

K-33-24N-1W

RECEIVE

OCT 3 0 1991

OIL CON. Dⁿ

WELLNAME: *Browning Federal 33-1*
DST
TARGET AZIMUTH (0-360 DEG): 44.12

DIRECTIONAL SURVEY DATA

COUNTY: *Rio Arriba* RIG: *Big A #3*

MEASURED DEPTH (FT.)	HOLE ANGLE (DEG)	HOLE AZIMUTH (0-360D)	TRUE VERTICAL DEPTH (FT.)	+NORTH -SOUTH (FT.)	+EAST -WEST (FT.)	CLOSURE (FT.)	TRUE VERTICAL SECTION (FT.)	DOGLEG SEVERITY (D/100')	+BUILD -DROP RATE (D/100')
0	0.0	00.0	0.0	0.00	0.00	0.00	0.0	N/A	N/A
93	0.75	1	93.0	0.61	0.01	0.61	0.4	0.81	0.81
332	0.75	1	332.0	3.74	0.07	3.74	2.7	0.00	0.00
455	0.0001	1	455.0	4.54	0.08	4.54	3.3	0.61	-0.61
537	0.25	181.5	537.0	4.36	0.07	4.36	3.2	0.00	0.30
782	0.25	186.5	782.0	3.30	0.00	3.30	2.4	0.00	0.00
1071	0.25	276.5	1071.0	2.74	-0.70	2.83	1.5	0.12	0.00
1298	1	106.5	1298.0	2.24	0.71	2.35	2.1	0.55	0.33
1412	1	99.5	1411.9	1.79	2.64	3.19	3.1	0.00	0.00
1557	1.25	93.5	1556.9	1.48	5.47	5.67	4.9	0.19	0.17
1710	1.5	113.5	1709.9	0.58	8.97	8.99	6.7	0.35	0.16
1904	1.25	110.5	1903.8	-1.17	13.28	13.34	8.4	0.13	-0.13
1966	1.25	116.5	1965.8	-1.71	14.52	14.62	8.9	0.00	0.00
2058	0.75	121.5	2057.8	-2.47	15.93	16.12	9.3	0.55	-0.54
2150	0.75	126.5	2149.8	-3.14	16.93	17.22	9.5	0.00	0.00
2335	0.5	106.5	2334.8	-4.09	18.68	19.12	10.1	0.18	-0.14
2612	1	142.5	2611.7	-6.35	21.31	22.24	10.3	0.24	0.18
2951	1.5	135.5	2950.7	-11.87	26.22	28.78	9.7	0.15	0.15
3043	1.5	138.5	3042.6	-13.63	27.86	31.02	9.6	0.00	0.00
3137	1	130.5	3136.6	-15.08	29.30	32.95	9.6	0.56	-0.53
3228	0.75	151.5	3227.6	-16.12	30.19	34.22	9.4	0.44	-0.27
3444	1	176.5	3443.6	-19.24	30.98	36.47	7.8	0.21	0.12
3629	1	190.5	3628.5	-22.44	30.78	38.10	5.3	0.00	0.00
3815	1.25	234.5	3814.5	-25.22	28.84	38.31	2.0	0.47	0.13
4061	1.75	262.5	4060.4	-27.26	22.93	35.62	-3.6	0.35	0.20
4152	1.75	286.5	4151.4	-27.05	20.22	33.77	-5.3	0.80	0.00
5276	1.75	284.5	5274.9	-17.88	-12.86	22.02	-21.8	0.00	0.00
4399	1.25	284.5	4398.2	-23.63	9.37	25.42	-10.4	-0.06	0.06
4582	1	296.5	4581.1	-22.42	6.01	23.21	-11.9	0.19	-0.14
4794	0.25	271.5	4793.1	-21.58	3.89	21.93	-12.8	0.37	-0.35
5008	0.75	157.5	5007.1	-22.86	3.96	23.20	-13.7	0.41	0.23
5100	1	126.5	5099.1	-23.89	4.84	24.38	-13.8	0.57	0.27
5192	1.25	104.5	5191.1	-24.62	6.45	25.45	-13.2	0.54	0.27
5285	1	128.5	5284.1	-25.38	8.07	26.63	-12.6	0.57	-0.27
5499	1.5	96.5	5498.0	-26.86	12.31	29.55	-10.7	0.39	0.23
5865	0.75	94.5	5863.9	-27.59	19.46	33.77	-6.3	0.21	-0.20
6089	2	279	6087.9	-27.10	17.06	32.02	-7.6	1.23	0.56
6182	3.62	285.5	6180.8	-26.06	12.63	28.96	-9.9	1.77	1.74
6275	7.12	16	6273.5	-19.72	11.39	22.77	-6.2	8.61	3.76
6305	12	32	6303.1	-15.29	13.55	20.43	-1.5	18.37	16.27
6337	17.25	40.5	6334.0	-8.85	18.40	20.42	6.5	17.68	16.41
6369	20.63	42	6364.3	-1.05	25.26	25.28	16.8	10.67	10.56
6400	26	40.5	6392.8	8.18	33.33	34.32	29.1	17.43	17.32
6431	31.12	38.5	6420.0	19.62	42.74	47.03	43.8	16.80	16.52
6460	36.62	39	6444.0	32.22	52.85	61.90	59.9	18.99	18.97
6491	42.25	40	6468.0	47.40	65.38	80.76	79.5	18.28	18.16
6521	48.25	40.5	6489.1	63.65	79.14	101.57	100.8	20.03	20.00
6551	54.38	40	6507.8	81.52	94.27	124.62	124.1	20.47	20.43
6581	58	41.5	6524.5	100.39	110.54	149.32	149.0	12.76	12.07
6612	61.63	43	6540.1	120.22	128.56	176.01	175.8	12.43	11.71
6643	65.5	43.5	6553.9	140.43	147.57	203.72	203.6	12.57	12.48
6673	69	44	6565.5	160.42	166.70	231.35	231.2	11.77	11.67
6704	72.12	45	6575.8	181.26	187.19	260.57	260.4	10.51	10.06
6733	76.25	45.5	6583.7	200.90	207.00	288.46	288.3	14.34	14.24
6763	79.75	46	6590.0	221.37	228.02	317.80	317.7	11.78	11.67
6793	82.13	47	6594.7	241.76	249.51	347.42	347.3	8.59	7.93
6825	84.38	47.5	6598.4	263.33	272.84	379.19	379.0	7.20	7.03
6854	86.38	47.5	6600.8	282.86	294.15	408.09	407.8	6.90	6.90

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6885	86.5	46.5	6602.7	303.96	316.78	439.02	438.7	3.24	0.39
6915	86.5	47	6604.5	324.48	338.59	468.97	468.7	1.66	0.00
6946	86.13	47.5	6606.5	345.48	361.31	499.90	499.5	2.00	-1.19
6977	86.25	47	6608.6	366.47	384.02	530.83	530.4	1.66	0.39
7008	85.87	47.5	6610.7	387.47	406.73	561.75	561.3	2.02	-1.23
7039	85.62	47.5	6613.0	408.35	429.52	592.66	592.2	0.00	-0.81
7070	85.88	45.5	6615.3	429.63	451.95	623.57	623.1	6.49	0.84

Ruth Ann Martinez, do hereby certify that
 this is a true and correct copy of original
 examined by me this *30th*
Oct 91 for Directional Survey *11-9-95*

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 OCT 30 1991
 OIL CON. DIST.