

R / W

20 21
29 28

6.2 AC
4.5
10.7 AC

T 4483
N / NW

N / NW

15.2

N / NW

1 8.0

2 35.8

N / NW

N / NW

N / NW

5 19.5

5 10.7

4 3.5

3 4.5

NO
6" well

T 3646

N / NW

T 3722

N / NW

T 3616

N / NW

T 3618

22.3

1 9.0

1 23.0

7.0

2 17.0

2 17.3

2 23.3

2 11.8

N / NW

H / NW

3 10.1

N / NW

4 14.9

3 20.2

N / NW

N / NW

3 22.4

H / NW

7 5.2

6 6.5

5 3.3

N / NW

4 6.4

3 42.5

T 3698

N / NW

N / NW

N / NW

T - D2N
R - D1W
Sec - 29
SE 1/4 NE 1/4
ASCS PHOTO.

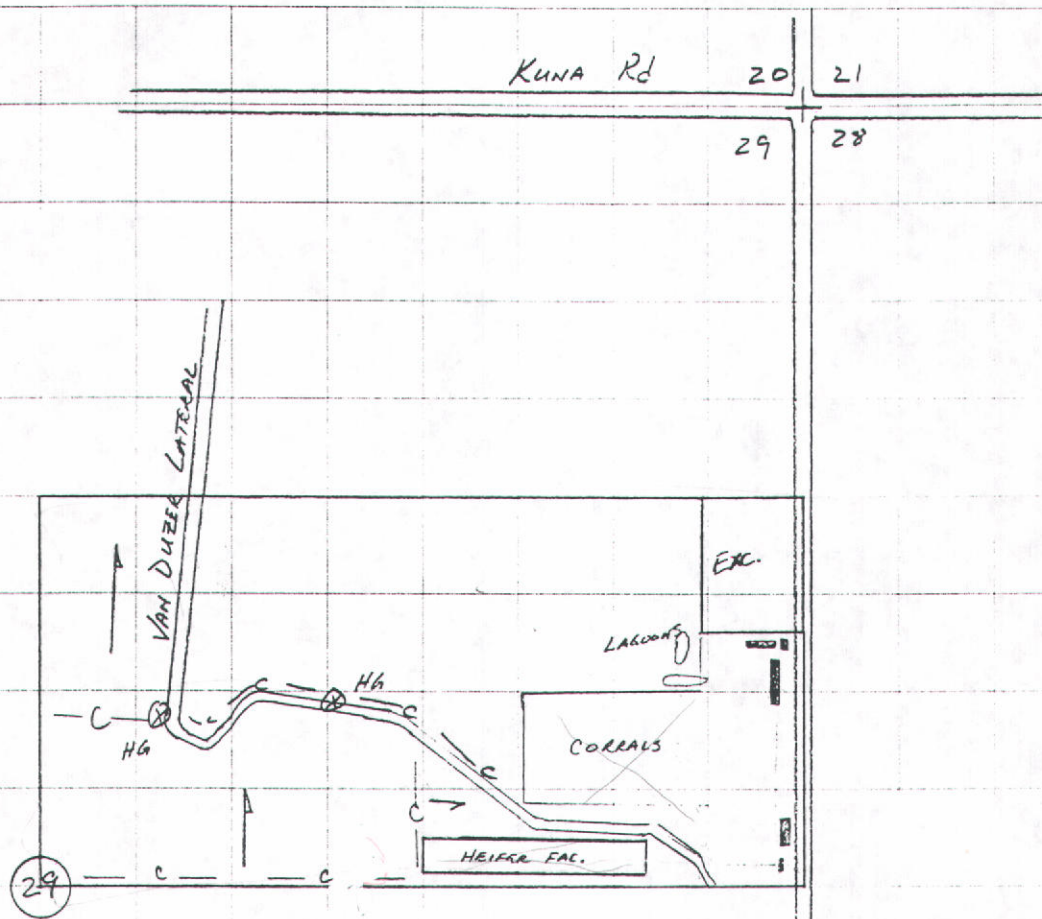
NO
600.
LOTS
DAN - 12/18/1998

14.3

N / NW

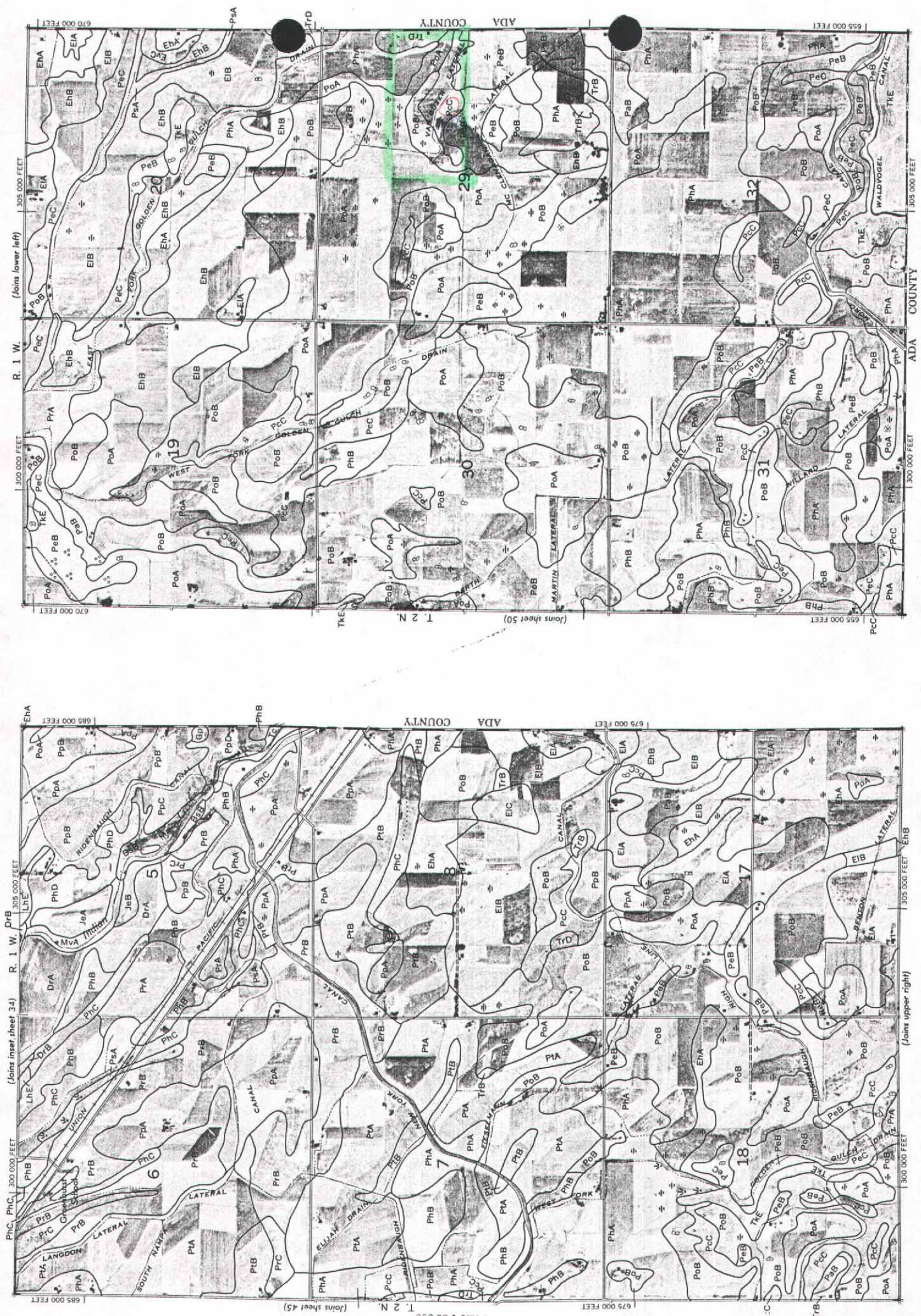
T 2 N

Use Standard Legend. Indicate roads and show direction and distance to nearest town. Indicate points of compass—show scale of map.
 Designate section numbers at section centers. If more than one source of irrigation supply, indicate area served by each.



TP. 2N RGE. 1W	
CANYON COUNTY	
IDAHO STATE	
SCALE: 1" = 660'	
PLATTED BY CWC 9/98	VERIFIED BY
TITLE REPORT DESCRIPTION	

Mc DEMOTT RD



RECEIVED

OCT 07 1998

WATER RESOURCES
WESTERN REGIONSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

RECEIVED

MAR 29 1999

DEPARTMENT OF WATER RESOURCES

1. Name of Applicant KENT J. REGLE Phone 208-922-3544
Post Office address 7639 S. McDERMOTT KUNA ID 83634
2. Source of water supply GROUND WATER which is a tributary of _____
3. Location of point of diversion is _____ 1/4 of SE 1/4 of NE 1/4, Govt. Lot _____
Sec. 29 Township 2N Range 1W B.M. CANYON County; additional points of diversion if any: _____
4. Water will be used for the following purposes:
Amount .40 for Commercial purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount .20 for Stockwater purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated is (a) .40 and/or (b) _____
cubic feet per second acre feet per annum
6. Proposed diverting works:
a. Description of ditches, flumes, pumps, headgates, etc. 2 wells, 2 pumps
- b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet; period of year when water will be diverted to storage: _____ to _____ inclusive. 8"-129'
- c. Proposed well diameter is 8", 6" inches; proposed depth of well is 6"-130' feet.
- d. Is ground water with a temperature of greater than 85°F being sought? N
- e. If well is already drilled, when? 8"-1994; Drilling firm 8"-Doty 6"-Davis
Well was drilled for (well owner) 8"-Applicant 6"-Keith Hurren
7. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
a. Hydropower; show total feet of head and proposed capacity if KW. _____
b. Stockwatering; list number and kind of livestock. 600 milkers, 845 dry stock
c. Municipal; show name of municipality. _____
d. Domestic; show number of households. _____
e. Other; describe fully. _____

* added county using owners maps.

