COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR NEW APPLICATIONS

FROM: RYAN
DATE: 17-May-05

SUSPENSE DATE: 24-May-05

TO: INIT. TO: INIT. FOR: PLEASE:
BAUER, G. NAKAMA, L. Approval
CHING, F. NAKANO, D. Signature
FUJII, N. OHYE, M. Information
GOODING, K. SAKODA, E.
HARDY, R. 2 SUBIA, S.
HIGA, D. SWANSON, S.
ICE, C. UYENO, D.
IMATA, R. YODA, K.
KUNIMURA, I. YOSHINAGA, M.

Well Number: 246.07

WELL CONSTRUCTION

PUMP INSTALLATION

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated
1 TRANSL. LETTER
2 PERMIT PROCESS TABLE
3 CWRM MAP
4 APPL. FORM (5 COPIES)
5 USGS MAPS (5 COPIES)
6 TAX MAPS (5 COPIES)
7 PARCEL OWNER VERIF.
8 CONTRACTOR VERIF.
9 ALL INFO FILLED IN
10 BACKGROUND CHECK
11 $25 FEE DEPOSIT SLIP
12 SHPO SUSP/OBS check

FOLDER: MADE NEW FILE FOLDER, ATTACHED
FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:

DATE ACTION

hold up accepting until yellow addressed — no problems? move
Mr. Rod Diamond  
HCR#3 Box 14073  
Keeau, HI 96749  

Dear Mr. Diamond:

Well Construction/Pump Installation Permit Application for Well No. 3686-07

We acknowledge receipt, on June 3, 2005, of your completed Well Construction/Pump Installation permit application and filing fee for the Ariel Well (Well No. 3686-07). You can expect your application to be processed within ninety (90) days from this date.

For your information, the attached table describes the process, responsible parties, and deadline requirements for drilling or modifying a well and installing, modifying, or replacing a pump.

By this acceptance letter, we are also notifying the well operator/landowner that water may not be pumped for purposes other than testing until the certificate of well construction/pump installation completion letter is issued to the well operator and landowner. Additionally, the permitted pump capacity described on the pump installation permit may be reduced in the event that the pump test does not support the capacity. No certificate of pump installation will be issued until the Commission has determined that the pump capacity will not have adverse effects on the aquifer, other nearby wells, or streams. In other words, you may need to remove the pump and install a smaller pump at the Commission's discretion before you can withdraw water for purposes other than testing.

If you have any questions about your permit application, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai) extension 70255.

Sincerely,

DEAN A. NAKANO  
Acting Deputy Director

RI:ss  
Attachment  
c: Bruce Martin
TO: Honorable Chiyoue L. Fukino, M.D., Director
   Department of Health
   Attention: Director's Office
   Harold Yee, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
       Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
         Ariel Well (Well No. 3686-07)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by July 25, 2005. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title II, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

For the applicant's information, a source of possible wastewater contamination [ ] is not located near the proposed well site (information attached).

An NPDES permit is required.

Other relevant DOH rules/regulations, information, or recommendations are attached.

In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

No comments/objections

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title II, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is not located near the proposed well site (information attached).

[ ] An NPDES permit is required.

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] In the event that the location of the well changes but is still within the parcel described on this application, our division considers the comments to still be applicable, and we do not need to review the new location.

[ ] No comments/objections
June 20, 2005

TO: Harry Yada, Administrator
   Land Division

FROM: Dean Nakano, Acting Deputy Director
      Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
         Ariel Well (Well No. 3686-07)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by July 25, 2005. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[ ] A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. ____________________________

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ____________________________ Phone: ______________

Signed: ____________________________ Date: ______________
Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by July 25, 2005. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255. If you require additional information regarding specific information that can be provided by the applicant, please contact the applicant directly at the contact information provided on the application form.

RESPONSE:

[ ] This is a [ ] public (county or state) project [ ] private project and [ ] will [ ] may disturb historic sites.

[ ] We concur that the work described under this permit will not disturb historic sites.

[ ] We do not concur that the work described under this permit will not disturb historic sites. We require the following for our concurrence:

Contact Person: ___________________________________________________________________ Phone: __________________________

Signed: ________________________________________________________________________ Date: __________________________
June 20, 2005

TO: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

FROM: Dean A. Nakano, Acting Deputy Director
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Ariel Well (Well No. 3686-07)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by July 25, 2005. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RESPONSE:

[ ] This well project [ ] requires [ ] does not require a CDUP. If a CDUP is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

[ ] Other relevant OCCL rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ___________________ Phone: ____________

Signed: ___________________ Date: ____________
June 20, 2005

Mr. Chris Yuen, Director
Planning Department
County of Hawaii
101 Pauahi Street
Hilo, HI 96720

Dear Mr. Yuen:

Special Management Area Use Permit requirements for
Well Construction/Pump Installation Permit Application
Ariel Well (Well No. 3686-07)

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation permit application.

