	41.12
29	2,800	1.71	221.21	2,799.61	(25.24)	3.25	25.45	25.24	0.99	0.85	23.77
30	2,900	2.31	225.21	2,899.49	(27.79)	0.83	27.80	27.79	0.62	0.60	4.00
31	3,000	2.87	226.54	2,999.28	(30.92)	(2.41)	31.02	30.92	0.56	0.56	1.33
32	3,100	2.89	227.23	3,099.03	(34.35)	(6.07)	34.89	34.35	0.00	0.02	0.69
33	3,199	2.35	236.04	3,198.82	(37.21)	(9.62)	38.43	37.21	0.67	(0.54)	8.82
34	3,299	1.31	236.49	3,298.72	(38.98)	(12.27)	40.87	38.98	1.04	(1.04)	0.45
35	3,399	0.86	242.85	3,398.68	(39.96)	(13.89)	42.30	39.96	0.47	(0.45)	6.36
36	3,499	0.65	231.03	3,498.66	(40.66)	(15.00)	43.34	40.66	0.26	(0.21)	(11.82)
37	3,599	0.46	235.74	3,598.65	(41.24)	(15.77)	44.15	41.24	0.00	(0.19)	4.71
38	3,699	0.47	205.35	3,698.65	(41.84)	(16.28)	44.89	41.84	0.00	0.01	(30.39)
39	3,799	0.31	217.42	3,798.64	(42.42)	(16.62)	45.56	42.42	0.00	(0.16)	12.07
40	3,899	0.36	212.41	3,898.64	(42.90)	(16.95)	46.13	42.90	0.00	0.05	(5.01)
41	3,999	0.09	189.48	3,998.63	(43.24)	(17.14)	46.52	43.24	0.28	(0.27)	(22.93)
42	4,099	0.26	30.57	4,098.63	(43.13)	(17.03)	46.37	43.13	0.35	0.17	(158.91)
43	4,199	1.12	115.03	4,198.62	(43.34)	(16.03)	46.21	43.34	1.13	0.86	84.46

