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FEB 06 2007

DEPARTMENT OF
WATER RESOURCES

2

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA

A. Subcase 22-7397

Case No. 35976

STANDARD FORM 1
OBJECTION

Please fill in the following information:

B. NAME AND ADDRESS OF PERSON OBJECTING

Name: Layne Harris

Address: PO Box 63

Newdale, ID 83436

Daytime Phone: 208-458-4936

Name & Address of Attorney, if any:

Robert L. Harris

Holden, Kidwell, Hahn & Crapo, PLLC

PO Box 50130, Idaho Falls, ID 83405-0130

C. CLAIMANT OF WATER RIGHT AS LISTED IN DIRECTOR'S REPORT

Name: Layne Harris

Address: PO Box 63

Newdale, ID 83436

D. I object to the following elements as recommended in the Director's Report. (Please check the appropriate box(es)).

1. ☐ **Name and Address**
Should be: _____
2. ☐ **Source**
Should be: _____
3. ☒ **Quantity**
Should be: 3.16 cfs. For additional information, please see attached memorandum prepared by Kristin Moore and Harold Jones of IDWR.
4. ☐ **Priority Date**
Should be: _____
5. ☐ **Points of Diversion**
Should be: _____
6. ☐ **Instream Flow Description**
Should be: _____
7. ☐ **Purpose(s) of Use**
Should be: _____
8. ☐ **Period of Year**
Should be: _____
9. ☐ **Place of Use**
Should be: _____

10. **I object because:**

- ☐ This water right should not exist.
- ☐ This water right was not recommended, but should be recommended with the elements described above.

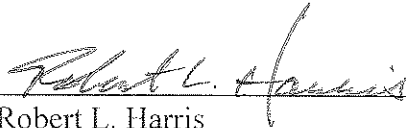
E. **REASONS SUPPORTING OBJECTION(S):** See attached memorandum prepared by Kristin Moore & Harold Jones of Idaho Department of Water Resources

VERIFICATION (Must be Completed)

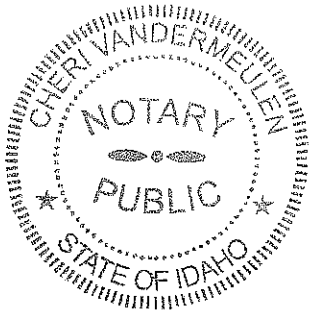
State of Idaho)
)ss.
County of Bonneville)

Robert L. Harris, duly sworn, upon oath, deposes and says:

That I am the attorney for the party/claimant objecting and that I have read this objection, know its contents and believe that the statements are true to the best of my knowledge.


Robert L. Harris

Subscribed and sworn to before me this 6th day of February, 2007.




Notary Public for Idaho
Residing at: Idaho Falls, ID
My Commission Expires: July 7, 2009

G.

CERTIFICATE OF MAILING

I hereby certify that on this 6th day of February, 2007, I mailed the original and copies of this objection, including all attachments, to the following persons:

1. Original to:

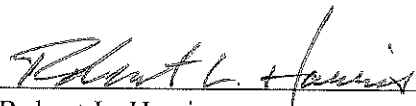
Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, ID 83303-2707

2. Copies to:

IDWR Document Depository
P.O. Box 83720
Boise, ID 83720-0098

Chief, Natural Resources Division
Office of the Attorney General
State of Idaho
P.O. Box 44449
Boise, ID 83711-4449

United States Department of Justice
Environmental and Natural Resource Division
550 West Fort Street, MSC 033
Boise, ID 83724


Robert L. Harris

G:\WPDATA\RLH\10136 Harris, Layne\03\Objection, 22-7397 wpd

To: Kay Walker *File 22-7397*
From: Kristin Moore and Harold Jones
Re: Clarification and Correction of License 22-7397

RECEIVED
JAN 09 2006
DEPARTMENT OF
WATER RESOURCES

Date: December 29, 2005

Our review of SRBA claim for 22-7397 exposed what we believe to be an error in the licensing of this water right. We are asking Allocations to consider issuing a new license based on the permit and the findings of the investigation conducted by Samuel Filetti in 1987. The narrative below explains the circumstances leading to the error.

Prior to 1982, the NE1/4 of Sec 10, T06N, R41E was covered by license 22-2186 and owned by Walz Enterprises. However, a conversation with representatives of Walz Enterprises suggests Layne Harris purchased the ground in Sec 10 without a water right. Since Mr. Harris intended to continue irrigating the NE1/4 of Sec 10, T06N, R41E in May 1982 he filed permit application 22-7397 seeking to drill a new well for irrigation of the land in question.

