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OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA                        OREGON
06/22/88



INTERVAL     501.0 TO  2769.0
RUN           1               RLAC 12735.
ENGINEER  M. HINDS               MR. THOMAS          MAG DEC     [illegible]

**********************************************
* SEARCH LENGTH=3", WINDOW LENGTH=8', STEP    *
*  LENGTH=2'                                  *
*      4     0     ?     0     5              *
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                  **FORMATION DIP**              ****BOREHOLE*****
   DEPTH   WL     ANG    AZ BEARING   GRADE       DA  DAZ BEARING

   502.0  8.00   12.7    72   N 72 E    100       0.3  237  S 57 W
   504.0  8.00   15.3    70   N 70 E    100       0.3  234  S 54 W
   506.0  8.00   11.9    54   N 54 E    100       0.3  227  S 47 W
   510.0  8.00   14.6    68   N 68 E    100       0.2  243  S 63 W
   512.0  8.00   14.8    91   S 89 E    100       0.2  258  S 78 W
   514.0  8.00   13.1    90   N 90 E    100       0.4  262  S 82 W
   516.0  8.00   11.8    83   N 83 E    100       0.4  258  S 78 W
   518.0  8.00   10.5    86   N 86 E    100       0.5  261  S 81 W
   520.0  8.00   10.1    88   N 88 E    100       0.5  262  S 82 W
   522.0  8.00    9.6    91   S 89 E    100       0.5  261  S 81 W
   524.0  8.00    3.6   235   S 55 W    100       0.5  262  S 82 W
   526.0  8.00    1.4   221   S 41 W    100       0.5  267  S 87 W
   528.0  8.00    3.0   249   S 69 W    100       0.5  270  N 90 W
   530.0  8.00    4.2   262   S 82 W    100       0.5  273  N 87 W
   532.0  8.00    4.9   270   N 90 W    100       0.5  283  N 77 W
   534.0  8.00    5.2   254   S 74 W    100       0.6  287  N 73 W
   536.0  8.00    6.4   237   S 57 W    100       0.6  286  N 74 W
   538.0  8.00    6.9   224   S 44 W    100       0.5  293  N 67 W
   540.0  8.00    6.5   223   S 43 W    100       0.5  298  N 62 W
   542.0  8.00    5.4   221   S 41 W    100       0.5  313  N 47 W
   544.0  8.00    4.9   234   S 54 W    100       0.5  326  N 34 W
   546.0  8.00    5.1   244   S 64 W    100       0.4  334  N 26 W
   548.0  8.00    5.2   251   S 71 W    100       0.4  340  N 20 W
   550.0  8.00    4.5   245   S 65 W    100       0.3  347  N 13 W
   552.0  8.00    2.9   232   S 52 W    100       0.3    1  N  1 E
   554.0  8.00    2.6   226   S 46 W    100       0.4    3  N  3 E
   556.0  8.00    2.1   214   S 34 W    100       0.3    5  N  5 E
   558.0  8.00    2.1   209   S 29 W    100       0.4   13  N 13 E
   560.0  8.00    2.1   203   S 23 W    100       0.4   12  N 12 E
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OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA                                OREGON
08/22/88



                        **FORMATION DIP**              *****BOREHOLE*****
   DEPTH    WL       ANG    AZ  BEARING   GRADE          DA   DAZ  BEARING

   562.0   8.00     3.1   191   S 11 W     100          0.4    17   N 17 E
   564.0   8.00     3.5   190   S 10 W     100          0.4    13   N 13 E
   566.0   8.00     3.8   222   S 42 W     100          0.4    15   N 15 E
   568.0   8.00     3.3   249   S 69 W     100          0.4    19   N 19 E
   570.0   8.00     2.8   265   S 85 W     100          0.4    21   N 21 E
   572.0   8.00     3.3   283   N 77 W     100          0.5    17   N 17 E
   574.0   8.00     3.1   279   N 81 W     100          0.5    14   N 14 E
   576.0   3.00     4.5   271   N 89 W     100          0.5    14   N 14 E
   578.0   8.00     4.3   255   S 75 W     100          0.5    13   N 13 E
   580.0   8.00     7.3   255   S 75 W     100          0.5    10   N 10 E
   582.0   8.00     3.0   254   S 74 W     100          0.5     9   N  9 E
   588.0   8.00     9.4   241   S 61 W     100          0.7     0   N  0 E
   590.0   8.00     9.4   229   S 49 W     100          0.8   357   N  3 W
   592.0   8.00     9.2   192   S 12 W     100          0.9   357   N  3 W
   594.0   8.00     8.8   181   S  1 W     100          1.0   355   N  5 W
   596.0   8.00     7.5   191   S 11 W     100          1.0   354   N  6 W
   598.0   8.00     8.1   202   S 22 W     100          1.0   354   N  6 W
   600.0   8.00     8.3   203   S 23 W     100          1.0   354   N  6 W
   602.0   8.00     9.9   202   S 22 W     100          1.1   357   N  3 W
   604.0   8.00    10.1   199   S 19 W     100          1.1     0   N  0 E
   606.0   8.00    13.2   190   S 10 W     100          1.1     1   N  1 E
   608.0   8.00    16.9   176   S  4 E     100          1.0     2   N  2 E
   610.0   8.00    14.1   195   S 15 W     100          1.1     6   N  6 E
   612.0   8.00    13.9   204   S 24 W     100          1.1     6   N  6 E
   614.0   8.00    17.4   202   S 22 W     100          1.1     6   N  6 E
   616.0   8.00    17.6   190   S 10 W     100          1.0     5   N  5 E
   618.0   8.00    16.2   182   S  2 W     100          1.0     4   N  4 E
   620.0   8.00    16.2   178   S  2 E     100          0.9     6   N  6 E
   622.0   8.00    15.4   166   S 14 E     100          0.9     5   N  5 E
   624.0   8.00     9.8   159   S 21 E     100          0.9     6   N  6 E
   626.0   8.00     7.5   161   S 19 E     100          0.8     4   N  4 E
   628.0   8.00     6.6   157   S 23 E     100          0.9     4   N  4 E
   630.0   8.00     4.4   150   S 30 E     100          0.8     5   N  5 E
   632.0   8.00     2.9   147   S 33 E     100          0.8     5   N  5 E
   634.0   8.00     2.6   147   S 33 E     100          0.7     7   N  7 E
   636.0   8.00     2.4   139   S 41 E     100          0.7     5   N  5 E
   638.0   8.00     2.3   137   S 43 E     100          0.7     6   N  6 E
   640.0   8.00     2.3   121   S 59 E     100          0.6     8   N  8 E
   642.0   8.00     2.0   120   S 60 E     100          0.6     8   N  8 E
   644.0   8.00     1.9   143   S 37 E     100          0.6     9   N  9 E
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OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA                          OREGON
08/22/85



                  **FORMATION DIP**                    ****BOREHOLE*****
   DEPTH    WL       ANG    AZ BEARING   GRADE          DA  DAZ BEARING

   646.0   8.00     2.4   143   S 37 E     100          0.6    6  N  6 E
   658.0   8.00     2.5   186   S  6 W     100          0.5   24  N 24 E
   660.0   8.00     2.3   194   S 14 W     100          0.6   29  N 29 E
   662.0   8.00     2.1   198   S 18 W     100          0.6   27  N 27 E
   664.0   8.00     1.7   202   S 22 W     100          0.6   17  N 17 E
   666.0   8.00     1.7   200   S 20 W     100          0.7   17  N 17 E
   668.0   8.00     2.0   240   S 60 W     100          0.7   21  N 21 E
   674.0   8.00     4.4   241   S 61 W     100          0.7   26  N 26 E
   688.0   8.00     2.2   286   N 74 W     100          0.9   43  N 43 E
   690.0   8.00     2.5   266   S 86 W     100          0.9   44  N 44 E
   692.0   8.00     4.5   307   N 53 W     100          1.0   44  N 44 E
   694.0   8.00     4.1   305   N 55 W     100          1.0   45  N 45 E
   696.0   8.00     4.6   290   N 70 W     100          1.0   44  N 44 E
   698.0   8.00     5.4   274   N 86 W     100          1.1   44  N 44 E
   700.0   8.00     5.6   266   S 86 W     100          1.1   45  N 45 E
   706.0   8.00     2.1   320   N 40 W     100          1.1   49  N 49 E
   708.0   8.00     1.9   329   N 31 W     100          1.1   49  N 49 E
   710.0   8.00     2.4   335   N 25 W     100          1.1   49  N 49 E
   712.0   8.00     3.6   318   N 42 W     100          1.0   52  N 52 E
   714.0   8.00     2.1   329   N 31 W     100          0.9   50  N [illegible] E
   722.0   8.00     5.1   252   S 72 W     100          0.9   48  N 48 E
   724.0   8.00     5.4   249   S 69 W     100          0.9   52  N [illegible] E
   726.0   8.00     3.6   242   S 62 W     100          0.9   53  N 53 E
   730.0   8.00     7.4   196   S 16 W     100          0.8   58  N [illegible] E
   732.0   8.00     9.3   190   S 10 W     100          0.7   61  N 61 E
   734.0   8.00    12.1   178   S  2 E     100          0.7   64  N 64 E
   736.0   8.00    12.8   162   S 18 E     100          0.7   66  N 66 E
   738.0   8.00    12.0   167   S 13 E     100          0.7   70  N 70 E
   740.0   8.00    12.3   173   S  7 E     100          0.7   72  N 72 E
   742.0   8.00    12.2   171   S  9 E     100          0.8   72  N 72 E
   744.0   8.00    10.9   171   S  9 E     100          0.8   72  N 72 E
   746.0   8.00    10.1   153   S 27 E     100          0.9   76  N 76 E
   748.0   8.00     9.2   141   S 39 E     100          1.0   81  N 81 E
   750.0   8.00    11.5   188   S  8 W     100          1.1   82  N 82 E
   752.0   8.00    10.6   186   S  6 W     100          1.1   84  N 84 E
   754.0   8.00    11.1   180   S  0 E     100          1.1   85  N [illegible] E
   756.0   8.00    10.9   172   S  8 E     100          1.1   87  N 87 E
   758.0   8.00     9.2   178   S  2 E     100          1.2   87  N 87 E
   760.0   8.00     9.1   184   S  4 W     100          1.3   89  N 89 E
   762.0   8.00     9.0   183   S  3 W     100          1.3   89  N 89 E
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OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA OREGON
08/22/88

