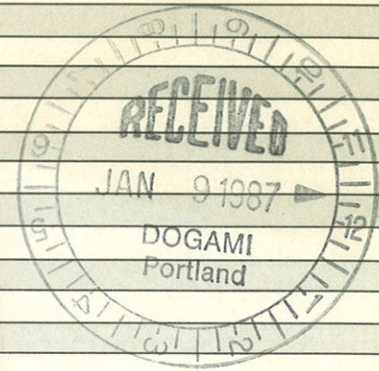


OREGON NATURAL GAS CORP.  
 OM 41A-10  
 MIST  
 COLUMBIA  
 12-12-86

OREGON



INTERVAL 421.0 TO 3076.0  
 RUN 1 RLAC 11159.  
 ENGINEER M. HINDS MR. THOMAS MAG DEC 20.

\*\*\*\*\*  
 \* OREGON 11159 SL=12, WL= 8, ST=2 \*  
 \* \*  
 \* 4 0 0 0 0 \*  
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\*\*FORMATION DIP\*\*

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
435.0	8.00	11.3	266	S 85 W	100	0.1	234	S 54 W
438.0	8.00	11.7	289	N 71 W	100	0.1	253	S 73 W
440.0	8.00	9.0	273	N 87 W	100	0.1	196	S 16 W
442.0	8.00	7.1	274	N 85 W	100	0.1	201	S 21 W
444.0	8.00	4.3	273	N 87 W	100	0.1	218	S 38 W
446.0	8.00	3.5	271	N 89 W	100	0.1	217	S 37 W
448.0	8.00	3.5	267	S 87 W	100	0.2	216	S 36 W
450.0	8.00	3.5	259	S 79 W	100	0.2	209	S 29 W
452.0	8.00	3.5	249	S 69 W	100	0.2	217	S 37 W
454.0	8.00	3.5	252	S 72 W	100	0.2	215	S 35 W
456.0	8.00	4.0	245	S 65 W	100	0.2	219	S 39 W
458.0	8.00	6.8	279	N 81 W	100	0.2	212	S 32 W
460.0	8.00	4.9	257	S 87 W	100	0.2	212	S 32 W
462.0	8.00	5.1	271	N 89 W	100	0.2	203	S 23 W
464.0	8.00	5.5	265	S 85 W	100	0.2	203	S 23 W
466.0	8.00	7.0	268	S 88 W	100	0.1	200	S 20 W
468.0	8.00	8.7	275	N 85 W	100	0.2	215	S 35 W
470.0	8.00	10.0	273	N 87 W	100	0.2	218	S 38 W
472.0	8.00	9.9	268	S 88 W	100	0.2	211	S 31 W
474.0	8.00	10.4	284	N 75 W	100	0.2	216	S 36 W
476.0	8.00	9.8	284	N 75 W	100	0.2	203	S 23 W
478.0	8.00	9.7	283	N 77 W	100	0.3	206	S 26 W
480.0	8.00	9.3	281	N 79 W	100	0.3	209	S 29 W
482.0	8.00	8.9	275	N 85 W	100	0.3	202	S 22 W
484.0	8.00	9.7	269	S 89 W	100	0.3	209	S 29 W
486.0	8.00	9.7	268	S 88 W	100	0.2	216	S 36 W
488.0	8.00	10.0	276	N 84 W	100	0.2	209	S 29 W
490.0	8.00	10.2	270	N 90 W	100	0.3	206	S 26 W
492.0	8.00	10.0	267	S 87 W	100	0.2	208	S 28 W

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DEPTH	WL	**FORMATION DIP**				*****BOREHOLE*****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
494.0	8.00	10.7	267	S 87 W	100	0.3	197	S 17 W
496.0	8.00	10.4	265	S 85 W	100	0.3	198	S 18 W
498.0	8.00	10.5	264	S 84 W	100	0.3	199	S 19 W
500.0	8.00	10.7	267	S 87 W	100	0.3	208	S 28 W
502.0	8.00	10.5	266	S 85 W	100	0.3	198	S 18 W
504.0	8.00	10.8	262	S 82 W	100	0.3	203	S 23 W
506.0	8.00	10.5	266	S 85 W	100	0.3	198	S 18 W
508.0	8.00	10.4	263	S 83 W	100	0.4	203	S 23 W
510.0	8.00	10.7	261	S 81 W	100	0.4	207	S 27 W
512.0	8.00	10.9	261	S 81 W	100	0.4	199	S 19 W
514.0	8.00	10.5	264	S 84 W	100	0.4	204	S 24 W
516.0	8.00	11.0	266	S 85 W	100	0.4	204	S 24 W
518.0	8.00	11.4	262	S 82 W	100	0.4	202	S 22 W
520.0	8.00	11.1	260	S 80 W	100	0.4	202	S 22 W
522.0	8.00	12.0	255	S 75 W	100	0.4	202	S 22 W
524.0	8.00	12.1	257	S 77 W	100	0.4	201	S 21 W
526.0	8.00	12.5	257	S 77 W	100	0.4	199	S 19 W
528.0	8.00	13.0	255	S 75 W	100	0.4	202	S 22 W
530.0	8.00	13.1	257	S 77 W	100	0.4	196	S 16 W
532.0	8.00	13.4	258	S 78 W	100	0.4	199	S 19 W
534.0	8.00	12.6	257	S 77 W	100	0.4	199	S 19 W
536.0	8.00	13.9	251	S 71 W	100	0.4	193	S 13 W
538.0	8.00	13.9	252	S 72 W	100	0.4	198	S 18 W
540.0	8.00	15.2	252	S 72 W	100	0.4	198	S 18 W
542.0	8.00	13.9	255	S 75 W	100	0.4	202	S 22 W
544.0	8.00	12.3	255	S 75 W	100	0.4	197	S 17 W
546.0	8.00	11.1	260	S 80 W	100	0.4	198	S 18 W
548.0	8.00	10.3	264	S 84 W	100	0.4	199	S 19 W
550.0	8.00	10.5	254	S 74 W	100	0.4	195	S 15 W
552.0	8.00	9.8	260	S 80 W	100	0.4	193	S 13 W
554.0	8.00	10.8	243	S 63 W	100	0.4	193	S 13 W
556.0	8.00	8.8	243	S 63 W	100	0.4	196	S 16 W
558.0	8.00	8.5	241	S 61 W	100	0.4	196	S 16 W
560.0	8.00	9.0	244	S 64 W	100	0.4	196	S 16 W
562.0	8.00	8.3	242	S 62 W	100	0.4	194	S 14 W
564.0	8.00	8.8	253	S 73 W	100	0.4	188	S 8 W
566.0	8.00	8.3	254	S 74 W	100	0.4	188	S 8 W
568.0	8.00	8.8	248	S 68 W	100	0.4	192	S 12 W
570.0	8.00	8.4	253	S 73 W	100	0.4	194	S 14 W
572.0	8.00	8.2	252	S 72 W	100	0.4	193	S 13 W

OREGON NATURAL GAS CORP.

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DEPTH	WL	**FORMATION DIP**				GRADE	****BOREHOLE****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
574.0	8.00	7.5	255	S 75 W	100	0.4	195	S 15 W	
576.0	8.00	8.0	270	N 90 W	100	0.4	191	S 11 W	
578.0	8.00	6.3	271	N 89 W	100	0.4	193	S 13 W	
580.0	8.00	6.7	257	S 77 W	100	0.4	190	S 10 W	
582.0	8.00	4.2	281	N 79 W	100	0.4	192	S 12 W	
584.0	8.00	3.1	352	N 8 W	100	0.4	190	S 10 W	
586.0	8.00	2.3	356	N 4 W	100	0.5	194	S 14 W	
588.0	8.00	1.9	356	N 4 W	100	0.5	190	S 10 W	
590.0	8.00	2.1	28	N 28 E	100	0.5	189	S 9 W	
592.0	8.00	2.2	32	N 32 E	100	0.5	193	S 13 W	
594.0	8.00	1.5	14	N 14 E	88	0.6	189	S 9 W	
596.0	8.00	3.4	8	N 8 E	100	0.6	181	S 1 W	
598.0	8.00	3.5	354	N 6 W	100	0.6	177	S 3 E	
600.0	8.00	3.2	1	N 1 E	100	0.6	178	S 2 E	
602.0	8.00	3.1	347	N 13 W	100	0.7	170	S 10 E	
604.0	8.00	2.3	352	N 7 W	100	0.6	170	S 10 E	
606.0	8.00	2.9	342	N 16 W	100	0.7	167	S 13 E	
608.0	8.00	3.0	331	N 29 W	100	0.6	165	S 15 E	
610.0	8.00	4.8	346	N 14 W	100	0.6	163	S 17 E	
612.0	8.00	5.7	2	N 2 E	100	0.6	159	S 21 E	
614.0	8.00	5.7	7	N 7 E	100	0.6	158	S 22 E	
616.0	8.00	6.0	356	N 4 W	100	0.6	152	S 28 E	
618.0	8.00	6.1	351	N 9 W	100	0.6	153	S 27 E	
620.0	8.00	4.5	357	N 3 W	100	0.5	150	S 30 E	
622.0	8.00	3.7	359	N 5 W	100	0.5	151	S 29 E	
624.0	8.00	2.6	0	N 0 E	100	0.5	154	S 26 E	
626.0	8.00	4.9	344	N 15 W	100	0.5	154	S 26 E	
628.0	8.00	4.0	311	N 49 W	100	0.6	154	S 26 E	
630.0	8.00	4.3	320	N 40 W	100	0.5	154	S 26 E	
632.0	8.00	5.1	334	N 25 W	100	0.5	154	S 26 E	
634.0	8.00	5.6	328	N 32 W	100	0.5	155	S 25 E	
636.0	8.00	7.3	332	N 28 W	100	0.5	154	S 26 E	
638.0	8.00	8.2	335	N 25 W	100	0.5	151	S 29 E	
640.0	8.00	9.1	334	N 25 W	100	0.5	151	S 29 E	
642.0	8.00	7.3	338	N 22 W	100	0.4	155	S 25 E	
644.0	8.00	5.3	338	N 22 W	100	0.5	150	S 30 E	
646.0	8.00	4.0	350	N 10 W	100	0.4	153	S 25 E	
648.0	8.00	4.5	350	N 10 W	100	0.4	156	S 24 E	
650.0	8.00	6.5	46	N 46 E	100	0.4	154	S 26 E	
652.0	8.00	6.6	45	N 45 E	100	0.5	156	S 24 E	

OREGON NATURAL GAS CORP.

