BEFORE THE WATER RESOURCES DIRECTOR OF OREGON

KLAMATH COUNTY

IN THE MATTER OF APPLICATION G-10731)
IN THE NAMES OF WILLIAM L. GALLAGHER)
AND NADINE F. GALLAGHER FOR PERMIT)
TO APPROPRIATE GROUND WATER)

STATEMENT, FINDINGS CONCLUSIONS AND ORDER

STATEMENT

On May 27, 1982, Application G-10731 in the names of William L. Gallagher and Nadine F. Gallagher, was filed in the office of the Water Resources Director for a permit to appropriate water from a certain ground water reservoir by means of an existing 150-foot deep, 12-inch diameter well located within the NE 1/4 SE 1/4 of Section 31, Township 36 South, Range 12 East, WM, for irrigation of a certain 253 acres of land located within the east one-half of said Section 31 and the SW 1/4 NW 1/4 of Section 32. (Exhibit WRD 2-G)

On June 18, 1982, a protest against approval of Application G-10731 was filed by Gordon H. Smith. The protest alleges that the proposed appropriation would reduce the water available to the protestant under his existing right from Whiskey Creek. (Exhibit WRD 3-G)

On June 24, 1982, a protest against approval of Application G-10731 was filed by Bruce S. Topham and Virginia A. Topham. The protest alleges that the proposed appropriation would reduce the water available to the protestants under their existing and claimed rights from Whiskey Creek and springs. (Exhibit WRD 4-G)

On July 1, 1982, a protest against approval of Application G-10731 was filed by Dell Smith. The protest alleges that the proposed appropriation would interfere with the flow of Whiskey Creek and springs, from which the protestant obtains water for domestic, stock and irrigation uses. (Exhibit WRD 5-G)

On July 1, 1982, a protest against approval of Application G-10731 was filed by Stephen D. Hess. The protest alleges that the proposed appropriation would interfere with the flow of Whiskey Creek and springs, from which the protestant obtains water for domestic, stock and irrigation uses. (Exhibit 6-G)

Pursuant to the provisions of ORS 537.622(2) and the Director's Notice of Hearing dated July 12, 1982 (Exhibit WRD 1-G), the matter was brought to hearing before James W. Carver, Jr., an employee of the Water Resources Department, authorized to preside in behalf of the Director, at Klamath Falls, Oregon, commencing on July 29, 1982. The hearing was adjourned on July 30, 1982, and reconvened on August 26, 1982, pursuant to agreement of the parties and the Director's notice dated August 3, 1982.

Protestant Gordon H. Smith was present and was represented by Robert S. Hamilton, Attorney at Law, during the first session of the hearing. Mr. Smith appeared without services of legal counsel during the second session of the hearing.

Protestants Bruce S. and Virginia A. Topham were present and were represented by Robert S. Hamilton during the first portion of the first session of the hearing. During the remainder of the hearing, the Tophams appeared without the services of legal counsel.

Protestants Dell Smith and Stephen D. Hess were present and were represented by Phil Studenberg, Attorney at Law, throughout the hearing.

Applicants William L. and Nadine F. Gallagher were present and were represented by Donald A. Bick, Attorney at Law, throughout the hearing.

The hearing was held concurrently with another hearing on the matter of pending Application G-10724 in the name of Truman Harrison, for a permit to appropriate water from a certain ground water reservoir by means of an existing well located within the SE 1/4 NW 1/4 of Section 22, Township 36 South, Range 11 East, WM, for irrigation purposes, and protests by Gordon H. Smith and by Bruce S. and Virginia A. Topham.

Based on the record, the Water Resources Director makes the following findings of fact, conclusions and order.

FINDINGS OF FACT

The geologic units and relative geographical locations of the Gallagher Well (Application G-10731), Whiskey Creek, Sprague River and other features are shown on Figure 1. Figure 1 is a photocopy of a portion of Plate 2, Ground Water Report 21 entitled "Ground Water in Selected Areas in the Klamath Basin, Oregon," published by the State Engineer of Oregon (Exhibit WRD 21).