		FORMATION DIP				****BOREHOLE*****		
DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
764.0	8.00	8.5	176	S 4 E	100	1.3	89	N 89 E
766.0	8.00	8.7	168	S 12 E	100	1.4	89	N 89 E
768.0	8.00	9.8	237	S 57 W	100	1.3	90	N 90 E
770.0	8.00	9.7	227	S 47 W	100	1.4	88	N 88 E
772.0	8.00	10.2	203	S 23 W	100	1.3	88	N 88 E
774.0	8.00	8.8	194	S 14 W	100	1.3	86	N 86 E
776.0	8.00	9.1	192	S 12 W	100	1.3	84	N 84 E
778.0	8.00	9.2	195	S 15 W	100	1.2	81	N 81 E
780.0	8.00	9.8	198	S 18 W	100	1.2	82	N 82 E
782.0	8.00	8.4	192	S 12 W	100	1.2	79	N 79 E
784.0	8.00	9.7	197	S 17 W	100	1.2	75	N 75 E
786.0	8.00	9.5	198	S 18 W	100	1.2	74	N 74 E
788.0	8.00	10.6	200	S 20 W	100	1.2	73	N 73 E
790.0	8.00	10.0	196	S 16 W	100	1.2	72	N 72 E
792.0	8.00	11.0	209	S 29 W	100	1.2	69	N 69 E
794.0	8.00	11.8	207	S 27 W	100	1.1	66	N 66 E
796.0	8.00	12.0	206	S 26 W	100	1.1	66	N 66 E
798.0	8.00	11.8	207	S 27 W	100	1.0	66	N 66 E
800.0	8.00	12.1	204	S 24 W	100	1.0	63	N 63 E
802.0	8.00	12.4	198	S 18 W	100	0.9	62	N 62 E
804.0	8.00	12.5	194	S 14 W	100	0.9	58	N 58 E
806.0	8.00	14.8	200	S 20 W	100	0.8	57	N 57 E
812.0	8.00	6.3	180	S 0 E	100	0.6	49	N 49 E
814.0	8.00	11.5	158	S 22 E	100	0.6	48	N 48 E
816.0	8.00	8.6	165	S 15 E	100	0.6	49	N 49 E
818.0	8.00	8.3	155	S 25 E	100	0.5	53	N 53 E
820.0	8.00	13.1	133	S 47 E	100	0.5	60	N 60 E
822.0	8.00	9.2	124	S 56 E	100	0.5	67	N 67 E
824.0	8.00	13.9	155	S 25 E	100	0.6	79	N 79 E
826.0	8.00	9.1	198	S 18 W	100	0.7	83	N 83 E
828.0	8.00	8.1	184	S 4 W	100	0.8	85	N 85 E
830.0	8.00	7.9	185	S 5 W	100	0.8	90	N 90 E
832.0	8.00	8.7	185	S 5 W	100	0.9	91	S 89 E
834.0	8.00	8.4	177	S 3 E	100	0.9	91	S 89 E
836.0	8.00	9.2	176	S 4 E	100	1.0	93	S 87 E
838.0	8.00	11.2	175	S 5 E	100	1.1	93	S 87 E
842.0	8.00	16.9	186	S 6 W	100	1.2	89	N 89 E
844.0	8.00	11.6	185	S 5 W	100	1.3	92	S 88 E
846.0	8.00	13.1	155	S 25 E	100	1.4	89	N 89 E
848.0	8.00	12.9	191	S 11 W	100	1.2	89	N 89 E

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OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA                                OREGON
08/22/89


                      **FORMATION DIP**                    ****BOREHOLE*****
   DEPTH   CL       ANG   AZ BEARING   GRADE            DA  DAZ BEARING

   850.0   8.00   12.0   182   S  2 W     100           1.1   86   N 86 E
   852.0   8.00   13.2   191   S 11 W     100           0.9   82   N 82 E
   854.0   8.00    7.4   175   S  5 E     100           0.8   79   N 79 E
   856.0   8.00    4.7   170   S 10 E     100           0.7   72   N 72 E
   858.0   8.00    8.8   235   S 55 W     100           0.6   58   N 58 E
   860.0   8.00   11.8   239   S 59 W     100           0.6   57   N 57 E
   862.0   8.00   10.0   238   S 58 W     100           0.5   54   N 54 E
   864.0   8.00   11.1   227   S 47 W     100           0.6   57   N 57 E
   866.0   8.00   10.6   233   S 53 W     100           0.6   63   N 63 E
   868.0   8.00    9.6   231   S 51 W     100           0.6   79   N 79 E
   870.0   8.00   10.0   222   S 42 W     100           0.6   70   N 70 E
   872.0   8.00    9.8   234   S 54 W     100           0.7   72   N 72 E
   874.0   8.00    7.5   246   S 66 W     100           0.7   76   N 76 E
   876.0   8.00    7.0   249   S 69 W     100           0.8   74   N 74 E
   878.0   8.00    7.4   263   S 83 W     100           0.8   73   N 73 E
   880.0   8.00    6.5   253   S 73 W     100           0.9   77   N 77 E
   882.0   8.00    8.8   246   S 66 W     100           0.9   77   N 77 E
   884.0   8.00    9.1   237   S 57 W     100           1.1   79   N 79 E
   886.0   8.00    8.6   236   S 56 W     100           1.1   81   N 81 E
   888.0   8.00    7.4   231   S 51 W     100           1.0   83   N 83 E
   892.0   8.00   13.7   158   S 22 E     100           1.0   91   S 89 E
   894.0   8.00   12.4   156   S 24 E     100           0.9   94   S 86 E
   896.0   8.00   12.2   159   S 21 E     100           0.9   94   S 86 E
   898.0   8.00   13.5   150   S 30 E     100           0.8   97   S 83 E
   900.0   8.00   10.9   151   S 29 E     100           0.7   95   S 85 E
   902.0   8.00    9.2   149   S 31 E     100           0.6   95   S 85 E
   904.0   8.00    7.1   144   S 36 E     100           0.6   89   N 89 E
   906.0   8.00    7.2   141   S 39 E     100           0.5   80   N 80 E
   908.0   8.00    5.5   133   S 47 E     100           0.4   62   N 62 E
   910.0   8.00    5.0   131   S 49 E     100           0.4   50   N 50 E
   912.0   8.00    5.4   133   S 47 E     100           0.3   39   N 39 E
   914.0   8.00    3.8   141   S 39 E     100           0.3   27   N 27 E
   916.0   8.00    4.0   139   S 41 E     100           0.3   20   N 20 E
   918.0   8.00    3.6   143   S 37 E     100           0.2    3   N  3 E
   920.0   8.00    3.2   141   S 39 E     100           0.3  352   N  8 W
   922.0   8.00    3.0   143   S 37 E     100           0.3  342   N 18 W
   924.0   8.00    3.1   144   S 36 E     100           0.4  330   N 30 W
   926.0   8.00    3.5   118   S 62 E     100           0.4  323   N 37 W
   928.0   8.00    2.5   125   S 55 E     100           0.4  317   N 43 W
   930.0   8.00    2.5   108   S 72 E     100           0.5  311   N 49 W
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  COLUMBIA                                      OREGON
  08/22/88