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DEPTH	WT	**FORMATION DIP**				*****BOREHOLE*****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
654.0	8.00	6.3	35	N 35 E	100	0.5	154	S 26 E
655.0	8.00	20.4	29	N 29 E	100	0.4	164	S 16 E
650.0	8.00	38.2	307	N 53 W	74	0.4	153	S 27 E
652.0	8.00	41.3	295	N 65 W	60	0.4	158	S 22 E
654.0	8.00	36.8	279	N 81 W	94	0.4	164	S 16 E
655.0	8.00	19.9	325	N 34 W	100	0.4	167	S 13 E
658.0	8.00	16.8	307	N 53 W	100	0.4	169	S 11 E
670.0	8.00	16.6	303	N 57 W	100	0.4	175	S 5 E
672.0	8.00	17.3	297	N 63 W	100	0.4	173	S 7 E
678.0	8.00	17.6	261	S 81 W	60	0.4	180	S 0 E
680.0	8.00	19.1	267	S 87 W	100	0.4	180	S 0 E
682.0	8.00	18.4	271	N 89 W	100	0.4	181	S 1 W
684.0	8.00	20.2	269	S 89 W	100	0.4	177	S 3 E
685.0	8.00	19.6	273	N 87 W	100	0.5	178	S 2 E
688.0	8.00	21.8	263	S 83 W	100	0.5	183	S 3 W
690.0	8.00	18.9	288	N 72 W	100	0.5	182	S 2 W
692.0	8.00	17.0	274	N 85 W	100	0.5	183	S 3 W
695.0	8.00	18.6	264	S 84 W	100	0.6	181	S 1 W
698.0	8.00	7.7	285	N 75 W	100	0.7	179	S 1 E
700.0	8.00	8.6	273	N 87 W	100	0.6	179	S 1 E
702.0	8.00	7.9	281	N 79 W	100	0.6	184	S 4 W
704.0	8.00	8.3	285	N 75 W	100	0.6	181	S 1 W
705.0	8.00	8.9	293	N 67 W	100	0.7	179	S 1 E
708.0	8.00	9.2	289	N 71 W	100	0.7	178	S 2 E
710.0	8.00	9.6	294	N 66 W	100	0.7	176	S 4 E
712.0	8.00	11.5	304	N 55 W	100	0.7	176	S 4 E
714.0	8.00	9.9	296	N 64 W	100	0.7	174	S 6 E
715.0	8.00	10.2	295	N 65 W	100	0.7	174	S 6 E
718.0	8.00	10.1	289	N 71 W	100	0.7	171	S 9 E
720.0	8.00	10.9	283	N 77 W	100	0.7	170	S 10 E
722.0	8.00	15.3	253	S 83 W	100	0.7	170	S 10 E
724.0	8.00	13.2	264	S 84 W	100	0.7	171	S 9 E
726.0	8.00	11.7	265	S 85 W	100	0.7	176	S 4 E
728.0	8.00	12.0	268	S 88 W	100	0.7	172	S 8 E
730.0	8.00	10.3	272	N 88 W	100	0.7	174	S 6 E
732.0	8.00	9.5	276	N 84 W	100	0.7	172	S 8 E
734.0	8.00	10.0	275	N 85 W	100	0.7	171	S 9 E
735.0	8.00	9.0	278	N 82 W	100	0.8	170	S 10 E
738.0	8.00	6.8	279	N 81 W	100	0.7	172	S 8 E
740.0	8.00	9.3	274	N 85 W	100	0.7	170	S 10 E

OREGON NATURAL GAS CORP.

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## \*\*FORMATION DIP\*\*

## \*\*\*\*\*BOREHOLE\*\*\*\*\*

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
742.0	8.00	8.9	271	N 35 W	100	0.7	169	S 11 E
744.0	8.00	10.3	275	N 53 W	100	0.8	171	S 9 E
746.0	8.00	10.7	291	N 69 W	100	0.8	170	S 10 E
748.0	8.00	12.5	298	N 62 W	100	0.8	167	S 13 E
750.0	8.00	13.2	298	N 62 W	100	0.8	167	S 13 E
752.0	8.00	12.1	294	N 65 W	100	0.8	169	S 11 E
754.0	8.00	12.0	290	N 70 W	100	0.7	168	S 12 E
756.0	8.00	12.4	290	N 70 W	100	0.7	165	S 15 E
758.0	8.00	11.5	285	N 75 W	100	0.7	166	S 14 E
750.0	8.00	13.9	305	N 55 W	100	0.7	162	S 18 E
752.0	8.00	16.9	308	N 52 W	100	0.8	162	S 18 E
754.0	8.00	14.0	274	N 85 W	100	0.7	159	S 21 E
756.0	8.00	13.0	274	N 85 W	100	0.7	158	S 22 E
758.0	8.00	11.9	247	S 67 W	100	0.7	160	S 20 E
770.0	8.00	11.5	244	S 64 W	100	0.7	163	S 17 E
772.0	8.00	9.9	243	S 65 W	100	0.8	158	S 22 E
774.0	8.00	9.7	245	S 62 W	100	0.8	159	S 21 E
776.0	8.00	9.0	244	S 64 W	100	0.8	161	S 19 E
778.0	8.00	9.7	248	S 68 W	100	0.7	163	S 17 E
780.0	8.00	11.5	246	S 66 W	100	0.8	159	S 21 E
782.0	8.00	8.8	247	S 67 W	100	0.8	162	S 18 E
784.0	8.00	13.0	241	S 51 W	100	0.7	161	S 19 E
786.0	8.00	7.2	246	S 66 W	97	0.8	162	S 18 E
794.0	8.00	8.6	243	S 63 W	100	0.8	161	S 19 E
796.0	8.00	8.7	245	S 65 W	100	0.8	161	S 19 E
798.0	8.00	9.3	245	S 65 W	100	0.8	159	S 21 E
800.0	8.00	9.6	244	S 64 W	100	0.8	159	S 21 E
802.0	8.00	10.7	246	S 68 W	100	0.8	160	S 20 E
804.0	8.00	11.2	253	S 73 W	100	0.8	161	S 19 E
806.0	8.00	13.1	244	S 64 W	100	0.8	159	S 21 E
808.0	8.00	13.5	243	S 63 W	100	0.8	159	S 21 E
810.0	8.00	13.8	243	S 63 W	100	0.7	160	S 20 E
812.0	8.00	13.9	247	S 67 W	100	0.8	157	S 23 E
814.0	8.00	15.2	256	S 75 W	100	0.8	155	S 25 E
816.0	8.00	13.6	252	S 72 W	100	0.8	160	S 26 E
818.0	8.00	12.4	249	S 69 W	100	0.8	160	S 26 E
820.0	8.00	10.3	240	S 60 W	100	0.8	158	S 22 E
822.0	8.00	12.9	233	S 53 W	100	0.8	157	S 23 E
824.0	8.00	8.5	226	S 45 W	100	0.8	158	S 22 E
826.0	8.00	9.0	237	S 57 W	100	0.8	158	S 22 E

OREGON NATURAL GAS CORP.  
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DEPTH	VI	**FORMATION DIP**				***BOREHOLE***		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
828.0	8.00	7.8	227	S 47 W	100	0.7	158	S 22 E
830.0	8.00	8.4	182	S 2 W	100	0.7	157	S 23 E
832.0	8.00	9.1	174	S 5 E	100	0.8	153	S 27 E
834.0	8.00	9.8	167	S 13 E	100	0.7	156	S 24 E
836.0	8.00	9.4	162	S 20 E	100	0.7	156	S 24 E
838.0	8.00	9.2	162	S 19 E	100	0.8	154	S 26 E
840.0	8.00	9.8	153	S 27 E	100	0.8	154	S 26 E
842.0	8.00	10.2	151	S 29 E	100	0.8	153	S 27 E
844.0	8.00	11.1	145	S 34 E	100	0.7	157	S 23 E
846.0	8.00	12.6	153	S 27 E	100	0.8	154	S 26 E
848.0	8.00	12.5	165	S 15 E	100	0.8	154	S 26 E
850.0	8.00	13.5	191	S 11 W	100	0.8	157	S 23 E
852.0	8.00	13.2	195	S 15 W	100	0.8	158	S 22 E
854.0	8.00	12.6	191	S 11 W	100	0.8	154	S 26 E
856.0	8.00	13.5	198	S 18 W	100	0.8	157	S 23 E
858.0	8.00	12.0	201	S 21 W	100	0.8	156	S 24 E
860.0	8.00	16.7	208	S 20 W	100	0.7	152	S 21 E
862.0	8.00	19.0	202	S 22 W	100	0.8	156	S 24 E
864.0	8.00	17.4	204	S 24 W	100	0.8	157	S 23 E
866.0	8.00	16.7	206	S 25 W	100	0.8	158	S 22 E
868.0	8.00	13.8	216	S 35 W	100	0.8	156	S 24 E
870.0	8.00	10.6	200	S 20 W	100	0.8	156	S 24 E
872.0	8.00	10.3	195	S 15 W	100	0.8	157	S 23 E
874.0	8.00	9.7	191	S 11 W	100	0.8	159	S 21 E
876.0	8.00	9.4	181	S 1 W	100	0.8	157	S 23 E
878.0	8.00	9.2	173	S 2 E	100	0.7	157	S 23 E
880.0	8.00	8.5	176	S 4 E	100	0.7	157	S 23 E
882.0	8.00	7.1	173	S 7 E	100	0.8	156	S 24 E
884.0	8.00	6.1	182	S 7 W	100	0.8	156	S 24 E
886.0	8.00	4.5	167	S 13 E	100	0.8	157	S 23 E
888.0	8.00	4.3	171	S 9 E	100	0.8	157	S 23 E
890.0	8.00	2.6	174	S 5 E	100	0.8	155	S 25 E
892.0	8.00	3.0	154	S 25 E	100	0.8	155	S 25 E
894.0	8.00	4.6	153	S 25 E	100	0.7	157	S 23 E
896.0	8.00	5.0	165	S 15 E	100	0.8	156	S 24 E
898.0	8.00	5.4	163	S 17 E	100	0.8	156	S 24 E
900.0	8.00	6.8	170	S 10 E	100	0.8	155	S 25 E
902.0	8.00	5.7	177	S 3 E	100	0.8	157	S 23 E
904.0	8.00	4.9	185	S 5 W	100	0.8	156	S 24 E
906.0	8.00	4.8	190	S 10 W	100	0.8	157	S 23 E

OREGON NATURAL GAS CORP.

