WELL CONSTRUCTION PERMIT

for

Kihei-Unocal Monitor Wells
Well Nos. 4427-01M to 03M
Kihei, Maui

TO: Unocal Marketing & Refining
P.O. Box 659
Honolulu, HI 96807

In accordance with Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct three monitor wells (Well Nos. 4427-01M to 03M) in the vicinity of Maui Petroleum, Hobron Lane, TMK: 3-7-11:21, is approved, subject to the following conditions:

1. The Commission on Water Resource Management Staff (Commission staff), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, before any work by this permit commences.

2. The wells shall be used for ground water quality monitoring, sampling, and testing only.

3. The following shall be submitted to the Commission staff within 30 days after completion of the wells:
   a. Well Completion Reports.
   b. As-built sectional drawings of the wells.
   c. Plot plan and map showing the exact locations of the wells.
   d. Periodic reports of monitoring and testing results.

4. The applicant shall comply with all applicable laws, rules, and ordinances.
5. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

6. Upon completion of monitoring operations, the applicant shall obtain a well construction permit to seal the wells with cement grout in a manner approved by the Commission.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management
JUL 20 1992
Date of Issuance

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

Applicant's Signature: Bruce C. Muddleston Date: 7/27/92
Printed Name: Bruce C. Muddleston
Firm or Title: Unocal

Please sign and return one copy of this permit to the Commission staff and retain a copy for your record.

Enc. (Well Completion Report form)
c: USGS
   Department of Health
      Safe Drinking Water Branch
      Solid and Hazardous Waste Branch
      Ground Water Protection Program
   Maui Department of Water Supply
   Dames & Moore
WELL CONSTRUCTION PERMIT

PUMP INSTALLATION PERMIT

APPLICATION FOR

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 276, Honolulu, Hawaii 96819. Application must be accompanied by a non-refundable filing fee of $15.00 plus $1.00 per acre. If necessary, phone

1. WELL LOCATION/NAME: Maui-50
   Island: Maui
   Tax Map Key: 8-7-011-031
   Address: Maui Petroleum, Halema Lane, Kahului, Maui, Hawaii
   (Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER
   Firm Name: Unocal Marketing and Refining
   Contact Person: Bruce Huddleston
   Address: P.O. Box 659
   Honolulu, HI 96820
   Phone: 522-7157

   LANDOWNER
   Firm Name: A and B Properties
   Contact Person: --
   Address: 33 Laka Avenue, Suite 400
   Kahului, Maui, HI 96732
   Phone: 877-5523

3. PROPOSED CONTRACTOR FOR:
   ☐ Well Drilling
   ☐ Pump Installation
   Name: PR Drilling Company, Inc.
   Address: 235 Kekua Street
   Wahiawa, HI 96786
   Phone: 692-2631
   Contractor's License No: G9637

4. PROPOSED WORK
   ☐ Drill New Well
   ☐ Deepen
   ☐ Alter
   ☐ Seal
   ☐ Install New Pump
   ☐ Replace Pump
   ☐ Redrill
   ☐ Modify Pump
   (Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE
   ☐ Municipal (including hotels, stores, etc.)
   ☐ Domestic (individual, noncommercial water systems)
   ☐ Irrigation (specify)
   ☐ Military
   ☐ Industrial
   ☐ Other (specify) monitor
   ☐ Groundwater

6. PROPOSED AMOUNT OF WITHDRAWAL _______ gallons per day

7. PROPOSED PUMP INFORMATION N/A
   Pump Type: ☐ Vertical Turbine
   ☐ Submersible
   ☐ Centrifugal
   Motor: ☐ Diesel
   ☐ Gas
   ☐ Electric: _______ Rated Horsepower
   Rated Pump Capacity _______ gallons per minute (gpm)

Well Owner (print) ___________________________ Landowner (print) ___________________________
Signature ___________________________ Signature ___________________________
Date ___________________________ Date ___________________________

For Official Use Only:
Field Checked By ___________________________ Latitude _______ Hydrologic Unit
Date ___________________________ Longitude _______ State Well No. 6-4427-01105-03

Kiner-Noncal
Briefly describe the proposed work:

The boring for well installation will be drilled with a truck-mounted drill rig equipped with 4-inch hollow stem auger. The well will be installed into the boring as described below.

