

UNION NATURAL GAS CORP.

IN 230-3
 WIST
 COLUMBIA
 07-05-88

OREGON

INTERVAL 2614.0 TO 2979.0

RUN 2 REAC 12634.

DEGRINER B. WELCH NR. TROPAL MAG DEC 21.

 * LAC12634 SEARCH LENGTH= 8" *
 * WINDOW LENGTH=8",STEP LENGTH=2" *
 * C O D S C *

FORMATION DIP

COREHOLE

DEPTH	DI	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2622.0	8.00	12.5	135	S 45 E	100	14.6	246	S 01 E
2624.0	8.00	8.5	139	S 41 E	100	14.7	278	N 52 E
2632.0	8.00	12.5	105	S 71 E	100	14.7	141	S 37 E
2636.0	8.00	5.9	114	S 68 E	100	14.6	90	N 90 E
2638.0	8.00	7.3	124	S 56 E	100	14.5	90	N 91 E
2640.0	8.00	8.5	144	S 36 E	100	14.6	93	N 99 E
2642.0	8.00	10.4	131	S 45 E	100	14.7	92	S 88 E
2650.0	8.00	9.3	108	S 72 E	100	14.8	94	S 86 E
2652.0	8.00	10.5	103	S 77 E	100	14.7	94	S 86 E
2654.0	8.00	10.7	105	S 75 E	100	14.7	95	S 85 E
2656.0	8.00	8.8	92	S 88 E	100	14.6	95	S 85 E
2660.0	8.00	19.9	357	N 3 W	100	14.6	95	S 85 E
2662.0	8.00	19.1	357	N 3 W	100	14.5	95	S 85 E
2664.0	8.00	19.4	357	N 3 W	100	14.4	95	S 85 E
2666.0	8.00	21.0	2	N 2 E	100	14.3	95	S 84 E
2668.0	8.00	19.5	1	N 1 E	100	14.3	96	S 84 E
2670.0	8.00	15.4	350	N 10 W	100	14.2	96	S 84 E
2672.0	8.00	9.0	331	N 29 W	100	14.2	96	S 84 E
2674.0	8.00	10.3	333	N 27 W	100	14.1	96	S 84 E
2676.0	8.00	5.0	325	N 25 W	100	14.1	96	S 84 E
2680.0	8.00	3.7	327	N 33 W	100	14.1	96	S 84 E
2682.0	8.00	7.8	356	N 4 W	100	14.1	96	S 84 E
2684.0	8.00	6.0	355	N 5 W	100	14.0	96	S 84 E
2686.0	8.00	8.1	359	N 1 E	100	14.1	97	S 83 E
2688.0	8.00	7.2	3	N 3 E	100	14.1	97	S 83 E
2692.0	8.00	12.4	276	N 84 E	100	14.1	97	S 83 E
2694.0	8.00	14.3	305	N 55 E	100	14.1	97	S 83 E
2696.0	8.00	7.3	295	N 65 W	100	14.1	97	S 83 E
2698.0	8.00	12.5	304	N 56 W	100	14.0	97	S 83 E

OREGON NATURAL GAS CORP.