GM 414-10

MIST

COLUMBIA

OREGON

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DEPTH	NL	**FORMATION DIP**				****BOREHOLE****			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
908.0	8.00	4.2	177	S 3 E	100	0.8	156	S 24 E	
910.0	8.00	4.4	202	S 22 W	100	0.8	155	S 25 E	
912.0	8.00	5.0	213	S 33 W	100	0.8	157	S 23 E	
914.0	8.00	5.1	224	S 44 W	100	0.8	159	S 21 E	
916.0	8.00	4.6	240	S 60 W	100	0.8	160	S 20 E	
918.0	8.00	5.4	235	S 55 W	100	0.8	161	S 19 E	
920.0	8.00	5.8	237	S 57 W	100	0.7	160	S 20 E	
922.0	8.00	5.9	238	S 58 W	100	0.8	158	S 22 E	
924.0	8.00	6.1	237	S 57 W	100	0.7	160	S 20 E	
926.0	8.00	8.7	233	S 53 W	100	0.7	159	S 21 E	
928.0	8.00	9.3	225	S 45 W	100	0.8	159	S 21 E	
930.0	8.00	9.1	225	S 45 W	100	0.8	157	S 23 E	
932.0	8.00	11.5	229	S 49 W	100	0.8	160	S 20 E	
934.0	8.00	12.4	231	S 51 W	100	0.7	159	S 21 E	
936.0	8.00	10.7	224	S 44 W	100	0.7	158	S 22 E	
938.0	8.00	13.9	235	S 56 W	100	0.7	158	S 22 E	
940.0	8.00	12.1	232	S 52 W	100	0.8	160	S 20 E	
942.0	8.00	10.4	231	S 51 W	100	0.7	159	S 21 E	
944.0	8.00	9.8	232	S 52 W	100	0.7	159	S 21 E	
946.0	8.00	9.9	234	S 54 W	100	0.7	158	S 22 E	
948.0	8.00	10.1	234	S 54 W	100	0.7	157	S 23 E	
950.0	8.00	10.2	224	S 44 W	100	0.7	155	S 25 E	
952.0	8.00	10.1	215	S 35 W	100	0.7	156	S 24 E	
954.0	8.00	8.9	214	S 34 W	100	0.7	155	S 25 E	
956.0	8.00	7.9	213	S 33 W	100	0.7	154	S 26 E	
958.0	8.00	6.9	213	S 35 W	100	0.7	153	S 27 E	
960.0	8.00	6.4	215	S 35 W	100	0.7	152	S 28 E	
962.0	8.00	6.1	214	S 34 W	100	0.7	154	S 26 E	
964.0	8.00	5.8	219	S 39 W	100	0.7	154	S 26 E	
966.0	8.00	5.0	227	S 47 W	100	0.7	154	S 26 E	
968.0	8.00	4.6	230	S 50 W	100	0.7	156	S 24 E	
970.0	8.00	4.3	232	S 52 W	100	0.7	153	S 27 E	
972.0	8.00	4.1	231	S 51 W	100	0.7	154	S 26 E	
974.0	8.00	3.9	228	S 48 W	100	0.7	155	S 25 E	
976.0	8.00	3.8	228	S 48 W	100	0.7	153	S 27 E	
978.0	8.00	3.5	225	S 45 W	100	0.7	156	S 24 E	
980.0	8.00	5.0	221	S 41 W	100	0.7	154	S 26 E	
982.0	8.00	3.7	209	N 71 W	100	0.7	156	S 24 E	
984.0	8.00	5.8	303	N 57 W	100	0.7	152	S 28 E	
986.0	8.00	6.7	295	N 65 W	100	0.7	153	S 27 E	

OREGON NATURAL GAS CORP.

OM 41A-10

WIST

CO UM31A

OREGON

12-12-86

DEPTH	DI	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	HEADING	GRADE	DA	DAZ	BEARING
988.0	3.00	5.2	293	N 52 W	100	0.7	145	S 34 E
990.0	3.00	4.7	275	N 85 W	100	0.6	141	S 39 E
992.0	3.00	5.7	281	N 79 W	100	0.6	138	S 42 E
994.0	3.00	5.7	272	N 88 W	100	0.6	135	S 45 E
996.0	3.00	15.4	278	N 98 W	90	0.6	135	S 45 E
998.0	3.00	6.9	281	N 72 W	100	0.5	132	S 48 E
1000.0	3.00	6.9	253	S 73 W	100	0.5	134	S 46 E
1002.0	3.00	16.1	283	N 77 W	100	0.5	136	S 44 E
1004.0	3.00	16.3	282	N 74 W	100	0.5	134	S 46 E
1006.0	3.00	5.5	278	N 82 W	100	0.5	134	S 46 E
1010.0	3.00	4.5	272	N 88 W	100	0.4	136	S 44 E
1012.0	3.00	4.5	262	S 82 W	100	0.4	143	S 37 E
1014.0	3.00	4.6	253	S 73 W	100	0.4	146	S 34 E
1016.0	3.00	5.2	249	S 69 W	100	0.4	150	S 30 E
1018.0	3.00	5.5	238	S 58 W	100	0.4	156	S 24 E
1020.0	3.00	5.5	239	S 59 W	100	0.4	157	S 23 E
1022.0	3.00	5.7	231	S 56 W	100	0.4	157	S 23 E
1024.0	3.00	5.5	229	S 48 W	100	0.4	165	S 15 E
1026.0	3.00	4.7	228	S 40 W	100	0.4	160	S 20 E
1028.0	3.00	5.3	223	S 43 W	100	0.4	162	S 18 E
1030.0	3.00	4.4	222	S 42 W	100	0.4	160	S 20 E
1032.0	3.00	6.8	266	S 86 W	81	0.4	165	S 15 E
1034.0	3.00	5.2	243	S 63 W	71	0.4	164	S 16 E
1036.0	3.00	38.1	23	N 23 E	100	0.4	166	S 14 E
1038.0	3.00	36.8	24	N 24 E	73	0.4	164	S 16 E
1040.0	3.00	36.2	25	N 25 E	100	0.4	164	S 16 E
1042.0	3.00	22.7	22	N 22 E	100	0.5	167	S 13 E
1045.0	3.00	42.4	325	N 34 W	76	0.6	167	S 13 E
1050.0	3.00	35.2	315	N 44 W	100	0.6	163	S 17 E
1052.0	3.00	16.5	298	N 70 W	100	0.6	164	S 16 E
1054.0	3.00	2.6	251	S 71 W	100	0.6	164	S 16 E
1072.0	3.00	6.4	248	S 68 W	100	0.6	161	S 19 E
1074.0	3.00	5.2	225	S 45 W	100	0.6	160	S 20 E
1076.0	3.00	2.4	228	S 48 W	100	0.6	162	S 18 E
1078.0	3.00	3.3	224	S 44 W	100	0.6	162	S 18 E
1080.0	3.00	3.7	235	S 55 W	100	0.6	161	S 19 E
1082.0	3.00	1.1	311	N 49 W	100	0.6	160	S 20 E
1092.0	3.00	2.9	332	N 21 W	100	0.6	163	S 17 E
1094.0	3.00	3.2	327	N 33 W	100	0.6	164	S 16 E
1096.0	3.00	3.2	312	N 48 W	100	0.6	162	S 18 E



OREGON NATURAL GAS CORP.

OM 41A-10

MIST

COLUMBIA

OREGON

12-12-86

DEPTH	WI	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	UA	DAZ	BEARING
1098.0	8.00	3.1	308	N 52 W	100	0.6	165	S 15 E
1100.0	8.00	1.1	278	N 82 W	100	0.6	164	S 16 E
1102.0	8.00	1.4	233	S 53 W	98	0.6	167	S 13 E
1104.0	8.00	2.3	197	S 17 W	100	0.6	163	S 17 E
1105.0	8.00	1.3	190	S 10 W	100	0.6	165	S 15 E
1112.0	8.00	7.0	318	N 42 W	100	0.6	166	S 14 E
1114.0	8.00	9.1	318	N 46 W	100	0.6	167	S 13 E
1118.0	8.00	5.0	270	N 90 W	100	0.6	165	S 15 E
1120.0	8.00	5.4	255	S 75 W	100	0.6	166	S 14 E
1122.0	8.00	5.4	260	S 80 W	100	0.6	165	S 15 E
1124.0	8.00	6.3	243	S 63 W	100	0.5	165	S 15 E
1125.0	8.00	5.1	253	S 73 W	100	0.5	166	S 14 E
1128.0	8.00	4.8	260	S 80 W	100	0.5	164	S 16 E
1130.0	8.00	2.6	254	S 74 W	100	0.6	166	S 14 E
1138.0	8.00	34.8	225	S 45 W	100	0.5	165	S 15 E
1140.0	8.00	20.0	222	S 42 W	100	0.5	166	S 14 E
1144.0	8.00	13.3	237	S 57 W	66	0.5	167	S 13 E
1145.0	8.00	14.9	237	S 57 W	100	0.5	168	S 15 E
1148.0	8.00	13.1	243	S 63 W	100	0.5	165	S 15 E
1150.0	8.00	12.8	242	S 62 W	100	0.5	168	S 12 E
1152.0	8.00	13.2	239	S 59 W	100	0.5	170	S 10 E
1154.0	8.00	13.3	235	S 55 W	100	0.5	164	S 16 E
1155.0	8.00	14.3	233	S 53 W	100	0.5	165	S 15 E
1158.0	8.00	4.5	244	S 61 W	100	0.5	167	S 13 E
1150.0	8.00	9.1	253	S 73 W	100	0.5	167	S 13 E
1152.0	8.00	9.1	264	S 84 W	100	0.5	167	S 13 E
1154.0	8.00	9.7	257	S 77 W	100	0.5	167	S 13 E
1155.0	8.00	10.3	257	S 77 W	100	0.5	165	S 15 E
1158.0	8.00	11.1	253	S 73 W	100	0.5	164	S 16 E
1170.0	8.00	11.5	249	S 69 W	100	0.5	164	S 16 E
1172.0	8.00	12.1	247	S 67 W	100	0.5	165	S 15 E
1174.0	8.00	13.5	242	S 62 W	100	0.5	166	S 14 E
1182.0	8.00	10.8	244	S 64 W	100	0.4	170	S 10 E
1184.0	8.00	9.3	251	S 71 W	100	0.4	170	S 10 E
1186.0	8.00	10.2	243	S 63 W	100	0.4	171	S 9 E
1188.0	8.00	8.2	235	S 55 W	100	0.4	170	S 10 E
1190.0	8.00	4.3	228	S 48 W	100	0.4	169	S 11 E
1195.0	8.00	3.5	263	S 39 W	100	0.4	172	S 8 E
1208.0	8.00	34.0	247	S 67 W	100	0.4	162	S 18 E
1210.0	8.00	36.3	248	S 68 W	100	0.4	167	S 13 E

OREGON NATURAL GAS CORP.

