

**BEFORE THE COLORADO WATER CONSERVATION BOARD**

**STATE OF COLORADO**

---

**IN THE MATTER OF PROPOSED INSTREAM FLOW APPROPRIATIONS IN  
WATER DIVISION NO. 6:**

**YELLOW CREEK - UPPER**

**(confluence with Barcus Creek to confluence with Lambert Springs)**

**YELLOW CREEK - LOWER**

**(confluence with Lambert Springs to confluence with the White River)**

---

**NOTICE OF PARTY STATUS**

---

Mountain Water LLC, acting by and through Buchanan and Sperling, P.C., submits this Notice of Party Status in accordance with Rule 51 of the Rules Concerning the Colorado Instream Flow and Natural Lake Level Program, 2 CCR 408-2 (the "ISF Rules").

**A. Identity of Party:**

Mountain Water LLC  
7703 Ralston Road  
Arvada, Colorado 80002

Please direct all notices, pleadings, and correspondence to counsel:

Timothy R. Buchanan  
Buchanan and Sperling, P.C.  
7703 Ralston Road  
Arvada, Colorado 80002  
Telephone: 303-431-9141  
Email: trb@tbvs.net

**B. Identification of the Contested Instream Flow Appropriations:**

- Yellow Creek (Upper) – from the confluence with Barcus Creek to the confluence with Lambert Springs.  
CWCID ID: 13/6/A-005  
Upper Terminus. UTM North: 4446251.97, UTM East: 213556.69

Lower Terminus. UTM North: 449129.57, UTM East: 211572.39  
Length: 3.66 Miles

- Yellow Creek (Lower) – from the confluence with Lambert Springs to the confluence with the White River.  
CWCB ID: 13/6/A-006  
Upper Terminus: UTM North: 449129.57, UTM East: 211572.39  
Lower Terminus: UTM North: 4452477.49, UTM East: 210214.46  
Length: 3.45 miles

### **C. Reasons for Obtaining Party Status:**

Mountain Water LLC owns several water rights that have been decreed by the District Courts of the State of Colorado for diversion out of Piceance Creek and Yellow Creek, including, but not limited to water rights described in the following:

A. *Findings of Fact, Conclusions of Law, Judgment and Decree of the Water Court* entered in Case No. 88CW420 on August 13, 1991 by the Water Court in and for Water Division No. 5 (“Augmentation Plan”)

B. *Findings of Fact, Conclusions of Law, Ruling of the Referee, Judgment and Decree of the Court* entered in Case No. 98CW315 on November 26, 2011 by the Water Court in and for Water Division No. 5.

The Augmentation Plan includes terms and conditions for operation of water wells that cause depletions to Piceance Creek, Yellow Creek and the White River, and specific terms and conditions for replacement of the depletions. The Augmentation Plan and some of the wells operated pursuant to the terms and conditions of the Augmentation Plan have been in operation since 1990. The Case No. 88CW420 Decree also includes various rights of exchange of water, including a *Yellow Creek substitution and exchange* described as follows:

(1) The withdrawal of water from the wells located on the Sodium Leases may result in depletions to Yellow Creek, including Corral Gulch and Stake Springs Draw, within an area along Yellow Creek beginning at approximately Section 6, Township 2 South, Range 98 West of the 6th P.M. and ending at approximately Sections 15 and 16, Township 2 North, Range 98 West of the 6th P.M. The following water will be substituted and exchanged for the water depleted from Yellow Creek by operation of the wells on the Sodium Leases pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.

(2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional.

(3) The appropriation date claimed is April 5, 1988, which is the date the points of diversion described in the plan for augmentation were surveyed and investigated.

Augmentation Plan, pages 23, 24.

In addition, Mountain Water LLC owns the water rights described in the Case No. 98CW315 Decree, which include several water rights for direct diversion and storage of water diverted out of Yellow Creek at locations upstream of the proposed instream flow water rights. Pursuant to C.R.S. Section 37-92-102(3) (b), the proposed instream flow appropriations shall be subject to the present uses or exchanges of water being made by other water users pursuant to appropriation or practices in existence on the date of such appropriation, and Mountain Water LLC asserts that the water rights owned by Mountain Water are pre-existing conditions that are senior to the proposed instream flow water rights.

On December 14, 2014, representatives of the CWCB, the Bureau of Land Management and Mountain Water LLC met to discuss the proposed instream flow appropriations. During the meeting the parties discussed the various issues and concerns regarding the proposed instream flow appropriations and agreed to conceptual terms and conditions for resolution of the issues and concerns. The agreement regarding the conceptual terms and conditions has not been completed, and to the knowledge and belief of Mountain Water LLC, the parties will continue to work towards completion of the agreement.

Mountain Water LLC reserves the right to adopt, join in or other assert the issues asserted by ExxonMobil in its Notice to Contest, as amended, and other issues as may be determined during the proceedings.

#### **D. Contested Facts:**

In addition to the issues asserted above, Mountain Water LLC reserves the right to identify and raise other contested factual and legal issues prior to or at a hearing in this matter.

#### **D. General Description of Supporting Data:**

1. The following decrees for water rights owned by Mountain Water LLC pertaining to Yellow Creek:
  - A. *Findings of Fact, Conclusions of Law, Judgment and Decree of the Water Court* entered in Case No. 88CW420 on August 13, 1991 by the Water Court in and for Water Division No. 5, attached as **Exhibit A**.
  - B. *Findings of Fact, Conclusions of Law, Ruling of the Referee, Judgment and Decree of the Court* entered in Case No. 98CW315 on November 26, 2011 by the Water Court in and for Water Division No. 5, attached as **Exhibit B**.
2. All documents, facts, data, photographs, and other material in the record of the CWCB, and in the files of the Colorado Division of Wildlife, and the U.S. Bureau of Land



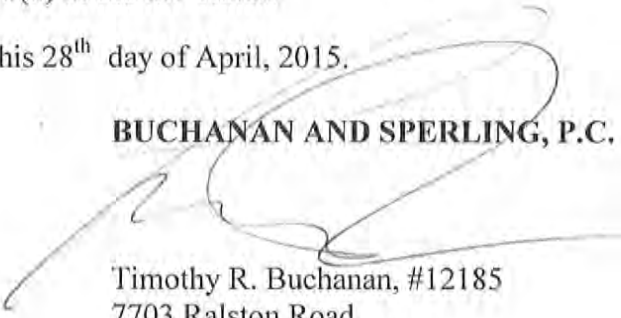
Management, regarding the proposed instream flow rights.

3. Records available from the Division of Water Resources regarding existing rights, decrees, stipulations, engineering reports, call chronology, basin studies, and other relevant information.
4. Data from the USGS "Yellow Creek near White River, CO" gage (No. 09306255).
5. All facts and data to be offered in rebuttal.
6. Mountain Water LLC reserves the right to present other facts, data, documents, and factual and opinion testimony at a hearing on this matter.

WHEREFORE, Mountain Water LLC contests that proposed Yellow Creek (Upper) and Yellow Creek (Lower) instream flow appropriations and requests that a hearing officer be appointed in accordance with Rule 5(n) of the ISF Rules.

Respectfully dated this 28<sup>th</sup> day of April, 2015.

**BUCHANAN AND SPERLING, P.C.**



Timothy R. Buchanan, #12185  
7703 Ralston Road  
Arvada, Colorado 80002  
Tele: 303-434-8757  
Email: [trb@tbvs.net](mailto:trb@tbvs.net)

### CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document and Exhibits were served on the following on April 28, 2015 by the method indicated:

Linda J. Bassi, Chief, Stream and Lake Protection Section By Federal Express  
Jeff Baessler, Deputy Chief, Stream and Lake Protection Section  
Colorado Water Conservation Board  
1313 Sherman Street, Room 721  
Denver, Colorado 80203

Susan Schneider  
Colorado Assistant Attorney General By: email: [susan.schneider@state.co.us](mailto:susan.schneider@state.co.us)

Roy E Smith, Water Rights Specialist By email: [r20smith@blm.gov](mailto:r20smith@blm.gov)  
Bureau of Land Management

PORZAK BROWNING & BUSHONG LLP

Glenn E. Porzak By email: [gporzak@pbblaw.com](mailto:gporzak@pbblaw.com)  
Kristin H. Moseley By email: [kmoseley@pbblaw.com](mailto:kmoseley@pbblaw.com)  
Karen L. Henderson By email: [khenderson@pbblaw.com](mailto:khenderson@pbblaw.com)  
*Attorneys for Exxon Mobil Corporation*

Exhibit A

3008 491 PAGE 322

District Court - Water Division No. 5

A true copy as of record this 15th

day of August, 1991

CLERK / DEPUTY CLERK

DISTRICT COURT, WATER DIVISION NO. 5, STATE OF COLORADO

Case No. 88CW420

FINDINGS OF FACT, CONCLUSIONS OF LAW, JUDGMENT AND DECREE OF THE  
WATER COURT

CONCERNING THE APPLICATION FOR WATER RIGHTS OF NATEC MINERALS,  
INC., A DELAWARE CORPORATION

IN RIO BLANCO AND GARFIELD COUNTIES.

The Application in this case was filed on December 29, 1988. The Court having reviewed the pleadings and having received evidence regarding the Application, does hereby enter the following Findings of Fact, Conclusions of Law and Judgment and Decree of the Court:

#### I. FINDINGS OF FACT

1. The name, address and telephone number of the Applicant is as follows:

NaTec Minerals, Inc.  
1177 West Loop South  
Houston, TX 77227-2427  
(713) 552-2000

2. Timely and adequate notice of the Application was given in accordance with law. The Application was published in the resume for Water Division No. 5 and in the appropriate newspapers in Rio Blanco and Garfield Counties in conformance with the requirements of Section 37-92-302(3), C.R.S. The Court has jurisdiction over the subject matter of this Application.

3. Statements of Opposition were timely filed by the following parties:

Exxon Company, U.S.A.  
State Engineer and Division Engineer  
Marathon Oil Company  
Per Sten Johnson  
Shell Western E & P, Inc. and Joseph L. Fox and Theo Ertl,  
Trustees of the Tell Ertl Family Trust; Theo Ertl,  
Trustee of the Buff Ertl White, Jill Ertl Esbensen, Jan  
Ertl, Twig Ertl and Rett Ertl Trusts  
Mobil Oil Corporation

State of Colorado - Rio Blanco Co.  
Filed for record the 16th day of Aug. A.D. 1991 at 11:07 a.m. by Clerk of Court  
Nancy R. Amick, Recorder  
By George P. Wilber, Deputy

243688

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 2

Amoco Corporation, doing business as Rio Blanco Oil Shale  
Company, Inc.  
Occidental Oil Shale, Inc.

4. On April 24, 1989, the Court granted a Motion to Intervene filed by Larry H. Robinson and Susan K. Robinson and allowed them to file a Statement of Opposition.

5. The time for filing of Statements of Opposition has expired and the Court has jurisdiction over all parties affected hereby, irrespective of whether they have appeared.

6. The Application was originally filed by NaTec, Ltd., a Texas limited partnership, doing business in Colorado as NaTec Mines, Ltd., and SR Investments, Incorporated, a Colorado Corporation. A Motion for Substitution of Parties was granted and NaTec Minerals, Inc. was substituted for the original applicants.

7. The Application was rereferred to the Water Judge on September 5, 1990.

8. NaTec Minerals, Inc. ("NaTec") owns four federal sodium leases ("the Sodium Leases") comprising approximately 8,224 acres in the Piceance Creek Basin and Yellow Creek Basin in Rio Blanco County, Colorado. The Sodium Leases pertain to the following land areas:

Lease No. C-0118326

Township 1 South, Range 98 West, 6th P.M.

Section 13: Lots 9 to 24 inclusive (All)

Section 14: Lot 5, Lots 9 to 23 inclusive (All)

Section 15: Lots 1 to 13 inclusive

Section 21: NE1/4NE1/4, S1/2NE1/4, NE1/4SW1/4, SE1/4

Section 22: Lots 12, 13, and 14

Total area = 2,159.64 Acres

Lease No. C-0118327

Township 1 South, Range 98 West, 6th P.M.

Section 23: Lots 1 to 16 inclusive (All)

Section 24: Lots 1 to 16 inclusive (All)

Section 25: Lots 1 to 16 inclusive (All)  
Section 26: Lots 1 to 16 inclusive (All)  
Total area = 2,483.36 Acres

Lease No. C-0119986

Township 1 South, Range 98 West, 6th P.M.  
Section 21: S1/2SW1/4  
Section 27: Lots 1 to 16 inclusive (All)  
Section 28: All  
Section 29: SE1/4NE1/4, S1/2S1/2, NE1/4SE1/4  
Section 33: All  
Section 34: Lots 3 to 6 inclusive  
Total area = 2,379.60 Acres

Lease No. C-37474(out of C-0119985)

Township 1 South, Range 98 West, 6th P.M.  
Section 16: N1/2NE1/4, SW1/4NE1/4, W1/2, NW1/4SE1/4  
Section 17: All  
Section 20: NE1/4NE1/4  
Section 21: NW1/4NW1/4  
Total area = 1,200.00 Acres

9. NaTec also owns the water rights and real property described in this Decree. The water rights described in this Decree will be used for a water supply for mining operations on the Sodium Leases and irrigation to the extent that the water is physically and legally available.

10. The Application requests approval of a plan for augmentation, including approval of an application for conditional water rights, change of water rights, and conditional appropriative rights of substitution and exchange, for the mining operations on the Sodium Leases.

Plan for Augmentation including, Change of  
Water Rights and Conditional Appropriative Rights  
of Substitution and Exchange

11. NaTec owns the following wells and associated water rights, which are hereinafter referred to as "the NaTec wells":



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 4

a. Name: Dunn Well No. 20-1.

Decrees: Water Division No. 5, Case No. W-1925, Entered July 16, 1974; Water Division No. 5, Case No. W-1925-77, Entered December 30, 1977; Water Division No. 5, Case No. 81CW132, Entered November 4, 1981; Water Division No. 5, Case No. 85CW163, Entered October 30, 1985; Water Division No. 5, Case No. 89CW116, Entered November 1, 1989.

Legal Description: In the NE1/4 of the NE1/4 of Section 20, Township 1 South, Range 98 West of the 6th P.M., at a point 1197.37 feet South of the North line and 1172.25 feet West of the East line of said Section 20.

Depth: 2412 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Appropriation Date: February 28, 1967.

Source: Tributary ground water.

b. Name: Colorado Minerals Well No. 14-1.

Decrees: Water Division No. 5, Case No. W-1923, Entered July 16, 1974; Water Division No. 5, Case No. W-1923-77, Entered December 30, 1977; Water Division No. 5, Case No. 81CW130, Entered November 4, 1981; Water Division No. 5, Case No. 85CW161, Entered October 30, 1985; Water Division No. 5, Case No. 89CW118, Entered November 1, 1989.

Legal Description: In the NW1/4 of the NE1/4 of Section 14, Township 1 South, Range 98 West of the 6th P.M., at a point 641.22 feet South of the North line and 1698.76 feet West of the East line of said Section 14.

Depth: 2486 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 5

Appropriation Date: February 28, 1967.

Source: Tributary ground water.

c. Name: Savage Well No. 24-1.

