

OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11/28/86

INTERVAL 450.0 TO 2774.0

RUN 1 RLAC 1110.

ENGINEER B. WELCH MR. THOMAS MAG DEC 20.

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\* HLAC 11102 (WLB, SL12, ST2) \*

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\*\*FORMATION DIP\*\*

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

DEPTH WL ANG AZ BEARING GRADE DA DAZ BEARING

452.5	3.00	6.3	330	N 30 W	100	0.9	115	S 65 E
454.5	8.00	4.3	334	N 26 W	100	0.9	114	S 66 E
456.5	8.00	2.1	332	N 26 W	100	0.9	115	S 65 E
470.5	8.00	2.3	324	N 35 W	100	0.8	115	S 65 E
472.5	8.00	2.4	329	N 31 W	100	0.9	112	S 68 E
474.5	8.00	3.8	341	N 19 W	100	0.9	115	S 65 E
476.5	8.00	4.7	354	N 6 W	100	0.9	118	S 62 E
478.5	8.00	4.3	358	N 2 W	100	0.9	117	S 63 E
480.5	8.00	1.7	315	N 45 W	100	1.0	115	S 65 E
482.5	8.00	3.3	253	S 73 W	100	1.0	116	S 64 E
484.5	8.00	5.3	247	S 67 W	100	1.0	116	S 64 E
486.5	8.00	5.2	250	S 70 W	100	0.9	119	S 63 E
488.5	8.00	3.7	273	N 87 W	100	0.9	116	S 64 E
490.5	8.00	2.9	313	N 47 W	100	1.0	117	S 63 E
492.5	8.00	2.8	341	N 19 W	100	1.0	116	S 64 E
494.5	8.00	3.2	335	N 24 W	100	1.0	117	S 63 E
496.5	8.00	2.8	329	N 31 W	100	0.9	118	S 62 E
498.5	8.00	3.2	335	N 25 W	100	1.0	118	S 62 E
500.5	8.00	3.0	359	N 1 W	100	1.0	118	S 62 E
502.5	8.00	3.7	7	N 7 E	100	1.0	119	S 61 E
504.5	5.00	4.5	6	N 5 E	100	0.9	123	S 57 E
506.5	8.00	3.9	351	N 9 W	100	0.9	126	S 54 E
508.5	8.00	3.8	338	N 22 W	100	1.0	129	S 51 E
510.5	8.00	4.0	343	N 17 W	100	1.0	127	S 53 E
512.5	8.00	3.2	342	N 18 W	100	1.1	127	S 53 E
514.5	8.00	3.7	338	N 22 W	100	1.1	127	S 53 E
516.5	8.00	3.7	334	N 25 W	100	1.1	128	S 52 E
518.5	8.00	3.3	354	N 5 W	100	1.1	127	S 53 E
520.5	8.00	4.0	4	N 4 E	100	1.1	126	S 54 E

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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
522.5	8.00	2.5	346	N 14 W	100	1.1	127	S 53 E
524.5	8.00	3.4	358	N 2 W	100	1.1	126	S 54 E
526.5	8.00	3.9	340	N 12 W	100	1.1	126	S 54 E
528.5	8.00	4.7	342	N 18 W	100	1.1	126	S 54 E
530.5	8.00	5.3	350	N 10 W	100	1.1	127	S 53 E
532.5	8.00	7.1	352	N 8 W	100	1.2	128	S 52 E
534.5	8.00	7.1	333	N 27 W	100	1.2	127	S 53 E
536.5	8.00	6.1	328	N 32 W	100	1.2	126	S 54 E
538.5	8.00	5.1	336	N 24 W	100	1.1	126	S 54 E
540.5	8.00	3.7	353	N 7 W	100	1.1	125	S 55 E
542.5	8.00	4.1	355	N 5 W	100	1.1	125	S 55 E
544.5	8.00	3.3	353	N 5 W	100	1.1	124	S 56 E
546.5	8.00	4.2	353	N 5 W	100	1.1	122	S 58 E
548.5	8.00	6.8	349	N 11 W	100	1.1	120	S 60 E
550.5	8.00	8.2	349	N 11 W	100	1.1	122	S 58 E
552.5	8.00	9.7	346	N 14 W	100	1.1	119	S 61 E
554.5	8.00	10.2	342	N 18 W	100	1.2	120	S 60 E
556.5	8.00	10.7	336	N 24 W	100	1.2	119	S 61 E
558.5	8.00	10.5	330	N 30 W	100	1.2	117	S 63 E
560.5	8.00	10.3	328	N 32 W	100	1.2	117	S 63 E
562.5	8.00	10.5	331	N 29 W	100	1.2	115	S 65 E
564.5	8.00	10.0	331	N 29 W	100	1.2	116	S 64 E
566.5	8.00	8.3	338	N 22 W	100	1.2	119	S 61 E
568.5	8.00	7.1	338	N 22 W	100	1.3	118	S 62 E
570.5	8.00	5.7	330	N 30 W	100	1.2	118	S 62 E
572.5	8.00	5.7	340	N 20 W	100	1.2	116	S 64 E
574.5	8.00	7.9	0	N 0 E	100	1.2	117	S 63 E
576.5	8.00	8.2	342	N 18 W	100	1.2	116	S 64 E
578.5	8.00	4.7	359	N 1 W	100	1.3	117	S 63 E
580.5	8.00	4.5	353	N 7 W	100	1.2	116	S 64 E
582.5	8.00	4.5	346	N 14 W	100	1.2	114	S 66 E
584.5	8.00	5.0	348	N 12 W	100	1.1	114	S 66 E
586.5	8.00	5.3	351	N 9 W	100	1.1	113	S 67 E
588.5	8.00	6.8	350	N 10 W	100	1.1	114	S 66 E
590.5	8.00	5.1	337	N 23 W	100	1.2	112	S 68 E
592.5	8.00	4.9	337	N 23 W	100	1.1	112	S 68 E
594.5	8.00	5.1	345	N 15 W	100	1.1	112	S 68 E
596.5	8.00	6.2	353	N 7 W	100	1.1	113	S 67 E
598.5	8.00	7.3	353	N 7 W	100	1.1	116	S 64 E
600.5	8.00	14.1	17	N 17 E	100	1.1	118	S 62 E

