1- Ground elevation at well: Estimated 467 feet MSL. Survey pending.

2- Top of casing elevation:
   a) vent hole? Pending, Casing stickup 1.5 ft above ground, No

3- Wellhead protection cover type:
   a) weep hole? No
   b) concrete pad dimensions: stove-pipe monument, No

4- Dia./type of well casing:
   2-inch Sch. 40 PVC

5a Type/slot size of screen:
   2-inch Sch. 40 PVC, 0.020 slot

5b Type/slot size of screen:
   2-inch Sch. 40 PVC, 0.020 slot

6a Type screen filter/Quantity:
   #3 Monterey Sand

6b Type screen filter/Quantity:
   #3 Monterey Sand

7- Type of seal:
   a) Quantity used:
      Bentonite chips (medium), 10 bags or 500 pounds

8- Grout:
   a) Grout mix used:
      Bentonite slurry grout
   b) Method of placement:
      Tremmie pipe
   c) Vol. of well casing grout:
      165 gallons

Development method:
Surge, bail, and pump - 1st devel. 3/8/06
Development note:
Surge, bail, and pump - 2nd devel. 3/16/06

Estimated purge volume:

Comments:
Nested well pair initially installed 2/26/06 (casing damaged)
Removed casings and completed re-drill on same borehole for well installation.
Nested wells labeled as follows:
MW-44-125 (screen 114-124) with 10-foot blank casing sump.
## SOIL BORING LOG

**PROJECT NAME:** IMPM Drill Program  
**HOE DEPTH (ft):** 134.0  
**DRILLING CONTRACTOR:** Prosonic Corp. Phoenix, AZ

**SURFACE ELEVATION:** 470.8 ft. MSL  
**NORTHING (CCS NAD 27 Z 5):** 2,102,729.79  
**EASTING (CCS NAD 27 Z 5):** 7,616,251.64  
**DATE STARTED:** 3/6/2006  
**DATE COMPLETED:** 3/7/2006

**LOCATION:** PG&E Compressor Station - Flood Plain, Topock, California  
**LOGGED BY:** R. Tweidt

### Soil Boring Log

<table>
<thead>
<tr>
<th>DEPTH BGS (feet)</th>
<th>INTERVAL</th>
<th>TYPE/NUMBER</th>
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<th>SOIL DESCRIPTION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>0 - 5</td>
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<td></td>
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<td>5</td>
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<tr>
<td>10</td>
<td>10</td>
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<tr>
<td>15</td>
<td>15</td>
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<tr>
<td>20</td>
<td>20</td>
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<tr>
<td>25</td>
<td>25</td>
<td></td>
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<td></td>
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<tr>
<td>30</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>35</td>
<td></td>
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</tr>
</tbody>
</table>

- **0' - 7'** was drilled using a 11 3/4 - inch bit with air rotary

- **Hand augured to 5' bgs**

- **SAND (SP)** - brn (10YR4/3), 95% f sand, <5% silt, 0% gravel, poorly sorted, non-plastic, wet, no odor

- **<2% organic specks**

- **<2% organic specks**

- **95% sand, <5% silt, 0% gravel, <2% black organic specks**  
  **Drill Rate = 10' / min**
# SOIL BORING LOG

**PROJECT NAME:** IMPM Drill Program  
**DRILLING CONTRACTOR:** Prosonic Corp., Phoenix, AZ  
**DATE STARTED:** 3/6/2006  
**DATE COMPLETED:** 3/7/2006  
**LOCATION:** PG&E Compressor Station - Flood Plain, Topock, California  
**LOGGED BY:** R. Tweidt  
**SURFACE ELEVATION:** 470.8 ft. MSL  
**NORTHING (CCS NAD 27 Z 5):** 2,102,729.79  
**EASTING (CCS NAD 27 Z 5):** 7,616,251.64  
**DRILLING METHOD:** Rotosonic  
**DRILLING EQUIPMENT:** Track Mounted Rotosonic