                       **FORMATION DIP**                 *****BOREHOLE*****
    DEPTH   CL        ANG   AZ BEARING  GRADE          DA  DAZ BEARING


     932.0  8.00      2.5  107   S 73 E    100         0.6  309  N 51 W
     934.0  8.00      4.1  134   S 46 E    100         0.6  311  N 49 W
     936.0  8.00      6.4  131   S 49 E    100         0.6  307  N 53 W
     938.0  5.00      1.2  145   S 35 E    100         0.7  305  N 55 W
     940.0  8.00      1.4  134   S 46 E    100         0.7  301  N 59 W
     942.0  8.00      1.6  137   S 43 E    100         0.8  301  N 59 W
     944.0  8.00      3.7  107   S 73 E    100         0.8  299  N 61 W
     952.0  8.00      8.1   40   N 40 E    100         1.1  298  N 62 W
     954.0  8.00     10.3   21   N 21 E    100         1.1  296  N 64 W
     956.0  8.00      9.1   32   N 32 E    100         1.2  298  N 62 W
     958.0  8.00      6.8   53   N 53 E    100         1.2  297  N 63 W
     960.0  8.00      4.5   82   N 82 E    100         1.3  294  N 66 W
     962.0  8.00      4.5   81   N 81 E    100         1.3  290  N 70 W
     966.0  8.00      5.3   87   N 87 E    100         1.5  286  N 74 W
     968.0  8.00      2.3  109   S 71 E    100         1.6  285  N 75 W
     970.0  8.00      3.6  124   S 56 E    100         1.8  284  N 76 W
     972.0  8.00      4.1  135   S 45 E    100         1.8  283  N 77 W
     974.0  8.00      4.1  114   S 66 E    100         1.9  283  N 77 W
     976.0  5.00      4.6  115   S 65 E    100         1.9  282  N 78 W
     996.0  9.00     12.4  114   S 66 E    100         2.6  276  N 84 W
    1000.0  8.00     15.4  108   S 72 E    100         2.7  279  N 81 W
    1004.0  8.00     15.7   98   S 82 E    100         2.8  278  N 82 W
    1016.0  8.00      5.1  112   S 68 E    100         3.4  274  N 86 W
    1018.0  8.00      3.2  115   S 65 E    100         3.4  275  N 85 W
    1020.0  8.00      3.6  104   S 76 E    100         3.5  275  N 85 W
    1024.0  8.00      2.5   99   S 81 E    100         3.6  273  N 87 W
    1026.0  8.00      2.9   86   N 86 E    100         3.7  273  N 87 W
    1034.0  8.00      7.9  124   S 56 E    100         4.1  272  N 88 W
    1040.0  8.00     11.8  100   S 80 E    100         4.4  273  N 87 W
    1042.0  8.00      9.5   82   N 82 E    100         4.5  272  N 88 W
    1048.0  8.00      6.6  158   S 22 E    100         4.9  271  N 89 W
    1052.0  8.00      8.9  141   S 39 E    100         5.1  271  N 89 W
    1054.0  8.00      8.9  141   S 39 E    100         5.2  271  N 89 W
    1056.0  8.00     12.8  143   S 37 E    100         5.2  270  N 90 W
    1058.0  8.00     13.5  144   S 36 E    100         5.4  270  N 90 W
    1060.0  8.00     13.5  145   S 35 E    100         5.5  270  N 90 W
    1062.0  8.00     14.0  142   S 38 E    100         5.6  270  N 90 W
    1074.0  8.00      6.6   95   S 85 E    100         6.4  268  S 88 W
    1076.0  8.00      5.8  113   S 67 E    100         6.5  266  S 86 W
    1078.0  8.00      9.2  108   S 72 E    100         6.5  267  S 87 W
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                        **FORMATION DIP**              ****BOREHOLE*****
    DEPTH   WL       ANG   AZ BEARING  GRADE          DA  DAZ BEARING

    1080.0  8.00     6.5  126  S 54 E    100          6.7  267  S 87 W
    1082.0  8.00     6.8  114  S 66 E    100          6.6  266  S 86 W
    1086.0  8.00     6.3  224  S 44 W    100          7.0  265  S 85 W
    1088.0  8.00     4.1  209  S 29 W    100          7.1  265  S 85 W
    1090.0  8.00     5.1  223  S 43 W    100          7.2  265  S 85 W
    1092.0  8.00     4.1  221  S 41 W    100          7.3  264  S 84 W
    1094.0  8.00     4.7  202  S 22 W    100          7.4  264  S 84 W
    1096.0  8.00     2.8  185  S  5 W    100          7.5  263  S 83 W
    1098.0  8.00     4.0  185  S  5 W    100          7.6  263  S 83 W
    1100.0  8.00     3.4  225  S 45 W    100          7.8  263  S 83 W
    1102.0  8.00     3.9  215  S 35 W    100          7.8  263  S 83 W
    1104.0  8.00     6.0  231  S 51 W    100          7.9  262  S 82 W
    1106.0  8.00     4.2  215  S 35 W    100          8.1  262  S 82 W
    1110.0  8.00    15.4  316  N 44 W    100          8.2  263  S 83 W
    1118.0  8.00     3.4  301  N 59 W    100          8.6  261  S 81 W
    1120.0  8.00     2.8  266  S 86 W    100          8.7  261  S 81 W
    1122.0  8.00     2.7  240  S 60 W    100          8.9  261  S 81 W
    1124.0  8.00     2.5  257  S 77 W    100          8.9  261  S 81 W
    1126.0  8.00     2.5  252  S 72 W    100          8.9  260  S 80 W
    1128.0  8.00     1.3  256  S 76 W    100          9.0  260  S 80 W
    1130.0  8.00     6.0  210  S 30 W    100          9.2  260  S 80 W
    1132.0  8.00     5.3  131  S 49 E    100          9.2  260  S 80 W
    1136.0  8.00     1.7  135  S 45 E    100          9.4  260  S 80 W
    1138.0  8.00     1.3  158  S 22 E    100          9.5  260  S 80 W
    1140.0  8.00     0.6  108  S 72 E    100          9.5  260  S 80 W
    1142.0  8.00     1.1   32  N 32 E    100          9.7  261  S 81 W
    1144.0  8.00     2.0   47  N 47 E    100          9.7  260  S 80 W
    1146.0  8.00     1.5  311  N 49 W    100          9.8  260  S 80 W
    1150.0  8.00     4.3  272  N 88 W    100         10.0  260  S 80 W
    1152.0  8.00    10.1  289  N 71 W    100         10.1  260  S 80 W
    1164.0  8.00     7.4  268  S 88 W    100         10.5  261  S 81 W
    1166.0  8.00     8.6  294  N 66 W    100         10.6  260  S 80 W
    1168.0  8.00     7.2  299  N 61 W    100         10.6  259  S 79 W
    1170.0  8.00     9.2  275  N 85 W    100         10.7  259  S 79 W
    1172.0  8.00    12.4  283  N 77 W    100         10.7  259  S 79 W
    1174.0  8.00     5.8  264  S 84 W    100         10.8  259  S 79 W
    1176.0  8.00    12.4  270  N 90 W    100         10.9  259  S 79 W
    1178.0  8.00    12.9  267  S 87 W    100         11.0  259  S 79 W
    1180.0  8.00    12.6  268  S 88 W    100         11.1  259  S 79 W
    1182.0  8.00    14.1  263  S 83 W    100         11.1  259  S 79 W
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    OREGON NATURAL GAS CORP.
    IW 22C-10
    MIST
    COLUMBIA                               OREGON
    08/22/88


