WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

WELL	PENETRA 2C
FIELD	WILDCAT GULCO
COUNTY	CHAVES
STATE	NEW MEXICO
LOCATION	1980' FSL & 1980' FEL
SEC	15
TWP	15S
RGE	25E
API NUMBER	30-005-12345
DATE	03/03/2003
DRILLING CONTRACTOR	RIG 2
RIG TYPE	2000 HP
ELEVATIONS: KB	4200
DF	4198
GL	4195
TD DRILLER	4250
TD LOGGER	4248
BOTTOM LOG INTERVAL	4248
TOP LOG INTERVAL	3800
CASING DRILLER	8.625 @ 300
CASING LOGGER	300
BIT SIZE	7.875
TYPE FLUID IN HOLE	GEL CHEM
DENSITY	9.2
VISCOSITY	48
PH	9.5
FLUID LOSS	6.8
SOURCE OF SAMPLE	PIT
RM @ MEASURED TEMP	0.62 @ 72
RMF @ MEASURED TEMP	0.48 @ 72
RMC @ MEASURED TEMP	0.71 @ 72
SOURCE RMF & RMC	MEASURED
RM @ BHT	0.31 @ 138
TIME CIRC. END	0400
TIME LOGGER ON BOTTOM	0530
MAX. REC. TEMP.	138
EQUIP. LOCATION	ROSWELL
RECORDED BY	J. SMITH
WITNESSED BY	R. JONES

Equipment Data

CELLAR LOCATOR	LTS*
TEMPERATURE TOOL	LTS*
AUDIO DETECTOR	LTS*

Remarks/Survey Results

TD/100 MM - OK LOCATION

EMPG TMG MAXREDS: T960' TOP 48
E180' TOP 28

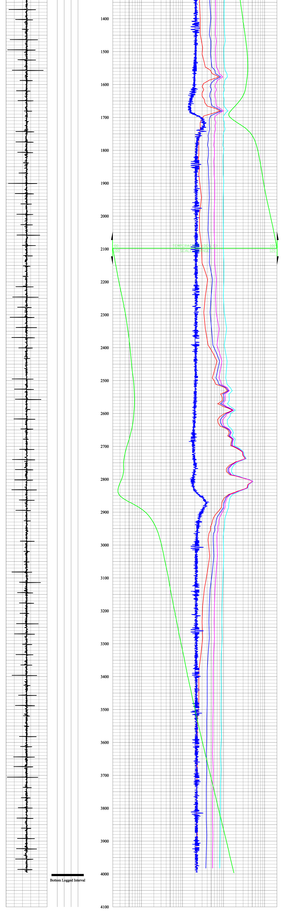
CASING AND TUBING RECORD

SIZE	WT/ft	FROM	TO	SIZE	WT/ft	FROM	TO
13.375"	48.0	SURFACE	302'	2.875"	6.5	SURFACE	787.43'
8.625"	24.0	SURFACE	300'				
7.000"	23.0	SURFACE	3800'				
5.500"	15.5	3800'	4248'				