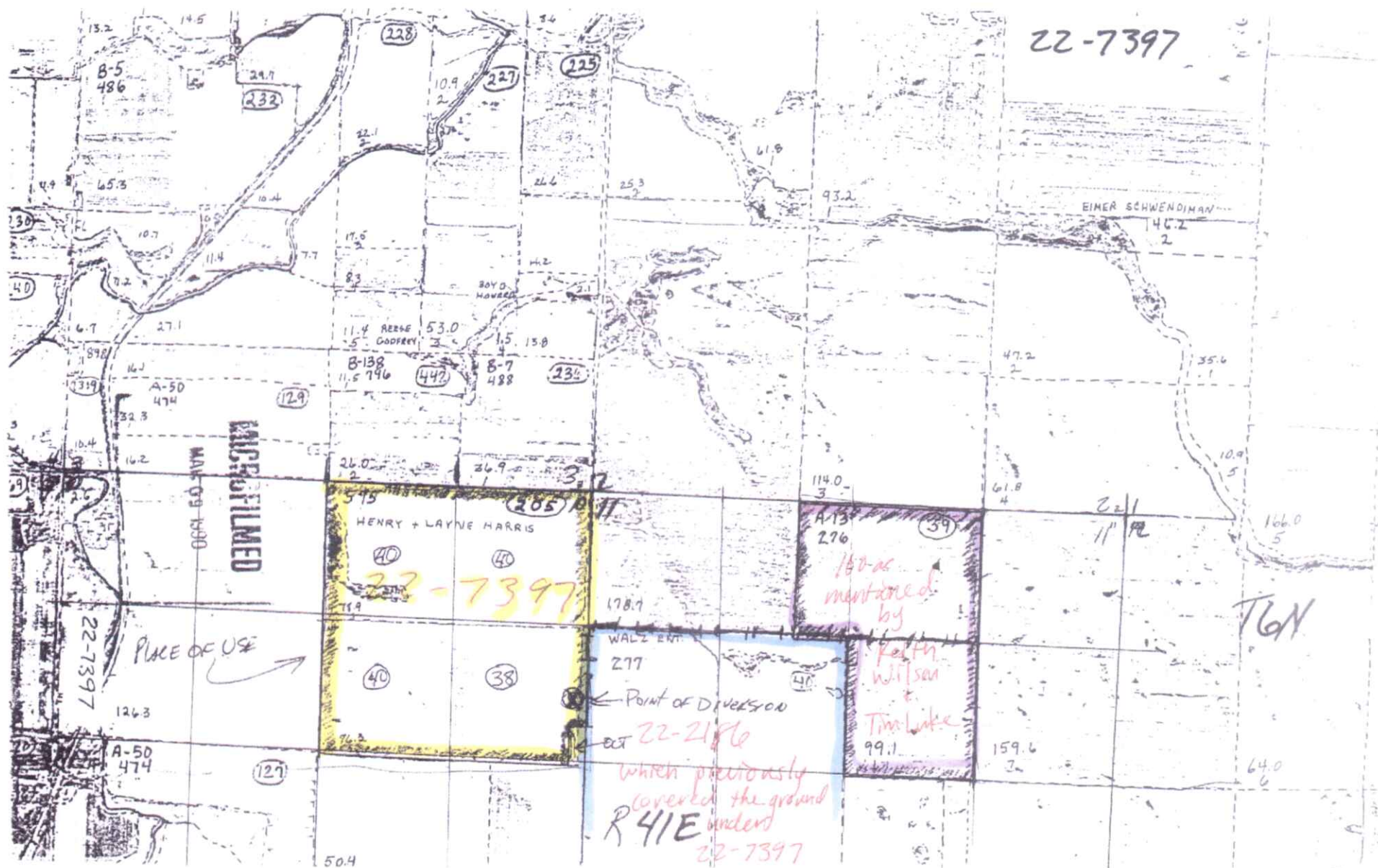
The licensing field exam for permit 22-7397, performed in summer of 1987 by Samuel Filetti (summer field examiner), shows he found 158 acres in the NE1/4 of Sec 10 being irrigated by a well in SENE of Sec 10. Mr. Filetti's report indicates he found nine 1/4 mile hand lines and recommended the license be issued for 3.16 cfs (0.02 cfs/ac). But prior to forwarding the licensing field exam to Boise, Keith Wilson, Senior Water Resource Agent, reviewed Mr. Filetti's report and appears to have added a remark in the overlap review analysis section of the field exam stating additional land (approx. 100 acres) in Sec 11 T6N R41E was being irrigated from Mr. Harris' well. He also wrote that water rights 22-2196, 22-2257, 22-2271B, and 22-7234 were appurtenant to the same 100 acres in Sec 11. We believe these notes by Keith Wilson subsequently led to an analysis by Department staff that incorrectly reduced the diversion rate for license 22-7397. Enclosed, Map 1 from the Department's records shows a mainline from the Harris to the 100 acres mentioned in Mr. Wilson's notes. However, transfer 2728 filed in 1982 by Val Schwendiman and approved in 1983 included 80 of the 100 acres in Sec 11 in a 2053-acre place of use to be irrigated by 22-2196, 22-2257, 22-2271B, and 22-7234.

A review by Tim Luke on January 24, 1990 (memorandum included) includes the 100 acres in Sec 11 in the analysis for licensing 22-7397. The memorandum is self explanatory in that Mr. Luke prorated the 3.16 cfs recommended in the field exam over 258 acres rather than the 158 acres for which it was intended. We think that Mr. Luke should have approached this differently, licensing 22-7397 as Mr. Filetti recommended rather than basing the licensed quantity on a prorate share that included the 100 acres in Sec 11, 80 of which were already covered by water rights under transfer 2728. Today the land in Sec 11 is still being irrigated as reflected by transfer 2728. Additionally, Mr. Harris has never asserted any possessory interest to the land in Sec 11. Even if water from his well was going to land in Section 11 prior to licensing he did not seek a water right for that use and his well is not connected to the irrigation system providing water to that land.

