

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date May 2, 2005

FROM: Ground Water/Hydrology Section Ivan Gall
Reviewer's Name

SUBJECT: Application G- 16415 Supersedes review of NA
Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review ground water applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: Brian Peterson County: JACK

A1. Applicant(s) seek(s) 0.118 cfs from 1 well(s) in the Rogue Basin,
Poormans Creek subbasin Quad Map: Medford West

A2. Proposed use: Irrigation Seasonality: April 1 through October 31

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	**	1	Bedrock	0.118	38S/02W-7 NESE	1980' N, 1060' W fr SE cor S 07
2						
3						
4						
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	2140	na	6.90*	3/1/2005	200	0-60	0-60	na	na	80	na	

Use data from application for proposed wells.

A4. **Comments:** * Static water collected by I.K. Gall - WRD

I believe the correct well log is JACK 16202. This is based on the well location, reported yield, and that Peterson's property was part of the "old Maddox ranch".

A5. **Provisions of the Rogue** Basin rules relative to the development, classification and/or management of ground water hydraulically connected to surface water are, or are not, activated by this application. (Not all basin rules contain such provisions.)

Comments: _____

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: _____

Comments: _____

B. GROUND WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. **Based upon available data**, I have determined that ground water* for the proposed use:

- a. is over appropriated, is not over appropriated, or **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the ground water portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. **will not** or **will likely** be available in the amounts requested without injury to prior water rights. * This finding is limited to the ground water portion of the injury determination as prescribed in OAR 690-310-130;
- c. **will not** or **will likely** to be available within the capacity of the ground water resource; or
- d. **will, if properly conditioned**, avoid injury to existing ground water rights or to the ground water resource:
 - i. The permit should contain condition #(s) 7B, 7C (March), 7F, 7J;
 - ii. The permit should be conditioned as indicated in item 2 below.
 - iii. The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. **Condition** to allow ground water production from no deeper than _____ ft. below land surface;
- b. **Condition** to allow ground water production from no shallower than _____ ft. below land surface;
- c. **Condition** to allow ground water production only from the _____ ground water reservoir between approximately _____ ft. and _____ ft. below land surface;
- d. **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Ground Water Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

B3. **Ground water availability remarks:** ***Require applicant to install and maintain a properly functioning, totalizing flow meter.

The applicant's well is completed in the fractured bedrock aquifer. I have no aquifer property or water level data for this area. The local area has been heavily altered by old hydraulic mining. In some areas large amounts of cobbles and boulders are evident. Depth to bedrock suggests that there is little, if any, alluvial aquifer in the area. There are approximately 50 well logs in section 7, with yields ranging from zero to 70 gpm. Many wells have yields less than 5 gpm. Three deepenings are noted in GRID for section 7; static water levels range from zero to 180 feet bgs. Bedrock geology (map attached) is composed of Jurassic and Upper Triassic (?) metamorphic sandstone and argillite with lesser amounts of schist, marble, and meta-igneous rocks. Overlying the bedrock in the area are more recent unconsolidated deposits (landslide, fan, and stream deposits). A north-south trending fault is mapped just west of the site along Sterling Creek Road.

C. GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Little data are available. The fractured bedrock aquifer likely exhibits increasing degrees of confinement with depth, and it appears that 10-20 feet of clay material overlies the aquifer. In areas near more deeply incised drainages, or more pervasively fractured, the system may behave in a more semi-confined to unconfined manner.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Poorman's Creek	2133	~2,000	6,400	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: The local drainages near the well are "seasonal", generally flowing only when it rains; shortly following rains, flow declines to little or nothing (Gall and Menteer, pers. observations). The Applegate River (5.5 miles west) and Forest Creek (3 miles west) are larger drainages that may capture groundwater from the flow system near the applicant's well. However, no data exist to help with groundwater flow directions and degree of hydraulic connection over such a large distance.

Water Availability Basin the well(s) are located within: Forest Creek

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% natural flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

	SW #	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: _____

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: _____

C4b. **690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.**

- C5. **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or ground water use under this permit can be regulated if it is found to substantially interfere with surface water:
 - i. The permit should contain condition #(s) _____;
 - ii. The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions** Because the applicant's well is located several miles from any year-round stream, it is unlikely that the potential for substantial interference is present. No data exist to indicate the groundwater flow directions in this area. Groundwater may just as easily be flowing east to the Bear Creek valley, or west towards Forest Creek and the Applegate River. As such, no hydraulic connection with any surface water body was identified by this review. However, a general understanding of groundwater flow indicates that this groundwater is connected to surface water somewhere in the Applegate or Rogue basins.

