



United States  
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Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Kittitas County Area, Washington

## Tamarack Valley Plat



January 26, 2010

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://soils.usda.gov/contact/state\\_offices/](http://soils.usda.gov/contact/state_offices/)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report  
Soil Map




Map Scale: 1:2,250 if printed on A size (8.5" x 11") sheet.



# Custom Soil Resource Report

## MAP LEGEND




















### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils


 Soil Map Units

### Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

 Very Stony Spot

 Wet Spot

 Other

### Special Line Features

-  Gully
-  Short Steep Slope
-  Other

### Political Features

 Cities

### Water Features

-  Oceans
-  Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

## MAP INFORMATION

Map Scale: 1:2,250 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kittitas County Area, Washington  
 Survey Area Data: Version 3, Jun 15, 2009

Date(s) aerial images were photographed: 7/27/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Kittitas County Area, Washington (WA637)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
164	Nard ashy loam, 25 to 45 percent slopes	1.3	7.1%
201	Roslyn ashy sandy loam, 0 to 5 percent slopes	5.0	28.1%
213	Roslyn ashy sandy loam, moist, 3 to 25 percent slopes	11.6	64.8%
Totals for Area of Interest		17.9	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments



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on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Kittitas County Area, Washington

### 164—Nard ashy loam, 25 to 45 percent slopes

#### Map Unit Setting

*Elevation:* 1,800 to 4,800 feet  
*Mean annual precipitation:* 30 to 40 inches  
*Mean annual air temperature:* 43 to 45 degrees F  
*Frost-free period:* 80 to 120 days

#### Map Unit Composition

*Nard and similar soils:* 80 percent  
*Minor components:* 20 percent

#### Description of Nard

##### Setting

*Landform:* Mountain slopes  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Residuum and colluvium from sandstone and old alluvium with an influence of volcanic ash in the upper part

##### Properties and qualities

*Slope:* 25 to 45 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)  
*Depth to water table:* About 20 to 36 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* High (about 9.7 inches)

##### Interpretive groups

*Land capability (nonirrigated):* 7e  
*Other vegetative classification:* grand fir/vine maple (CWS551)

##### Typical profile

*0 to 1 inches:* Slightly decomposed plant material  
*1 to 4 inches:* Ashy loam  
*4 to 12 inches:* Ashy loam  
*12 to 24 inches:* Loam  
*24 to 34 inches:* Clay loam  
*34 to 60 inches:* Clay loam

#### Minor Components

##### Rock outcrop

*Percent of map unit:* 5 percent

##### Roxer

*Percent of map unit:* 5 percent

##### Kiper

*Percent of map unit:* 5 percent

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### Ampad

*Percent of map unit: 5 percent*

## 201—Roslyn ashy sandy loam, 0 to 5 percent slopes

### Map Unit Setting

*Elevation: 1,900 to 2,400 feet*

*Mean annual precipitation: 30 to 40 inches*

*Mean annual air temperature: 43 to 45 degrees F*

*Frost-free period: 85 to 115 days*

### Map Unit Composition

*Roslyn and similar soils: 85 percent*

*Minor components: 15 percent*

### Description of Roslyn

#### Setting

*Landform: Terraces*

*Down-slope shape: Concave*

*Across-slope shape: Concave*

*Parent material: Glacial drift with a mantle of loess and volcanic ash*

#### Properties and qualities

*Slope: 0 to 5 percent*

*Depth to restrictive feature: More than 80 inches*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.57 to 1.98 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water capacity: Moderate (about 8.0 inches)*

#### Interpretive groups

*Land capability (nonirrigated): 3c*

*Other vegetative classification: grand fir/common snowberry/pinegrass (CWS336)*

#### Typical profile

*0 to 1 inches: Moderately decomposed plant material*

*1 to 8 inches: Ashy sandy loam*

*8 to 15 inches: Ashy sandy loam*

*15 to 37 inches: Loam*

*37 to 49 inches: Gravelly loam*

*49 to 60 inches: Gravelly loam*

### Minor Components

#### Nard

*Percent of map unit: 10 percent*

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### **Volperie**

*Percent of map unit: 5 percent*

## **213—Roslyn ashy sandy loam, moist, 3 to 25 percent slopes**

### **Map Unit Setting**

*Elevation: 1,900 to 2,400 feet*

*Mean annual precipitation: 30 to 40 inches*

*Mean annual air temperature: 43 to 45 degrees F*

*Frost-free period: 85 to 115 days*

### **Map Unit Composition**

*Roslyn, moist, and similar soils: 85 percent*

*Minor components: 15 percent*

### **Description of Roslyn, Moist**

#### **Setting**

*Landform: Kame terraces, terraces, valley sides*

*Down-slope shape: Concave, linear*

*Across-slope shape: Concave, convex*

*Parent material: Glacial drift with a mantle of loess and volcanic ash*

#### **Properties and qualities**

*Slope: 3 to 25 percent*

*Depth to restrictive feature: More than 80 inches*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.57 to 1.98 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water capacity: Moderate (about 8.5 inches)*