9. Description of place of use:

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.

b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	N E				N W				S W				S E				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
ZN	1W	29			X	X													

Total number of acres to be irrigated _____

10. Describe any other water rights used for the same purposes as described above. _____

11. a. Who owns the property at the point of diversion? Applicant

b. Who owns the land to be irrigated or place of use? Applicant

c. If the property is owned by a person other than the applicant, describe the arrangement enable the applicant to make this filing: _____

12. Remarks: Water bearing zone to be appropriated is from 100 to 130 feet.

Mitigation is proposed for consumptive use. DAN
1-13-99

13. MAP OF PROPOSED PROJECT ATTACHED ☒ Show clearly the proposed point of diversion, place of use, section number, township and range number.

BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.

[Signature]
(Applicant)

Received by Ly Date 10/7/98 Time 9 AM Preliminary check by DAN
Fee \$ 100 Receipted by Ly # W024472 Date 10/7/98
Publication prepared by [Signature] Date 2-10-99 Published in Press-Tribune
Publication approved [Signature] Date 3-9-99 3-18-99 ? 2-25-99

Comments: Date: 1/13/1999 User-ID: DNELSON

Subject: ADDITIONAL INFORMATION

IDWR review indicate that Boise-Kuna Irrigation District canal shares overlap place of use. The applicant signed an agreement on 10/22/1998 to retain 10 of the Boise-Kuna canal shares for future mitigation. Lori Graves Senior Water Right agent said this was approved per Norm Young and Gary Spackman. Signature of the Canal Co. on the agreement was not required per Gary Spackman. The applicant stated that the commercial and stockwater use are for use in a dairy parlor and associated facilities. According to the application there are 2 wells located in the same 40 acre tract for this application. The first well is a 6" well and was drilled to a depth of 130 feet in 1978. The second well is a 8" well drilled 189 feet and was drilled as a domestic well in 1994. The 1994 well will need the drilling permit updated to a commercial well and the fee adjusted from \$35.00 to \$200.00. Therefore, \$165.00 must be paid prior to application being sent to the State Office for approval.

R / W

20

28

6.2 AC

NO
6" well

T 4483

N / NW

N / NW

15.2

1
8.0

2
35.8

5
10.7

N / NW

N / NW

4
3.5

3
4.5

T 3646

N / NW

T 3722

N / NW

T 3616

N / NW

T 3618

NO
8" well

Place of Use

22.3

9.0

1
23.0

2
17.0

N / NW

2
11.8

N / NW

2
17.3

2
23.3

H / NW

3
10.1

N / NW

4
14.9

3
20.2

N / NW

H / NW

7
5.2

6
6.5

5
3.3

N / NW

4
6.4

3
42.5

3
22.4

T 3698

N / NW

N / NW

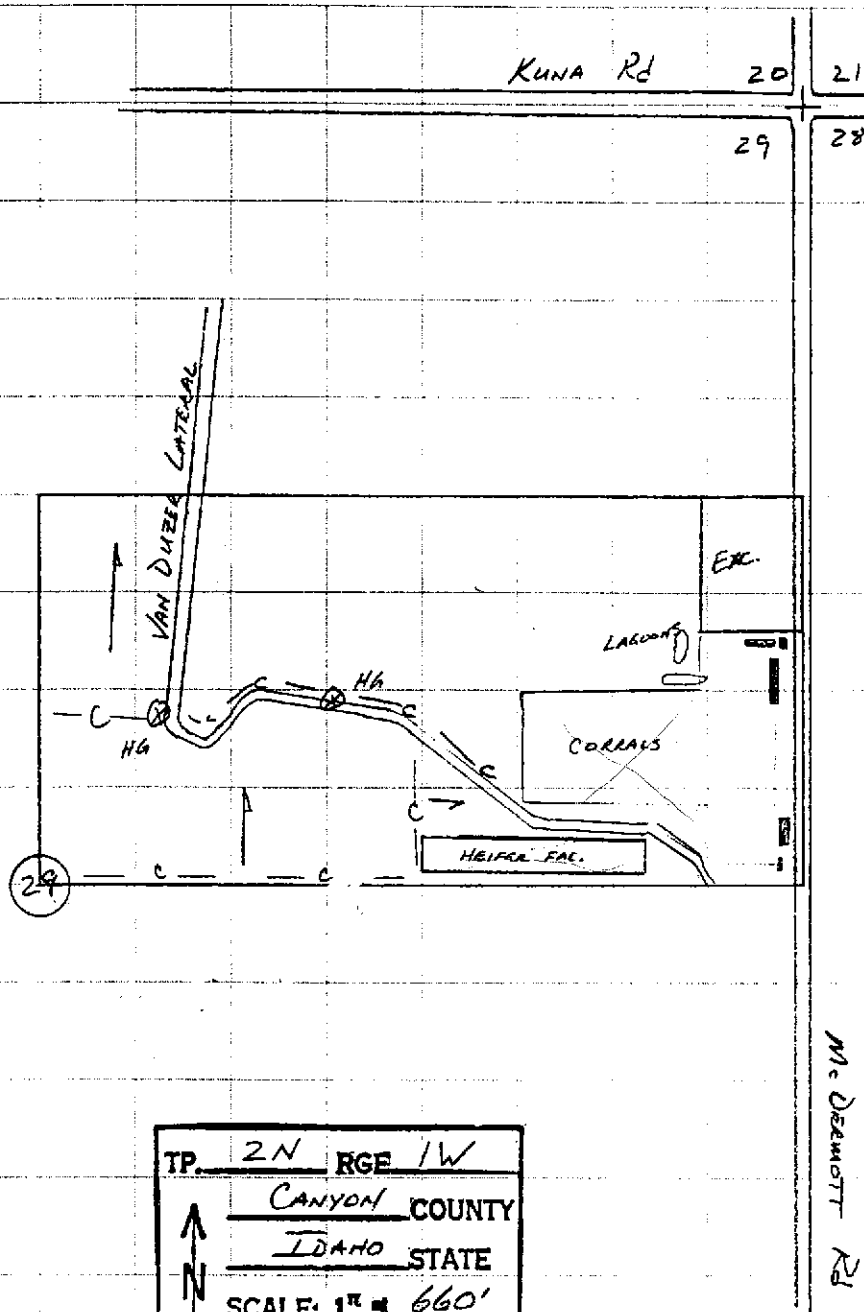
N / NW

T- D2N
R- D1W
Sec- 29
SE 1/4 NE 1/4
ASCS PHOTO.

NO
600
LOTS
DAN - 12/18/1998

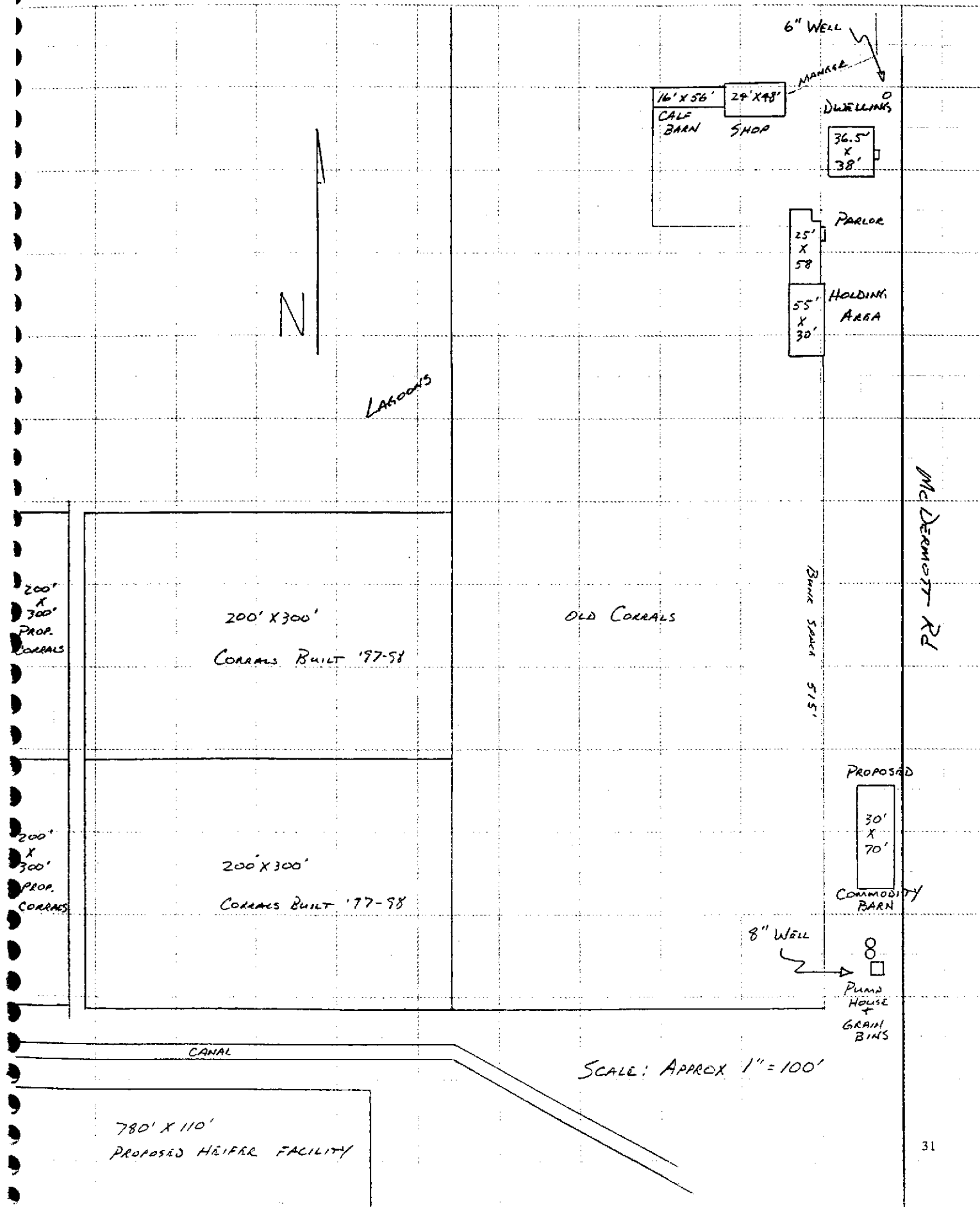
T 2 N

Use Standard Legend. Indicate roads and show direction and distance to nearest town. Indicate points of compass—show scale of map.
 Designate section numbers at section centers. If more than one source of irrigation supply, indicate area served by each.



