## WELL ANALYSIS CORPORATION

## AUDIO DETECTION SURVEY

| | |
|---|---|
| WELL TYPE<br>GS, OG<br>CB | COMPANY: SOUTHERN CALIF. GAS CO.<br>WELL: PORTER 26B<br>FIELD: ALISO CANYON<br>COUNTY: LOS ANGELES STATE: CALIFORNIA |

LOCATION:
DISTRICT 2

API NUMBER:0403721357
SEC: 28 TWN: 3N RNG: 16W

OTHER SVC:

PERMANENT DATUM: GROUND LEVEL ELEV: 2505.00 FT.

LOG MEASURED FROM KB 12' ABOVE PERM DATUM

DRILLING MEASURED FROM

-ELEVATIONS-
KB: 2517.00 Ft.
DF: Ft.
GL: 2505.00 Ft.

| | | | | | |
|---|---|---|---|---|---|
| DATE LOG RAN | 03-21-2016 | PRESSURE | FLOWING | INJECTION | SHUT-IN |
| RUN NUMBER | ONE | TUBING PSI | | | 1236 |
| EFFECTIVE DEPTH | 7932' | CASING PSI | | | 1236 |
| PICKUP DEPTH | 7903' | INJECTION RATE | N\|A | | |
| BOT LOGGED INT | 7903' | OBSERVED RATE | N\|A | | |
| TOP LOGGED INT | 100' | R/A SOURCE | N\|A | | |
| TYPE OF INJECT | NONE | ACTIVITY | N\|A | | |
| FLUID IN WELL | GAS | HALF LIFE | N\|A | | |
| FLUID LEVEL | N\|A | | | | |
| WELL STATUS | STATIC | | PRODUCTION DATA | | |
| MAX TEMPERATURE | 165.5 F. | OIL Gr. | OIL = | | |
| AT DEPTH | 7903.0' | GAS Gr. | GAS= | | |
| TEMPERATURE SENS | 1 F/DIV. | MPP | BHP = | | |
| LOGGING SPEED | 100 FPM | | WATER= | | |
| RECORDED BY | C. BARAJAS | | | | |
| WITNESSED BY | N\|A | | | | |
| EMAIL TO | A. KARGAR | | | | |
| DEPTH CORRELATION | LINER TOP | | | | |

### Equipment Data

| | | | |
|---|---|---|---|
| COLLAR LOCATOR | 1.375" | | |
| TEMPERATURE TOOL | 1.375" | | |
| AUDIO DETECTOR | 1.375" | | |

### Remarks/Survey Results

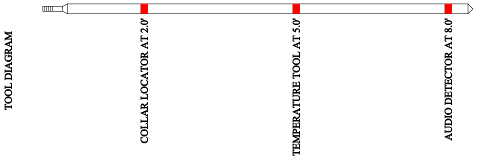
```
SAND TAG MARKERS: 7525' TOP S4
                  7583' TOP S8
                  7705' TOP HZ
                  7760' TOP FREW
```

### CASING AND TUBING RECORD

| SIZE | WT(#) | FROM | TO | SIZE | WT(#) | FROM | TO |
|---|---|---|---|---|---|---|---|
| 13.375" | 54.5 | SURFACE | 797' | 3.500" | 9.3 | 7379' | 7390' |
| 8.625" | 36.0 | SURFACE | 7525' | | | | |
| 6.625" | 28.0 | 7392' | 7932' | | | | |
| 2.875" | 6.5 | SURFACE | 7379' | | | | |