Decrees: Water Division No. 5, Case No. W-1924, Entered July 16, 1974; Water Division No. 5, Case No. W-1924-77, Entered December 30, 1977; Water Division No. 5, Case No. 81CW131, Entered November 4, 1981; Water Division No. 5, Case No. 85CW162, Entered October 30, 1985, Water Division No. 5, Case No. 89CW117, Entered November 1, 1989.

Legal Description: In the NE1/4 of the NE1/4 of Section 24, Township 1 South, Range 98 West, of the 6th P.M., at a point 342.94 feet South of the North line and 331.71 feet West of the East line of said Section 24.

Depth: 2795 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Appropriation Date: February 28, 1967.

Source: Tributary ground water.

d. Name: Colorado Minerals Well No. 28-1.

Decrees: Water Division No. 5, Case No. W-1922, Entered July 16, 1974; Water Division No. 5, Case No. W-1922-77, Entered December 30, 1977; Water Division No. 5, Case No. 81CW129, Entered November 4, 1981; Water Division No. 5, Case No. 85CW160, Entered October 30, 1985; Water Division No. 5, Case No. 89CW119, Entered November 1, 1989.

Legal Description: In the NE1/4 of the NW1/4 of Section 28, Township 1 South, Range 98 West, of the 6th P.M., at a point 270.5 feet South of the North line and 1365.2 feet East of the West line of said Section 28.

Depth: 2194 feet.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 6

Amount: 5.00 cubic feet per second of time, conditional.

Appropriation Date: February 28, 1967.

Source: Tributary ground water.

- e. Name: Industrial Resources Well D-14-1-1.

Decrees: Water Division No. 5, Case No. W-2886, Entered November 7, 1977; Water Division No. 5, Case No. 81CW313, Entered April 14, 1982; Water Division No. 5, Case No. 85CW306, Entered April 14, 1986; Water Division No. 5, Case No. 89CW226, Entered March 20, 1990.

Legal Description: In the SE1/4 of the NE1/4 of Section 14, Township 1 South, Range 98 West, of the 6th P.M., at a point South 16°57'30" West 2635.85 feet from the Northeast corner of the said Section 14.

Depth: 1755 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Appropriation Date: November 8, 1974.

Source: Tributary ground water.

- f. Name: Industrial Resources Well D-14-1-2.

Decrees: Water Division No. 5, Case No. W-2885, Entered November 7, 1977; Water Division No. 5, Case No. 81CW312, Entered April 14, 1982; Water Division No. 5, Case No. 85CW305, Entered April 14, 1986; Water Division No. 5, Case No. 89CW225, Entered March 20, 1990.

Legal Description: In the SE1/4 of the NE1/4 of Section 14, Township 1 South, Range 98 West, of the 6th P.M., at a point South 19°16' West 2791.11 feet from the Northeast corner of the said Section 14.

Depth: 1260 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 7

Appropriation Date: November 8, 1974.

Source: Tributary ground water.

g. Name: Industrial Resources Well D-20-1-1.

Decrees: Water Division No. 5, Case No. W-2884, Entered November 7, 1977; Water Division No. 5, Case No. 81CW311, Entered April 14, 1982; Water Division No. 5, Case No. 85CW304, Entered April 11, 1986; Water Division No. 5, Case No. 89CW224, Entered March 20, 1990.

Legal Description: In the NE1/4 of the NE1/4 of Section 20, Township 1 South, Range 98 West, of the 6th P.M., at a point South 45°58'20" West 1718.35 feet from the Northeast corner of the said Section 20.

Depth: 1080 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Appropriation Date: November 8, 1974.

Source: Tributary ground water.

h. Name: Industrial Resources Well D-20-1-2.

Decrees: Water Division No. 5, Case No. W-2887, Entered November 7, 1977; Water Division No. 5, Case No. 81CW314, Entered April 14, 1982; Water Division No. 5, Case No. 85CW307, Entered April 14, 1986; Water Division No. 5, Case No. 89CW227, Entered March 20, 1990.

Legal Description: In the NE1/4 of the NE1/4 of Section 20, Township 1 South, Range 98 West, of the 6th P.M., at a point South 41°13' West 1688.29 feet from the Northeast corner of the said Section 20.

Depth: 1498 feet.

Amount: 5.00 cubic feet per second of time, conditional.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 8

Appropriation Date: November 8, 1974.

Source: Tributary ground water.

i. Name: MMC-IRI 4.

Decrees: Water Division No. 5, Case No. 82CW429, Entered November 22, 1985; Water Division No. 5, Case No. 86CW308, Entered July 10, 1987.

Legal Description: Located 1120 feet from the East line and 410 feet from the South line in Section 23, Township 1 South, Range 98 West, of the 6th P.M., in Rio Blanco County, Colorado.

Estimated Depth: 1880 feet.

Amount: 1.00 cubic feet per second of time, conditional.

Estimated Pumping Rate: 448.8 g.p.m.

Appropriation Date: January 31, 1981.

Source: Water tributary to Yellow Creek, a tributary of the White River.

j. Name: MMC-IRI 5.

Decrees: Water Division No. 5, Case No. 82CW429, Entered November 22, 1985; Water Division No. 5, Case No. 86CW308, Entered July 10, 1987.

Legal Description: Located 1370 feet from the East line and 650 feet from the South line in Section 23, Township 1 South, Range 98 West, of the 6th P.M., in Rio Blanco County, Colorado.

Estimated Depth: 1880 feet.

Amount: 1.00 cubic feet per second of time, conditional.

Estimated Pumping Rate: 448.8 g.p.m.



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 9

Appropriation Date: January 31, 1981.

Source: Water tributary to Yellow Creek, a tributary of the White River.

k. Name: MMC-IRI 6.

Decrees: Water Division No. 5, Case No. 82CW429, Entered November 22, 1985; Water Division No. 5, Case No. 86CW308, Entered July 10, 1987.

Legal Description: Located 1120 feet from the East line and 700 feet from the South line in Section 23, Township 1 South, Range 98 West, of the 6th P.M., in Rio Blanco County, Colorado.

Estimated Depth: 1878 feet.

Amount: 1.00 cubic feet per second of time, conditional.

Estimated Pumping Rate: 448.8 g.p.m.

Appropriation Date: March 31, 1981.

Source: Water tributary to Yellow Creek, a tributary of the White River.

l. Name: MMC-IRI 7.

Decrees: Water Division No. 5, Case No. 82CW429, Entered November 22, 1985; Water Division No. 5, Case No. 86CW308, Entered July 10, 1987.

Legal Description: Located 1300 feet from the East line and 510 feet from the South line in Section 23, Township 1 South, Range 98 West, of the 6th P.M., in Rio Blanco County, Colorado.

Estimated Depth: 1880 feet.

Amount: 1.00 cubic feet per second of time, conditional.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 10

Estimated Pumping Rate: 448.8 g.p.m.

Appropriation Date: April 30, 1981.

Source: Water tributary to Yellow Creek, a tributary of the White River.

m. Name: MMC-IRI 8.

Decrees: Water Division No. 5, Case No. 82CW429, Entered November 22, 1985; Water Division No. 5, Case No. 86CW308, Entered July 10, 1987.

Legal Description: Located 1230 feet from the East line and 580 feet from the South line in Section 23, Township 1 South, Range 98 West, of the 6th P.M., in Rio Blanco County, Colorado.

Estimated Depth: 1880 feet.

Amount: 1.00 cubic feet per second of time, conditional.

Estimated Pumping Rate: 448.8 g.p.m.

Appropriation Date: May 31, 1981.

Source: Water tributary to Yellow Creek, a tributary of the White River.

12. NaTec also owns the following water rights:

a. Name: Wolf Ridge Reservoir.

Decrees: Water Division No. 5, Case No. W-358, Entered November 19, 1971; Water Division No. 5, Case No. W-358-75, Entered October 22, 1975; Water Division No. 5, Case No. 79CW143, Entered October 31, 1979; Water Division No. 5, Case No. 83CW153, Entered October 20, 1983; Water Division No. 5, Case No. 87CW140, Entered November 12, 1987.

Legal Description: The initial point of survey of the high water line of the reservoir is located at a point

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 11

whence the Northeast corner of Section 12, Township 1 South, Range 98 West, of the 6th P.M. bears North 08°44' East a distance of 4663 feet. The high water line of the reservoir includes parts of Sections 12, 13 and 24, Township 1 South, Range 98 West, of the 6th P.M.

Capacity: 7379.70 acre feet.

Appropriation Date: November 19, 1966.

Source: White River and an unnamed creek tributary to Yellow Creek.

- b. Name: Wolf Ridge Feeder Pipeline.

Decrees: Water Division No. 5, Case No. W-459, Entered August 23, 1973; Water Division No. 5, Case No. W-358-75 and Case No. W-459-75, Entered January 29, 1976; Water Division No. 5, Case No. 79CW144, Entered October 31, 1979; Water Division No. 5, Case No. 83CW154, Entered October 20, 1983; Water Division No. 5, Case No. 87CW139, Entered November 30, 1987.

Legal Description: The point of diversion is located on the left bank of the White River whence Corner No. 2 of Tract 46, Section 34, Township 2 North, Range 97 West of the 6th P.M. bears North 77°44' West a distance of 545 feet.

Amount: 100 cubic feet per second of time, conditional.

Appropriation Date: November 19, 1966.

Source: White River.

13. NaTec owns the following described water rights, which are hereinafter referred to as "the surface water rights":

- a. Name: Morgan Ditch No. 1

Source: Piceance Creek, a tributary of the White River

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 12

Location: The headgate is located on the north bank of Piceance Creek, about two hundred yards above the government road crossing in Rio Blanco County.

Amount: 1.00 cfs, Priority No. 3A in former Water District No. 43

Use: Irrigation

Appropriation Date: April 15, 1883

Decree: Entered by the District Court in and for Rio Blanco County on April 28, 1890

- b. Name: Enlargement and Extension of Morgan Ditch No. 1

Source: Piceance Creek, a tributary of the White River

Location: The headgate is located on the north bank of Piceance Creek, about two hundred yards above the government road crossing in Rio Blanco County.

Amount: 0.40 cfs, Priority No. 51A in former Water District No. 43

Use: Irrigation

Appropriation Date: September 27, 1886

Decree: Entered by the District Court in and for Rio Blanco County on April 28, 1890

- c. Name: Morgan No. 2 Ditch

Source: Piceance Creek, a tributary of the White River

Location: The headgate is located on the south bank of Piceance Creek, about one fourth of a mile above the government road crossing.

Amount: 0.40 cfs, Priority No. 50B in former Water District No. 43

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 13

Appropriation Date: September 27, 1886

Decree: Entered by the District Court in and for Rio Blanco County on April 28, 1890

d. Name: Home Supply Ditch

Source: Nineteen Creek, also known as Nineteen Mile Creek, a tributary of Piceance Creek which is a tributary of the White River

Location: The headgate is located on the south bank of Nineteen Creek, also known as Nineteen Mile Creek, about one mile above the junction of Nineteen Creek and Piceance Creek, in Rio Blanco County.

Amount: 1.00 cfs, Priority No. 51 in former Water District No. 43

Use: Irrigation

Appropriation Date: September 19, 1886

Decree: Entered by the District Court in and for Garfield County on May 10, 1889 in Case No. 133

e. Name: Larson Ditch

Source: Piceance Creek, a tributary of the White River

Location: The headgate is located on the north bank of Piceance Creek, about thirty five miles above the mouth thereof and about one half mile from where the government road crosses said creek in Rio Blanco County.

Amount: 2.50 cfs, Priority No. 50 in former Water District No. 43

Use: Irrigation

Appropriation Date: September 17, 1886

Decree: Entered by the District Court in and for Garfield County on May 10, 1889 in Case No. 133



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 14

f. Name: Larson Reservoir

Source: A gulch which is a small tributary to Piceance Creek which is tributary to the White River

Location: Southeastern portion of the N.E. forty acres of said Larson's land about 200 yards east of the government road crossing Piceance Creek.

Decreed Capacity: 2,700,000 cubic feet, approximately 62 acre feet, Reservoir Priority No. 2 in former Water District No. 43

Decreed Dimensions: 600 feet in length, 300 feet in width, 15 feet in depth

Use: Irrigation and Domestic

Amount: Water sufficient to keep said reservoir reasonably well filled may flow into Larson Reservoir at any time when it does not interfere materially with any appropriation of the waters of Piceance Creek made prior to July 20, 1888.

Decree: Entered by the District Court in and for Garfield County on May 10, 1889 in Case No. 133

g. NaTec also owns the Larson Reservoir Enlargement water right described in this Decree.

14. NaTec has requested approval of a plan for augmentation including application for conditional water rights, change of water rights and conditional appropriative rights of substitution and exchange. The plan for augmentation is intended to provide a continuous water supply for production of sodium bicarbonate from nahcolite solution mining on the Sodium Leases, and the water rights owned by NaTec will be used in an integrated water supply system for mining operations on the Sodium Leases and for irrigation purposes. The NaTec wells, including alternate points of diversion for the wells, will be used as a source of water for the mining operations. The water used in the mining process will be used for domestic, commercial, industrial, and irrigation purposes in conjunction with the mining process. For purposes of

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 15

this plan for augmentation, NaTec has assumed that all of the water used in the mining process is fully consumed.

15. The NaTec wells will withdraw water from aquifers which are tributary to Piceance Creek and Yellow Creek, which are tributaries of the White River, to the extent that water from the aquifers is physically and legally available. Pumping water through the water supply wells will result in depletions to Piceance Creek and Yellow Creek, and at certain times of the year, the depletions may be out-of-priority. In order to prevent injury to other vested water rights, NaTec will replace the out-of-priority depletions to Piceance Creek and Yellow Creek with water from the NaTec wells, the surface water rights and the Wolf Ridge Reservoir water right and the Wolf Ridge Feeder Pipeline water right.

16. Engineering investigations indicate that pumping of water from the wells located on the Sodium Leases will deplete Piceance Creek and Yellow Creek within a calculable time after pumping begins and the depletions will continue for a specified time after pumping terminates. NaTec has developed a methodology for determining the timing and quantity of depletions.

17. The Piceance Creek and Yellow Creek Basins are underlain by two formations generally known as the Uinta Formation and the Green River Formation. Within each formation are several distinct geologic members. NaTec has developed a computer model to simulate the pumping of wells on the Sodium Leases and the resulting impact on Piceance Creek and Yellow Creek. The model incorporated the following layers as representing the geologic formations:

- Layer 1 - Uinta
- Layer 2 - R-8 and A-groove
- Layer 3 - Mahogany Zone
- Layer 4 - B-groove and R-6
- Layer 5 - L-5 to base of Parachute Creek Member

The model also incorporated data regarding geologic parameters within the Piceance Creek and Yellow Creek Basins.

18. The model indicates that the pumping of wells located on the Sodium Leases which are constructed in either (a) the R-8 and A-groove or (b) the B-groove and R-6, will result in depletions to Piceance Creek and Yellow Creek or their alluvium. The amount of

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 16

the depletions and the time at which the depletions affect either Piceance Creek or Yellow Creek can be determined by the model. The depletions to the streams are based on the quantity of water pumped over time, and represented by the expression " $q/Q$ ," where  $q$  is the depletion to the stream due to pumping (cfs), and where  $Q$  is the pumping rate at any time (cfs). The model was operated to determine the amount of depletion to Piceance Creek and Yellow Creek for a one cubic foot per second of time pumping rate over a one year time period, which is referred to as the unit depletion. The unit depletion for the wells constructed on the Sodium Leases which withdraw water in the R-8 and A-groove members for each year is specified on the attached Appendix C-G. The unit depletion for the wells constructed on the Sodium Leases which withdraw water in the B-groove and R-6 members for each year is specified on the attached Appendix H-L.