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DEPTH	WL	**FORMATION DIP**				***BOREHOLE***		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
602.5	8.00	7.5	9	N 9 E	100	1.1	118	S 62 E
604.5	8.00	5.3	358	N 2 W	100	1.1	115	S 64 E
605.5	8.00	4.7	18	N 18 E	100	1.1	117	S 63 E
608.5	8.00	3.0	114	S 65 E	100	1.1	117	S 63 E
610.5	8.00	2.0	102	S 78 E	100	1.1	113	S 67 E
618.5	8.00	40.4	95	S 84 E	100	0.8	113	S 67 E
620.5	8.00	35.7	94	S 85 E	58	0.8	114	S 66 E
626.5	8.00	38.6	107	S 73 E	63	0.9	117	S 63 E
630.5	8.00	20.0	43	N 43 E	100	0.8	130	S 50 E
632.5	8.00	21.4	46	N 46 E	100	0.8	127	S 53 E
634.5	8.00	21.4	27	N 27 E	100	0.7	138	S 42 E
636.5	8.00	13.1	351	N 9 W	100	0.7	137	S 43 E
638.5	8.00	12.8	319	N 41 W	100	0.8	139	S 41 E
640.5	8.00	11.1	306	N 54 W	100	0.8	138	S 42 E
642.5	8.00	9.2	306	N 54 W	100	0.9	136	S 44 E
644.5	8.00	7.9	314	N 46 W	100	0.9	138	S 42 E
646.5	8.00	6.3	321	N 39 W	100	0.8	135	S 45 E
648.5	8.00	6.1	331	N 29 W	100	0.8	135	S 45 E
650.5	8.00	7.8	338	N 22 W	100	0.8	135	S 45 E
652.5	8.00	3.9	339	N 21 W	100	0.8	135	S 45 E
654.5	8.00	2.7	336	N 22 W	100	0.9	135	S 45 E
658.5	8.00	2.9	250	S 78 W	100	1.0	130	S 50 E
650.5	8.00	5.4	252	S 72 W	100	1.1	130	S 50 E
652.5	8.00	5.4	212	S 32 W	100	1.1	130	S 50 E
654.5	8.00	7.4	213	S 33 W	100	1.1	131	S 49 E
658.5	8.00	24.1	222	S 42 W	100	1.1	134	S 46 E
678.5	8.00	12.7	203	S 23 W	90	0.9	131	S 49 E
680.5	8.00	13.2	223	S 43 W	100	1.0	133	S 47 E
682.5	8.00	15.0	221	S 41 W	100	0.9	131	S 49 E
684.5	8.00	28.1	248	S 68 W	100	1.0	131	S 49 E
686.5	8.00	27.2	237	S 57 W	76	1.0	130	S 50 E
688.5	8.00	27.8	231	S 51 W	100	1.0	132	S 48 E
714.5	8.00	37.6	227	S 47 W	100	1.0	133	S 47 E
716.5	8.00	36.1	227	S 47 W	100	1.1	132	S 48 E
718.5	8.00	37.2	220	S 40 W	88	1.2	133	S 47 E
720.5	8.00	35.8	218	S 38 W	93	1.2	131	S 49 E
724.5	8.00	21.2	243	S 63 W	100	1.2	131	S 49 E
728.5	8.00	26.0	248	S 68 W	100	1.2	129	S 51 E
730.5	8.00	30.7	248	S 69 W	67	1.3	128	S 52 E
736.5	8.00	26.0	233	S 53 W	100	1.2	127	S 53 E

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

DEPTH WL ANG AZ BEARING GRADE DA DAZ BEARING

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
740.5	8.00	17.2	253	S 73 W	69	1.2	127	S 53 E
742.5	8.00	19.2	230	S 50 W	63	1.2	128	S 52 E
744.5	8.00	19.9	239	S 59 W	71	1.2	130	S 50 E
746.5	8.00	20.2	235	S 55 W	56	1.2	127	S 53 E
748.5	8.00	18.5	245	S 66 W	76	1.2	130	S 50 E
750.5	8.00	30.0	235	S 55 W	85	1.2	131	S 49 E
754.5	8.00	37.0	81	N 81 E	35	1.2	128	S 52 E
756.5	8.00	32.6	84	N 84 E	100	1.2	128	S 52 E
758.5	8.00	33.5	95	S 85 E	89	1.2	131	S 49 E
760.5	8.00	30.7	81	N 81 E	100	1.2	131	S 49 E
762.5	8.00	35.3	74	N 74 E	100	1.1	131	S 49 E
764.5	8.00	35.6	101	S 79 E	100	1.2	131	S 49 E
768.5	8.00	42.8	105	S 74 E	100	1.2	128	S 52 E
770.5	8.00	26.9	118	S 62 E	80	1.2	129	S 53 E
774.5	8.00	21.5	59	N 59 E	100	1.1	130	S 50 E
776.5	8.00	27.9	79	N 79 E	100	1.1	131	S 49 E
778.5	8.00	32.7	63	N 63 E	100	1.1	132	S 48 E
780.5	8.00	27.2	63	N 63 E	100	1.2	133	S 47 E
782.5	8.00	26.3	62	N 62 E	100	1.2	133	S 47 E
784.5	8.00	24.9	52	N 52 E	100	1.1	133	S 47 E
786.5	8.00	24.4	69	N 69 E	100	1.2	133	S 47 E
788.5	8.00	25.6	64	N 64 E	100	1.2	133	S 47 E
790.5	8.00	22.7	66	N 66 E	100	1.2	133	S 47 E
792.5	8.00	22.6	75	N 75 E	100	1.2	132	S 48 E
794.5	8.00	23.0	83	N 83 E	100	1.2	135	S 45 E
796.5	8.00	23.9	79	N 79 E	100	1.2	133	S 47 E
798.5	8.00	23.5	85	N 85 E	100	1.2	134	S 46 E
800.5	8.00	23.1	74	N 74 E	100	1.2	134	S 46 E
802.5	8.00	23.2	81	N 81 E	100	1.3	133	S 47 E
804.5	8.00	21.9	88	N 88 E	100	1.3	135	S 45 E
806.5	8.00	20.6	105	S 74 E	100	1.3	135	S 45 E
808.5	8.00	21.1	98	S 82 E	100	1.2	133	S 47 E
810.5	8.00	18.4	109	S 71 E	100	1.3	134	S 46 E
812.5	8.00	19.0	81	N 81 E	100	1.2	131	S 49 E
814.5	8.00	11.0	92	S 88 E	100	1.2	129	S 51 E
820.5	8.00	11.0	29	N 29 E	100	1.2	128	S 52 E
822.5	8.00	8.5	32	N 32 E	100	1.2	127	S 53 E
824.5	8.00	8.7	22	N 22 E	100	1.1	127	S 53 E
826.5	8.00	7.2	0	N 0 E	100	1.1	130	S 50 E
828.5	8.00	7.9	357	N 3 W	100	1.1	131	S 49 E

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

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
830.5	8.00	9.5	342	N 18 W	100	1.0	131	S 49 E
832.5	8.00	9.8	337	N 23 W	100	1.0	131	S 49 E
834.5	8.00	9.3	328	N 32 W	100	1.0	131	S 49 E
838.5	8.00	35.1	326	N 34 W	100	1.0	133	S 47 E
840.5	8.00	34.9	334	N 25 W	100	1.1	133	S 47 E
842.5	8.00	35.0	340	N 20 W	100	1.1	132	S 48 E
856.5	8.00	14.5	352	N 8 W	100	1.1	131	S 49 E
858.5	8.00	7.7	318	N 42 W	100	1.2	133	S 47 E
850.5	8.00	10.3	301	N 59 W	100	1.2	132	S 48 E
852.5	8.00	7.9	317	N 43 W	100	1.2	131	S 49 E
854.5	8.00	9.0	346	N 14 W	100	1.2	131	S 49 E
856.5	8.00	10.3	345	N 15 W	100	1.2	134	S 46 E
858.5	8.00	11.0	337	N 23 W	100	1.1	134	S 46 E
870.5	8.00	10.9	327	N 33 W	100	1.1	134	S 46 E
872.5	8.00	10.7	328	N 32 W	100	1.1	136	S 44 E
874.5	8.00	13.6	320	N 40 W	100	1.0	140	S 40 E
876.5	8.00	11.9	344	N 16 W	100	1.0	139	S 41 E
878.5	8.00	11.0	346	N 14 W	100	1.0	141	S 39 E
880.5	8.00	10.5	352	N 8 W	100	1.0	140	S 40 E
882.5	8.00	11.2	357	N 3 W	100	1.1	140	S 40 E
884.5	8.00	9.9	355	N 5 W	100	1.1	140	S 40 E
886.5	8.00	10.7	359	N 1 W	100	1.1	138	S 42 E
888.5	8.00	10.7	358	N 2 W	100	1.1	138	S 42 E
890.5	8.00	12.6	345	N 15 W	100	1.1	138	S 42 E
892.5	8.00	16.4	344	N 16 W	100	1.1	139	S 41 E
894.5	8.00	12.7	348	N 12 W	100	1.1	139	S 41 E
896.5	8.00	11.6	359	N 1 W	100	1.2	138	S 42 E
898.5	8.00	12.0	6	N 6 E	100	1.2	136	S 44 E
900.5	8.00	14.8	19	N 19 E	100	1.3	135	S 45 E
902.5	8.00	11.5	22	N 22 E	100	1.2	135	S 45 E
904.5	8.00	11.3	27	N 27 E	100	1.2	134	S 46 E
906.5	8.00	11.4	20	N 28 E	100	1.2	135	S 45 E
908.5	8.00	11.5	23	N 25 E	100	1.2	134	S 46 E
910.5	8.00	12.7	24	N 24 E	100	1.2	136	S 44 E
912.5	8.00	15.3	28	N 28 E	100	1.1	138	S 42 E
914.5	8.00	15.7	15	N 15 E	100	1.1	142	S 38 E
916.5	8.00	12.9	359	N 1 W	100	1.1	144	S 36 E
918.5	8.00	17.1	13	N 13 E	100	1.1	143	S 37 E
920.5	8.00	17.8	6	N 6 E	100	1.1	146	S 34 E
922.5	8.00	17.8	13	N 13 E	100	1.1	147	S 33 E