The approximate boundaries of the protestants' properties within the subject area are shown on Figure 2. These lands were part of the Klamath Indian Reservation prior to termination of the reservation.

Testimony and evidence were in agreement as to the five geological units found in the study area. They are listed and described below from youngest to oldest:

1. Quaternary Alluvium: A thin layer of alluvium covers most of the study area.

2. Quaternary Basalt: Wide-spread thin flows of basalt in units of 20 to 30 feet thick cap many slopes bordering the study area.

3. Eruptive Center Rocks: Bug Butte, Spring Butte and Council Butte are remnants of Plio-Pleistocene eruptive centers comprised of eruptive and shallow intrusive rocks such as rhyolite, dacite, andesite and basalt. Much of the mountainous terrain surrounding this part of the Sprague River Valley is comprised of this unit.

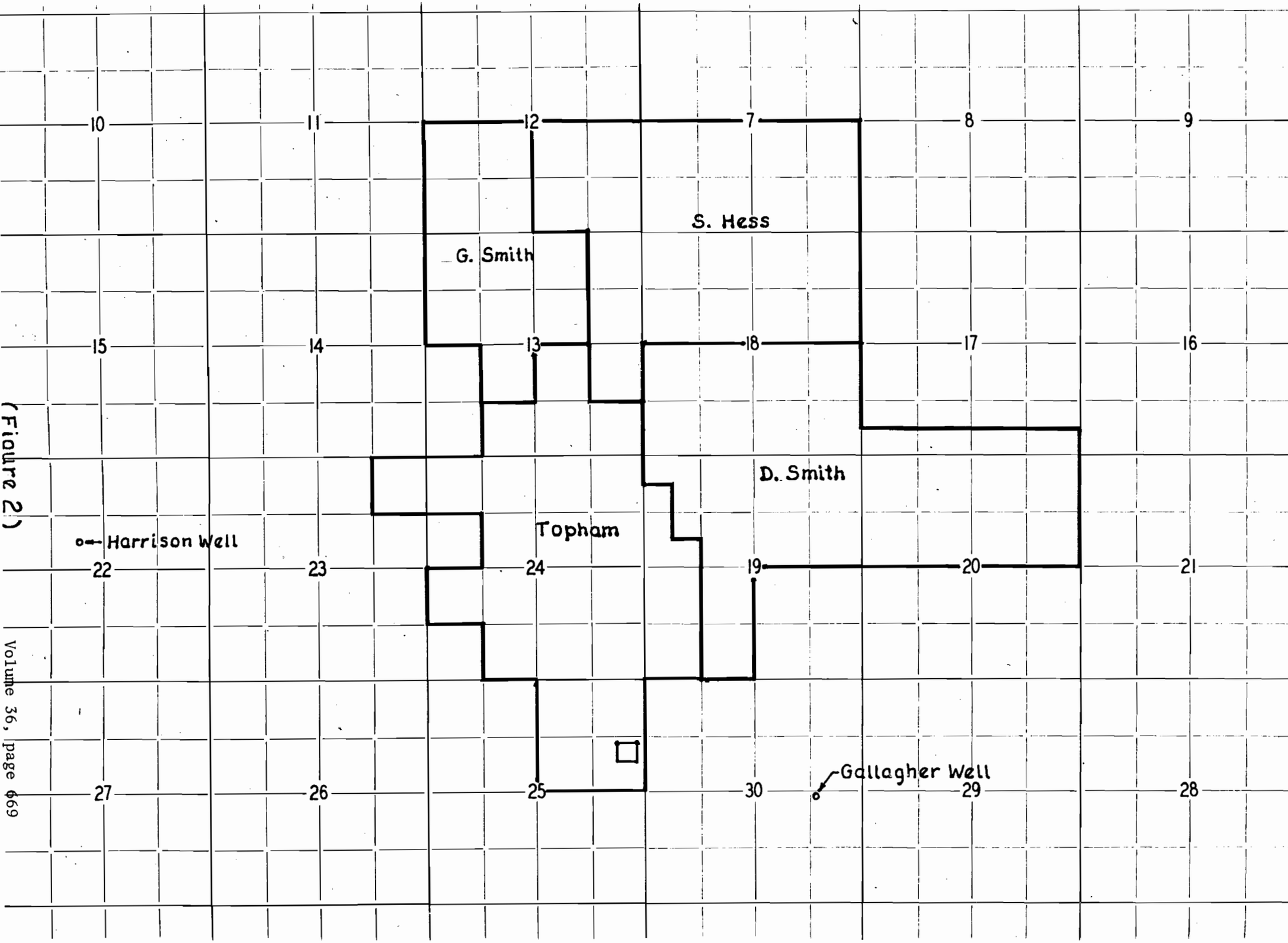
4. Yonna Formation: The geology is dominated by the Pliocene Yonna Formation composed of discontinuous layers of siltstone, diatomite, sandstone, pumice, gravel, tuff and lava flows deposited in a lacustrine envionment. In the study area, the Yonna Formation is of variable thickness, and based on driller's logs, ranges from 300 to 1000 feet thick.