TP. 2N RGE 1W	
CANYON COUNTY	
IDAHO STATE	
SCALE: 1" = 660'	
PLATTED BY CWC 7/98	VERIFIED BY
TITLE REPORT DESCRIPTION	

Use Standard Legend. Indicate roads and show direction and distance to nearest town. Indicate points of compass - show scale of map.
Designate section numbers at section centers. If more than one source of irrigations supply, indicate area served by each.



RECEIVED

OCT 22 1998

WATER RESOURCES
WESTERN REGION

REQUEST TO PROCESS

COMPLETE REQUEST IF YOU WANT YOUR APPLICATION TO BE PROCESSED USING ONE OF THE
THREE ALTERNATIVES BELOW

Name of Applicant

KENT J. REGZI

Mailing Address

7639 S. McDermott
KUNA Idaho 83634

Application No.
(if known)

☐ IN LOCAL PUBLIC INTEREST

Yes, I want my application processed and before it is advertised, I will amend my application to demonstrate that the proposed appropriation is in the local public interest including the need to preserve flows in the Snake River during the migration periods of anadromous fish.

☐ PROPOSE MITIGATION NOW

Yes, I want my application processed and before it is advertised, I will amend my application to include proposed mitigation to offset anticipated depletions in the Snake River during periods of anadromous fish migration.

☒ WILL AGREE TO MITIGATION IN THE FUTURE IF NECESSARY

Yes, I want my application processed at this time, and I will accept a condition of approval that will require mitigation should the Director of the Idaho Department of Water Resources determine that mitigation is necessary to offset depletions from this appropriation to flows in the Snake River during periods of anadromous fish migration. I understand that mitigation is not required now but may be needed in the future. I also understand that the Director will not require mitigation until I have an opportunity to review the process by which the need for mitigation is established and the amount of water required is quantified.

Signature

KJR

Date

10-13-98

Please return this form to:

Idaho Dept. of Water Resources
Western Regional Office
2735 Airport Way
Boise, ID 83705-5082

REMOVED

OCT 22 1998

MEMORANDUM

WATER RESOURCES
WESTERN REGION

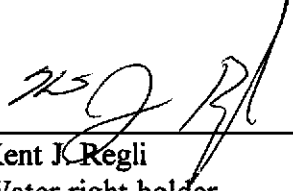
The applicant, Kent J. Regli, agrees that the following conditions be incorporated into permit to appropriate water no. N/A:

1. The water right holder shall retain ownership of ten Kuna-Mora Irrigation District shares (?) representing water that irrigated ten acres taken out of production for the dairy.

2. The Department of Water Resources may require that water authorized for use by the ten shares be placed in the ground water to replace water withdrawn for the dairy.

Kuna-Mora Irrigation District acknowledges this agreement by cosigning below.

Dated this 13th day of Oct., 1998


Kent J. Regli
Water right holder

per Gary S.
per Norm Y.

by 12/18/98

Representative of Kuna- Mora Irrigation District

 N/A per Gary Spackman

1/27/99

Lon Gorman

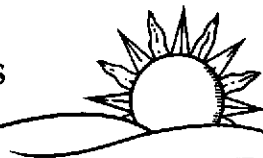
McCoy & Watts Realty

Farms • Dairies • Ranches

Susan Rathke McCoy
Broker

10877 Oswego Drive
Boise, ID 83709

Office - 208-362-4669
Office - 1-800-362-4669
Mobile - 208-866-1809
Fax - 208-362-1870





State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

April 21, 1999

KENT REGLI
7639 S MC DERMOTT
KUNA ID 83634

RE: Water Appropriation Application No. 63-12498

Dear Mr. Regli:

In 1996 the Idaho legislature appropriated \$300,000 to initiate a study of ground water availability in the Treasure Valley. The study was conceived in response to concerns by state and local officials about the impacts of population growth and development on water resources in the valley. The Department of Water Resources (IDWR) is working with a number of other local, state, and federal entities to conduct the study, which is expected to take five years to complete. During the study, IDWR is withholding approvals on most consumptive use applications until enough data is available to be reasonably sure that ground water can be appropriated in the Treasure Valley without injury to prior water rights.

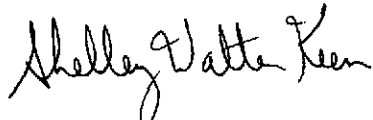
IDWR will process applications that include plans to mitigate for the consumption of water that will result from the proposed appropriation. Your application, 63-12498, is being processed because you have offered to use ten acres of irrigation water, or about 45 acre-feet of water, supplied by the Boise-Kuna Irrigation District to mitigate the consumptive use portion of your proposed commercial and stockwater use. Before your application can be considered further, however, you must provide additional information about your proposed mitigation plan.

First, your mitigation plan needs to incorporate a means by which IDWR can verify that the mitigation water is being diverted from the Boise River and is being dedicated exclusively to recharging the groundwater. For example, other mitigation plans have proposed diverting the surface water into a pond, gravel pit, or ditch where it would seep into the ground. Second, IDWR is seeking assurance that your proposal does not conflict with Boise-Kuna Irrigation District policy or operations. Once the details of your mitigation plan have been formulated, please ask Boise-Kuna Irrigation District to provide a statement of approval to IDWR.

Kent Regli
April 21, 1999
Page 2

I will hold your application until you can supply the requested information. If you have any questions, please contact me at 208-327-7946.

Respectfully,

A handwritten signature in cursive script that reads "Shelley Walter Keen".

Shelley Walter Keen
Water Rights Supervisor

MEMORANDUM

To: Shelley
From: Glen *WJ*
RE: MITIGATION WITH IRRIGATION DISTRICT WATER
Date: April 20, 1999

To File 63-12498

John Rosholt recently expressed concern to the department of proposals of dairy operators to mitigate their groundwater use by offering canal company shares as mitigation. The concern of Rosholt clearly related to canal capacity when available shares were not subsequently diverted from the delivery canal and potential problems associated with the use of shares of irrigation water to be used for recharge purposes. The department agreed to advise him of proposals involving canal company shares for mitigation.

I think it is the applicant's responsibility to make all the necessary showings to IDWR before we issue a permit as opposed to issuing a permit with conditions of approval which an applicant may not agree or may not be able to comply.

In the case of Application for Permit No. 63-12498, I think it is up to the applicant to seek approval from the irrigation district to use district water for mitigation purposes, similar to the Rosholt concern with canal company shares. The applicant then would need to provide evidence of district concurrence to the department and would have to show the department how the mitigation (recharge) would occur, i.e. that the water in fact would be diverted from the source and would be recharged in some manner such as to a pond, gravel pit or similar structure.

If the concepts in this memo conflicts with some of our past actions, please feel free to discuss with me so we will be as consistent as possible.

MEMORANDUM

DATE: April 20, 1999

TO: Glen Saxton

FROM: Shelley W. Keen ^{SWK}

RE: Application 63-12498

To File 63-12498

I need your guidance on how to proceed with application 63-12498. The applicant, Kent Regli, wants to develop groundwater for a dairy in Basin 63 on irrigated land in the Boise-Kuna Irrigation District. Because Basin 63 is effectively closed to new consumptive uses, Mr. Regli has offered ten acres of Boise-Kuna Irrigation District water to mitigate for his proposed use of groundwater. I am not certain how to frame this mitigation proposal to make it acceptable to IDWR.

In 1996 Stephen Woodard offered a similar mitigation proposal for development of groundwater for a mint still. IDWR approved Mr. Woodard's application, 63-12338 (copy attached), with a requirement that he divert 11.5 acre feet from Pioneer Irrigation District into a seepage ditch on his own property and maintain records of his diversions. Regli's situation is different than Woodard's because a requirement to bring water onto the property to seep will likely conflict with the need to dispose of dairy wastewater through land application. Also, we may have to deal with the fact that Woodard apparently has not complied with the requirement to divert Pioneer Irrigation District water. While the Woodard situation is not yet resolved, I am nevertheless reluctant to repeat it.

If we allow Regli to get by with leaving ten acres of water in the Mora Canal, I am not sure how we can be sure that it will seep rather than be used downstream in the system, if it is diverted from the river at all. District operations may be such that water is not diverted from the river if diversion into the laterals diminishes, especially if storage water is being used. Moreover, we would be affording Regli an opportunity that we have not yet offered even to subdivisions and municipalities in the Treasure Valley. Currently, our new permits require subdivisions and municipalities to divert and use the available surface water for irrigation when they would prefer to rely solely on groundwater.

I think an equitable solution would be to require Regli to contribute to a local or regional recharge project. I do not, however, know what that project might be. The fact that Regli is in an irrigation district rather than a canal company, where shares can be marketed and moved, may prove to be an additional difficulty. Perhaps the management plan Gary has been crafting addresses this issue, but I have not seen a draft of the plan yet. Therefore, I am not sure how to condition 63-12498 so that it accomplishes the objectives of continuing surface water diversions and minimizing reliance on groundwater in the Treasure Valley.