Basin 22 is one of last to be reported in Eastern Region. We are diligently moving forward with recommendations and would appreciate a prompt response.

Thank you.

22-7397



MEMORANDUM

TO: FILE/PERMIT NO. 22-7397

FROM: TIM LUKE *old Jim*

RE: CLARIFICATION & CORRECTION OF FIELD EXAMINATION

DATE: 1-24-90

=====

Staff review of the field examination for this permit revealed that the rate of diversion appeared to be too high. The permit is for irrigation of 160 acres. The examiner found 158 acres which could be licensed.

In conducting the examination, the examiner was looking at a system that included more than the 158 permitted acres. He had noted that there were nine, quarter mile handlines. This is generally an excessive number of handlines for only 160 acres. In the overlap review, the examiner noted that the system examined irrigated an additional 100 acres in an adjacent section. The total system therefore includes 258 acres and nine quarter mile handlines. Nine lines on 258 acres is indeed a more acceptable or realistic system.

The examiner measured 3.21 cfs as a diversion rate for the entire system. Rather than spread this rate proportionately over the entire 258 acres, the examiner assigned a rate of 0.02 cfs per acre, or a total of 3.16 cfs for the 158 acres. Had the measured rate been assigned proportionately, the rate per acre and total diversion rate for the 158 acres would be as follows:

$3.21\text{cfs}/258 \text{ acres} = 0.0124 \text{ cfs/acre} \times 158 \text{ acres} = 1.9658 \text{ or } 1.97\text{cfs}$

It is recommended that the licensed diversion rate be 1.97 cfs.

RECORDED

MAR 09 1990

Transfer No. 2728
22-7167
 Water Right No. 22-7234
22-7016
22-2271
22-2257
22-2196
22-7052

APPROVED

STATE OF IDAHO
 DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT

To Change the Point of Diversion and/or the Place of Use

Name of applicant Val E. Schwendiman Phone 458-4261

Post Office address Newdale, Idaho 83436

A. DESCRIPTION OF RIGHT AS RECORDED**1. Right evidenced by:**

a. Decree No. _____ Decreed to _____ (Name)
 in case of _____ vs _____
 dated in _____ in _____ county of _____
 (Name of court)

b. License No. 22-7234 issued by the Idaho Department of Water Resources

c. Claim No. _____ on file with the Idaho Department of Water Resources

2. If applicant is not the original holder of this right, explain how it was acquired and attach a copy of the deed or other evidence of ownership of the land to which the right is appurtenant _____

3. Source of water Groundwater tributary to _____

4. Date of priority 5-6-1977

5. Water is used for the following purposes:

amount 7.0cfs for Irrigation purposes from 4-1 to 10-31
 amount _____ for _____ purposes from _____ to _____
 amount _____ for _____ purposes from _____ to _____
 (month/day — both dates inclusive)

6. Total amount of water under right: a. 7.00 cubic feet per second
 &/or
 b. _____ acre feet per annum

7. Location of original point of diversion is SE % of NE % of Section 1
 Township 6N Range 41E B.M. in Madison County
 Additional points of diversion, if any _____

8. Lands irrigated or place of use:

TWP.	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
6N	41E	1			40	39	39	39	40	40	40	40	39	40	32	40	15		483
		2	39	33	38	36	17			17	17			17	38	40	40	40	372
		11	40	40	40	40									40			40	240
		12					39	39	40	40	40	40	40						318
7N		36										15	37	20					72

Total number of acres to be irrigated 1485

Describe any other water rights used for the same purpose as described above _____

10. To your knowledge, has any portion of this water right undergone a period of five or more consecutive years of nonuse? No If yes, describe in item D, REMARKS.

