

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

COLUMBIA

OREGON

1-06-87

INTERVAL 491.0 TO 3163.0

RUN 1 RLAC 11223.

ENGINEER M. HINDS MR. THOMAS MAG DEC 20.

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 \* OREGON 11223 SL=12,WL= 8,ST=2 \*  
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 \* 4 0 0 0 0 \*  
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\*\*FORMATION DIP\*\*

\*\*\*\*BOREHOLE\*\*\*\*

DEPTH WL ANG AZ BEARING GRADE DA DAZ BEARING

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
505.0	8.00	4.2	179	S 1 E	100	0.6	317	N 43 W
507.0	8.00	5.7	178	S 2 E	100	0.7	313	N 47 W
509.0	8.00	2.4	170	S 10 E	100	0.7	319	N 41 W
515.0	8.00	0.9	96	N 46 E	100	0.7	213	S 33 W
519.0	8.00	3.3	51	N 61 E	100	0.8	194	S 14 W
521.0	8.00	1.9	55	N 65 E	100	0.8	195	S 15 W
523.0	8.00	2.0	44	N 44 E	100	0.8	194	S 14 W
527.0	8.00	2.1	358	N 2 W	100	0.8	193	S 13 W
529.0	8.00	2.9	5	N 5 E	100	0.8	195	S 15 W
531.0	8.00	2.8	82	N 82 E	100	0.8	193	S 13 W
533.0	8.00	1.1	70	N 70 E	100	0.9	195	S 15 W
539.0	8.00	3.9	70	N 70 E	100	0.9	193	S 13 W
541.0	8.00	3.7	75	N 75 E	100	0.9	193	S 13 W
543.0	8.00	3.7	60	N 60 E	100	0.9	195	S 15 W
545.0	8.00	6.4	73	N 73 E	100	0.8	194	S 14 W
549.0	8.00	5.2	49	N 49 E	100	0.9	195	S 15 W
551.0	8.00	1.6	69	N 69 E	100	0.9	195	S 15 W
553.0	8.00	1.3	60	N 60 E	100	0.9	192	S 12 W
555.0	8.00	3.7	7	N 7 E	100	0.8	195	S 15 W
557.0	8.00	4.4	357	N 3 W	100	0.8	194	S 14 W
559.0	8.00	1.2	300	N 60 W	100	0.8	194	S 14 W
553.0	8.00	16.8	327	N 33 W	100	0.8	191	S 11 W
555.0	8.00	16.5	330	N 30 W	100	0.8	194	S 14 W
557.0	8.00	15.8	344	N 15 W	100	0.8	193	S 13 W
559.0	8.00	16.4	345	N 15 W	100	0.8	191	S 11 W
589.0	8.00	6.2	298	N 62 W	100	0.9	192	S 12 W
591.0	8.00	8.5	297	N 63 W	94	0.9	192	S 12 W
593.0	8.00	19.4	345	N 15 W	100	0.9	192	S 12 W
597.0	8.00	26.1	27	N 27 E	100	0.8	192	S 12 W

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DEPTH	WL	**FORMATION DIP**				****BOREHOLE****			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
603.0	8.00	40.5	20	N 20 E	100	0.9	189	S 9 W	
611.0	8.00	8.6	48	N 48 E	94	0.9	188	S 8 W	
613.0	8.00	2.4	347	N 13 W	100	0.9	191	S 11 W	
615.0	8.00	2.6	1	N 1 E	100	0.9	189	S 9 W	
617.0	8.00	1.5	2	N 2 E	100	0.9	190	S 10 W	
629.0	8.00	4.0	84	N 84 E	60	0.9	189	S 9 W	
639.0	8.00	1.1	96	S 84 E	100	0.9	190	S 10 W	
641.0	8.00	3.1	61	N 61 E	100	0.9	188	S 8 W	
643.0	8.00	3.7	75	N 75 E	100	0.8	186	S 6 W	
645.0	8.00	4.2	72	N 72 E	100	0.8	188	S 8 W	
647.0	8.00	6.8	100	S 80 E	100	0.9	190	S 10 W	
649.0	8.00	5.0	55	N 55 E	100	0.9	189	S 9 W	
651.0	8.00	11.1	47	N 47 E	100	0.9	187	S 7 W	
653.0	8.00	8.2	40	N 40 E	100	0.8	188	S 8 W	
657.0	8.00	7.4	316	N 44 W	100	0.8	183	S 3 W	
655.0	8.00	41.5	288	N 72 W	79	0.8	185	S 5 W	
657.0	8.00	41.2	330	N 30 W	59	0.8	185	S 5 W	
659.0	8.00	40.8	319	N 41 W	83	0.9	185	S 5 W	
675.0	8.00	11.3	22	N 22 E	100	0.9	183	S 3 W	
677.0	8.00	25.6	23	N 23 E	100	0.9	186	S 6 W	
679.0	8.00	4.3	356	N 4 W	100	0.9	188	S 8 W	
683.0	8.00	2.5	18	N 18 E	100	0.9	183	S 3 W	
687.0	8.00	1.6	41	N 41 E	100	0.8	186	S 6 W	
689.0	8.00	2.7	63	N 63 E	100	0.9	184	S 4 W	
691.0	8.00	9.1	26	N 26 E	100	0.9	187	S 7 W	
693.0	8.00	15.6	43	N 43 E	100	0.8	184	S 4 W	
699.0	8.00	40.5	34	N 34 E	100	0.8	183	S 3 W	
701.0	8.00	2.7	86	N 86 E	100	0.8	183	S 3 W	
703.0	8.00	2.3	91	S 89 E	100	0.8	184	S 4 W	
705.0	8.00	2.3	8	N 8 E	100	0.8	182	S 2 W	
707.0	8.00	1.7	322	N 38 W	100	0.8	184	S 4 W	
711.0	8.00	2.7	315	N 45 W	100	0.9	181	S 1 W	
713.0	8.00	1.8	329	N 31 W	100	0.8	183	S 3 W	
715.0	8.00	1.9	353	N 3 W	100	0.8	184	S 4 W	
717.0	8.00	1.8	1	N 1 E	100	0.8	181	S 1 W	
719.0	8.00	2.2	32	N 32 E	100	0.8	182	S 2 W	
721.0	8.00	2.2	13	N 13 E	100	0.8	182	S 2 W	
723.0	8.00	2.0	357	N 3 W	100	0.8	183	S 3 W	
725.0	8.00	0.6	4	N 4 E	100	0.8	182	S 2 W	
735.0	8.00	0.6	0	N 0 E	100	0.7	179	S 1 E	

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COLUMBIA

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1-06-87

DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
739.0	8.00	0.9	54	N 54 E	100	0.8	179	S 1 E
741.0	8.00	0.9	48	N 48 E	100	0.8	180	S 0 E
743.0	8.00	0.4	62	N 62 E	100	0.7	180	S 0 E
745.0	8.00	0.6	215	S 35 W	100	0.7	179	S 1 E
747.0	8.00	1.4	237	S 57 W	100	0.8	180	S 0 E
749.0	8.00	1.9	240	S 60 W	100	0.8	178	S 2 E
751.0	8.00	2.8	250	S 50 W	100	0.8	179	S 1 E
753.0	8.00	1.9	235	S 55 W	100	0.8	178	S 2 E
755.0	8.00	1.2	224	S 44 W	100	0.7	178	S 2 E
757.0	8.00	2.0	215	S 35 W	100	0.8	179	S 1 E
759.0	8.00	0.7	185	S 5 W	100	0.8	177	S 3 E
751.0	8.00	1.8	191	S 11 W	100	0.8	179	S 1 E
753.0	8.00	0.7	180	S 0 E	100	0.8	176	S 4 E
755.0	8.00	0.5	188	S 8 W	100	0.8	178	S 2 E
757.0	8.00	0.4	189	S 9 W	100	0.8	176	S 4 E
759.0	8.00	0.2	215	S 35 W	100	0.8	176	S 4 E
771.0	8.00	0.5	193	S 13 W	100	0.7	176	S 4 E
773.0	8.00	0.8	127	S 53 E	100	0.7	175	S 5 E
775.0	8.00	0.8	110	S 70 E	100	0.7	177	S 3 E
777.0	8.00	0.7	121	S 59 E	100	0.7	177	S 3 E
779.0	8.00	0.5	127	S 53 E	100	0.7	176	S 4 E
781.0	8.00	0.4	146	S 34 E	100	0.7	176	S 4 E
783.0	8.00	0.6	191	S 11 W	100	0.7	176	S 4 E
785.0	8.00	0.9	198	S 18 W	100	0.7	175	S 5 E
787.0	8.00	1.0	204	S 24 W	100	0.7	175	S 5 E
789.0	8.00	1.1	228	S 48 W	100	0.7	176	S 4 E
791.0	8.00	1.6	209	S 29 W	100	0.7	175	S 5 E
793.0	8.00	2.0	217	S 37 W	100	0.7	179	S 1 E
795.0	8.00	1.2	215	S 35 W	100	0.7	176	S 4 E
797.0	8.00	1.2	215	S 35 W	100	0.7	173	S 7 E
799.0	8.00	1.2	204	S 24 W	100	0.7	174	S 6 E
803.0	8.00	2.1	221	S 41 W	100	0.8	175	S 5 E
805.0	8.00	1.2	218	S 38 W	100	0.8	174	S 6 E
809.0	8.00	1.8	217	S 37 W	100	0.8	176	S 4 E
811.0	8.00	1.1	215	S 35 W	100	0.8	174	S 6 E
813.0	8.00	1.0	182	S 2 W	100	0.8	175	S 5 E
815.0	8.00	0.2	91	S 89 E	100	0.8	176	S 4 E
819.0	8.00	0.2	74	N 74 E	100	0.9	177	S 3 E
821.0	8.00	0.3	74	N 74 E	100	0.9	182	S 2 W
823.0	8.00	0.7	129	S 51 E	100	0.8	182	S 2 W