<table>
<thead>
<tr>
<th>DEPTH BGS (feet)</th>
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<th>SOIL DESCRIPTION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>10</td>
<td>SAND (SP) - dk (10YR4/3), 95% f sand, &lt;5% silt, 0% gravel, poorly sorted, non-plastic, wet, no odor</td>
<td>Drill Rate = 10' / min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 95% sand, &lt;5% silt, 0% gravel, &lt;2% black organic specks, gravel up to 2 cm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 95% sand, &lt;5% silt, &lt;5% gravel, &lt;2% black organic specks, gravel up to 2 cm, subrnd to rnd, chert &amp; other sed rks present</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- sand coarsening downward, mostly m sand</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- local mottled black organic strings</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>GW</td>
<td>SANDY GRAVEL (GW) - dk yellowish brn (10YR4/4), 35% sand, &lt;5% silt, 60% gravel, well graded, subrnd to rnd up to 10 cm, wet, no odor, mostly sed with minor mm gravel</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>10</td>
<td>SW</td>
<td>GRAVELLY SAND (SW) - dk yellowish brn (10YR4/4), 70% sand, &lt;5% silt, 30% gravel, well grd, subrnd to rnd up to 9 cm, wet, no odor</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>10</td>
<td></td>
<td>- gravely lens, 35% sand, &lt;5% silt, 60% gravel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 70% sand, &lt;5% silt, 25% gravel, max dia 7 cm, trace black organic specks</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>10</td>
<td></td>
<td>- 55% sand, &lt;5% silt, 40% gravel, trace black organic specks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 85% sand, &lt;5% silt, 10% gravel, gravel fining downward, max dia 5 cm, mostly sed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 85% sand, &lt;5% silt, 10% gravel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 60% sand, &lt;5% silt, 35% gravel, increased gravel, max dia 7 cm</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>10</td>
<td></td>
<td>- clayey silt layer, brn (7.5YR4/3), low plasticity, slow dilatancy, soft</td>
<td>Drill Rate = 10' / min</td>
</tr>
<tr>
<td>Depth BGS (feet)</td>
<td>Soil Type</td>
<td>USCS Code</td>
<td>Soil Description</td>
<td>Comments</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------</td>
<td>-----------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>75</td>
<td>Gravelly Sand (SW)</td>
<td>10YR4/4</td>
<td>dk yellowish brn (10YR4/4), 70% sand, &lt;5% silt, 30% gravel, well grnd, subrd to rnd up to 9 cm, wet, no odor</td>
<td>Drill Rate = 10' / min</td>
</tr>
<tr>
<td>80</td>
<td>Silty Gravelly Sand (SM)</td>
<td>7.5YR3/4</td>
<td>dk brn (7.5YR3/4), 70% sand, 15% silt, 15% gravel, well graded, submd to subrd up to 3 cm, wet, no odor, mostly met gravel</td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>Sand (SP)</td>
<td>10YR5/4</td>
<td>yellowish brn (10YR5/4), 70% m sand, &lt;2% silt, 30% gravel, poorly graded, submd to rnd up to 8 cm, wet, no odor, distal rock suite assemblage</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Sandy Gravel (GW)</td>
<td>10YR4/3</td>
<td>brn (10YR4/3), 35% sand, &lt;5% silt, 60% gravel, well graded, submd to well rnd up to 12 cm, wet, no odor, mostly sed to met</td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>Silty Gravel (GW)</td>
<td>2YR3/4</td>
<td>brn (2YR3/4), 60% sand, &lt;5% silt, 40% gravel, generally graded, submd to well rnd up to 12 cm, wet, no odor, mostly met gravel</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Silty Sandy Gravel (GW)</td>
<td>10YR3/4</td>
<td>dk brn (10YR3/4), 60% sand, &lt;5% silt, 40% gravel, well graded, submd to well rnd up to 12 cm, wet, no odor, mostly met gravel</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Sandy Gravelly Sand (SM)</td>
<td>10YR4/4</td>
<td>dk yellowish brn (10YR4/4), 70% sand, &lt;5% silt, 30% gravel, well grnd, subrd to rnd up to 9 cm, wet, no odor, mostly met gravel</td>
<td></td>
</tr>
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**SOIL BORING LOG**