5. Lower Basalt: These Pliocene flood basalts, not exposed in the study area, comprise a thick sequence of individual flows that cooled from a low viscosity magma that extruded along fissures and covered a large portion of Northern California and South-Central Oregon. This unit resembles the Columbia River Basalt Group both temporally and compositionally.

Testimony and evidence were also in agreement as to the general hydrogeologic character of the rock units found in the area. The aquifer from which most wells in the area produce is the confined Lower Basalt. The Yonna Formation is also capable of large sustained yields from confined strata of permeable sandstones, conglomerates, pumice and fractured lava flows. The Lower Basalt appears to have a higher head than the Yonna Formation and often flowing artesian conditions were encountered when drillers intersected the Lower Basalt.


Cottonwood Springs
Buckmaster Point
Springs
Tim Brown Spring
Chester Spring
Spring
Qb
Tbt
Ty
Qby
Tb
bcb
4537
BM 4608
dac
4485
BM 4571
Horse Butte
Knot
TABLE
4721
TABLELAND ROAD
BM 4343
Qal
Wild Billy Lake
acd
4495
Brown Spring
BM 4329
Sprague Valley River
4320
cbd
DREWS ROAD
cdd
Artesian Well
ddc
aaa
bbb
abb
baa
SPRAGUE RIVER
SPRAGUE VALLEY
cda
dca
4297
aaa
4321
Council Butte
QTve
bad
bcb1
dcb2
acd1
4302
acd2
4302
ddb
4320
dcc
ccc
cdd
Artesian Well
cad
4294
ddc
dcc
caa
4309
SMITH WELL
SMITH SEEP #2
OREGON CALIFORNIA AND EASTERN
Whisky Creek
TOPHAM SPRING
BM 4352
BM 4321
dcd
BM 4334
BM 4337
BM 4317
BM 4309
BM 4322
Spring Butte
bda
HARRISON WELL
G-10724
Muckney Lake
Yainax Agency
dda
4326
dca
4315
Jackson Cem
cdc
Bug Butte
Chief Schonchin Cem
Davis Hill
BM 4421
BM 4399
adb
4368
OLD RAILROAD GRADE
cba
4328
aab
4315
SCHONCHIN SPRING
BM 4324
GALLAGHER WELL
G-10731
BM 4328
dcc
4347
Crater Lake Camp
BM 4379
CLINE FLAT
KLAMATH NAINA FOREST
RIDGE
Erskine Beal Spr
BM 4602
BM 4904
Maynard Flat
Caloosan Spr
JEEP TR
FREMONT NATIONAL FOREST
BOUNDARY

(Figure 1)


10
11
12
7
8
9
S. Hess
G. Smith
15
14
13
18
17
16
D. Smith
Topham
Harrison Well
22
23
24
19
20
21
Gallagher Well
27
26
25
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29
28

(Figure 2)

Wells producing from the Yonna Formation and/or open to production from both Yonna and Lower Basalt are located west of Whiskey Creek. In upper Whiskey Creek, most production appears to be from Quaternary alluvium and/or Quaternary basalt. Wells located near volcanic eruptive centers appear to produce from a light colored volcanic rock, presumably dacite or rhyolite, from the eruptive center. The eruptive center rocks and the Quaternary basalt are fractured and considered to be good recharge units.