IN 238-3a

PLC1

COLUMBIA

OREGON

87-04-88

DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2700.0	8.00	8.9	348	N 12 W	100	14.1	97	S 85 E	
2702.0	8.00	9.0	8	N 8 E	100	14.0	97	S 83 E	
2704.0	8.00	12.7	359	N 1 W	100	14.1	97	S 87 E	
2706.0	8.00	13.9	5	N 5 E	100	14.1	97	S 80 E	
2708.0	8.00	9.2	1	N 1 E	100	14.1	97	S 87 E	
2710.0	8.00	9.2	359	N 1 W	100	14.1	97	S 83 E	
2712.0	8.00	7.4	6	N 6 E	100	14.1	97	S 83 E	
2714.0	8.00	7.4	5	N 5 E	100	14.1	97	S 87 E	
2716.0	8.00	10.8	3	N 3 E	100	14.1	97	S 83 E	
2718.0	8.00	9.1	332	N 28 W	100	14.1	97	S 83 E	
2720.0	8.00	13.0	318	N 48 W	100	14.1	97	S 83 E	
2722.0	8.00	9.8	328	N 32 W	100	14.1	97	S 82 E	
2724.0	8.00	4.7	9	N 9 E	100	14.1	97	S 83 E	
2726.0	8.00	8.6	7	N 7 E	100	14.1	97	S 83 E	
2728.0	8.00	7.1	346	N 14 W	100	14.2	97	S 83 E	
2730.0	8.00	7.3	0	N 0 E	100	14.2	97	S 83 E	
2732.0	8.00	6.8	333	N 27 W	100	14.1	97	S 83 E	
2736.0	8.00	11.8	344	N 16 W	100	14.2	97	S 83 E	
2740.0	8.00	13.2	356	N 4 W	100	14.2	97	S 83 E	
2742.0	8.00	11.4	351	N 9 W	100	14.2	97	S 83 E	
2744.0	8.00	13.9	352	N 8 W	100	14.2	97	S 83 E	
2746.0	8.00	10.4	341	N 19 W	100	14.2	97	S 83 E	
2748.0	8.00	10.5	348	N 12 W	100	14.2	97	S 83 E	
2750.0	8.00	9.2	345	N 15 W	100	14.2	97	S 83 E	
2752.0	8.00	5.1	342	N 18 W	100	14.2	97	S 83 E	
2754.0	8.00	8.7	356	N 4 W	100	14.2	97	S 83 E	
2756.0	8.00	7.9	17	N 17 E	100	14.2	97	S 83 E	
2758.0	8.00	22.0	358	N 2 W	100	14.2	97	S 83 E	
2760.0	8.00	22.4	357	N 3 W	100	14.3	97	S 83 E	
2762.0	8.00	22.8	351	N 9 W	100	14.3	97	S 83 E	
2764.0	8.00	14.0	358	N 2 W	100	14.3	97	S 83 E	
2766.0	8.00	12.2	351	N 9 W	100	14.3	97	S 83 E	
2768.0	8.00	9.1	4	N 4 E	100	14.3	97	S 83 E	
2770.0	8.00	13.0	1	N 1 E	100	14.3	97	S 83 E	
2772.0	8.00	10.0	357	N 3 W	100	14.3	97	S 83 E	
2774.0	8.00	13.2	4	N 4 E	100	14.3	97	S 83 E	
2776.0	8.00	10.8	353	N 7 W	100	14.3	97	S 83 E	
2778.0	8.00	8.3	355	N 1 W	100	14.3	97	S 83 E	
2780.0	8.00	39.7	18	N 18 E	100	14.3	97	S 83 E	
2786.0	8.00	22.2	334	N 26 W	100	14.4	97	S 83 E	

OREGON NATURAL GAS CORP.