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HIST

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DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
924.5	8.00	15.2	5	N 5 E	100	1.1	147	S 33 E
926.5	8.00	14.1	6	N 6 E	100	1.1	144	S 36 E
928.5	8.00	12.8	17	N 17 E	100	1.0	145	S 35 E
930.5	8.00	12.5	31	N 31 E	100	1.0	146	S 34 E
932.5	8.00	12.2	33	N 33 E	100	1.0	146	S 34 E
934.5	8.00	13.5	22	N 22 E	100	1.0	151	S 29 E
936.5	8.00	13.3	26	N 26 E	100	1.1	150	S 30 E
938.5	8.00	13.7	26	N 26 E	100	1.1	148	S 32 E
940.5	8.00	14.3	30	N 30 E	100	1.1	148	S 32 E
942.5	8.00	12.0	21	N 21 E	100	1.1	150	S 30 E
944.5	8.00	14.3	29	N 29 E	100	1.1	149	S 31 E
946.5	8.00	12.4	21	N 21 E	100	1.2	151	S 29 E
948.5	8.00	14.1	25	N 25 E	100	1.2	151	S 29 E
950.5	8.00	13.4	15	N 15 E	100	1.3	150	S 30 E
952.5	8.00	13.3	15	N 15 E	100	1.3	148	S 32 E
954.5	8.00	14.8	19	N 19 E	100	1.3	151	S 29 E
956.5	8.00	14.6	13	N 13 E	85	1.3	153	S 27 E
958.5	8.00	16.0	15	N 15 E	100	1.3	153	S 27 E
960.5	8.00	13.1	358	N 2 W	100	1.4	151	S 29 E
962.5	8.00	11.7	342	N 18 W	100	1.4	151	S 29 E
964.5	8.00	12.3	358	N 10 W	100	1.4	151	S 29 E
966.5	8.00	12.3	357	N 3 W	100	1.3	150	S 30 E
968.5	8.00	13.1	0	N 0 E	100	1.4	152	S 28 E
970.5	8.00	12.3	357	N 3 W	100	1.4	151	S 29 E
972.5	8.00	11.5	359	N 1 W	100	1.4	152	S 28 E
974.5	8.00	15.0	19	N 19 E	100	1.4	154	S 26 E
976.5	8.00	18.0	16	N 16 E	100	1.4	154	S 26 E
978.5	8.00	20.4	11	N 11 E	100	1.4	152	S 28 E
980.5	8.00	16.4	40	N 40 E	100	1.4	154	S 26 E
982.5	8.00	12.9	27	N 27 E	100	1.3	153	S 27 E
988.5	8.00	15.2	21	N 21 E	100	1.3	153	S 27 E
990.5	8.00	17.7	37	N 37 E	100	1.3	155	S 25 E
992.5	8.00	17.0	44	N 44 E	100	1.3	154	S 26 E
994.5	8.00	18.0	33	N 33 E	100	1.3	157	S 23 E
996.5	8.00	17.4	26	N 26 E	100	1.3	157	S 23 E
998.5	8.00	22.3	51	N 51 E	100	1.4	158	S 22 E
1000.5	8.00	18.5	33	N 33 E	68	1.4	157	S 23 E
1002.5	8.00	18.1	23	N 23 E	100	1.4	157	S 23 E
1004.5	8.00	18.1	29	N 29 E	100	1.5	157	S 23 E
1006.5	8.00	19.3	19	N 19 E	100	1.4	158	S 22 E

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MIST

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

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1008.5	8.00	19.7	13	N 13 E	100	1.4	158	S 22 E
1010.5	8.00	22.2	25	N 25 E	100	1.4	158	S 22 E
1012.5	8.00	22.3	30	N 30 E	100	1.4	157	S 23 E
1014.5	8.00	24.1	30	N 30 E	100	1.4	157	S 23 E
1016.5	8.00	23.7	26	N 26 E	100	1.4	159	S 21 E
1018.5	8.00	23.9	28	N 28 E	100	1.4	158	S 22 E
1020.5	8.00	23.5	35	N 35 E	100	1.4	158	S 22 E
1022.5	8.00	22.3	31	N 31 E	100	1.4	157	S 23 E
1024.5	8.00	22.6	26	N 26 E	100	1.4	155	S 25 E
1026.5	8.00	22.7	20	N 20 E	100	1.4	155	S 25 E
1028.5	8.00	23.5	24	N 24 E	100	1.4	157	S 23 E
1030.5	8.00	22.5	28	N 28 E	100	1.4	158	S 22 E
1032.5	8.00	23.5	19	N 19 E	100	1.5	158	S 22 E
1034.5	8.00	24.7	29	N 29 E	100	1.5	156	S 24 E
1036.5	8.00	25.7	28	N 28 E	100	1.5	159	S 21 E
1038.5	8.00	26.1	34	N 34 E	100	1.5	157	S 23 E
1040.5	8.00	26.1	33	N 33 E	100	1.5	156	S 24 E
1042.5	8.00	31.1	30	N 30 E	100	1.5	155	S 25 E
1044.5	8.00	29.5	25	N 25 E	100	1.5	154	S 26 E
1046.5	8.00	28.6	26	N 26 E	100	1.5	156	S 24 E
1048.5	8.00	28.4	39	N 39 E	100	1.5	157	S 23 E
1050.5	8.00	28.7	45	N 45 E	100	1.5	157	S 23 E
1052.5	8.00	29.8	45	N 45 E	100	1.5	156	S 24 E
1054.5	8.00	30.4	43	N 43 E	100	1.5	156	S 24 E
1056.5	8.00	30.0	37	N 37 E	100	1.5	155	S 25 E
1058.5	8.00	23.3	41	N 41 E	100	1.5	158	S 22 E
1050.5	8.00	21.2	50	N 50 E	100	1.5	157	S 23 E
1052.5	8.00	24.0	15	N 15 E	100	1.5	158	S 22 E
1054.5	8.00	22.9	359	N 1 W	100	1.5	158	S 22 E
1056.5	8.00	19.7	354	N 6 W	100	1.5	157	S 23 E
1058.5	8.00	17.3	351	N 9 W	100	1.6	154	S 26 E
1070.5	8.00	11.5	335	N 25 W	99	1.6	153	S 27 E
1072.5	8.00	12.5	0	N 0 E	100	1.5	159	S 21 E
1074.5	8.00	9.6	0	N 0 E	100	1.6	158	S 22 E
1076.5	8.00	9.3	346	N 14 W	100	1.6	156	S 24 E
1088.5	8.00	5.7	3	N 3 E	100	1.5	155	S 25 E
1090.5	8.00	7.5	349	N 11 W	100	1.7	153	S 27 E
1092.5	8.00	4.5	348	N 12 W	100	1.7	157	S 23 E
1094.5	8.00	3.2	337	N 23 W	100	1.6	157	S 23 E
1096.5	8.00	6.5	315	N 45 W	100	1.6	156	S 24 E