19. The annual depletion associated with pumping water from the wells constructed on the Sodium Leases is determined by the following procedure:

- a. On or before November 1 of each year, NaTec shall estimate the total volume of water in acre-feet that will be withdrawn through the NaTec wells and any alternate point of diversion wells, for both the (a) R-8 and A-groove members and (b) B-groove and R-6 members, for the period November 1 through October 31.
- b. The total volume of water in acre-feet shall be converted into a flow rate in cfs, and NaTec shall assume that the well is pumped at a uniform rate for 365 days.
- c. The flow rate in cfs shall be multiplied by the year one unit depletion rate for each basin to obtain the depletion rate in cfs for the one year of pumping. The depletion rate for previous years of pumping shall be the sum of the actual flow rate for each previous year multiplied by the unit depletion rate specified on the appropriate Appendix for the number of years following the pumping at the actual flow rate. The total depletion rate for the one year of pumping for each basin shall be the sum of the depletion rate for the one year of pumping and the depletion rate for the previous years of pumping.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 17

- d. The determinations made pursuant to this paragraph shall be annually filed with the Division Engineer and State Engineer.

20. The depletions to Piceance Creek and Yellow Creek will be determined on a weekly basis and to the extent depletions to the streams are out-of-priority, fully consumable water will be released to the affected stream. Replacement of depletions will be made to the affected stream reach by releasing water from various sources owned by NaTec. The following describes the affected stream reaches and the source of the replacement water to supply depletions to the affected stream reach:

- a. Lower White River. The Lower White River reach has an upstream point of beginning at the point of diversion of the Wolf Ridge Feeder Pipeline on the White River, as described above, and continues downstream on the White River. To the extent the calling water right has a priority junior to the water rights decreed for the Wolf Ridge Reservoir and the Wolf Ridge Feeder Pipeline, the replacement of depletions to the Lower White River reach will be made with water released to the White River from diversions made at the point of diversion of the Wolf Ridge Feeder Pipeline and with water released to upstream reaches as described below.
- b. Yellow Creek. The Yellow Creek reach, which includes Corral Gulch and Stake Springs Draw, has an upstream point of beginning within an area along Yellow Creek beginning at approximately Section 6, Township 2 South, Range 98 West of the 6th P.M. and continuing downstream on Yellow Creek and the White River. Replacement of depletions to the Yellow Creek reach will be made pursuant to the terms of this Decree.
- c. Piceance Creek. The Piceance Creek reach has an upstream point of beginning at the point of diversion of the Larson Ditch, as described above, and continuing downstream on Piceance Creek and the White River. Replacement of depletions to the Piceance Creek reach will be made with water released to Piceance Creek from the surface water rights pursuant to the terms of this Decree.

21. The source of the fully consumable water to be released to the affected streams will be from (1) the fully consumable portion of the direct flow agricultural water rights owned by NaTec and as changed pursuant to this Decree; (2) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (3) the water attributable to the water rights for the NaTec wells; (4) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (5) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above. Each water right used for release to the affected streams shall be physically and legally available for such purpose.

22. In order to assess the accuracy of the procedures for determining the quantity and timing of depletions to the stream system, NaTec has proposed a monitoring program for the aquifers from which the wells will withdraw water. The data from the monitoring program will be filed with the State Engineer and such data shall be available to all objectors.

23. NaTec shall maintain records of the (1) the amount of water diverted by each water right, (2) the calculated depletion to the stream system, (3) the priority of the calling water right, (4) the location of the calling water right, and (5) the source and amount of water released to replace the depletion. NaTec has provided the Court and all objectors with a proposed accounting form. The accounting form is not incorporated in this decree because the Court recognizes that the accounting form may be revised over time. NaTec shall also maintain records of the monitoring program described in this decree.

24. The plan for augmentation described in this decree will not result in material injury to other vested water rights and should be approved.

25. The plan for augmentation is in accordance with law and should be granted subject to the terms of this Decree.

#### CHANGE OF WATER RIGHTS FOR NATEC WELLS

26. In order to facilitate operation of the plan for augmentation, NaTec has requested approval of alternate points of diversion for the NaTec wells. In addition to the points of diversion for the NaTec wells described above, NaTec has requested



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 19

the right to use the following well locations as alternative points of diversion for the water rights associated with the NaTec wells:

- (1) Wells to be located in the NE1/4 of the SE1/4 of Section 35, Township 1 South, Range 98 West of the 6th P.M.
- (2) Wells to be located in the SW1/4 of the SW1/4 of Section 27, Township 1 South, Range 98 West of the 6th P.M.
- (3) Wells to be located in the SE1/4 of the SE1/4 of Section 28, Township 1 South, Range 98 West of the 6th P.M.
- (4) Wells to be located in the NE1/4 of the NE1/4 of Section 33, Township 1 South, Range 98 West of the 6th P.M.
- (5) Wells to be located in the NW1/4 of the NW1/4 of Section 34, Township 1 South, Range 98 West of the 6th P.M.
- (6) Wells to be located in the NE1/4 of the SW1/4 of Section 27, Township 1 South, Range 98 West of the 6th P.M.
- (7) Wells to be located in the SE1/4 of the NW1/4 of Section 26, Township 1 South, Range 98 West of the 6th P.M.
- (8) Other wells to be located on the Sodium Leases.

27. The water pumped from the alternate point of diversion wells will only be pumped when the NaTec wells water rights are in priority or when the out-of-priority depletions associated with alternate point of diversion wells will be replaced in accordance with the plan for augmentation described in this Decree.

28. The change of the NaTec wells and the water rights associated with the NaTec wells will not result in material injury to other vested water rights and should be approved.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 20

29. The change of the NaTec wells is in accordance with law and should be granted subject to the terms of this Decree.

CHANGE OF DIRECT FLOW AND STORAGE WATER RIGHTS

30. The surface water rights have historically been used for irrigation and domestic purposes. The surface water rights will be changed for use in the augmentation plan and to the extent water is not required for the augmentation plan, the surface water rights will be used for irrigation and domestic purposes.

31. A map identifying the historical points of diversion and depicting the approximate location of historical use for the surface water rights is attached as Appendix A. The land where the water rights were historically used is depicted on the map and is generally described as follows:

Township 3 South, Range 94 West, 6th P.M.

Section 28: SE1/4 SW1/4  
Section 33: NE1/4 SW1/4, S1/2 SW1/4, NW1/4 SE1/4,  
E1/2 NW1/4, SW1/4 NE1/4, SW1/4 SE1/4

Township 4 South, Range 94 West, 6th P.M.

Section 4: Lots 1, 2, 3 and 4, S1/2 N1/2, W1/2 SW1/4  
Section 5: S1/2, S1/2 NE1/4  
Section 6: N1/2 SE1/4, SE1/4 SE1/4  
Section 7: NE1/4 NE1/4  
Section 8: N1/2 N1/2  
Section 9: NW1/4 NW1/4

32. The average annual diversions of the direct flow water rights were historically approximately 416 acre-feet, and average annual releases of the water diverted under the Larson Reservoir water right were historically approximately 50 acre-feet. Approximately fifty-eight percent of the water that was applied for irrigation was consumed by plant evapotranspiration. In addition to the direct flow water rights used on the land, water was released from Larson Reservoir and approximately fifty-eight percent of the water released from Larson Reservoir was consumed by plant evapotranspiration. Water was also diverted for storage in Larson Reservoir, and approximately five percent of the diversions seeped out of the ditch and were not delivered to Larson Reservoir.

A total of 244 acres were historically irrigated, and the average annual consumptive use on the 244 acres was 270 acre-feet.

33. Engineering investigations indicate that the direct flow water rights were historically diverted from April 1 through October 31. The Larson Reservoir water right historically diverted water whenever the water right was in priority.

34. The owner of the land where the surface water rights have been historically used is Aaron C. Woodward, and Aaron C. Woodward has entered into a Covenant Not To Irrigate for the benefit of SR Investments, Inc. The Covenant Not To Irrigate has been assigned to NaTec. Until the surface water rights are required for replacement of depletions pursuant to the plan for augmentation, all or a portion of the surface water rights will continue to be used for irrigation purposes. As the water rights are used in the plan for augmentation, NaTec will terminate irrigation of the lands that were historically irrigated by the water rights and no further irrigation of those lands will be permitted without a Water Court decree approving such irrigation.

35. The change of the surface water rights will not result in material injury to other vested water rights and should be approved.

36. The change of the surface water rights is in accordance with law and should be granted subject to the terms of this Decree.

CHANGE OF WOLF RIDGE FEEDER PIPELINE AND RESERVOIR WATER RIGHTS

37. NaTec proposes to use the Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights for replacement of out-of-priority diversions under the plan for augmentation. The Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights were acquired for the mining operations on the sodium leases, and the use of the water rights under the plan for augmentation is consistent with the original purposes of the water rights. At the time the water rights were appropriated, it was contemplated that the water rights would be fully consumed. The structures for diverting and storing the water rights have not been constructed, and until such time as the structures required for use of the Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir are constructed, the water rights will be used for replacement of out-of-priority diversions under the plan for augmentation. NaTec shall not divert

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 22

water pursuant to the Wolf Ridge Feeder Pipeline or Wolf Ridge Reservoir water rights unless facilities are constructed which will provide for measurement of the amount of water diverted under the water rights.

38. The change of the Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights will not result in material injury to other vested water rights and should be approved.

39. The change of the Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights is in accordance with law and should be granted subject to the terms of this Decree.

APPROPRIATION OF SUBSTITUTION AND EXCHANGES

40. At such times when the water withdrawn by the NaTec wells and the alternate points of diversion for the NaTec wells constitute out-of-priority diversions, the water withdrawn by the NaTec wells and alternate point of diversion wells will be substituted and exchanged for fully consumable water released to stream reaches affected by the withdrawal of water. The affected streams and the water to be substituted and exchanged for the out-of-priority diversions of water through the wells constructed on the Sodium Leases are described as follows:

a. Piceance Creek substitution and exchange

- (1) The withdrawal of water from the wells located on the Sodium Leases may result in depletions to Piceance Creek within an area along Piceance Creek beginning at approximately Section 3, Township 3 South, Range 96 West of the 6th P.M. and ending at approximately Sections 11 and 12, Township 1 North, Range 97 West of the 6th P.M. The following water will be substituted and exchanged for the water depleted from Piceance Creek by operation of the wells on the Sodium Leases pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 23

wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.

- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional.
- (3) The appropriation date claimed is April 5, 1988, which is the date the points of diversion described in the plan for augmentation were surveyed and investigated.

b. Yellow Creek substitution and exchange

- (1) The withdrawal of water from the wells located on the Sodium Leases may result in depletions to Yellow Creek, including Corral Gulch and Stake Springs Draw, within an area along Yellow Creek beginning at approximately Section 6, Township 2 South, Range 98 West of the 6th P.M. and ending at approximately Sections 15 and 16, Township 2 North, Range 98 West of the 6th P.M. The following water will be substituted and exchanged for the water depleted from Yellow Creek by operation of the wells on the Sodium Leases pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.
- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional.



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 24

- (3) The appropriation date claimed is April 5, 1988, which is the date the points of diversion described in the plan for augmentation were surveyed and investigated.

c. White River substitution and exchange

- (1) To the extent the withdrawal of water from the wells located on the Sodium Leases results in depletions to water rights located on the White River downstream of the point of diversion of the Wolf Ridge Feeder Pipeline, which is located on the left bank of the White River whence Corner No. 2 of Tract 46, Section 34, Township 2 North, Range 97 West of the 6th P.M. bears North 77°44' West a distance of 545 feet, the water diverted pursuant to the Wolf Ridge Feeder Pipeline water right will be substituted and exchanged for the water depleted from Piceance Creek and Yellow Creek pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.
- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional, but not to exceed at total of 1600 acre feet per year.
- (3) The appropriation date claimed is April 5, 1988, which is the date the points of diversion described in the plan for augmentation were surveyed and investigated.

41. The appropriative rights of substitution and exchange will be operated pursuant to Sections 37-80-120, 37-82-106, 37-83-104, and 37-92-101, et seq., C.R.S.

42. The conditional water right for the substitution and exchanges can be and will be diverted and controlled and the water will be beneficially used and the project can and will be completed with diligence and within a reasonable time.

43. The substitution and exchanges are in accordance with law and should be granted subject to the terms of this Decree.

DETERMINATION OF CONDITIONAL WATER RIGHT FOR  
LARSON RESERVOIR ENLARGEMENT

44. NaTec owns the existing Larson Reservoir structure located in the W1/2NE1/4 and the W1/2SE1/4 of Section 33, Township 3 South, Range 94 West of the Sixth Principal Meridian, County of Rio Blanco, State of Colorado and the existing Larson Reservoir water right associated with the Larson Reservoir. The existing Larson Reservoir water right is more specifically described in this Decree. The location of Larson Reservoir and the proposed Larson Reservoir Enlargement are on the following described land:

A parcel of land situated in the W1/2NE1/4 and the W1/2SE1/4 of Section 33, Township 3 South, Range 94 West of the Sixth Principal Meridian, County of Rio Blanco, State of Colorado; said parcel being more particularly described as follows:

Commencing at the Southeast corner of said Section 33, and assuming a bearing of East between the Southwest and Southeast Corners of Said Section 33; thence N 50°45'11"W 1707.07 feet to a point on the easterly line of said W1/2SE1/4, the True Point of Beginning; thence leaving said easterly line, West 660.00 feet; thence North 1400.00 feet; thence West 100.00 feet; thence North 500.00 feet; thence N 45°00'00"E 707.11 feet; thence East 260.00 feet to a point on the easterly line of said W1/2NE1/4; thence South 2400.00 feet to the True Point of Beginning; said parcel containing 35.78 Acres, more or less.

Water stored in Larson Reservoir also currently inundates, and will continue to inundate, a portion of a parcel of land situated in the E1/2 of Section 33, Township 3 South, Range 94 West of the Sixth Principal Meridian, in Rio Blanco County, Colorado, which is owned by the United States of America.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 26

45. The Larson Reservoir Enlargement is anticipated to have the following dimensions:

- a. The surface area of the high water line shall be approximately twenty-five (25) acres.
- b. The maximum height of the dam shall be approximately fifty (50) feet.
- c. The length of the dam shall be approximately one-thousand eight hundred and fifty (1850) feet.
- d. The total capacity of the Larson Reservoir Enlargement shall be approximately six-hundred and sixty-two (662) acre-feet.

46. The appropriation of the Larson Reservoir Enlargement water right was initiated on April 5, 1988 by completion of a field survey of the Larson Reservoir Enlargement site and by additional field investigations regarding the Larson Reservoir Enlargement site. NaTec has proceeded with reasonable diligence toward completion of the appropriation since that date.

47. The conditional water right for the Larson Reservoir Enlargement can be and will be diverted and stored and the water will be beneficially used and the project can and will be completed with diligence and within a reasonable time.