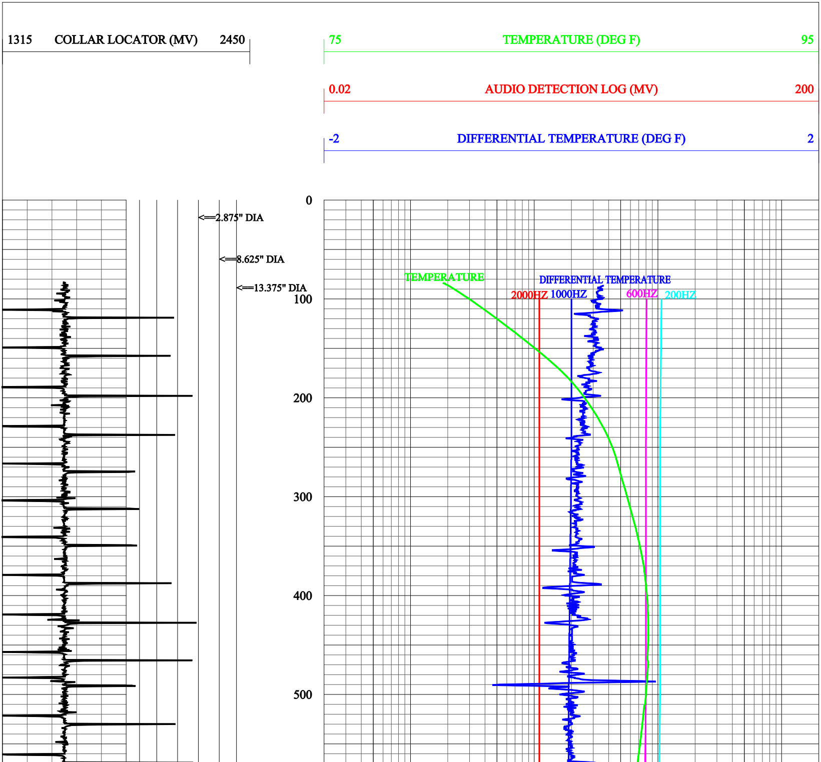
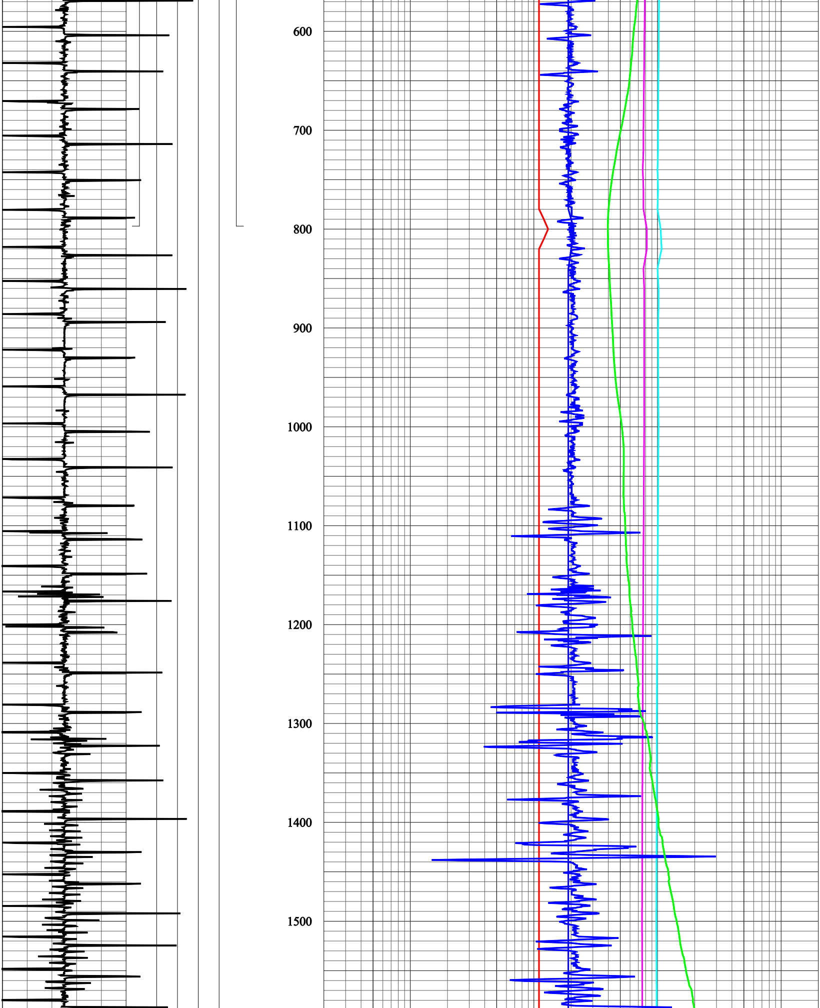
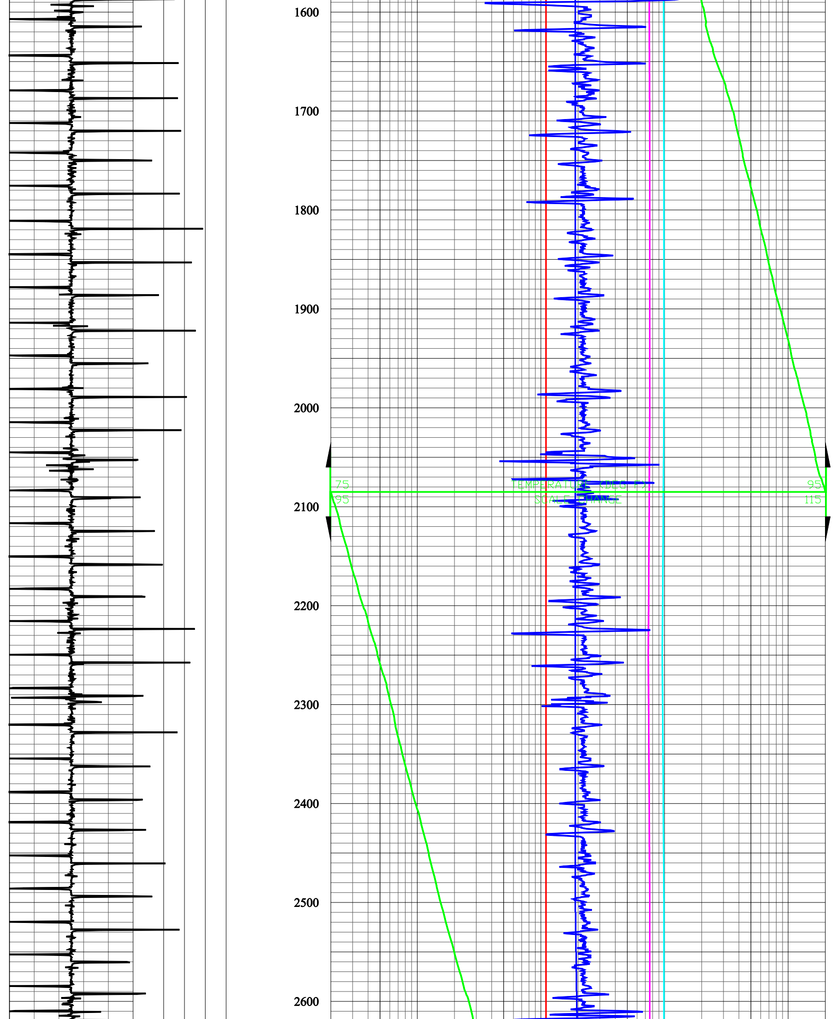