                        **FORMATION DIP**              ****BOREHOLE*****
    DEPTH   WL       ANG   AZ BEARING  GRADE          DA  DAZ BEARING

    1192.0  8.00    13.9  281  N 79 W    100         11.3  257  S 77 W
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```
   1194.0   8.00   13.2   281   N 79 W       100        11.4   257   S 77 W
   1196.0   8.00    4.6   234   S 54 W       100        11.5   257   S 77 W
   1198.0   8.00    5.2   212   S 32 W       100        11.6   258   S 78 W
   1208.0   8.00    8.2   260   S 80 W       100        11.8   257   S 77 W
   1212.0   8.00    5.7   285   N 75 W       100        12.1   258   S 78 W
   1222.0   8.00    6.5   314   N 46 W       100        12.6   257   S 77 W
   1224.0   8.00    5.1   282   N 78 W       100        12.4   258   S 78 W
   1226.0   8.00    5.6   275   N 85 W       100        12.5   257   S 77 W
   1228.0   8.00    6.2   309   N 51 W       100        12.6   258   S 78 W
   1232.0   8.00   10.5   289   N 71 W       100        12.6   256   S 76 W
   1236.0   8.00    9.0   347   N 13 W       100        12.6   257   S 77 W
   1238.0   8.00   14.2   319   N 41 W       100        12.6   257   S 77 W
   1240.0   8.00   12.2   282   N 78 W       100        12.6   257   S 77 W
   1246.0   8.00   14.5   247   S 67 W       100        12.8   257   S 77 W
   1248.0   8.00    9.4   233   S 53 W       100        12.8   257   S 77 W
   1252.0   8.00    7.4   269   S 89 W       100        12.8   257   S 77 W
   1254.0   8.00    7.3   245   S 65 W       100        12.8   257   S 77 W
   1256.0   8.00    9.0   278   N 82 W       100        12.9   257   S 77 W
   1258.0   8.00   15.3   267   S 87 W       100        12.9   257   S 77 W
   1260.0   8.00   10.7   282   N 78 W       100        12.9   257   S 77 W
   1262.0   8.00    8.0   282   N 78 W       100        13.0   257   S 77 W
   1264.0   8.00   11.6   304   N 56 W       100        12.9   257   S 77 W
   1266.0   8.00    7.6   274   N 86 W       100        13.1   257   S 77 W
   1268.0   8.00    8.6   258   S 78 W       100        13.1   257   S 77 W
   1270.0   8.00    8.4   263   S 83 W       100        13.2   257   S 77 W
   1272.0   8.00    8.4   286   N 74 W       100        13.1   257   S 77 W
   1274.0   8.00    9.5   294   N 66 W       100        13.2   257   S 77 W
   1276.0   8.00    9.7   281   N 79 W       100        13.1   257   S 77 W
   1278.0   8.00    7.5   303   N 57 W       100        13.2   257   S 77 W
   1280.0   8.00    6.7   289   N 71 W       100        13.2   257   S 77 W
   1282.0   8.00    7.7   278   N 82 W       100        13.2   257   S 77 W
   1284.0   8.00    9.7   265   S 85 W       100        13.2   257   S 77 W
   1286.0   8.00    9.3   273   N 87 W       100        13.2   257   S 77 W
   1288.0   8.00    9.5   273   N 87 W       100        13.2   257   S 77 W
   1290.0   8.00    9.3   266   S 86 W       100        13.2   257   S 77 W
   1292.0   8.00    9.8   267   S 87 W       100        13.2   257   S 77 W
   1294.0   8.00   10.1   270   N 90 W       100        13.2   257   S 77 W
   1296.0   8.00   11.0   280   N 80 W       100        13.1   257   S 77 W
   1304.0   8.00    8.8   260   S 80 W       100        13.2   257   S 77 W
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    OREGON NATURAL GAS CORP.
    IW 22D-10
    MIST
    COLUMBIA                               OREGON
    08/22/88



                        **FORMATION DIP**                ****BOREHOLE*****
       DEPTH   WL         ANG    AZ BEARING   GRADE         DA   DAZ BEARING
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```
   1306.0   8.00   10.6   244   S 64 W      100       13.2   257   S 77 W
   1308.0   8.00    9.6   251   S 71 W      100       13.2   257   S 77 W
   1310.0   8.00   12.8   265   S 85 W      100       13.2   257   S 77 W
   1312.0   8.00    6.3   266   S 86 W      100       13.2   257   S 77 W
   1314.0   8.00   10.2   255   S 75 W      100       13.2   257   S 77 W
   1316.0   8.00    8.6   237   S 57 W      100       13.2   257   S 77 W
   1318.0   8.00   11.3   265   S 85 W      100       13.2   257   S 77 W
   1320.0   8.00   11.9   269   S 89 W      100       13.2   257   S 77 W
   1322.0   8.00    9.4   184   S  4 W      100       13.2   257   S 77 W
   1324.0   8.00    7.1   193   S 13 W      100       13.1   257   S 77 W
   1326.0   8.00    6.1   202   S 22 W      100       13.1   257   S 77 W
   1328.0   8.00   12.1   279   N 81 W      100       13.1   257   S 77 W
   1330.0   8.00   12.6   281   N 79 W      100       13.1   257   S 77 W
   1332.0   8.00   14.1   279   N 81 W      100       13.1   257   S 77 W
   1334.0   8.00   13.0   280   N 80 W      100       13.1   257   S 77 W
   1336.0   8.00   12.6   295   N 65 W      100       13.1   257   S 77 W
   1338.0   8.00   12.3   294   N 66 W      100       13.1   257   S 77 W
   1340.0   8.00   12.0   305   N 55 W      100       13.1   257   S 77 W
   1342.0   8.00   11.3   291   N 69 W      100       13.1   257   S 77 W
   1344.0   8.00    9.9   287   N 73 W      100       13.1   257   S 77 W
   1346.0   8.00    8.6   272   N 88 W      100       13.2   257   S 77 W
   1348.0   8.00   12.8   281   N 79 W      100       13.2   257   S 77 W
   1350.0   8.00   10.7   284   N 76 W      100       13.2   257   S 77 W
   1352.0   8.00   11.5   272   N 88 W      100       13.3   257   S 77 W
   1354.0   8.00   10.2   287   N 73 W      100       13.3   257   S 77 W
   1356.0   8.00    8.2   343   N 17 W      100       13.1   257   S 77 W
   1358.0   8.00    6.2   316   N 44 W      100       13.2   257   S 77 W
   1360.0   8.00    3.9   289   N 71 W      100       13.2   257   S 77 W
   1362.0   8.00   10.0   256   S 76 W      100       13.2   257   S 77 W
   1370.0   8.00    8.1   263   S 83 W      100       13.1   257   S 77 W
   1372.0   8.00    7.8   268   S 88 W      100       13.1   257   S 77 W
   1374.0   8.00    5.0   247   S 67 W      100       13.1   257   S 77 W
   1376.0   8.00    9.5   230   S 50 W      100       13.2   257   S 77 W
   1390.0   8.00    9.3   269   S 89 W      100       13.1   257   S 77 W
   1392.0   8.00    9.1   267   S 87 W      100       13.1   257   S 77 W
   1396.0   8.00    7.0   268   S 88 W      100       13.1   257   S 77
   1398.0   8.00    7.5   283   N 77 W      100       13.1   257   S 77 W
   1400.0   8.00    8.8   274   N 86 W      100       13.1   257   S 77 W
   1402.0   8.00    8.4   234   S 54 W      100       13.1   257   S 77 W
   1404.0   8.00   12.9   258   S 78 W      100       13.1   258   S 78 W









                                                                    PAGE  10

  OREGON NATURAL GAS CORP.
  IW 22D-10
  MIST
  COLUMBIA                            OREGON
  08/22/88



                  **FORMATION DIP**                ****BOREHOLE*****
    DEPTH   WL     ANG    AZ BEARING   GRADE         DA   DAZ BEARING
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```
   1406.0   8.00   11.4   263   S 83 W      100       13.1   257   S 77 W
   1408.0   8.00    6.6   215   S 35 W      100       13.0   258   S 78 W
   1410.0   8.00    8.7   238   S 58 W      100       13.0   258   S 78 W
   1414.0   8.00    7.4   227   S 47 W      100       13.1   257   S 77 W
   1416.0   8.00    7.4   217   S 37 W      100       13.1   257   S 77 W
   1418.0   8.00   10.4   272   N 88 W      100       13.1   257   S 77 W
   1440.0   8.00   18.0   255   S 75 W      100       13.0   257   S 77 W
   1448.0   8.00    5.8   281   N 79 W      100       13.0   257   S 77 W
   1450.0   8.00   11.3   249   S 69 W      100       13.0   257   S 77 W
   1452.0   8.00   10.6   271   N 89 W      100       13.0   257   S 77 W
   1482.0   8.00   18.9   261   S 81 W      100       12.9   257   S 77 W
   1484.0   8.00   15.6   267   S 87 W      100       12.8   257   S 77 W
   1486.0   8.00   22.4   271   N 89 W      100       12.8   257   S 77 W
   1508.0   8.00   12.5   263   S 83 W      100       12.7   257   S 77 W
   1510.0   8.00   11.7   276   N 84 W      100       12.7   257   S 77 W
   1512.0   8.00   11.1   257   S 77 W      100       12.8   258   S 78 W
   1514.0   8.00   11.2   264   S 84 W      100       12.8   257   S 77 W
   1516.0   8.00   10.7   280   N 80 W      100       12.7   257   S 77 W
   1518.0   8.00   11.7   283   N 77 W      100       12.7   258   S 78 W
   1528.0   8.00   14.2   268   S 88 W      100       12.6   257   S 77 W
   1530.0   8.00    8.5   300   N 60 W      100       12.6   257   S 77 W
   1532.0   8.00    6.4   273   N 87 W      100       12.6   257   S 77 W
   1534.0   8.00   10.1   301   N 59 W      100       12.7   257   S 77 W
   1536.0   8.00   13.7   290   N 70 W      100       12.6   257   S 77 W
   1552.0   8.00   12.3   291   N 69 W      100       12.9   257   S 77 W
   1554.0   8.00   10.7   300   N 60 W      100       12.9   257   S 77 W
   1570.0   8.00   12.5   292   N 68 W      100       12.8   257   S 77 W
   1572.0   8.00   18.1   311   N 49 W      100       12.8   257   S 77 W
   1574.0   8.00   26.3   332   N 28 W      100       12.8   257   S 77 W
   1626.0   8.00   12.4   323   N 37 W      100       12.7   257   S 77 W
   1646.0   8.00    9.8   283   N 77 W      100       12.4   257   S 77 W
   1648.0   8.00    9.6   274   N 86 W      100       12.5   257   S 77 W
   1650.0   8.00    8.8   263   S 83 W      100       12.6   258   S 78 W
   1652.0   8.00   10.1   268   S 88 W      100       12.6   257   S 77 W
   1654.0   8.00    9.7   261   S 81 W      100       12.6   257   S 77 W
   1656.0   8.00    9.1   268   S 88 W      100       12.6   257   S 77 W
   1658.0   8.00    9.8   269   S 89 W      100       12.5   258   S 78 W
   1660.0   8.00    8.2   269   S 89 W      100       12.6   257   S 77 W
   1662.0   8.00    7.9   256   S 76 W      100       12.6   258   S 78 W
   1664.0   8.00    8.5   265   S 85 W      100       12.5   258   S 78 W
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  OREGON NATURAL GAS CORP.
  IW 22C-10
  MIST
  COLUMBIA                               OREGON
  08/22/88