#### **Interpretive groups**

*Land capability (nonirrigated): 4e*

*Other vegetative classification: grand fir/vine maple (CWS551)*

#### **Typical profile**

*0 to 1 inches: Moderately decomposed plant material*

*1 to 8 inches: Ashy sandy loam*

*8 to 15 inches: Ashy sandy loam*

*15 to 37 inches: Loam*

*37 to 60 inches: Gravelly loam*

### **Minor Components**

#### **Quicksell**

*Percent of map unit: 5 percent*

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**Bertolotti**

*Percent of map unit: 5 percent*

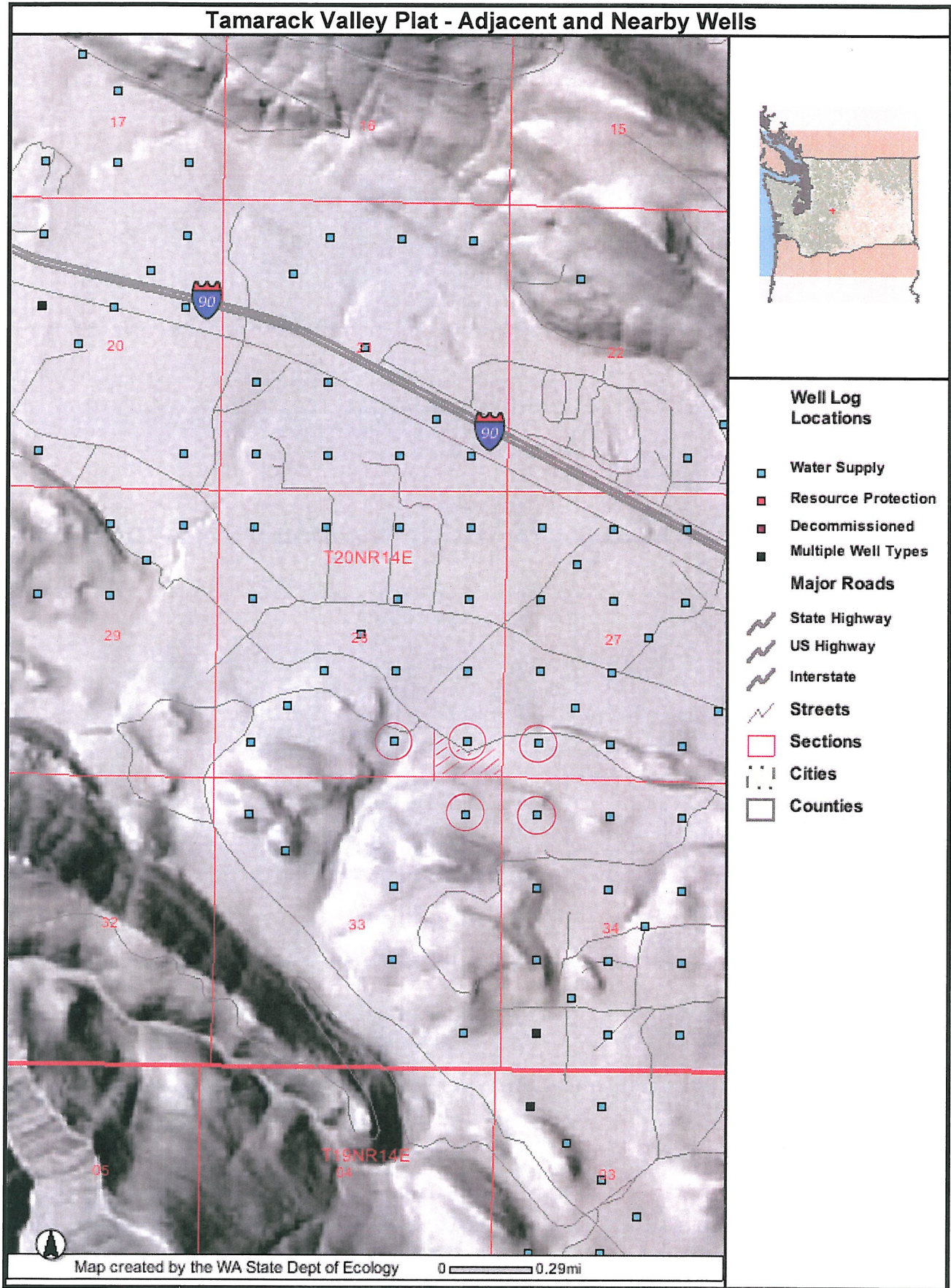
**Nard**

*Percent of map unit: 5 percent*

Tamarack Valley Plat and Rezone  
Adjacent and Nearby Wells

<b>Well Number</b>	<b>Depth (ft.)</b>	<b>GPM</b>
W36900	98	18
24163	92	100
W170913	65	15
39234	120	15
none	60	0
034237	30	10
W254829	58	55
W109688	63	60
<b>Average</b>	<b>73</b>	<b>34</b>





The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Rep

WATER WELL REPORT  
STATE OF WASHINGTON

Start Card No. **W36900**  
Shallow Well No. **AB1002**  
Water Right Permit No.

(1) OWNER: Name **RUTTAN, BARY** Address: **P.O. BOX 428 EASTON, WA 98925-**

(2) LOCATION OF WELL: County **KITKUM** - **SE 1/4 SE 1/4 Sec 28 T 20 N. R 14E W4**  
(2a) STREET ADDRESS OF WELL (or nearest address):

(3) PROPOSED USE: **DOMESTIC** (18) WELL LOG

(4) TYPE OF WORK: Owner's Number of well (If more than one) **1** Formations: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.  
NEW WELL Method: **ROTARY**

(5) DIMENSIONS: Diameter of well **6** inches  
Drilled **90** ft. Depth of completed well **90** ft.

		MATERIAL		FROM	TO
		<b>COBBLES AND GRAVEL</b>		<b>0</b>	<b>6</b>
		<b>SAND AND GRAVEL</b>		<b>6</b>	<b>49</b>
		<b>BROWN SAND</b>		<b>49</b>	<b>72</b>
		<b>SAND CLAY BROWN</b>		<b>72</b>	<b>79</b>