W 236-33

FIST

COLUMBIA

OREGON

07-02-88

DEPTH	ML	**FORMATION DIP**				***CORRECTION***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
2788.0	8.00	19.3	357	N 3 W	100	14.3	97	S 83 E	
2790.0	8.00	21.3	8	N 8 E	100	14.4	97	S 83 E	
2792.0	8.00	5.6	17	N 17 E	100	14.4	97	S 83 E	
2794.0	8.00	14.0	13	N 13 E	100	14.4	97	S 83 E	
2796.0	8.00	12.0	15	N 15 E	100	14.4	97	S 83 E	
2798.0	8.00	16.1	20	N 20 E	100	14.4	97	S 83 E	
2800.0	8.00	12.3	0	N 0 E	100	14.4	97	S 83 E	
2804.0	8.00	10.1	11	N 11 E	100	14.4	97	S 83 E	
2806.0	8.00	12.7	41	N 41 E	100	14.4	98	S 87 E	
2808.0	8.00	6.7	11	N 11 E	100	14.4	97	S 83 E	
2810.0	8.00	6.5	7	N 7 E	100	14.5	97	S 83 E	
2820.0	8.00	10.3	13	N 13 E	100	14.4	98	S 87 E	
2822.0	8.00	13.8	23	N 23 E	100	14.5	98	S 87 E	
2824.0	8.00	14.5	8	N 8 E	100	14.6	97	S 83 E	
2828.0	8.00	12.0	17	N 17 E	100	14.5	97	S 83 E	
2832.0	8.00	11.4	18	N 18 E	100	14.6	98	S 87 E	
2834.0	8.00	12.1	354	N 6 W	100	14.6	98	S 87 E	
2836.0	8.00	12.7	354	N 6 W	100	14.6	97	S 83 E	
2838.0	8.00	12.3	344	N 16 W	100	14.6	97	S 83 E	
2840.0	8.00	11.7	354	N 6 W	100	14.6	97	S 83 E	
2842.0	8.00	3.6	351	N 9 W	100	14.6	97	S 83 E	
2844.0	8.00	11.8	352	N 6 W	100	14.6	97	S 83 E	
2846.0	8.00	10.6	358	N 2 W	100	14.6	98	S 87 E	
2862.0	8.00	15.1	3	N 3 E	100	14.7	98	S 87 E	
2864.0	8.00	13.0	335	N 25 W	73	14.7	96	S 83 E	
2874.0	8.00	12.5	354	N 6 W	100	14.7	98	S 87 E	
2876.0	8.00	0.8	22	N 22 E	100	14.7	97	S 83 E	
2880.0	8.00	9.9	335	N 25 W	100	14.7	97	S 83 E	
2890.0	8.00	8.4	334	N 26 W	100	14.8	97	S 83 E	
2892.0	8.00	8.6	332	N 28 W	100	14.8	97	S 83 E	
2894.0	8.00	8.7	352	N 8 W	100	14.8	97	S 83 E	
2896.0	8.00	8.0	356	N 4 W	100	14.8	97	S 83 E	
2898.0	8.00	10.0	348	N 12 W	100	14.8	97	S 83 E	
2900.0	8.00	11.4	352	N 8 W	100	14.8	97	S 83 E	
2902.0	8.00	10.2	348	N 12 W	100	14.8	97	S 83 E	
2904.0	8.00	10.4	346	N 14 W	100	14.8	97	S 83 E	
2906.0	8.00	16.0	5	N 5 E	100	14.8	97	S 83 E	
2908.0	8.00	7.5	348	N 12 W	100	14.8	97	S 83 E	
2910.0	8.00	8.2	312	N 48 W	100	14.9	97	S 83 E	
2914.0	8.00	8.0	334	N 26 W	100	14.8	97	S 83 E	

COLUMBIA NATURAL GAS CORP.

IL 238-33

MIST

COLUMBIA

OREGON

07-05-88

DEPTH	WL	**FORMATION DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DA	DAZ	BEARING
2916.0	8.00	4.1	311	N 49 W	100	14.9	97	S 83 E
2920.0	8.00	3.5	2	N 2 E	100	14.9	97	S 83 E
2926.0	8.00	6.0	1	N 5 E	100	14.9	97	S 83 E
2928.0	8.00	9.9	342	N 18 W	100	14.9	97	S 83 E
2930.0	8.00	9.2	340	N 20 W	100	14.9	98	S 83 E
2932.0	8.00	6.8	353	N 7 W	100	14.9	97	S 83 E
2934.0	8.00	7.5	322	N 38 W	100	14.9	98	S 83 E
2938.0	8.00	3.4	341	N 19 W	100	15.0	97	S 83 E
2940.0	8.00	5.4	347	N 13 W	100	15.0	97	S 83 E
2942.0	8.00	8.0	317	N 43 W	100	15.0	97	S 83 E
2944.0	8.00	5.0	345	N 11 W	100	15.0	97	S 83 E
2946.0	8.00	9.5	347	N 13 W	100	15.0	97	S 83 E
2948.0	8.00	7.5	336	N 29 W	100	15.0	97	S 83 E
2950.0	8.00	9.3	336	N 24 W	100	15.0	97	S 83 E
2952.0	8.00	12.5	73	N 73 E	100	15.1	97	S 83 E
2958.0	8.00	10.4	131	S 49 E	100	15.2	96	S 84 E
2960.0	8.00	15.2	124	S 56 E	100	15.1	97	S 83 E
2962.0	8.00	18.2	120	S 60 E	100	15.1	96	S 84 E
2964.0	8.00	20.0	120	S 60 E	100	15.1	96	S 84 E
2966.0	8.00	20.7	118	S 62 E	100	15.0	97	S 83 E
2972.0	8.00	19.1	115	S 65 E	100	15.0	97	S 83 E