                  **FORMATION DIP**                  *****BOREHOLE*****
     DEPTH   WL       ANG    AZ BEARING  GRADE          DA   DAZ BEARING
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```
  1666.0   8.00    8.3   267   S 87 W      100        12.5   257   S 77 W
  1668.0   8.00    9.3   264   S 84 W      100        12.5   257   S 77 W
  1670.0   8.00    8.2   221   S 41 W      100        12.5   257   S 77 W
  1672.0   8.00    8.2   222   S 42 W      100        12.6   258   S 78 W
  1674.0   8.00    8.3   256   S 76 W      100        12.5   258   S 78 W
  1676.0   8.00    9.9   258   S 78 W      100        12.5   258   S 78 W
  1678.0   8.00    7.2   264   S 84 W      100        12.5   257   S 77 W
  1680.0   8.00    6.5   244   S 64 W      100        12.5   257   S 77 W
  1684.0   8.00    6.9   293   N 67 W      100        12.5   257   S 77 W
  1686.0   8.00    6.7   296   N 64 W      100        12.5   257   S 77 W
  1688.0   8.00    8.6   278   N 82 W      100        12.5   257   S 77 W
  1690.0   8.00    7.6   273   N 87 W      100        12.3   257   S 77 W
  1696.0   8.00    8.6   274   N 86 W      100        12.1   257   S 77 W
  1698.0   8.00    9.5   279   N 81 W      100        12.1   257   S 77 W
  1710.0   8.00    7.2   276   N 84 W      100        12.2   257   S 77 W
  1712.0   8.00    6.7   285   N 75 W      100        12.1   257   S 77 W
  1714.0   8.00    6.6   334   N 26 W      100        12.1   257   S 77 W
  1716.0   8.00    6.2   327   N 33 W      100        12.2   257   S 77 W
  1718.0   8.00    7.0   299   N 61 W      100        12.2   257   S 77 W
  1720.0   8.00    5.0   271   N 89 W      100        12.2   257   S 77 W
  1722.0   8.00    6.5   277   N 83 W      100        12.3   257   S 77 W
  1724.0   8.00    6.4   255   S 75 W      100        12.4   257   S 77 W
  1726.0   8.00    6.1   268   S 88 W      100        12.4   257   S 77 W
  1728.0   8.00   10.8   285   N 75 W      100        12.3   257   S 77 W
  1730.0   8.00    9.3   281   N 79 W      100        12.3   257   S 77 W
  1732.0   8.00   11.2   290   N 70 W      100        12.2   257   S 77 W
  1734.0   8.00   10.4   351   N  9 W      100        12.1   257   S 77 W
  1738.0   8.00    5.2    19   N 19 E      100        12.3   257   S 77 W
  1740.0   8.00    3.7    55   N 55 E      100        12.3   257   S 77 W
  1742.0   8.00    6.6    47   N 47 E      100        12.3   257   S 77 W
  1746.0   8.00    7.1    46   N 46 E      100        12.2   256   S 76 W
  1748.0   8.00    7.5    24   N 24 E      100        12.1   256   S 76 W
  1754.0   8.00    9.2    28   N 28 E      100        12.3   257   S 77 W
  1756.0   8.00    9.1   358   N  2 W      100        12.2   257   S 77 W
  1758.0   8.00    8.7   351   N  9 W      100        12.2   257   S 77 W
  1760.0   8.00   17.5   318   N 42 W      100        12.1   257   S 77 W
  1762.0   8.00   15.5   306   N 54 W      100        12.2   257   S 77 W
  1764.0   8.00   11.9   297   N 63 W      100        12.3   257   S 77 W
  1766.0   8.00   12.3     3   N  3 E      100        12.2   257   S 77 W
  1768.0   8.00   11.4     1   N  1 E      100        12.2   257   S 77 W
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 OREGON NATURAL GAS CORP.
 IW 22D-10
 MIST
 COLUMBIA                         OREGON
 08/22/89



                  **FORMATION DIP**            ****BOREHOLE*****
   DEPTH   WL      ANG   AZ BEARING  GRADE       DA  DAZ BEARING


  1770.0   8.00   12.0     3   N  3 E      100        12.1   257   S 77 W
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```
    1772.0   8.00   11.2     2   N  2  E      100        12.2   257   S 77 W
    1774.0   8.00    9.2    34   N 34  E      100        12.1   257   S 77 W
    1776.0   8.00   16.6    48   N 48  E      100        12.2   257   S 77 W
    1778.0   8.00   18.2    47   N 47  E      100        12.2   257   S 77 W
    1786.0   8.00    2.5    59   N 59  E      100        12.0   256   S 76 W
    1790.0   8.00    1.5    47   N 47  E      100        12.0   256   S 76 W
    1800.0   8.00   10.2    11   N 11  E      100        12.0   257   S 77 W
    1804.0   8.00    3.2   345   N 15  W      100        11.8   257   S 77 W
    1806.0   8.00    0.5   304   N 56  W      100        11.9   257   S 77 W
    1808.0   8.00    8.2   294   N 66  W      100        12.0   257   S 77 W
    1812.0   8.00    7.3   312   N 48  W      100        12.0   257   S 77 W
    1814.0   8.00   10.2   333   N 27  W      100        11.9   257   S 77 W
    1816.0   8.00    7.3   280   N 80  W      100        11.8   257   S 77 W
    1818.0   8.00    4.5   193   S 13  W      100        11.8   257   S 77 W
    1822.0   8.00    9.4   104   S 76  E      100        11.7   257   S 77 W
    1824.0   8.00   10.2    98   S 82  E      100        11.7   257   S 77 W
    1830.0   8.00   17.3   116   S 64  E      100        11.8   256   S 76 W
    1834.0   8.00   19.1   146   S 34  E      100        11.7   257   S 77 W
    1836.0   8.00   14.6   184   S  4  W      100        11.8   257   S 77 W
    1838.0   8.00   16.7   204   S 24  W      100        11.8   257   S 77 W
    1840.0   8.00    9.5   271   N 89  W      100        11.9   257   S 77 W
    1842.0   8.00   13.5   299   N 61  W      100        12.0   257   S 77 W
    1844.0   8.00   14.1   296   N 64  W      100        12.0   257   S 77 W
    1846.0   8.00   13.2   305   N 55  W      100        12.0   257   S 77 W
    1850.0   8.00   16.5   297   N 63  W      100        11.9   257   S 77 W
    1864.0   8.00   12.9   301   N 59  W      100        11.7   256   S 76 W
    1866.0   8.00   13.8   311   N 49  W      100        11.7   256   S 76 W
    1868.0   8.00   13.7   318   N 42  W      100        11.7   256   S 76 W
    1870.0   8.00   13.6   317   N 43  W      100        11.7   256   S 76 W
    1872.0   8.00   13.9   321   N 39  W      100        11.7   257   S 77 W
    1874.0   8.00   13.7   311   N 49  W      100        11.8   257   S 77 W
    1882.0   8.00    9.4   317   N 43  W      100        11.7   257   S 77 W
    1886.0   8.00    9.2   258   S 78  W      100        11.6   257   S 77 W
    1888.0   8.00    8.6   254   S 74  W      100        11.5   257   S 77 W
    1890.0   8.00    5.3   174   S  6  E      100        11.5   256   S 76 W
    1896.0   8.00    8.1   100   S 80  E      100        11.3   257   S 77 W
    1900.0   8.00    8.5    75   N 75  E      100        11.3   257   S 77 W
    1902.0   8.00    9.4    76   N 76  E      100        11.4   257   S 77 W
    1908.0   8.00    4.2    66   N 66  E      100        11.4   257   S 77 W