OM 414-10

WIST

COLUMBIA

OREGON

12-12-86

DEPTH	DI	**FORMATION DTP**				GRADE	****BOREHOLE****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1212.0	8.00	36.9	246	S 55 W	59	0.4	163	S 17 E	
1214.0	8.00	7.8	181	S 1 W	100	0.4	161	S 15 E	
1216.0	8.00	9.3	181	S 1 W	100	0.4	162	S 18 E	
1224.0	8.00	4.9	208	S 25 W	72	0.4	171	S 8 E	
1225.0	8.00	6.1	189	S 9 W	100	0.4	172	S 8 E	
1229.0	8.00	6.3	235	S 25 W	100	0.4	167	S 13 E	
1230.0	8.00	6.1	198	S 19 W	100	0.3	165	S 15 E	
1234.0	8.00	5.2	245	S 55 W	100	0.3	165	S 15 E	
1236.0	8.00	7.3	235	S 75 W	98	0.3	164	S 16 E	
1242.0	8.00	6.7	199	S 19 W	100	0.3	168	S 12 E	
1244.0	8.00	8.8	209	S 29 W	100	0.3	168	S 12 E	
1245.0	8.00	4.9	183	S 5 W	100	0.3	167	S 13 E	
1248.0	8.00	4.6	173	S 7 E	100	0.3	168	S 12 E	
1250.0	8.00	6.8	209	S 25 W	100	0.3	167	S 13 E	
1252.0	8.00	5.1	200	S 20 W	100	0.3	165	S 15 E	
1254.0	8.00	4.1	227	S 47 W	100	0.3	162	S 11 E	
1255.0	8.00	3.8	229	S 42 W	91	0.3	160	S 20 E	
1252.0	8.00	1.0	228	S 48 W	100	0.4	155	S 25 E	
1254.0	8.00	2.2	209	S 29 W	100	0.3	161	S 19 E	
1270.0	8.00	3.7	218	S 38 W	100	0.3	165	S 15 E	
1272.0	8.00	7.5	217	S 37 W	100	0.3	157	S 23 E	
1274.0	8.00	0.8	213	S 35 W	100	0.3	158	S 22 E	
1285.0	8.00	7.1	330	N 30 W	100	0.3	154	S 26 E	
1288.0	8.00	9.7	342	N 15 W	100	0.3	152	S 25 E	
1290.0	8.00	8.5	340	N 20 W	100	0.3	153	S 27 E	
1292.0	8.00	6.9	338	N 22 W	100	0.3	156	S 24 E	
1294.0	8.00	9.1	350	N 10 W	100	0.3	160	S 20 E	
1295.0	8.00	6.4	345	N 15 W	100	0.2	150	S 30 E	
1298.0	8.00	7.3	345	N 14 W	100	0.2	157	S 23 E	
1300.0	8.00	7.7	344	N 15 W	100	0.2	153	S 27 E	
1302.0	8.00	5.3	352	N 8 W	100	0.2	141	S 39 E	
1304.0	8.00	5.8	348	N 12 W	100	0.2	137	S 43 E	
1305.0	8.00	6.1	348	N 12 W	100	0.3	138	S 42 E	
1308.0	8.00	4.9	348	N 20 W	100	0.3	148	S 32 E	
1310.0	8.00	5.2	341	N 19 W	100	0.2	149	S 31 E	
1312.0	8.00	5.0	341	N 19 W	100	0.2	155	S 25 E	
1314.0	8.00	3.4	346	N 14 W	100	0.2	145	S 35 E	
1316.0	8.00	2.1	6	N 5 E	100	0.2	147	S 33 E	
1318.0	8.00	1.9	43	N 43 E	100	0.2	141	S 39 E	
1320.0	8.00	0.5	52	N 52 E	100	0.2	138	S 42 E	

OREGON NATURAL GAS CORP.

OM 414-10

MIST

COLUMBIA

OREGON

12-12-86

DEPTH	NL	**FORMATION DIP**				****BORCHOLE****		
		ANG	AZ	BEARINGS	GRADE	UA	DAZ	BEARING
1326.0	8.00	1.8	312	N 48 W	100	0.2	128	S 52 E
1328.0	8.00	5.0	316	N 42 W	100	0.2	131	S 49 E
1330.0	8.00	4.9	307	N 53 W	100	0.2	133	S 47 E
1332.0	8.00	5.2	318	N 50 W	100	0.2	139	S 41 E
1334.0	8.00	2.7	274	N 85 W	100	0.2	127	S 53 E
1336.0	8.00	0.6	275	N 85 W	100	0.2	131	S 45 E
1340.0	8.00	0.6	253	S 73 W	92	0.3	126	S 54 E
1342.0	8.00	1.2	332	N 26 W	100	0.3	111	S 69 E
1344.0	8.00	1.4	325	N 34 W	100	0.3	115	S 65 E
1346.0	8.00	1.1	319	N 41 W	100	0.3	112	S 68 E
1350.0	8.00	1.3	272	N 88 W	100	0.3	111	S 69 E
1352.0	8.00	0.8	272	N 88 W	100	0.4	98	S 82 E
1354.0	8.00	1.1	318	N 42 W	100	0.4	100	S 80 E
1356.0	8.00	0.9	299	N 61 W	100	0.4	92	S 68 E
1358.0	8.00	3.2	35	N 39 E	100	0.4	92	S 88 E
1360.0	8.00	9.4	35	N 35 E	100	0.4	86	N 86 E
1362.0	8.00	13.2	27	N 27 E	100	0.4	86	N 86 E
1364.0	8.00	21.5	17	N 17 E	100	0.4	84	N 84 E
1366.0	8.00	19.8	5	N 5 E	100	0.4	79	N 79 E
1368.0	8.00	13.3	144	S 85 E	100	0.4	76	N 76 E
1370.0	8.00	13.3	142	S 88 E	100	0.4	74	N 74 E
1378.0	8.00	37.7	175	S 5 E	100	0.4	60	N 60 E
1380.0	8.00	36.0	171	S 9 E	86	0.5	61	N 61 E
1382.0	8.00	32.2	166	S 14 E	100	0.5	58	N 58 E
1384.0	8.00	32.3	157	S 23 E	83	0.4	59	N 59 E
1386.0	8.00	45.1	217	S 37 W	28	0.4	56	N 56 E
1388.0	8.00	45.5	224	S 44 W	78	0.4	53	N 53 E
1402.0	8.00	12.9	223	S 45 W	95	0.3	30	N 30 E
1404.0	8.00	13.6	215	S 35 W	100	0.2	25	N 25 E
1410.0	8.00	12.5	252	S 72 W	72	0.1	12	N 12 E
1412.0	8.00	11.1	243	S 63 W	100	0.1	34	N 34 E
1414.0	8.00	20.7	242	S 62 W	100	0.1	23	N 23 E
1416.0	8.00	24.1	224	S 44 W	100	0.1	39	N 39 E
1418.0	8.00	23.8	213	S 33 W	100	0.1	66	N 66 E
1420.0	8.00	11.9	51	N 51 E	80	0.1	82	N 82 E
1422.0	8.00	1.9	19	N 19 E	100	0.1	55	N 55 E
1424.0	8.00	16.0	11	N 11 E	71	0.1	82	N 82 E
1428.0	8.00	16.9	356	N 4 W	87	0.2	70	N 70 E
1432.0	8.00	39.5	347	N 13 W	59	0.3	75	N 75 E
1434.0	8.00	39.1	334	N 25 W	66	0.3	74	N 74 E

OREGON NATURAL GAS CORP.

OM 41A-10

WYST

CD UM31A

OREGON

12-12-86

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1442.0	8.00	9.1	337	N 23 W	47	0.4	70	N 70 E
1444.0	8.00	11.4	2	N 2 E	100	0.4	57	N 57 E
1446.0	8.00	10.9	284	N 75 W	100	0.4	57	N 57 E
1454.0	8.00	5.8	277	N 83 W	100	0.4	45	N 45 E
1458.0	8.00	3.2	295	N 64 W	100	0.5	45	N 45 E
1450.0	8.00	4.4	272	N 89 W	100	0.5	46	N 46 E
1452.0	8.00	5.1	265	S 85 W	100	0.5	45	N 45 E
1454.0	8.00	5.3	261	S 81 W	100	0.5	48	N 48 E
1456.0	8.00	4.8	263	S 83 W	80	0.4	48	N 48 E
1476.0	8.00	6.4	333	N 27 W	100	0.5	40	N 40 E
1480.0	8.00	6.0	331	N 29 W	100	0.5	38	N 38 E
1484.0	8.00	6.1	317	N 43 W	100	0.5	35	N 35 E
1486.0	8.00	6.8	321	N 39 W	100	0.5	33	N 33 E
1488.0	8.00	7.3	313	N 42 W	100	0.5	36	N 36 E
1490.0	8.00	6.6	313	N 47 W	100	0.5	31	N 31 E
1492.0	8.00	4.9	319	N 41 W	100	0.5	31	N 31 E
1494.0	8.00	3.9	324	N 36 W	100	0.5	35	N 35 E
1496.0	8.00	1.5	353	N 7 W	100	0.5	33	N 33 E
1502.0	8.00	8.3	275	N 84 W	100	0.5	34	N 34 E
1504.0	8.00	6.5	283	N 77 W	100	0.5	36	N 36 E
1506.0	8.00	6.9	284	N 76 W	100	0.5	35	N 35 E
1508.0	8.00	6.0	295	N 65 W	100	0.5	36	N 36 E
1510.0	8.00	5.0	294	N 65 W	100	0.5	30	N 30 E
1512.0	8.00	6.2	258	S 88 W	100	0.4	40	N 40 E
1514.0	8.00	7.6	269	S 89 W	100	0.5	38	N 38 E
1516.0	8.00	10.1	307	N 53 W	100	0.5	40	N 40 E
1518.0	8.00	7.2	304	N 55 W	100	0.4	38	N 38 E
1520.0	8.00	6.0	303	N 51 W	100	0.4	34	N 34 E
1522.0	8.00	6.7	294	N 65 W	100	0.4	34	N 34 E
1528.0	8.00	7.1	285	N 73 W	100	0.5	33	N 33 E
1530.0	8.00	5.3	291	N 69 W	100	0.5	32	N 32 E
1532.0	8.00	3.4	292	N 68 W	100	0.5	29	N 29 E
1534.0	8.00	5.8	311	N 49 W	100	0.4	36	N 36 E
1536.0	8.00	12.5	346	N 14 W	100	0.5	35	N 35 E
1538.0	8.00	4.2	327	N 33 W	100	0.4	13	N 13 E
1540.0	8.00	3.8	316	N 44 W	100	0.4	8	N 8 E
1542.0	8.00	5.0	305	N 55 W	100	0.4	9	N 9 E
1544.0	8.00	3.3	331	N 23 W	100	0.4	11	N 11 E
1546.0	8.00	4.7	321	N 39 W	100	0.4	23	N 23 E
1548.0	8.00	1.8	211	S 31 W	100	0.4	25	N 25 E

OREGON NATURAL GAS CORP.