APPLICATION FOR PERMIT STATE OFFICE ANALYSIS

by Cindy StenNo.: 63-12498 Name: Regli Date: April 6/99 Ad OK? ✓ ✓ Gvmt Lts: ✓AREA OF CONCERN: - No/Yes: BRD Mor / GWMA / Trust / Non-trust

PROTESTED: - 020 (Protest Agreement) or *W19 (Order)

SYSTEM COMPLETED:

- > 1 year - 26A P17
- ≤ 1 year/no proof - P18

GROUNDWATER: (✓ FLO-CH)

DRILLING PERMIT

- All wells (✓ WDQ3) - 046 P23
- In Basin 34? - 085
- Irr. within WD - P05 (new well location)
- WMD (✓ MAP) - North / East / West
- > 0.24 cfs/5 acres - 067 or No MD (in-stream stock or power)
- ≤ 0.24 cfs/5 acres - No MD
- WMD
- Supp irr use only - 065-079 (if GW use SW)-(keep SW)-(GW not primary irr source)
- Supp. irr + uses - 100-101
- > 0.24 cfs/5 acres - 01M (report when notified)
- ≤ 0.24 cfs/5 acres - No MD

SURFACE WATER: (✓ FLO-CH) (Surface water that doesn't sink is regulated):

- FISH & GAME CONTACTED: - YES / NO; WHEN: RESPONSE:
- IN/ABOVE MSF (✓ MAP) - *WB9
- IN-STREAM DEVELOPMENT - P52 (stream channel alteration)
- WD (✓ MAP & LISTING) - R04 (WD #)
- > 0.20 cfs - 01J-P08 (MD & LD)
- ≤ 0.20 cfs - 01H-P01 (LD), 01P or No MD (in-stream stock)
- WMD (✓ MAP)
- > 0.24 cfs/5 acres - 067 or No MD (in-stream stock or power)
- ≤ 0.24 cfs/5 acres - No MD
- SPRINGS/SINK, INACTIVE WD & REST OF STATE
- > 0.24 cfs/5 acres - 01M or No MD (in-stream stock or power)
- ≤ 0.24 cfs/5 acres - No MD

RIVER BASINS: (*Surface water):

- Snake R (01) - *W22-P04, NA
- (02/03-irr) - 007 (w/ remark *WB9 if above Weiser), NA
- Payette R(65) - *W22 (regulated uses), 047-P04 (Payette Lake), NA
- Salmon R (70's) - 029 (fish screens), NA
- Weiser R (67) - 086, 087

USE:

- STORAGE (✓3 compo.) - 18A (in & out MD for on-stream storage), 18B-P09 (>10' dam), NA
- IRR ≤ 5 acres - R66/R67/R68/R69 (0.03 cfs/acre + 3.0/3.5/4.0/4.5 AF)
- > 5 acres - R62/R63/R64/R65 (0.02 cfs/acre + 3.0/3.5/4.0/4.5 AF)
- STOCKWATER - R37 (BLM/USFS); NA
- MINING - 054(req) -081-P10
- FISH PROPAGATION - 029(70's only)-007-042(req)-081 (WVQ)-P10
- HEATING/COOLING - R07 (injection well)
- POWER - 17H/17K(+uses)-08A-025(P18)-01N-028-081(P10)-027 (if no other cons. use); 17G (FERC) or 17M (FERC); 18B-P09; >25 cfs-P18
- MUNICIPAL
- In restricted area? - 022, 075, 004 (+memo?)
- Irr., GW supp. to SW? - 102

DOMESTIC

- Surface water - *WB5 (Big Wood R or Boise R ↑ Star Bridge); 27A (Payette River); NA
- >1 in rest. area - 071-070

FIRE PROTECTION

- 077

LOCATION:

- BOISE FRONT LOGEO - 058 (<85° GW temp only)
- MITIGATION - 120
- 42-248 AREA - P84 In 20/30/40/50/60/70/80 (87) basin)
- SWAN FALLS FLAG (✓Code) -

- Trust - 051-052-053-P74 (Consumptive Uses), NA
- Non-Trust (1) - 048-049 (Consumptive Uses), NA

OWNERSHIP:

- 004 (PD/PU)

OTHER CONDITIONS:

- 069

STANDARD REMARKS:

- ① w02/600m 945 dry ② w52

BENEFICIAL USE DUE:

- 4 /1/ 2004

COMMENTS:

MEMORANDUM

DATE: April 7, 1999
TO: File No. 63-12498
FROM: Cindy Zimmermann
SUBJECT: Application Review

The application identifies stockwater and commercial place of use within SWNE & SENE, S29, T02N, R01W. The advertisement lists place of use as SWNE, SENE, & SENW, S29, T02N, R01W. The error is not fatal. Per Gary Spackman, re-advertisement is not necessary.

The applicant proposes using irrigation district surface water as mitigation for the proposed groundwater use for a dairy under this application. The application refers to both the Boise-Kuna Irrigation District and the Kuna-Mora Irrigation District. The Bureau of Reclamation's Roster of Water Users Organizations and the Boise Valley Irrigation District map indicate the place of use is located within the Boise-Kuna Irrigation District. I spoke with Gary Spackman who did not know the correct entity but agreed that the correct entity needed to be identified on the permit.

I talked with Fay Russell at Boise-Kuna Irrigation District today. Apparently, a separate district, the Kuna-Mora Irrigation District, was proposed at some time but formation of the district fell through. Ms. Russell confirmed that the applicant has 72.14 acres of irrigation right within the Boise-Kuna Irrigation District delivered off the Mora Canal. Ms. Russell stated the irrigation water goes with the land. The water cannot be moved to other lands by an individual. Rather the individual petitions the district to remove the water from the land, and then the district reassigns the water to other lands. The irrigation district has no control of the water after delivery. The right holder may do whatever he wishes with the water after delivery.

I explained the proposed mitigation plan to Ms. Russell. Ms. Russell affirmed that the irrigation district would not be in a position to make sure the 10 acres of mitigation water would not be diverted and used.

ILLINOIS DEPARTMENT OF WATER RESOURCES
APPROPRIATION APPLICATION ANALYSIS SHEET

MAR 29 1999

Department of Public Works

INITIAL REVIEW BY: DAN DATE: 12-18-98 APPLICATION: 63-12498

REQUIRED INFORMATION

- ☒ Name: (If applicant is a corporation or partnership, names and addresses for the director, officers, and other partners must be included.)
- ☒ Address:
- ☒ Source: (See USGS Quad for names of water sources)
- ☒ Point of Diversion: (10 acres for spring, lot & block descriptions for Subdivisions, local name)
- ☒ County:
- ☒ Quantity: (flow and/or volume)
- ☒ Period of use:
- ☒ Nature of proposed use: (Include description of use)
- ☒ Description of diverting works:
- ☒ Time required for beneficial use of water:
- ☒ Place of use or acres irrigated:
- ☒ Map: (show T, R, S, QQ &/or QQQ)
- ☒ Subdivision plat: (for > 1 home in restricted area. $\geq$ 5 homes in non-restricted area)
- ☒ Signature: (If applicant is corp., partnership, or municipality, title of signatory is required)
- ☒ Correct fee paid
- Gov't. Lots:
NO P/D
NO P/U

ADDITIONAL INFORMATION

YES ADVERTISE REMARK(S)
(Reviewer identify which remarks)

N/A T FLAG CHANGED TO P FLAG

YES NO

- ☒ Overlapping place of use: (Describe source & relationship to present application on next page.)
- ☒ Overlapping point of diversion.
- ☒ Critical groundwater area:
- ☒ Groundwater management area:
- ☒ 1992 moratorium:
- ☒ Surface water source, IDFG letter needed.
- ☒ Bull trout impact area, IDFG letter needed
- ☒ E-mail to SCA staff: (perennial stream, non-pump diversion &/or any mining).
- ☒ E-mail to Dam Safety staff: (for any storage)
- ☒ Mitigation plan: Check any that apply.
- ☒ immediate = acceptable plan required and submitted.
- ☐ future = open areas, acceptance of condition of approval is in file.
- ☒ Send power requirement letter &/or fish farm requirement letter.
- ☒ Power residency affidavit:
- ☒ Diversion greater than 5 cfs or 500 af or irrigation greater than 200 acres: (If yes, attach Large Diversion supplementary analysis sheet.)
- ☒ *REQUEST ADDITIONAL INFORMATION FROM THE APPLICANT

Requested update of well permit for
1994 well.

Date Requested 1-28-99 Date Response Received 2-2-99

YES NO

X In form for advertising:
 Statewide advertising: (> 10 cfs &/or 1000 af)
X Fee amount, receipt number and date recorded on application:

SEND COPIES TO: NOTE IF E-MAIL COMMENT LETTER USED.

YES NO

_____ ~~X~~ I.D. Health & Welfare
 _____ ~~X~~ I.D. District Health
 _____ ~~X~~ I.D. Fish & Game
 _____ ~~X~~ I.D. Lands

YES NO

_____ ☒ U.S. BLM
 _____ ☒ U.S. Forest Service
 _____ ☒ Water Dist. # _____
 _____ ☒ Other

FINAL REGIONAL PROCESSING REVIEW:

YES NO

☒ ☐ Affidavit of publication received:
☒ ☐ Application published correctly: If not, record action taken.

✓ Publication dates and paper recorded on application:

Final date for protest 3-8 99

☒ Protests received.

 ✓ Recommendations attached:

☒ Measuring device required:

☒ Water delivered by water master? District #

Special conditions of approval or cover letter: 120, water right holder must
~~return ten shares of Kuna Mera Irrigation Dist. water~~ Validity of
 this right is contingent on retention of ten shares of Kuna-Mera Irrigation
 District water. ~~WSZ (10 shares, Kuna Mera Irrigation Dist.)~~

See below for additional information

Recommended Date or Priority 10/7/98

Recommended by: Gans

Date: 3/19/99

ADDITIONAL INFORMATION:

Boise - Kuna IRRIGATION DISTRICT CANAL SHARES OVERLAP
Place of use. These canal shares are required
FOR mitigation purposes, to allow processing of
consumptive use in Basin 63.