## OREGON NATURAL GAS

CM 120-10

MIST

COLUMBIA

OREGON

11/28/86

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

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

DEPTH	WL	ANG	AZ	BEARINGS	GRADE	DA	DAZ	BEARING
1098.5	8.00	7.1	311	N 49 W	100	1.6	156	S 24 E
1104.5	8.00	4.5	353	N 7 W	82	1.6	157	S 23 E
1106.5	8.00	6.5	16	N 15 E	100	1.7	159	S 21 E
1108.5	8.00	8.5	5	N 5 E	100	1.6	159	S 21 E
1110.5	8.00	9.0	13	N 13 E	100	1.5	158	S 22 E
1112.5	8.00	10.5	2	N 2 E	100	1.6	159	S 21 E
1114.5	8.00	12.1	12	N 12 E	100	1.6	161	S 19 E
1116.5	8.00	12.5	344	N 15 W	100	1.7	161	S 19 E
1118.5	8.00	11.7	355	N 5 W	86	1.6	162	S 18 E
1120.5	8.00	17.0	6	N 5 E	100	1.6	161	S 19 E
1122.5	8.00	21.1	8	N 8 E	83	1.5	162	S 18 E
1124.5	8.00	23.1	4	N 4 E	100	1.6	160	S 20 E
1136.5	8.00	35.7	72	N 72 E	100	1.7	157	S 23 E
1140.5	8.00	10.9	56	N 65 E	100	1.6	156	S 24 E
1142.5	8.00	11.2	51	N 51 E	94	1.6	156	S 24 E
1144.5	8.00	13.3	25	N 25 E	100	1.6	155	S 25 E
1146.5	8.00	15.0	23	N 23 E	100	1.6	155	S 25 E
1148.5	8.00	11.3	13	N 13 E	100	1.6	156	S 24 E
1150.5	8.00	6.1	1	N 1 E	76	1.5	155	S 25 E
1154.5	8.00	8.8	3	N 3 E	100	1.5	156	S 24 E
1156.5	8.00	8.7	346	N 14 W	100	1.5	157	S 23 E
1158.5	8.00	8.8	334	N 25 W	100	1.5	157	S 23 E
1150.5	8.00	12.4	325	N 35 W	100	1.5	157	S 23 E
1152.5	8.00	20.5	272	N 88 W	100	1.5	156	S 24 E
1154.5	8.00	20.2	269	S 89 W	100	1.5	156	S 24 E
1176.5	8.00	14.1	245	S 65 W	100	1.6	156	S 24 E
1180.5	8.00	21.8	244	S 64 W	100	1.5	159	S 21 E
1194.5	8.00	34.5	257	S 77 W	100	1.7	167	S 13 E
1205.5	8.00	1.5	258	S 75 W	100	1.8	168	S 12 E
1208.5	8.00	1.6	269	N 71 W	100	1.8	167	S 13 E
1210.5	8.00	3.6	282	N 78 W	100	1.8	167	S 13 E
1212.5	8.00	11.9	289	N 71 W	100	1.9	166	S 14 E
1218.5	8.00	8.0	292	N 68 W	100	1.8	162	S 18 E
1220.5	8.00	7.2	275	N 84 W	100	1.9	160	S 20 E
1222.5	8.00	5.5	295	N 65 W	100	1.9	160	S 20 E
1224.5	8.00	1.5	271	N 89 W	100	1.9	160	S 20 E
1226.5	8.00	2.0	290	N 70 W	100	1.8	160	S 20 E
1232.5	8.00	22.8	295	N 65 W	100	1.8	161	S 19 E
1234.5	8.00	22.3	316	N 44 W	100	1.9	162	S 18 E
1236.5	8.00	22.4	306	N 54 W	100	1.9	160	S 20 E



## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11/28/86

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****			
		ANG	AZ	BEARINGS	GRADE	DA	DAZ	BEARING	
1238.5	8.00	15.5	317	N 43 W	100	1.9	160	S 28 E	
1244.5	8.00	1.8	297	N 63 W	100	1.9	158	S 22 E	
1248.5	8.00	25.0	285	N 75 W	96	1.9	157	S 23 E	
1250.5	8.00	20.3	262	S 82 W	100	1.8	155	S 25 E	
1252.5	8.00	10.4	267	S 87 W	100	1.8	155	S 25 E	
1256.5	8.00	4.8	297	N 63 W	100	1.8	157	S 23 E	
1260.5	8.00	3.3	317	N 43 W	100	1.9	156	S 24 E	
1264.5	8.00	4.6	304	N 55 W	70	1.9	156	S 24 E	
1272.5	8.00	2.5	290	N 70 W	100	1.8	153	S 27 E	
1274.5	8.00	5.2	304	N 55 W	100	1.8	154	S 26 E	
1276.5	8.00	6.9	309	N 51 W	100	1.8	153	S 27 E	
1282.5	8.00	23.9	316	N 44 W	100	1.8	155	S 25 E	
1284.5	8.00	52.9	313	N 47 W	69	1.9	154	S 26 E	
1286.5	8.00	52.1	305	N 55 W	97	1.9	153	S 27 E	
1288.5	8.00	30.6	301	N 59 W	100	1.9	153	S 27 E	
1290.5	8.00	25.3	298	N 62 W	100	1.9	154	S 26 E	
1292.5	8.00	19.3	290	N 70 W	100	1.9	153	S 27 E	
1298.5	8.00	18.7	316	N 44 W	100	1.8	150	S 30 E	
1300.5	8.00	17.9	305	N 55 W	100	1.8	150	S 30 E	
1302.5	8.00	17.4	294	N 65 W	100	1.8	150	S 30 E	
1304.5	8.00	16.3	281	N 79 W	86	1.8	149	S 31 E	
1306.5	8.00	25.0	265	S 83 W	75	1.8	150	S 30 E	
1310.5	8.00	31.5	296	N 64 W	100	1.9	148	S 32 E	
1314.5	8.00	10.1	296	N 64 W	100	1.8	148	S 32 E	
1316.5	8.00	7.0	319	N 41 W	100	1.9	146	S 34 E	
1320.5	8.00	9.5	3	N 3 E	100	1.8	146	S 34 E	
1326.5	8.00	45.1	7	N 7 E	100	1.8	146	S 34 E	
1330.5	8.00	30.7	6	N 6 E	100	1.9	148	S 32 E	
1332.5	8.00	20.6	357	N 3 W	100	1.9	146	S 34 E	
1334.5	8.00	21.5	16	N 16 E	100	1.9	147	S 33 E	
1336.5	8.00	2.1	279	N 81 W	100	1.9	146	S 34 E	
1340.5	8.00	7.1	267	S 87 W	100	1.8	146	S 34 E	
1342.5	8.00	7.7	264	S 84 W	100	1.9	147	S 33 E	
1344.5	8.00	7.6	248	S 68 W	100	1.8	149	S 31 E	
1346.5	8.00	7.2	234	S 54 W	100	1.8	148	S 32 E	
1348.5	8.00	5.7	220	S 40 W	100	1.8	150	S 30 E	
1350.5	8.00	5.0	243	S 63 W	100	1.8	151	S 29 E	
1352.5	8.00	5.5	272	N 88 W	100	1.9	151	S 29 E	
1354.5	8.00	6.6	285	N 74 W	100	1.9	152	S 28 E	
1356.5	8.00	6.9	288	N 72 W	100	1.9	152	S 28 E	