		<b>BROWN CLAY GRAVEL</b>		<b>79</b>	<b>90</b>

(6) CONSTRUCTION DETAILS:  
Casing installed: **6** " Dia. from **48** ft. to **80** ft.  
**WELDED** " Dia. from ft. to ft.  
" Dia. from ft. to ft.

Perforations: **NO**  
Type of perforator used  
SIZE of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

Screens: **NO**  
Manufacturer's Name  
Type  
Dia. slot size from ft. to ft.  
Dia. slot size from ft. to ft.

Gravel packed: **YES** Size of gravel **PER**  
Gravel placed from **75** ft. to **90** ft.

Surface seal: **YES** To what depth? **10** ft.  
Material used in seal **BENTONITE**  
Did any strata contain unusable water? **NO**  
Type of water? Depth of strata **10** ft.  
Method of sealing strata off **OVERBORE**

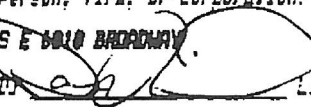
(7) PUMP: Manufacturer's Name  
Type H.P.

(8) WATER LEVELS: Land-surface elevation  
above mean sea level ... ft.  
Static level **28** ft. below top of well Date **04/18/94**  
Artesian Pressure lbs. per square inch Date  
Artesian water controlled by

Work started **04/14/94** Completed **04/18/94**

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.  
Was a pump test made? **NO** If yes, by whom?  
Yield: gal./min with ft. drawdown after hrs.  
Recovery data  
Time Water Level Time Water Level Time Water Level  
Date of test / /  
Ballier test gal./min. ft. drawdown after hrs.  
Air test **10** gal./min. w/ stem set at ft. for hrs.  
Artesian flow g.p.m. Date  
Temperature of water Was a chemical analysis made? **NO**

WELL CONSTRUCTOR CERTIFICATION:  
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **PONDEROSA DRILLING**  
(Person, firm, or corporation) (Type or print)  
ADDRESS **E 6010 BROADWAY**  
SIGNED  License No. **2060**  
Contractor's  
Registration No. **PO-ND-EI424BJE** Date **04/20/94**