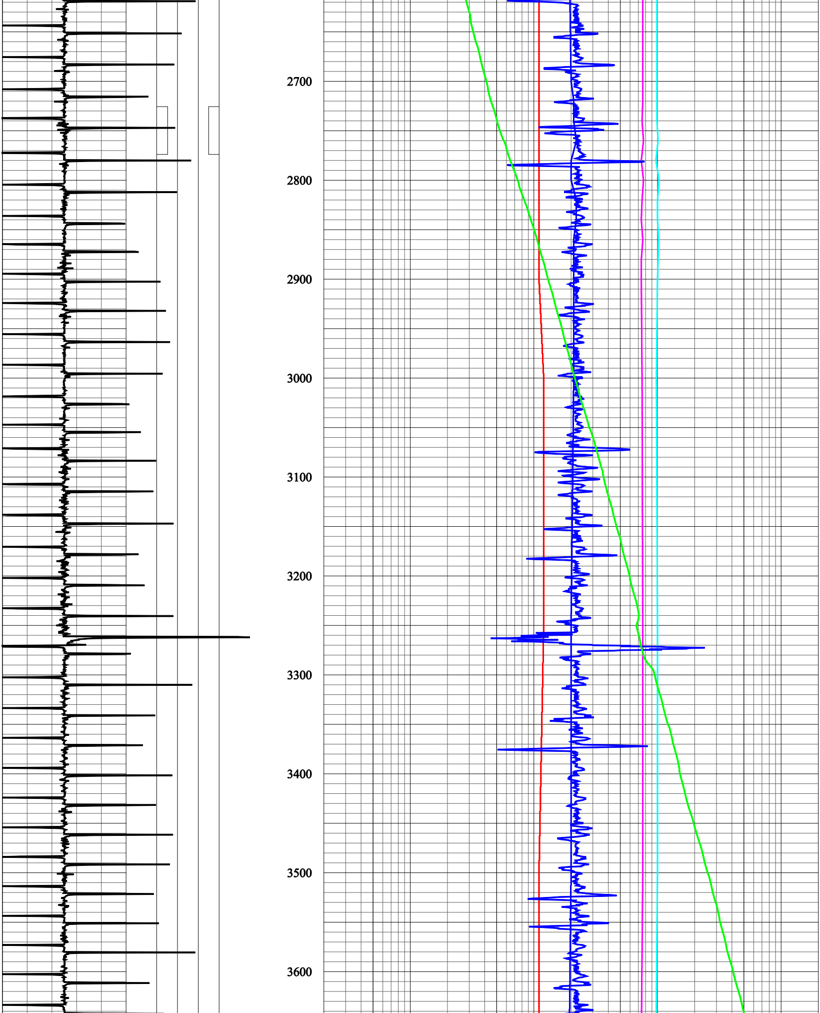
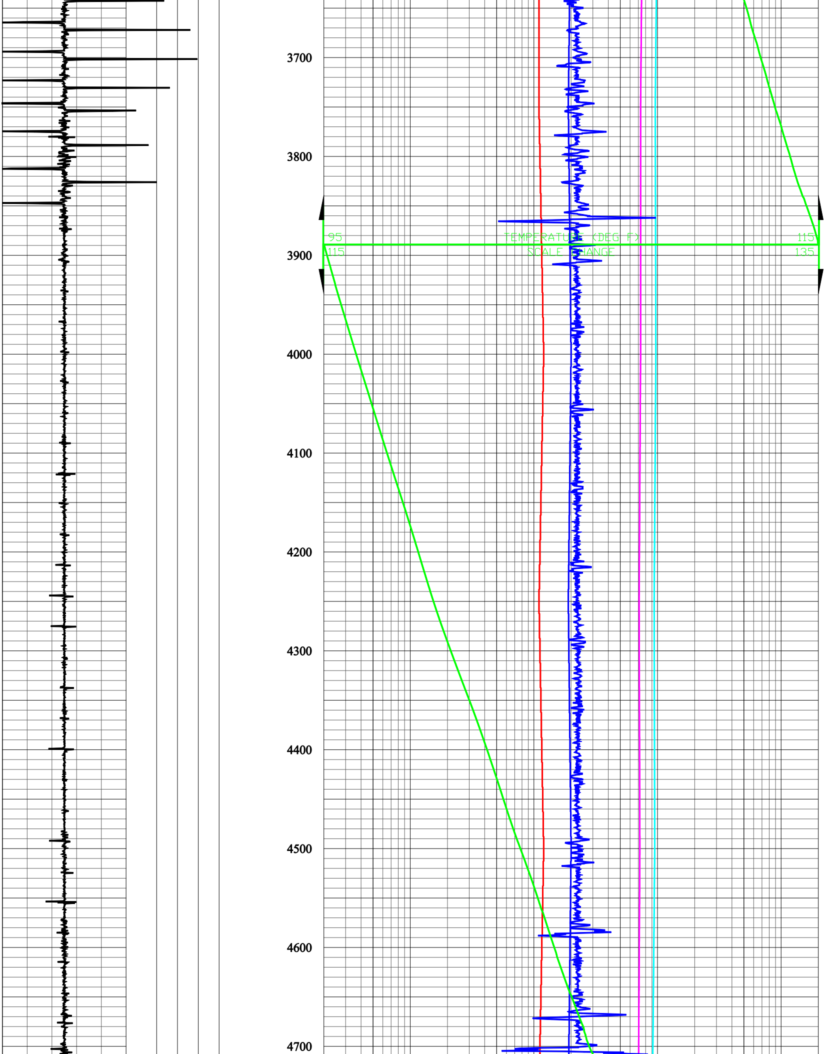
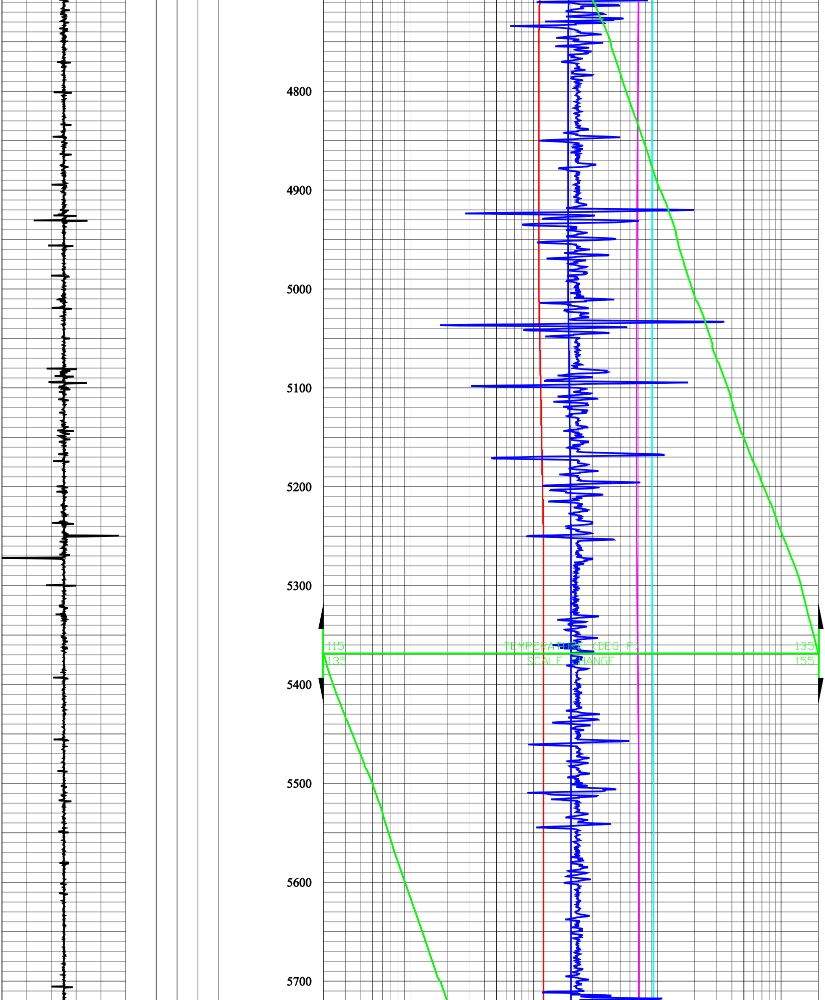