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11/28/86

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

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1358.5	8.00	6.9	288	N 72 W	100	1.9	152	S 28 E
1360.5	8.00	5.2	279	N 81 W	100	1.9	153	S 27 E
1362.5	8.00	4.3	263	S 83 W	100	1.9	153	S 27 E
1364.5	8.00	4.4	271	N 89 W	100	2.0	154	S 26 E
1365.5	8.00	4.0	264	S 84 W	100	2.0	153	S 27 E
1368.5	8.00	3.3	271	N 89 W	100	2.1	153	S 27 E
1370.5	8.00	6.3	259	S 79 W	100	2.0	153	S 27 E
1372.5	8.00	24.4	261	S 81 W	100	2.0	153	S 27 E
1392.5	8.00	5.7	292	N 68 W	100	2.1	150	S 30 E
1400.5	8.00	34.2	287	N 73 W	100	2.0	149	S 31 E
1408.5	8.00	3.6	310	N 58 W	100	2.0	148	S 32 E
1410.5	8.00	6.2	301	N 59 W	100	2.1	149	S 31 E
1412.5	8.00	7.2	283	N 77 W	100	2.1	148	S 32 E
1414.5	8.00	6.8	279	N 81 W	100	2.1	149	S 31 E
1416.5	8.00	9.1	289	N 71 W	100	2.1	147	S 33 E
1418.5	8.00	6.6	309	N 51 W	100	2.2	148	S 32 E
1420.5	8.00	4.1	293	N 67 W	100	2.2	147	S 33 E
1452.5	8.00	2.2	258	S 78 W	100	2.2	152	S 28 E
1454.5	8.00	1.3	232	S 52 W	100	2.2	151	S 29 E
1456.5	8.00	1.5	222	S 42 W	100	2.2	150	S 30 E
1454.5	8.00	2.4	192	S 12 W	100	2.2	151	S 29 E
1456.5	8.00	5.1	184	S 4 W	100	2.2	151	S 29 E
1458.5	8.00	5.6	169	S 11 E	100	2.2	150	S 30 E
1470.5	8.00	4.6	169	S 11 E	100	2.2	151	S 29 E
1475.5	8.00	20.4	95	S 85 E	100	2.2	151	S 29 E
1480.5	8.00	3.1	55	N 55 E	100	2.1	152	S 28 E
1482.5	8.00	3.3	54	N 54 E	100	2.2	151	S 29 E
1490.5	8.00	25.5	36	N 36 E	100	2.2	151	S 29 E
1494.5	8.00	12.8	77	N 77 E	100	2.1	152	S 28 E
1496.5	8.00	26.7	98	S 82 E	100	2.1	153	S 27 E
1502.5	8.00	34.5	138	S 42 E	100	2.1	153	S 27 E
1506.5	8.00	34.1	145	S 35 E	100	2.1	153	S 27 E
1508.5	8.00	28.2	141	S 39 E	94	2.1	153	S 27 E
1510.5	8.00	38.5	132	S 48 E	100	2.1	154	S 26 E
1512.5	8.00	37.3	148	S 40 E	56	2.0	154	S 26 E
1514.5	8.00	27.4	137	S 43 E	100	2.0	155	S 25 E
1516.5	8.00	42.2	100	S 80 E	100	2.0	154	S 26 E
1522.5	8.00	33.9	93	S 87 E	100	2.0	156	S 24 E
1532.5	8.00	8.3	96	S 84 E	100	2.1	154	S 26 E
1536.5	8.00	8.9	80	N 80 E	100	2.0	154	S 26 E

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11/28/86

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1538.5	8.00	38.5	53	N 53 E	100	2.0	153	S 27 E
1542.5	8.00	34.4	39	N 39 E	81	2.1	152	S 28 E
1544.5	8.00	35.5	35	N 35 E	71	2.1	152	S 28 E
1546.5	8.00	31.8	337	N 23 W	100	2.1	151	S 29 E
1550.5	8.00	14.5	314	N 45 W	100	2.0	152	S 28 E
1552.5	8.00	13.5	312	N 48 W	100	2.0	153	S 27 E
1554.5	8.00	28.9	247	S 67 W	100	2.1	153	S 27 E
1556.5	8.00	32.1	188	S 8 W	100	2.1	153	S 27 E
1558.5	8.00	33.4	186	S 6 W	100	2.0	153	S 27 E
1562.5	8.00	15.8	196	S 16 W	100	2.0	151	S 29 E
1570.5	8.00	29.2	206	S 25 W	61	2.0	148	S 32 E
1572.5	8.00	41.8	212	S 32 W	92	2.0	148	S 32 E
1574.5	8.00	33.7	186	S 6 W	100	1.9	148	S 32 E
1576.5	8.00	42.4	184	S 4 W	100	1.8	147	S 33 E
1578.5	8.00	42.6	186	S 6 W	100	1.8	146	S 34 E
1580.5	8.00	43.0	174	S 6 E	100	1.7	146	S 34 E
1582.5	8.00	44.2	165	S 15 E	62	1.7	145	S 35 E
1584.5	8.00	47.8	168	S 12 E	100	1.6	145	S 35 E
1602.5	8.00	9.7	219	S 39 W	58	1.5	145	S 35 E
1604.5	8.00	9.3	211	S 31 W	100	1.4	146	S 34 E
1606.5	8.00	10.7	304	N 56 W	100	1.5	146	S 34 E
1608.5	8.00	9.6	298	N 62 W	100	1.5	144	S 36 E
1610.5	8.00	13.6	275	N 83 W	96	1.6	144	S 36 E
1612.5	8.00	16.0	267	S 87 W	100	1.5	144	S 36 E
1614.5	8.00	16.1	273	N 87 W	100	1.5	144	S 36 E
1616.5	8.00	14.2	267	S 87 W	100	1.6	142	S 38 E
1618.5	8.00	13.8	265	S 85 W	100	1.6	143	S 37 E
1620.5	8.00	6.4	279	N 81 W	100	1.6	144	S 36 E
1622.5	8.00	14.9	275	N 85 W	100	1.7	142	S 38 E
1624.5	8.00	13.1	272	N 88 W	100	1.7	142	S 38 E
1626.5	8.00	13.3	273	N 87 W	100	1.7	142	S 38 E
1628.5	8.00	14.1	277	N 83 W	100	1.7	141	S 39 E
1630.5	8.00	12.8	271	N 89 W	100	1.7	140	S 40 E
1632.5	8.00	11.8	268	S 88 W	100	1.6	138	S 42 E
1634.5	8.00	12.7	265	S 85 W	100	1.6	140	S 40 E
1636.5	8.00	12.9	243	S 63 W	100	1.5	138	S 42 E
1638.5	8.00	12.0	253	S 73 W	100	1.6	138	S 42 E
1640.5	8.00	12.3	235	S 53 W	100	1.5	140	S 40 E
1642.5	8.00	18.9	247	S 67 W	100	1.5	140	S 40 E
1644.5	8.00	7.6	256	S 75 W	100	1.5	140	S 40 E