**PROJECT NAME:**  
IMPM Drill Program  

**HOLE DEPTH (ft):**  
134.0  

**DRILLING CONTRACTOR:**  
Prosonic Corp. Phoenix, AZ  

**SURFACE ELEVATION:**  
470.8 ft. MSL  

**NORTHLING (CCS NAD 27 Z 5):**  
2,102,729.79  

**EASTING (CCS NAD 27 Z 5):**  
7,616,251.64  

**DATE STARTED:**  
3/6/2006  

**DATE COMPLETED:**  
3/7/2006  

**DRILLING METHOD:**  
Rotosonic  

**DRILLING EQUIPMENT:**  
Track Mounted Rotosonic  

**LOCATION:**  
PG&E Compressor Station - Flood Plain, Topock, California  

**LOGGED BY:**  
R. Tweidt  

**SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.**

**DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.**
### SOIL BORING LOG

**PROJECT NAME:** IMPM Drill Program  
**HOLE DEPTH (ft):** 134.0  
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</table>
| 110              | SM     | 20       |             |           | SILTYSVELLY SAND (SM) - dk brn (7.5YR3/4), 70% sand, 15% silt, 15% gravel, well graded, subang to subrnd up to 3cm, wet, no odor, mostly met gravel  
|                  |        |          |             |           | - 50% sand, 20% silt, 30% gravel, subang to subrnd, max dia 4 cm, met gravel |
|                  |        |          |             |           | - 65% sand, 15% silt, 20% gravel, subang to subrnd, max dia 3 cm, met gravel |
|                  |        |          |             |           | - very dk gray (7.5YR3/1), 55% sand, 25% silt, 20% gravel, max dia 2 cm, slightly musty-sulphur odor, appears to contain organic material |
|                  |        |          |             |           | - dk brn (7.5YR3/3), 30% sand, 20% silt, 50% gravel, subang to subrnd, max dia 4 cm, highly weathered met gravel |
| 115              |        |          |             |           |                  | Top of Rework Bedrock (?) |
| 120              | ML     |          |             |           | GRAVELLY SILT WITH SAND (ML) - dr reddish brn (5YR3/4), 25% sand, 45% silt, 30% gravel up to 6 cm, well graded, subang to subrnd up to 2 cm, wet, no odor, decomposed |
|                  | SM     |          |             |           | SILT SAND (SM) - dr reddish brn (5YR3/4), 75% sand, 15% silt, 10% gravel, well graded, subang to subrnd up to 2 cm, wet, no odor |
| 125              |        |          |             |           | MIOCENE CONGLOMERATE (BR) - reddish brn (5YR4/4), 65% sand, 25% silt, 10% gravel, hard, clasts up to 10 cm, dry |
| 130              | BR     |          |             |           |                  | Boring Terminated at 134 ft |

**ABBREVIATIONS**

cc = continuous core run  
bn = brown  
l = light  
dk = dark  
vf = very fine-grained
**SOIL BORING LOG**

**PROJECT NAME:** IMPM Drill Program

**HOLE DEPTH (ft):** 134.0

**DRILLING CONTRACTOR:** Prosonic Corp. Phoenix, AZ

**SURFACE ELEVATION:** 470.8 ft. MSL

**NORTHING (CCS NAD 27 Z 5):** 2,102,729.79

**EASTING (CCS NAD 27 Z 5):** 7,616,251.64

**DATE STARTED:** 3/6/2006

**DATE COMPLETED:** 3/7/2006

**DRILLING METHOD:** Track Mounted Rotosonic

**LOCATION:** PG&E Compressor Station - Flood Plain, Topock, California

**LOGGED BY:** R. Tweidt

**PROJECT NUMBER:** MW-44

<table>
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<tr>
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</tbody>
</table>

- **f** = fine-grained
- **m** = medium-grained
- **c** = coarse-grained
- **vc** = very coarse-grained
- **ang** = angular
- **subang** = subangular
- **subrnd** = subrounded
- **rd** = rounded
- **br** = bedrock formation
- **ss** = sandstone
- **conglom** = conglomerate
- **comptd** = compacted
- **qtz** = quartz

**SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.**

**DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.**