48. The application for a conditional water right for the Larson Reservoir Enlargement is in accordance with law and should be granted subject to the terms of this Decree.

## II. CONCLUSIONS OF LAW

49. To the extent that any of the foregoing Findings of Fact constitute Conclusions of Law, the Findings of Fact are incorporated herein.

50. The Court has jurisdiction over the subject matter of the Application in this case and has jurisdiction over all the parties irrespective of whether they have appeared.

51. This Application was filed pursuant to and in compliance with Colorado law, including Section 37-92-101, et seq., C.R.S.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 27

52. Pursuant to Section 37-92-302(5), C.R.S., NaTec may initiate and implement this plan for augmentation.

53. Subject to the provisions of this Decree, the plan for augmentation, including conditional water rights, change of water rights and conditional appropriative rights of substitution and exchange, described herein meet the requirements of Sections 37-80-120, 37-82-106, 37-83-104 and 37-92-101, et seq., C.R.S. The application for approval of the plan for augmentation, including conditional water rights, change of water rights and conditional appropriative rights of substitution and exchange, should be approved, subject to the provisions of this decree.

### III. JUDGMENT AND DECREE

54. The Findings of Fact and Conclusions of Law set forth above are incorporated herein by reference.

55. The application for the plan for augmentation, including application for conditional water rights, change of water rights and conditional appropriative rights of substitution and exchange is hereby granted, subject to the terms and conditions of this Decree.

56. The plan for augmentation is approved and shall be operated pursuant to the following terms and conditions:

a. Out-of-priority depletions to Piceance Creek and Yellow Creek from pumping water from the wells located on the Sodium Leases shall be determined using the following methodology:

- (1) On or before November 1 of each year, NaTec shall estimate the total volume of water in acre-feet that will be withdrawn through the NaTec wells and any alternate point of diversion wells, for both the (a) R-8 and A-groove members and (b) B-groove and R-6 members, for the period November 1 through October 31. During the period from November 1 through October 31, NaTec shall not exceed the estimated total volume of water to be withdrawn.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 28

- (2) The total volume of water in acre-feet shall be converted into a flow rate in cfs, and NaTec shall assume that the well is pumped at a uniform rate for 365 days. The flow rate determined pursuant to this paragraph may not exceed 2.21 cfs, and the total volume of water withdrawn during any period of November 1 through October 31 shall not exceed 1600 acre feet. The instantaneous rate of pumping of the NaTec wells shall not exceed five cfs.
- (3) The flow rate in cfs shall be multiplied by the year one unit depletion rate for each basin to obtain the depletion rate in cfs for the one year of pumping. The appropriate unit depletion rate shall depend on the location of the well and on the formation in which the well is completed. In determining the appropriate unit depletion rate, the following chart shall apply:

<u>Well Location Zone As Shown On Appendix B</u>	<u>Well Completion Formation</u>	<u>Unit Depletion Rate</u>
A	R-8 and A-Groove	Appendix C
B	R-8 and A-Groove	Appendix D
C	R-8 and A-Groove	Appendix E
D	R-8 and A-Groove	Appendix F
E	R-8 and A-Groove	Appendix G
A	B-Groove and R-6	Appendix H
B	B-Groove and R-6	Appendix I
C	B-Groove and R-6	Appendix J
D	B-Groove and R-6	Appendix K
E	B-Groove and R-6	Appendix L

The depletion rate for previous years of pumping shall be the sum of the actual flow rate for each previous year multiplied by the unit depletion rate specified on the appropriate Appendix for the number of years following the pumping at the actual flow rate. The total depletion rate for the one year of pumping for each basin shall be the sum of the depletion rate for the one year of pumping and the depletion rate for the previous years of pumping. For example, if the actual flow rate in

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 29

year one is .2 cfs for a well constructed in Zone C in the R-8 and A- Groove, the unit depletion rate for the one year of pumping is taken from Appendix E and is equal to 0.000892 for Yellow Creek and zero for Piceance Creek. The unit depletion rate is multiplied by .2 cfs to obtain the actual depletion for the one year of pumping, and, in this example, the total depletion would be equal to .000178 cfs or .13 acre-feet. If in year two, the actual flow rate was .3 cfs, actual flow rate would be multiplied by .000892 to obtain the actual depletion for the one year of pumping, and the previous year's flow rate of .2 would be multiplied by 0.001581 to obtain the actual depletion occurring in year two from the previous year's actual flow rate. The total depletion in year two, in this example, would be the sum of the two depletions, or .000584 cfs or .42 acre-feet

- (4) In addition to the other limitations specified in this decree, the estimated total volume of water withdrawn during any year or series of years by the NaTec wells shall not result in any annual depletion to Piceance Creek and Yellow Creek exceeding the sum of 270 acre-feet plus eighty percent of the absolute portion, as it may exist from time to time, of the Larson Reservoir Enlargement water right described in this decree. NaTec shall annually determine whether the actual flow rate from previous years' pumping and the current year projected flow rate will result in a violation of this condition.
- b. The depletions to Piceance Creek and Yellow Creek will be determined on a weekly basis and to the extent depletions to the streams are out-of-priority, fully consumable water will be released to the affected stream. The releases to the affected stream shall be made monthly, except that if the Division Engineer determines that the releases are required on a weekly basis, the Division Engineer may direct that the releases be made on a weekly basis. Replacement of depletions will be made to the affected stream reach by releasing water from various sources owned by NaTec. The following describes the

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 30

affected stream reaches and the source of the replacement water to supply depletions to the affected stream reach:

- (1) Lower White River. The Lower White River reach has an upstream point of beginning at the point of diversion of the Wolf Ridge Feeder Pipeline on the White River, as described above, and continues downstream on the White River. To the extent the calling water right has a priority junior to the water rights decreed for the Wolf Ridge Reservoir and the Wolf Ridge Feeder Pipeline, the replacement of depletions to the Lower White River reach will be made with water released to the White River from diversions made at the point of diversion of the Wolf Ridge Feeder Pipeline and with water released to upstream reaches as described below.
  - (2) Yellow Creek. The Yellow Creek reach, which includes Corral Gulch and Stake Springs Draw, has an upstream point of beginning within an area along Yellow Creek beginning at approximately Section 6, Township 2 South, Range 98 West of the 6th P.M. and continuing downstream on Yellow Creek and the White River. Replacement of depletions to the Yellow Creek reach will be made with water released to Yellow Creek as described below.
  - (3) Piceance Creek. The Piceance Creek reach has an upstream point of beginning at the point of diversion of the Larson Ditch, as described above, and continuing downstream on Piceance Creek and the White River. Replacement of depletions to the Piceance Creek reach will be made with water released to Piceance Creek from the surface water rights as described below.
- c. The source of the fully consumable water to be released to the affected streams will be from (1) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (2) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (3) the water attributable to the water rights for the NaTec wells; (4) the water

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 31

attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (5) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above. The water attributable to the water rights for the NaTec wells may only be used as a source of fully consumable water to be released to the affected streams during the time that mining operations are in effect on the Sodium Leases. NaTec may make releases of (1) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (2) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; and (3) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above, in amounts in excess of the required replacement for depletions associated with operation of the NaTec wells, and divert the water at locations on Piceance Creek. With respect to the releases of water in excess of the amounts required for replacement of depletions, the Division Engineer shall assess such stream transit losses as are appropriate and shall not permit other water users between the point of release and the point of delivery to divert the excess water. At the time of serving the notice regarding retained jurisdiction as provided in Paragraph 65 of this Decree, NaTec shall provide notice to all parties of NaTec's plans for delivery of fully consumable water to the Yellow Creek Basin after termination of the mining operations on the Sodium Leases. The plans may include, but not be limited to, (1) construction of such facilities as determined by NaTec for delivery of fully consumable water to the Yellow Creek Basin, or (2) preparation of plans for the delivery of fully consumable water to the Yellow Creek Basin, which plans may include the construction of Wolf Ridge Reservoir, or (3) filing an application in the Water Court, or such other court or entity having jurisdiction, in this case or a subsequent case, to utilize fully consumable water from the Yellow Creek Basin as a source of water to replace depletions to the Yellow Creek Basin. Any party may invoke the retained jurisdiction provided in Paragraph 65 of this Decree to object to the adequacy of the actions proposed by NaTec, and the objection shall be served within six



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 32

months after the filing of the notice provided in Paragraph 65 of this Decree. If no objection is filed, or if an objection is filed and the Water Court has entered a final order which is not appealed by any party, or if appealed, is resolved on appeal, NaTec shall construct the facilities or otherwise implement the plans provided by NaTec, and approved by the Water Court if an objection is filed, during the two year period prior to the expiration of the retained jurisdiction provided in Paragraph 65.

- d. At such time as mining operations on the Sodium Leases have terminated and no additional water will be diverted by the NaTec Wells, NaTec may determine the maximum future annual depletion associated with previous withdrawals of water from the NaTec Wells by using the procedures specified in this Decree, and dedicate to the Piceance Creek and Yellow Creek streams sufficient fully consumable water associated with water rights to replace the maximum future annual depletion. In the event NaTec intends to dedicate fully consumable water associated with water rights, NaTec shall provide notice to all parties of the water rights or portions of water rights to be dedicated to the stream system. Any party that objects to the dedication of the water rights to the stream system shall file an objection with the Water Court within six months after the notice is filed with the Water Court, or such other court or entity having jurisdiction of the case. If no objection is filed, or if an objection is filed and the Water Court has entered a final order which is not appealed by any party, or if appealed, is resolved on appeal, NaTec shall have no further obligations or requirement to provide replacement water pursuant to this decree, subject to the terms of any order entered by the court.
- e. NaTec shall maintain records of the (1) the amount of water diverted by each water right, (2) the calculated depletion to the stream system, (3) the priority of the calling water right, (4) the location of the calling water right, and (5) the source and amount of water released to replace the depletion. The NaTec has provided the Court and all objectors with a proposed accounting form. The accounting form is not incorporated

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 33

in this decree because the Court recognizes that the accounting form may be revised over time.

f. NaTec shall implement the following monitoring program for the aquifers from which the wells will withdraw water and for Piceance Creek and Yellow Creek:

- (1) During the time that NaTec is operating the wells on the sodium leases, NaTec shall maintain at least two monitoring wells on or in the vicinity of the sodium leases. At least one of the monitoring wells shall be constructed to monitor the B-Groove and at least one of the one of the monitoring wells shall be constructed to monitor the A-Groove. NaTec shall designate the monitoring wells and may from time to time designate different wells to be used for monitoring purposes.
- (2) For each monitoring well designated by NaTec, NaTec shall take water quality samples and piezometric head readings. The water quality samples and piezometric head readings shall be taken at least monthly.
- (3) NaTec shall maintain, or maintain in conjunction with the United States Geological Survey, a stream gauge at or near the following locations:
  - (a) The confluence of Piceance Creek and Ryan Gulch;
  - (b) The confluence of Piceance Creek and the White River;
  - (c) On Corral Gulch; and
  - (d) The confluence of Yellow Creek and the White River.

The stream gauges shall provide for continuous streamflow measurement. NaTec shall also take water quality samples on at least a quarterly basis.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 34

- (4) The data from the monitoring program shall be filed with the State Engineer at least annually.
- (5) The monitoring program shall be continuously operated from the date of this Decree to three (3) years following the date the wells augmented pursuant to this decree terminate operation. In the event the gauges or other equipment used in the monitoring program shall fail or otherwise become inoperable, NaTec shall replace or repair the gauges or other equipment as soon as possible after NaTec is aware of the failure or inoperation of the gauge or other equipment.

57. The alternate points of diversion for the NaTec wells are approved and shall be operated pursuant to the following terms and conditions:

- a. In addition to the points of diversion for the NaTec wells described above, NaTec shall be permitted to use other wells to be constructed on the Sodium Leases within the area defined by the dotted line shown on Appendix B. No wells may be constructed or operated pursuant to this Decree at locations not included within the area defined by the dotted line shown on Appendix B.
- b. At such time when NaTec desires to construct any one of the alternate point of diversion wells, NaTec shall file a well permit application with the office of the State Engineer. The well permit applications shall designate the specific location of the wells. At the time the well permit applications are filed with the State Engineer, NaTec shall also provide to the State Engineer a report indicating that if the proposed wells are operated pursuant to the terms of this Decree, there will be adequate replacement water available under the terms of this Decree to replace the depletions to Yellow Creek and Piceance Creek. So long as NaTec operates the NaTec Wells and the alternate point of diversion wells for the NaTec Wells pursuant to the terms of this Decree and so long as there is adequate replacement water available under the terms of this Decree to replace the depletions to Yellow Creek and Piceance Creek, the State Engineer shall issue new well permit applications in accordance

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 35

with the terms of this Decree within forty-five (45) days after filing the documents described in this paragraph with the State Engineer.

- c. NaTec shall maintain records satisfactory to the State Engineer of the volume of water pumped from the NaTec wells and from the alternate point of diversion wells and shall indicate the water right that is being diverted by the well. The water pumped from the alternate point of diversion wells shall only be pumped when the NaTec wells water rights are in priority or when the depletions associated with pumping the wells will be replaced in accordance with the plan for augmentation described in this Decree.
- d. The alternate point of diversion wells and associated water rights shall be augmented pursuant to the terms of the plan for augmentation described below.

58. The change of the surface water rights is approved and the surface water rights shall be used pursuant to the following terms and conditions:

- a. The type of use for each water right shall be domestic, industrial, commercial, irrigation, stockwatering, recreation, and fish and wildlife purposes. Additionally, the water will be directly used, stored and subsequently used, and used for substitution and exchange, for replacement of depletions and for augmentation purposes, including the right to fully consume by first use and by subsequent use the water diverted under the water rights.
- b. Each water right may be diverted at the point of diversion described above or at two alternate points of diversion. If the water rights are diverted into storage, the alternate point of diversion shall be at the Larson Ditch headgate described above and the water will be carried to the Larson Reservoir and the Larson Reservoir Enlargement. If the water rights are not diverted into storage, the point of diversion shall be a stream gauging station to be located on Piceance Creek in the NE1/4 of Section 5 or the N1/2 of Section 4, Township 4 South, Range 94 West of the 6th P.M.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 36

- c. Within any ten consecutive year period, the total amount of water that Applicant may divert under the following water rights shall not exceed 4660 acre-feet:

Morgan Ditch No. 1  
Enlargement and Extension of Morgan Ditch No. 1  
Morgan No. 2 Ditch  
Home Supply Ditch  
Larson Ditch  
Larson Reservoir

Diversions under the foregoing water rights shall only be made when the water rights are in priority and, except for the Larson Reservoir water right, shall be further limited to (a) fifty-eight percent of the amount of each water right that is in priority when the water right is used for any purpose other than diversion into storage or direct irrigation, and (b) sixty-three percent of the amount of each water right that is in priority when the water right is diverted into storage. When the foregoing water rights are diverted for direct irrigation, the full amount of the water right shall be available for diversion. Each water right may be diverted for different purposes and the amount of water that may be diverted for each purpose shall be subject to the terms of this paragraph. For purposes of applying the ten year volumetric limit, the diversion amount for each water right shall be determined before applying the fifty-eight percent or sixty-three percent reduction described in this paragraph. The fifty-eight percent or sixty-three percent of the water is fully consumable and may be used for the purposes described above.