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11728786

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

## \*\*\*\*BORCHOLE\*\*\*\*

DEPTH	WL	ANG	AZ	BEARINGS	GRADE	DA	DAZ	BEARING
1545.5	8.00	6.3	231	S 71 W	100	1.5	138	S 42 E
1648.5	8.00	7.4	231	S 51 W	100	1.5	140	S 40 E
1650.5	8.00	9.5	246	S 65 W	100	1.5	139	S 41 E
1654.5	8.00	42.6	296	N 64 W	100	1.5	141	S 39 E
1658.5	8.00	34.1	344	N 15 W	100	1.6	140	S 40 E
1650.5	8.00	18.7	343	N 17 W	100	1.6	141	S 39 E
1652.5	8.00	32.1	343	N 17 W	100	1.7	141	S 39 E
1654.5	8.00	23.4	342	N 18 W	100	1.7	140	S 40 E
1684.5	8.00	1.9	293	N 67 W	100	1.6	138	S 42 E
1686.5	8.00	1.8	260	S 80 W	100	1.6	138	S 42 E
1688.5	8.00	2.2	245	S 65 W	100	1.5	137	S 43 E
1698.5	8.00	2.0	252	S 72 W	100	1.6	135	S 45 E
1704.5	8.00	1.5	240	S 60 W	100	1.6	134	S 46 E
1706.5	8.00	3.3	233	S 53 W	100	1.6	134	S 46 E
1708.5	8.00	4.0	210	S 30 W	100	1.5	135	S 45 E
1710.5	8.00	5.5	209	S 29 W	100	1.5	136	S 44 E
1712.5	8.00	6.1	197	S 17 W	100	1.6	136	S 44 E
1726.5	8.00	0.9	229	S 49 W	100	1.6	144	S 36 E
1728.5	8.00	1.1	230	S 50 W	100	1.6	144	S 36 E
1730.5	8.00	1.0	222	S 42 W	100	1.5	143	S 37 E
1736.5	8.00	1.2	218	S 38 W	100	1.6	146	S 34 E
1738.5	8.00	1.5	243	S 63 W	100	1.5	144	S 36 E
1740.5	8.00	2.0	240	S 60 W	100	1.5	144	S 36 E
1742.5	8.00	2.2	253	S 73 W	100	1.5	143	S 37 E
1744.5	8.00	1.5	258	S 78 W	100	1.5	143	S 37 E
1746.5	8.00	1.3	233	S 53 W	100	1.5	144	S 36 E
1748.5	8.00	2.4	237	S 57 W	100	1.5	144	S 36 E
1750.5	8.00	3.6	229	S 49 W	100	1.5	142	S 38 E
1752.5	8.00	4.5	194	S 14 W	100	1.6	143	S 37 E
1756.5	8.00	7.6	178	S 2 E	100	1.5	142	S 38 E
1758.5	8.00	26.6	177	S 3 E	56	1.5	143	S 37 E
1762.5	8.00	7.3	165	S 15 E	75	1.5	142	S 38 E
1764.5	8.00	6.7	141	S 39 E	100	1.5	146	S 34 E
1766.5	8.00	6.3	157	S 23 E	100	1.4	143	S 37 E
1770.5	8.00	4.9	150	S 30 E	100	1.4	144	S 36 E
1772.5	8.00	4.0	176	S 4 E	100	1.4	143	S 37 E
1774.5	8.00	4.3	179	S 1 E	100	1.4	141	S 39 E
1776.5	8.00	3.9	182	S 2 W	100	1.4	143	S 37 E
1778.5	8.00	5.0	161	S 19 E	100	1.3	143	S 37 E
1780.5	8.00	2.4	159	S 21 E	100	1.3	143	S 37 E

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

11/28/86

DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
1732.5	8.00	4.1	105	S 74 E	69	1.3	144	S 36 E
1786.5	8.00	2.7	115	S 65 E	96	1.3	141	S 39 E
1796.5	8.00	21.6	123	S 57 E	51	1.3	142	S 38 E
1808.5	8.00	3.7	146	S 34 E	100	1.3	147	S 33 E
1816.5	8.00	27.1	162	S 18 E	95	1.1	151	S 29 E
1818.5	8.00	12.9	190	S 10 W	100	1.2	146	S 34 E
1820.5	8.00	16.1	217	S 37 W	100	1.2	143	S 37 E
1824.5	8.00	5.8	219	S 39 W	100	1.2	147	S 33 E
1826.5	8.00	2.0	307	N 53 W	56	1.1	148	S 32 E
1840.5	8.00	3.5	291	N 69 W	100	1.2	140	S 40 E
1842.5	8.00	5.3	282	N 78 W	100	1.3	144	S 36 E
1850.5	8.00	2.2	289	N 71 W	100	1.1	147	S 33 E
1852.5	8.00	28.8	344	N 15 W	100	1.1	145	S 35 E
1856.5	8.00	23.5	341	N 19 W	88	1.2	143	S 37 E
1850.5	8.00	11.7	317	N 43 W	100	1.2	144	S 36 E
1864.5	8.00	17.4	319	N 41 W	70	1.1	146	S 34 E
1856.5	8.00	9.3	352	N 8 W	100	1.1	148	S 32 E
1858.5	8.00	6.0	353	N 7 W	100	1.1	145	S 35 E
1870.5	8.00	8.2	347	N 13 W	100	1.1	148	S 32 E
1878.5	8.00	30.9	343	N 17 W	100	1.1	141	S 39 E
1880.5	8.00	31.3	354	N 5 W	100	1.1	142	S 38 E
1882.5	8.00	6.7	356	N 4 W	100	1.1	141	S 39 E
1884.5	8.00	31.9	354	N 6 W	100	1.1	142	S 38 E
1886.5	8.00	33.9	345	N 15 W	100	1.1	139	S 41 E
1888.5	8.00	40.0	342	N 18 W	74	1.1	138	S 42 E
1890.5	8.00	8.9	327	N 33 W	100	1.1	140	S 40 E
1900.5	8.00	28.4	313	N 47 W	100	1.1	139	S 41 E
1920.5	8.00	50.5	331	N 29 W	64	1.1	139	S 41 E
1928.5	8.00	4.7	1	N 1 E	100	1.2	138	S 42 E
1932.5	8.00	5.0	5	N 6 E	100	1.1	137	S 43 E
1950.5	8.00	31.4	14	N 14 E	100	1.2	134	S 46 E
1954.5	8.00	19.2	32	N 32 E	100	1.2	134	S 46 E
1958.5	8.00	4.8	1	N 1 E	100	1.2	133	S 47 E
1960.5	8.00	6.3	355	N 5 W	69	1.2	133	S 47 E
1952.5	8.00	36.9	30	N 30 E	99	1.2	133	S 47 E
1972.5	8.00	32.4	117	S 63 E	82	1.2	129	S 51 E
1974.5	8.00	32.6	119	S 61 E	44	1.2	129	S 51 E
1976.5	8.00	35.7	105	S 75 E	100	1.3	130	S 50 E
1978.5	8.00	43.0	75	N 75 E	62	1.3	132	S 48 E
1980.5	8.00	43.1	67	N 67 E	100	1.3	129	S 51 E

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

OREGON

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1985.5	8.00	34.8	115	S 65 E	98	1.2	131	S 49 E
1995.5	8.00	3.7	96	S 84 E	83	1.3	128	S 52 E
1998.5	8.00	1.9	79	N 79 E	100	1.3	129	S 51 E
2012.5	8.00	32.0	33	N 33 E	78	1.2	128	S 52 E
2025.5	8.00	9.1	15	N 15 E	100	1.1	122	S 58 E
2030.5	8.00	26.7	343	N 17 W	100	1.1	114	S 66 E
2045.5	8.00	3.1	308	N 52 W	86	1.2	120	S 60 E
2048.5	8.00	3.6	313	N 47 W	70	1.2	119	S 61 E
2050.5	8.00	4.4	336	N 24 W	100	1.2	119	S 61 E
2052.5	8.00	9.6	328	N 32 W	86	1.2	120	S 60 E
2058.5	8.00	7.4	343	N 17 W	100	1.2	120	S 60 E
2050.5	8.00	7.4	339	N 21 W	100	1.2	118	S 62 E
2052.5	8.00	4.5	344	N 16 W	100	1.2	120	S 60 E
2058.5	8.00	2.6	17	N 17 E	100	1.2	116	S 64 E
2070.5	8.00	8.5	52	N 52 E	100	1.2	114	S 66 E
2072.5	8.00	11.1	46	N 46 E	100	1.1	111	S 69 E
2074.5	8.00	7.7	49	N 49 E	88	1.2	111	S 69 E
2076.5	8.00	14.6	53	N 53 E	100	1.2	112	S 68 E
2078.5	8.00	21.4	41	N 41 E	100	1.2	112	S 68 E
2080.5	8.00	23.4	17	N 17 E	94	1.2	110	S 70 E
2088.5	8.00	40.9	354	N 6 W	58	1.1	105	S 75 E
2098.5	8.00	23.2	355	N 5 W	62	1.2	104	S 76 E
2104.5	8.00	0.7	362	N 8 W	82	1.2	105	S 75 E
2106.5	8.00	1.7	347	N 13 W	100	1.2	108	S 72 E
2108.5	8.00	3.0	344	N 16 W	100	1.1	104	S 76 E
2122.5	8.00	42.2	10	N 10 E	100	0.9	103	S 77 E
2124.5	8.00	20.8	82	N 82 E	85	1.0	97	S 83 E
2126.5	8.00	18.0	101	S 79 E	100	1.0	97	S 83 E
2134.5	8.00	33.3	108	S 72 E	84	1.0	102	S 78 E
2136.5	8.00	31.5	102	S 78 E	63	1.1	101	S 79 E
2144.5	8.00	37.1	161	S 19 E	82	1.1	102	S 78 E
2152.5	8.00	6.2	182	S 2 W	100	1.1	100	S 80 E
2170.5	8.00	37.0	186	S 5 W	83	0.9	100	S 80 E
2172.5	8.00	31.1	173	S 7 E	99	0.9	99	S 81 E
2174.5	8.00	30.3	165	S 15 E	59	0.9	97	S 83 E
2180.5	8.00	36.2	152	S 28 E	88	0.8	95	S 85 E
2182.5	8.00	34.9	155	S 25 E	79	0.8	93	S 87 E
2186.5	8.00	30.5	191	S 11 W	100	0.8	96	S 84 E
2192.5	8.00	34.4	224	S 44 W	58	0.8	93	S 87 E
2194.5	8.00	35.0	220	S 40 W	70	0.8	95	S 85 E