ON 10-22-98 Mr. Regli signed an memorandum
agreement ~~and~~ agreeing to mitigation in future by ~~the~~
Retaining 10 shares Kuna-Mora Irrigation District water.
~~see~~ ~~Re~~ per Gary Spackman & Norm Young.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

1/28/1999

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

KENT J REGLI
7639 S MC DERMOTT
KUNA, ID 83634

RE: APPLICATION FOR PERMIT FOR DAIRY, # 63-12498

Dear Mr. Regli,

I have reviewed your application for permit for a commercial dairy and stockwater received on 10/7/1998. We will be advertising this application within the next few weeks. However, there is still one detail that will need to be addressed prior to sending this application to our State Office for processing.

According to Lori Graves, the senior water right agent that assisted you in putting your application together, you were informed that you would need to update the domestic well drilling permit for the 8" well that was drilled in 1994. Prior to updating this well from a domestic well to a commercial dairy well our office needs to receive a fee adjustment to perform the necessary paperwork. A commercial well permit has a fee of \$200.00 and a domestic well has a fee of \$35.00. Therefore, you will be required to pay the difference of these two fees of \$ 165.00.

Until we receive this \$165.00, we will not be able to send your application to the State Office of the Idaho Department of Water Resources for approval. We will continue with advertising and processing in our office so the application will be ready to send to the State Office as soon as the fee adjustment is received and the application has successfully completed the advertising and protest process.

If you have any questions please contact me at the above address or telephone number.

Respectfully,

Daniel A. Nelson
Water Right Agent

COPY

NOTICE OF APPLICATION WATER RIGHT

The Following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-12498

REGLI, KENT J
7639 S MCDERMOTT
KUNA, ID 83634
Source: GROUNDWATER
Diversion Pt: SENE Sec 29 T 02N R 01W in CANYON County.
Use: COMMERCIAL (0.400 CFS)
STOCKWATER (0.200 CFS)
Total Diversion: (0.400 CFS)

Date Filed: 10/ 7/1998

In: CANYON County

T02N R01W S29 SWNE SENE ~~SENE~~ Not fatal. *com. 4/6/99.*
Water bearing zone to be appropriated is from 100 feet to 190 feet.
Mitigation is proposed for consumptive use.

63-12502

BROWN, DAN A
DERN, LUCINDIA
22108 POND LN
CALDWELL, ID 83605
Source: GROUNDWATER
Diversion Pt: SESW Sec 9 T 04N R 03W in CANYON County.
Use: DOMESTIC (0.040 CFS)
Total Diversion: (0.040 CFS)

Date Filed: 12/30/1998

In: CANYON County

T04N R03W S09 SESW

Permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise, Idaho 83705 together with a protest fee of \$25.00 on or before MARCH 8, 1999. The protestant must also send a copy of the protest to the applicant.

KARL J. DREHER, Director

February 18, 25, 1999

8419

RECEIVED

MAR 03 1999

WATER RESOURCES
WESTERN REGION

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
) SS.
County of Canyon)

Carolyn Roberson

of Nampa, Canyon County, Idaho, being first duly sworn, deposes and says:

1. That I am a citizen of the United States of America, and at all times hereinafter mentioned was over the age of eighteen years, and not a party to the above entitled action.
2. That I am the Principal Clerk of the Idaho Press-Tribune, a daily newspaper published in the City of Nampa and Caldwell, in the County of Canyon, State of Idaho; that the said newspaper is in general circulation in the said County of Canyon, and in the vicinity of Nampa and Caldwell, and has been uninterruptedly published in said County during a period of seventy-eight consecutive weeks prior to the first publication of the notice, a copy of which is hereto attached.
3. That the notice, of which the annexed is a printed copy, was published in said newspaper

Twice

— in the regular and entire issue of said paper, and was printed in the newspaper proper, and not in a supplement.

4. That said notice was published the following dates:
February 18 and 25, 1999

Carolyn Roberson

STATE OF IDAHO)
)
COUNTY OF CANYON)

On this 25th day of February
in the year of 1999, before me, a Notary
Public, personally appeared Carolyn Roberson,
known or identified to me to be the person whose
name subscribed to the within instrument, and being
by me first duly sworn, declared that the statements
therein are true, and acknowledged to me that he/she
executed the same.

Jeanne Leach
Notary Public for Idaho
Residing at Nampa

BY COMMISSION EXPIRES
JUNE 1ST, 2000

RECEIVED

MAR 03 1999

WATER RESOURCES
WESTERN REGION

$$\begin{array}{r}
 20335 \\
 + \underline{2764} \\
 23099 \\
 \times \underline{365} \text{ days} \\
 8431135 \\
 \div \underline{325850} \text{ gal} \\
 25.9 \text{ afa}
 \end{array}$$

1. Volume Diverted

$$\begin{array}{r}
 25.9 \\
 \div \underline{4.5} \\
 5.8 \text{ acre reduction}
 \end{array}$$

2. Volume Consumed

$$\begin{array}{r}
 600 \text{ milking} \\
 \times \underline{.0058} \text{ of/cow/yr} \\
 3.5 \text{ afa} \\
 \div \underline{3.5} \text{ of/ac/yr} \\
 1 \text{ acre reduction}
 \end{array}$$

3. Land Application

$$\begin{array}{r}
 25.9 \\
 + \underline{3.5} \\
 29.4 \\
 \div \underline{3.5} \\
 \underline{8.4} \text{ acre reduction}
 \end{array}
 \quad \text{(Total Consumption)}$$

Fresh water Considerations for Kent J. Regli
 Dairy Based on information from DEAN E. FALK -
 Extension Dairy Specialist - U. of I. - (JERSEY cattle)

600	MILKING COWS (at 50 LBS. per day)	24 gal. = 14400
125	DRY COWS - - - - -	11 gal. = 1375
120	16-24 mo. hFRS. - - - - -	9 gal. = 1080
120	13-15 mo. hFRS - - - - -	9 gal. = 1080
120	9-12 mo. hFRS - - - - -	7 gal. = 840
120	5-8 mo. hFRS - - - - -	7 gal. = 840
120	3-4 mo. hFRS. - - - - -	4 gal. = 480
120	0-2 mo. hFRS - - - - -	2 gal. = 240

Total for Livestock 20335
 EACH DAY

Parlor + milk house

Bulk tank - 1 2000 Gallon =	46
1 3000 Gallon =	78
~~Pipeline 16 stalls~~	<u>124</u>

Pipeline - 16 stalls 60^{gal} per wash $(4\frac{1}{2}) \times = 240$

Cow Prep - MANUAL - $.75 \times 600 \times 2$ times per day = 900

Parlor + holding corral wash down
 (Water is Recycled from Plate cooler)
 = 1500

Total used in 2764
 BARN Each day

23099 gallons per day $\times 365 = 8,431,135$ per year

Form 238-7
7/94IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUse Typewriter
or
Ball Point Pen1. DRILLING PERMIT NO. 63 - 94 - W - 0659 - 000
Other IDWR No. _____

2. OWNER:

Name KENT J. OR DANA M. REGLI
Address 7639 SOUTH McDERMOTT
City KUNA State ID Zip 83634

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N		Twp. <u>2</u> North ☒ or South ☐	
E		Rge. <u>1</u> East ☐ or West ☒	
S		Sec. <u>29</u> 1/4 SE 1/4 NE 1/4	
		Gov't Lot _____ County _____	

Address of Well Site 7639 SOUTH McDERMOTT
City KUNA

(Give at least name of road - Distance to road or landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK

☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT Sacks or Pounds	METHOD
Material	From	To		
BENTONITE	0	114	900 LBS	DRY POUR

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) _____
Was drive shoe seal tested? ☒ Y ☐ N How? NO BLOW BY

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8"	3+	187	2.50		☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Orsmeter	Material	Casing	Liner
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

73 ft. below ground / Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Flow gal./min.	Drawdown	Pumping Level	Time
100		160	1 1/2 HOUR

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
12"	0	1	TOP SOIL		☒
12"	1	7	BROKEN ROCK AND BOULDERS		☒
12"	7	48	BROKEN LAVE ROCK		☒
12"	48	86	HARD SOLID ROCK		☒
12"	86	92	BROKEN ROCK AND CREVESES		☒
12"	92	114	BROKEN ROCK, CINDERS, & BOULDERS		☒
8"	114	120	SAND AND GRAVEL	☒	
8"	120	125	CLAY		☒
8"	125	133	SAND GRAVEL	☒	
8"	133	135	CLAY		☒
8"	135	183	SAND	☒	
8"	183	189	CLAY		☒
8"	189		SAND	☒	

RECEIVED

OCT 14 1994

WATER RESOURCES
WESTERN REGIONCompleted Depth 189' (Measurable)
Date: Started 8/15/94 Completed 10/10/94

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name BILL DOTY DRILLING CO., INC Firm No. 42Firm Official [Signature] Date 10-12-94

and Supervisor or Operator _____ Date _____

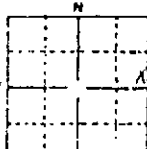
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