The protested Gallagher Well is located in upper Whiskey Creek. Upper Whiskey Creek has been arbitrarily defined as that portion of Whiskey Creek upstream of the boundary between Sections 19 and 30 in Township 36 South, Range 12 East. Expert testimony from Keith Anderson and Bruce Topham and other evidence of record concur on the following facts that relate to the upper Whiskey Creek area:

1. Wells in upper Whiskey Creek produce from Quaternary alluvium and/or Quaternary basalt.

2. Northwest-trending faults mapped on the east and west sides of the south end of the upper Whiskey Creek area, separate Yonna Formation from Quaternary basalt.

3. Well log evidence indicates the Quaternary alluvium thickens from south to north in the upper Whiskey Creek area.

4. Quaternary basalt and eruptive center rocks that form the hills south of Whiskey Creek, are thought to be recharge areas for ground water present in upper Whiskey Creek. Precipitation percolates into these permeable volcanic materials and migrates northward into alluvial deposits that form upper Whiskey Creek.

5. Results of a seepage run conducted in October, 1970, measured 21 cfs entering the Sprague River from Whiskey Creek. Considering the low gradient of Whiskey Creek (approximately 10-15 feet per mile) and the narrow width of the creek, transmissivity of the aquifer(s) in hydraulic connection with upper Whiskey Creek is probably 50 to 75 percent higher than that calculated for wells pumping from the Yonna/Lower Basalt aquifer.

6. Pump test data for the Gallagher irrigation wells show specific capacities of 45 gpm/foot of drawdown for the older well in 36S/11E-36aab and 57 gpm/foot of drawdown for the protested well in 36S/12E-31daa. These data also indicate a high transmissivity for the upper Whiskey Creek aquifer.

7. Well log information from the Gallagher irrigation wells and other domestic wells in the upper Whiskey Creek area indicate relatively unconfined ground water conditions. The water table in the upper Whiskey Creek area is very close to land surface as evidenced by water levels in wells and the marshy character of the terrain.

8. The older Gallagher Well was observed by WRD from 1954 to 1972 with no long-term decline noted. Measurements taken in 1981 and 1982 indicate no declines since 1972. Data show seasonal fluctuations in this well to be approximately two feet per year.

9. Wells drilled into upper Whiskey Creek have temperatures ranging from 7-12°C; this is in comparison to temperatures of approximately 16°C measured in wells producing from Yonna Formation and approximately 20°C measured in wells believed to intersect Lower Basalt. Conductivity values are also lower in upper Whiskey Creek wells compared to those of wells west of Whiskey Creek.

Protestants Bruce Topham, Gordon Smith and Stephen Hess testified that they first began noticing reduced flow in lower Whiskey Creek and its associated springs in August of 1980.

All reported similar, yet more severe, problems during the summer of 1981. During a WRD investigation of lower Whiskey Creek in September, 1981, many dry springs and reverse flow into Topham Spring were observed. The flow across the Gordon Smith diversion dam from Whiskey Creek (36S/11E-13dba - Application 8052) was estimated at 1.0 cfs. Topham testified that Topham Spring fluctuated between normal and reverse flow and that other springs on his property and Gordon Smith's property (which he leases) fluctuated concurrently. Topham testified that during this time, the flow of water in the creek was normal upon entering his property, but during its course across the property, flow was greatly reduced; as such, little of the creek flowed beyond Topham's property and Topham was unable to irrigate the downstream land that he leases from Gordon Smith.