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DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
825.0	8.00	0.8	129	S 51 E	100	0.8	183	S 3 W
827.0	8.00	0.4	98	S 82 E	100	0.8	183	S 3 W
829.0	8.00	0.1	66	N 66 E	100	0.8	183	S 3 W
833.0	8.00	0.3	8	N 8 E	100	0.8	183	S 3 W
835.0	8.00	1.3	307	N 53 W	100	0.8	184	S 4 W
837.0	8.00	0.7	192	S 12 W	100	0.8	182	S 2 W
839.0	8.00	1.4	176	S 4 E	100	0.8	185	S 5 W
841.0	8.00	1.7	193	S 13 W	100	0.8	182	S 2 W
843.0	8.00	1.6	204	S 24 W	100	0.8	184	S 4 W
845.0	8.00	1.5	227	S 47 W	100	0.8	183	S 3 W
847.0	8.00	0.9	207	S 27 W	100	0.8	183	S 3 W
849.0	8.00	0.4	252	S 72 W	100	0.8	182	S 2 W
851.0	8.00	1.0	224	S 44 W	100	0.8	183	S 3 W
853.0	8.00	0.9	148	S 32 E	100	0.8	183	S 3 W
855.0	8.00	0.8	138	S 42 E	100	0.9	182	S 2 W
857.0	8.00	1.3	127	S 53 E	100	0.8	183	S 3 W
859.0	8.00	1.2	110	S 70 E	100	0.9	182	S 2 W
851.0	8.00	0.5	110	S 70 E	100	0.8	183	S 3 W
857.0	8.00	0.5	38	N 38 E	100	0.8	184	S 4 W
859.0	8.00	0.7	344	N 15 W	100	0.8	185	S 5 W
873.0	8.00	3.5	232	S 52 W	100	0.8	187	S 7 W
875.0	8.00	1.5	241	S 61 W	100	0.9	188	S 8 W
877.0	8.00	3.3	182	S 2 W	100	0.8	188	S 8 W
879.0	8.00	3.3	195	S 15 W	100	0.8	189	S 9 W
881.0	8.00	3.7	220	S 40 W	100	0.8	193	S 13 W
883.0	8.00	4.3	232	S 52 W	100	0.8	195	S 15 W
885.0	8.00	4.1	233	S 53 W	100	0.8	197	S 17 W
887.0	8.00	1.7	217	S 37 W	100	0.8	197	S 17 W
889.0	8.00	1.9	191	S 11 W	100	0.8	196	S 16 W
891.0	8.00	2.0	195	S 15 W	100	0.7	200	S 20 W
893.0	8.00	2.5	212	S 32 W	100	0.7	197	S 17 W
895.0	8.00	2.8	216	S 35 W	100	0.7	200	S 20 W
897.0	8.00	2.4	203	S 23 W	100	0.7	199	S 19 W
899.0	8.00	1.8	203	S 23 W	100	0.7	201	S 21 W
901.0	8.00	2.0	196	S 16 W	100	0.7	201	S 21 W
903.0	8.00	1.8	191	S 11 W	100	0.6	199	S 19 W
905.0	8.00	3.3	173	S 7 E	100	0.6	202	S 22 W
907.0	8.00	21.2	213	S 33 W	100	0.6	201	S 21 W
913.0	8.00	0.4	221	S 41 W	100	0.5	196	S 16 W
915.0	8.00	1.4	354	N 5 W	100	0.5	194	S 14 W

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MIST

COLUMBIA

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1-05-87

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
917.0	8.00	2.0	329	N 31 W	100	0.5	196	S 16 W
919.0	8.00	2.4	31	N 31 E	100	0.5	192	S 12 W
921.0	8.00	3.1	40	N 40 E	100	0.5	192	S 12 W
923.0	8.00	3.8	73	N 73 E	100	0.5	189	S 9 W
925.0	8.00	4.0	79	N 79 E	100	0.5	193	S 13 W
927.0	8.00	2.2	55	N 55 E	100	0.6	189	S 9 W
929.0	8.00	2.4	108	S 72 E	100	0.5	186	S 6 W
931.0	8.00	1.4	89	N 89 E	100	0.6	178	S 2 E
933.0	8.00	1.6	82	N 82 E	100	0.6	180	S 0 E
935.0	8.00	1.2	73	N 73 E	100	0.6	177	S 3 E
937.0	8.00	2.2	80	N 80 E	100	0.6	178	S 2 E
939.0	8.00	2.1	69	N 69 E	100	0.7	176	S 4 E
941.0	8.00	3.2	37	N 37 E	100	0.7	176	S 4 E
943.0	8.00	7.2	3	N 3 E	100	0.6	175	S 5 E
945.0	8.00	9.9	21	N 21 E	100	0.7	175	S 5 E
947.0	8.00	15.7	39	N 39 E	100	0.7	175	S 5 E
949.0	8.00	17.2	29	N 29 E	100	0.8	180	S 0 E
951.0	8.00	17.8	24	N 24 E	100	0.8	180	S 0 E
953.0	8.00	16.4	23	N 23 E	100	0.7	179	S 1 E
955.0	8.00	13.3	40	N 40 E	100	0.7	183	S 3 W
957.0	8.00	13.6	55	N 55 E	100	0.7	182	S 2 W
959.0	8.00	13.7	45	N 45 E	100	0.8	185	S 6 W
961.0	8.00	24.5	45	N 45 E	100	0.8	186	S 6 W
963.0	8.00	20.1	344	N 15 W	100	0.8	188	S 8 W
965.0	8.00	17.7	333	N 7 W	100	0.8	186	S 6 W
967.0	8.00	16.2	1	N 1 E	100	0.8	189	S 9 W
971.0	8.00	9.1	13	N 13 E	100	0.8	195	S 15 W
975.0	8.00	8.5	13	N 13 E	95	0.8	197	S 17 W
977.0	8.00	8.1	26	N 26 E	71	0.8	199	S 19 W
979.0	8.00	5.1	1	N 1 E	100	0.7	198	S 18 W
981.0	8.00	4.0	18	N 18 E	100	0.7	196	S 16 W
983.0	8.00	5.7	9	N 9 E	100	0.7	197	S 17 W
985.0	8.00	7.8	2	N 2 E	100	0.8	197	S 17 W
987.0	8.00	7.8	10	N 10 E	100	0.8	198	S 18 W
989.0	8.00	9.7	1	N 1 E	100	0.8	200	S 20 W
991.0	8.00	11.0	354	N 5 W	100	0.8	194	S 14 W
993.0	8.00	11.5	348	N 12 W	100	0.8	194	S 14 W
995.0	8.00	11.2	342	N 15 W	100	0.8	197	S 17 W
999.0	8.00	5.7	2	N 2 E	100	0.8	196	S 16 W
1001.0	8.00	7.4	347	N 13 W	100	0.8	195	S 16 W

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COLUMBIA

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DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1003.0	8.00	7.7	1	N 1 E	100	0.8	195	S 15 W	
1005.0	8.00	7.4	7	N 7 E	100	0.8	195	S 15 W	
1007.0	8.00	6.7	17	N 17 E	100	0.8	198	S 16 W	
1009.0	8.00	5.1	5	N 5 E	100	0.8	196	S 16 W	
1011.0	8.00	4.5	20	N 20 E	100	0.8	201	S 21 W	
1013.0	8.00	6.5	7	N 7 E	100	0.7	202	S 22 W	
1015.0	8.00	8.1	27	N 27 E	100	0.6	204	S 24 W	
1017.0	8.00	7.0	28	N 28 E	100	0.6	204	S 24 W	
1019.0	8.00	8.0	15	N 15 E	100	0.5	199	S 19 W	
1023.0	8.00	9.0	5	N 5 E	100	0.5	194	S 14 W	
1025.0	8.00	4.8	217	S 37 W	100	0.5	187	S 7 W	
1027.0	8.00	5.2	229	S 49 W	100	0.5	189	S 9 W	
1029.0	8.00	5.7	242	S 62 W	100	0.5	191	S 11 W	
1031.0	8.00	5.7	243	S 63 W	100	0.5	190	S 10 W	
1033.0	8.00	6.0	252	S 72 W	100	0.5	186	S 6 W	
1035.0	8.00	5.5	237	S 57 W	100	0.5	189	S 9 W	
1037.0	8.00	5.9	235	S 55 W	100	0.5	186	S 6 W	
1039.0	8.00	5.1	227	S 47 W	100	0.5	186	S 6 W	
1041.0	8.00	7.3	223	S 43 W	100	0.5	185	S 5 W	
1043.0	8.00	7.9	225	S 45 W	100	0.5	188	S 6 W	
1045.0	8.00	8.0	229	S 49 W	100	0.5	182	S 2 W	
1047.0	8.00	8.6	244	S 64 W	100	0.5	183	S 3 W	
1049.0	8.00	8.0	264	S 84 W	100	0.6	183	S 3 W	
1051.0	8.00	7.5	299	N 61 W	88	0.6	176	S 4 E	
1053.0	8.00	8.8	309	N 51 W	100	0.6	178	S 2 E	
1055.0	8.00	9.8	313	N 47 W	100	0.6	177	S 3 E	
1057.0	8.00	8.1	325	N 34 W	100	0.7	177	S 3 E	
1059.0	8.00	8.8	314	N 45 W	100	0.6	178	S 2 E	
1051.0	8.00	10.9	309	N 51 W	100	0.6	178	S 2 E	
1053.0	8.00	10.0	311	N 49 W	100	0.6	178	S 2 E	
1055.0	8.00	10.1	313	N 47 W	100	0.7	175	S 5 E	
1057.0	8.00	7.1	324	N 35 W	69	0.7	178	S 2 E	
1059.0	8.00	3.8	293	N 67 W	100	0.7	175	S 5 E	
1071.0	8.00	9.5	294	N 65 W	100	0.8	178	S 2 E	
1073.0	8.00	8.2	307	N 51 W	100	0.8	180	S 0 E	
1075.0	8.00	5.0	319	N 39 W	100	0.8	181	S 1 W	
1077.0	8.00	7.9	317	N 43 W	100	0.8	180	S 0 E	
1079.0	8.00	8.1	305	N 55 W	100	0.8	179	S 1 E	
1085.0	8.00	9.8	259	S 79 W	100	0.7	182	S 2 W	
1087.0	8.00	10.0	270	N 90 W	100	0.8	183	S 3 W	

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OM 12 C-3

MIST

COLUMBIA

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**			GRADE	*****BOREHOLE*****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1089.0	8.00	10.4	290	N 80 W	100	0.8	185	S 5 W
1091.0	8.00	10.5	277	N 83 W	100	0.9	183	S 3 W
1093.0	8.00	9.1	280	N 80 W	100	0.9	184	S 4 W
1095.0	8.00	9.5	278	N 82 W	100	0.9	184	S 4 W
1097.0	8.00	9.2	280	N 80 W	100	0.9	186	S 6 W
1099.0	8.00	9.0	275	N 84 W	100	0.9	184	S 4 W
1101.0	8.00	9.8	275	N 85 W	100	0.9	185	S 5 W
1103.0	8.00	10.0	275	N 84 W	100	0.9	182	S 2 W
1105.0	8.00	10.2	275	N 84 W	100	0.9	184	S 4 W
1107.0	8.00	9.7	285	N 74 W	100	0.9	185	S 5 W
1109.0	8.00	7.5	293	N 67 W	100	0.9	185	S 5 W
1111.0	8.00	9.5	301	N 59 W	100	0.9	188	S 6 W
1113.0	8.00	9.0	300	N 60 W	100	0.9	189	S 9 W
1115.0	8.00	10.3	305	N 55 W	100	0.9	192	S 12 W
1117.0	8.00	8.6	295	N 65 W	100	0.8	192	S 12 W
1119.0	8.00	9.0	297	N 65 W	100	0.9	190	S 10 W
1121.0	8.00	8.3	291	N 69 W	100	0.9	192	S 12 W
1123.0	8.00	7.2	295	N 62 W	100	0.9	193	S 13 W
1125.0	8.00	7.8	297	N 63 W	100	0.9	195	S 16 W
1127.0	8.00	5.4	284	N 75 W	100	0.8	195	S 16 W
1129.0	8.00	8.7	288	N 72 W	100	0.8	196	S 18 W
1131.0	8.00	8.5	283	N 67 W	100	0.8	197	S 17 W
1133.0	8.00	6.9	308	N 52 W	100	0.8	196	S 16 W
1135.0	8.00	8.8	293	N 67 W	100	0.8	196	S 16 W
1137.0	8.00	8.7	291	N 69 W	100	0.8	195	S 15 W
1139.0	8.00	9.1	320	N 40 W	100	0.8	200	S 20 W
1145.0	8.00	7.8	319	N 41 W	100	0.8	200	S 20 W
1147.0	8.00	7.5	315	N 45 W	100	0.8	196	S 16 W
1149.0	8.00	9.0	308	N 52 W	100	0.8	196	S 16 W
1151.0	8.00	7.5	304	N 55 W	100	0.9	197	S 17 W
1153.0	8.00	7.1	295	N 63 W	100	0.9	193	S 13 W
1155.0	8.00	5.5	265	S 85 W	100	0.9	195	S 15 W
1157.0	8.00	5.4	262	S 82 W	100	0.8	194	S 14 W
1159.0	8.00	4.8	246	S 65 W	100	0.9	194	S 14 W
1151.0	8.00	4.5	221	S 41 W	100	0.9	193	S 13 W
1153.0	8.00	4.8	201	S 21 W	100	0.8	197	S 17 W
1155.0	8.00	2.8	198	S 18 W	100	0.9	195	S 15 W
1157.0	8.00	2.9	211	S 31 W	100	0.8	193	S 13 W
1159.0	8.00	7.6	273	N 67 W	100	0.9	195	S 15 W
1171.0	8.00	7.1	292	N 68 W	100	0.8	194	S 14 W

OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

COLUMBIA

OREGON

I-95-87

DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1173.0	8.00	7.6	298	N 52 W	100	0.9	194	S 14 W	
1175.0	8.00	4.2	285	N 75 W	100	0.9	193	S 13 W	
1177.0	8.00	3.2	304	N 55 W	100	0.9	192	S 12 W	
1179.0	8.00	3.5	22	N 22 E	100	0.9	194	S 14 W	
1181.0	8.00	3.3	18	N 18 E	100	0.8	191	S 11 W	
1183.0	8.00	4.3	15	N 15 E	100	0.9	191	S 11 W	
1185.0	8.00	3.7	338	N 2 W	100	0.9	193	S 13 W	
1187.0	8.00	4.4	332	N 28 W	100	0.8	193	S 13 W	
1189.0	8.00	2.2	292	N 58 W	100	0.9	191	S 11 W	
1191.0	8.00	1.2	247	S 57 W	100	0.9	194	S 14 W	
1193.0	8.00	3.4	131	S 49 E	100	0.9	191	S 11 W	
1195.0	8.00	3.5	125	S 60 E	100	0.9	193	S 13 W	
1197.0	8.00	3.8	123	S 57 E	100	0.8	192	S 12 W	
1199.0	8.00	4.0	125	S 54 E	100	0.9	191	S 11 W	
1201.0	8.00	3.7	138	S 50 E	100	0.9	189	S 9 W	
1203.0	8.00	3.3	138	S 27 E	100	0.9	189	S 9 W	
1205.0	8.00	4.0	194	S 14 W	100	0.8	191	S 11 W	
1207.0	8.00	4.7	152	S 12 W	100	0.8	191	S 11 W	
1209.0	8.00	5.6	191	S 11 W	100	0.8	189	S 9 W	
1211.0	8.00	6.0	157	S 12 W	100	0.9	191	S 11 W	
1213.0	8.00	5.8	182	S 2 W	100	0.8	191	S 11 W	
1215.0	8.00	5.6	191	S 11 W	100	0.8	192	S 12 W	
1217.0	8.00	6.0	194	S 14 W	100	0.8	192	S 12 W	
1219.0	8.00	5.7	190	S 10 W	100	0.8	193	S 13 W	
1221.0	8.00	5.8	191	S 11 W	100	0.8	190	S 10 W	
1223.0	8.00	6.1	191	S 11 W	100	0.8	189	S 9 W	
1225.0	8.00	6.0	183	S 3 W	100	0.8	187	S 7 W	
1227.0	8.00	5.4	183	S 3 W	100	0.8	188	S 8 W	
1229.0	8.00	5.0	188	S 8 W	100	0.8	189	S 9 W	
1231.0	8.00	4.4	186	S 8 E	100	0.8	189	S 9 W	
1233.0	8.00	3.9	209	S 29 W	100	0.8	190	S 10 W	
1235.0	8.00	4.2	195	S 15 W	100	0.8	188	S 8 W	
1237.0	8.00	3.3	186	S 8 W	100	0.8	188	S 8 W	
1239.0	8.00	2.5	185	S 5 W	100	0.8	187	S 7 W	
1241.0	8.00	2.3	184	S 4 W	100	0.9	187	S 7 W	
1243.0	8.00	2.6	183	S 3 W	100	0.8	188	S 8 W	
1245.0	8.00	3.5	154	S 25 E	100	0.8	189	S 9 W	
1247.0	8.00	3.3	153	S 25 E	100	0.8	189	S 9 W	
1249.0	8.00	3.9	154	S 25 E	100	0.8	190	S 10 W	
1251.0	8.00	3.9	143	S 31 E	100	0.8	189	S 9 W	



OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

COLUMBIA

OREGON

1-35-87

DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1253.0	3.00	4.7	160	S 20 E	100	0.8	189	S 9 W
1255.0	3.00	1.0	115	S 64 E	100	0.8	190	S 10 W
1257.0	3.00	1.4	58	N 58 E	100	0.8	191	S 11 W
1259.0	3.00	2.5	54	N 54 E	100	0.8	190	S 10 W
1251.0	3.00	3.5	63	N 63 E	100	0.8	191	S 11 W
1253.0	3.00	3.4	81	N 81 E	100	0.8	189	S 9 W
1255.0	3.00	3.7	63	N 63 E	100	0.8	191	S 11 W
1257.0	3.00	4.4	59	N 59 E	100	0.8	190	S 10 W
1259.0	3.00	5.4	51	N 51 E	100	0.8	192	S 12 W
1271.0	3.00	7.3	24	N 24 E	100	0.8	189	S 9 W
1273.0	3.00	7.8	13	N 13 E	100	0.8	187	S 7 W
1275.0	3.00	34.1	294	N 66 W	68	0.8	191	S 11 W
1285.0	3.00	2.3	259	S 79 W	88	0.7	200	S 20 W
1287.0	3.00	1.5	257	S 77 W	100	0.7	197	S 17 W
1289.0	3.00	1.3	330	N 30 W	100	0.6	199	S 19 W
1291.0	3.00	4.0	313	N 45 W	55	0.7	200	S 20 W
1295.0	3.00	4.3	314	N 46 W	100	0.7	200	S 20 W
1297.0	3.00	4.9	310	N 50 W	100	0.7	200	S 20 W
1299.0	3.00	4.5	323	N 37 W	100	0.7	198	S 18 W
1301.0	3.00	4.4	337	N 27 W	100	0.7	197	S 17 W
1303.0	3.00	3.3	354	N 6 W	100	0.7	197	S 17 W
1305.0	3.00	3.4	21	N 21 E	100	0.7	200	S 20 W
1307.0	3.00	3.8	33	N 33 E	100	0.7	198	S 18 W
1309.0	3.00	3.5	29	N 29 E	100	0.7	201	S 21 W
1311.0	3.00	3.3	354	N 6 W	100	0.7	201	S 21 W
1313.0	3.00	4.6	4	N 4 E	100	0.7	200	S 20 W
1315.0	3.00	4.8	0	N 0 E	100	0.7	200	S 20 W
1317.0	3.00	11.7	27	N 27 E	100	0.7	199	S 19 W
1319.0	3.00	15.3	47	N 47 E	100	0.7	198	S 18 W
1321.0	3.00	17.9	43	N 43 E	100	0.7	201	S 21 W
1323.0	3.00	21.0	41	N 41 E	100	0.7	198	S 18 W
1325.0	3.00	22.2	37	N 37 E	78	0.7	199	S 19 W
1327.0	3.00	28.6	53	N 53 E	100	0.7	196	S 16 W
1329.0	3.00	25.2	34	N 34 E	88	0.7	198	S 18 W
1333.0	3.00	19.2	52	N 52 E	100	0.7	198	S 18 W
1335.0	3.00	21.0	66	N 66 E	100	0.7	199	S 19 W
1337.0	3.00	23.2	67	N 67 E	77	0.7	200	S 20 W
1339.0	3.00	17.5	75	N 75 E	100	0.7	202	S 22 W
1341.0	3.00	17.7	69	N 69 E	100	0.7	200	S 20 W
1343.0	3.00	14.5	77	N 77 E	100	0.7	201	S 21 W

OREGON NATURAL GAS CORP.

04 12 C-3

MIST

COLUMBIA

OREGON

1-95-87

DEPTH	WL	**FORMATION DIP**				***BOREHOLE***		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1345.0	8.00	9.2	80	N 83 E	100	0.7	200	S 20 W
1347.0	8.00	32.1	61	N 61 E	100	0.7	201	S 21 W
1349.0	8.00	17.5	74	N 74 E	100	0.7	200	S 20 W
1351.0	8.00	15.4	83	N 83 E	100	0.7	198	S 18 W
1353.0	8.00	40.0	97	S 85 E	99	0.7	196	S 16 W
1355.0	8.00	15.0	85	N 85 E	100	0.7	193	S 13 W
1357.0	8.00	39.9	85	N 85 E	100	0.7	198	S 18 W
1359.0	8.00	12.5	83	N 83 E	100	0.7	199	S 19 W
1361.0	8.00	14.2	61	N 61 E	100	0.7	199	S 19 W
1363.0	8.00	13.5	48	N 48 E	100	0.7	202	S 22 W
1365.0	8.00	19.0	32	N 32 E	100	0.7	199	S 19 W
1367.0	8.00	12.4	54	N 54 E	99	0.6	202	S 22 W
1369.0	8.00	22.7	59	N 59 E	100	0.7	201	S 21 W
1371.0	8.00	25.8	70	N 70 E	100	0.7	202	S 22 W
1373.0	8.00	26.4	71	N 71 E	100	0.7	197	S 17 W
1375.0	8.00	26.8	77	N 77 E	100	0.7	198	S 18 W
1377.0	8.00	28.1	103	S 77 E	100	0.7	199	S 19 W
1387.0	8.00	22.1	73	N 73 E	58	0.7	196	S 16 W
1389.0	8.00	18.0	73	N 73 E	100	0.7	199	S 19 W
1391.0	8.00	16.5	84	N 84 E	100	0.7	196	S 16 W
1393.0	8.00	18.7	76	N 76 E	100	0.7	197	S 17 W
1395.0	8.00	30.8	90	N 90 E	68	0.6	199	S 19 W
1397.0	8.00	27.2	90	N 90 E	62	0.7	199	S 19 W
1399.0	8.00	18.4	97	S 83 E	100	0.6	200	S 20 W
1401.0	8.00	17.9	78	N 78 E	100	0.6	199	S 19 W
1403.0	8.00	19.0	80	N 80 E	100	0.7	196	S 16 W
1405.0	8.00	16.6	77	N 77 E	100	0.6	199	S 19 W
1407.0	8.00	19.0	80	N 80 E	100	0.6	199	S 19 W
1409.0	8.00	18.4	82	N 82 E	100	0.6	201	S 21 W
1411.0	8.00	16.0	82	N 82 E	100	0.7	200	S 20 W
1413.0	8.00	24.1	107	S 73 E	100	0.7	200	S 20 W
1415.0	8.00	14.0	91	S 89 E	100	0.7	199	S 19 W
1417.0	8.00	13.9	108	S 72 E	100	0.7	202	S 22 W
1419.0	8.00	12.4	92	S 88 E	100	0.7	201	S 21 W
1421.0	8.00	12.7	96	S 84 E	100	0.6	201	S 21 W
1423.0	8.00	11.9	102	S 75 E	100	0.7	202	S 22 W
1425.0	8.00	13.3	102	S 78 E	100	0.7	201	S 21 W
1427.0	8.00	13.7	105	S 74 E	100	0.6	201	S 21 W
1429.0	8.00	18.1	119	S 81 E	89	0.6	202	S 22 W
1431.0	8.00	17.5	119	S 85 E	100	0.6	205	S 25 W