PERFORATIONS

SPF	PIPE DIA.	
		2SCREEN1 787.43'
		2BK LIST MAXREDS1 4282.71', 7748.34',
		2ELSCORE ELEMTRS1 7789.01',
		8D-GCS 7822.27

TOOL DIAGRAM

Audio Data: d:\data\M0108.las

DEPTH	200HZ 1	400HZ 1	1000HZ 1	2000HZ 1
50	18.40 1	14.30 1	10.30 1	3.50 1
100	19.50 1	15.20 1	10.80 1	3.60 1
150	21.60 1	16.80 1	9.40 1	3.00 1
200 1	20.90 1	15.90 1	11.80 1	3.40 1
250 1	21.40 1	16.70 1	11.20 1	3.20 1
300 1	21.40 1	15.70 1	11.10 1	2.80 1
350 1	14.70 1	10.70 1	7.50 1	2.70 1
400 1	13.20 1	9.40 1	6.50 1	2.50 1
450 1	15.20 1	11.10 1	6.90 1	2.30 1
500 1	12.80 1	9.40 1	6.40 1	2.40 1
550 1	12.20 1	8.50 1	6.20 1	2.30 1
600 1	11.90 1	8.10 1	6.20 1	2.30 1
650 1	11.80 1	8.10 1	5.80 1	2.20 1
700 1	11.50 1	8.00 1	5.80 1	2.20 1
749 1	13.30 1	9.10 1	6.30 1	2.20 1
800 1	11.80 1	8.00 1	5.80 1	2.20 1
850 1	11.20 1	7.70 1	5.70 1	2.20 1
900 1	11.20 1	7.60 1	5.80 1	2.20 1
950 1	10.50 1	7.40 1	6.00 1	2.20 1
1000 1	10.50 1	6.60 1	6.70 1	2.20 1
1050 1	11.20 1	6.80 1	6.70 1	2.40 1
1100 1	11.20 1	6.70 1	6.70 1	2.40 1
1150 1	10.40 1	6.40 1	6.40 1	2.70 1
1200 1	10.50 1	6.40 1	6.40 1	2.70 1
1250 1	10.50 1	6.40 1	6.80 1	2.70 1
1300 1	11.30 1	6.70 1	6.90 1	2.80 1
1350 1	10.80 1	6.50 1	6.90 1	2.70 1
1400 1	10.30 1	6.30 1	6.90 1	2.70 1
1450 1	10.40 1	6.50 1	6.50 1	2.70 1
1470 1	11.00 1	6.60 1	6.50 1	2.70 1
1490 1	10.20 1	6.40 1	6.90 1	3.10 1
1510 1	10.30 1	6.40 1	6.90 1	3.10 1
1530 1	10.30 1	6.50 1	6.50 1	3.00 1
1550 1	10.40 1	6.70 1	5.20 1	3.40 1
1570 1	10.60 1	7.00 1	5.20 1	3.40 1
1590 1	12.10 1	7.80 1	6.40 1	3.90 1
1580 1	12.40 1	9.40 1	8.50 1	7.70 1
1600 1	12.70 1	9.60 1	9.00 1	8.00 1
1610 1	12.50 1	9.20 1	8.50 1	7.80 1
1609 1	10.30 1	6.20 1	6.70 1	3.00 1
1619 1	10.40 1	6.30 1	5.10 1	3.30 1
1629 1	9.80 1	6.20 1	6.70 1	3.00 1
1639 1	10.30 1	6.30 1	6.70 1	3.00 1
1650 1	10.40 1	6.50 1	6.50 1	3.40 1
1660 1	10.20 1	6.50 1	5.00 1	3.50 1
1670 1	10.20 1	6.50 1	5.00 1	3.50 1
1680 1	11.80 1	6.90 1	7.80 1	7.00 1
1685 1	12.40 1	9.90 1	9.00 1	8.20 1
1690 1	11.40 1	8.50 1	7.80 1	6.10 1
1699 1	10.70 1	7.10 1	5.80 1	4.50 1
1709 1	10.50 1	6.50 1	5.00 1	3.50 1
1710 1	9.90 1	6.50 1	5.00 1	3.00 1
1720 1	10.50 1	6.50 1	6.50 1	2.70 1
1730 1	10.90 1	6.50 1	6.50 1	2.70 1
1740 1	10.90 1	6.40 1	6.50 1	2.70 1
1750 1	10.10 1	6.10 1	6.40 1	2.60 1
1760 1	9.90 1	6.10 1	6.40 1	2.60 1
1770 1	9.90 1	6.00 1	6.20 1	2.50 1
1779 1	9.80 1	5.90 1	6.20 1	2.50 1
1789 1	9.60 1	5.80 1	6.30 1	2.50 1
1799 1	10.20 1	6.00 1	6.30 1	2.50 1
1810 1	9.80 1	5.90 1	6.30 1	2.50 1
1840 1	9.70 1	5.90 1	6.30 1	2.40 1
1859 1	9.80 1	5.90 1	6.30 1	2.40 1
1900 1	9.90 1	6.00 1	6.30 1	2.40 1
1950 1	10.10 1	6.10 1	6.40 1	2.40 1
1950 1	9.80 1	6.10 1	6.50 1	2.90 1
1949 1	9.90 1	6.10 1	6.50 1	2.90 1
1949 1	9.90 1	6.10 1	6.20 1	2.60 1
2100 1	9.30 1	6.10 1	6.40 1	2.90 1
2150 1	10.20 1	6.10 1	6.50 1	2.90 1
2200 1	10.20 1	6.70 1	5.10 1	3.40 1
2250 1	10.20 1	6.70 1	5.10 1	3.40 1