OREGON NATURAL GAS

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MIST

COLUMBIA

OREGON

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\*\*FORMATION DIP\*\*

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2204.5	8.00	20.6	261	S 31 W	100	0.8	93	S 87 E
2206.5	8.00	19.4	288	N 72 W	100	0.8	94	S 86 E
2208.5	8.00	17.8	272	N 88 W	52	0.7	89	N 89 E
2222.5	8.00	18.9	299	N 61 W	100	0.7	81	N 81 E
2224.5	8.00	22.8	290	N 70 W	88	0.7	79	N 79 E
2226.5	8.00	21.9	271	N 89 W	100	0.7	80	N 80 E
2228.5	8.00	28.2	245	S 65 W	100	0.6	82	N 82 E
2230.5	8.00	35.0	199	S 19 W	13	0.6	82	N 82 E
2232.5	8.00	47.6	172	S 9 E	57	0.6	86	N 86 E
2242.5	8.00	43.0	163	S 17 E	67	0.6	80	N 80 E
2252.5	8.00	40.1	187	S 7 W	100	0.6	76	N 76 E
2254.5	8.00	37.5	170	S 10 E	71	0.6	74	N 74 E
2256.5	8.00	37.6	193	S 13 W	72	0.5	77	N 77 E
2264.5	8.00	38.0	198	S 18 W	37	0.5	70	N 70 E
2270.5	8.00	39.2	189	S 9 W	76	0.4	62	N 62 E
2272.5	8.00	18.5	177	S 3 E	89	0.4	56	N 56 E
2274.5	8.00	19.2	151	S 29 E	79	0.5	59	N 59 E
2286.5	8.00	25.9	152	S 18 E	90	0.5	50	N 50 E
2298.5	8.00	31.8	173	S 7 E	54	0.4	50	N 50 E
2290.5	8.00	28.1	168	S 12 E	31	0.5	45	N 45 E
2302.5	8.00	36.7	129	S 51 E	100	0.5	42	N 42 E
2306.5	8.00	43.4	142	S 38 E	100	0.5	43	N 43 E
2326.5	8.00	51.8	173	S 7 E	75	0.5	16	N 16 E
2328.5	8.00	50.4	164	S 15 E	75	0.5	20	N 20 E
2332.5	8.00	26.9	200	S 20 W	41	0.5	17	N 17 E
2334.5	8.00	27.9	194	S 14 W	100	0.5	15	N 15 E
2340.5	8.00	43.6	173	S 7 E	79	0.5	12	N 12 E
2342.5	8.00	41.9	160	S 20 E	100	0.5	11	N 11 E
2344.5	8.00	41.4	157	S 23 E	100	0.5	15	N 15 E
2346.5	8.00	35.4	166	S 14 E	67	0.5	15	N 15 E
2348.5	8.00	36.3	168	S 12 E	61	0.6	15	N 15 E
2352.5	8.00	46.9	196	S 15 W	100	0.6	10	N 10 E
2374.5	8.00	23.6	200	S 20 W	36	0.7	8	N 8 E
2378.5	8.00	28.4	155	S 25 E	86	0.8	3	N 3 E
2380.5	8.00	39.0	166	S 14 E	87	0.8	359	N 1 W
2386.5	8.00	35.0	163	S 15 E	88	0.8	1	N 1 E
2392.5	8.00	22.8	222	S 42 W	100	0.8	3	N 3 E
2394.5	8.00	21.5	214	S 34 W	100	0.8	6	N 6 E
2398.5	8.00	15.1	255	S 75 W	100	0.9	1	N 1 E
2400.5	8.00	6.6	243	S 63 W	93	0.8	5	N 5 E

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MIST

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

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2402.5	8.00	0.7	289	N 71 W	100	0.8	9	N 9 E
2408.5	8.00	16.2	295	N 65 W	100	0.9	10	N 10 E
2412.5	8.00	15.0	2	N 2 E	100	1.0	12	N 12 E
2414.5	8.00	16.9	0	N 0 E	100	0.9	14	N 14 E
2416.5	8.00	14.8	4	N 4 E	100	1.0	12	N 12 E
2418.5	8.00	16.9	355	N 4 W	100	1.0	13	N 13 E
2420.5	8.00	10.3	345	N 15 W	100	1.0	13	N 13 E
2422.5	8.00	12.1	347	N 13 W	100	1.0	14	N 14 E
2424.5	8.00	19.7	32	N 32 E	100	1.0	13	N 13 E
2428.5	8.00	19.6	55	N 55 E	100	1.0	17	N 17 E
2432.5	8.00	13.8	36	N 36 E	100	1.0	18	N 18 E
2434.5	8.00	17.4	42	N 42 E	100	1.0	17	N 17 E
2436.5	8.00	14.2	31	N 31 E	100	0.9	16	N 16 E
2438.5	8.00	16.5	28	N 28 E	100	0.9	17	N 17 E
2442.5	8.00	23.2	29	N 29 E	100	0.9	18	N 18 E
2448.5	8.00	11.5	41	N 41 E	96	0.9	18	N 18 E
2452.5	8.00	14.6	18	N 18 E	100	1.0	17	N 17 E
2456.5	8.00	9.7	30	N 30 E	100	0.9	16	N 16 E
2458.5	8.00	8.4	27	N 27 E	100	0.9	15	N 15 E
2460.5	8.00	9.2	8	N 8 E	100	1.0	15	N 15 E
2462.5	8.00	9.3	342	N 18 W	100	1.1	12	N 12 E
2464.5	8.00	10.4	352	N 8 W	100	1.1	14	N 14 E
2466.5	8.00	10.3	354	N 5 W	100	1.1	15	N 15 E
2468.5	8.00	13.0	348	N 12 W	100	1.1	15	N 15 E
2470.5	8.00	6.0	342	N 18 W	100	1.1	13	N 13 E
2472.5	8.00	5.4	337	N 23 W	100	1.1	14	N 14 E
2482.5	8.00	23.9	15	N 15 E	100	0.8	24	N 24 E
2484.5	8.00	20.9	9	N 9 E	100	0.9	24	N 24 E
2486.5	8.00	20.1	350	N 10 W	100	0.9	23	N 23 E
2488.5	8.00	18.3	348	N 12 W	100	0.9	25	N 26 E
2498.5	8.00	11.6	1	N 1 E	100	0.9	24	N 24 E
2500.5	8.00	11.9	353	N 7 W	100	0.9	26	N 26 E
2502.5	8.00	11.9	349	N 11 W	100	0.9	25	N 25 E
2504.5	8.00	12.5	3	N 3 E	100	0.9	28	N 28 E
2506.5	8.00	12.7	355	N 5 W	100	0.9	29	N 29 E
2508.5	8.00	15.1	347	N 13 W	86	0.9	30	N 30 E
2510.5	8.00	13.1	25	N 25 E	100	0.9	29	N 29 E
2512.5	8.00	12.2	26	N 26 E	100	0.9	27	N 27 E
2514.5	8.00	17.9	352	N 8 W	100	0.9	31	N 31 E
2516.5	8.00	25.8	4	N 4 E	100	0.9	33	N 33 E