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

COLUMBIA

OREGON

1-35-87

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1433.0	8.00	18.2	114	S 65 E	100	0.6	206	S 26 W
1435.0	8.00	16.1	120	S 83 E	100	0.6	202	S 22 W
1437.0	8.00	12.1	114	S 65 E	100	0.6	206	S 26 W
1439.0	8.00	12.5	131	S 49 E	100	0.6	204	S 24 W
1441.0	8.00	12.4	131	S 49 E	100	0.6	199	S 19 W
1443.0	8.00	12.5	117	S 63 E	100	0.6	201	S 21 W
1445.0	8.00	16.9	144	S 35 E	100	0.5	204	S 24 W
1447.0	8.00	18.7	145	S 37 E	100	0.6	208	S 28 W
1449.0	8.00	17.7	159	S 41 E	100	0.5	211	S 31 W
1451.0	8.00	17.7	144	S 35 E	100	0.6	211	S 31 W
1453.0	8.00	18.5	142	S 38 E	100	0.6	207	S 27 W
1455.0	8.00	17.9	149	S 31 E	100	0.6	209	S 29 W
1457.0	8.00	13.9	142	S 38 E	100	0.6	208	S 28 W
1459.0	8.00	14.2	143	S 31 E	100	0.6	210	S 30 W
1453.0	8.00	15.5	142	S 38 E	60	0.6	206	S 26 W
1455.0	8.00	16.7	141	S 39 E	100	0.6	208	S 27 W
1457.0	8.00	15.7	145	S 35 E	62	0.5	212	S 32 W
1459.0	8.00	16.2	142	S 38 E	90	0.5	209	S 29 W
1471.0	8.00	16.3	147	S 33 E	100	0.5	208	S 28 W
1475.0	8.00	15.3	151	S 29 E	100	0.5	208	S 28 W
1477.0	8.00	16.0	157	S 23 E	100	0.5	212	S 32 W
1479.0	8.00	15.2	154	S 14 E	69	0.5	215	S 35 W
1481.0	8.00	18.4	164	S 15 E	100	0.5	214	S 34 W
1483.0	8.00	13.6	170	S 10 E	77	0.5	216	S 38 W
1485.0	8.00	13.9	193	S 13 W	100	0.6	218	S 38 W
1487.0	8.00	6.2	167	S 13 E	100	0.6	214	S 34 W
1489.0	8.00	9.0	175	S 4 E	100	0.6	214	S 34 W
1491.0	8.00	8.9	175	S 7 E	100	0.6	216	S 36 W
1493.0	8.00	8.7	168	S 12 E	100	0.5	219	S 39 W
1495.0	8.00	7.4	165	S 15 E	93	0.5	216	S 36 W
1497.0	8.00	5.7	124	S 35 E	100	0.5	223	S 43 W
1499.0	8.00	4.9	125	S 55 E	100	0.5	221	S 41 W
1501.0	8.00	3.5	132	S 45 E	100	0.5	215	S 35 W
1503.0	8.00	3.5	120	S 60 E	100	0.5	217	S 37 W
1505.0	8.00	5.8	121	S 59 E	100	0.6	219	S 39 W
1507.0	3.00	4.2	110	S 70 E	83	0.5	221	S 41 W
1509.0	8.00	2.6	111	S 69 E	100	0.6	219	S 39 W
1519.0	8.00	14.4	87	N 87 E	100	0.5	223	S 43 W
1521.0	8.00	12.9	94	S 85 E	100	0.6	218	S 38 W
1523.0	8.00	13.1	101	S 72 E	100	0.6	222	S 42 W

OREGON NATURAL GAS CORP.

OH 12 C-3

WIST

COLUMBIA

OREGON

1-05-87

DEPTH	WC	**FORMATION DIP**				GRADE	****BOREHOLE****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1525.0	8.00	12.5	114	S 65 E	100	0.5	228	S 48 W	
1527.0	8.00	12.7	130	S 50 E	100	0.5	225	S 45 W	
1529.0	8.00	12.4	137	S 43 E	100	0.5	227	S 47 W	
1533.0	8.00	12.0	137	S 43 E	100	0.5	225	S 45 W	
1535.0	8.00	13.4	134	S 45 E	100	0.5	228	S 48 W	
1537.0	8.00	14.2	135	S 44 E	100	0.5	231	S 51 W	
1539.0	8.00	13.9	133	S 47 E	100	0.5	230	S 50 W	
1541.0	8.00	14.7	123	S 57 E	100	0.5	228	S 48 W	
1543.0	8.00	15.9	125	S 54 E	100	0.5	233	S 53 W	
1545.0	8.00	17.4	123	S 60 E	100	0.5	230	S 50 W	
1547.0	8.00	16.7	116	S 64 E	100	0.5	237	S 57 W	
1549.0	8.00	15.1	115	S 64 E	100	0.5	238	S 58 W	
1551.0	8.00	15.8	115	S 64 E	100	0.5	230	S 50 W	
1553.0	8.00	15.2	115	S 65 E	100	0.5	234	S 54 W	
1555.0	8.00	14.4	163	S 13 E	100	0.5	235	S 55 W	
1557.0	8.00	15.2	166	S 14 E	100	0.5	234	S 54 W	
1559.0	8.00	17.9	151	S 49 E	100	0.5	236	S 56 W	
1551.0	8.00	20.2	118	S 52 E	100	0.5	235	S 53 W	
1553.0	8.00	21.2	115	S 55 E	100	0.5	234	S 54 W	
1555.0	8.00	21.0	117	S 55 E	100	0.5	234	S 54 W	
1557.0	8.00	21.1	115	S 55 E	100	0.5	237	S 57 W	
1559.0	8.00	21.3	115	S 55 E	100	0.5	239	S 59 W	
1571.0	8.00	21.5	121	S 59 E	100	0.5	239	S 59 W	
1573.0	8.00	21.4	123	S 57 E	100	0.5	240	S 60 W	
1575.0	8.00	21.7	125	S 54 E	100	0.5	238	S 56 W	
1577.0	8.00	22.2	128	S 52 E	100	0.5	243	S 63 W	
1579.0	8.00	22.1	125	S 54 E	100	0.5	244	S 64 W	
1581.0	8.00	22.0	125	S 54 E	100	0.5	242	S 62 W	
1583.0	8.00	21.8	122	S 58 E	100	0.6	242	S 62 W	
1585.0	8.00	21.9	125	S 54 E	100	0.5	243	S 63 W	
1587.0	8.00	22.4	124	S 55 E	100	0.5	242	S 62 W	
1589.0	8.00	23.2	123	S 57 E	100	0.5	243	S 63 W	
1591.0	8.00	24.5	124	S 55 E	100	0.5	247	S 67 W	
1593.0	8.00	24.9	123	S 57 E	100	0.6	242	S 62 W	
1595.0	8.00	24.9	128	S 60 E	100	0.6	248	S 68 W	
1597.0	8.00	25.8	123	S 57 E	100	0.6	247	S 67 W	
1599.0	8.00	27.3	117	S 63 E	100	0.6	248	S 68 W	
1601.0	8.00	26.2	114	S 65 E	100	0.6	249	S 69 W	
1603.0	8.00	25.6	128	S 60 E	100	0.6	250	S 70 W	
1605.0	8.00	24.6	123	S 57 E	100	0.6	252	S 72 W	

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

CO. J431A

OREGON

1-06-87

DEPTH	NL	**FORMATION DIP**			GRADE	***BOREHOLE***		
		AVG	AZ	BEARING		DA	DAZ	BEARING
1607.0	8.00	24.5	124	S 55 E	100	0.6	252	S 72 W
1609.0	8.00	24.9	122	S 58 E	100	0.6	252	S 72 W
1611.0	8.00	25.7	125	S 55 E	100	0.6	252	S 72 W
1613.0	8.00	25.5	125	S 55 E	100	0.6	256	S 76 W
1615.0	8.00	26.9	122	S 58 E	100	0.7	255	S 75 W
1617.0	8.00	26.5	120	S 59 E	100	0.7	258	S 76 W
1619.0	8.00	27.3	120	S 60 E	100	0.7	255	S 76 W
1621.0	8.00	27.8	121	S 59 E	100	0.7	259	S 75 W
1623.0	8.00	27.9	128	S 52 E	100	0.7	261	S 81 W
1625.0	8.00	27.9	128	S 52 E	100	0.7	258	S 78 W
1627.0	8.00	28.6	126	S 54 E	100	0.7	255	S 75 W
1629.0	8.00	28.5	122	S 58 E	100	0.7	256	S 75 W
1631.0	8.00	28.2	122	S 58 E	100	0.7	260	S 80 W
1633.0	8.00	27.0	122	S 58 E	100	0.7	258	S 78 W
1635.0	8.00	27.2	123	S 57 E	100	0.7	260	S 80 W
1637.0	8.00	26.5	125	S 52 E	100	0.7	264	S 84 W
1639.0	8.00	27.2	130	S 50 E	100	0.7	261	S 81 W
1641.0	8.00	28.1	129	S 51 E	100	0.7	260	S 80 W
1643.0	8.00	29.3	128	S 52 E	100	0.7	260	S 80 W
1645.0	8.00	30.0	124	S 55 E	100	0.8	260	S 80 W
1647.0	8.00	29.6	120	S 60 E	100	0.8	260	S 80 W
1649.0	8.00	30.5	115	S 64 E	100	0.8	261	S 81 W
1651.0	8.00	29.8	115	S 65 E	100	0.8	262	S 82 W
1653.0	8.00	30.1	117	S 63 E	100	0.8	261	S 81 W
1655.0	8.00	30.8	113	S 67 E	100	0.8	264	S 84 W
1657.0	8.00	32.2	110	S 62 E	100	0.8	265	S 85 W
1659.0	8.00	33.0	116	S 64 E	100	0.8	264	S 84 W
1661.0	8.00	34.1	114	S 65 E	100	0.8	264	S 84 W
1663.0	8.00	34.5	114	S 65 E	100	0.8	267	S 87 W
1665.0	8.00	34.3	114	S 65 E	100	0.9	267	S 87 W
1667.0	8.00	33.4	114	S 66 E	100	0.9	255	S 85 W
1669.0	8.00	31.5	127	S 53 E	100	0.9	268	S 88 W
1671.0	8.00	30.9	123	S 57 E	100	0.9	267	S 87 W
1673.0	8.00	30.4	125	S 54 E	100	0.9	267	S 87 W
1675.0	8.00	30.2	130	S 50 E	100	0.9	267	S 87 W
1677.0	8.00	29.5	127	S 53 E	100	1.0	267	S 87 W
1679.0	8.00	29.0	123	S 55 E	100	1.0	267	S 87 W
1681.0	8.00	28.5	123	S 57 E	100	0.9	263	S 85 W
1683.0	8.00	28.8	124	S 55 E	100	1.0	268	S 88 W
1685.0	8.00	29.1	123	S 55 E	100	1.0	267	S 87 W

