**WELL SUMMARY REPORT**

In compliance with rules and regulations pursuant to ORS 520

**Northwest Natural Gas Co.**

(Company or Operator)

**Northwest Natural Gas Co.**

(Lease)

**IW 33ac-3**

(Well No.)

---

**Wildcat:** Mist Storage

(or Field Name)

**Signature:**

**County:** Columbia

**Position:** Senior Operations Superintendent

**Date:** 5-Mar-91

---

**Commended drilling:** 11/19/90

**Completed drilling:** 12/4/90

**P & A:** no

**Total depth:** 2897'

**Redrill depth:**

**Log runs:** 2 runs-DIL, SFL, GR Neutron Density, Dipmeter--1 run-Vertilog, Photon

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### CASING RECORD

<table>
<thead>
<tr>
<th>Size of hole</th>
<th>Size of Casing</th>
<th>Wt in lbs. per ft.</th>
<th>Grade Type</th>
<th>Depth</th>
<th>Amount of Cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 1/2&quot;</td>
<td>13 3/8&quot;</td>
<td>54.5#</td>
<td>K-55</td>
<td>574'</td>
<td>596 sx</td>
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<tr>
<td>12 1/4&quot;</td>
<td>8 5/8&quot;</td>
<td>32#</td>
<td>K-55</td>
<td>2603'</td>
<td>1542 sx</td>
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**Geological Marker**

**Depth**

Clark & Wilson Sand 2604'

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**Plugs**

- cement f/2765'-2698'

**Junk**

NONE

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**Perforations or Liner**

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<th>From</th>
<th>To</th>
<th>Shot/ft</th>
<th>Method of Perforating</th>
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<tr>
<td>5 1/2&quot;</td>
<td>2698'</td>
<td>2581'</td>
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**Initial Production**

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<tr>
<th>Date</th>
<th>Clean Oil bbl/day</th>
<th>Gravity</th>
<th>Percent Water</th>
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1990
Northwest Natural Gas Co.

**Well Summary Report**

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**Sec. 10 T: 6N R: 5W**

Surveyed Coordinate (if directional, BHL & SHL): SHL=1706' W & 1470' N from the SE corner Sec 3; T6N; R5W--BHL=340' N & 292' W of SHL @ 2603' MD

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(or Field Name): Mist Storage

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5-Mar-91

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