DIRECTIONAL SURVEY DATA

WELL NAME: EMU H #3				LOCATION: McKinley				RIG:			
TARGET AZIMUTH (0-360 DEG):				180.00				ELEV: 6,661 RKB			
NO.	MEAS DEPTH (FT.)	HOLE ANGLE (DEG)	HOLE AZIMUTH (0-360D)	TRUE VERTICAL DEPTH (FT.)	LAT +NORTH -SOUTH (FT.)	DEP +EAST -WEST (FT.)	CLOSURE (FT.)	TRUE VERTICAL SECTION (FT.)	DOGLEG SEVERITY (%/100')	+BUILD -DROP RATE (%/100')	WALK RATE +R/-L (%/100')
44	4.299	0.94	119.03	4,298.59	(44.16)	(14.43)	46.45	44.16	0.00	(0.18)	4.00
45	4.399	0.74	138.23	4,398.57	(45.03)	(13.28)	46.95	45.03	0.34	(0.20)	19.20
46	4.499	0.61	146.30	4,498.55	(45.96)	(12.56)	47.64	45.96	0.00	(0.13)	8.07
47	4.599	0.81	137.79	4,598.53	(46.93)	(11.79)	48.38	46.93	0.00	0.20	(8.51)
48	4.699	1.19	152.45	4,698.51	(48.37)	(10.83)	49.57	48.37	0.46	0.38	14.66
49	4.799	1.20	147.52	4,798.46	(50.17)	(9.79)	51.12	50.17	0.00	0.01	(4.93)
50	4.899	1.17	156.27	4,898.41	(51.99)	(8.82)	52.73	51.99	0.00	(0.03)	8.75
51	4.990	1.59	174.83	4,989.19	(54.09)	(8.33)	54.73	54.09	0.67	0.46	20.44
52	5.035	2.70	172.60	5,034.16	(55.77)	(8.14)	56.36	55.77	2.47	2.47	(4.96)
53	5,045	2.30	168.40	5,044.15	(56.20)	(8.07)	56.77	56.20	4.40	(4.00)	(42.00)
54	5,054	2.90	170.60	5,053.14	(56.60)	(7.99)	57.16	56.60	6.76	6.67	24.44
55	5,065	4.20	175.50	5,064.11	(57.27)	(7.92)	57.82	57.27	12.13	11.82	44.55
56	5,075	5.80	177.50	5,074.08	(58.14)	(7.87)	58.67	58.14	16.09	16.00	20.00
57	5,085	7.10	180.20	5,084.01	(59.27)	(7.85)	59.78	59.27	13.35	13.00	27.00
58	5,091	8.00	184.00	5,089.96	(60.05)	(7.88)	60.57	60.05	17.15	15.00	63.33
59	5,105	10.00	183.40	5,103.79	(62.24)	(8.02)	62.75	62.24	14.30	14.29	(4.29)
60	5,120	12.20	180.40	5,118.51	(65.13)	(8.10)	65.63	65.13	15.16	14.67	(20.00)
61	5,136	14.00	178.80	5,134.09	(68.75)	(8.08)	69.22	68.75	11.47	11.25	(10.00)
62	5,156	16.70	173.00	5,153.38	(74.02)	(7.67)	74.42	74.02	15.51	13.50	(29.00)
63	5,165	17.90	172.10	5,161.97	(76.68)	(7.33)	77.03	76.68	13.66	13.33	(10.00)
64	5,194	22.10	169.10	5,189.21	(86.45)	(5.68)	86.64	86.45	14.90	14.48	(10.34)
65	5,222	26.40	168.80	5,214.74	(97.74)	(3.48)	97.80	97.74	15.36	15.36	(1.07)
66	5,253	31.40	166.40	5,241.87	(112.36)	(0.24)	112.36	112.36	16.55	16.13	(7.74)
67	5,268	33.30	164.60	5,254.54	(120.12)	1.78	120.14	120.12	14.20	12.67	(12.00)
68	5,281	34.70	163.80	5,265.32	(127.12)	3.76	127.17	127.12	11.31	10.77	(6.15)
69	5,311	38.40	163.10	5,289.41	(144.24)	8.85	144.51	144.24	12.41	12.33	(2.33)
70	5,342	42.70	164.50	5,312.96	(163.59)	14.46	164.23	163.59	14.18	13.87	4.52
71	5,371	46.50	164.70	5,333.61	(183.22)	19.87	184.29	183.22	13.11	13.10	0.69
72	5,390	48.70	165.40	5,346.42	(196.77)	23.48	198.17	196.77	11.89	11.58	3.68
73	5,405	51.10	165.80	5,356.08	(207.89)	26.34	209.55	207.89	16.13	16.00	2.67
74	5,435	55.80	166.40	5,373.94	(231.28)	32.12	233.50	231.28	15.75	15.67	2.00
75	5,462	60.20	167.00	5,388.25	(253.55)	37.38	256.29	253.55	16.40	16.30	2.22
76	5,467	60.60	166.60	5,390.72	(257.79)	38.38	260.63	257.79	10.60	8.00	(8.00)
77	5,472	60.90	166.50	5,393.16	(262.03)	39.39	264.97	262.03	6.25	6.00	(2.00)
78	5,484	62.60	163.40	5,398.84	(272.23)	42.14	275.48	272.23	26.80	14.17	(25.83)
79	5,499	65.10	164.80	5,405.45	(285.18)	45.82	288.84	285.18	18.65	16.67	9.33
80	5,509	66.90	165.30	5,409.52	(294.01)	48.18	297.93	294.01	18.57	18.00	5.00
81	5,529	70.60	166.60	5,416.77	(312.09)	52.70	316.51	312.09	19.47	18.50	6.50
82	5,544	73.20	168.80	5,421.43	(326.02)	55.74	330.75	326.02	22.24	17.33	14.67
83	5,560	76.10	171.10	5,425.66	(341.21)	58.43	346.17	341.21	22.82	18.12	14.37
84	5,570	78.02	172.10	5,427.90	(350.85)	59.85	355.92	350.85	21.50	19.16	10.00
85	5,580	79.70	173.10	5,429.83	(360.58)	61.11	365.72	360.58	19.49	16.84	10.00
86	5,595	81.70	174.00	5,432.26	(375.29)	62.78	380.50	375.29	14.59	13.33	6.00