                                                                            PAGE  13

   OREGON NATURAL GAS CORP.
   IW 22D-10
   MIST
   COLUMBIA                               OREGON
   08/22/88



                   **FORMATION DIP**                   ****BOREHOLE*****
     DEPTH  WL      ANG   AZ BEARING  GRADE         DA  DAZ BEARING
```

```
  1914.0   8.00   10.6    74   N 74 E     100      11.3  257  S 77 W
  1916.0   8.00    7.7    13   N 13 E     100      11.3  257  S 77 W
  1918.0   8.00    6.8    32   N 32 E     100      11.3  257  S 77 W
  1920.0   8.00    6.1   332   N 28 W     100      11.3  257  S 77 W
  1922.0   8.00    9.3   344   N 16 W     100      11.3  258  S 78 W
  1924.0   8.00   15.8   350   N 10 W     100      11.5  258  S 78 W
  1926.0   8.00    8.5   286   N 74 W     100      11.4  257  S 77 W
  1928.0   8.00    7.8   288   N 72 W     100      11.4  257  S 77 W
  1930.0   8.00   13.3   309   N 51 W     100      11.3  257  S 77 W
  1932.0   8.00   10.0   287   N 73 W     100      11.3  257  S 77 W
  1942.0   8.00    4.0   350   N 10 W     100      11.3  258  S 78 W
  1944.0   8.00    4.1   331   N 29 W     100      11.1  258  S 78 W
  1948.0   8.00    4.7   333   N 27 W     100      11.2  258  S 78 W
  1952.0   8.00    7.4   349   N 11 W     100      11.0  258  S 78 W
  1954.0   8.00    8.3   341   N 19 W     100      11.0  257  S 77 W
  1956.0   8.00    3.4   297   N 63 W     100      11.0  257  S 77 W
  1958.0   8.00   11.3   302   N 58 W     100      11.1  257  S 77 W
  1966.0   8.00    7.7   204   S 24 W     100      10.9  257  S 77 W
  1988.0   8.00   10.1   230   S 50 W     100      10.9  258  S 78 W
  1990.0   8.00    5.7   247   S 67 W     100      10.7  257  S 77 W
  1992.0   8.00    2.2   223   S 43 W     100      10.7  257  S 77 W
  1994.0   8.00   10.2   240   S 60 W     100      10.7  256  S 76 W
  1996.0   8.00   10.2   245   S 65 W     100      10.7  257  S 77 W
  2006.0   8.00   20.9   149   S 31 E      90      10.6  256  S 76 W
  2008.0   8.00   18.0   146   S 34 E     100      10.7  256  S 76 W
  2012.0   8.00    9.2    66   N 66 E     100      10.6  256  S 76 W
  2018.0   8.00   12.8    64   N 64 E     100      10.4  256  S 76 W
  2020.0   8.00    4.3    71   N 71 E     100      10.4  256  S 76 W
  2024.0   8.00    2.0     4   N  4 E     100      10.4  256  S 76 W
  2026.0   8.00   13.7     5   N  5 E     100      10.5  256  S 76 W
  2028.0   8.00   12.9   356   N  4 W     100      10.4  256  S 76 W
  2032.0   8.00   10.2    15   N 15 E     100      10.4  256  S 76 W
  2034.0   8.00   10.4    15   N 15 E     100      10.4  256  S 76 W
  2036.0   8.00   11.2    30   N 30 E     100      10.4  257  S 77 W
  2038.0   8.00   10.1    21   N 21 E     100      10.3  256  S 76 W
  2046.0   8.00   10.4    49   N 49 E     100      10.3  256  S 76 W
  2048.0   8.00    9.5    53   N 53 E     100      10.3  257  S 77 W
  2054.0   8.00    9.5     6   N  6 E     100      10.3  257  S 77 W
  2056.0   8.00    9.5     4   N  4 E     100      10.3  257  S 77 W
  2058.0   8.00    6.1   353   N  7 W     100      10.4  257  S 77 W











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  OREGON NATURAL GAS CORP.
  IW 22D-10
  MIST
  COLUMBIA                          OREGON
  08/22/88



                  **FORMATION DIP**              ****BOREHOLE*****
    DEPTH   WL     ANG   AZ BEARING  GRADE         DA  DAZ BEARING
```

```
  2060.0  8.00   6.7   10  N 10 E     100     10.4  257  S 77 W
  2066.0  8.00  12.9   22  N 22 E     100     10.4  257  S 77 W
  2068.0  8.00  12.2   27  N 27 E     100     10.3  258  S 78 W
  2070.0  8.00  12.7   29  N 29 E     100     10.4  258  S 78 W
  2072.0  8.00  11.7   19  N 19 E     100     10.4  257  S 77 W
  2074.0  8.00  12.0   24  N 24 E     100     10.4  258  S 78 W
  2076.0  8.00  11.9    9  N  9 E     100     10.4  258  S 78 W
  2078.0  8.00  11.4    9  N  9 E     100     10.4  258  S 78 W
  2080.0  8.00  13.0  350  N 10 W     100     10.4  258  S 78 W
  2082.0  8.00   1.2   49  N 49 E     100     10.4  258  S 78 W
  2084.0  8.00   1.6  101  S 79 E     100     10.3  258  S 78 W
  2086.0  8.00   3.7  182  S  2 W     100     10.2  258  S 78 W
  2088.0  8.00   2.6  172  S  8 E     100     10.4  258  S 78 W
  2100.0  8.00  18.4  151  S 29 E     100     10.1  259  S 79 W
  2113.0  8.00  14.4   67  N 67 E     100      9.8  243  S 63 W
  2115.0  8.00  21.4   52  N 52 E     100      9.8  343  N 17 W
  2129.0  8.00   5.5   42  N 42 E     100      9.8  260  S 80 W
  2131.0  8.00   4.2   58  N 58 E     100      9.8  260  S 80 W
  2133.0  8.00   5.8   69  N 69 E     100      9.8  260  S 80 W
  2135.0  8.00   4.7   29  N 29 E     100      9.8  260  S 80 W
  2137.0  8.00   3.4   26  N 26 E     100      9.8  260  S 80 W
  2139.0  8.00   2.3   16  N 16 E     100      9.8  260  S 80 W
  2141.0  8.00   1.4   33  N 33 E     100      9.9  260  S 80 W
  2143.0  8.00   3.2   43  N 43 E     100      9.9  260  S 80 W
  2147.0  8.00   8.6   77  N 77 E     100      9.9  259  S 79 W
  2149.0  8.00   5.4   66  N 66 E     100      9.8  259  S 79 W
  2151.0  8.00   5.8   24  N 24 E     100      9.8  259  S 79 W
  2153.0  8.00   6.2   15  N 15 E     100      9.9  259  S 79 W
  2155.0  8.00   6.6    9  N  9 E     100      9.9  259  S 79 W
  2157.0  8.00   6.2    0  N  0 E     100      9.9  259  S 79 W
  2159.0  8.00   5.2  349  N 11 W     100      9.9  259  S 79 W
  2161.0  8.00   5.8  343  N 17 W     100      9.9  259  S 79 W
  2163.0  8.00   7.8  351  N  9 W     100      9.9  259  S 79 W
  2165.0  8.00   9.6  347  N 13 W     100      9.9  259  S 79 W
  2169.0  8.00   4.9  319  N 41 W     100      9.8  259  S 79 W
  2171.0  8.00   5.1  310  N 50 W     100      9.8  259  S 79 W
  2173.0  8.00   5.7  316  N 44 W     100      9.8  259  S 79 W
  2175.0  8.00   6.1  320  N 40 W     100      9.8  259  S 79 W
  2177.0  8.00   6.4  306  N 54 W     100      9.8  259  S 79 W
  2179.0  8.00   8.0  276  N 84 W     100      9.8  259  S 79 W




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  OREGON NATURAL GAS CORP.
  IW 22D-10
  MIST
  COLUMBIA                            OREGON
  08/22/86