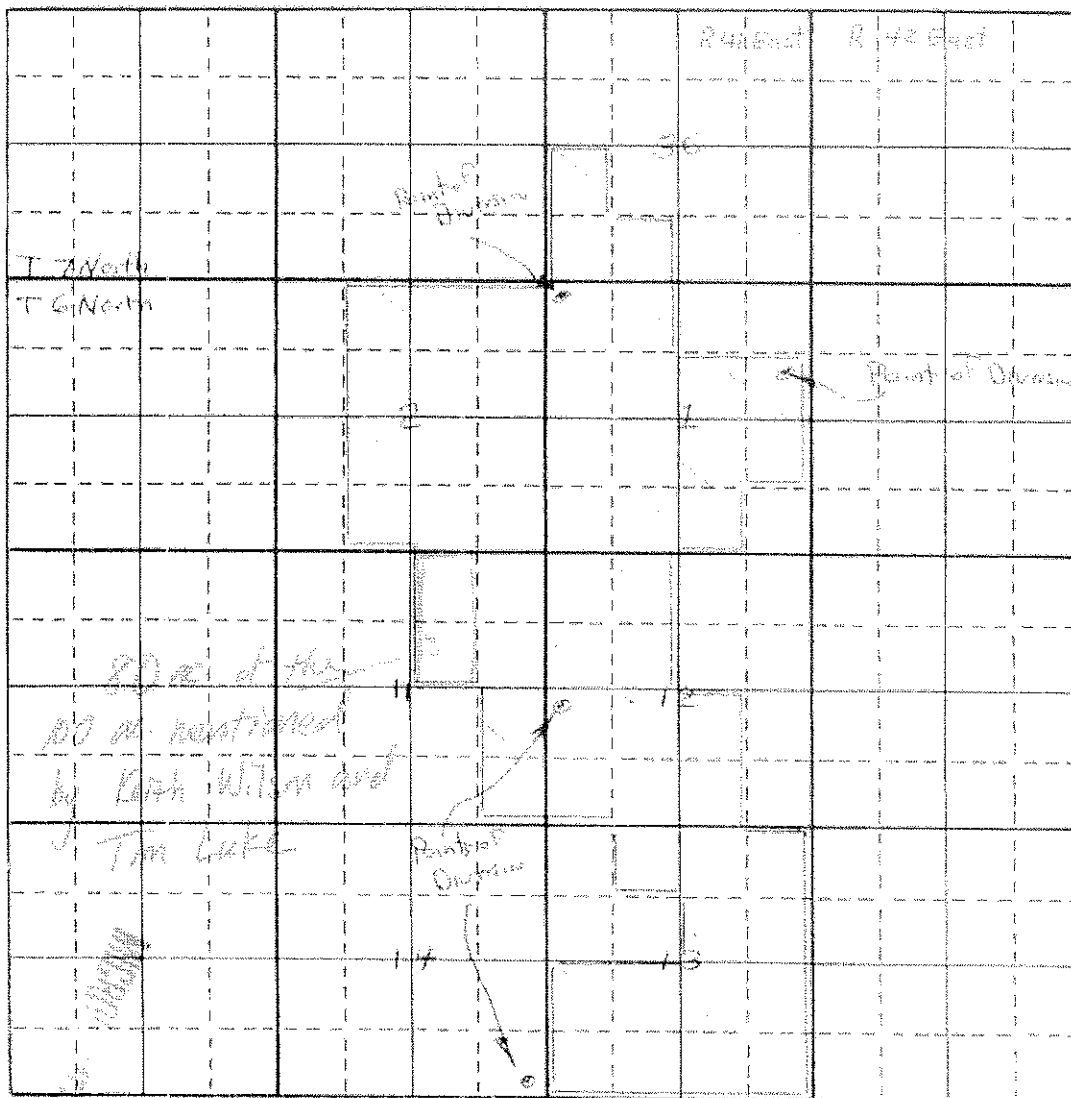
c. Describe the use of water to which the right was being put

TWP	RANGE	SEC.	NE 1/4				NW 1/4				SE 1/4				SW 1/4				TOTAL
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
6N	41E	1			40	39	39	39	40	40	40	40	39	40	32	40	15		483
		2	39	38	39	36	17			17	17			17	38	40	40	40	378
		11	40	40	40	40									40			40	240
		12					39	39	40	40	40	40	40	40		40	40		398
		13	39	37.5		40	38				32	39	39	32	40	40	40	28	482
7N	41E	36											15	37	20				72

Total number of acres to be irrigated 2053

4. Describe any other water rights used for the same purpose as described above None

5. Draw a map indicating the new point(s) of diversion and/or the new land to be irrigated. Show clearly the land involved by section, township and range number.



SCALE 3/16" = 1 mile. Draw plan on 10.

D REMARKS

* Section C reflects the cumulative total of all rights involved in transfer

I hereby assert that no one will be injured by such change and that the change does not constitute an enlargement in use of the original right. The information contained in this application is true to the best of my knowledge.

I understand that any willfull misrepresentations made in this application may result in voiding its approval.

Van E. Schindler
(Signature of Applicant)

Subscribed and sworn to before me this 15th day of July, 1982

Luc B. Boff
(Notary Public)

My commission expires Life

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Transfer of Water Rights No. 22-7167B, 22-2271B, 22-7052I, 22-7234, 22-7016, 22-2257, 22-2196 and said application is hereby APPROVED, subject to the following limitations and conditions:

1. These water rights shall provide no more than 0.02 cfs per acre nor more than 3.5 afa per acre to the 2053 acres identified in the final land list.

Witness my hand this 10th day of March, 1983

J. Glen Saylor
Chief, Operations Bureau

FOR DEPARTMENT USE ONLY

Received by SM Date 7-16-82 Protest filed by _____

Prelim. check by HWS Fee 50.00

Received by BP Date 7-16-82 #22393

Published in Standard Journal Copies of protest forwarded by _____

Pub. dates 9/9 & 9/16/82 Hearing held by _____ Date _____

Watermaster's recommendation requested on _____ Recommended for approval denial

_____ rec'd. _____ by HWS Der

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 22-07397

Priority: May 20, 1982

Maximum Diversion Rate: 1.97 CFS
Maximum Diversion Volume: 553.0 AF

This is to certify, that LAYNE HARRIS
P.O. BOX 63
NEWDALE, ID 83436

has complied with the terms and conditions
of the permit, issued pursuant to Application for Permit dated April 30, 1982; and
has submitted Proof of Beneficial Use on July 21, 1983. An examination indicates
that the works have a diversion capacity of 3.210 cfs of water from a GROUNDWATER
source, and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 to 11/01	1.97 CFS	553.0 AF

LOCATION OF POINT(S) OF DIVERSION: SENE, Sec. 10, Township 06N, Range 41E
MADISON County

PLACE OF USE: IRRIGATION

<u>TWN</u>	<u>RGE</u>	<u>SEC</u>	<u>ACRES</u>	<u>ACRES</u>	<u>ACRES</u>	<u>TOTAL</u>
06N	41E	10	NENE 40	NWNE 40	SWNE 40	158
			SENE 38			

Total number of acres irrigated: 158

CONDITIONS/REMARKS:

1. The maximum diversion volume is defined as the maximum allowable volume of water that may be diverted annually from the source under this right. The use of water confirmed by this right is limited to the amount which can actually be beneficially used. The maximum diversion volume may be adjusted to more accurately describe the beneficial use or to implement accepted standards of diversion and use efficiency.
2. This water right is appurtenant to the described place of use.
3. This right is subject to all prior water rights and may be forfeited by five years of non-use.
4. Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho law.
5. This right when combined with all other rights shall provide no more than .02 cfs per acre nor more than 3.0 afa per acre for the lands above.