References Used: OWRD Grid well log database.
Wiley, T.J., and J.G. Smith, 1993. Preliminary Geologic map of the Medford East, Medford West, Eagle Point, and Sams Valley Quadrangles, Jackson County, Oregon. Bulletin 0-93-13, Oregon Department of Geology and Mineral Industries.

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: _____ Logid: _____

D2. **THE WELL does not meet current well construction standards based upon:**

- a. review of the well log;
- b. field inspection by _____;
- c. report of CWRE _____;
- d. other: (specify) _____

D3. **THE WELL construction deficiency:**

- a. constitutes a health threat under Division 200 rules;
- b. commingles water from more than one ground water reservoir;
- c. permits the loss of artesian head;
- d. permits the de-watering of one or more ground water reservoirs;
- e. other: (specify) _____

D4. **THE WELL construction deficiency is described as follows:** _____

- D5. **THE WELL**
- a. was, or was not constructed according to the standards in effect at the time of original construction or most recent modification.
 - b. I don't know if it met standards at the time of construction.

D6. **Route to the Enforcement Section.** I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.

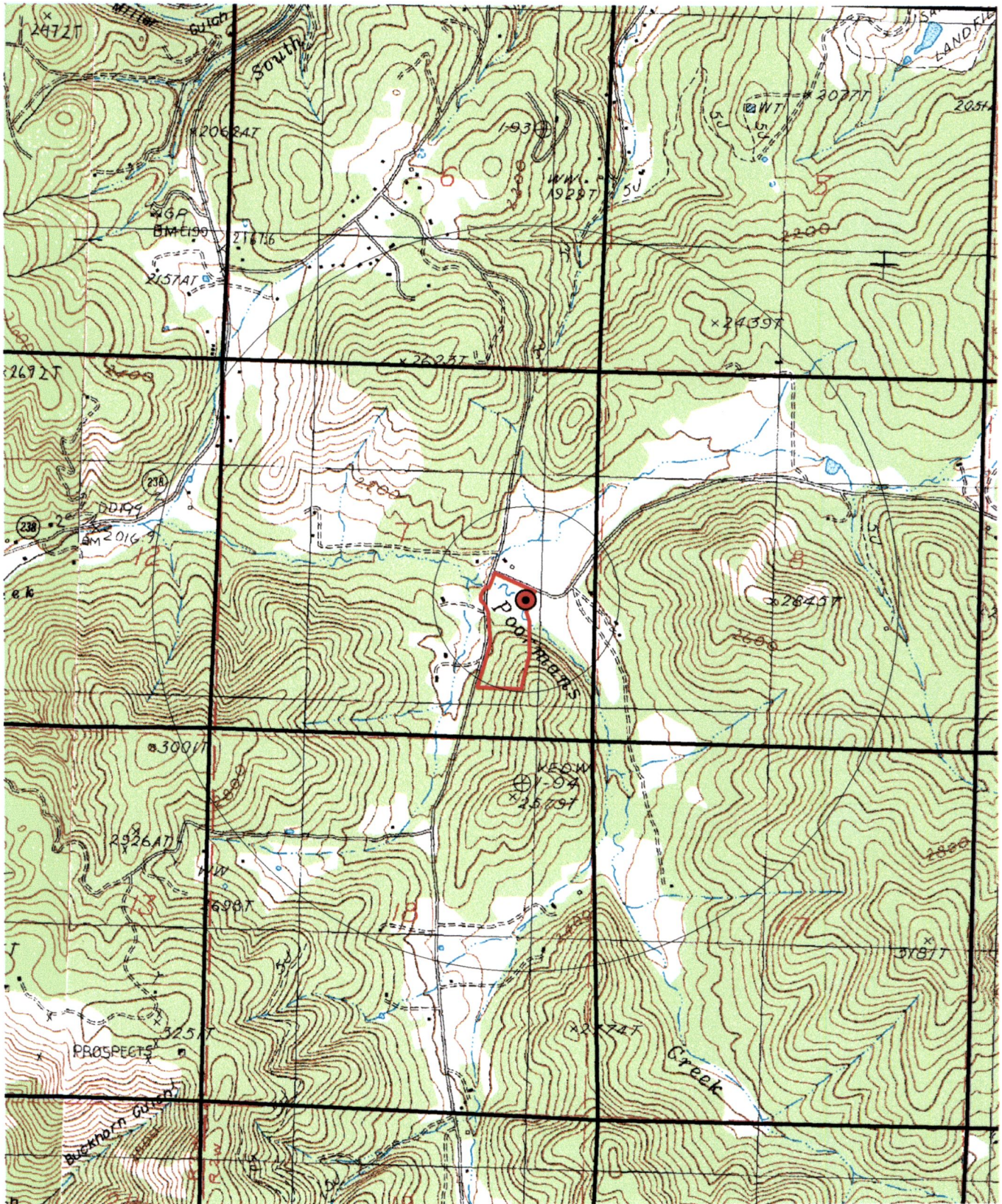
THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