- d. In addition to the volumetric limitation described in the preceding paragraph, the maximum amount of water that may be diverted under the Larson Reservoir water right in any year shall be 62 acre-feet. The Larson Reservoir water right may only be diverted when it is in priority and may be diverted at the historical point of diversion or at the alternate points of diversion described above. If the Larson Reservoir water right is diverted at the alternate points of diversion, the diversion shall be limited to sixty percent of the amount of the water right that is in priority when the water right is diverted. If

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 37

the Larson Reservoir water right is diverted at the historical point of diversion, the full amount of the water right shall be available for diversion, and the water may be used for direct irrigation or diverted into storage in Larson Reservoir. At such time when the water stored in Larson Reservoir under the Larson Reservoir water right is released from Larson Reservoir for any purpose other than irrigation, sixty percent of the amount of water released from Larson Reservoir is fully consumable and may be used for the purposes described above. If the water stored in Larson Reservoir under the Larson Reservoir water right is released for irrigation purposes, all of the water so released may be used for irrigation purposes.

- e. Diversions by the direct flow water rights shall be limited to the April 1 through October 31 of each year. The Larson Reservoir water right is not limited to a season of diversion.
- f. The land historically irrigated by the surface water rights as indicated on the map attached as Appendix A shall cease to be irrigated by the surface water rights in accordance with the following schedule:

NaTec wells average annual pumping rate		Acres to
greater than,	but less than,	cease irrigation
0.0 cfs	.5 cfs	61 acres
.5	1.0	122
1.0	1.5	183
1.5	2.21	244

At such time when NaTec has withdrawn lands from irrigation pursuant to the foregoing schedule, NaTec shall file with the Court and with all parties a survey showing the location of the lands withdrawn from irrigation. If the lands withdrawn from irrigation include the lands marked as sub-irrigated lands on the map attached as Appendix A, NaTec shall also file with the Court and with all parties a Statement from the Division Engineer indicating that the Division Engineer has inspected the sub-irrigated lands and determined that sufficient dry-up of the lands has occurred. Lands

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 38

withdrawn from irrigation shall not be irrigated with any water unless the Court has entered a decree authorizing such irrigation.

59. The change of the Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights is approved and, in addition to the manner and type of use specified in the decrees entered in Case Nos. W-358 and W-459, the water rights shall be used pursuant to the following terms and conditions:

- a. The Wolf Ridge Feeder Pipeline and Wolf Ridge Reservoir water rights shall only be diverted when the water rights are in priority and shall be diverted at the point of diversion of the Wolf Ridge Feeder Pipeline on the White River described above and return the water to the White River at the same location, or an upstream location, to replace any depletions to water rights located downstream of the point of diversion of the Wolf Ridge Feeder Pipeline in conjunction with the plan for augmentation. All water diverted under the water rights shall be fully consumable.
- b. NaTec shall not divert water pursuant to the Wolf Ridge Feeder Pipeline or Wolf Ridge Reservoir water rights unless facilities are constructed which will provide for measurement of the amount of water diverted under the water rights. NaTec shall maintain records of the amount of water diverted under each water right and the amount of water returned to the stream system.

60. The water released to the affected streams will be substituted and exchanged for the out-of-priority diversions of water through the wells constructed on the Sodium Leases, by means of the following appropriative rights of substitution and exchange pursuant to Sections 37-80-120, 37-82-106, 37-83-104, and 37-92-101, et seq., C.R.S.:

- a. Piceance Creek substitution and exchange

- (1) The withdrawal of water from the wells located on the Sodium Leases may result in depletions to Piceance Creek within an area along Piceance Creek beginning at approximately Section 3, Township 3 South, Range 96 West of the 6th P.M. and ending at

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 39

approximately Sections 11 and 12, Township 1 North, Range 97 West of the 6th P.M. The following water will be substituted and exchanged for the water depleted from Piceance Creek by operation of the wells on the Sodium Leases pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.

- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional.
- (3) The appropriation date is April 5, 1988.

b. Yellow Creek substitution and exchange

- (1) The withdrawal of water from the wells located on the Sodium Leases may result in depletions to Yellow Creek, including Corral Gulch and Stake Springs Draw, within an area along Yellow Creek beginning at approximately Section 6, Township 2 South, Range 98 West of the 6th P.M. and ending at approximately Sections 15 and 16, Township 2 North, Range 98 West of the 6th P.M. The following water will be substituted and exchanged for the water depleted from Yellow Creek by operation of the wells on the Sodium Leases pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 40

water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.

- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional.
- (3) The appropriation date is April 5, 1988.

c. White River substitution and exchange

- (1) To the extent the withdrawal of water from the wells located on the Sodium Leases results in depletions to water rights located on the White River downstream of the point of diversion of the Wolf Ridge Feeder Pipeline, which is located on the left bank of the White River whence Corner No. 2 of Tract 46, Section 34, Township 2 North, Range 97 West of the 6th P.M. bears North 77°44' West a distance of 545 feet, the water diverted pursuant to the Wolf Ridge Feeder Pipeline water right will be substituted and exchanged for the water depleted from Piceance Creek and Yellow Creek pursuant to this plan for augmentation: (a) the fully consumable portion of the direct flow agricultural water rights and as changed pursuant to this Decree; (b) the fully consumable portion of the water stored under the storage water right for Larson Reservoir and as changed pursuant to this Decree; (c) the water attributable to the water rights for the NaTec wells; (d) the water attributable to the water stored pursuant to the Larson Reservoir Enlargement water right described above; and (e) the Wolf Ridge Reservoir and Wolf Ridge Feeder Pipeline water rights described above.
- (2) The maximum rate of substitution and exchange will be 2.21 c.f.s., conditional, but not to exceed a total of 1600 acre feet per year.
- (3) The appropriation date is April 5, 1988.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 41

61. The Larson Reservoir Enlargement water right is approved and described as follows:

- a. Name of Structure: Larson Reservoir Enlargement
- b. Legal Description of Location of Reservoir:

A parcel of land situated in the W1/2NE1/4 and the W1/2SE1/4 of Section 33, Township 3 South, Range 94 West of the Sixth Principal Meridian, County of Rio Blanco, State of Colorado; said parcel being more particularly described as follows:

Commencing at the Southeast corner of said Section 33, and assuming a bearing of East between the Southwest and Southeast Corners of Said Section 33; thence N 50°45'11"W 1707.07 feet to a point on the easterly line of said W1/2SE1/4, the True Point of Beginning; thence leaving said easterly line, West 660.00 feet; thence North 1400.00 feet; thence West 100.00 feet; thence North 500.00 feet; thence N 45°00'00"E 707.11 feet; thence East 260.00 feet to a point on the easterly line of said W1/2NE1/4; thence South 2400.00 feet to the True Point of Beginning; said parcel containing 35.78 Acres, more or less.

The Larson Reservoir Enlargement will also inundate a portion of a parcel of land situated in the E1/2 of Section 33, Township 3 South, Range 94 West of the Sixth Principal Meridian, in Rio Blanco, Colorado.

The Dam Outlet for the Larson Reservoir Enlargement is located as follows:

Beginning at the Southeast corner of Section 33, Township 3 South, Range 94 West of the 6th P.M., and assuming a bearing of East between the Southwest and Southeast Corners of Said Section 33, thence N 45°07'25"W a distance of 2618.54 feet to the True Point of Beginning, which is the existing outlet from the Larson Reservoir.

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 42

The location of the Dam Outlet may be changed during construction of the Larson Reservoir Enlargement, but will be located on the property described above.

- c. Source: Piceance Creek and surface drainage into Larson Reservoir Enlargement from an unnamed tributary, sometimes known as Nineteen Mile Creek.
- d. Name and capacity of ditches used to fill Larson Reservoir Enlargement and legal description of each point of diversion:

(1) Piceance Creek point of diversion

- (a) Name of Ditch: Larson Ditch
- (b) Capacity: 10.0 c.f.s.
- (c) Legal description of the point of diversion:

Beginning at the Southeast corner of Section 33, Township 3 South, Range 94 West of the 6th P.M., and assuming a bearing of East between the Southwest and Southeast Corners of Said Section 33, thence S 32°05'43"E a distance of 2881.73 feet to the True Point of Beginning, which is the headgate on Piceance Creek.

(2) Unnamed tributary of Piceance Creek, sometimes known as Nineteen Mile Creek, point of diversion

- (a) Name of Ditch: The unnamed tributary discharges directly into Larson Reservoir Enlargement
- (b) Capacity: 10.0 c.f.s.
- (c) Legal description of the point of diversion:

Beginning at the Southeast corner of Section 33, Township 3 South, Range 94 West of the 6th P.M., and assuming a bearing of East between the Southwest and

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 43

Southeast Corners of Said Section 33, thence N 50°45'11" W 1707.07 feet to a point on the easterly line of said W1/2SE1/4, thence North approximately 2000 feet to the True Point of Beginning; which is approximately the point the water enters the Larson Reservoir Enlargement on land owned by NaTec.

- e. Amount: The maximum quantity of water which may be diverted and stored under the Larson Reservoir Enlargement water right is six-hundred (600) acre-feet per year, conditional, and an additional six-hundred (600) acre-feet per year to fill and refill the Larson Reservoir Enlargement, conditional. The water right will be diverted at a rate of ten (10.0) c.f.s from Piceance Creek and ten (10.0) c.f.s. from the unnamed tributary to Piceance Creek, sometimes known as Nineteen Mile Creek.
- f. Appropriation date: April 5, 1988.
- g. Use: Domestic, industrial, commercial, irrigation, stockwatering, recreation, and fish and wildlife purposes. The water may be used for a) immediate application to beneficial uses; b) for storage and subsequent application to beneficial uses; c) for substitution and exchange; d) for replacement of depletions; and e) for augmentation. NaTec shall have the right to fully consume the water during the first use of the water, or to recapture and reuse the water until the water is fully consumed. The conditional water rights will be used as a source of augmentation water for the augmentation plan described in this Decree.

62. The terms and conditions provided for in this Decree are adequate to assure that no material injury to any water users will result from operation of the plan for augmentation, including conditional water rights, change of water rights and conditional appropriative rights of substitution and exchange.

63. NaTec has demonstrated an appropriate method of accounting for diversions and stream depletions associated with the operation of the plan for augmentation, including conditional water rights, change of water rights and conditional appropriative rights

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 44

of substitution and exchange. Unless specifically indicated by this Decree, all accounting records required by this Decree shall be filed with the State Engineer and Division Engineer on an annual basis.

64. The conditional water rights and conditional appropriative rights of substitution and exchange awarded herein are continued in full force and effect until August, 1997. If NaTec desires to maintain the conditional water rights and conditional appropriative rights of substitution and exchange, an application for finding of reasonable diligence shall be filed during or before August, 1997, or a showing made that the conditional water rights and conditional appropriative rights of substitution and exchange have become absolute by reason of completion of the appropriation. In determining reasonable diligence, the Court shall consider the water rights described herein and the water rights determined herein to be a unified water system so that work done on any one part of the system shall be considered to be the exercise of reasonable diligence in the development of the conditional water rights and conditional appropriative rights of substitution and exchange decreed herein.

65. Pursuant to Section 37-92-304(6), C.R.S., the Court shall retain jurisdiction over the subject matter of this case for the purpose of reconsideration of whether the plan for augmentation or changes of water rights approved herein cause material injury to the vested water rights of others, including the parties identified in Paragraphs 3 and 4 of the Findings of Fact, and for the purposes described in Paragraph 56.c., for a period of ten (10) years from the date NaTec files with the Court notice that the annual withdrawal from the NaTec wells is equal to or has exceeded 400 acre-feet per year. For purposes of serving notices pursuant to the terms of this Paragraph, the notices may be served at the addresses specified in the documents contained in the files of the Water Court, and such addresses may be changed from time to time by filing such changes with the Water Court and serving a copy on all other parties.

66. The Court shall also retain jurisdiction for an indefinite time period to determine whether the five cfs pumping rate limit or the limit on the total volume of water withdrawn during any period of November 1 through October 31 or the limit on annual depletions as described in Paragraph 56 may be increased under the terms of this plan for augmentation or under a subsequent

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 45

case, for the purposes described in Paragraph 56.d., and to resolve any disputes regarding whether the sub-irrigated lands described in the map attached as Appendix A have had irrigation of such lands terminated.

67. A copy of this Decree shall be filed with the State Engineer and Division Engineers for Water Divisions No. 5 and 6.

DATED THIS 13<sup>th</sup> day of August, 1991.

BY THE COURT:

Thomas W. Ossola

---

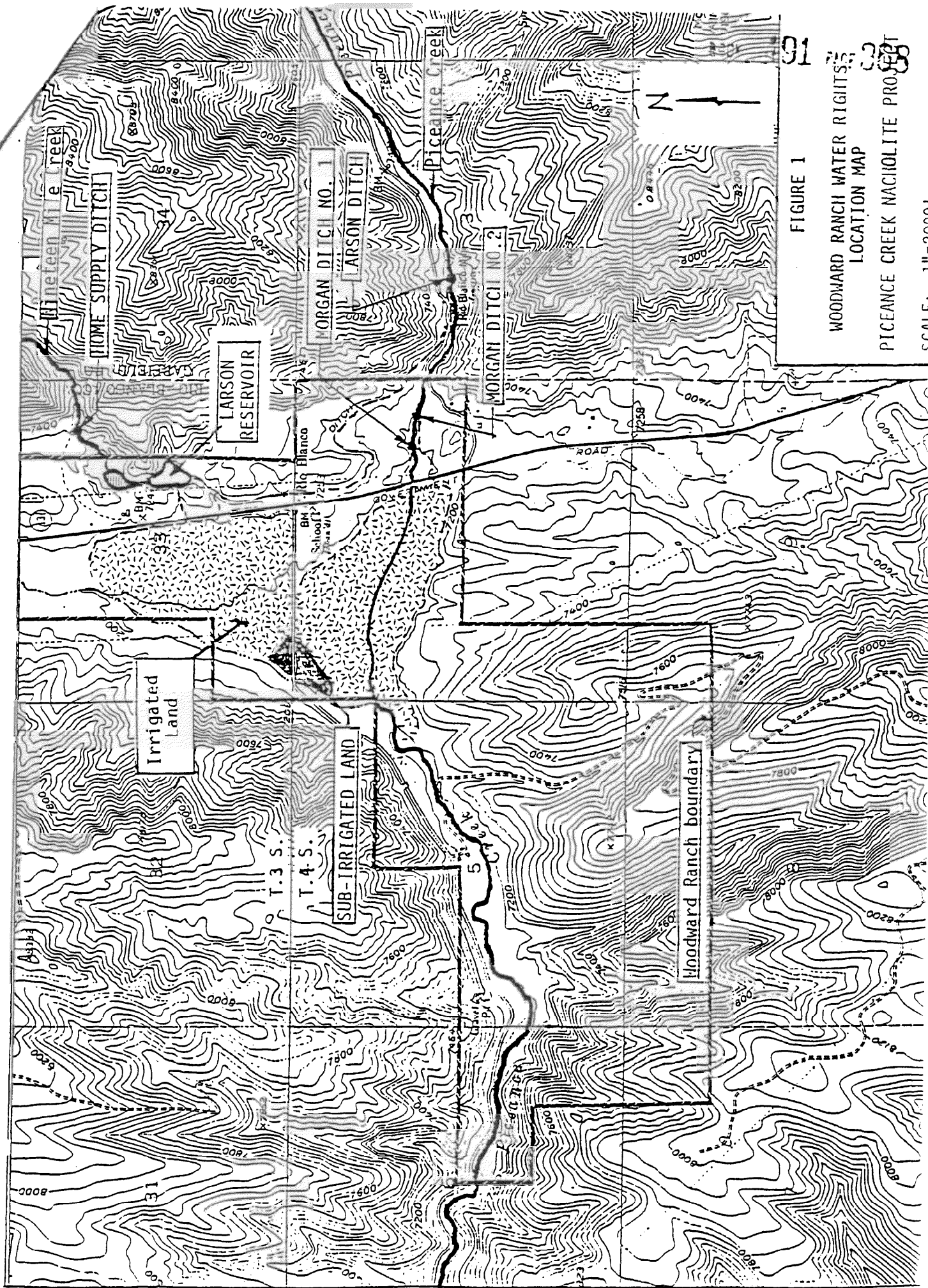
Thomas W. Ossola, Water Judge  
Water Division No. 5