WELL DRILLER'S REPORT

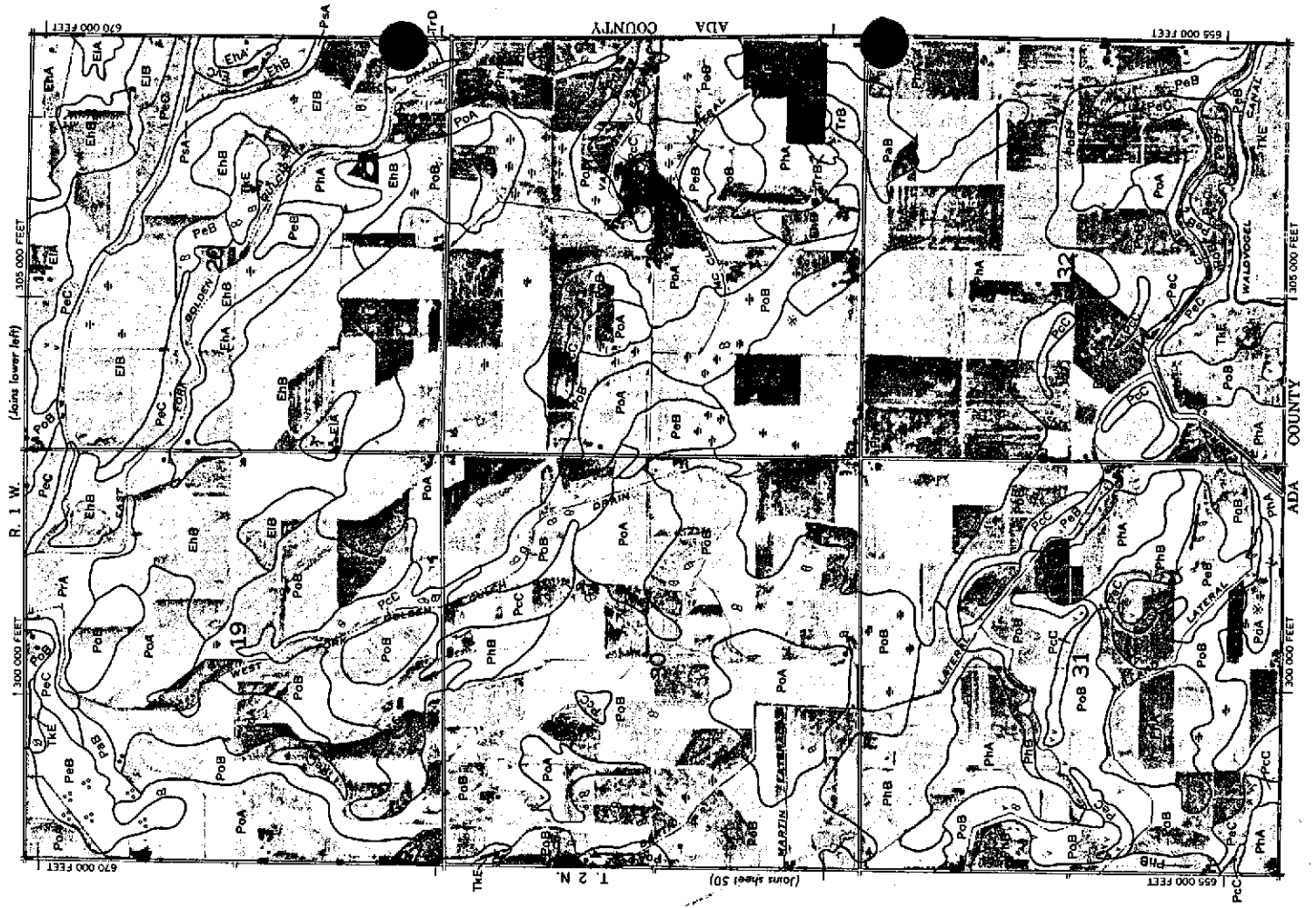
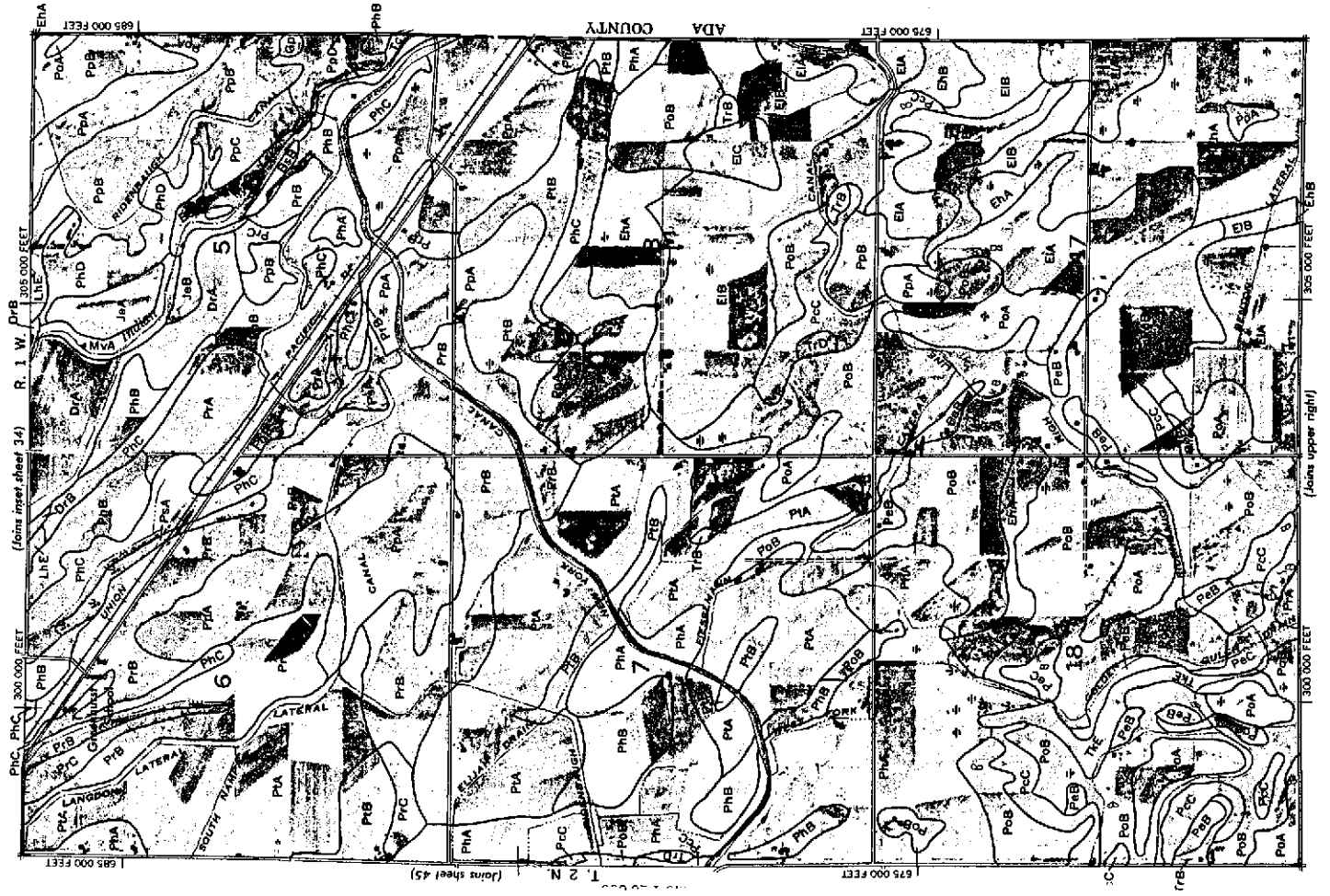
Sheet 1

State law requires this report be filed with the Director, Department of Water Resources, within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>Kirk Nurren</u> Address <u>W. 2nd Street, Lima</u> Owner's Permit No. _____	7. WATER LEVEL Static water level <u>79'</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow _____ Temperature _____ P. Quality _____ Artesian closed-in pressure _____ p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																									
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (Describe method of abandoning) _____	8. WELL TEST DATA ☐ Pump ☐ Bailer ☐ Other <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Discharge G.P.M.</th> <th>Draw Down</th> <th>Hours Pumped</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Discharge G.P.M.	Draw Down	Hours Pumped																																																						
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3. PROPOSED USE ☒ Domestic ☐ Irrigation ☐ Test ☐ Other (Specify type) _____ ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection	9. LITHOLOGIC LOG <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Hole Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th rowspan="2">Water Yes/No</th> </tr> <tr> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr><td> </td><td>0</td><td>3</td><td>Top of C. & Hart Pan</td><td>X</td></tr> <tr><td> </td><td>3</td><td>17</td><td>Gravel</td><td>X</td></tr> <tr><td> </td><td>17</td><td>28</td><td>Gravel covered with</td><td>X</td></tr> <tr><td> </td><td> </td><td> </td><td>fine sand</td><td>X</td></tr> <tr><td> </td><td>28</td><td>57</td><td>Solid Lava</td><td>X</td></tr> <tr><td> </td><td>57</td><td>70</td><td>Gravel covered</td><td>X</td></tr> <tr><td> </td><td>70</td><td>82</td><td>Solid Lava</td><td>X</td></tr> <tr><td> </td><td>82</td><td>95</td><td>Gravel covered</td><td>X</td></tr> <tr><td> </td><td>95</td><td>110</td><td>Solid Lava</td><td>X</td></tr> <tr><td> </td><td>110</td><td>130</td><td>Gravel covered</td><td>X</td></tr> </tbody> </table>	Hole Diam.	Depth		Material	Water Yes/No	From	To		0	3	Top of C. & Hart Pan	X		3	17	Gravel	X		17	28	Gravel covered with	X				fine sand	X		28	57	Solid Lava	X		57	70	Gravel covered	X		70	82	Solid Lava	X		82	95	Gravel covered	X		95	110	Solid Lava	X		110	130	Gravel covered	X
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4. METHOD DRILLED ☐ Cable ☒ Rotary ☐ Dug ☐ Other	RECEIVED JUN 7 1978 Department of Water Resources Western Regional Office RECEIVED MAY 12 1978 Department of Water Resources Western Regional Office																																																									
5. WELL CONSTRUCTION Diameter of hole <u>6</u> inches Total depth <u>130</u> feet Casing schedule: ☒ Steel ☐ Concrete <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Thickness</th> <th>Diameter</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td><u>2.50</u> inches</td> <td><u>6</u> inches</td> <td><u>1 1/2</u> feet</td> <td><u>5 9/16</u> feet</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> Was casing drive shoe used? ☒ Yes ☐ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch Size of perforation _____ inches by _____ inches <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Number</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> Well screen installed? ☐ Yes ☒ No Manufacturer's name _____ Type _____ Model No. _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☒ No Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>15</u> Material used in seal ☐ Cement grout ☒ Pudding clay ☐ Well cuttings Sealing procedure used ☐ Sherry pit ☒ Temporary surface casing ☒ Overbore to seal depth		Thickness	Diameter	From	To	<u>2.50</u> inches	<u>6</u> inches	<u>1 1/2</u> feet	<u>5 9/16</u> feet																	Number	From	To																														
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Number	From	To																																																								
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name <u>None</u> Lot No. _____ Block No. _____ County <u>Canyon</u> Section <u>SE</u> & <u>NE</u> of Sec. <u>29</u> T. <u>2</u> N. R. <u>1</u> W.	10. Work started <u>4/21/78</u> finished <u>6/21/78</u>																																																									
11. DRILLER'S CERTIFICATION Firm Name <u>Shaw-Winn Drilling</u> Firm No. <u>101</u> Address <u>415 N. Pitt St.</u> Date <u>8/22/78</u> Signed by (Firm Official) <u>Charles Davis</u> and _____ Operator _____																																																										