OM 414-16

MIST

COLUMBIA

OREGON

12-12-86

DEPTH	WL	**FORMATION DIP**				GRADE	****BOREHOLE****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1550.0	8.00	2.3	192	S 12 W	100	0.3	15	N 15 E	
1552.0	8.00	2.6	243	S 53 W	100	0.4	25	N 25 E	
1554.0	8.00	4.1	251	S 71 W	100	0.5	20	N 20 E	
1556.0	8.00	3.3	269	S 89 W	100	0.4	27	N 27 E	
1558.0	8.00	4.2	287	N 73 W	100	0.5	33	N 33 E	
1560.0	8.00	3.2	265	S 35 W	100	0.5	25	N 25 E	
1562.0	8.00	1.9	254	S 84 W	100	0.4	28	N 28 E	
1564.0	8.00	3.3	253	S 73 W	100	0.4	22	N 22 E	
1568.0	8.00	21.5	215	S 35 W	100	0.4	24	N 24 E	
1570.0	8.00	10.3	203	S 23 W	100	0.4	25	N 25 E	
1572.0	8.00	7.9	195	S 15 W	100	0.4	22	N 22 E	
1574.0	8.00	23.2	97	S 82 E	100	0.4	21	N 21 E	
1576.0	8.00	23.3	90	N 90 E	100	0.4	24	N 24 E	
1578.0	8.00	37.0	81	N 31 E	100	0.4	23	N 23 E	
1580.0	8.00	33.5	331	N 29 W	62	0.4	22	N 22 E	
1582.0	8.00	11.0	274	N 35 W	100	0.4	21	N 21 E	
1584.0	8.00	9.0	257	S 77 W	100	0.4	22	N 22 E	
1586.0	8.00	8.9	261	S 81 W	69	0.4	22	N 22 E	
1588.0	8.00	9.9	255	S 85 W	100	0.4	20	N 20 E	
1590.0	8.00	8.8	262	S 81 W	100	0.4	24	N 24 E	
1592.0	8.00	9.4	268	S 88 W	100	0.4	19	N 19 E	
1594.0	8.00	7.5	282	N 78 W	100	0.4	23	N 23 E	
1596.0	8.00	7.2	291	N 69 W	100	0.4	21	N 21 E	
1598.0	8.00	5.0	277	N 33 W	100	0.4	18	N 18 E	
1600.0	8.00	3.4	263	S 83 W	100	0.4	16	N 16 E	
1602.0	8.00	6.9	247	S 67 W	100	0.3	25	N 25 E	
1604.0	8.00	7.1	245	S 65 W	100	0.3	20	N 20 E	
1606.0	8.00	10.0	250	S 73 W	100	0.3	16	N 16 E	
1608.0	8.00	10.1	246	S 63 W	100	0.3	17	N 17 E	
1610.0	8.00	12.3	255	S 75 W	100	0.3	18	N 18 E	
1612.0	8.00	12.8	261	S 81 W	100	0.3	21	N 21 E	
1614.0	8.00	11.6	270	N 90 W	100	0.3	18	N 18 E	
1616.0	8.00	13.1	264	S 84 W	100	0.3	23	N 23 E	
1618.0	8.00	14.2	263	S 83 W	100	0.3	19	N 19 E	
1620.0	8.00	14.0	258	S 78 W	100	0.3	20	N 20 E	
1622.0	8.00	14.6	242	S 62 W	100	0.3	22	N 22 E	
1624.0	8.00	12.7	252	S 72 W	100	0.3	23	N 23 E	
1626.0	8.00	12.7	251	S 71 W	100	0.3	20	N 20 E	
1628.0	8.00	12.0	250	S 70 W	100	0.4	26	N 26 E	
1630.0	8.00	10.3	254	S 74 W	100	0.3	28	N 28 E	

OREGON NATURAL GAS CORP.

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COLUMBIA

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DEPTH	DI	**FORMATION DIP**			****BOREHOLE****			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1632.0	8.00	10.3	246	S 65 W	100	0.3	25	N 25 E
1634.0	8.00	11.5	242	S 62 W	100	0.3	24	N 24 E
1636.0	8.00	13.2	233	S 53 W	100	0.3	31	N 31 E
1638.0	8.00	13.3	243	S 63 W	100	0.3	31	N 31 E
1640.0	8.00	11.4	241	S 61 W	100	0.3	35	N 35 E
1642.0	8.00	12.8	244	S 64 W	100	0.3	31	N 31 E
1644.0	8.00	14.7	234	S 54 W	100	0.2	33	N 33 E
1646.0	8.00	12.5	245	S 65 W	100	0.3	29	N 29 E
1648.0	8.00	9.1	251	S 71 W	100	0.3	39	N 39 E
1650.0	8.00	9.5	247	S 67 W	100	0.3	36	N 36 E
1652.0	8.00	9.6	246	S 68 W	100	0.3	44	N 44 E
1654.0	8.00	8.3	253	S 73 W	100	0.2	47	N 47 E
1656.0	8.00	12.8	265	S 85 W	100	0.2	51	N 51 E
1658.0	8.00	10.3	264	S 94 W	100	0.2	45	N 45 E
1650.0	8.00	5.9	250	S 70 W	100	0.2	48	N 48 E
1652.0	8.00	13.3	270	N 90 W	100	0.2	47	N 47 E
1654.0	8.00	9.2	251	N 69 W	100	0.2	49	N 49 E
1656.0	8.00	6.1	257	S 77 W	100	0.2	65	N 65 E
1658.0	8.00	6.9	239	S 59 W	100	0.2	63	N 63 E
1670.0	8.00	10.5	217	S 37 W	100	0.2	69	N 69 E
1672.0	8.00	8.9	232	S 52 W	100	0.3	61	N 61 E
1674.0	8.00	9.9	234	S 54 W	100	0.3	55	N 55 E
1676.0	8.00	9.5	238	S 58 W	100	0.3	58	N 58 E
1678.0	8.00	9.4	240	S 60 W	100	0.3	60	N 60 E
1680.0	8.00	10.4	243	S 63 W	100	0.3	60	N 60 E
1682.0	8.00	10.2	244	S 64 W	100	0.3	60	N 60 E
1684.0	8.00	10.5	244	S 64 W	100	0.3	60	N 60 E
1686.0	8.00	11.2	242	S 62 W	100	0.3	58	N 58 E
1688.0	8.00	10.5	265	S 85 W	100	0.3	67	N 67 E
1690.0	8.00	12.5	269	S 88 W	100	0.4	73	N 73 E
1692.0	8.00	11.9	255	S 75 W	100	0.3	72	N 72 E
1694.0	8.00	11.4	253	S 73 W	100	0.4	65	N 65 E
1696.0	8.00	11.1	253	S 73 W	100	0.4	75	N 75 E
1698.0	8.00	11.1	252	S 72 W	100	0.4	71	N 71 E
1700.0	8.00	10.6	257	S 77 W	100	0.4	61	N 61 E
1702.0	8.00	10.1	257	S 77 W	100	0.4	69	N 69 E
1704.0	8.00	10.1	257	S 77 W	100	0.4	72	N 72 E
1706.0	8.00	9.7	259	S 79 W	100	0.4	70	N 70 E
1708.0	8.00	10.6	268	S 88 W	100	0.4	73	N 73 E
1710.0	8.00	10.0	269	N 71 W	100	0.4	74	N 74 E

OREGON NATURAL GAS CORP.

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DEPTH	NL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1712.0	8.00	17.0	321	N 39 W	100	0.4	81	N 81 E
1714.0	8.00	62.9	305	N 55 W	92	0.4	80	N 80 E
1722.0	8.00	0.6	266	S 86 W	100	0.4	93	S 87 E
1726.0	8.00	1.4	249	S 69 W	100	0.5	101	S 79 E
1744.0	8.00	1.2	301	N 59 W	100	0.7	97	S 83 E
1748.0	8.00	16.7	273	N 87 W	100	0.7	101	S 79 E
1750.0	8.00	10.4	279	N 81 W	100	0.7	97	S 83 E
1752.0	8.00	11.9	277	N 83 W	100	0.7	97	S 83 E
1754.0	8.00	13.5	268	S 88 W	100	0.8	98	S 82 E
1756.0	8.00	17.5	271	N 89 W	100	0.8	100	S 80 E
1758.0	8.00	24.7	254	S 74 W	100	0.8	95	S 85 E
1760.0	8.00	20.5	269	S 89 W	100	0.8	95	S 85 E
1762.0	8.30	19.3	258	S 78 W	100	0.9	95	S 85 E
1764.0	8.00	21.0	243	S 69 W	100	0.9	94	S 86 E
1772.0	8.00	8.2	217	S 37 W	100	1.0	89	N 89 E
1776.0	8.00	6.9	215	S 36 W	100	1.0	92	S 88 E
1778.0	8.00	8.3	191	S 11 W	100	0.9	89	N 89 E
1780.0	8.00	12.2	200	S 20 W	100	0.9	89	N 89 E
1782.0	8.00	9.7	213	S 33 W	88	1.0	87	N 87 E
1816.0	8.00	2.9	223	S 43 W	100	1.1	77	N 77 E
1818.0	8.00	4.7	208	S 28 W	100	1.1	76	N 76 E
1820.0	8.00	3.6	219	S 39 W	100	1.2	76	N 76 E
1822.0	8.00	3.5	228	S 48 W	100	1.2	75	N 75 E
1824.0	8.00	4.2	201	S 21 W	100	1.2	75	N 75 E
1826.0	8.00	13.7	159	S 21 E	100	1.2	77	N 77 E
1830.0	8.00	8.2	177	S 3 E	100	1.2	78	N 78 E
1834.0	8.00	0.8	179	S 1 E	100	1.1	79	N 79 E
1836.0	8.00	2.6	150	S 10 W	100	1.2	76	N 76 E
1838.0	8.00	2.3	223	S 43 W	100	1.2	75	N 75 E
1840.0	8.00	2.7	241	S 61 W	61	1.2	75	N 75 E
1844.0	8.00	38.3	205	S 26 W	67	1.2	70	N 70 E
1846.0	8.00	39.0	207	S 27 W	100	1.2	72	N 72 E
1848.0	8.00	40.1	195	S 15 W	96	1.2	68	N 68 E
1852.0	8.00	23.5	246	S 65 W	54	1.0	69	N 69 E
1858.0	8.00	27.1	292	N 68 W	100	1.0	72	N 72 E
1860.0	8.00	24.9	273	N 87 W	88	0.9	77	N 77 E
1862.0	8.00	19.1	309	N 51 W	100	1.0	78	N 78 E
1864.0	8.00	30.5	321	N 39 W	82	0.9	78	N 78 E
1880.0	8.00	2.6	300	N 60 W	100	1.0	81	N 81 E
1882.0	8.00	2.0	304	N 55 W	100	1.0	75	N 75 E

OREGON NATURAL GAS CORP.