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 46

APPENDIX A

MAP DEPICTING THE LOCATION OF  
HISTORICALLY IRRIGATED LANDS





01

FIGURE 1

WOODWARD RANCH WATER RIGHTS  
LOCATION MAP

PICEANCE CREEK NACLIOLE PROJECT

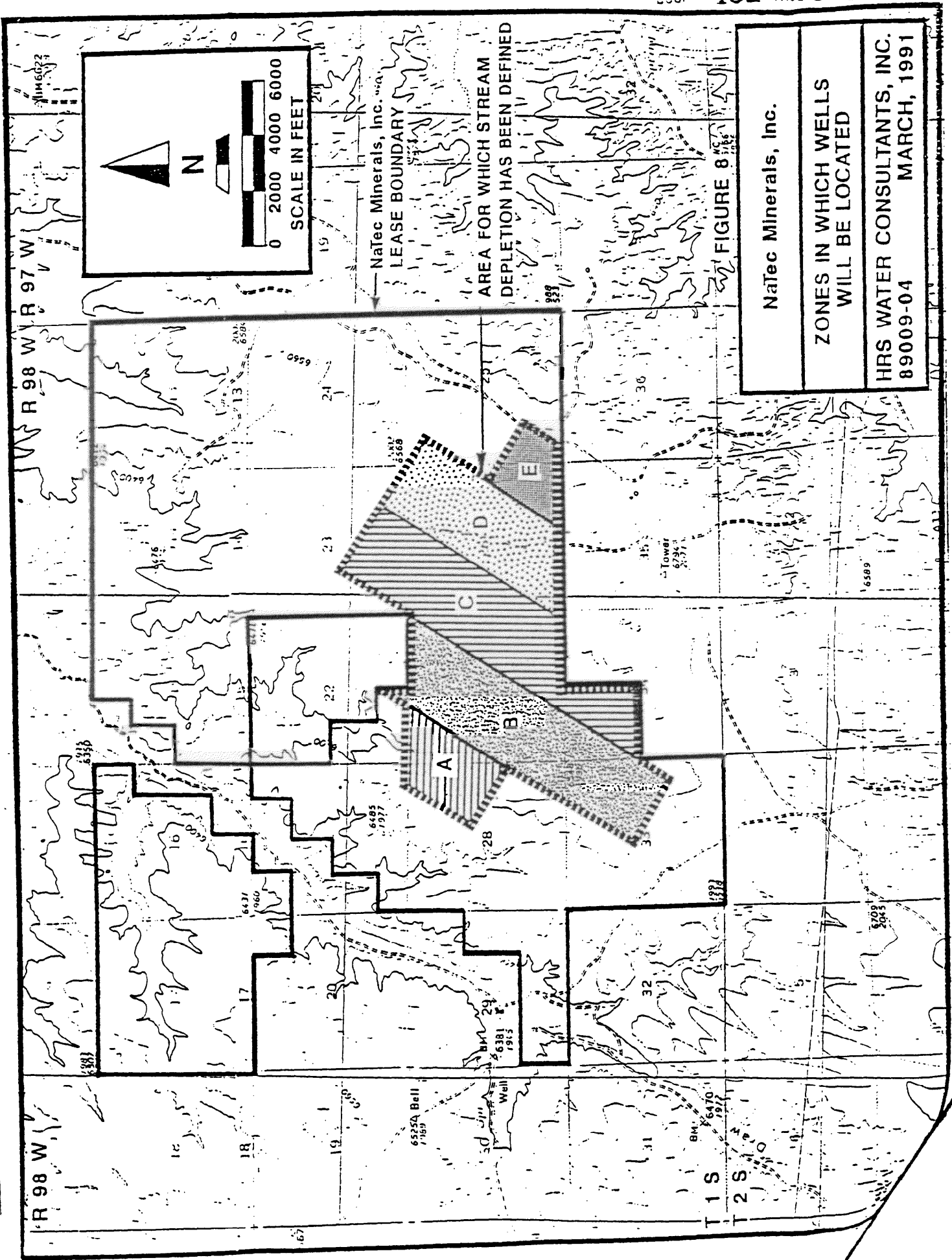
SCALE: 1"=2000'



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 47

APPENDIX B

MAP DEPICTING THE LOCATION OF  
WELL LOCATION ZONES



NaTec Minerals, Inc.  
LEASE BOUNDARY  
AREA FOR WHICH STREAM  
DEPLETION HAS BEEN DEFINED

FIGURE 8

NaTec Minerals, Inc.

ZONES IN WHICH WELLS  
WILL BE LOCATED

HRS WATER CONSULTANTS, INC.  
89009-04  
MARCH, 1991

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 48

## APPENDIX C

Unit Response for Wells Constructed  
Into the R-8 and A-Groove Formations  
Within Zone "A"

<u>Year</u>	Yellow Creek ~ Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.016823	0
2	0.011907	0
3	0.008374	0
4	0.010311	0
5	0.01011	0.000163
6	0.010799	0.001056
7	0.010167	0.000491
8	0.010149	0.000512
9	0.010184	-0.0001
10	0.009761	0.000001
11	0.00998	0.000127
12	0.009758	0.000225
13	0.00952	0.000153
14	0.009644	0.000097
15	0.009298	0.000035
16	0.009209	0.000214
17	0.007066	0.000298
18	0.005133	0.000067
19	0.005136	-0.00004
20	0.004979	0.000255
21	0.003573	0.000074
22	0.003803	0.000165
23	0.003661	0.000094
24	0.003804	-0.00014
25	0.003749	0.000296
26	0.003952	-0.00012
27	0.004038	0.000472
28	0.00374	-0.0001
29	0.004119	0.000183
30	0.004007	0.000264
31	0.003981	0.000081
32	0.004032	0.000059

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 49

33	0.003951	0.000214
34	0.003952	0.000268
35	0.004041	0.000054
36	0.003905	0.000043
37	0.003961	0.000338
38	0.003965	0.000097
39	0.003923	0.000234
40	0.003918	0.000247
41	0.003956	0.00006
42	0.003789	0.000312
43	0.003977	0.000463
44	0.00363	0.000204
45	0.00372	0.000329
46	0.003713	0.000265
47	0.00378	0.00033
48	0.003778	0.000257
49	0.003706	0.000708
50	0.003609	0.000263
51	0.003668	0.000237
52	0.003609	0.000121
53	0.003589	0.000358
54	0.003549	0.000154
55	0.003386	0.000663
56	0.003429	0.000133
57	0.003309	0.000324
58	0.003486	0.000619
59	0.003413	0.000469
60	0.003332	0.000318
61	0.003468	0.000343
62	0.003257	0.000408
63	0.003218	0.00062
64	0.003313	0.00034
65	0.002967	0.000521
66	0.003029	0.000341
67	0.003308	0.000256
68	0.003079	0.000722
69	0.003111	0.000482
70	0.003129	0.000365
71	0.002882	0.000286
72	0.002955	0.000638
73	0.002947	0.000451
74	0.002876	0.000557
75	0.0028	0.000439
76	0.002951	0.000587

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 50

77	0.003005	0.000741
78	0.002824	0.000278
79	0.002446	0.000472
80	0.002987	0.000725
81	0.002788	0.000254
82	0.002559	0.00079
83	0.002467	0.000339
84	0.002575	0.000473
85	0.002661	0.000774
86	0.002641	0.000534
87	0.002883	0.000535
88	0.002337	0.000573
89	0.002302	0.000731
90	0.002589	0.000619
91	0.002428	0.000489
92	0.002276	0.00068
93	0.002411	0.000612
94	0.002445	0.000634
95	0.001923	0.000603
96	0.001901	0.000714
97	0.001945	0.000461
98	0.001954	0.000667
99	0.002052	0.000633
100	0.001979	0.000497
101	0.001945	0.000983
102	0.001908	0.000528
103	0.002136	0.000444
104	0.001823	0.000686
105	0.001977	0.000758
106	0.00186	0.000434
107	0.001774	0.000907
108	0.001762	0.000675
109	0.00197	0.000685
110	0.001858	0.000695
111	0.001808	0.00066
112	0.001802	0.000741
113	0.002008	0.000536
114	0.001637	0.000685
115	0.001954	0.000799
116	0.001716	0.000682
117	0.001768	0.000762
118	0.00182	0.000794
119	0.001805	0.000422
120	0.001674	0.000721

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 51

121	0.00161	0.000601
122	0.001627	0.000713
123	0.001779	0.000609
124	0.00172	0.000767
125	0.001707	0.000787
126	0.001621	0.000397
127	0.001274	0.000694
128	0.001648	0.000705
129	0.001659	0.000752
130	0.001594	0.000675
131	0.001539	0.000668
132	0.001397	0.000552
133	0.001545	0.000836
134	0.001482	0.000849
135	0.001421	0.000517
136	0.00155	0.00101
137	0.001488	0.000527
138	0.001474	0.000397
139	0.001516	0.001013
140	0.001475	0.000664
141	0.001448	0.000738
142	0.00123	0.000634
143	0.001305	0.000724
144	0.001471	0.000501
145	0.001252	0.000727
146	0.001471	0.000785
147	0.001243	0.000813
148	0.001389	0.000647
149	0.001165	0.000745
150	0.001315	0.000478
151	0.001221	0.00059
152	0.001365	0.000894
153	0.001354	0.000663
154	0.001215	0.000742
155	0.001257	0.000759
156	0.001219	0.000613
157	0.001183	0.000716
158	0.001189	0.000661
159	0.001176	0.001068
160	0.001245	0.00059
161	0.001153	0.000788
162	0.001133	0.000267
163	0.001115	0.000849
164	0.001133	0.000425

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 52

165	0.001289	0.000854
166	0.001076	0.000763
167	0.001402	0.000963
168	0.000908	0.000389
169	0.00129	0.000627
170	0.001017	0.000531
171	0.001084	0.000626
172	0.001085	0.000988
173	0.001413	0.000484
174	0.001104	0.000766
175	0.001225	0.000651
176	0.000962	0.000681
177	0.000936	0.000797
178	0.000913	0.000545
179	0.000988	0.000569
180	0.001085	0.000568
181	0.001306	0.000839
182	0.00097	0.000655
183	0.000903	0.0007
184	0.001026	0.0008
185	0.001032	0.000557
186	0.00103	0.000567
187	0.000744	0.000536
188	0.000911	0.000738
189	0.000968	0.000759
190	0.001114	0.000789
191	0.001169	0.000685
192	0.000953	0.000534
193	0.000831	0.000801
194	0.000825	0.000597
195	0.001054	0.000445
196	0.000819	0.000606
197	0.001017	0.000676
198	0.000725	0.000806
199	0.000841	0.000447
200	0.000814	0.000802
201	0.000842	0.000611
202	0.001015	0.000475
203	0.000849	0.000638
204	0.001039	0.001107
205	0.000957	0.000492
206	0.000856	0.000648
207	0.000679	0.000456
208	0.000831	0.000772

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 53

209	0.000695	0.00048
210	0.000709	0.000524
211	0.001031	0.000484
212	0.000612	0.000615
213	0.000762	0.000631
214	0.00076	0.000507
215	0.000711	0.000542
216	0.000786	0.000491
217	0.000696	0.000617
218	0.00085	0.000514
219	0.000767	0.000764
220	0.000814	0.000527
221	0.000949	0.000491
222	0.00069	0.000707
223	0.000582	0.000359
224	0.000821	0.000905
225	0.000525	0.000384
226	0.000637	0.000519
227	0.000711	0.000597
228	0.00053	0.000426
229	0.000775	0.000673
230	0.000754	0.000539
231	0.000983	0.000532
232	0.000592	0.0006
233	0.000654	0.000322
234	0.000628	0.000711
235	0.000457	0.000504
236	0.000923	0.000617
237	0.000652	0.000562
238	0.000684	0.000492
239	0.000645	0.000565
240	0.000671	0.00083
241	0.000618	0.000377
242	0.000449	0.000571
243	0.00071	0.000287
244	0.000635	0.00072
245	0.000467	0.000342
246	0.000765	0.000582
247	0.000833	0.000562
248	0.000763	0.000599
249	0.000533	0.000667
250	0.000699	0.000277



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 54.