OREGON NATURAL GAS

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COLUMBIA

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\*\*FORMATION DIP\*\*

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

DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2518.5	8.00	15.7	344	N 15 W	100	0.9	32	N 32 E
2520.5	8.00	26.6	355	N 5 W	100	0.8	35	N 35 E
2522.5	8.00	19.2	12	N 12 E	89	0.7	41	N 41 E
2526.5	8.00	19.6	357	N 3 W	100	0.7	37	N 37 E
2528.5	8.00	17.8	5	N 5 E	100	0.7	32	N 32 E
2530.5	8.00	19.7	12	N 12 E	100	0.8	33	N 33 E
2556.5	8.00	26.5	349	N 11 W	100	0.7	35	N 35 E
2558.5	8.00	19.3	358	N 2 W	100	0.7	34	N 34 E
2560.5	8.00	18.5	14	N 14 E	100	0.7	38	N 38 E
2562.5	8.00	18.9	3	N 3 E	80	0.7	39	N 39 E
2564.5	8.00	17.3	15	N 15 E	100	0.7	34	N 34 E
2566.5	8.00	14.3	16	N 16 E	100	0.6	34	N 34 E
2568.5	8.00	15.3	351	N 9 W	100	0.8	35	N 35 E
2570.5	8.00	13.9	354	N 6 W	100	0.8	34	N 34 E
2572.5	8.00	14.6	355	N 5 W	100	0.8	33	N 33 E
2574.5	8.00	13.0	6	N 6 E	100	0.8	31	N 31 E
2576.5	8.00	14.5	356	N 4 W	52	0.8	34	N 34 E
2578.5	8.00	16.6	6	N 6 E	100	0.8	34	N 34 E
2580.5	8.00	10.8	346	N 14 W	100	0.8	33	N 33 E
2582.5	8.00	18.3	328	N 32 W	100	0.8	36	N 36 E
2584.5	8.00	18.2	328	N 40 W	100	0.8	35	N 35 E
2586.5	8.00	11.4	304	N 56 W	100	0.7	37	N 37 E
2588.5	8.00	17.9	343	N 17 W	100	0.7	39	N 39 E
2590.5	8.00	19.9	348	N 12 W	100	0.7	38	N 38 E
2592.5	8.00	11.9	341	N 19 W	100	0.7	32	N 32 E
2594.5	8.00	17.1	349	N 11 W	100	0.7	32	N 32 E
2596.5	8.00	20.1	353	N 1 W	100	0.7	36	N 36 E
2598.5	8.00	16.9	351	N 9 W	100	0.7	33	N 33 E
2600.5	9.00	20.3	341	N 19 W	100	0.7	34	N 34 E
2602.5	8.00	20.0	358	N 2 W	100	0.7	37	N 37 E
2604.5	8.00	19.2	356	N 4 W	100	0.7	41	N 41 E
2606.5	8.00	29.5	342	N 18 W	100	0.7	43	N 43 E
2612.5	8.00	31.1	332	N 28 W	66	0.5	48	N 48 E
2624.5	8.00	11.1	342	N 18 W	100	0.6	54	N 54 E
2626.5	8.00	6.3	332	N 28 W	100	0.6	59	N 59 E
2630.5	8.00	14.5	313	N 47 W	100	0.6	57	N 57 E
2632.5	8.00	17.2	339	N 21 W	100	0.6	62	N 62 E
2634.5	8.00	17.4	351	N 9 W	100	0.6	65	N 65 E
2636.5	8.00	18.7	343	N 17 W	100	0.6	64	N 64 E
2638.5	8.00	18.5	338	N 22 W	100	0.6	65	N 65 E

## OREGON NATURAL GAS

OM 120-10

MIST

COLUMBIA

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DEPTH	WL	**FORMATION DIP**				****BOREHOLE****		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2640.5	8.00	17.2	352	N 8 W	100	0.6	73	N 73 E
2642.5	8.00	15.8	352	N 8 W	100	0.6	75	N 75 E
2644.5	8.00	13.7	339	N 21 W	100	0.6	76	N 76 E
2646.5	8.00	22.7	16	N 16 E	100	0.6	81	N 81 E
2648.5	8.00	23.1	7	N 7 E	79	0.5	78	N 78 E
2650.5	8.00	23.6	12	N 12 E	64	0.5	82	N 82 E
2652.5	8.00	17.6	26	N 26 E	100	0.5	88	N 88 E
2654.5	8.00	19.7	34	N 34 E	100	0.5	90	N 90 E
2658.5	8.00	12.8	26	N 26 E	100	0.5	88	N 88 E
2660.5	8.00	11.2	16	N 16 E	100	0.5	86	N 86 E
2652.5	8.00	14.9	347	N 13 W	100	0.6	76	N 76 E
2654.5	8.00	20.3	340	N 20 W	100	0.7	74	N 74 E
2656.5	8.00	12.8	4	N 4 E	100	0.7	80	N 80 E
2658.5	8.00	17.7	352	N 8 W	100	0.7	80	N 80 E
2670.5	8.00	12.0	336	N 24 W	100	0.7	82	N 82 E
2672.5	8.00	11.5	321	N 39 W	100	0.7	78	N 78 E
2674.5	8.00	13.2	323	N 37 W	100	0.6	81	N 81 E
2676.5	8.00	13.2	354	N 6 W	60	0.7	85	N 85 E
2678.5	8.00	9.3	344	N 15 W	100	0.7	89	N 89 E
2686.5	8.00	24.5	307	N 53 W	90	0.7	100	S 80 E
2688.5	8.00	17.8	320	N 40 W	100	0.7	97	S 83 E
2690.5	8.00	17.0	327	N 33 W	100	0.8	102	S 78 E
2692.5	8.00	13.1	7	N 7 E	100	0.7	103	S 77 E
2694.5	8.00	16.1	10	N 10 E	100	0.7	105	S 75 E
2696.5	8.00	16.6	9	N 9 E	100	0.8	106	S 74 E
2698.5	8.00	12.9	13	N 13 E	100	0.8	108	S 72 E
2702.5	8.00	35.4	22	N 22 E	74	0.8	109	S 71 E
2710.5	8.00	4.4	44	N 44 E	67	0.7	108	S 72 E
2716.5	8.00	19.8	100	S 80 E	70	0.7	103	S 77 E
2720.5	8.00	26.2	149	S 31 E	84	0.7	98	S 82 E
2722.5	8.00	29.5	163	S 17 E	58	0.7	100	S 80 E
2724.5	8.00	34.6	142	S 38 E	55	0.7	105	S 75 E
2726.5	8.00	39.9	125	S 55 E	59	0.8	104	S 76 E
2728.5	8.00	27.8	117	S 63 E	66	0.8	103	S 77 E
2732.5	8.00	39.8	161	S 19 E	74	0.7	103	S 77 E
2734.5	8.00	44.1	222	S 42 W	80	0.7	104	S 76 E
2736.5	8.00	29.9	219	S 39 W	97	0.7	104	S 76 E
2738.5	8.00	28.9	212	S 32 W	88	0.7	103	S 77 E
2746.5	8.00	14.7	235	S 55 W	100	0.7	107	S 73 E
2748.5	8.00	15.3	255	S 75 W	92	0.7	107	S 73 E

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MIST

COLUMBIA

OREGON

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DEPTH	WL	**FORMATION DIP**				GRADE	*****BOREHOLE*****		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2750.5	8.00	31.1	307	N 53 W	100	0.7	109	S 71 E	
2752.5	8.00	17.9	313	N 47 W	78	0.7	109	S 71 E	
2750.5	8.00	10.6	317	N 43 W	100	0.8	107	S 73 E	
2752.5	8.00	12.3	288	N 72 W	100	0.7	109	S 71 E	
2754.5	8.00	27.9	286	N 74 W	100	0.7	111	S 69 E	
2756.5	8.00	24.4	277	N 83 W	55	0.7	108	S 72 E	