2300 1	10.40 1	6.70 1	5.20 1	3.40 1
2350 1	11.90 1	7.80 1	5.10 1	3.40 1
2400 1	12.20 1	8.00 1	5.10 1	3.50 1
2450 1	12.20 1	8.10 1	6.40 1	6.80 1
2500 1	12.60 1	7.70 1	6.50 1	5.30 1
2529 1	11.80 1	8.00 1	7.10 1	6.50 1
2529 1	12.20 1	8.00 1	7.10 1	6.50 1
2540 1	14.30 1	10.80 1	10.40 1	10.70 1
2540 1	14.30 1	10.80 1	10.40 1	12.40 1
2549 1	13.40 1	10.70 1	9.70 1	8.50 1
2559 1	12.80 1	10.60 1	10.20 1	9.40 1
2570 1	13.80 1	11.10 1	10.20 1	9.40 1
2580 1	12.40 1	9.40 1	8.40 1	7.10 1
2589 1	14.20 1	11.50 1	10.70 1	9.40 1
2600 1	16.40 1	13.70 1	13.10 1	16.50 1
2609 1	14.80 1	12.40 1	11.70 1	10.70 1
2620 1	14.30 1	11.80 1	9.30 1	8.10 1
2629 1	12.40 1	9.50 1	8.40 1	7.20 1
2639 1	12.20 1	9.50 1	8.40 1	7.20 1
2649 1	13.20 1	10.30 1	9.40 1	8.30 1
2660 1	16.00 1	14.10 1	13.30 1	12.50 1
2670 1	18.20 1	16.40 1	15.80 1	15.20 1
2680 1	16.10 1	13.80 1	12.40 1	12.80 1
2689 1	19.20 1	17.50 1	17.00 1	16.10 1
2700 1	19.20 1	17.50 1	17.00 1	16.10 1
2710 1	18.20 1	16.40 1	15.80 1	16.80 1
2720 1	25.10 1	23.70 1	23.20 1	22.20 1
2729 1	30.80 1	29.80 1	29.30 1	28.90 1
2740 1	31.50 1	30.30 1	30.30 1	29.40 1
2750 1	22.70 1	21.30 1	20.80 1	20.00 1
2759 1	22.70 1	21.30 1	20.80 1	20.00 1
2770 1	17.90 1	16.00 1	15.40 1	14.10 1
2780 1	16.40 1	14.10 1	13.30 1	12.50 1
2790 1	15.40 1	13.40 1	12.80 1	11.70 1
2800 1	17.40 1	15.70 1	15.10 1	14.20 1
2809 1	22.40 1	21.00 1	20.50 1	19.60 1
2820 1	32.30 1	31.70 1	31.00 1	29.10 1
2830 1	41.20 1	40.20 1	40.00 1	39.10 1
2840 1	39.30 1	38.40 1	38.10 1	37.30 1
2850 1	24.70 1	23.40 1	23.00 1	22.00 1
2860 1	18.20 1	16.40 1	15.80 1	14.80 1
2870 1	14.40 1	12.20 1	11.60 1	10.50 1
2879 1	13.80 1	11.50 1	10.70 1	9.40 1
2890 1	13.80 1	11.50 1	10.70 1	9.40 1
2900 1	13.30 1	10.90 1	10.00 1	8.90 1
2910 1	12.40 1	9.80 1	8.90 1	7.70 1
2920 1	11.70 1	8.80 1	7.80 1	6.50 1
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2940 1	12.40 1	8.80 1	7.80 1	6.50 1
2950 1	10.40 1	7.50 1	6.50 1	5.20 1
2960 1	10.50 1	7.30 1	6.10 1	4.80 1
2970 1	10.00 1	7.00 1	5.80 1	4.50 1
2980 1	10.00 1	7.00 1	5.70 1	4.40 1
2990 1	9.80 1	6.90 1	5.40 1	4.30 1
3000 1	9.80 1	6.80 1	5.40 1	4.30 1
3049 1	10.10 1	7.00 1	5.80 1	4.40 1
3100 1	9.80 1	6.60 1	5.30 1	4.00 1
3150 1	9.50 1	6.20 1	5.00 1	3.50 1
3200 1	9.20 1	6.00 1	4.60 1	3.10 1
3250 1	9.20 1	6.00 1	4.60 1	3.10 1
3299 1	9.30 1	6.00 1	4.60 1	3.10 1
3350 1	8.80 1	5.70 1	4.20 1	2.80 1
3400 1	8.70 1	5.60 1	4.00 1	2.70 1
3450 1	8.70 1	5.60 1	4.00 1	2.50 1
3500 1	8.70 1	5.60 1	4.00 1	2.50 1
3550 1	8.70 1	5.60 1	3.90 1	2.50 1
3600 1	8.30 1	5.30 1	3.80 1	2.20 1
3650 1	8.40 1	5.40 1	3.80 1	2.20 1
3700 1	8.40 1	5.50 1	3.80 1	2.20 1
3750 1	8.40 1	5.50 1	3.80 1	2.20 1
3800 1	8.40 1	5.50 1	3.80 1	2.20 1
3850 1	8.30 1	5.50 1	3.80 1	2.20 1
3900 1	8.30 1	5.50 1	3.90 1	2.30 1
3950 1	8.30 1	5.50 1	3.90 1	2.30 1
4000 1	8.20 1	5.50 1	3.90 1	2.20 1