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MAR 09 1990

PAGE 2

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE
WATER RIGHT NO. 22-07397

This license is issued pursuant to the provisions of Section 42-219, Idaho Code.
Witness the seal and signature of the Director, affixed at Boise, this 28th
day of FEBRUARY, 1990.

Acting for


R. Keith Higginson, Director

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MAR 05 1990

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

APPROVED

To appropriate the public waters of the State of Idaho

1. Name of applicant Layne Harris Phone 458-4936
Post office address Newdale, ID. 83436
2. Source of water supply (GROUNDWATER) 6-15-82 GWC which is a tributary of Well
3. Location of point of diversion is SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 10 Township 6N.
Range 41 E. B.M. Madison County, additional points of diversion if any: _____

4. Water will be used for the following purposes:

Amount 3.2 for Irrigation purposes from 4/1 to 11/1 (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)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated:

a. 3.2 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. 150 hp. Turbine pump

b. Height of storage dam _____ feet, active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet, materials used in storage dam: _____

Period of year when water will be diverted to storage _____ to _____ inclusive.
(Month/Day) (Month/Day)

c. Proposed well diameter is 12 inches; proposed depth of well is 200 feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 1 years (minimum 1 year - maximum 5 years).

8. Description of proposed uses:

a. If water is not for irrigation:

(1) Give the place of use of water: _____ $\frac{1}{4}$ of _____ $\frac{1}{4}$ of Section _____ Township _____

Range _____ B.M.

(2) Amount of power to be generated: _____ horsepower under _____ feet of head.

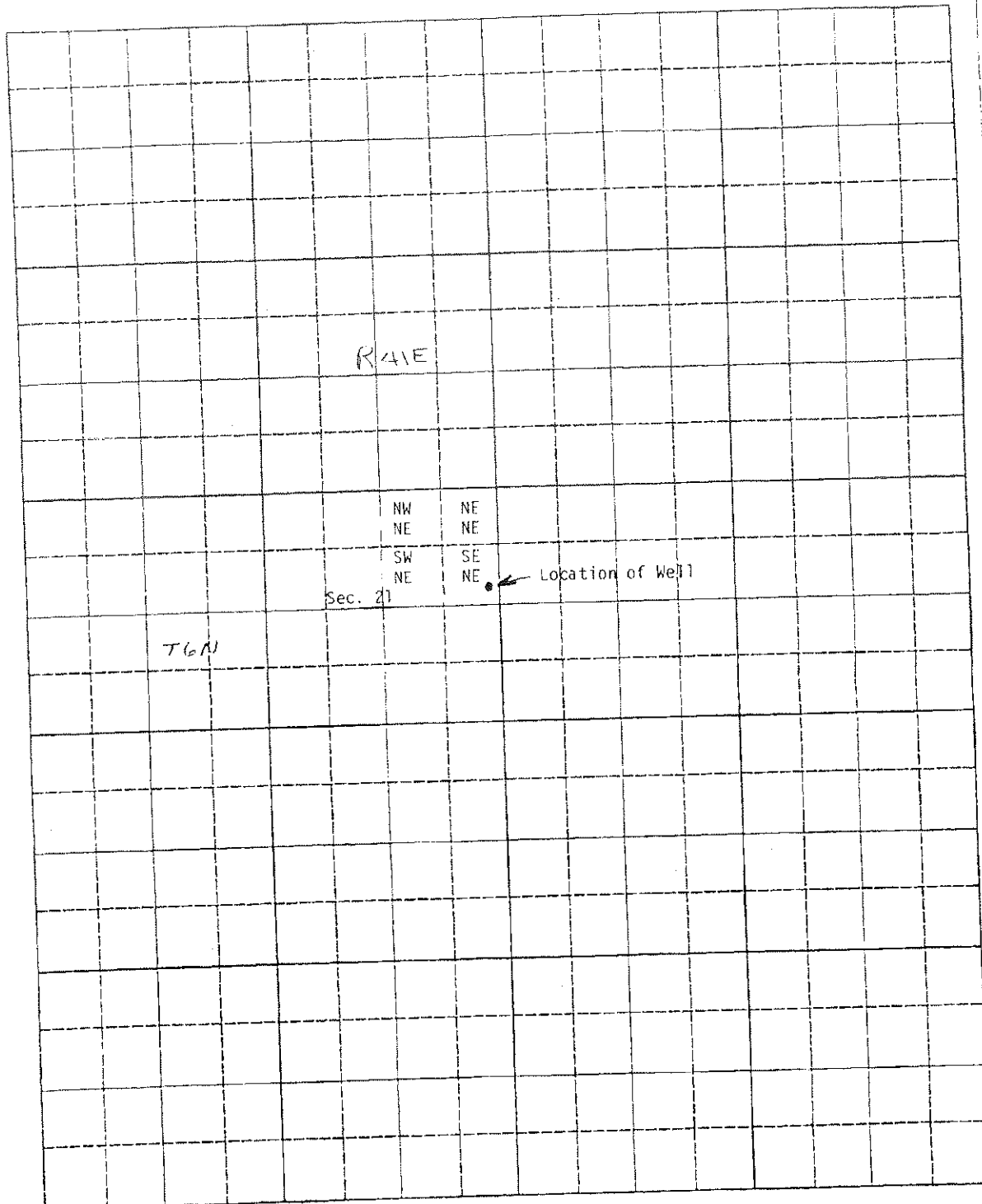
(3) List number of each kind of livestock to be watered _____