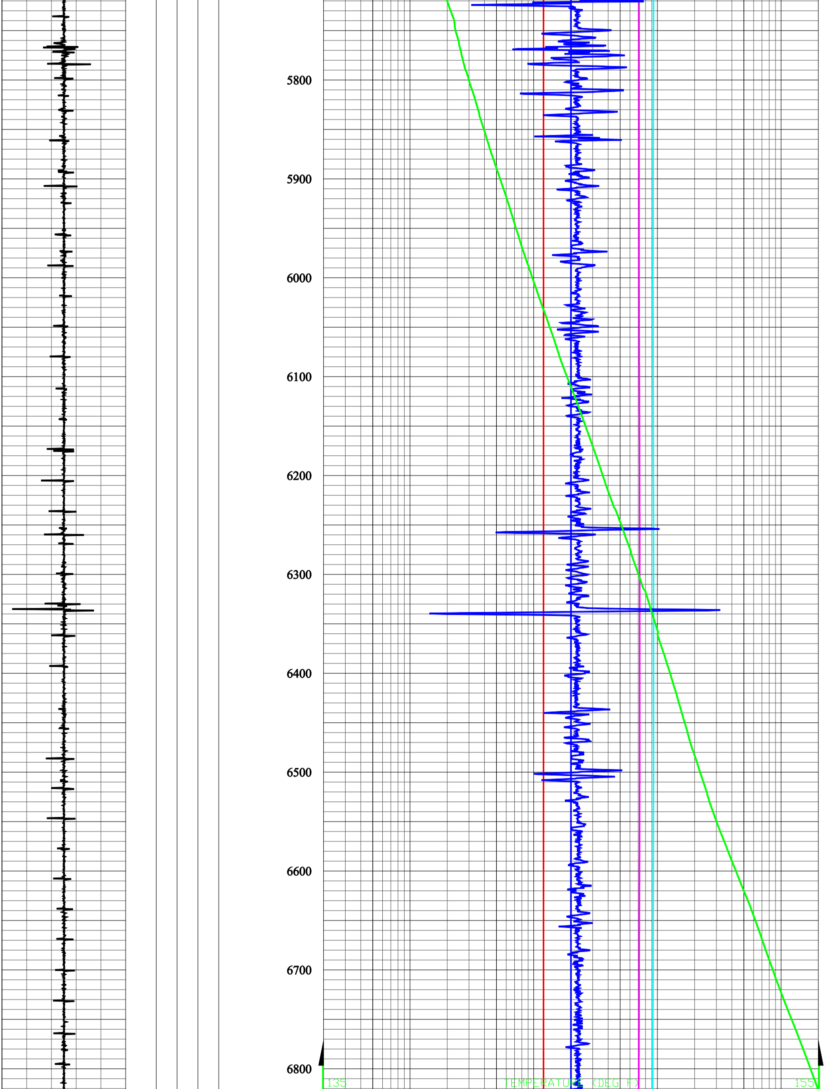
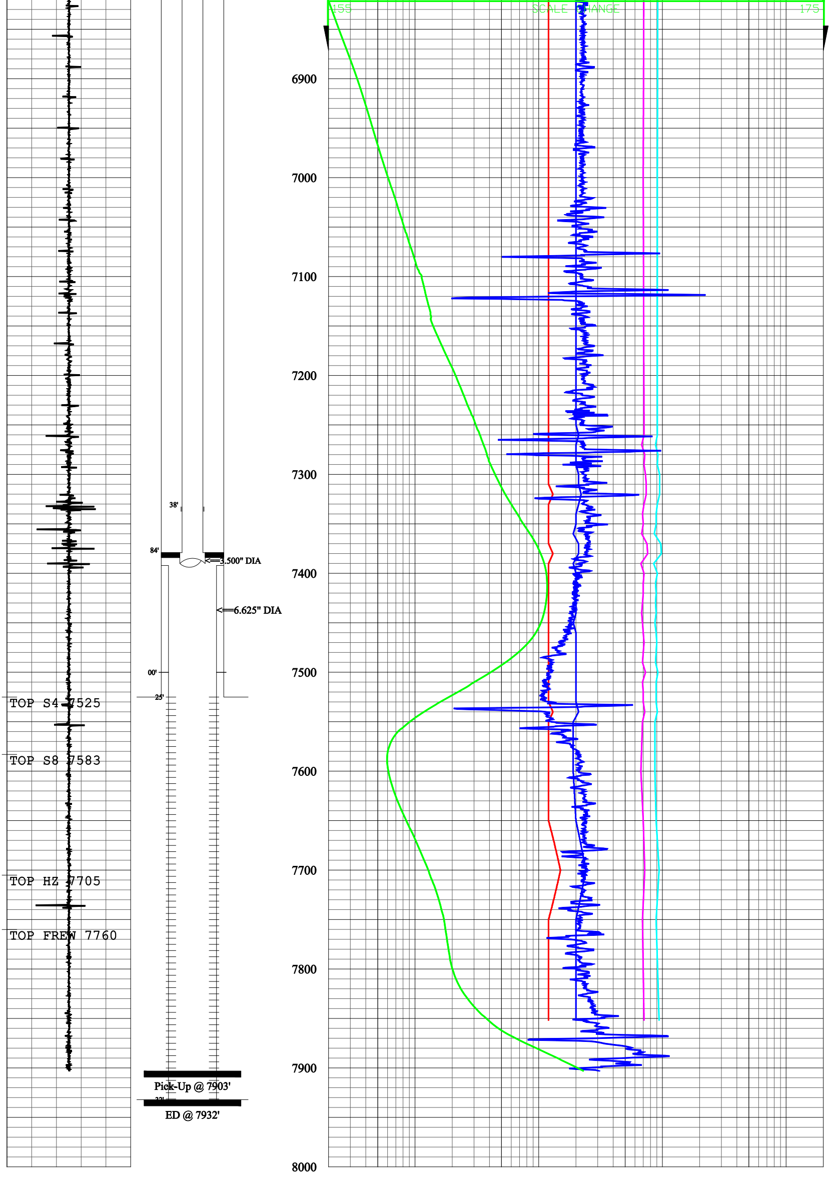
| STR. | PIPE DIA. | PERFORATIONS |
|---|---|---|
| A | 8.625" | WSO: 7500'. |
| | 6.625" | SLOTTED: 7525'-7932'. |
| | | PACKERS: 7384'. |
| | | SLIDING SLEEVES: 7338'. |
| | | NO-GO: 7368'. |
| | | STAGE COLLAR: 2793'. |
| | | PENGO PATCH: 2726'-2773'. |