D7. Well construction deficiency has been corrected by the following actions: _____

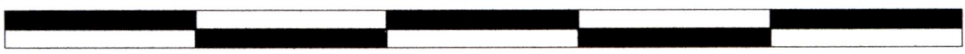
_____, 200_____
(Enforcement Section Signature)

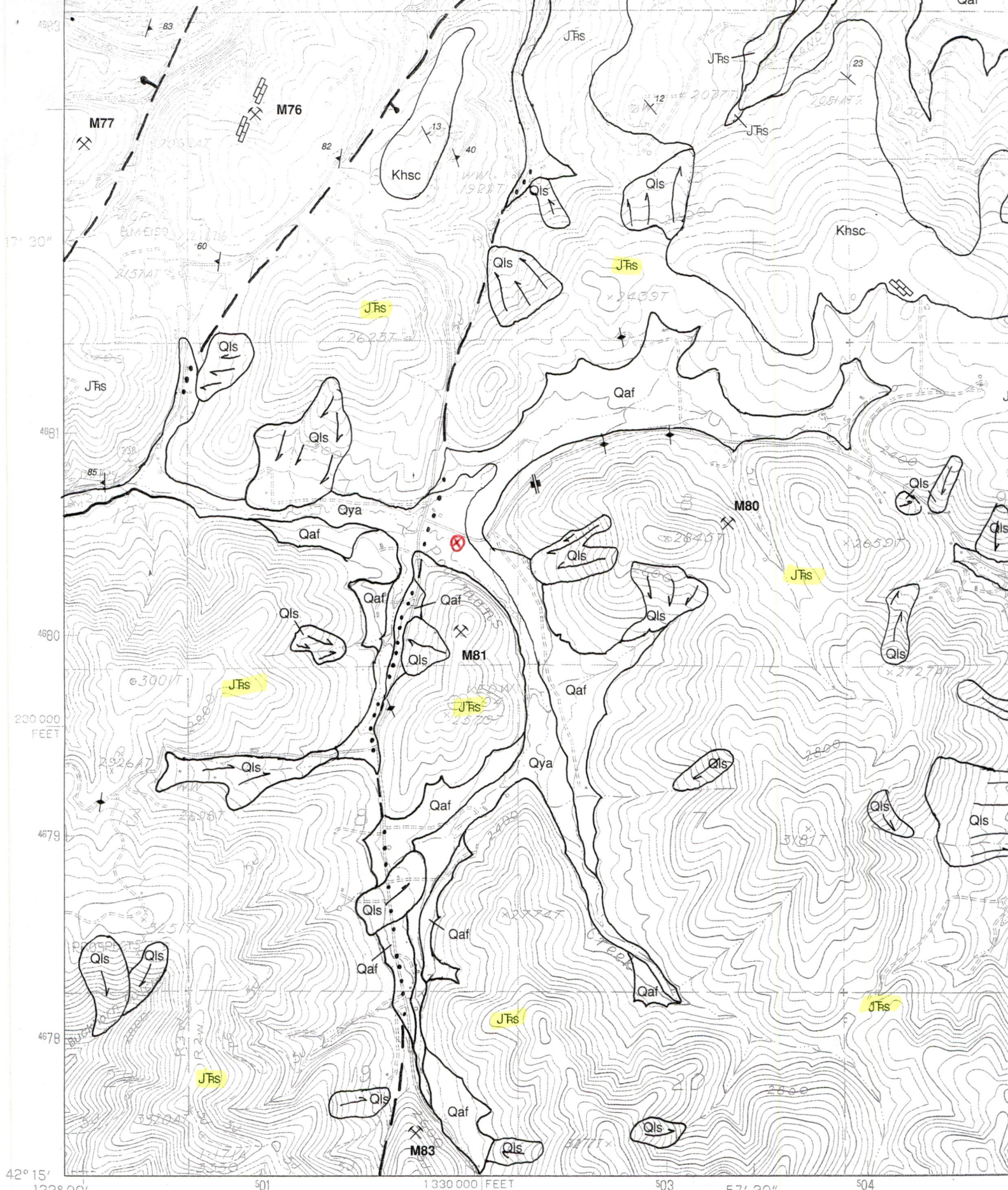
D8. **Route to Water Rights Section (attach well reconstruction logs to this page).**