(4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____

If water is to be used for other purposes describe: _____

APPROVED

11. Map of proposed project. Show clearly the proposed point of diversion, type of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

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

RECEIVED

Raymond J. Jones
(Applicant)

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

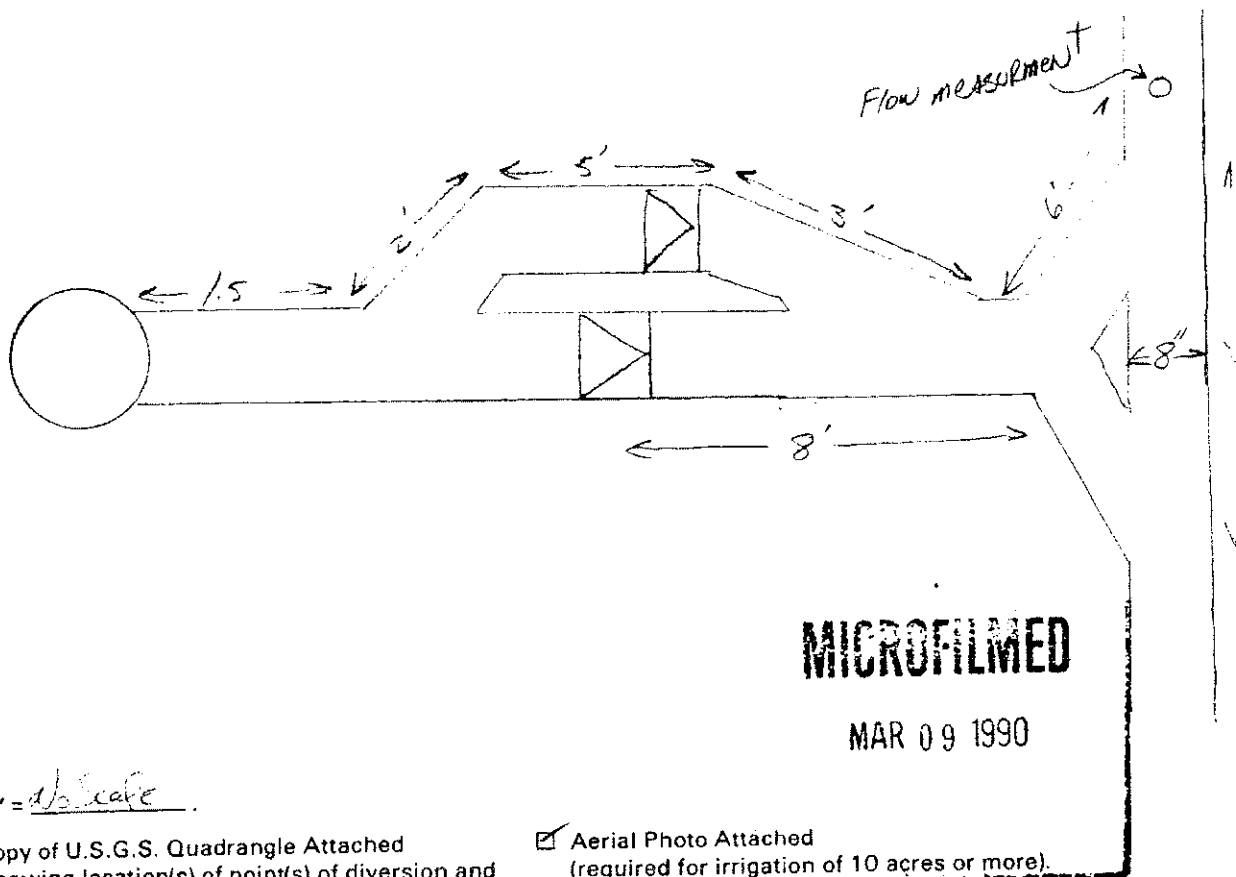
Permit No. 32-7397
Phone No. 458-4936
1. Owner: LAYNE HARRIS
Current Address: BOX 63 NEWCASTLE ID 83436
2. Accompanied by: LAYNE HARRIS EXAM. DATE: 7-17-87
Address: SAME Phone No. _____
Relationship to Permit Holder: _____
3. Source: GROUNDWATER tributary to _____

B. OVERLAP REVIEW

1. Other water rights with same place of use: NONE 22-2186 ☐ Copies Attached
2. Other water rights with same point of diversion: NONE ☐ Copies Attached ☐ Copies of Field Exam's Attached

C. SYSTEM DESCRIPTION

1. **Diversion System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. ☐ Alternative diagram attached



Scale: 1" = 40' Scale

2. ☒ Copy of U.S.G.S. Quadrangle Attached
Showing location(s) of point(s) of diversion and place(s) of use (required).
☒ Photo of Diversion and System Attached
(required for all but single household domestic groundwater, and stockwater.)
☒ Aerial Photo Attached
(required for irrigation of 10 acres or more).