### TOOL DIAGRAM



```
     Audio Data:  C:\data\NOISE.txt
--------------------------------------------------
   DEPTH |   200HZ |   600HZ |  1000HZ |  2000HZ |
--------------------------------------------------
     100 |   10.70 |    8.10 |    2.00 |    1.10 |
     250 |   10.40 |    8.00 |    2.00 |    1.10 |
     500 |   10.40 |    8.00 |    1.90 |    1.10 |
     700 |   10.10 |    7.70 |    1.90 |    1.10 |
     720 |   10.10 |    7.70 |    1.90 |    1.10 |
     740 |   10.00 |    7.60 |    1.90 |    1.10 |
     760 |   10.10 |    7.70 |    1.90 |    1.10 |
     780 |   10.00 |    7.70 |    1.90 |    1.10 |
     800 |   10.60 |    8.20 |    2.10 |    1.30 |
     820 |   10.80 |    8.20 |    2.00 |    1.10 |
     840 |   10.00 |    7.70 |    1.90 |    1.10 |
     860 |   10.20 |    7.80 |    1.90 |    1.10 |
     880 |   10.20 |    7.80 |    1.90 |    1.10 |
     900 |   10.10 |    7.80 |    1.90 |    1.10 |
    1000 |   10.20 |    7.80 |    1.90 |    1.10 |
    1250 |    9.90 |    7.60 |    1.90 |    1.10 |
    1500 |    9.80 |    7.50 |    1.90 |    1.10 |
    1750 |    9.90 |    7.60 |    1.90 |    1.10 |
    2000 |    9.90 |    7.60 |    1.90 |    1.10 |
    2250 |    9.60 |    7.40 |    1.90 |    1.10 |
    2500 |    9.90 |    7.60 |    1.90 |    1.10 |
    2700 |    9.90 |    7.60 |    2.00 |    1.10 |
    2720 |    9.90 |    7.60 |    2.10 |    1.10 |
    2740 |    9.90 |    7.50 |    2.10 |    1.10 |
    2760 |   10.10 |    7.70 |    2.20 |    1.10 |
    2780 |    9.70 |    7.40 |    2.00 |    1.10 |
    2800 |   10.30 |    7.70 |    2.00 |    1.10 |
    2820 |   10.00 |    7.50 |    2.20 |    1.10 |
    2840 |   10.00 |    7.40 |    2.20 |    1.10 |
    2860 |   10.20 |    7.60 |    2.10 |    1.10 |
    2880 |   10.10 |    7.40 |    2.10 |    1.10 |
    2900 |   10.00 |    7.40 |    2.10 |    1.10 |
    3000 |    9.80 |    7.50 |    2.10 |    1.20 |
    3250 |   10.00 |    7.60 |    2.00 |    1.20 |
    3500 |   10.00 |    7.60 |    2.00 |    1.10 |
    3750 |    9.60 |    7.30 |    1.90 |    1.10 |
    4000 |    9.70 |    7.30 |    2.00 |    1.20 |
    4250 |    9.40 |    7.10 |    1.90 |    1.10 |
    4500 |    9.50 |    7.20 |    2.00 |    1.20 |
    4750 |    9.10 |    7.00 |    1.90 |    1.10 |
    5000 |    9.10 |    6.80 |    1.90 |    1.10 |
    5250 |    9.00 |    6.80 |    2.00 |    1.20 |
    5500 |    9.30 |    7.10 |    2.00 |    1.20 |
    5750 |    9.30 |    7.10 |    2.00 |    1.20 |