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OREGON

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DEPTH	WT	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1884.0	8.00	1.7	293	N 67 W	92	1.0	78	N 78 E
1888.0	8.00	0.4	294	N 62 W	100	1.0	78	N 78 E
1892.0	8.00	1.9	281	N 79 W	100	1.0	84	N 84 E
1894.0	8.00	2.3	307	N 55 W	100	1.1	85	N 85 E
1895.0	8.00	1.7	287	N 73 W	100	1.0	82	N 82 E
1898.0	8.00	1.5	300	N 60 W	100	1.0	83	N 83 E
1908.0	8.00	2.7	335	N 25 W	100	1.0	76	N 76 E
1910.0	8.00	5.0	335	N 25 W	100	1.1	79	N 79 E
1912.0	8.00	5.1	323	N 37 W	100	1.1	82	N 82 E
1914.0	8.00	4.8	324	N 35 W	100	1.1	79	N 79 E
1915.0	8.00	5.9	312	N 48 W	100	1.1	86	N 86 E
1916.0	8.00	4.8	320	N 46 W	100	1.1	82	N 82 E
1920.0	8.00	4.6	300	N 60 W	100	1.1	84	N 84 E
1922.0	8.00	12.5	155	S 25 E	100	1.2	85	N 85 E
1924.0	8.00	10.2	159	S 41 E	100	1.2	87	N 87 E
1925.0	8.00	7.5	158	S 22 E	100	1.2	85	N 85 E
1928.0	8.00	9.0	147	S 31 E	100	1.2	86	N 86 E
1930.0	8.00	7.9	154	S 16 E	100	1.2	82	N 82 E
1932.0	8.00	8.6	150	S 30 E	100	1.1	85	N 85 E
1935.0	8.00	12.3	192	S 12 W	100	1.2	86	N 86 E
1942.0	8.00	40.4	209	S 29 W	100	1.2	84	N 84 E
1944.0	8.00	40.4	205	S 25 W	100	1.2	86	N 86 E
1948.0	8.00	29.0	180	S 0 E	100	1.2	84	N 84 E
1950.0	8.00	29.1	157	S 23 E	100	1.2	83	N 83 E
1954.0	8.00	42.9	194	S 19 W	73	1.2	85	N 85 E
1956.0	8.00	30.6	210	S 30 W	109	1.2	87	N 87 E
1958.0	8.00	0.9	154	S 26 E	46	1.2	85	N 85 E
1962.0	8.00	0.5	135	S 45 E	77	1.2	87	N 87 E
1964.0	8.00	0.5	194	S 14 W	100	1.2	86	N 86 E
1965.0	8.00	2.7	194	S 14 W	100	1.2	85	N 85 E
1968.0	8.00	9.1	159	S 21 E	100	1.2	85	N 85 E
1970.0	8.00	8.4	165	S 15 E	100	1.2	84	N 84 E
1972.0	8.00	9.1	168	S 12 E	100	1.2	87	N 87 E
1974.0	8.00	12.5	158	S 22 E	100	1.2	86	N 86 E
1990.0	8.00	16.3	120	S 60 E	17	1.3	85	N 85 E
1994.0	8.00	13.1	129	S 51 E	100	1.3	85	N 85 E
1995.0	8.00	15.9	142	S 38 E	100	1.3	86	N 86 E
1998.0	8.00	14.3	127	S 53 E	100	1.3	86	N 86 E
2000.0	8.00	16.7	125	S 59 E	100	1.3	85	N 85 E
2002.0	8.00	18.8	118	S 62 E	100	1.3	85	N 85 E



OREGON NATURAL GAS CORP.

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MIST

CO. JMBIA

OREGON

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DEPTH	WL	**FORMATION DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DA	DAZ	BEARING
2010.0	8.00	27.2	27	N 27 E	88	1.2	85	N 85 E
2012.0	8.00	28.6	17	N 17 E	100	1.2	85	N 85 E
2015.0	8.00	35.9	16	N 16 E	72	1.2	86	N 86 E
2018.0	8.00	36.3	21	N 21 E	100	1.2	83	N 83 E
2020.0	8.00	37.1	22	N 22 E	100	1.2	84	N 84 E
2024.0	8.00	38.0	69	N 69 E	72	1.2	83	N 83 E
2025.0	8.00	21.9	67	N 67 E	100	1.2	84	N 84 E
2028.0	8.00	28.1	63	N 63 E	85	1.2	83	N 83 E
2030.0	8.00	25.0	87	N 87 E	100	1.2	84	N 84 E
2032.0	8.00	15.9	124	S 56 E	78	1.2	85	N 85 E
2035.0	8.00	21.2	141	S 39 E	100	1.3	82	N 82 E
2040.0	8.00	16.1	102	S 74 E	100	1.3	85	N 85 E
2042.0	8.00	17.4	104	S 75 E	100	1.3	84	N 84 E
2045.0	8.00	10.1	105	S 75 E	100	1.3	84	N 84 E
2048.0	8.00	41.6	82	S 88 E	100	1.3	84	N 84 E
2050.0	8.00	17.5	229	S 40 W	100	1.3	87	N 87 E
2058.0	8.00	10.1	234	S 54 W	100	1.3	88	N 88 E
2070.0	8.00	11.0	236	S 56 W	71	1.3	86	N 86 E
2080.0	8.00	23.5	250	S 70 W	100	1.3	85	N 85 E
2082.0	8.00	14.3	231	S 51 W	100	1.4	85	N 85 E
2085.0	8.00	25.3	240	S 50 W	45	1.4	86	N 86 E
2095.0	8.00	45.3	188	S 8 W	100	1.4	85	N 85 E
2104.0	8.00	13.3	192	S 12 W	100	1.3	86	N 86 E
2105.0	8.00	16.1	191	S 11 W	100	1.3	87	N 87 E
2108.0	8.00	8.1	178	S 2 E	96	1.3	87	N 87 E
2112.0	8.00	14.2	47	N 47 E	100	1.3	84	N 84 E
2115.0	8.00	26.3	43	N 43 E	100	1.3	86	N 86 E
2118.0	8.00	30.6	16	N 16 E	100	1.3	86	N 86 E
2120.0	8.00	10.3	357	N 3 W	100	1.3	85	N 85 E
2122.0	8.00	6.3	36	N 36 E	100	1.3	85	N 85 E
2124.0	8.00	15.4	44	N 44 E	100	1.3	85	N 85 E
2128.0	8.00	1.6	105	S 74 E	100	1.3	87	N 87 E
2130.0	8.00	0.8	121	S 59 E	100	1.3	86	N 86 E
2132.0	8.00	13.1	79	N 79 E	100	1.3	85	N 85 E
2134.0	8.00	13.6	93	S 87 E	100	1.3	86	N 86 E
2140.0	8.00	1.1	145	S 40 E	100	1.3	85	N 85 E
2144.0	8.00	7.5	122	S 58 E	100	1.3	85	N 85 E
2155.0	8.00	6.1	68	N 68 E	100	1.2	86	N 86 E
2158.0	8.00	2.5	34	N 34 E	100	1.3	86	N 86 E
2162.0	8.00	32.0	59	N 59 E	100	1.2	87	N 87 E

GREGOV NATURAL GAS CORP.

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MIST

CO: UMBIA

OREGON

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DEPTH	WT	**FORMATION DIP**				*****BOREHOLE*****			
		AVG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
2154.0	8.00	37.8	69	N 69 E	100	1.2	89	N 89 E	
2155.0	8.00	37.9	47	N 47 E	58	1.2	90	N 90 E	
2158.0	8.00	10.7	330	N 30 W	91	1.2	90	N 90 E	
2172.0	8.00	15.3	335	N 29 W	100	1.2	90	N 90 E	
2174.0	8.00	31.9	337	N 23 W	100	1.1	90	N 90 E	
2178.0	8.00	38.5	349	N 11 W	92	1.1	92	S 88 E	
2188.0	8.00	43.3	336	N 24 W	71	1.2	89	N 89 E	
2192.0	8.00	51.7	15	N 15 E	57	1.2	89	N 89 E	
2195.0	8.00	5.5	35	N 35 E	100	1.2	87	N 87 E	
2198.0	8.00	3.7	322	N 38 W	100	1.2	88	N 88 E	
2200.0	8.00	3.5	349	N 11 W	100	1.2	89	N 89 E	
2205.0	8.00	44.0	324	N 35 W	100	1.2	88	N 88 E	
2208.0	8.00	41.5	314	N 45 W	100	1.2	86	N 86 E	
2212.0	8.00	19.2	308	N 52 W	100	1.2	83	N 83 E	
2215.0	8.00	22.0	293	N 67 W	99	1.3	77	N 77 E	
2220.0	8.00	10.6	253	S 85 W	100	1.2	76	N 76 E	
2225.0	8.00	13.4	317	N 43 W	100	1.2	71	N 71 E	
2228.0	8.00	2.3	309	N 51 W	100	1.2	70	N 70 E	
2232.0	8.00	5.0	312	N 48 W	100	1.2	74	N 74 E	
2234.0	8.00	1.9	307	N 53 W	100	1.2	74	N 74 E	
2236.0	8.00	4.0	323	N 31 W	100	1.2	76	N 76 E	
2248.0	8.00	3.5	318	N 42 W	100	1.2	76	N 76 E	
2250.0	8.00	4.1	296	N 64 W	100	1.2	76	N 76 E	
2254.0	8.00	5.0	253	S 75 W	100	1.1	79	N 79 E	
2255.0	8.00	44.2	235	S 55 W	100	1.2	79	N 79 E	
2268.0	8.00	27.6	224	S 44 W	100	1.1	75	N 75 E	
2270.0	8.00	7.6	192	S 12 W	100	1.1	75	N 75 E	
2272.0	8.00	9.2	127	S 83 E	100	1.1	74	N 74 E	
2274.0	8.00	8.2	130	S 50 E	100	1.1	74	N 74 E	
2275.0	8.00	6.6	149	S 49 E	100	1.2	74	N 74 E	
2278.0	8.00	4.5	135	S 45 E	100	1.2	72	N 72 E	
2280.0	8.00	4.3	156	S 24 E	100	1.2	72	N 72 E	
2282.0	8.00	5.2	151	S 29 E	100	1.2	69	N 69 E	
2284.0	8.00	5.7	146	S 34 E	100	1.2	67	N 67 E	
2286.0	8.00	5.7	118	S 62 E	100	1.2	67	N 67 E	
2288.0	8.00	7.0	114	S 65 E	100	1.2	65	N 65 E	
2290.0	8.00	9.2	86	N 86 E	100	1.1	67	N 67 E	
2292.0	8.00	9.5	118	S 62 E	100	1.1	64	N 64 E	
2294.0	8.00	12.4	135	S 45 E	100	1.1	64	N 64 E	
2295.0	8.00	8.2	133	S 47 E	100	1.1	62	N 62 E	

OREGON NATURAL GAS CORP.

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\*\*FORMATION DIP\*\*

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

DEPTH	DL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2298.0	8.00	9.8	128	S 32 E	100	1.0	64	N 64 E
2300.0	8.00	7.0	135	S 45 E	86	1.0	60	N 60 E
2302.0	8.00	3.4	143	S 37 E	100	1.0	61	N 61 E
2304.0	8.00	3.7	165	S 15 E	100	1.0	61	N 61 E
2305.0	8.00	39.7	255	S 75 W	96	1.0	61	N 61 E
2314.0	8.00	50.6	303	N 37 W	100	1.0	62	N 62 E
2315.0	8.00	45.9	27	N 27 E	100	1.0	63	N 63 E
2320.0	8.00	32.2	62	N 62 E	76	1.0	64	N 64 E
2324.0	8.00	5.6	45	N 45 E	100	1.0	63	N 63 E
2325.0	8.00	4.9	25	N 25 E	100	1.0	64	N 64 E
2328.0	8.00	4.5	15	N 15 E	100	1.0	63	N 63 E
2330.0	8.00	4.3	3	N 3 E	100	1.0	62	N 62 E
2332.0	8.00	6.4	0	N 0 E	69	0.9	62	N 62 E
2334.0	8.00	3.9	354	N 5 W	100	0.9	61	N 61 E
2338.0	8.00	4.2	30	N 30 E	100	0.9	62	N 62 E
2340.0	8.00	5.3	1	N 1 E	100	0.8	63	N 63 E
2342.0	8.00	4.5	357	N 3 W	100	0.8	63	N 63 E
2344.0	8.00	4.5	343	N 17 W	100	0.8	65	N 65 E
2358.0	8.00	23.7	345	N 14 W	100	0.8	64	N 64 E
2350.0	8.00	7.8	19	N 19 E	100	0.9	63	N 63 E
2352.0	8.00	7.8	17	N 17 E	100	0.9	65	N 65 E
2354.0	8.00	8.3	343	N 17 W	100	0.9	66	N 66 E
2356.0	8.00	6.5	349	N 11 W	100	0.9	65	N 65 E
2358.0	8.00	7.2	339	N 21 W	100	0.9	65	N 65 E
2370.0	8.00	7.6	349	N 20 W	100	0.9	66	N 66 E
2372.0	8.00	7.9	341	N 19 W	100	0.9	68	N 68 E
2374.0	8.00	7.4	348	N 12 W	100	0.9	65	N 65 E
2384.0	8.00	5.3	13	N 13 E	100	0.9	61	N 61 E
2385.0	8.00	7.3	347	N 13 W	100	0.9	63	N 63 E
2398.0	8.00	4.1	359	N 10 W	100	0.8	64	N 64 E
2400.0	8.00	5.6	352	N 8 W	100	0.8	63	N 63 E
2402.0	8.00	8.6	5	N 5 E	100	0.8	65	N 65 E
2404.0	8.00	8.5	6	N 5 E	100	0.8	66	N 66 E
2405.0	8.00	5.8	7	N 7 E	100	0.8	63	N 63 E
2408.0	8.00	6.2	357	N 3 W	100	0.8	62	N 62 E
2410.0	8.00	7.5	342	N 15 W	100	0.8	64	N 64 E
2412.0	8.00	7.4	344	N 15 W	100	0.9	65	N 65 E
2420.0	8.00	7.7	357	N 3 W	100	0.9	63	N 63 E
2425.0	8.00	15.3	356	N 4 W	100	0.8	66	N 66 E
2428.0	8.00	10.5	19	N 19 E	100	0.8	61	N 61 E