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

CO-J431A

OREGON

1-05-87

DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1687.0	8.00	29.5	125	S 55 E	100	1.0	269	S 89 W	
1689.0	8.00	29.8	124	S 55 E	100	1.0	268	S 88 W	
1691.0	8.00	29.4	125	S 55 E	100	1.0	266	S 86 W	
1693.0	8.00	29.0	125	S 55 E	100	1.1	267	S 87 W	
1695.0	8.00	28.4	123	S 57 E	100	1.1	268	S 86 W	
1697.0	8.00	27.2	129	S 51 E	100	1.1	268	S 86 W	
1699.0	8.00	27.1	132	S 48 E	100	1.1	268	S 86 W	
1701.0	8.00	27.5	135	S 45 E	100	1.1	269	S 89 W	
1703.0	8.00	29.5	125	S 54 E	100	1.1	269	S 89 W	
1705.0	8.00	29.5	127	S 55 E	100	1.1	268	S 88 W	
1707.0	8.00	29.9	124	S 55 E	100	1.1	269	S 89 W	
1709.0	8.00	31.5	131	S 45 E	100	1.1	269	S 89 W	
1711.0	8.00	31.1	135	S 47 E	100	1.2	271	N 89 W	
1713.0	8.00	30.5	131	S 45 E	100	1.2	271	N 89 W	
1715.0	8.00	31.2	128	S 52 E	79	1.2	270	N 90 W	
1717.0	8.00	29.4	125	S 57 E	100	1.2	270	N 90 W	
1719.0	8.00	34.5	118	S 62 E	100	1.2	270	N 90 W	
1721.0	8.00	33.0	117	S 55 E	100	1.2	269	S 89 W	
1723.0	8.00	31.9	115	S 64 E	100	1.2	270	N 90 W	
1725.0	8.00	31.1	114	S 62 E	73	1.2	271	N 89 W	
1727.0	8.00	31.2	119	S 61 E	100	1.2	271	N 89 W	
1729.0	8.00	30.1	121	S 59 E	100	1.2	272	N 88 W	
1731.0	8.00	33.5	127	S 53 E	100	1.3	270	N 90 W	
1733.0	8.00	22.9	125	S 55 E	100	1.3	274	N 86 W	
1737.0	8.00	31.3	124	S 54 E	100	1.4	272	N 86 W	
1739.0	8.00	30.4	122	S 58 E	100	1.4	273	N 87 W	
1741.0	8.00	31.7	124	S 55 E	100	1.4	273	N 87 W	
1743.0	8.00	37.6	109	S 71 E	100	1.4	273	N 87 W	
1745.0	8.00	39.6	103	S 75 E	100	1.4	272	N 88 W	
1747.0	8.00	41.7	98	S 82 E	100	1.4	272	N 88 W	
1749.0	8.00	41.9	95	S 84 E	100	1.4	272	N 88 W	
1751.0	8.00	36.4	102	S 78 E	100	1.5	272	N 88 W	
1757.0	8.00	17.9	84	N 84 E	76	1.5	273	N 87 W	
1759.0	8.00	17.1	125	S 55 E	100	1.5	273	N 87 W	
1755.0	8.00	21.6	125	S 55 E	100	1.5	274	N 86 W	
1759.0	8.00	30.8	139	S 50 E	100	1.6	274	N 86 W	
1775.0	8.00	42.6	103	S 75 E	100	1.6	273	N 87 W	
1777.0	8.00	31.0	103	S 77 E	51	1.6	272	N 88 W	
1785.0	8.00	19.5	137	S 43 E	100	1.7	275	N 85 W	
1793.0	8.00	36.5	135	S 44 E	98	1.8	275	N 85 W	

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

COLUMBIA

OREGON

1-06-87

DEPTH	NL	**FORMATION DIP**				GRADE	****BOREHOLE****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1795.0	8.00	42.5	149	S 31 E	100	1.7	274	N 86 W	
1797.0	8.00	4.4	230	S 50 W	100	1.8	275	N 85 W	
1803.0	8.00	12.7	220	S 40 W	100	1.9	274	N 86 W	
1805.0	8.00	11.1	202	S 22 W	100	1.9	274	N 88 W	
1807.0	8.00	10.8	203	S 25 W	100	1.9	276	N 84 W	
1809.0	8.00	11.3	210	S 30 W	100	1.9	275	N 85 W	
1811.0	8.00	10.2	231	S 51 W	100	1.9	277	N 83 W	
1813.0	8.00	11.0	232	S 52 W	100	1.9	277	N 83 W	
1815.0	8.00	10.8	233	S 53 W	100	2.0	278	N 82 W	
1817.0	8.00	10.2	232	S 52 W	100	2.0	277	N 83 W	
1819.0	8.00	9.2	232	S 52 W	100	2.0	276	N 84 W	
1821.0	8.00	9.4	227	S 47 W	100	2.0	277	N 83 W	
1823.0	8.00	8.5	232	S 52 W	100	2.0	277	N 83 W	
1825.0	8.00	7.4	219	S 39 W	100	2.0	278	N 82 W	
1827.0	8.00	6.1	221	S 41 W	100	2.0	278	N 82 W	
1829.0	8.00	4.4	233	S 53 W	100	2.0	278	N 82 W	
1831.0	8.00	3.6	222	S 42 W	100	2.0	278	N 82 W	
1833.0	8.00	5.5	245	S 65 W	79	2.1	278	N 82 W	
1837.0	8.00	4.0	241	S 61 W	100	2.1	278	N 82 W	
1839.0	8.00	3.9	244	S 64 W	100	2.1	279	N 81 W	
1843.0	8.00	22.1	249	S 69 W	100	2.1	278	N 82 W	
1847.0	8.00	9.6	306	N 54 W	100	2.1	279	N 81 W	
1849.0	8.00	10.2	302	N 54 W	100	2.1	279	N 81 W	
1851.0	8.00	10.3	306	N 54 W	100	2.1	279	N 81 W	
1853.0	8.00	12.9	311	N 49 W	100	2.1	280	N 80 W	
1855.0	8.00	13.6	309	N 51 W	100	2.1	280	N 80 W	
1857.0	8.00	11.0	324	N 35 W	91	2.1	280	N 80 W	
1859.0	8.00	11.7	356	N 22 W	100	2.1	280	N 80 W	
1851.0	8.00	10.4	311	N 49 W	100	2.0	279	N 81 W	
1853.0	8.00	11.7	305	N 54 W	100	2.0	281	N 79 W	
1855.0	8.00	8.9	309	N 51 W	100	2.1	280	N 80 W	
1857.0	8.00	6.6	318	N 42 W	100	2.0	280	N 80 W	
1871.0	8.00	8.8	333	N 25 W	100	2.0	280	N 80 W	
1873.0	8.00	9.4	300	N 63 W	100	1.9	280	N 80 W	
1875.0	8.00	9.4	309	N 51 W	100	2.0	279	N 81 W	
1877.0	8.00	10.1	307	N 53 W	100	1.9	279	N 81 W	
1879.0	8.00	10.4	299	N 61 W	100	1.9	279	N 81 W	
1881.0	8.00	9.9	290	N 70 W	100	1.9	279	N 81 W	
1883.0	8.00	10.1	291	N 69 W	100	1.9	279	N 81 W	
1885.0	8.00	8.4	280	N 80 W	97	1.9	279	N 81 W	

OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

CO-U431A

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****			
		ANG	AZ	BLKING	GRADE	DA	DAZ	BLKING	
1887.0	8.00	9.1	251	S 71 W	93	1.9	279	N 81 W	
1889.0	8.00	15.4	280	N 80 W	100	1.9	279	N 81 W	
1891.0	8.00	14.8	284	N 75 W	100	1.9	280	N 80 W	
1893.0	8.00	12.1	288	N 80 W	100	1.9	281	N 79 W	
1895.0	8.00	10.4	281	N 79 W	100	1.9	280	N 80 W	
1897.0	8.00	9.2	267	S 87 W	130	1.8	279	N 81 W	
1899.0	8.00	8.1	269	S 89 W	100	1.8	279	N 81 W	
1901.0	8.00	7.7	275	N 85 W	100	1.8	280	N 80 W	
1903.0	8.00	10.7	287	N 73 W	100	1.8	280	N 80 W	
1905.0	8.00	11.1	287	N 63 W	100	1.8	280	N 80 W	
1907.0	8.00	7.0	305	N 57 W	100	1.7	281	N 79 W	
1909.0	8.00	10.4	291	N 69 W	100	1.7	280	N 80 W	
1911.0	8.00	8.5	300	N 60 W	100	1.8	280	N 80 W	
1913.0	8.00	6.8	311	N 49 W	100	1.7	280	N 80 W	
1915.0	8.00	12.5	287	S 77 W	100	1.7	279	N 81 W	
1917.0	8.00	9.6	245	S 65 W	100	1.7	279	N 81 W	
1919.0	8.00	6.9	247	S 67 W	100	1.7	279	N 81 W	
1921.0	8.00	9.3	245	S 65 W	100	1.7	279	N 81 W	
1923.0	8.00	9.9	244	S 64 W	100	1.7	280	N 80 W	
1925.0	8.00	13.0	250	S 71 W	100	1.7	279	N 81 W	
1927.0	8.00	13.1	259	S 79 W	100	1.6	281	N 79 W	
1929.0	8.00	12.8	262	S 82 W	100	1.6	280	N 80 W	
1931.0	8.00	17.2	274	N 85 W	100	1.6	281	N 79 W	
1933.0	8.00	16.5	268	S 88 W	100	1.6	281	N 79 W	
1935.0	8.00	14.7	276	N 84 W	100	1.6	280	N 80 W	
1937.0	8.00	15.8	249	S 69 W	100	1.5	280	N 80 W	
1939.0	8.00	16.1	257	S 77 W	100	1.5	279	N 81 W	
1941.0	8.00	13.4	251	S 51 W	100	1.5	279	N 81 W	
1943.0	8.00	11.7	225	S 45 W	100	1.5	280	N 80 W	
1945.0	8.00	11.1	217	S 37 W	100	1.5	280	N 80 W	
1947.0	8.00	14.4	208	S 28 W	100	1.5	280	N 80 W	
1949.0	8.00	13.3	215	S 35 W	100	1.5	281	N 79 W	
1951.0	8.00	12.2	239	S 59 W	100	1.5	282	N 78 W	
1953.0	8.00	19.2	254	S 74 W	100	1.5	282	N 78 W	
1955.0	8.00	11.1	238	S 58 W	100	1.6	282	N 78 W	
1957.0	8.00	17.7	262	S 82 W	100	1.5	282	N 78 W	
1959.0	8.00	16.8	261	S 81 W	100	1.5	283	N 77 W	
1951.0	8.00	19.6	240	S 65 W	100	1.4	283	N 77 W	
1953.0	8.00	19.5	241	S 61 W	100	1.5	282	N 78 W	
1955.0	8.00	13.7	242	S 62 W	100	1.4	282	N 78 W	



## OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

COLUMBIA

OREGON

1-05-87

DEPTH	WL	**FORMATION DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1957.0	8.00	9.1	231	S 51 W	100	1.5	282	N 78 W
1959.0	8.00	5.5	240	S 60 W	100	1.5	282	N 78 W
1971.0	8.00	9.5	221	S 41 W	100	1.4	282	N 78 W
1973.0	8.00	7.4	223	S 49 W	100	1.4	283	N 77 W
1975.0	8.00	6.6	219	S 39 W	100	1.4	283	N 77 W
1977.0	8.00	11.6	251	S 71 W	79	1.5	283	N 77 W
1979.0	8.00	6.8	229	S 49 W	100	1.4	284	N 76 W
1981.0	8.00	14.7	271	N 85 W	100	1.5	285	N 75 W
1985.0	8.00	15.0	252	S 72 W	100	1.4	283	N 77 W
1987.0	8.00	12.9	231	S 71 W	99	1.4	283	N 77 W
1989.0	8.00	7.5	263	N 77 W	100	1.4	286	N 74 W
1991.0	8.00	9.8	263	S 89 W	100	1.4	285	N 75 W
1993.0	8.00	14.4	260	S 80 W	100	1.3	283	N 77 W
1995.0	8.00	2.1	207	S 27 W	100	1.3	284	N 76 W
1997.0	8.00	16.0	217	S 37 W	100	1.3	284	N 76 W
1999.0	8.00	9.1	215	S 35 W	57	1.2	283	N 77 W
2003.0	8.00	8.7	258	S 78 W	100	1.3	286	N 74 W
2005.0	8.00	8.4	246	S 65 W	100	1.3	285	N 75 W
2007.0	8.00	7.1	248	S 69 W	100	1.3	284	N 76 W
2009.0	8.00	24.5	237	S 57 W	100	1.3	285	N 75 W
2013.0	8.00	6.2	255	S 75 W	100	1.3	284	N 76 W
2015.0	8.00	24.8	244	S 64 W	54	1.3	286	N 74 W
2019.0	8.00	13.3	256	S 75 W	100	1.3	289	N 71 W
2023.0	8.00	4.7	218	S 33 W	100	1.3	289	N 71 W
2027.0	8.00	6.1	241	S 61 W	100	1.3	288	N 72 W
2029.0	8.00	10.0	235	S 55 W	100	1.3	287	N 73 W
2031.0	8.00	5.3	218	S 38 W	100	1.3	289	N 71 W
2033.0	8.00	5.5	215	S 35 W	100	1.4	289	N 71 W
2035.0	8.00	5.8	204	S 24 W	100	1.4	288	N 72 W
2037.0	8.00	7.3	227	S 47 W	100	1.3	291	N 69 W
2039.0	8.00	11.3	248	S 68 W	100	1.3	291	N 69 W
2041.0	8.00	12.4	245	S 65 W	100	1.3	291	N 69 W
2043.0	8.00	13.2	264	S 84 W	100	1.3	294	N 66 W
2045.0	8.00	11.7	253	S 78 W	100	1.3	294	N 66 W
2047.0	8.00	16.3	281	N 79 W	77	1.2	293	N 67 W
2049.0	8.00	19.7	245	S 63 W	100	1.3	294	N 66 W
2051.0	8.00	24.3	255	S 75 W	100	1.2	294	N 66 W
2053.0	8.00	44.4	295	N 64 W	100	1.2	294	N 66 W
2057.0	8.00	45.5	53	N 53 E	32	1.2	294	N 66 W
2059.0	8.00	24.6	52	N 52 E	67	1.2	294	N 66 W

OREGON NATURAL GAS CORP.

CM 12 C-3

WIST

COLUMBIA

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				GRADE	*****BOREHOLE*****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2051.0	8.00	21.7	63	N 63 E	100	1.2	293	N 67 W	
2053.0	8.00	20.7	79	N 79 E	100	1.2	294	N 66 W	
2055.0	8.00	24.0	105	S 74 E	68	1.3	292	N 68 W	
2059.0	8.00	2.2	113	S 57 E	77	1.3	293	N 67 W	
2071.0	8.00	1.7	53	N 53 E	100	1.3	292	N 68 W	
2073.0	8.00	4.2	64	N 64 E	100	1.3	294	N 66 W	
2075.0	8.00	2.3	54	N 54 E	100	1.3	296	N 64 W	
2079.0	8.00	3.1	63	N 63 E	100	1.2	294	N 65 W	
2081.0	8.00	2.4	71	N 71 E	100	1.2	295	N 65 W	
2083.0	8.00	18.4	42	N 42 E	100	1.2	295	N 65 W	
2085.0	8.00	32.5	69	N 69 E	100	1.3	295	N 65 W	
2105.0	8.00	1.2	69	N 69 E	100	1.2	298	N 62 W	
2113.0	8.00	4.5	90	N 90 E	100	1.2	298	N 62 W	
2115.0	8.00	28.2	55	N 55 E	100	1.2	297	N 63 W	
2117.0	8.00	29.1	63	N 63 E	100	1.2	298	N 62 W	
2121.0	8.00	2.7	119	S 51 E	100	1.3	296	N 64 W	
2125.0	8.00	12.7	103	S 77 E	100	1.2	295	N 65 W	
2127.0	8.00	10.3	51	N 51 E	100	1.2	297	N 65 W	
2129.0	8.00	11.4	50	N 50 E	100	1.2	296	N 64 W	
2137.0	8.00	0.5	52	N 52 E	100	1.2	295	N 61 W	
2141.0	8.00	2.9	98	S 82 E	100	1.3	302	N 58 W	
2143.0	8.00	3.5	105	S 71 E	100	1.2	302	N 58 W	
2147.0	8.00	3.8	95	S 84 E	100	1.2	306	N 54 W	
2157.0	8.00	2.1	97	S 83 E	100	1.1	309	N 51 W	
2153.0	8.00	15.2	100	S 80 E	100	1.2	307	N 53 W	
2155.0	8.00	17.0	80	N 80 E	100	1.2	307	N 53 W	
2157.0	8.00	14.7	113	S 67 E	100	1.2	308	N 52 W	
2171.0	8.00	7.1	134	S 45 E	100	1.1	308	N 52 W	
2175.0	8.00	7.6	113	S 67 E	100	1.1	308	N 52 W	
2177.0	8.00	4.5	129	S 51 E	100	1.1	309	N 51 W	
2181.0	8.00	3.0	150	S 30 E	100	1.1	309	N 51 W	
2189.0	8.00	6.0	147	S 33 E	93	1.2	308	N 52 W	
2191.0	8.00	7.0	81	N 81 E	100	1.2	308	N 52 W	
2197.0	8.00	1.0	73	N 73 E	79	1.2	309	N 51 W	
2203.0	8.00	43.8	41	N 41 E	99	1.2	309	N 51 W	
2205.0	8.00	27.4	45	N 45 E	100	1.2	308	N 52 W	
2213.0	8.00	17.6	104	S 75 E	100	1.2	308	N 52 W	
2219.0	8.00	6.5	112	S 65 E	100	1.2	308	N 52 W	
2221.0	8.00	5.9	141	S 39 E	100	1.2	308	N 52 W	
2227.0	8.00	13.0	139	S 41 E	100	1.2	307	N 53 W	

OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

COLUMBIA

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2229.0	9.00	27.1	135	S 45 E	100	1.2	308	N 52 W	
2231.0	8.00	24.3	142	S 38 E	100	1.3	306	N 54 W	
2233.0	8.00	21.3	122	S 58 E	100	1.2	306	N 54 W	
2235.0	9.00	11.3	59	N 59 E	100	1.2	304	N 56 W	
2237.0	8.00	28.9	1	N 1 E	59	1.2	305	N 55 W	
2241.0	9.00	2.4	358	N 2 W	100	1.2	305	N 55 W	
2243.0	8.00	6.6	358	N 2 W	100	1.3	305	N 55 W	
2245.0	9.00	29.1	63	N 63 E	100	1.3	305	N 54 W	
2247.0	8.00	24.4	47	N 47 E	100	1.3	306	N 54 W	
2249.0	8.00	30.3	69	N 68 E	100	1.3	307	N 53 W	
2251.0	9.00	21.0	34	N 34 E	100	1.2	307	N 53 W	
2251.0	8.00	13.3	25	N 25 E	100	1.2	306	N 52 W	
2253.0	8.00	11.9	335	N 24 W	100	1.2	307	N 53 W	
2255.0	8.00	7.5	314	N 45 W	100	1.2	309	N 51 W	
2257.0	8.00	7.0	289	N 71 W	100	1.2	308	N 52 W	
2275.0	8.00	37.6	257	S 77 W	100	1.2	308	N 52 W	
2277.0	8.00	37.5	240	S 60 W	100	1.2	310	N 50 W	
2285.0	8.00	16.2	193	S 15 W	100	1.2	308	N 52 W	
2289.0	8.00	10.8	201	S 21 W	87	1.2	307	N 53 W	
2291.0	9.00	12.7	175	S 4 E	44	1.2	306	N 54 W	
2297.0	8.00	41.8	290	N 70 W	95	1.2	308	N 52 W	
2299.0	9.00	27.0	269	S 89 W	100	1.3	306	N 54 W	
2301.0	8.00	27.2	275	N 84 W	100	1.2	306	N 54 W	
2305.0	9.00	20.6	249	S 69 W	80	1.2	308	N 52 W	
2309.0	8.00	10.0	282	N 78 W	100	1.3	307	N 53 W	
2311.0	9.00	24.3	304	N 55 W	100	1.2	309	N 51 W	
2313.0	8.00	22.3	317	N 43 W	100	1.2	309	N 51 W	
2315.0	8.00	22.4	323	N 37 W	100	1.1	308	N 52 W	
2317.0	9.00	21.1	341	N 19 W	100	1.1	308	N 52 W	
2325.0	9.00	27.3	299	N 62 W	100	1.1	307	N 53 W	
2327.0	8.00	34.7	304	N 56 W	97	1.1	309	N 51 W	
2329.0	8.00	34.4	310	N 50 W	100	1.1	308	N 52 W	
2331.0	8.00	17.1	305	N 59 W	100	1.1	309	N 51 W	
2333.0	9.00	21.0	168	S 12 E	100	1.1	309	N 51 W	
2335.0	9.00	17.3	153	S 27 E	87	1.1	308	N 52 W	
2337.0	9.00	11.0	155	S 25 E	100	1.1	308	N 52 W	
2339.0	8.00	29.4	92	S 85 E	100	1.0	310	N 50 W	
2341.0	8.00	29.1	91	S 89 E	100	1.0	308	N 52 W	
2353.0	8.00	31.4	45	N 45 E	95	0.9	316	N 44 W	
2355.0	9.00	31.5	41	N 41 E	58	0.9	318	N 42 W	

OREGON NATURAL GAS CORP.