Surveys

DIRECTIONAL SURVEY DATA

WELL NAME: EMU H #3				LOCATION: McKinley				RIG:			
TARGET AZIMUTH (0-360 DEG):				180.00				New Mexico			
								ELEV: 6.661 RKB			
NO.	MEAS DEPTH (FT.)	HOLE ANGLE (DEG)	HOLE AZIMUTH (0-360D)	TRUE VERTICAL DEPTH (FT.)	LAT +NORTH -SOUTH (FT.)	DEP +EAST -WEST (FT.)	CLOSURE (FT.)	TRUE VERTICAL SECTION (FT.)	DOGLEG SEVERITY (°/100')	+BUILD -DROP RATE (°/100')	WALK RATE +R/-L (°/100')
87	5,602	82.80	174.00	5,433.20	(382.18)	63.50	387.42	382.18	15.71	15.71	0.00
88	5,613	84.10	175.00	5,434.46	(393.06)	64.55	398.33	393.06	14.87	11.82	9.09
89	5,633	86.20	176.80	5,436.15	(412.94)	65.97	418.17	412.94	13.81	10.50	9.00
90	5,664	87.00	177.10	5,437.99	(443.84)	67.62	448.96	443.84	2.76	2.58	0.97
91	5,671	87.30	176.30	5,438.33	(450.82)	68.02	455.92	450.82	12.19	4.29	(11.43)
92	5,688	86.80	175.90	5,439.21	(467.76)	69.18	472.84	467.76	3.76	(2.94)	(2.35)
93	5,703	86.70	174.10	5,440.06	(482.67)	70.48	487.79	482.67	12.00	(0.67)	(12.00)
94	5,726	86.40	173.60	5,441.44	(505.50)	72.94	510.74	505.50	2.53	(1.30)	(2.17)
95	5,731	86.00	173.20	5,441.77	(510.46)	73.51	515.72	510.46	11.30	(8.00)	(8.00)
96	5,738	85.50	172.80	5,442.29	(517.38)	74.36	522.70	517.38	9.14	(7.14)	(5.71)
97	5,763	84.40	175.20	5,444.49	(542.15)	76.97	547.58	542.15	10.53	(4.40)	9.60
98	5,794	85.70	179.20	5,447.17	(572.99)	78.48	578.34	572.99	13.52	4.19	12.90
99	5,825	89.50	181.80	5,448.47	(603.95)	78.20	608.99	603.95	14.85	12.26	8.39
100	5,855	91.50	183.70	5,448.21	(633.91)	76.76	638.55	633.91	9.20	6.67	6.33
101	5,881	91.40	186.30	5,447.55	(659.80)	74.50	664.00	659.80	10.00	(0.38)	10.00
102	5,889	91.30	187.10	5,447.36	(667.75)	73.57	671.79	667.75	10.08	(1.25)	10.00
103	5,920	90.30	191.30	5,446.93	(698.34)	68.61	701.70	698.34	13.93	(3.23)	13.55
104	5,949	89.40	196.80	5,447.00	(726.46)	61.57	729.06	726.46	19.22	(3.10)	18.97
105	5,979	89.30	201.40	5,447.34	(754.80)	51.76	756.57	754.80	15.34	(0.33)	15.33
106	6,010	89.50	200.20	5,447.67	(783.78)	40.75	784.84	783.78	3.92	0.65	(3.87)
107	6,042	89.70	201.90	5,447.89	(813.64)	29.26	814.17	813.64	5.35	0.63	5.31
108	6,073	88.20	200.00	5,448.46	(842.58)	18.18	842.78	842.58	7.81	(4.84)	(6.13)
109	6,101	88.40	201.40	5,449.29	(868.76)	8.29	868.80	868.76	5.05	0.71	5.00
110	6,133	89.70	201.50	5,449.82	(898.54)	(3.41)	898.55	898.54	4.07	4.06	0.31
111	6,164	90.20	202.70	5,449.85	(927.26)	(15.08)	927.39	927.26	4.19	1.61	3.87
112	6,194	90.60	202.50	5,449.64	(954.96)	(26.61)	955.33	954.96	1.49	1.33	(0.67)
113	6,222	90.40	202.20	5,449.39	(980.85)	(37.25)	981.56	980.85	1.29	(0.71)	(1.07)
114	6,254	90.50	203.90	5,449.14	(1,010.30)	(49.78)	1,011.52	1,010.30	5.32	0.31	-5.31
115	6,284	90.50	204.00	5,448.88	(1,037.71)	(61.96)	1,039.56	1,037.71	0.00	0.00	0.33
116	6,314	90.10	203.10	5,448.72	(1,065.21)	(73.94)	1,067.78	1,065.21	3.28	(1.33)	(3.00)
117	6,346	89.80	204.30	5,448.75	(1,094.52)	(86.81)	1,097.95	1,094.52	3.87	(0.94)	3.75
118	6,379	89.40	203.70	5,448.98	(1,124.66)	(100.23)	1,129.12	1,124.66	2.19	(1.21)	(1.82)
119	6,411	88.90	202.50	5,449.46	(1,154.09)	(112.78)	1,159.59	1,154.09	4.06	(1.56)	(3.75)
120	6,443	89.00	202.90	5,450.04	(1,183.61)	(125.13)	1,190.20	1,183.61	1.29	0.31	1.25
121	6,471	88.90	202.10	5,450.56	(1,209.47)	(135.84)	1,217.08	1,209.47	2.88	(0.36)	(2.86)
122	6,504	89.00	202.80	5,451.16	(1,239.97)	(148.44)	1,248.82	1,239.97	2.14	0.30	2.12
123	6,536	89.30	202.10	5,451.64	(1,269.54)	(160.66)	1,279.66	1,269.54	2.38	0.94	(2.19)
124	6,567	89.30	202.80	5,452.01	(1,298.19)	(172.50)	1,309.60	1,298.19	2.26	0.00	2.26
125	6,596	89.10	202.50	5,452.42	(1,324.95)	(183.66)	1,337.62	1,324.95	1.24	(0.69)	(1.03)
126	6,617	88.96	202.28	5,452.77	(1,344.36)	(191.66)	1,357.95	1,344.36	1.24	(0.67)	(1.05)