OREGON NATURAL GAS CORP.

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MIST

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OREGON

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DEPTH	WI	**FORMATION DIP**				***BOREHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
2430.0	8.00	13.4	352	N 1 W	100	0.8	59	N 59 E	
2432.0	8.00	10.5	34	N 34 E	100	0.7	59	N 59 E	
2436.0	8.00	13.4	47	N 47 E	100	0.7	58	N 58 E	
2438.0	8.00	12.2	57	N 57 E	95	0.6	55	N 55 E	
2440.0	8.00	7.3	29	N 29 E	100	0.7	55	N 55 E	
2444.0	8.00	5.9	84	N 84 E	100	0.6	55	N 55 E	
2446.0	8.00	5.7	91	S 89 E	100	0.6	55	N 55 E	
2448.0	8.00	5.3	85	N 85 E	100	0.7	55	N 55 E	
2450.0	8.00	1.1	12	N 12 E	100	0.7	57	N 57 E	
2452.0	8.00	19.5	337	N 23 W	100	0.6	44	N 44 E	
2454.0	8.00	8.6	299	N 61 W	100	0.6	44	N 44 E	
2456.0	8.00	14.7	321	N 39 W	100	0.7	46	N 46 E	
2458.0	8.00	9.0	333	N 27 W	100	0.6	46	N 46 E	
2470.0	8.00	12.5	24	N 24 E	100	0.6	42	N 42 E	
2472.0	8.00	12.6	19	N 19 E	100	0.5	44	N 44 E	
2474.0	8.00	13.3	355	N 4 W	100	0.5	50	N 50 E	
2476.0	8.00	13.2	12	N 12 E	100	0.5	52	N 52 E	
2478.0	8.00	12.5	1	N 1 E	100	0.5	68	N 68 E	
2480.0	8.00	13.9	337	N 23 W	100	0.6	76	N 76 E	
2482.0	8.00	14.7	314	N 46 W	100	0.6	79	N 79 E	
2484.0	8.00	15.8	311	N 49 W	100	0.7	77	N 77 E	
2490.0	8.00	50.1	359	N 1 W	100	0.7	78	N 78 E	
2498.0	8.00	2.6	358	N 2 W	100	0.7	79	N 79 E	
2500.0	8.00	2.9	344	N 12 W	100	0.7	78	N 78 E	
2502.0	8.00	3.3	35	N 35 E	100	0.6	79	N 79 E	
2504.0	8.00	2.6	55	N 55 E	100	0.6	78	N 78 E	
2506.0	8.00	2.8	39	N 39 E	100	0.6	75	N 75 E	
2508.0	8.00	6.8	108	S 72 E	100	0.5	70	N 70 E	
2512.0	8.00	11.4	107	S 73 E	95	0.5	61	N 61 E	
2514.0	8.00	20.0	112	S 68 E	100	0.5	60	N 60 E	
2518.0	8.00	3.5	132	S 48 E	87	0.5	59	N 59 E	
2525.0	8.00	33.7	222	S 42 W	36	0.6	65	N 65 E	
2528.0	8.00	36.4	192	S 12 W	52	0.6	67	N 67 E	
2530.0	8.00	10.6	194	S 14 W	73	0.6	68	N 68 E	
2534.0	8.00	3.6	253	S 73 W	100	0.6	67	N 67 E	
2538.0	8.00	2.0	264	S 84 W	100	0.6	68	N 68 E	
2540.0	8.00	3.0	325	N 34 W	100	0.6	69	N 69 E	
2542.0	8.00	6.7	350	N 10 W	100	0.6	65	N 65 E	
2544.0	8.00	7.9	335	N 25 W	100	0.6	71	N 71 E	
2546.0	8.00	8.2	322	N 37 W	100	0.6	70	N 70 E	

OREGON NATURAL GAS CORP.

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DEPTH	WL	**FORMATION DIP**				GRADE	***BORCHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2546.0	8.00	8.6	322	N 38 W	100	0.6	69	N 69 E	
2550.0	8.00	9.7	347	N 13 W	100	0.5	66	N 66 E	
2552.0	8.00	6.1	329	N 31 W	100	0.5	66	N 66 E	
2556.0	8.00	26.7	18	N 18 E	86	0.6	65	N 65 E	
2558.0	8.00	32.3	358	N 2 W	100	0.6	66	N 66 E	
2550.0	8.00	33.9	8	N 8 E	100	0.6	64	N 64 E	
2558.0	8.00	6.8	11	N 11 E	100	0.6	65	N 65 E	
2570.0	8.00	8.1	24	N 24 E	100	0.5	62	N 62 E	
2572.0	8.00	8.1	25	N 25 E	100	0.6	63	N 63 E	
2574.0	8.00	10.3	23	N 23 E	100	0.6	61	N 61 E	
2576.0	8.00	10.6	25	N 25 E	100	0.5	66	N 66 E	
2578.0	8.00	8.7	17	N 17 E	100	0.6	66	N 66 E	
2580.0	8.00	9.2	10	N 10 E	100	0.5	64	N 64 E	
2582.0	8.00	8.6	0	N 0 E	100	0.5	66	N 66 E	
2584.0	8.00	7.4	351	N 9 W	100	0.5	61	N 61 E	
2586.0	8.00	8.1	332	N 6 W	100	0.5	64	N 64 E	
2588.0	8.00	2.0	319	N 41 W	100	0.5	69	N 69 E	
2590.0	8.00	4.2	316	N 44 W	100	0.5	60	N 60 E	
2592.0	8.00	3.5	8	N 8 E	100	0.5	57	N 57 E	
2594.0	8.00	3.0	357	N 3 W	100	0.4	59	N 59 E	
2596.0	8.00	4.0	43	N 43 E	100	0.4	56	N 56 E	
2598.0	8.00	6.1	78	N 78 E	100	0.4	46	N 46 E	
2600.0	8.00	40.6	161	S 19 E	89	0.4	51	N 51 E	
2606.0	8.00	7.2	257	S 77 W	100	0.4	44	N 44 E	
2608.0	8.00	43.4	270	N 90 W	100	0.4	39	N 39 E	
2614.0	8.00	2.3	275	N 85 W	60	0.4	46	N 46 E	
2618.0	8.00	2.3	269	S 89 W	100	0.4	44	N 44 E	
2620.0	8.00	2.3	277	N 83 W	100	0.4	45	N 45 E	
2622.0	8.00	4.5	301	N 59 W	100	0.3	51	N 51 E	
2624.0	8.00	27.4	5	N 5 E	100	0.3	51	N 51 E	
2626.0	8.00	12.0	340	N 20 W	100	0.3	58	N 58 E	
2628.0	8.00	9.5	309	N 51 W	100	0.3	62	N 62 E	
2630.0	8.00	5.1	334	N 25 W	100	0.3	79	N 79 E	
2632.0	8.00	4.0	332	N 28 W	100	0.4	64	N 64 E	
2636.0	8.00	26.8	345	N 15 W	88	0.3	74	N 74 E	
2638.0	8.00	28.9	314	N 46 W	100	0.3	63	N 63 E	
2640.0	8.00	28.3	330	N 39 W	100	0.2	69	N 69 E	
2642.0	8.00	41.5	63	N 65 E	75	0.2	49	N 49 E	
2644.0	8.00	43.3	115	S 65 E	100	0.2	67	N 67 E	
2648.0	8.00	33.9	120	S 60 E	86	0.2	52	N 52 E	

OREGON NATURAL GAS CORP.

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WIST

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OREGON

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DEPTH	AL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2650.0	8.00	22.8	237	S 57 W	63	0.2	73	N 73 E
2652.0	9.00	55.5	252	S 72 W	62	0.2	71	N 71 E
2655.0	8.00	48.4	248	S 68 W	86	0.3	77	N 77 E
2658.0	8.00	38.6	273	N 87 W	100	0.3	74	N 74 E
2654.0	8.00	6.9	11	N 11 E	86	0.2	69	N 69 E
2655.0	8.00	7.7	344	N 15 W	100	0.3	85	N 85 E
2658.0	8.00	8.1	343	N 17 W	100	0.3	81	N 81 E
2670.0	8.00	10.2	348	N 12 W	100	0.3	73	N 73 E
2672.0	8.00	6.6	326	N 34 W	100	0.3	85	N 85 E
2674.0	8.00	10.3	351	N 9 W	100	0.3	82	N 82 E
2675.0	8.00	11.5	340	N 20 W	85	0.2	90	N 90 E
2678.0	8.00	9.2	334	N 26 W	100	0.2	85	N 85 E
2680.0	8.00	8.5	335	N 25 W	100	0.2	89	N 89 E
2682.0	8.00	5.5	337	N 23 W	100	0.2	95	S 85 E
2684.0	8.00	7.6	355	N 5 W	100	0.2	102	S 71 E
2685.0	8.00	8.7	349	N 12 W	100	0.2	108	S 72 E
2688.0	8.00	9.5	344	N 12 W	100	0.2	115	S 65 E
2690.0	8.00	9.5	345	N 15 W	100	0.3	114	S 68 E
2692.0	8.00	8.5	336	N 24 W	100	0.2	119	S 61 E
2694.0	8.00	7.9	333	N 27 W	100	0.2	117	S 63 E
2695.0	8.00	8.4	333	N 27 W	100	0.2	116	S 64 E
2698.0	8.00	7.8	326	N 34 W	100	0.2	126	S 54 E
2700.0	8.00	6.2	348	N 12 W	100	0.2	132	S 48 E
2702.0	8.00	4.6	2	N 2 E	100	0.2	137	S 43 E
2704.0	8.00	6.2	15	N 15 E	100	0.2	143	S 37 E
2705.0	8.00	5.7	2	N 2 E	100	0.2	139	S 41 E
2708.0	8.00	6.9	354	N 5 W	100	0.2	135	S 45 E
2710.0	8.00	5.5	355	N 5 W	100	0.2	141	S 59 E
2712.0	8.00	8.0	342	N 18 W	100	0.3	136	S 44 E
2714.0	8.00	8.8	245	N 14 W	100	0.3	134	S 46 E
2715.0	8.00	9.4	354	N 5 W	100	0.3	136	S 44 E
2718.0	8.00	10.1	351	N 29 W	100	0.2	141	S 39 E
2720.0	8.00	9.2	333	N 27 W	100	0.3	153	S 27 E
2722.0	8.00	13.5	345	N 15 W	100	0.3	153	S 27 E
2724.0	8.00	7.9	335	N 25 W	100	0.3	159	S 21 E
2725.0	8.00	8.0	336	N 24 W	100	0.3	162	S 18 E
2728.0	8.00	7.6	341	N 19 W	100	0.3	159	S 21 E
2730.0	8.00	7.8	342	N 12 W	100	0.2	152	S 28 E
2732.0	8.00	10.1	353	N 7 W	100	0.2	163	S 17 E
2738.0	8.00	10.3	353	N 7 W	100	0.1	189	S 9 W

OREGON NATURAL GAS CORP.