9M 12 C-3

WIST

CO-JM31A

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2357.0	8.00	32.3	49	N 49 E	52	0.9	321	N 39 W
2359.0	8.00	32.0	97	S 55 E	100	0.9	321	N 39 W
2361.0	8.00	32.2	92	S 88 E	85	0.9	317	N 43 W
2365.0	8.00	21.3	337	N 23 W	100	0.9	320	N 40 W
2367.0	8.00	23.9	324	N 36 W	100	0.9	317	N 43 W
2369.0	8.00	22.3	324	N 36 W	100	0.9	318	N 42 W
2371.0	8.00	23.4	279	N 51 W	100	0.9	315	N 45 W
2373.0	8.00	21.0	277	N 53 W	99	0.9	317	N 43 W
2381.0	8.00	40.3	345	N 14 W	53	0.8	317	N 43 W
2383.0	8.00	31.0	344	N 16 W	59	0.9	320	N 40 W
2393.0	8.00	11.3	39	N 39 E	100	0.8	325	N 35 W
2395.0	8.00	11.4	38	N 38 E	100	0.8	324	N 36 W
2397.0	8.00	5.4	333	N 25 W	100	0.8	325	N 35 W
2399.0	8.00	9.3	357	N 1 W	100	0.8	328	N 32 W
2401.0	8.00	11.9	11	N 11 E	100	0.8	326	N 34 W
2405.0	8.00	23.2	22	N 22 E	50	0.8	330	N 30 W
2407.0	8.00	1.4	7	N 7 E	100	0.8	330	N 30 W
2417.0	8.00	14.2	5	N 5 E	100	0.8	329	N 31 W
2419.0	8.00	9.2	351	N 9 W	100	0.8	329	N 31 W
2421.0	8.00	12.4	343	N 17 W	100	0.8	330	N 30 W
2427.0	8.00	39.6	27	N 27 E	96	0.7	329	N 31 W
2429.0	8.00	38.8	26	N 26 E	98	0.7	327	N 33 W
2433.0	8.00	34.9	15	N 15 E	100	0.7	330	N 30 W
2447.0	8.00	36.2	13	N 13 E	83	0.7	336	N 24 W
2449.0	8.00	32.9	11	N 11 E	93	0.7	338	N 22 W
2451.0	8.00	41.3	35	N 36 E	100	0.7	339	N 21 W
2455.0	8.00	16.7	54	N 54 E	100	0.6	334	N 26 W
2457.0	8.00	16.1	54	N 54 E	100	0.6	333	N 27 W
2459.0	8.00	21.3	49	N 49 E	100	0.6	329	N 31 W
2461.0	8.00	23.5	56	N 55 E	100	0.6	326	N 34 W
2463.0	8.00	28.5	34	N 34 E	100	0.6	324	N 36 W
2465.0	8.00	24.1	37	N 37 E	100	0.6	322	N 38 W
2467.0	8.00	29.1	32	N 32 E	100	0.6	324	N 36 W
2469.0	8.00	16.6	43	N 43 E	100	0.6	322	N 38 W
2471.0	8.00	31.2	33	N 33 E	97	0.6	324	N 36 W
2473.0	8.00	5.4	328	N 32 W	100	0.5	321	N 39 W
2477.0	8.00	10.2	282	N 78 W	100	0.5	327	N 33 W
2479.0	8.00	8.7	290	N 70 W	100	6.5	328	N 32 W
2481.0	8.00	8.0	263	N 75 W	100	0.5	334	N 26 W
2483.0	8.00	6.9	260	N 80 W	100	0.5	339	N 21 W

OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

COLUMBIA

OREGON

1-05-87

DEPTH	WL	**FORMATION DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DA	DAZ	BEARING
2485.0	8.00	5.0	287	N 73 W	100	0.5	333	N 27 W
2487.0	8.00	12.6	255	S 75 W	100	0.5	334	N 26 W
2491.0	8.00	35.8	280	S 28 W	100	0.5	329	N 31 W
2495.0	8.00	11.7	147	S 33 E	100	0.4	327	N 33 W
2497.0	8.00	9.3	158	S 22 E	100	0.4	327	N 33 W
2499.0	8.00	11.5	151	S 29 E	100	0.4	325	N 35 W
2501.0	8.00	18.7	69	N 69 E	100	0.4	318	N 42 W
2503.0	8.00	2.5	317	N 43 W	100	0.4	317	N 43 W
2505.0	8.00	4.0	331	N 29 W	100	0.4	311	N 49 W
2507.0	8.00	6.1	325	N 34 W	100	0.3	312	N 48 W
2509.0	8.00	7.5	317	N 43 W	100	0.3	317	N 43 W
2511.0	8.00	6.5	299	N 61 W	100	0.3	320	N 40 W
2515.0	8.00	8.3	297	N 63 W	100	0.4	319	N 41 W
2517.0	8.00	9.8	305	N 54 W	100	0.4	325	N 35 W
2519.0	8.00	9.8	291	N 69 W	100	0.4	323	N 37 W
2521.0	8.00	8.2	303	N 37 W	100	0.4	318	N 42 W
2523.0	8.00	6.3	28	N 28 E	100	0.4	315	N 45 W
2525.0	8.00	38.3	31	N 11 E	95	0.3	315	N 48 W
2533.0	8.00	41.8	29	N 29 E	100	0.3	307	N 53 W
2543.0	8.00	12.4	37	N 37 E	100	0.2	294	N 60 W
2547.0	8.00	11.4	35	N 35 E	100	0.2	299	N 61 W
2549.0	8.00	6.1	324	N 35 W	100	0.1	307	N 53 W
2551.0	8.00	7.2	347	N 13 W	100	0.1	321	N 39 W
2553.0	8.00	8.7	358	N 10 W	100	0.1	305	N 55 W
2555.0	8.00	7.8	348	N 20 W	92	0.1	318	N 42 W
2557.0	8.00	7.3	319	N 41 W	100	0.1	316	N 44 W
2559.0	8.00	24.8	305	N 54 W	100	0.1	308	N 52 W
2561.0	8.00	7.0	285	N 74 W	100	0.2	295	N 65 W
2563.0	8.00	8.9	256	S 75 W	100	0.2	297	N 63 W
2565.0	8.00	0.5	271	N 59 W	100	0.2	283	N 77 W
2567.0	8.00	1.9	348	N 28 W	100	0.2	285	N 75 W
2579.0	8.00	14.3	9	N 9 E	100	0.1	278	N 82 W
2581.0	8.00	7.1	332	N 28 W	100	0.2	266	S 86 W
2583.0	8.00	6.9	317	N 45 W	100	0.2	271	N 69 W
2585.0	8.00	7.6	318	N 58 W	100	0.1	257	S 77 W
2587.0	8.00	8.1	314	N 45 W	100	0.2	242	S 62 W
2589.0	8.00	7.8	312	N 48 W	100	0.2	259	S 79 W
2591.0	8.00	6.0	315	N 42 W	100	0.2	253	S 73 W
2593.0	8.00	6.8	305	N 55 W	100	0.2	244	S 64 W
2595.0	8.00	5.4	292	N 53 W	100	0.2	250	S 70 W

OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

COLUMBIA

OREGON

1-05-87

\*\*FORMATION DIP\*\*

\*\*\*\*BOREHOLE\*\*\*\*

DEPTH	WL	ANG	AZ	BEARINGS	GRADE	DA	DAZ	BEARING
2597.0	3.00	4.5	301	N 59 W	100	0.2	248	S 58 W
2599.0	3.00	4.3	310	N 50 W	100	0.2	245	S 66 W
2601.0	3.00	6.9	311	N 49 W	100	0.2	235	S 55 W
2603.0	3.00	4.7	337	N 23 W	100	0.2	241	S 61 W
2605.0	3.00	4.2	324	N 35 W	100	0.2	225	S 48 W
2607.0	3.00	4.7	327	N 33 W	100	0.2	225	S 46 W
2609.0	3.00	3.4	313	N 47 W	100	0.2	222	S 42 W
2611.0	3.00	6.9	313	N 47 W	100	0.2	233	S 53 W
2613.0	3.00	7.0	309	N 51 W	100	0.2	234	S 54 W
2615.0	3.00	8.0	295	N 54 W	100	0.2	234	S 54 W
2617.0	3.00	8.7	242	S 52 W	100	0.2	244	S 64 W
2619.0	3.00	3.5	217	S 37 W	100	0.2	232	S 52 W
2623.0	3.00	8.7	212	S 32 W	100	0.2	228	S 48 W
2627.0	3.00	4.8	333	N 27 W	100	0.2	232	S 52 W
2629.0	3.00	6.3	305	N 54 W	100	0.2	234	S 54 W
2631.0	3.00	6.0	313	N 42 W	100	0.2	237	S 57 W
2633.0	3.00	4.8	287	N 73 W	100	0.2	230	S 50 W
2635.0	3.00	4.5	275	N 74 W	100	0.3	225	S 46 W
2637.0	3.00	5.0	281	N 79 W	100	0.2	229	S 49 W
2639.0	3.00	5.4	287	N 71 W	100	0.2	221	S 41 W
2641.0	3.00	6.8	297	N 53 W	100	0.3	217	S 37 W
2643.0	3.00	6.8	300	N 60 W	100	0.3	223	S 43 W
2647.0	3.00	5.4	315	N 45 W	67	0.2	213	S 33 W
2653.0	3.00	5.7	263	S 83 W	82	0.3	209	S 29 W
2655.0	3.00	6.7	277	N 63 W	100	0.3	213	S 33 W
2657.0	3.00	7.1	251	S 71 W	100	0.3	214	S 34 W
2659.0	3.00	10.8	269	S 69 W	98	0.4	209	S 29 W
2663.0	3.00	16.4	270	N 50 W	100	0.2	215	S 35 W
2677.0	3.00	7.0	312	N 48 W	100	0.3	210	S 36 W
2679.0	3.00	4.8	316	N 44 W	100	0.3	208	S 28 W
2681.0	3.00	3.3	325	N 35 W	100	0.3	210	S 30 W
2691.0	3.00	9.5	331	N 23 W	76	0.3	203	S 28 W
2693.0	3.00	8.4	337	N 3 W	100	0.3	265	S 26 W
2695.0	3.00	10.9	332	N 8 W	100	0.2	200	S 20 W
2697.0	3.00	14.7	3	N 3 E	100	0.2	198	S 18 W
2699.0	3.00	16.9	13	N 13 E	100	0.2	188	S 8 W
2701.0	3.00	15.2	20	N 20 E	100	0.3	197	S 17 W
2703.0	3.00	14.1	21	N 21 E	100	0.3	200	S 20 W
2707.0	3.00	11.5	333	N 3 W	85	0.2	191	S 11 W
2711.0	3.00	8.9	330	N 30 W	100	0.2	185	S 5 W

GREGOV NATURAL GAS CORP.

OH 12 C-3

MIST

COLUMBIA

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				***BOREHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
2715.0	8.00	5.1	323	N 37 W	67	0.4	183	S 3 W	
2717.0	8.00	4.7	317	N 48 W	100	0.4	182	S 2 W	
2719.0	8.00	7.8	263	S 83 W	76	0.3	181	S 1 W	
2721.0	8.00	14.1	272	N 68 W	100	0.4	186	S 6 W	
2723.0	8.00	13.6	286	N 74 W	100	0.4	183	S 3 W	
2727.0	8.00	8.3	286	N 74 W	100	0.3	171	S 9 E	
2729.0	8.00	8.6	311	N 42 W	100	0.2	172	S 8 E	
2731.0	8.00	9.8	292	N 68 W	100	0.3	191	S 11 W	
2733.0	8.00	11.3	293	N 67 W	100	0.3	180	S 0 E	
2739.0	8.00	46.5	292	N 68 W	100	0.3	175	S 5 E	
2741.0	8.00	43.5	240	S 60 W	100	0.3	178	S 2 E	
2743.0	8.00	11.0	262	S 82 W	100	0.3	179	S 1 E	
2745.0	8.00	6.7	288	N 72 W	100	0.2	174	S 6 E	
2747.0	8.00	6.9	299	N 61 W	100	0.2	175	S 5 E	
2749.0	8.00	5.7	289	N 71 W	100	0.2	172	S 8 E	
2751.0	8.00	4.9	295	N 62 W	100	0.1	164	S 16 E	
2753.0	8.00	12.1	313	N 45 W	86	0.2	175	S 5 E	
2755.0	8.00	36.7	331	N 29 W	-100	0.1	176	S 4 E	
2751.0	8.00	6.3	335	N 25 W	-100	0.1	173	S 7 E	
2753.0	8.00	12.2	327	N 35 W	-100	0.1	185	S 5 W	
2757.0	8.00	4.9	319	N 41 W	100	0.1	183	S 3 W	
2759.0	8.00	6.0	307	N 53 W	100	0.1	187	S 7 W	
2773.0	8.00	5.6	351	N 9 W	100	0.2	191	S 11 W	
2775.0	8.00	22.2	1	N 1 E	100	0.1	199	S 19 W	
2789.0	8.00	34.3	38	N 30 E	100	0.3	182	S 2 W	
2791.0	8.00	17.6	13	N 18 E	100	0.3	181	S 1 W	
2793.0	8.00	31.5	48	N 48 E	87	0.3	185	S 5 W	
2795.0	8.00	32.9	2	N 2 E	100	0.2	192	S 12 W	
2797.0	8.00	22.7	17	N 17 E	94	0.2	201	S 21 W	
2799.0	8.00	33.7	337	N 23 W	95	0.2	213	S 33 W	
2801.0	8.00	21.3	344	N 16 W	43	0.2	218	S 38 W	
2803.0	8.00	25.7	350	N 18 W	56	0.2	222	S 42 W	
2805.0	8.00	28.7	341	N 19 W	100	0.2	230	S 58 W	
2807.0	8.00	11.1	319	N 41 W	100	0.2	237	S 57 W	
2809.0	8.00	1.9	308	N 52 W	64	0.2	230	S 50 W	
2811.0	8.00	5.6	319	N 50 W	100	0.2	223	S 48 W	
2815.0	8.00	15.0	292	N 68 W	100	0.2	217	S 37 W	
2819.0	8.00	38.5	308	N 52 W	51	0.2	210	S 38 W	
2821.0	8.00	35.0	282	N 78 W	100	0.2	217	S 37 W	
2825.0	8.00	8.3	286	N 74 W	100	0.1	222	S 42 W	

OREGON NATURAL GAS CORP.