    6000 |    9.20 |    7.10 |    2.00 |    1.20 |
    6250 |    9.30 |    7.20 |    2.00 |    1.20 |
    6500 |    9.30 |    7.20 |    2.00 |    1.20 |
    6750 |    9.20 |    7.10 |    2.00 |    1.20 |
    7000 |    9.10 |    7.00 |    2.00 |    1.20 |
    7250 |    9.10 |    7.10 |    2.00 |    1.20 |
    7260 |    9.10 |    7.10 |    2.10 |    1.20 |
    7270 |    8.80 |    6.80 |    2.00 |    1.20 |
    7280 |    9.20 |    7.20 |    2.00 |    1.20 |
    7290 |    9.10 |    7.10 |    2.00 |    1.20 |
    7300 |    9.50 |    7.30 |    2.10 |    1.20 |
    7310 |    9.50 |    7.40 |    2.10 |    1.20 |
    7320 |    9.50 |    7.40 |    2.20 |    1.30 |
    7330 |    9.10 |    7.10 |    2.10 |    1.20 |
    7340 |    8.90 |    6.90 |    2.00 |    1.20 |
    7350 |    8.90 |    7.00 |    2.00 |    1.20 |
    7360 |    8.60 |    6.80 |    1.90 |    1.20 |
    7370 |    9.70 |    7.50 |    2.10 |    1.20 |
    7380 |    9.80 |    7.60 |    2.10 |    1.30 |
    7390 |    8.50 |    6.70 |    1.90 |    1.20 |
    7400 |    9.10 |    7.10 |    2.00 |    1.20 |
    7410 |    8.80 |    7.00 |    2.00 |    1.20 |
    7420 |    8.90 |    7.00 |    1.90 |    1.20 |
    7430 |    8.80 |    6.90 |    2.00 |    1.20 |
    7440 |    8.90 |    6.80 |    2.00 |    1.20 |
    7450 |    8.70 |    6.90 |    1.90 |    1.20 |
    7460 |    8.90 |    7.00 |    2.00 |    1.20 |
    7470 |    9.00 |    7.10 |    2.00 |    1.20 |
```

```
     7480 |     8.90 |     7.00 |     2.00 |     1.20 |
     7490 |     8.80 |     6.90 |     2.00 |     1.20 |
     7500 |     9.20 |     7.30 |     2.00 |     1.20 |
     7510 |     8.90 |     6.90 |     2.00 |     1.20 |
     7520 |     8.90 |     7.00 |     2.00 |     1.20 |
     7530 |     8.90 |     7.00 |     2.00 |     1.20 |
     7540 |     9.10 |     7.20 |     2.10 |     1.30 |
     7550 |     8.70 |     6.90 |     1.90 |     1.20 |
     7600 |     8.70 |     6.70 |     1.90 |     1.20 |
     7650 |     8.90 |     7.00 |     2.00 |     1.20 |
     7700 |     9.40 |     7.20 |     2.40 |     1.50 |
     7750 |     8.90 |     6.90 |     2.00 |     1.20 |
     7852 |     9.40 |     7.10 |     2.00 |     1.20 |
```


1315 COLLAR LOCATOR (MV) 2450
75 TEMPERATURE (DEG F) 95
0.02 AUDIO DETECTION LOG (MV) 200
-2 DIFFERENTIAL TEMPERATURE (DEG F) 2
<==2.875" DIA
<==8.625" DIA
<==13.375" DIA
0
100
200
300
400
500
TEMPERATURE
DIFFERENTIAL TEMPERATURE
2000HZ
1000HZ
600HZ
200HZ