## APPENDIX D

Unit Response For Wells Constructed  
Into The R-8 and A-Groove Formations  
Within Zone "B"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.003512	0
2	0.003561	0
3	0.001173	0
4	0.00337	0
5	0.003336	0.000123
6	0.004207	0.001323
7	0.003744	0.000447
8	0.004009	0.000367
9	0.004036	-0.00009
10	0.004363	0.00039
11	0.004455	-0.00005
12	0.004589	0.000316
13	0.004546	0.000041
14	0.004928	0.000182
15	0.004889	0.000177
16	0.004871	0.000196
17	0.005038	0.0003
18	0.004905	0.000219
19	0.005163	-0.00003
20	0.004995	0.000213
21	0.005196	0.000137
22	0.005253	0.000439
23	0.004936	0.000197
24	0.00496	0.000279
25	0.005143	0.000131
26	0.005353	0.000239
27	0.00494	0.000522
28	0.00486	0.000182
29	0.004986	0.000234
30	0.005022	0.000432
31	0.005183	0.000272
32	0.004884	0.000309
33	0.004785	0.000452

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 55

34	0.004887	0.000228
35	0.004717	0.000327
36	0.004913	0.000534
37	0.004741	0.000358
38	0.004204	0.000461
39	0.003967	0.000556
40	0.003863	0.000447
41	0.003669	0.00037
42	0.004052	0.000696
43	0.003747	0.000502
44	0.003833	0.000411
45	0.003697	0.000607
46	0.003944	0.000584
47	0.003793	0.000677
48	0.003719	0.000453
49	0.003751	0.000631
50	0.003683	0.000653
51	0.00379	0.000599
52	0.003569	0.000543
53	0.003802	0.00075
54	0.00338	0.000947
55	0.003721	0.000397
56	0.003619	0.000772
57	0.00365	0.000536
58	0.00342	0.000995
59	0.003502	0.000459
60	0.003438	0.00097
61	0.003331	0.000781
62	0.003371	0.000667
63	0.003342	0.000787
64	0.003491	0.000474
65	0.003236	0.000971
66	0.003194	0.000848
67	0.003387	0.000743
68	0.002845	0.000993
69	0.003103	0.000882
70	0.003145	0.000922
71	0.002901	0.000564
72	0.003036	0.000829
73	0.002988	0.00108
74	0.002901	0.000896
75	0.003083	0.00072
76	0.002948	0.000736
77	0.002851	0.000813

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 56

78	0.002887	0.000978
79	0.002819	0.000922
80	0.002473	0.000866
81	0.002459	0.000934
82	0.002483	0.000926
83	0.002521	0.000818
84	0.002448	0.000681
85	0.002308	0.001206
86	0.00254	0.000791
87	0.002525	0.001233
88	0.002367	0.00073
89	0.002338	0.000886
90	0.002387	0.001163
91	0.002494	0.000928
92	0.002102	0.000647
93	0.002202	0.001132
94	0.002025	0.00101
95	0.001831	0.000774
96	0.001707	0.001326
97	0.00189	0.000822
98	0.001501	0.001088
99	0.001787	0.000954
100	0.001622	0.000996
101	0.001739	0.001023
102	0.001932	0.001004
103	0.001581	0.000594
104	0.001714	0.001405
105	0.001797	0.001173
106	0.001822	0.000734
107	0.001378	0.001032
108	0.001954	0.000849
109	0.00172	0.001143
110	0.001486	0.000707
111	0.001776	0.001323
112	0.001679	0.000854
113	0.00161	0.00104
114	0.001588	0.000929
115	0.001665	0.0012
116	0.001743	0.000986
117	0.001477	0.001055
118	0.00168	0.000864
119	0.001564	0.001292
120	0.00174	0.000868
121	0.001386	0.001053

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 57

122	0.001697	0.000965
123	0.001567	0.001032
124	0.001239	0.000909
125	0.001776	0.001157
126	0.001615	0.000795
127	0.001365	0.000998
128	0.001281	0.001243
129	0.001708	0.001038
130	0.00169	0.000946
131	0.001448	0.001039
132	0.001333	0.001164
133	0.001518	0.000953
134	0.001319	0.00075
135	0.001396	0.001036
136	0.00143	0.000639
137	0.001128	0.001559
138	0.001134	0.00098
139	0.001252	0.001043
140	0.001215	0.000744
141	0.001323	0.001077
142	0.001245	0.000824
143	0.001286	0.001
144	0.001037	0.000949
145	0.001188	0.001165
146	0.001221	0.000727
147	0.001228	0.001251
148	0.001124	0.000695
149	0.001221	0.001072
150	0.001079	0.000994
151	0.001267	0.000895
152	0.001101	0.001131
153	0.001154	0.000643
154	0.001264	0.001019
155	0.001229	0.001282
156	0.000952	0.000688
157	0.001159	0.00088
158	0.001231	0.000936
159	0.001306	0.000883
160	0.001191	0.000997
161	0.000895	0.000918
162	0.001202	0.000973
163	0.000959	0.000833
164	0.001197	0.00103
165	0.001049	0.000858

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 58

166	0.001173	0.000972
167	0.001115	0.0008
168	0.000976	0.000832
169	0.001065	0.001166
170	0.000999	0.000535
171	0.000979	0.000919
172	0.001072	0.001008
173	0.001248	0.000893
174	0.001174	0.00105
175	0.001225	0.000957
176	0.000969	0.000965
177	0.000972	0.000805
178	0.000964	0.000864
179	0.000847	0.000717
180	0.001101	0.000931
181	0.000944	0.000992
182	0.001032	0.000881
183	0.000915	0.000784
184	0.000992	0.000947
185	0.001194	0.000962
186	0.000901	0.000886
187	0.001013	0.000786
188	0.001018	0.001149
189	0.000843	0.0006
190	0.000872	0.001207
191	0.001359	0.000668
192	0.000784	0.00065
193	0.00089	0.000904
194	0.000924	0.000835
195	0.00099	0.000883
196	0.001167	0.000829
197	0.000745	0.000759
198	0.000908	0.000822
199	0.000837	0.000815
200	0.001059	0.000945
201	0.000818	0.000522
202	0.000906	0.000732
203	0.001151	0.000953
204	0.000598	0.000832
205	0.000839	0.000759
206	0.000875	0.001128
207	0.00093	0.000553
208	0.000928	0.00103
209	0.000896	0.000829

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 59

210	0.000849	0.000952
211	0.000887	0.00053
212	0.000746	0.000811
213	0.000924	0.000675
214	0.000849	0.001032
215	0.000861	0.001057
216	0.000853	0.00063
217	0.000723	0.000488
218	0.000943	0.001001
219	0.000916	0.000733
220	0.000756	0.000693
221	0.000778	0.000874
222	0.000835	0.000678
223	0.000847	0.000718
224	0.000778	0.000783
225	0.000801	0.000793
226	0.000535	0.000483
227	0.000944	0.000743
228	0.000685	0.000687
229	0.000874	0.000545
230	0.00094	0.000715
231	0.00049	0.000433
232	0.000755	0.000708
233	0.000814	0.000469
234	0.000699	0.000804
235	0.000641	0.000681
236	0.000616	0.000564
237	0.000689	0.000678
238	0.00056	0.000591
239	0.000665	0.000695
240	0.000753	0.000615
241	0.000724	0.000635
242	0.000622	0.000754
243	0.000767	0.000458
244	0.00069	0.000838
245	0.000437	0.000452
246	0.000792	0.000727
247	0.000781	0.000397
248	0.000633	0.000805
249	0.000585	0.000659
250	0.000531	0.000657

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 60

## APPENDIX E

Unit Response For Wells Constructed  
Into The R-8 and A-Groove Formations  
Within Zone "C"

<u>Year</u>	<u>Yellow</u> <u>Creek</u> <u>Basin</u> cfs/cfs	<u>Piceance</u> <u>Creek</u> <u>Basin</u> cfs/cfs
1	0.000892	0
2	0.001581	0
3	-0.00051	0
4	0.001155	0
5	0.001057	0.000148
6	0.001836	0.001519
7	0.001578	0.000171
8	0.001312	0.000434
9	0.001678	0.000164
10	0.001528	0.000365
11	0.001829	0.000308
12	0.001819	0.000215
13	0.001986	0.000358
14	0.001874	0.00025
15	0.002145	0.000265
16	0.002104	0.000385
17	0.002686	0.000434
18	0.002298	0.000267
19	0.00261	0.000645
20	0.002516	0.000299
21	0.002707	0.000527
22	0.002893	0.000164
23	0.002693	0.000465
24	0.002664	0.000403
25	0.002991	0.000501
26	0.002916	0.000611
27	0.002856	0.000702
28	0.002903	0.000702
29	0.003072	0.000506
30	0.003109	0.000616
31	0.003052	0.000589
32	0.003145	0.000835

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 61

33	0.003212	0.000781
34	0.003079	0.000544
35	0.003207	0.000836
36	0.003316	0.001165
37	0.002855	0.000486
38	0.003395	0.000793
39	0.003161	0.000961
40	0.003259	0.000782
41	0.003114	0.000785
42	0.002936	0.00129
43	0.003047	0.0008
44	0.003162	0.000787
45	0.003303	0.001191
46	0.003119	0.000784
47	0.003275	0.001133
48	0.00305	0.000748
49	0.003172	0.001286
50	0.003379	0.000942
51	0.002999	0.001228
52	0.003059	0.000863
53	0.003237	0.001279
54	0.002918	0.000878
55	0.003103	0.001145
56	0.00302	0.00104
57	0.002974	0.001454
58	0.003064	0.00102
59	0.003077	0.001268
60	0.002825	0.001045
61	0.003215	0.001287
62	0.00282	0.001205
63	0.002885	0.000915
64	0.002884	0.001596
65	0.003105	0.001269
66	0.002778	0.001056
67	0.002807	0.000996
68	0.002851	0.001592
69	0.00289	0.001094
70	0.002761	0.001418
71	0.002737	0.001042
72	0.00277	0.001365
73	0.002698	0.001268
74	0.002912	0.001148
75	0.002628	0.001495
76	0.002747	0.001215



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 62

77	0.00257	0.001157
78	0.002454	0.001279
79	0.002707	0.001254
80	0.002711	0.001484
81	0.002537	0.001567
82	0.002377	0.001257
83	0.002823	0.001484
84	0.002486	0.001234
85	0.002515	0.001506
86	0.002568	0.001123
87	0.002352	0.001437
88	0.002366	0.001315
89	0.002421	0.001449
90	0.002314	0.001298
91	0.002409	0.001109
92	0.002207	0.001342
93	0.002381	0.001354
94	0.002523	0.001372
95	0.002083	0.000985
96	0.00223	0.001812
97	0.002353	0.001121
98	0.001983	0.00138
99	0.002481	0.001523
100	0.001982	0.001298
101	0.001893	0.001408
102	0.002038	0.001158
103	0.001863	0.001196
104	0.001983	0.00121
105	0.001942	0.001507
106	0.001747	0.001382
107	0.002012	0.001098
108	0.002089	0.001656
109	0.001897	0.001449
110	0.00188	0.001248
111	0.001678	0.001283
112	0.002129	0.00135
113	0.001921	0.001042
114	0.001594	0.001497
115	0.001805	0.001414
116	0.001894	0.001252
117	0.001969	0.001266
118	0.001592	0.001506
119	0.002007	0.001167
120	0.001616	0.001356

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 63

121	0.001651	0.001357
122	0.001912	0.001274
123	0.001781	0.001476
124	0.001657	0.00132
125	0.001852	0.001172
126	0.001659	0.001395
127	0.001764	0.00125
128	0.001605	0.001306
129	0.001471	0.00116
130	0.001661	0.001401
131	0.00164	0.001447
132	0.001795	0.001226
133	0.001612	0.001161
134	0.001544	0.000969
135	0.00183	0.001377
136	0.001579	0.001533
137	0.001523	0.001134
138	0.00161	0.001232
139	0.00171	0.001475
140	0.001458	0.001039
141	0.001603	0.001388
142	0.00161	0.001254
143	0.001502	0.001152
144	0.001365	0.001327
145	0.001635	0.000989
146	0.001703	0.001583
147	0.001232	0.001128
148	0.001303	0.000959
149	0.001216	0.001193
150	0.001344	0.001046
151	0.001383	0.001162
152	0.001426	0.001228
153	0.001408	0.000931
154	0.001074	0.001392
155	0.00125	0.001171
156	0.001261	0.000906
157	0.001154	0.000941
158	0.001545	0.001097
159	0.000995	0.001255
160	0.001081	0.000845
161	0.001249	0.001407
162	0.0012	0.000985
163	0.001246	0.001103
164	0.001183	0.000982

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 64

165	0.000969	0.001074
166	0.001235	0.001312
167	0.001248	0.001013
168	0.001169	0.000904
169	0.001063	0.000959
170	0.001256	0.001013
171	0.001274	0.001123
172	0.000809	0.001101
173	0.00119	0.001114
174	0.001351	0.000775
175	0.001243	0.001055
176	0.001125	0.000924
177	0.000962	0.00101
178	0.001146	0.000964
179	0.001034	0.001225
180	0.001104	0.001066
181	0.001196	0.001188
182	0.000914	0.000893
183	0.00099	0.00067
184	0.00099	0.001571
185	0.001087	0.000871
186	0.001105	0.001094
187	0.001041	0.000977
188	0.00094	0.00111
189	0.001307	0.000903
190	0.001104	0.001005
191	0.001017	0.000954
192	0.000941	0.000934
193	0.000965	0.001118
194	0.001008	0.000902
195	0.001148	0.000753
196	0.0011	0.001198
197	0.000891	0.001075
198	0.001058	0.00074
199	0.001015	0.001033
200	0.00098	0.000981
201	0.000952	0.001072
202	0.000684	0.001108
203	0.001143	0.000989
204	0.00086	0.000628
205	0.00092	0.000874
206	0.000907	0.000992
207	0.001014	0.001025
208	0.001002	0.000978

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 65

209	0.001019	0.000921
210	0.000865	0.000902
211	0.001054	0.000859
212	0.000962	0.000923
213	0.000941	0.000949
214	0.000573	0.001027
215	0.000883	0.000973
216	0.000897	0.000949
217	0.000953	0.000839
218	0.001099	0.0007
219	0.000823	0.00098
220	0.000976	0.000897
221	0.000856	0.000798
222	0.000876	0.001055
223	0.000888	0.000645
224	0.00065	0.001006
225	0.000757	0.000983
226	0.000992	0.000835
227	0.000851	0.000578
228	0.000719	0.00107
229	0.000861	0.000637
230	0.000657	0.000816
231	0.000725	0.001032
232	0.000843	0.000993
233	0.001005	0.000753
234	0.000798	0.000849
235	0.000826	0.000566
236	0.000894	0.000985
237	0.000777	0.000869
238	0.000816	0.000944
239	0.000503	0.000674
240	0.000808	0.000636
241	0.00081	0.001031
242	0.000692	0.000613
243	0.000871	0.000602
244	0.000754	0.000928
245	0.000693	0.0008
246	0.000422	0.000617
247	0.000833	0.000896
248	0.000702	0.000703
249	0.000732	0.000671
250	0.000598	0.00059

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 66

## APPENDIX F

Unit Response For Wells Constructed  
Into the R-8 and A-Groove Formations  
Within Zone "D"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.001065	0
2	0.000912	0
3	-0.00118	0
4	0.000809	0
5	0.000159	0.0004
6	0.001137	0.001496
7	0.000456	0.000688
8	0.00036	0.000673
9	0.00075	0.000203
10	0.000599	0.000694
11	0.000681	0.000618
12	0.000823	0.000675
13	0.000604	0.000367
14	0.001039	0.000966
15	0.000877	0.0007
16	0.000914	0.000972
17	0.001145	0.001089
18	0.001001	0.000588
19	0.001087	0.000916
20	0.001274	0.001035
21	0.001186	0.000848
22	0.001562	0.001095
23	0.001428	0.001171
24	0.00139	0.001396
25	0.001438	0.001346
26	0.001571	0.001007
27	0.001572	0.001384
28	0.001636	0.001214
29	0.001754	0.001403
30	0.001684	0.001225
31	0.001851	0.001322
32	0.001753	0.00145

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 67

33	0.001743	0.001636
34	0.001904	0.001701
35	0.001907	0.001632
36	0.001772	0.001424
37	0.002098	0.001418
38	0.002091	0.00145
39	0.001994	0.001865
40	0.001848	0.00174
41	0.002063	0.001718
42	0.001941	0.001763
43	0.00209	0.001689
44	0.001877	0.001925
45	0.002178	0.001556
46	0.002343	0.002098
47	0.001969	0.001543
48	0.002277	0.002143
49	0.002167	0.001753
50	0.001997	0.001698
51	0.002194	0.001956
52	0.002252	0.001915
53	0.002011	0.001698
54	0.00226	0.001686
55	0.002219	0.002008
56	0.002137	0.001905
57	0.002306	0.001938
58	0.002192	0.002066
59	0.002293	0.001728
60	0.002204	0.002194
61	0.002295	0.001667
62	0.002229	0.001902
63	0.002102	0.001937
64	0.002184	0.001888
65	0.002151	0.00189
66	0.002325	0.002117
67	0.002145	0.001666
68	0.001961	0.001954
69	0.002213	0.001916
70	0.002231	0.001813
71	0.002255	0.002122
72	0.002325	0.0018
73	0.002049	0.002252
74	0.002244	0.001909
75	0.002309	0.001877
76	0.00229	0.002005