PROPOSED SECTION OF WELL

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
<th>Length</th>
<th>Diameter</th>
<th>Wall thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Casing</td>
<td>PVC</td>
<td>2 ft.</td>
<td>4 in.</td>
<td>Schedule 40 in.</td>
</tr>
<tr>
<td>Casing</td>
<td>/Perforated/X/Screen</td>
<td>10 ft.</td>
<td>4 in.</td>
<td>Schedule 40 in.</td>
</tr>
<tr>
<td>Rock Packing</td>
<td></td>
<td>11 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Hole</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Elevation at top of casing 10 ft., msl.

Ground Elev. 10 ft., msl

Cement Grout 3 ft.

Bentonite seal 4 ft.

Hole Dia. 10 in.

Total Depth 12 ft.

Silica sand

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
Locations of wells MW-50, MW-51, and MW-52

Maui Petroleum
Kahului, Maui, Hawaii

Reference:
Weker Engineering & Construction Co.
General Arrangement, Marketing Station
Kahului, Maui, Hawaii
by: Union Oil Company of California
ated: Nov. 30, 1959

Legend:
- Exploratory Soil Boring
- PVC Monitoring Well
- Recovery Pit
- Exploratory Test Pit (TP) (backfilled)
- Approx.
- Locations of new wells (Marked with paint)

Free Product
Thickness
1/10/59

Kahului
(Maui Petro)
APPLICATION FOR

WELL CONSTRUCTION PERMIT
PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96823. Application must be accompanied by a non-refundable filing fee of $25.00 plus $1.00 per page. Application fee is payable to the Department of Land and Natural Resources. (Filing fees waived for government agencies.) If necessary, phone 944-1603, Hydrology/Geology Section for assistance.

1. WELL LOCATION/NAMES

Island: Maui
Tax Map Key: 3-7-011-021
Address: Hana Petroleum, Hana, Maui, Hawaii

(Attach a USGS map (scale 1/"=2000") and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

Firm Name: Maui Marketing, Ltd.
Contact Person: Bruce Huddleston
Address: R.O. Box 659
Hilo, HI 96720
Phone: 932-7137

3. LANDOWNER

Firm Name: A and B Properties
Contact Person: -
Address: 235 Kapiolani Avenue, Suite 400
Kahului, Maui, HI 96732
Phone: 847-5523

4. PROPOSED CONTRACTOR FOR:

Well Drilling
Pump Installation

Name: PR Drilling Company, Inc.
Address: 235 Kapiolani Street
Wahiawa, HI 96786

5. PROPOSED WORK

Drill New Well
Alter
Install New Pump
Deepen
Seal
Replace Pump
Redrill
Abandon
Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

6. PROPOSED USE

Municipal (including hotels, stores, etc.)
Domestic (individual, noncommercial water systems)
Irrigation (specify)

Military
Industrial
Other (specify)

7. PROPOSED PUMP INFORMATION

Pump Type: Vertical Turbine
Submersible
Centrifugal

Motor: Diesel
Gas
Electric

Rated Pump Capacity

(Blank space: gallons per minute (gpm))

WELL OWNER

Signature
Date

LANDOWNER

Signature
Date

For Official Use Only:
Field Checked By
Latitude
Hydrologic Unit
Date
Longitude
State Well No.
Briefly describe the proposed work:

The boring for well installation will be drilled with a truck-mounted drill rig equipped with 4-inch hollow stem auger. The well will be installed into the boring as described below.

PROPOSED SECTION OF WELL

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation at top of casing</td>
<td>10 ft., msl</td>
</tr>
<tr>
<td>Ground Elev.</td>
<td>10 ft., msl*</td>
</tr>
<tr>
<td>Cement Grout</td>
<td>ft.</td>
</tr>
<tr>
<td>Bentonite seal</td>
<td>ft.</td>
</tr>
<tr>
<td>Hole</td>
<td>ft.</td>
</tr>
<tr>
<td>Dia.</td>
<td>in.</td>
</tr>
<tr>
<td>Total Depth</td>
<td>12 ft.</td>
</tr>
<tr>
<td>Rock Packing</td>
<td>ft.</td>
</tr>
<tr>
<td>(Silica sand)</td>
<td></td>
</tr>
<tr>
<td>Solid Casing</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>PVC</td>
</tr>
<tr>
<td>Length</td>
<td>2 ft.</td>
</tr>
<tr>
<td>Diameter</td>
<td>4 in.</td>
</tr>
<tr>
<td>Wall thickness</td>
<td>Schedule 40 in.</td>
</tr>
<tr>
<td>Casing</td>
<td></td>
</tr>
<tr>
<td>/Perforated</td>
<td></td>
</tr>
<tr>
<td>/Screen</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>PVC</td>
</tr>
<tr>
<td>Length</td>
<td>10 ft.</td>
</tr>
<tr>
<td>Diameter</td>
<td>4 in.</td>
</tr>
<tr>
<td>Wall thickness</td>
<td>Schedule 40 in.</td>
</tr>
<tr>
<td>Openings</td>
<td>0.02 sq. in./L.F.</td>
</tr>
<tr>
<td>Open Hole</td>
<td>N/A</td>
</tr>
<tr>
<td>Length</td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>in.</td>
</tr>
</tbody>
</table>