                  **FORMATION DIP**              ****BOREHOLE*****
    DEPTH  WL     ANG   AZ BEARING  GRADE         DA  DAZ BEARING
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```
   2181.0   8.00    7.6  270   N 90 W      100        9.8  259  S 79 W
   2183.0   8.00    7.8  270   N 90 W      100        9.8  259  S 79 W
   2185.0   8.00    2.4  258   S 78 W      100        9.8  259  S 79 W
   2187.0   8.00    2.8  248   S 68 W      100        9.7  259  S 79 W
   2189.0   8.00    2.8  242   S 62 W      100        9.7  259  S 79 W
   2191.0   8.00    0.8  255   S 75 W      100        9.7  259  S 79 W
   2199.0   8.00   15.5  282   N 78 W      100        9.7  259  S 79 W
   2207.0   8.00   13.3  352   N  8 W      100        9.7  259  S 79 W
   2213.0   8.00    5.4   34   N 34 E      100        9.7  259  S 79 W
   2215.0   8.00    3.6   11   N 11 E      100        9.7  259  S 79 W
   2223.0   8.00    1.0   62   N 62 E      100        9.6  259  S 79 W
   2225.0   8.00    1.6  111   S 69 E      100        9.6  259  S 79 W
   2227.0   8.00    1.5  141   S 39 E      100        9.6  259  S 79 W
   2239.0   8.00    1.7  160   S 20 E      100        9.6  259  S 79 W
   2241.0   8.00    1.0  140   S 40 E      100        9.6  259  S 79 W
   2245.0   8.00   21.5  127   S 53 E      100        9.6  259  S 79 W
   2247.0   8.00   17.4  150   S 30 E      100        9.6  259  S 79 W
   2249.0   8.00   16.1  141   S 39 E      100        9.6  259  S 79 W
   2251.0   8.00   15.3  140   S 40 E      100        9.6  259  S 79 W
   2253.0   8.00    6.2  122   S 58 E      100        9.6  259  S 79 W
   2255.0   8.00    5.1   23   N 23 E      100        9.6  259  S 79 W
   2257.0   8.00    4.0   36   N 36 E      100        9.6  259  S 79 W
   2259.0   8.00    4.6   35   N 35 E      100        9.6  259  S 79 W
   2261.0   8.00    2.6   35   N 35 E      100        9.6  259  S 79 W
   2263.0   8.00    3.1   39   N 39 E      100        9.5  259  S 79 W
   2265.0   8.00    3.0   24   N 24 E      100        9.5  259  S 79 W
   2267.0   8.00    2.5   37   N 37 E      100        9.5  259  S 79 W
   2271.0   8.00    4.3  160   S 20 E      100        9.5  259  S 79 W
   2273.0   8.00    4.1  162   S 18 E      100        9.5  259  S 79 W
   2275.0   8.00    5.1  184   S  4 W      100        9.5  259  S 79 W
   2283.0   8.00    9.0  213   S 33 W      100        9.5  259  S 79 W
   2285.0   8.00    9.3  197   S 17 W      100        9.5  259  S 79 W
   2287.0   8.00   11.6  187   S  7 W      100        9.5  259  S 79 W
   2289.0   8.00    5.5  238   S 58 W      100        9.5  259  S 79 W
   2295.0   8.00    2.7  238   S 58 W      100        9.5  259  S 79 W
   2307.0   8.00    9.7  190   S 10 W      100        9.5  259  S 79 W
   2309.0   8.00   15.8  162   S 18 E      100        9.5  260  S 80 W
   2311.0   8.00    7.0  157   S 23 E      100        9.5  259  S 79 W
   2313.0   8.00   11.1  190   S 10 W      100        9.5  259  S 79 W
   2317.0   8.00    6.5    0   N  0 E      100        9.5  259  S 79 W
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   OREGON NATURAL GAS CORP.
   IW 22D-10
   MIST
   COLUMBIA                               OREGON
   08/22/88



                 **FORMATION DIP**              *****BOREHOLE*****
     DEPTH   VL      ANG   AZ BEARING   GRADE       DA  DAZ BEARING


   2319.0   8.00    6.7  354   N  6 W      100        9.4  259  S 79 W
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```
  2321.0   8.00    4.1  342   N 18 W       100         9.4  259  S 79 W
  2323.0   8.00    4.1  334   N 26 W       100         9.4  259  S 79 W
  2335.0   8.00   19.6   33   N 33 E       100         9.4  259  S 79 W
  2337.0   8.00   13.0   47   N 47 E       100         9.4  259  S 79 W
  2345.0   8.00    4.9   70   N 70 E       100         9.3  259  S 79 W
  2351.0   8.00    4.6   58   N 58 E       100         9.3  259  S 79 W
  2353.0   8.00    6.9   22   N 22 E       100         9.3  259  S 79 W
  2357.0   8.00    2.9   33   N 33 E       100         9.3  259  S 79 W
  2359.0   8.00    2.3    9   N  9 E       100         9.3  259  S 79 W
  2361.0   8.00    1.1  341   N 19 W       100         9.3  259  S 79 W
  2363.0   8.00    1.9  316   N 44 W       100         9.3  259  S 79 W
  2367.0   8.00    1.9  331   N 29 W       100         9.2  259  S 79 W
  2369.0   8.00    3.2   11   N 11 E       100         9.2  259  S 79 W
  2371.0   8.00    2.8    7   N  7 E       100         9.2  259  S 79 W
  2373.0   8.00    5.6   10   N 10 E       100         9.3  259  S 79 W
  2375.0   8.00    6.9   13   N 13 E       100         9.3  259  S 79 W
  2377.0   8.00   14.1   18   N 18 E       100         9.2  259  S 79 W
  2379.0   8.00   14.1   18   N 18 E       100         9.2  259  S 79 W
  2385.0   8.00    8.1   29   N 29 E       100         9.3  259  S 79 W
  2387.0   8.00    8.2   32   N 32 E       100         9.3  259  S 79 W
  2389.0   8.00    1.7    8   N  8 E       100         9.3  259  S 79 W
  2391.0   8.00    2.5   19   N 19 E       100         9.3  259  S 79 W
  2393.0   8.00    3.3   21   N 21 E       100         9.3  259  S 79 W
  2395.0   8.00    1.3   59   N 59 E       100         9.3  259  S 79 W
  2397.0   8.00    1.7   47   N 47 E       100         9.2  259  S 79 W
  2399.0   8.00    6.0  357   N  3 W       100         9.2  259  S 79 W
  2401.0   8.00    5.5   10   N 10 E       100         9.2  259  S 79 W
  2403.0   8.00    4.9    7   N  7 E       100         9.2  259  S 79 W
  2405.0   8.00    5.3    8   N  8 E       100         9.2  259  S 79 W
  2407.0   8.00    4.5   15   N 15 E       100         9.2  258  S 78 W
  2409.0   8.00   13.4  294   N 66 W       100         9.2  259  S 79 W
  2415.0   8.00   13.4  276   N 84 W       100         9.1  259  S 79 W
  2419.0   8.00    5.4  274   N 86 W       100         9.1  258  S 78 W
  2421.0   8.00    4.7  310   N 50 W       100         9.1  258  S 78 W
  2423.0   8.00    5.3  314   N 46 W       100         9.1  258  S 78 W
  2431.0   8.00    2.5  298   N 62 W       100         9.1  258  S 78 W
  2435.0   8.00    4.8  287   N 73 W       100         9.1  258  S 78 W
  2437.0   8.00    5.5  255   S 75 W       100         9.0  258  S 78 W
  2439.0   8.00    5.6  255   S 75 W       100         9.0  258  S 78 W
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    OREGON NATURAL GAS CORP.
    IW 22D-10
    MIST
    COLUMBIA                               OREGON
    08/22/88