We would appreciate your comments on the captioned application with regard to the SMA permitting requirements specific to your division. Please respond by returning this cover memo form by July 25, 2005. If we do not receive comments or a request for additional review time by this date, we will assume you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

Sincerely,

DEAN A. NAKANO
Acting Deputy Director

[ ] This well project [ ] requires [ ] does not require a SMA. If a SMA is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

[ ] Other relevant rules/regulations, information, or recommendations are attached.

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: _____

Signed: ___________________________ Date: ________
Assessed Values reflect tax year 2004. Oahu, Hawaii, and Maui Assessed Values reflect tax year 2005

Search criteria: TMK Taxkey 3-1-5-55-7

<table>
<thead>
<tr>
<th>Taxkey</th>
<th>Subdiv/Condo</th>
<th>Tnr</th>
<th>Address</th>
<th>Owner/Lessee</th>
<th>Bds</th>
<th>Bths</th>
<th>Land area</th>
<th>Liv area</th>
<th>Last Sale</th>
<th>Instr</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1-5-55-7</td>
<td>Hawaiian</td>
<td>F</td>
<td>BEACH MARTEN,</td>
<td></td>
<td>1.04 ac</td>
<td>10/15/2004 DEED $50,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paradise Park</td>
<td>RD</td>
<td></td>
<td>BRUCE E/ETAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
## Well Background Check

<table>
<thead>
<tr>
<th>Approved</th>
<th>Well No.</th>
<th>Well Name</th>
<th>Applicant</th>
<th>Driller</th>
<th>Pump Inst.</th>
<th>Type</th>
<th>Issued</th>
<th>Signed</th>
<th>WCR1 Accept</th>
<th>WCR2 Accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>3786-02</td>
<td>Peters</td>
<td>Martin W. Peters</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campbell</td>
<td>3787-06</td>
<td>Lucky Me</td>
<td>Regina M. Lutz and Kayrene L</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nielsen</td>
<td>3788-12</td>
<td>Scuppers</td>
<td>John Busek</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jobst</td>
<td>3888-02</td>
<td>Camping</td>
<td>Christopher &amp; Marta Campbell</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyilt</td>
<td>3888-11</td>
<td>Hendershot</td>
<td>Carolyn Hendershot</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harrison</td>
<td>3888-12</td>
<td>Harrison</td>
<td>Victor Chris Harrison</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucky Me</td>
<td>3586-06</td>
<td>Oh</td>
<td>Shelley &amp; Jeffry Hutch</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3687-16</td>
<td>Duley</td>
<td>Robert Duley</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td>1/7/2005</td>
<td>2/1/2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3688-07</td>
<td>Hendershot</td>
<td>Carolynn Hendershot</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td>1/6/2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3686-06</td>
<td>Polu Puka</td>
<td>Rick Carey</td>
<td>BC-23379</td>
<td>BC-23379</td>
<td>BOTH</td>
<td>5/3/2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F YR APP D OBJ</td>
<td>SRC/ COST</td>
<td>PROJECT</td>
<td>PH ACT</td>
<td>AMOUNT</td>
<td>NAME/DESCRIPTION (WANG INPUT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>---------</td>
<td>--------</td>
<td>---------</td>
<td>--------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S 05 326 C 1026 0752</td>
<td>(1)</td>
<td></td>
<td></td>
<td>$25.00</td>
<td>Bruce Marten</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2)</td>
<td></td>
<td></td>
<td>$25.00</td>
<td>Gary J. De Vine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3)</td>
<td></td>
<td></td>
<td>$25.00</td>
<td>Christopher Campbell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** $ 75.00

**REMARKS:**
- LINE (1) Ariel Well
- LINE (2) Family Well
- LINE (3) Campbell Well
- LINE (4) 
- LINE (5) 
- LINE (6) 
- LINE (7) 
- LINE (8) 
- LINE (9) 
- LINE (10)
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION / PUMP INSTALLATION PERMIT

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96809. Application must be accompanied by 8 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 808-973-2226. For further information and updates to this application form, visit http://www.hawaii.gov/wrc.