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
Locations of wells HW-50, HW-51, and HW-52
Maui Petroleum
Kahului, Maui, Hawaii

SHELL OIL

Legend:
- Exploratory Soil Boring
- PVC Monitoring Well
- Recovery Pit
- Exploratory Test Pit (TP) (backfilled)
- Approx.

× Locations of new wells
(Marked with paint)
WELL CONSTRUCTION PERMIT

APPLICATION FOR

PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water Resource Management, P.O. Box 272, Honolulu, Hawaii 96819. Application must be accompanied by a non-refundable filing fee of $11.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 158-7553, Hydrology/Geology Section for assistance.

1. WELL LOCATION/NAME

   Island: Maui
   Tax Map Key: 3-7-011-021
   Address: Maui Petroleum, Hakan Lame, Kahului, Maui, Hawaii

   (Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

   Firm Name: A and B Properties
   Contact Person: Bruce Huddleston
   Address: 233 Keanu Avenue, Suite 400
   Phone: 872-5523

   LANDOWNER

   Firm Name: A and B Properties
   Contact Person: Bruce Huddleston
   Address: 233 Keanu Avenue, Suite 400
   Phone: 872-5523

3. PROPOSED CONTRACTOR FOR:

   Well Drilling: PR Drilling Company, Inc.
   Pump Installation: P.O. Box 659
   Phone: 622-2631
   Contractor's License No: C 9627

4. PROPOSED WORK

   □ Drill New Well  □ Deepen  □ Alter  □ Seal  □ Replace Pump  □ Abandon  □ Modify Pump
   □ Install New Pump  □ Redrill  □ New Pump  □ Replace Pump  □ Modify Pump

   (Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

   □ Municipal (including hotels, stores, etc.)  □ Military
   □ Domestic (individual, noncommercial water systems)  □ Industrial
   □ Irrigation (specify)  □ Other (specify)  □ Monitor

6. PROPOSED AMOUNT OF WITHDRAWAL

   __________ gallons per day

7. PROPOSED PUMP INFORMATION

   Pump Type: □ Vertical Turbine  □ Submersible  □ Centrifugal
   Motor: □ Diesel  □ Gas  □ Electric: ____________________
   Rated Pump Capacity: __________ gallons per minute (gpm)

   __________ __________
   Well Owner (print)  Landowner (print)

   Signature  Signature

   Date  Date

   For Official Use Only:

   Field Checked By: ____________________
   Latitude: ____________________
   Hydrologic Unit: ____________________
   Date: ____________________
   Longitude: ____________________
   State Well No.: ____________________
Briefly describe the proposed work:

The boring for well installation will be drilled with a truck-mounted drill rig equipped with 4-inch hollow stem auger. The well will be installed into the boring as described below.

PROPOSED SECTION OF WELL

Elevation at top of casing

Cement Grout — ft.

Bentonite seal — ft.

Hole Dia. — in.

Total Depth — ft.

Rock Packing — ft.

(Silica sand)

Ground Elev. — ft., msl*

Solid Casing:

Material — PVC

Length — ft.

Diameter — in.

Wall thickness — Schedule 40 in.

Casing: / Perforated / Screen

Material — PVC

Length — ft.

Diameter — in.

Wall thickness — Schedule 40 in.

Openings — sq. in./L.F.

Open Hole: N/A

Length —

Diameter — in.

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
Locations of wells MW-50, MW-51, and MW-52
Maui Petroleum
Kahului, Maui, Hawaii

Legend:
- Exploratory Soil Boring
- PVC Monitoring Well
- Recovery Pit
- Exploratory Test Pit (IP) (backfilled)
- Approx.
- Locations of new wells (marked with paint)

Reference:
Weker Engineering & Construction Co.
General Arrangement, Marketing Station
Kahului, Maui, Hawaii
By: Union Oil Company of California
Date: Nov. 30, 1959

Free Product Thickness
1/10/62
Kahului
(Maui Petroleum)