**G-16415 Peterson 38S/02W-07
Medford West Quad Scale 1:24000**



0 2000 4000 6000 8000 10000 Feet



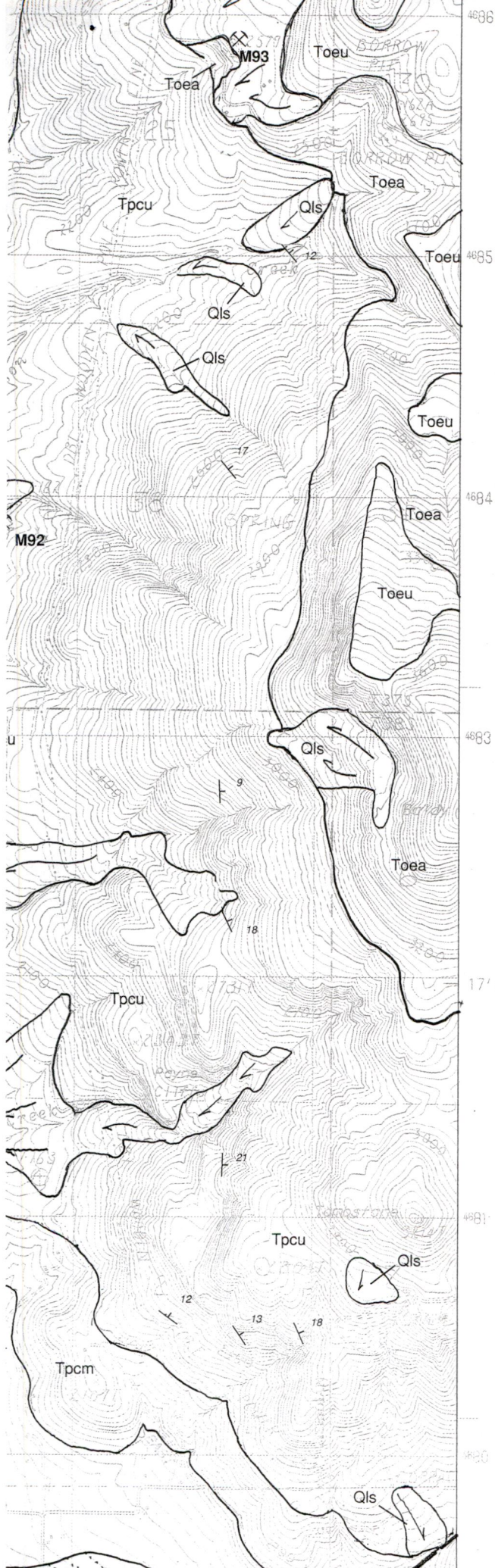


Base maps by U.S. Geological Survey
 Lambert conformal conic projection
 1927 North American Datum

B

FEET
 0 1000 2000

Creek



EXPLANATION

(Full description of geologic units, resources, and geochemistry in accompanying text)

SURFICIAL DEPOSITS

- Qya** Younger alluvium (Holocene)
- Qls** Landslide deposits (Holocene and Pleistocene)
- Qoa2 Older alluvium (Holocene and Pleistocene)
- Qaf** Alluvial fan deposits, undivided (Holocene and Pleistocene)
- Qafg Alluvial fan gravel (Holocene and Pleistocene)
- Qafs Alluvial fan sand (Holocene and Pleistocene)
- Qoa3 Older alluvium (Pleistocene)

DISCONFORMITY

TERTIARY (PALEOGENE) SEDIMENTARY AND VOLCANIC ROCKS

- Toeu Volcanic and volcanoclastic rocks undivided (lower Oligocene and upper Eocene)
- Toea Andesite
- Payne Cliffs Formation of McKnight (1971) (upper Eocene)
 - Tpcu Upper part (upper Eocene)
 - Tpcm Middle part (upper Eocene)
 - Tpcl Lower part (upper and middle(?) Eocene)
 - Tpcb Conglomerate

DISCONFORMITY

- Hornbrook Formation (Upper and Lower Cretaceous)
 - Khm Mudstone (Upper Cretaceous)
 - Khs Sandstone (Upper Cretaceous)
 - Khst Siltstone (Upper Cretaceous)
 - Khsc Sandstone and conglomerate (Upper and Lower Cretaceous)

ANGULAR UNCONFORMITY

JURASSIC OR OLDER METAMORPHIC ROCKS

- JTrs** Sandstone and argillite (Jurassic and Upper Triassic?)