GM 12 C-3

MIST

COLOMBIA

OREGON

1-06-87

DEPTH	ML	**FORMATION DIP**				****BUREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2827.0	8.00	6.3	319	N 41 W	100	0.2	212	S 32 W
2829.0	8.00	7.0	315	N 44 W	100	0.2	220	S 40 W
2831.0	8.00	20.5	280	N 50 W	100	0.2	222	S 42 W
2833.0	8.00	19.0	275	N 55 W	100	0.1	229	S 45 W
2835.0	8.00	17.9	290	N 70 W	100	0.1	201	S 21 W
2837.0	8.00	18.0	278	N 82 W	100	0.1	191	S 11 W
2839.0	8.00	17.6	271	N 89 W	100	0.2	192	S 12 W
2841.0	8.00	7.5	348	N 12 W	100	0.2	213	S 33 W
2843.0	8.00	10.3	348	N 12 W	100	0.2	220	S 40 W
2847.0	8.00	16.1	328	N 32 W	100	0.2	227	S 47 W
2849.0	8.00	18.2	330	N 30 W	100	0.2	222	S 42 W
2851.0	8.00	17.1	327	N 33 W	100	0.2	216	S 36 W
2853.0	8.00	19.8	344	N 15 W	100	0.2	218	S 38 W
2855.0	8.00	12.4	314	N 46 W	100	0.2	215	S 36 W
2857.0	8.00	12.1	305	N 57 W	100	0.2	219	S 39 W
2859.0	8.00	11.1	295	N 64 W	100	0.2	224	S 44 W
2861.0	8.00	10.9	305	N 55 W	100	0.2	220	S 40 W
2863.0	8.00	5.9	294	N 65 W	100	0.3	227	S 47 W
2865.0	8.00	6.7	317	N 48 W	100	0.3	229	S 49 W
2867.0	8.00	5.9	381	N 59 W	100	0.3	224	S 44 W
2869.0	8.00	4.6	312	N 48 W	100	0.2	222	S 42 W
2871.0	8.00	5.1	0	N 0 E	100	0.3	220	S 40 W
2879.0	8.00	11.3	20	N 21 E	100	0.3	222	S 42 W
2881.0	8.00	9.4	22	N 22 E	100	0.3	228	S 48 W
2883.0	8.00	8.9	0	N 0 E	100	0.2	226	S 46 W
2885.0	8.00	9.6	15	N 15 E	100	0.3	227	S 47 W
2889.0	8.00	3.1	335	N 25 W	100	0.2	226	S 46 W
2891.0	8.00	4.3	327	N 33 W	100	0.2	243	S 63 W
2897.0	8.00	6.2	309	N 51 W	100	0.2	243	S 63 W
2899.0	8.00	3.5	311	N 49 W	100	0.3	242	S 62 W
2911.0	8.00	3.1	357	N 3 W	100	0.2	229	S 49 W
2915.0	8.00	4.5	344	N 15 W	100	0.2	230	S 50 W
2917.0	8.00	5.8	338	N 30 W	100	0.2	230	S 50 W
2919.0	8.00	7.6	301	N 59 W	100	0.2	234	S 54 W
2921.0	8.00	7.1	293	N 67 W	100	0.2	231	S 51 W
2923.0	8.00	7.0	296	N 64 W	90	0.3	220	S 40 W
2925.0	8.00	6.3	321	N 39 W	100	0.3	224	S 44 W
2927.0	8.00	7.0	319	N 42 W	100	0.3	222	S 42 W
2929.0	8.00	5.4	320	N 48 W	100	0.3	224	S 44 W
2931.0	8.00	5.7	307	N 53 W	100	0.3	233	S 53 W



OREGON NATURAL GAS CORP.

OM 12 C-3

MIST

CO. JMBIA

OREGON

1-06-87

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2933.0	8.00	7.2	331	N 29 W	100	0.4	228	S 48 W
2935.0	8.00	3.9	310	N 50 W	100	0.4	231	S 51 W
2937.0	8.00	4.0	333	N 27 W	100	0.4	234	S 54 W
2941.0	8.00	5.1	327	N 35 W	100	0.4	230	S 50 W
2943.0	8.00	6.8	325	N 34 W	100	0.4	230	S 50 W
2955.0	8.00	9.0	327	N 35 W	96	0.4	228	S 48 W
2957.0	8.00	7.5	335	N 24 W	100	0.5	230	S 50 W
2959.0	8.00	8.2	7	N 7 E	100	0.5	222	S 42 W
2951.0	8.00	11.8	21	N 21 E	100	0.5	221	S 41 W
2953.0	8.00	6.1	349	N 11 W	100	0.5	227	S 47 W
2955.0	8.00	12.8	3	N 8 E	100	0.6	230	S 50 W
2957.0	8.00	11.1	322	N 38 W	100	0.5	228	S 48 W
2959.0	8.00	10.8	300	N 60 W	100	0.5	225	S 45 W
2971.0	8.00	12.1	312	N 41 W	100	0.5	228	S 48 W
2973.0	8.00	12.3	315	N 44 W	100	0.5	228	S 48 W
2975.0	8.00	13.6	318	N 42 W	100	0.5	230	S 50 W
2977.0	8.00	12.1	338	N 22 W	100	0.5	229	S 49 W
2979.0	8.00	9.4	325	N 34 W	100	0.5	223	S 43 W
2981.0	8.00	9.7	357	N 3 W	100	0.5	222	S 42 W
2983.0	8.00	3.4	337	N 21 W	100	0.6	224	S 46 W
2985.0	8.00	5.1	345	N 15 W	100	0.5	227	S 47 W
2987.0	8.00	2.7	328	N 32 W	100	0.6	228	S 48 W
2993.0	8.00	27.1	340	N 20 W	100	0.5	230	S 50 W
2997.0	8.00	8.8	325	N 35 W	100	0.5	233	S 53 W
2999.0	8.00	10.3	351	N 9 W	100	0.5	230	S 50 W
3001.0	8.00	6.9	340	N 20 W	100	0.5	233	S 53 W
3003.0	8.00	6.5	4	N 4 E	100	0.5	229	S 49 W
3005.0	8.00	5.3	16	N 15 E	100	0.5	226	S 46 W
3007.0	8.00	6.3	14	N 14 E	100	0.5	227	S 47 W
3009.0	8.00	4.4	15	N 15 E	100	0.5	227	S 47 W
3011.0	8.00	4.6	22	N 22 E	100	0.5	224	S 44 W
3013.0	8.00	2.2	28	N 28 E	100	0.5	223	S 43 W
3015.0	8.00	4.0	30	N 30 E	100	0.5	227	S 47 W
3017.0	8.00	11.6	53	N 53 E	100	0.5	225	S 45 W
3019.0	8.00	10.8	95	S 85 E	100	0.5	223	S 43 W
3021.0	8.00	10.2	109	S 90 E	100	0.5	223	S 43 W
3023.0	8.00	9.2	114	S 65 E	100	0.5	223	S 43 W
3025.0	8.00	40.4	125	S 55 E	86	0.5	223	S 43 W
3027.0	8.00	27.7	116	S 84 E	72	0.5	223	S 43 W
3033.0	8.00	23.7	138	S 42 E	55	0.5	226	S 46 W

OREGON NATURAL GAS CORP.

OM 12 C-3

WIST

COLOMBIA

OREGON

1-05-87

DEPTH	WL	**FORMATION DIP**				***BOREHOLE***		
		AVG	AZ	BEARING	GRADE	DA	DAZ	BEARING
3035.0	8.00	25.3	132	S 43 E	57	0.5	220	S 40 W
3037.0	8.00	21.0	53	S 87 E	100	0.5	215	S 35 W
3039.0	8.00	27.1	72	N 72 E	100	0.5	220	S 40 W
3041.0	8.00	12.7	313	N 47 W	100	0.5	221	S 41 W
3043.0	8.00	17.2	313	N 47 W	100	0.5	218	S 38 W
3045.0	8.00	17.9	297	N 63 W	100	0.6	215	S 35 W
3055.0	8.00	12.5	307	N 53 W	97	0.7	211	S 31 W
3057.0	8.00	10.0	308	N 60 W	100	0.7	211	S 31 W
3059.0	8.00	11.5	284	N 75 W	100	0.7	213	S 33 W
3051.0	8.00	10.8	312	N 48 W	100	0.7	212	S 32 W
3053.0	8.00	13.2	314	N 45 W	100	0.7	213	S 33 W
3055.0	8.00	13.5	305	N 54 W	100	0.7	207	S 27 W
3057.0	8.00	14.8	319	N 41 W	100	0.7	205	S 25 W
3059.0	8.00	40.9	25	N 25 E	100	0.7	203	S 23 W
3075.0	8.00	35.9	58	N 58 E	100	0.7	206	S 26 W
3077.0	8.00	21.7	73	N 73 E	100	0.7	207	S 27 W
3079.0	8.00	19.1	64	N 64 E	100	0.7	205	S 25 W
3081.0	8.00	23.5	56	N 56 E	100	0.8	205	S 25 W
3083.0	8.00	23.5	58	N 58 E	58	0.8	205	S 23 W
3087.0	8.00	25.2	53	N 53 E	52	0.8	205	S 26 W
3091.0	8.00	31.9	70	N 70 E	100	0.8	207	S 27 W
3107.0	8.00	36.4	84	N 84 E	100	0.8	197	S 17 W
3109.0	8.00	35.1	85	N 85 E	100	0.8	191	S 11 W
3111.0	8.00	18.8	72	N 72 E	100	0.8	193	S 13 W
3113.0	8.00	6.0	37	N 37 E	100	0.8	190	S 10 W
3115.0	8.00	19.0	346	N 14 W	100	0.8	192	S 12 W
3117.0	8.00	5.2	353	N 2 W	100	0.8	187	S 7 W
3125.0	8.00	44.2	339	N 21 W	94	0.8	186	S 6 W
3127.0	8.00	43.5	342	N 15 W	79	0.8	183	S 3 W
3133.0	8.00	1.0	339	N 21 W	44	0.9	156	S 24 E
3137.0	8.00	1.0	338	N 22 W	44	1.0	155	S 25 E
3139.0	8.00	1.0	338	N 22 W	44	1.0	155	S 25 E