Hess testified that during the summer of the 1981, his springs adjacent to Whiskey Creek (36S/11E-13d) stopped flowing and the creek level was too low to irrigate from. Hess and Topham testified that during the summer of 1982, their springs stopped flowing and that Whiskey Creek was too low to irrigate from.

Gordon Smith testified that in August of 1981, there was not enough water reaching his point of diversion from Whiskey Creek to keep his pasture irrigated and that much of the pasture that was kept naturally wet through the action of seeps, was dry. Dell Smith testified as to an ongoing decline in the flow of Whiskey Creek and its associated springs since ground water withdrawals began in the area in 1955.

The summer of 1982 marked the first time the protested Gallagher Well was put into operation.

Daily measurements of head or flow in Smith Well, Topham Spring and Smith Spring 2 were gathered during the summer of 1982. The data show a direct correlation between the water level changes recorded in Smith Well and those recorded in Smith Spring 2. Topham testified that he believed the declines and fluctuations noted in Smith Well, Smith Spring 2 and Topham Spring are related to withdrawal from the wells pumping west of Whiskey Creek. Topham, Hess, Dell Smith and Gordon Smith feel that the Gallagher Well is hydraulically connected to upper Whiskey Creek and that withdrawal from the Gallagher Well will cause a reduction in creek flow which will interfere with surface water rights of downstream users.

Dell Smith and Bruce Topham testified they observed fluctuations in the flow of Whiskey Creek on July 4 and July 5, 1982, respectively, that appeared to be related to operation of the Gallagher Well. Stephen Hess testified that on or around July 4, 1982, his springs located along Whiskey Creek ceased flowing. None of these three protestants had knowledge as to whether the observed fluctuations in lower Whiskey Creek or its associated springs were or were not caused by adjustments of upstream surface water diversions from the flow of Whiskey Creek.

The protestants' water rights of record and claims based on uses by Indian residents prior to termination of the Klamath Indian Reservation are for domestic, stock water and irrigation from Whiskey Creek and various springs which occur along Whiskey Creek. The testimony and evidence of record do not establish that appropriation of water as proposed by Application G-10731 would result in substantial interference with the water to which the protestants are entitled.

ULTIMATE FINDINGS OF FACT

The testimony and evidence adduced in the hearing do not establish that a probable measurable interference with the protestants obtaining the water to which they are entitled would result from the appropriation and use of ground water proposed by the pending Application G-10731 in the names of William L. Gallagher and Nadine F. Gallagher.

The testimony and evidence of record do not establish a probability that the proposed appropriation of ground water would cause undue interference with other existing wells or substantial interference with existing rights to appropriate surface water by others.

CONCLUSIONS OF LAW

Pursuant to the provisions of ORS 537.615 to 537.625, Application G-10731 should be approved by issuance of a permit, subject to prior rights to appropriate from the aforesaid ground water reservoir, and with the provision that should the propsed appropriation and use of ground water be found to have a measurable effect on the flow of Whiskey Creek and/or its tributaries, the proposed appropriation of ground water shall be regulated in accord with prior rights to appropriate such surface water flows.

ORDER

NOW, THEREFORE, it is ORDERED that Application G-10731 in the names of William L. Gallagher and Nadine F. Gallagher be approved by issuance of a permit with the following provisions:

(a) The right herein granted shall be subject to prior rights to appropriate ground water from the ground water reservoir which serves as the source of the appropriation authorized herein.

(b) Should it be determined subsequent to the issuance of this permit that the appropriation of ground water herein authorized has a measurable effect on the flow of Whiskey Creek and/or its tributaries, the appropriation of ground water herein authorized shall be regulated in accord with prior rights to appropriate such surface water flows.

Dated at Salem, Oregon this 28th day of December, 1982.

JAMES E. SEXSON
Director

NOTICE: You are entitled to judicial review of this Order. Judicial review may be obtained by filing a petition for review within sixty days from the service of this Order. Judicial review is pursuant to the provisions of ORS 183.482.

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