INTRUSIVE ROCKS

- Tii Intermediate intrusive rocks (late Miocene? to late Eocene?)
- Tim Mafic intrusive rocks (late Miocene? to late Eocene?)
- KJj Jacksonville pluton (Early Cretaceous and Late Jurassic?)

MAP SYMBOLS

- Contact--Approximately located
- - -** Fault--Dashed where inferred; dotted where concealed; ball and bar on down-thrown side.
- Strike and dip of beds
- Horizontal bed
- Strike and dip of foliation
- Strike of vertical foliation
- Strike and dip of joint

WELL REPORT
STATE OF OREGON

Jack
16202

State Well No. 385/2W-7da
State Permit No. _____

(1) OWNER:

Name Patricia Maddox
Address 280 Poorman Cr. Rd
City Jacksonville State Or

(2) TYPE OF WORK (check):

New Well Deepening Reconditioning Abandon
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Air Driven
Mud Dug
Cased Bored

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other
Thermal: Withdrawal Re injection

(5) CASING INSTALLED: Steel Plastic
Threaded Welded
" Diam. from +1 ft. to 39 ft. Gauge 250
" Diam. from _____ ft. to _____ ft. Gauge _____

LINER INSTALLED:

" Diam. from _____ ft. to _____ ft. Gauge _____

(6) PERFORATIONS:

Perforated? Yes 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.

(7) SCREENS:

Well screen installed? Yes No
Manufacturer's Name _____ Model No. _____
Type _____
Diam. _____ Slot Size _____ Set from _____ ft. to _____ ft.
Diam. _____ Slot Size _____ Set from _____ ft. to _____ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom?
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " "
Air test 70 gal./min. with drill stem at 180 ft. 1 hrs.
" " " " " " " "
Artesian flow g.p.m.
Temperature of water _____ Depth artesian flow encountered _____ ft.

(9) CONSTRUCTION:

Special standards: Yes No
Well seal—Material used CEMENT
Well sealed from land surface to 20 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 8 sacks
How was cement grout placed? PRESSURE GROUT
_____ from bottom up _____
Was pump installed? Yes No Type _____ HP _____ Depth _____ ft.
Was a drive shoe used? Yes No Plugs _____ Size: location _____ ft.
Did any strata contain unusable water? Yes No
Type of Water? _____ depth of strata _____
Method of sealing strata off _____
Was well gravel packed? Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

(10) LOCATION OF WELL:

County Jackson Driller's well number 432-0
NE 1/4 SE 1/4 Section 7 T. 38S R. 2W W.M.
Tax Lot # 107 Lot _____ Blk _____ Subdivision _____
Address at well location: _____

STERLING CK + POORMAN'S CK

(11) WATER LEVEL: Completed well.

Depth at which water was first found 38 ft.
Static level 22 ft. below land surface. Date 9-13-80
Artesian pressure _____ lbs. per square inch. Date _____

(12) WELL LOG:

Diameter of well below casing _____
Depth drilled 180 ft. Depth of completed well 180 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Sand	0	1	
CLAY GRAVEL	1	8	
CLAY	8	32	
CLAY BASALT	32	38	
BASALT BROWN	38	65	<u>22</u>
BASALT	65	110	
BASALT BROWN	110	121	<u>22</u>
BASALT	121	142	
BASALT BROWN	142	153	<u>22</u>
BASALT	153	180	

RECEIVED
SEP 17 1980
WATER RESOURCES DEPT
SALEM, OREGON

Work started 9-13 19 80 Completed 9-13 19 80
Date well drilling machine moved off of well 9-13 19 80

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
(Signed) JERRI Date 9-13-80
(Drilling Machine Operator)
Drilling Machine Operator's License No. 819

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name JERRY DENNIS (Type or print)
Address 2691 JERRY DENNIS DR. SALEM, OREGON 97302
(Signed) JERRY DENNIS (Water Well Contractor)
Contractor's License No. 697 Date 9-13 19 80

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,
SALEM, OREGON 97310
SP*12658-890
within 30 days from the date of well completion.