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE COPY TO THE DEPARTMENT



CHEMICAL PROPERTIES OF THE SOILS
Reglis Soils

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
PcC:								
Potratz-----	0-5	12-18	9.0-20.0	6.6-7.8	---	---	---	---
	5-24	18-22	10.0-20.0	7.9-8.4	15-30	---	0-2	0-5
	24-28	---	---	---	---	---	---	---
Power-----	0-9	18-22	10.0-20.0	6.6-7.8	---	---	---	---
	9-17	24-35	15.0-30.0	6.6-8.4	0-30	---	0-2	0-5
	17-60	15-20	10.0-15.0	7.9-9.0	15-30	---	0-2	0-5
PeB:								
Rock Outcrop.								
Potratz-----	0-5	12-18	9.0-20.0	6.6-7.8	---	---	---	---
	5-24	18-22	10.0-20.0	7.9-8.4	15-30	---	0-2	0-5
	24-28	---	---	---	---	---	---	---
Power-----	0-9	18-22	10.0-20.0	6.6-7.8	---	---	---	---
	9-17	24-35	15.0-30.0	6.6-8.4	0-30	---	0-2	0-5
	17-60	15-20	10.0-15.0	7.9-9.0	15-30	---	0-2	0-5
PhA:								
Power-----	0-9	18-22	10.0-20.0	6.6-7.8	---	---	---	---
	9-17	24-35	15.0-30.0	6.6-8.4	0-30	---	0-2	0-5
	17-60	15-20	10.0-15.0	7.9-9.0	15-30	---	0-2	0-5
PoA:								
Power-----	0-9	18-22	10.0-20.0	6.6-7.8	---	---	---	---
	9-17	24-35	15.0-30.0	6.6-8.4	0-30	---	0-2	0-5
	17-60	15-20	10.0-15.0	7.9-9.0	15-30	---	0-2	0-5
Potratz-----	0-5	12-18	9.0-20.0	6.6-7.8	---	---	---	---
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	9-17	24-35	15.0-30.0	6.6-8.4	0-30	---	0-2	0-5
	17-60	15-20	10.0-15.0	7.9-9.0	15-30	---	0-2	0-5
Potratz-----	0-5	12-18	9.0-20.0	6.6-7.8	---	---	---	---
	5-24	18-22	10.0-20.0	7.9-8.4	15-30	---	0-2	0-5
	24-28	---	---	---	---	---	---	---

CHEMICAL PROPERTIES OF THE SOILS--Continued
Reglis Soils

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
TrD: Trevino-----	0-8	12-18	7.0-15.0	6.6-7.3	---	---	---	---
	8-13	12-18	7.0-15.0	6.6-8.4	5-15	---	0-2	0-5
	13-18	10-18	6.0-15.0	6.6-8.4	5-15	---	0-2	0-5
	18-22	---	---	---	---	---	---	---

CHEMICAL PROPERTIES OF THE SOILS

Endnote -- CHEMICAL PROPERTIES OF THE SOILS

This report shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

CLAY as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this report, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, and plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

CATION EXCHANGE CAPACITY (CEC) is the total amount of cations held in a soil in such a way that they can be removed only by exchanging with another cation in the natural soil solution. CEC is a measure of the ability of a soil to retain cations, some of which are plant nutrients. Soils with low CEC hold few cations and may require more frequent applications of fertilizers than soils with high CEC. Soils with high CEC have the potential to retain cations, thus reducing the possibility of pollution of ground water.

SOIL REACTION is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

CALCIUM CARBONATE is the percentage by weight of calcium carbonate in the fine-earth material, less than 2 millimeters in size.

GYPSUM is the percentage by weight of hydrated calcium sulfates 20 millimeters or smaller in size, in the soil.

SALINITY is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils.

The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the report. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

SODIUM ADSORPTION RATIO (SAR) expresses the relative activity of sodium ions in exchange reactions in the soil. SAR is a measure of the amount of sodium relative to calcium and magnesium in the water extract from saturated soil paste.

ENGINEERING INDEX PROPERTIES
Reglis Soils

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
PcC:												
Potratz-----	0-5	Silt loam	ML, CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	20-30	NP-10
	5-24	Loam, silt loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	75-100	55-85	20-30	NP-10
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
Power-----												
	0-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	9-17	Silty clay loam, loam, silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	17-60	Loam, silt loam, very fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10
PeB:												
Rock Outcrop.												
Potratz-----												
	0-5	Silt loam	ML, CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	20-30	NP-10
	5-24	Loam, silt loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	75-100	55-85	20-30	NP-10
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
Power-----												
	0-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	9-17	Silty clay loam, loam, silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	17-60	Loam, silt loam, very fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10
PhA:												
Power-----												
	0-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	9-17	Silty clay loam, loam, silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	17-60	Loam, silt loam, very fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10

ENGINEERING INDEX PROPERTIES--Continued
Reglis Soils

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
PoA: Power-----	0-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	9-17	Silty clay loam, loam, silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	17-60	Loam, silt loam, very fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10
Potratz-----	0-5	Silt loam	ML, CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	20-30	NP-10
	5-24	Loam, silt loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	75-100	55-85	20-30	NP-10
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
PoB: Power-----	0-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	90-100	70-90	20-30	NP-10
	9-17	Silty clay loam, loam, silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	80-95	25-35	5-15
	17-60	Loam, silt loam, very fine sandy loam	CL-ML	A-4	0	0	95-100	90-100	90-100	60-85	20-30	5-10
Potratz-----	0-5	Silt loam	ML, CL-ML	A-4	0	0-5	95-100	90-100	80-100	65-90	20-30	NP-10
	5-24	Loam, silt loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	75-100	55-85	20-30	NP-10
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
TrD: Trevino-----	0-8	Silt loam	CL-ML	A-4	0	0	90-95	85-95	80-90	70-80	20-30	5-10
	8-13	Loam, stony loam, silt loam	CL-ML	A-4	0-20	0-5	85-100	85-100	75-100	55-80	20-30	5-10
	13-18	Fine sandy loam, loam, cobbly loam	SM, ML, CL-ML, SC-SM	A-4	0	0-25	75-100	70-90	55-75	40-55	20-30	NP-10
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP

ENGINEERING INDEX PROPERTIES

Endnote -- ENGINEERING INDEX PROPERTIES

This report gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

DEPTH to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given in the published Soil Survey for each soil series under "Soil Series and Their Morphology."

TEXTURE is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as about 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Soil Survey Glossary.

Classification of the soils is determined according to the Unified soil classification system and the system adopted by the American Association of State Highway and Transportation Officials.

The UNIFIED system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-MH.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock FRAGMENTS larger than 3 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage of soil particles passing designated sieves (PERCENTAGE PASSING SIEVE NUMBER--) is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

LIQUID LIMIT and PLASTICITY INDEX (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in this report.

PHYSICAL PROPERTIES OF SOILS
Reglis Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodability index" apply only to the surface layer)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
PcC:												
Potratz-----	0-5	12-18	1.50-1.60	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	2	5	56
	5-24	18-22	1.50-1.60	0.60-2.00	0.16-0.21	Low	0.0-0.5	0.37	0.37			
	24-28	---	---	---	---		---	---	---			
Power-----	0-9	18-22	1.30-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	5	6	48
	9-17	24-35	1.20-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-1.0	0.43	0.43			
	17-60	15-20	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			
PeB:												
Rock Outcrop.												
Potratz-----	0-5	12-18	1.50-1.60	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	2	5	56
	5-24	18-22	1.50-1.60	0.60-2.00	0.16-0.21	Low	0.0-0.5	0.37	0.37			
	24-28	---	---	---	---		---	---	---			
Power-----	0-9	18-22	1.30-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	5	6	48
	9-17	24-35	1.20-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-1.0	0.43	0.43			
	17-60	15-20	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			
PhA:												
Power-----	0-9	18-22	1.30-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	5	6	48
	9-17	24-35	1.20-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-1.0	0.43	0.43			
	17-60	15-20	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			
PcA:												
Power-----	0-9	18-22	1.30-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	5	6	48
	9-17	24-35	1.20-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-1.0	0.43	0.43			
	17-60	15-20	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			
Potratz-----	0-5	12-18	1.50-1.60	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	2	5	56
	5-24	18-22	1.50-1.60	0.60-2.00	0.16-0.21	Low	0.0-0.5	0.37	0.37			
	24-28	---	---	---	---		---	---	---			
PoB:												
Power-----	0-9	18-22	1.30-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	5	6	48
	9-17	24-35	1.20-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-1.0	0.43	0.43			
	17-60	15-20	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			

PHYSICAL PROPERTIES OF SOILS--Continued
Reglis Soils

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
PoB (con.): Potratz-----	0-5	12-18	1.50-1.60	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.43	0.43	2	5	56
	5-24	18-22	1.50-1.60	0.60-2.00	0.16-0.21	Low	0.0-0.5	0.37	0.37			
	24-28	---	---	---	---		---	---	---			
TrD: Trevino-----	0-8	12-18	1.35-1.60	0.60-2.00	0.19-0.21	Low	1.0-3.0	0.43	0.49	1	5	56
	8-13	12-18	1.50-1.60	0.60-2.00	0.16-0.21	Low	0.5-1.0	0.28	0.37			
	13-18	10-18	1.50-1.60	0.60-2.00	0.12-0.16	Low	0.5-1.0	0.32	0.43			
	18-22	---	---	---	---		---	---	---			

PHYSICAL PROPERTIES OF SOILS

Endnote -- PHYSICAL PROPERTIES OF SOILS

This report shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

CLAY as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this report, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

MOIST BULK DENSITY is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, the moisture content at 1/3 bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this report, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

PERMEABILITY refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems, septic tank absorption fields, and construction where the rate of water movement under saturated conditions affects behavior.