Do not use this space

D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Manometer						
ANNUBAR		Dietrich	7517316-SS	091409	7.981	
Eagle Eye		Dietrich	67C	09146	10.02	

2. Measurements:

Manometer Reading = $41.8 - 7.7 = 34.1$

Eagle Eye Reading = 36"

Pressure = 72 psi

ID = 7.981"

Static H₂O Level 320'

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

1. Measured Method:

9 Lines x 32 birds x $\frac{5 \text{ gal}}{\text{min}} \div 448.9 = 3.21 \text{ cfs}$ LIMIT TO 0.02 cfs/ac
Q = 3.16 cfs

2. Alternate Method for Checking Purposes:

Theoretical $Q_{cfs} = \frac{200 \times 8.814 \times .82}{320' \div (2308 \times 40)} = 3.51 \text{ cfs}$

F. PUMP EFFICIENCY DATA (Optional)

Discharge Pressure: _____ psi x 2.31 = _____ ft (1); Dynamic pumping level: _____ ft (2)

Total Head: (1) + (2) = _____ (3)

; Flow rate: _____ cfs (4)

Water HP: (3) x (4) $\div$ 8.8 = _____ (5)

Meter Input KW: 3.6 x _____ KH x _____ CTR or _____ MULT x _____ PTR x _____ N/ _____ T = _____ (6)

Meter Input HP: (6) x 1.34 = _____ (7)

Panel Input KW: _____ Ave PF x _____ Ave Volts x _____ Ave Amps x .001732 = _____ (6)

Panel Input HP: (6) x 1.34 = _____ (7) Efficiency: (5)/(7) x 100 = _____ %

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 158 \times 3.5 = 553$

$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 3.16 \times 214 \times 1.9835 = 1341.3$

V = Smaller of V_{IR} and V_{DR} = 553 ac-ft

2. Volume Calculations for Other Uses:

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
LICENSING REPORT

22-7234
Permit No.

Overlap Review

- a) Other water rights with same place of use: 22-2186
- b) Other water rights with same point of diversion: SEE BELOW

c) Analysis:

The system examined irrigates the following additional ground:

$\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 11, T6N, R4E.

For which -

The following groundwater rights are appurtenant

22-2196

22-2257

22-2271B

22-7234

PLACE OF USE

22-2186 $3.57 \text{ cfs} / 43 \text{ ac} = 0.083 \text{ cfs/ac}$

CONDITION

R29

This seems
to be added
in some 5
months after the
Exam was completed
in July of 1987

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MAR 09 1990

Examiner's Signature _____

Date _____

Checked in Regional Office by Keith C. Wilson

Date Dec 1, 1987

Approved in State Office by _____

Date _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
LICENSING REPORT

22-7377

Permit No.

Measurement Calculations

Field Measurement Calculations (Include theoretical capacities and system capacity)

Halls Meter: $Q = (A)(V_h)$ $A = \text{Area} = \frac{\pi d^2}{4}$ $V_h = \text{Halls Manometer Reading}$

$Q_{\text{gpm}} = (A)(V_h) = \left[\frac{\pi d^2}{4} \right] (V_h) = \text{GPM} \div 448.8 \text{ gpm/cfs} = \text{CFS}$

$Q_{\text{cfs}} = \left[\frac{(3.1416)(\quad)^2}{4} \right] \times (\quad) \div 448.8 = \quad \text{cfs}$

TABLE 1

CHART TO CONVERT LINEAR INCHES DIFFERENTIAL
IN THE MANOMETER TO MANOMETER READING

$V_h = \text{HALLS}$ Manometer Reading	Diff. Inches of Water	$V_h = \text{HALLS}$ Manometer Reading	Diff. Inches of Water	$V_h = \text{HALLS}$ Manometer Reading	Diff. Inches of Water
1	.140	17	12.435	33	43.950
1.5	.240	17.5	12.132	33.5	45.200
2	.350	18	12.848	34	46.500
2.5	.470	18.5	14.582	34.5	47.850
3	.600	19	15.334	35	49.200
3.5	.750	19.5	16.108	35.5	50.550
4	.903	20	16.898	36	51.900
4.5	1.080	20.5	17.707	36.5	53.250
5	1.283	21	18.534	37	54.600
5.5	1.540	21.5	19.380	37.5	56.000
6	1.803	22	20.246	38	57.35
6.5	2.094	22.5	21.129	38.5	58.7
7	2.397	23	22.031	39	60.05
7.5	2.722	23.5	22.951	39.5	61.4
8	3.066	24	23.891	40	62.75
8.5	3.428	24.5	24.849	40.5	64.1
9	3.810	25	25.825	41	65.45
9.5	4.210	25.5	26.820	41.5	66.8
10	4.627	26	27.834	42	68.15
10.5	5.063	26.5	28.866	42.5	69.5
11	5.520	27	29.917	43	70.85
11.5	5.994	27.5	30.987	43.5	72.2
12	6.486	28	32.075	44	73.55
12.5	6.997	28.5	33.181	44.5	74.9
13	7.526	29	34.307	45	76.25
13.5	8.074	29.5	35.451	45.5	77.6
14	8.642	30	36.580	46	78.95
14.5	9.228	30.5	37.750	46.5	80.3
15	9.832	31	38.960	47	81.65
15.5	10.454	31.5	40.200	47.5	83.00
16	11.096	32	41.450	48	84.35
16.5	11.756	32.5	42.800		