WELL LOCATION INFORMATION

1. STATE WELL NO. (verify name approved)
2. WELL NAME
3. COUNTY
4. TOWN
5. Ttax
6. RANK
7. ADDRESS
8. LICENSE BUSINESS NAME
9. ABANDON/SEAL WELL

The following be attached before this application is accepted as complete (check off if attached):

☐ Portion of 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quad map.
☐ Property tax map, showing well location referenced to established property boundaries.
☐ Photograph of the proposed well site.
☐ A schematic diagram showing the well site, access road and proposed well infrastructure (if applicable)

5. WELL OPERATOR'S NAME/COMPANY
BRUCE MARTIN

6. LANDOWNER'S NAME/COMPANY
same

7. Have you consulted with the Historic Preservation Division of the Department of Land and Natural Resources regarding potential impacts of well construction activities on historic sites?
☐ Yes (please attach applicable documentation from Historic Preservation)
☐ No (attach a short description of history of past land use, vacant property)

PROPOSED WELL CONSTRUCTION
PROPOSED PUMP INSTALLATION

6. Proposed Work
☐ X Construct New Well
☐ Modify Existing Well
☐ Abandon/Seal Well

8. Proposed Construction Type
☐ X Drilled
☐ Pump
☐ Tunnel

9. Proposed Pumping Rate, gpd (gallons per minute)
10. Method of flow measurement
☐ X Flow meter
☐ Open Pipe
☐ Well
☐ Other

11. Proposed Amount of Withdrawal, gpd (gallons per day)
12. Proposed Pump Rate, gpm (gallons per minute)
13. Proposed Pumping Rate, gpd (gallons per day)

14. Proposed Pumping Rate, gpm (gallons per minute)
15. Proposed Pumping Rate, gpd (gallons per day)

16. Municipal (water systems serving greater than 25 individuals or 15 service connections)

17. Domestic Number of units to be served

18. Industrial (describe)

19. Irrigation (describe crop and no. of acres)

20. Military (describe)

21. Other (describe)

OTHER LEGAL REQUIREMENTS

22. Conservation District Use Permit (CDUP)
☐ Required, CDUP # , date approved
☐ Not Required (attach documentation from COE)

23. Special Management Area Permit (SMAP)
☐ Required, SMA # , date approved
☐ Not Required (attach documentation from applicable County agency)

Additional remarks, explanations, etc. (attach additional sheet if more space is needed)

NOTE: Signing below indicates that the signatories understand and agree that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that upon permit approval: 1) the proposed work is to be completed within 2 (2) years of the approval date, 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 days after the completion date of the permitted work; 3) in the event that the application is not completed correctly, any permit may be suspended until the item is brought into compliance, and any work done while the permit is in suspension may result in fines up to $5000/day.

24. WELL DRILLER (Must be filled out if application is for Well Construction)
Rodney K Diamond
HCR #3 Box 14073 Keaau HI 96749

25. PUMP INSTALLER (Must be filled out if application is for Pump Installation)
Rodney K Diamond
HCR #3 Box 14073 Keaau HI 96749

For Official Use Only:

25 MAY 10 9:36
PROPOSED WELL SECTION (Please attach schematic if different from diagram provided below)

Hole Diameter: 12 inches.

Elevation at top of casing: 51 ft. msI*
Minimum of 2 ft. radius & 4" thick concrete pad (to contain benchmark surveyed to nearest 0.01 ft.)

Ground Elevation: 50 ft. msI*

Minimum of 2 ft. radius & 4" thick concrete pad (to contain benchmark surveyed to nearest 0.01 ft.)

Grouting Method:
- Positive Displacement
- Other

Cement Grout: 40 ft. (min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less)

Annular space between hole and casing (1 ft. for positive displacement, 3" for other methods).

3 in.

Rock or Gravel Packing:
- Crushed Basalt
- Rounded Gravel

Total Depth: 50 feet

Estimated Water Level Elevation: 0 ft. msI*

For non-salt water Basalt Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = (Water Elevation - )
Example: Estimated + 2 ft. Water Level Elevation: Bottom Elevation of Well Limit = (2 - ) = 18.5 ft

Solid Casing Material:
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139

- Stainless Steel: compliant with (check one or more):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)

- ABS Plastic: compliant with ASTM F480 and ASTM D1527

- Thermoset Plastic:
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139

- Stainless Steel: compliant with (check one or more):
  - ASTM A409 (production wells)

- PVC Plastic: compliant with ASTM F480 and (ASTM D1785 or ASTM D2241)

- Thermoset Plastic:
  - Centrifugally Cast Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950

- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basalt Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = (Water Elevation - )
Example: Estimated + 2 ft. Water Level Elev. Bottom Elevation of Well Limit = (2 - ) = 18.5 ft