                      **FORMATION DIP**             ****BOREHOLE*****
      DEPTH  QL       ANG   AZ BEARING  GRADE          DA  DAZ BEARING
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```
  2441.0  8.00   5.1  257  S 77 W     100     9.0  256  S 76 W
  2443.0  8.00   4.6  258  S 78 W     100     9.0  256  S 76 W
  2447.0  8.00   2.3  242  S 62 W     100     9.0  258  S 78 W
  2449.0  8.00   5.6  267  S 87 W     100     9.0  258  S 78 W
  2453.0  8.00  17.1  290  N 70 W     100     9.0  258  S 78 W
  2455.0  8.00  10.0  302  N 58 W     100     9.0  258  S 78 W
  2457.0  8.00  10.1  305  N 55 W     100     9.0  258  S 78 W
  2469.0  8.00  20.4   17  N 17 E     100     8.9  257  S 77 W
  2471.0  8.00  20.3   18  N 18 E     100     8.9  258  S 78 W
  2473.0  8.00   5.8  326  N 34 W     100     8.9  257  S 77 W
  2475.0  8.00   5.6  327  N 33 W     100     8.9  258  S 78 W
  2477.0  8.00   2.2  310  N 50 W     100     8.9  257  S 77 W
  2479.0  8.00   1.9  319  N 41 W     100     8.9  258  S 78 W
  2481.0  8.00   1.0  319  N 41 W     100     8.9  257  S 77 W
  2483.0  8.00   2.1  291  N 69 W     100     8.9  257  S 77 W
  2485.0  8.00   3.3  316  N 44 W     100     8.9  257  S 77 W
  2489.0  8.00   9.6  348  N 12 W     100     8.9  257  S 77 W
  2497.0  8.00   9.1  347  N 13 W     100     8.9  257  S 77 W
  2499.0  8.00   5.5  359  N  1 W     100     8.9  257  S 77 W
  2501.0  8.00   4.2  333  N 27 W     100     8.9  257  S 77 W
  2507.0  8.00   7.5  337  N 23 W     100     8.8  257  S 77 W
  2511.0  8.00   3.5   10  N 10 E     100     8.8  257  S 77 W
  2523.0  8.00   3.7    8  N  8 E     100     8.8  257  S 77 W
  2525.0  8.00   4.5    5  N  5 E     100     8.8  256  S 76 W
  2529.0  8.00  16.3  292  N 68 W     100     8.8  257  S 77 W
  2531.0  8.00  15.7  294  N 66 W     100     8.8  257  S 77 W
  2533.0  8.00  16.2  273  N 87 W     100     8.8  257  S 77 W
  2535.0  8.00  11.9  333  N 27 W     100     8.8  256  S 76 W
  2537.0  8.00  11.7  335  N 25 W     100     8.8  256  S 76 W
  2539.0  8.00  11.5  338  N 22 W     100     8.8  257  S 77 W
  2541.0  8.00  13.0  316  N 44 W     100     8.8  256  S 76 W
  2543.0  8.00  17.2  312  N 48 W     100     8.8  257  S 77 W
  2545.0  8.00  16.0  304  N 56 W     100     8.8  256  S 76 W
  2547.0  8.00  14.2  310  N 50 W     100     8.8  256  S 76 W
  2561.0  8.00  13.1  326  N 34 W     100     8.8  257  S 77 W
  2567.0  8.00  22.5   35  N 35 E     100     8.7  256  S 76 W
  2573.0  8.00   6.6   17  N 17 E     100     8.6  256  S 76 W
  2585.0  8.00  11.4  341  N 19 W     100     8.6  256  S 76 W
  2587.0  8.00   9.1  345  N 15 W     100     8.5  256  S 76 W
  2589.0  8.00   9.1  351  N  9 W     100     8.5  256  S 76 W
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 OREGON NATURAL GAS CORP.
 IW 22E-10
 MIST
 COLUMBIA                          OREGON
 08/22/88


                **FORMATION DIP**                ****BOREHOLE*****
   DEPTH  XL     ANG   AZ BEARING  GRADE          DA  DAZ BEARING


  2591.0  8.00   9.2  350  N 10 W     100     8.5  256  S 76 W
```

2593.0	8.00	10.5	341	N 19 W	100	8.5	256	S 76 W
2595.0	8.00	8.6	324	N 36 W	100	8.5	256	S 76 W
2597.0	8.00	9.7	333	N 27 W	100	8.5	256	S 76 W
2599.0	8.00	9.7	323	N 37 W	100	8.5	256	S 76 W
2601.0	8.00	8.4	334	N 26 W	100	8.5	256	S 76 W
2603.0	8.00	10.2	335	N 25 W	100	8.5	256	S 76 W
2605.0	8.00	9.3	341	N 19 W	100	8.5	256	S 76 W
2607.0	8.00	8.4	356	N 4 W	100	8.5	256	S 76 W
2609.0	8.00	11.0	338	N 22 W	100	8.5	256	S 76 W
2611.0	8.00	7.6	356	N 4 W	100	8.5	256	S 76 W
2613.0	8.00	8.9	336	N 24 W	100	8.5	256	S 76 W
2615.0	8.00	6.8	7	N 7 E	100	8.5	256	S 76 W
2617.0	8.00	6.4	19	N 19 E	100	8.5	256	S 76 W
2619.0	8.00	9.0	23	N 23 E	100	8.5	256	S 76 W
2621.0	8.00	7.7	21	N 21 E	100	8.5	256	S 76 W
2623.0	8.00	7.9	6	N 6 E	100	8.4	256	S 76 W
2625.0	8.00	6.3	349	N 11 W	100	8.4	256	S 76 W
2631.0	8.00	9.3	335	N 25 W	100	8.4	256	S 76 W
2635.0	8.00	13.4	329	N 31 W	100	8.4	256	S 76 W
2637.0	8.00	12.6	321	N 39 W	100	8.5	255	S 75 W
2641.0	8.00	5.9	321	N 39 W	100	8.4	255	S 75 W
2645.0	8.00	9.3	20	N 20 E	100	8.4	255	S 75 W
2647.0	8.00	9.2	5	N 5 E	100	8.4	255	S 75 W
2649.0	8.00	8.4	356	N 4 W	100	8.4	255	S 75 W
2651.0	8.00	10.3	5	N 5 E	100	8.4	255	S 75 W
2653.0	8.00	14.5	322	N 38 W	100	8.4	255	S 75 W
2655.0	8.00	14.6	341	N 19 W	100	8.4	255	S 75 W
2657.0	8.00	16.7	341	N 19 W	100	8.4	255	S 75 W
2659.0	8.00	15.3	354	N 6 W	100	8.4	255	S 75 W
2661.0	8.00	13.8	356	N 4 W	100	8.4	255	S 75 W
2663.0	8.00	13.0	352	N 8 W	100	8.4	255	S 75 W
2665.0	8.00	14.8	10	N 10 E	100	8.4	255	S 75 W
2667.0	8.00	13.6	21	N 21 E	100	8.4	255	S 75 W
2669.0	8.00	13.7	35	N 35 E	100	8.4	255	S 75 W
2671.0	8.00	13.4	36	N 36 E	100	8.4	255	S 75 W
2675.0	8.00	9.6	287	N 73 W	100	8.4	255	S 75 W
2677.0	8.00	10.5	293	N 67 W	100	8.4	254	S 74 W
2687.0	8.00	18.5	293	N 67 W	100	8.3	254	S 74 W
2689.0	8.00	12.5	312	N 48 W	100	8.4	254	S 74 W

OREGON NATURAL GAS CORP.
IW 22D-10
MIST
COLUMBIA OREGON
08/22/88

		FORMATION DIP				****BOREHOLE*****		
DEPTH	WL	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING

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  2691.0   8.00   19.3   306   N 54 W     100       8.4  254  S 74 W
  2693.0   8.00   19.5   307   N 53 W     100       8.4  254  S 74 W
  2697.0   8.00   17.1    35   N 35 E     100       8.4  254  S 74 W
  2699.0   8.00    6.2    25   N 25 E     100       8.4  254  S 74 W
  2701.0   8.00   12.0    32   N 32 E     100       8.4  254  S 74 W
  2703.0   8.00   10.8    35   N 35 E     100       8.4  254  S 74 W
  2705.0   8.00   11.4    34   N 34 E     100       8.4  254  S 74 W
  2709.0   8.00   19.5    29   N 29 E     100       8.4  254  S 74 W
  2711.0   8.00   21.6     8   N  8 E     100       8.4  254  S 74 W
  2713.0   8.00   18.1    26   N 26 E     100       8.4  254  S 74 W
  2715.0   8.00   12.6    21   N 21 E     100       8.4  254  S 74 W
  2717.0   8.00   12.4    17   N 17 E     100       8.4  254  S 74 W
  2719.0   8.00    9.6    16   N 16 E     100       8.4  253  S 73 W
  2721.0   8.00    6.8    11   N 11 E     100       8.5  254  S 74 W
  2723.0   8.00   25.1    79   N 79 E     100       8.5  254  S 74 W
  2725.0   8.00   20.9    73   N 73 E     100       8.6  254  S 74 W
  2727.0   8.00   13.9    89   N 89 E     100       8.6  254  S 74 W
  2741.0   8.00   19.5   104   S 76 E     100       8.6  254  S 74 W
  2743.0   8.00   31.7    85   N 85 E     100       8.5  254  S 74 W
  2745.0   8.00   34.9    85   N 85 E     100       8.6  253  S 73 W
  2747.0   8.00   15.6    51   N 51 E     100       8.6  252  S 72 W
  2763.0   8.00    8.5    60   N 60 E     100       8.4  253  S 73 W
  2765.0   8.00    6.8    89   N 89 E     100       8.4  253  S 73 W
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