MICROFILMED

MAR 09 1990

Annubar:

B = Difference in inches of water

C = Annubar Factor: Model 75 = -3.85
Model 73 = 4.14

$Q_{\text{cfs}} = \left[\frac{(C)(id)^2 \sqrt{B}}{448.8} \right] K = \text{CFS}$

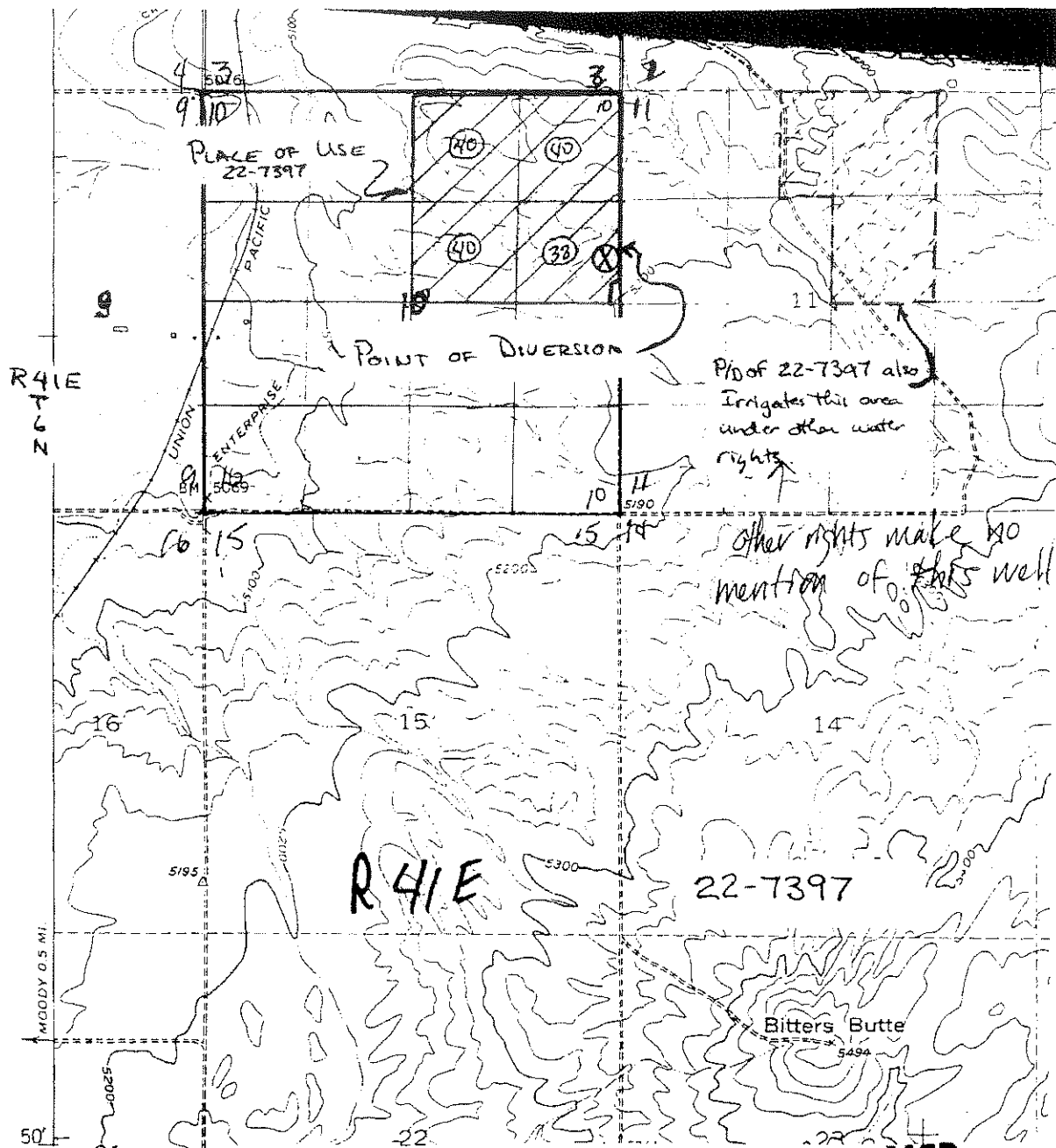
$Q_{\text{cfs}} = \left[\frac{(3.87)(7.781)^2 \sqrt{34.1}}{448.8} \right] (\quad) =$

$Q_{\text{cfs}} = 3.21 \text{ cfs}$

K = Flow Correction Factor
= 1 for Manometer
= # From Calibration Chart

C=Correction Factor

6" -----3.75
7.98"-----3.87
10"-----3.94
12"-----3.99
14"/16"-----4.01
18"/24"-----4.02
30" -----4.03



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