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MIST

COLUMBIA

OREGON

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\*\*FORMATION DIP\*\*

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	UA	DAZ	BEARING
2740.0	8.00	10.7	5	N 5 E	100	0.1	195	S 15 W
2742.0	8.00	11.2	357	N 3 W	100	0.1	198	S 16 W
2745.0	8.00	18.8	322	N 38 W	100	0.1	224	S 44 W
2748.0	8.00	7.6	340	N 20 W	100	0.1	224	S 44 W
2750.0	8.00	8.2	342	N 18 W	100	0.1	225	S 45 W
2752.0	8.00	7.4	355	N 5 W	100	0.1	226	S 46 W
2754.0	8.00	4.4	354	N 5 W	100	0.1	223	S 43 W
2755.0	8.00	5.2	22	N 22 E	100	0.1	188	S 8 W
2750.0	8.00	4.3	343	N 17 W	100	0.2	173	S 7 E
2752.0	8.00	7.9	339	N 22 W	100	0.3	175	S 8 E
2754.0	8.00	7.6	350	N 10 W	100	0.2	175	S 8 E
2755.0	8.00	9.2	347	N 13 W	100	0.3	179	S 1 E
2758.0	8.00	9.1	338	N 22 W	100	0.3	179	S 1 E
2770.0	8.00	8.8	337	N 23 W	100	0.3	179	S 1 E
2772.0	8.00	7.8	343	N 17 W	100	0.3	185	S 5 W
2774.0	8.00	5.4	345	N 14 W	100	0.3	187	S 7 W
2775.0	8.00	3.6	343	N 17 W	100	0.3	178	S 2 E
2778.0	8.00	5.4	349	N 12 W	100	0.3	176	S 4 E
2780.0	8.00	7.8	341	N 19 W	100	0.4	182	S 2 W
2782.0	8.00	8.4	349	N 11 W	100	0.4	179	S 1 E
2784.0	8.00	9.2	356	N 4 W	82	0.4	177	S 3 E
2785.0	8.00	12.9	344	N 16 W	100	0.4	176	S 4 E
2788.0	8.00	47.6	354	N 6 W	96	0.4	183	S 3 W
2790.0	8.00	5.2	13	N 13 E	100	0.4	175	S 5 E
2794.0	8.00	6.7	7	N 7 E	100	0.4	177	S 3 E
2795.0	8.00	8.2	352	N 3 W	100	0.3	172	S 8 E
2810.0	8.00	11.4	345	N 14 W	100	0.2	180	S 0 E
2812.0	8.00	11.0	16	N 15 E	100	0.2	183	S 3 W
2814.0	8.00	11.3	10	N 10 E	100	0.3	179	S 1 E
2820.0	8.00	42.0	347	N 13 W	100	0.3	185	S 5 W
2828.0	8.00	52.5	353	N 7 W	100	0.4	173	S 7 E
2830.0	8.00	52.3	355	N 5 W	100	0.4	180	S 0 E
2835.0	8.00	27.5	353	N 7 W	100	0.4	176	S 4 E
2836.0	8.00	3.4	357	N 3 W	89	0.4	173	S 7 E
2840.0	8.00	35.2	341	N 19 W	89	0.4	167	S 13 E
2842.0	8.00	40.4	329	N 31 W	77	0.5	172	S 5 E
2848.0	8.00	27.0	347	N 13 W	100	0.5	167	S 13 E
2855.0	8.00	34.9	333	N 21 W	100	0.4	175	S 5 E
2858.0	8.00	32.0	324	N 36 W	62	0.5	173	S 7 E
2862.0	8.00	41.5	297	N 62 W	100	0.4	168	S 12 E

OREGON NATURAL GAS CORP.

OM 41A-10

MIST

COLUMBIA

OREGON

12-12-86

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BLKING
2872.0	8.00	19.3	253	S 83 W	100	0.5	180	S 0 E
2874.0	8.00	31.1	262	S 82 W	100	0.5	174	S 6 E
2884.0	8.00	10.8	240	S 60 W	100	0.5	171	S 9 E
2885.0	8.00	20.4	245	S 65 W	100	0.6	171	S 9 E
2888.0	8.00	38.8	224	S 48 W	72	0.5	163	S 17 E
2890.0	8.00	38.9	219	S 39 W	54	0.6	163	S 17 E
2892.0	8.00	41.3	219	S 39 W	15	0.6	160	S 20 E
2894.0	8.00	2.9	340	N 20 W	100	0.6	166	S 14 E
2895.0	8.00	1.5	347	N 13 W	100	0.7	165	S 15 E
2902.0	8.00	6.9	343	N 15 W	100	0.7	165	S 15 E
2904.0	8.00	9.5	328	N 32 W	100	0.7	167	S 13 E
2912.0	8.00	40.5	245	N 15 W	69	0.7	167	S 13 E
2918.0	8.00	27.5	325	N 34 W	95	0.7	169	S 11 E
2920.0	8.00	5.7	339	N 21 W	100	0.7	170	S 10 E
2922.0	8.00	5.7	334	N 25 W	100	0.7	171	S 9 E
2924.0	8.00	6.5	331	N 22 W	100	0.7	167	S 13 E
2925.0	8.00	5.8	319	N 41 W	100	0.7	167	S 13 E
2928.0	8.00	5.9	325	N 24 W	100	0.9	165	S 15 E
2930.0	8.00	6.3	339	N 21 W	100	0.8	165	S 15 E
2932.0	8.00	7.2	343	N 17 W	100	0.8	166	S 14 E
2934.0	8.00	5.9	351	N 9 W	100	0.8	164	S 16 E
2935.0	8.00	7.2	319	N 41 W	100	0.8	168	S 12 E
2936.0	8.00	7.4	344	N 15 W	100	0.6	168	S 12 E
2940.0	8.00	9.3	322	N 32 W	72	0.8	166	S 14 E
2942.0	8.00	9.7	340	N 20 W	100	0.8	167	S 13 E
2944.0	8.00	6.9	331	N 29 W	100	0.8	169	S 11 E
2945.0	8.00	9.9	330	N 30 W	100	0.8	167	S 13 E
2948.0	8.00	9.0	336	N 22 W	100	0.8	167	S 13 E
2950.0	8.00	8.2	334	N 25 W	100	0.8	162	S 18 E
2952.0	8.00	9.6	327	N 33 W	100	0.8	166	S 14 E
2954.0	8.00	10.5	340	N 20 W	100	0.8	160	S 20 E
2955.0	8.00	15.3	358	N 7 W	100	0.9	161	S 19 E
2958.0	8.00	15.4	310	N 50 W	100	0.8	158	S 22 E
2972.0	8.00	9.0	271	N 49 W	100	0.8	151	S 29 E
2974.0	8.00	8.8	289	N 75 W	100	0.8	151	S 29 E
2975.0	8.00	9.7	321	N 39 W	100	0.8	147	S 33 E
2978.0	8.00	13.5	330	N 30 W	100	0.8	147	S 33 E
2980.0	8.00	8.5	325	N 34 W	100	0.9	146	S 34 E
2982.0	8.00	7.9	314	N 45 W	100	0.8	149	S 31 E
2984.0	8.00	7.0	327	N 33 W	100	0.9	148	S 32 E



OREGON NATURAL GAS CORP.

GM 314-10

MIST

COLUMBIA

OREGON

12-12-86

DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
2986.0	3.00	7.5	320	N 40 W	100	0.9	150	S 30 E
2988.0	3.00	7.5	315	N 42 W	100	0.9	151	S 29 E
2990.0	3.00	5.7	317	N 43 W	100	0.9	150	S 30 E
2992.0	3.00	7.0	307	N 53 W	100	0.9	153	S 27 E
2994.0	3.00	7.1	325	N 34 W	100	0.9	151	S 29 E
2996.0	3.00	8.2	355	N 25 W	100	0.9	150	S 30 E
2998.0	3.00	6.6	325	N 35 W	100	0.9	151	S 29 E
3000.0	3.00	8.7	334	N 25 W	100	0.9	152	S 28 E
3002.0	3.00	11.3	348	N 12 W	100	1.0	153	S 27 E
3004.0	3.00	15.3	358	N 2 W	100	1.0	152	S 26 E
3006.0	3.00	8.1	338	N 22 W	100	1.0	151	S 29 E
3008.0	3.00	11.3	333	N 27 W	100	1.0	153	S 27 E
3012.0	3.00	8.9	260	S 80 W	100	1.0	154	S 26 E
3015.0	3.00	11.9	235	S 55 W	100	1.1	160	S 20 E
3018.0	3.00	14.7	253	S 73 W	96	1.1	159	S 21 E
3024.0	3.00	11.6	312	N 48 W	100	1.1	157	S 23 E
3025.0	3.00	12.1	311	N 49 W	100	1.1	158	S 22 E
3028.0	3.00	5.3	318	N 42 W	100	1.2	160	S 20 E
3035.0	3.00	11.2	328	N 32 W	100	1.3	156	S 24 E
3038.0	3.00	11.6	318	N 44 W	100	1.3	163	S 17 E
3048.0	3.00	42.5	299	N 61 W	57	1.4	157	S 23 E
3050.0	3.00	38.5	258	S 78 W	100	1.4	159	S 21 E
3054.0	3.00	33.9	128	S 68 E	100	1.5	159	S 21 E
3055.0	3.00	31.0	114	S 65 E	100	1.5	156	S 24 E
3058.0	3.00	29.5	112	S 68 E	100	1.4	157	S 23 E
3050.6	3.00	25.8	113	S 67 E	100	1.4	159	S 21 E
3074.0	3.00	45.0	65	N 65 E	44	1.7	153	S 27 E