AVAILABLE WATER CAPACITY refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil layer. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

SHRINK-SWELL POTENTIAL is the potential for volume change in a soil with a loss or gain of moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils. If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed. Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The change is based on the soil fraction less than 2 millimeters in diameter. The classes are "Low," a change of less than 3 percent; "Moderate," 3 to 6 percent; and "High," more than 6 percent. "Very high," greater than 9 percent, is sometimes used.

PHYSICAL PROPERTIES OF SOILS

Endnote -- PHYSICAL PROPERTIES OF SOILS--Continued

ORGANIC MATTER is the plant and animal residue in the soil at various stages of decomposition. In report J, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

EROSION FACTOR K indicates the susceptibility of the whole soil (including rocks and rock fragments) to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.05 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

EROSION FACTOR K_f is like EROSION FACTOR K but it is for the fine-earth fraction of the soil. Rocks and rock fragments are not considered.

EROSION FACTOR T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

WIND ERODIBILITY GROUPS are made up of soils that have similar properties affecting their resistance to wind erosion in cultivated areas. The groups indicate the susceptibility of soil to wind erosion. Soils are grouped according to the following distinctions:

1. Coarse sands, sands, fine sands, and very fine sands. These soils are generally not suitable for crops. They are extremely erodible, and vegetation is difficult to establish.

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, and sapric soil material. These soils are very highly erodible. Crops can be grown if intensive measures to control wind erosion are used.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams. These soils are highly erodible. Crops can be grown if intensive measures to control wind erosion are used.

- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams. These soils are erodible. Crops can be grown if intensive measures to control wind erosion are used.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible. Crops can be grown if measures to control wind erosion are used.

PHYSICAL PROPERTIES OF SOILS

Endnote -- PHYSICAL PROPERTIES OF SOILS--Continued

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material. These soils are slightly erodible. Crops can be grown if measures to control wind erosion are used.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay. These soils are very slightly erodible. Crops can be grown if ordinary measures to control wind erosion are used.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material. These soils are very slightly erodible. Crops can be grown if ordinary measures to control wind erosion are used.

8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

The WIND ERODIBILITY INDEX is used in the wind erosion equation (WEQ). The index number indicates the amount of soil lost in tons per acre per year. The range of wind erodibility index numbers is 0 to 300.

WINDBREAKS AND ENVIRONMENTAL PLANTINGS
Reglis Soils

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
PeC: Potratz-----	---	Siberian peashrub, Peking cotoneaster, European privet, Tatarian honeysuckle, lilac	---	---	Russian-olive, Norway spruce, Austrian pine, ponderosa pine, Scotch pine, idahybrid poplar, golden willow
Power-----	---	Siberian peashrub, Peking cotoneaster, European privet, Nanking cherry, lilac	Rocky Mountain juniper	---	Russian-olive, Norway spruce, Scotch pine, idahybrid poplar, golden willow
PeR: Potratz-----	---	Siberian peashrub, Peking cotoneaster, European privet, Tatarian honeysuckle, lilac	---	---	Russian-olive, Norway spruce, Austrian pine, ponderosa pine, Scotch pine, idahybrid poplar, golden willow
Power-----	---	Siberian peashrub, Peking cotoneaster, European privet, Nanking cherry, lilac	Rocky Mountain juniper	---	Russian-olive, Norway spruce, Scotch pine, idahybrid poplar, golden willow
PhA: Power-----	---	Siberian peashrub, Peking cotoneaster, European privet, Nanking cherry, lilac	Rocky Mountain juniper	---	Russian-olive, Norway spruce, Scotch pine, idahybrid poplar, golden willow

WINDBREAKS AND ENVIRONMENTAL PLANTINGS--Continued
Reglis Soils

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
PoA: Power-----	---	Siberian peashrub, Peking cotoneaster, European privet, Nanking cherry, lilac	Rocky Mountain juniper	---	Russian-olive, Norway spruce, Scotch pine, idahybrid poplar, golden willow
Potratz-----	---	Siberian peashrub, Peking cotoneaster, European privet, Tatarian honeysuckle, lilac	---	---	Russian-olive, Norway spruce, Austrian pine, ponderosa pine, Scotch pine, idahybrid poplar, golden willow
PoB: Power-----	---	Siberian peashrub, Peking cotoneaster, European privet, Nanking cherry, lilac	Rocky Mountain juniper	---	Russian-olive, Norway spruce, Scotch pine, idahybrid poplar, golden willow
Potratz-----	---	Siberian peashrub, Peking cotoneaster, European privet, Tatarian honeysuckle, lilac	---	---	Russian-olive, Norway spruce, Austrian pine, ponderosa pine, Scotch pine, idahybrid poplar, golden willow

SOIL FEATURES
Reglis Soils

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
PcC:									
Potratz-----	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Power-----	>60	---	---	---	---	---	Low	High	Low
PeB:									
Potratz-----	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Power-----	>60	---	---	---	---	---	Low	High	Low
Rock Outcrop.									
PhA:									
Power-----	>60	---	---	---	---	---	Low	High	Low
PoA:									
Power-----	>60	---	---	---	---	---	Low	High	Low
Potratz-----	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
PoB:									
Power-----	>60	---	---	---	---	---	Low	High	Low
Potratz-----	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
TrD:									
Trevino-----	8-20	Hard	---	---	---	---	Low	High	Low

SOIL FEATURES

Endnote -- SOIL FEATURES

This report gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is either "Soft" or "Hard". If the rock is "Soft" or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is "Hard" or massive, blasting or special equipment generally is needed for excavation.

Cemented pans are cemented or indurated subsurface layers within a depth of 5 feet. Such pans cause difficulty in excavation. Pans are classified as "Thin" or "Thick". A "Thin" pan is less than 3 inches thick if continuously indurated or less than 18 inches thick if discontinuous or fractured. Excavations can be made by trenching machines, backhoes, or small rippers. A "Thick" pan is more than 3 inches thick if continuously indurated or more than 18 inches thick if discontinuous or fractured. Such a pan is so thick or massive that blasting or special equipment is needed in excavation.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. This report shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which usually is a result of oxidation. Not shown in the report is subsidence caused by an imposed surface load or by the withdrawal of ground water throughout an extensive area as a result of lowering the water table.

Potential frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage mainly to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors creates a severe corrosion environment. The steel installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer. For uncoated steel, the risk of corrosion, expressed as "Low", "Moderate", or "High", is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as "Low", "Moderate", or "High". It is based on soil texture, acidity, and amount of sulfates in the saturation extract.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

1/28/1999

RECEIVED

FEB 02 1999

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

KENT J REGLI
7639 S MC DERMOTT
KUNA, ID 83634

WATER RESOURCES
WESTERN REGION

RE: APPLICATION FOR PERMIT FOR DAIRY, # 63-12498

Dear Mr. Regli,

I have reviewed your application for permit for a commercial dairy and stockwater received on 10/7/1998. We will be advertising this application within the next few weeks. However, there is still one detail that will need to be addressed prior to sending this application to our State Office for processing.

According to Lori Graves, the senior water right agent that assisted you in putting your application together, you were informed that you would need to update the domestic well drilling permit for the 8" well that was drilled in 1994. Prior to updating this well from a domestic well to a commercial dairy well our office needs to receive a fee adjustment to perform the necessary paperwork. A commercial well permit has a fee of \$200.00 and a domestic well has a fee of \$35.00. Therefore, you will be required to pay the difference of these two fees of \$ 165.00.

Until we receive this \$165.00, we will not be able to send your application to the State Office of the Idaho Department of Water Resources for approval. We will continue with advertising and processing in our office so the application will be ready to send to the State Office as soon as the fee adjustment is received and the application has successfully completed the advertising and protest process.

If you have any questions please contact me at the above address or telephone number.

Respectfully,

Daniel A. Nelson
Water Right Agent



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

FEBRUARY 10, 1999

Legal Notices Department
Press-Tribune
P.O. Box 9399
Nampa, ID 83652

Dear Legal Dept.:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before MARCH 8, 1999.

Yours truly,

SUE TAYLOR
Secretary/Office Coordinator

Encl.

NOTICE OF APPLICATION FOR WATER RIGHT

The Following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-12498

REGLI, KENT J
7639 S MCDERMOTT
KUNA, ID 83634

Source: GROUNDWATER

Diversion Pt: SENE Sec 29 T 02N R 01W in CANYON County.

Use: COMMERCIAL	(	0.400 CFS)
STOCKWATER	(	0.200 CFS)
Total Diversion:	(	0.400 CFS)

Date Filed: 10/ 7/1998

In: CANYON County			
T02N R01W S29	SWNE	SENE	SENW

Water bearing zone to be appropriated is from 100 feet to 190 feet.

Mitigation is proposed for consumptive use.

RECEIPT
For Monies Paid
to the
Idaho Department of Water Resources

Receipt No: **W024768**

Date: **2/ 2/1999**
Time: **11:29:00**

Received
From: **KENT J. REGLI DAIRY**

Type of Payment	Program Acct	Amount
APPLICATION FOR PERMIT #63-12498	62103 229 21 1155	165.00
CHECK 1268		
	Total	\$ 165.00

Region: **WESTERN**

Signature: _____