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 68

77	0.001953	0.001754
78	0.002169	0.002309
79	0.00217	0.001702
80	0.002246	0.001874
81	0.002032	0.001818
82	0.002094	0.002081
83	0.002028	0.001822
84	0.002176	0.002007
85	0.001879	0.001732
86	0.00223	0.001856
87	0.002144	0.002193
88	0.002031	0.001588
89	0.002057	0.001827
90	0.002037	0.001897
91	0.002216	0.002109
92	0.001927	0.001682
93	0.002032	0.001734
94	0.002119	0.001809
95	0.002083	0.001899
96	0.00198	0.00186
97	0.001769	0.001572
98	0.001897	0.00216
99	0.002102	0.001574
100	0.001736	0.001933
101	0.001922	0.002048
102	0.001861	0.001544
103	0.00195	0.001857
104	0.001875	0.001585
105	0.001686	0.002003
106	0.001922	0.001621
107	0.001801	0.001717
108	0.001745	0.00151
109	0.001632	0.002037
110	0.002048	0.001515
111	0.001862	0.001741
112	0.00187	0.001826
113	0.001705	0.001561
114	0.001869	0.001474
115	0.001812	0.001673
116	0.00186	0.001699
117	0.001563	0.001783
118	0.001829	0.001503
119	0.001515	0.001644
120	0.00175	0.001451

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 69

121	0.001745	0.001766
122	0.001732	0.001452
123	0.001515	0.001439
124	0.001698	0.001459
125	0.001627	0.001662
126	0.001869	0.001191
127	0.00151	0.001596
128	0.001683	0.001527
129	0.001595	0.00131
130	0.00164	0.001808
131	0.001436	0.001212
132	0.001563	0.00123
133	0.001563	0.001578
134	0.001645	0.001413
135	0.001693	0.00151
136	0.001458	0.001491
137	0.001529	0.001399
138	0.001634	0.001303
139	0.001439	0.001632
140	0.001564	0.001431
141	0.001218	0.00112
142	0.001572	0.001472
143	0.00155	0.00139
144	0.001613	0.001428
145	0.001343	0.001207
146	0.00138	0.001302
147	0.001501	0.001674
148	0.001467	0.00123
149	0.001275	0.001609
150	0.001394	0.00132
151	0.001358	0.001472
152	0.0013	0.001023
153	0.00144	0.001576
154	0.001493	0.001227
155	0.001549	0.0013
156	0.001273	0.001363
157	0.001279	0.001468
158	0.00151	0.00116
159	0.001257	0.001351
160	0.001206	0.00122
161	0.001188	0.001113
162	0.001219	0.001342
163	0.001196	0.001386
164	0.001138	0.001199



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 70

165	0.001014	0.001348
166	0.00126	0.001053
167	0.001355	0.001423
168	0.001151	0.000989
169	0.000997	0.001323
170	0.001197	0.001489
171	0.00112	0.001115
172	0.000972	0.001073
173	0.001259	0.001051
174	0.001231	0.001106
175	0.001086	0.001042
176	0.001379	0.001305
177	0.001073	0.001162
178	0.001168	0.001356
179	0.001078	0.001095
180	0.001219	0.000994
181	0.000997	0.001186
182	0.001014	0.001045
183	0.000925	0.001288
184	0.001049	0.001052
185	0.001071	0.001208
186	0.000944	0.001221
187	0.001074	0.001101
188	0.001234	0.001246
189	0.001082	0.001335
190	0.000845	0.000622
191	0.000986	0.00136
192	0.000984	0.001156
193	0.001215	0.000994
194	0.000959	0.001044
195	0.00131	0.000855
196	0.000849	0.001188
197	0.000965	0.000937
198	0.000948	0.00125
199	0.001098	0.001113
200	0.000937	0.001119
201	0.000967	0.001101
202	0.001044	0.000898
203	0.00106	0.001127
204	0.001062	0.001083
205	0.000586	0.001027
206	0.000963	0.000946
207	0.000969	0.000933
208	0.000872	0.000782

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 71

209	0.000945	0.001021
210	0.000954	0.001271
211	0.000827	0.000861
212	0.00091	0.001098
213	0.00103	0.001081
214	0.000665	0.001043
215	0.000984	0.001048
216	0.000867	0.000988
217	0.000992	0.000741
218	0.000839	0.000955
219	0.001036	0.001006
220	0.000996	0.000716
221	0.000553	0.001196
222	0.000947	0.000965
223	0.00079	0.000974
224	0.00073	0.001108
225	0.000768	0.000718
226	0.001023	0.001062
227	0.001065	0.000819
228	0.000685	0.000913
229	0.000747	0.000836
230	0.000847	0.00105
231	0.000778	0.000925
232	0.000822	0.000785
233	0.000744	0.001017
234	0.000776	0.000694
235	0.001071	0.000953
236	0.000861	0.00065
237	0.000636	0.001047
238	0.000624	0.000707
239	0.000847	0.000553
240	0.000736	0.001049
241	0.000737	0.000798
242	0.000621	0.000699
243	0.000743	0.000794
244	0.000907	0.000865
245	0.000496	0.00092
246	0.000894	0.000842
247	0.000443	0.000928
248	0.000877	0.000557
249	0.000468	0.000721
250	0.000808	0.000878

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 72

## APPENDIX G

Unit Response For Wells Constructed  
Into the R-8 and A-Groove Formations  
Within Zone "E"

<u>Year</u>	<u>Yellow</u> <u>Creek</u> <u>Basin</u> cfs/cfs	<u>Piceance</u> <u>Creek</u> <u>Basin</u> cfs/cfs
1	0.000811	0
2	0.001229	0
3	-0.00168	0
4	0.000317	0
5	0.000258	0.000877
6	0.001002	0.001947
7	0.000255	0.001366
8	0.000185	0.001591
9	0.000083	0.00112
10	0.000208	0.001252
11	0.000302	0.001244
12	0.000303	0.001638
13	0.000222	0.001752
14	0.000273	0.00149
15	0.000607	0.001617
16	0.00028	0.001728
17	0.000364	0.00206
18	0.000551	0.001747
19	0.00036	0.002065
20	0.000669	0.002269
21	0.000409	0.002101
22	0.000665	0.002002
23	0.000502	0.002328
24	0.000505	0.002105
25	0.00085	0.001994
26	0.000746	0.002571
27	0.000697	0.002341
28	0.000853	0.002244
29	0.00066	0.002236
30	0.000999	0.002553
31	0.000932	0.002609
32	0.000649	0.002358

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 73

33	0.000847	0.002337
34	0.001069	0.002469
35	0.000919	0.002322
36	0.001017	0.002743
37	0.000952	0.002479
38	0.001249	0.002488
39	0.001088	0.002255
40	0.000991	0.002295
41	0.001204	0.002754
42	0.00126	0.002551
43	0.001033	0.002676
44	0.001223	0.002805
45	0.001122	0.002501
46	0.001213	0.002371
47	0.001449	0.002744
48	0.001144	0.00238
49	0.001298	0.002618
50	0.001515	0.00244
51	0.001605	0.002575
52	0.001148	0.002542
53	0.001334	0.002614
54	0.001501	0.002361
55	0.001292	0.002747
56	0.001321	0.002729
57	0.001651	0.002
58	0.001099	0.002797
59	0.00168	0.002383
60	0.001319	0.002066
61	0.001556	0.002427
62	0.001397	0.002116
63	0.001648	0.002031
64	0.001449	0.0022
65	0.001686	0.002221
66	0.001246	0.002179
67	0.00166	0.002231
68	0.001603	0.002109
69	0.001423	0.002284
70	0.00148	0.001982
71	0.001714	0.002392
72	0.001451	0.002011
73	0.001553	0.002204
74	0.001552	0.002023
75	0.001434	0.002019
76	0.001774	0.002136

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 74

77	0.001463	0.002103
78	0.001588	0.002236
79	0.001716	0.001996
80	0.001386	0.002209
81	0.001642	0.001969
82	0.001786	0.00213
83	0.001618	0.002114
84	0.00168	0.002023
85	0.001671	0.00181
86	0.001533	0.002183
87	0.001523	0.002073
88	0.001429	0.002089
89	0.001778	0.00211
90	0.00146	0.001859
91	0.001812	0.002165
92	0.001486	0.001837
93	0.001502	0.002052
94	0.001597	0.001955
95	0.001546	0.001749
96	0.001627	0.002093
97	0.001404	0.001825
98	0.001525	0.00203
99	0.001447	0.001735
100	0.00183	0.002111
101	0.001629	0.00181
102	0.001359	0.002017
103	0.001544	0.00216
104	0.001688	0.001569
105	0.001466	0.001855
106	0.001484	0.001884
107	0.001431	0.001972
108	0.001568	0.00187
109	0.001642	0.00189
110	0.001546	0.001582
111	0.00142	0.001807
112	0.001355	0.001755
113	0.001668	0.001798
114	0.001398	0.00181
115	0.001431	0.001764
116	0.001214	0.001678
117	0.00175	0.001952
118	0.00123	0.001919
119	0.001616	0.001573
120	0.001558	0.00169

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 75

121	0.00149	0.001735
122	0.001473	0.001887
123	0.001364	0.001662
124	0.001424	0.001643
125	0.001449	0.002019
126	0.00134	0.001342
127	0.001355	0.001845
128	0.001502	0.001626
129	0.00144	0.00164
130	0.001299	0.001551
131	0.001583	0.001716
132	0.001249	0.001583
133	0.001403	0.001674
134	0.001452	0.001529
135	0.001264	0.001789
136	0.001263	0.001615
137	0.001504	0.001754
138	0.001211	0.001542
139	0.001402	0.001798
140	0.001471	0.001499
141	0.001193	0.001441
142	0.001307	0.001587
143	0.001143	0.001598
144	0.001362	0.001242
145	0.001516	0.001678
146	0.00099	0.001394
147	0.001494	0.001727
148	0.001459	0.001364
149	0.000998	0.001374
150	0.001333	0.001496
151	0.001184	0.001711
152	0.001365	0.001496
153	0.001314	0.001401
154	0.001293	0.001466
155	0.001353	0.001569
156	0.001132	0.001426
157	0.001217	0.001403
158	0.00099	0.001665
159	0.001302	0.001399
160	0.000929	0.001159
161	0.00138	0.001432
162	0.001146	0.001431
163	0.001045	0.001285
164	0.001106	0.001309

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 76

165	0.001073	0.001258
166	0.001329	0.001518
167	0.001016	0.001403
168	0.001211	0.001232
169	0.001187	0.001504
170	0.001143	0.001164
171	0.001079	0.001334
172	0.001028	0.001149
173	0.001089	0.001251
174	0.00113	0.001136
175	0.001106	0.00164
176	0.001161	0.00116
177	0.00102	0.00122
178	0.001165	0.001306
179	0.000782	0.001159
180	0.001156	0.001284
181	0.001133	0.001289
182	0.00099	0.00101
183	0.000862	0.001187
184	0.001213	0.001296
185	0.000963	0.001455
186	0.000933	0.000932
187	0.00099	0.001262
188	0.001167	0.001322
189	0.000873	0.001066
190	0.000952	0.001223
191	0.000914	0.001186
192	0.000977	0.001114
193	0.001018	0.001227
194	0.001172	0.000977
195	0.000866	0.001131
196	0.00075	0.001173
197	0.001016	0.001432
198	0.001054	0.000798
199	0.000657	0.001108
200	0.000925	0.00133
201	0.001006	0.000804
202	0.001017	0.001404
203	0.000986	0.001104
204	0.000885	0.001076
205	0.000931	0.001083
206	0.000652	0.000976
207	0.000992	0.001322
208	0.000887	0.001132

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 77

209	0.000903	0.001138
210	0.000949	0.000925
211	0.000866	0.001197
212	0.000699	0.000938
213	0.001101	0.001038
214	0.000887	0.000979
215	0.000763	0.001169
216	0.000874	0.001053
217	0.000911	0.001001
218	0.000897	0.001019
219	0.00076	0.00106
220	0.000522	0.00102
221	0.001092	0.001022
222	0.000967	0.001001
223	0.000674	0.000951
224	0.000739	0.000866
225	0.001094	0.001084
226	0.00062	0.001215
227	0.00092	0.000961
228	0.000635	0.000807
229	0.0007	0.000676
230	0.000861	0.001311
231	0.00075	0.00108
232	0.000911	0.001013
233	0.000672	0.000849
234	0.000844	0.001052
235	0.000552	0.001246
236	0.000757	0.000835
237	0.000711	0.001001
238	0.000841	0.000781
239	0.000691	0.000727
240	0.000684	0.00101
241	0.000682	0.000845
242	0.000915	0.001174
243	0.000595	0.000437
244	0.000747	0.000982
245	0.000684	0.000947
246	0.00086	0.000738
247	0.000596	0.000701
248	0.000832	0.000987
249	0.000654	0.000908
250	0.000452	0.000658



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 78

## APPENDIX H

Unit Response For Wells Constructed  
Into the B-Groove and R-6 Formations  
Within Zone "A"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.012009	0.02571
2	0.015122	0.034516
3	0.008194	0.022704
4	0.007518	0.0207
5	0.005238	0.016264
6	0.005126	0.014577
7	0.004185	0.012116
8	0.003585	0.010742
9	0.002907	0.00839
10	0.002879	0.007837
11	0.002814	0.006924
12	0.002688	0.006933
13	0.002485	0.006355
14	0.002552	0.006289
15	0.0023	0.005669
16	0.002206	0.005481
17	0.002509	0.005207
18	0.002234	0.004848
19	0.001984	0.005044
20	0.00217	0.004727
21	0.001886	0.004445
22	0.001918	0.004396
23	0.001976	0.003921
24	0.002011	0.004143
25	0.001908	0.004033
26	0.001791	0.003715
27	0.001779	0.003977
28	0.001681	0.003576
29	0.001854	0.003627
30	0.001559	0.003275
31	0.001501	0.003528
32	0.001468	0.003118

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 79

33	0.00186	0.002952
34	0.001479	0.003043
35	0.001642	0.00312
36	0.00141	0.002738
37	0.001444	0.002801
38	0.001294	0.00262
39	0.001319	0.002758
40	0.001571	0.002714
41	0.001302	0.002493
42	0.001301	0.002491
43	0.001512	0.002291
44	0.001325	0.002498
45	0.001416	0.002176
46	0.001156	0.002527
47	0.001008	0.002048
48	0.000986	0.002475
49	0.001115	0.002232
50	0.001044	0.002098
51	0.00122	0.001938
52	0.001068	0.002035
53	0.001271	0.001976
54	0.000974	0.001948
55	0.001106	0.001731
56	0.001026	0.001803
57	0.001129	0.002089
58	0.001024	0.002029
59	0.001283	0.001343
60	0.000813	0.00231
61	0.001052	0.001763
62	0.001049	0.001764
63	0.000807	0.001477
64	0.000868	0.00162
65	0.000952	0.001706
66	0.001156	0.001526
67	0.000654	0.001737
68	0.000886	0.001563
69	0.000961	0.001699
70	0.001108	0.001589
71	0.000809	0.001288
72	0.000936	0.001462
73	0.000812	0.001378
74	0.001018	0.001287
75	0.000842	0.001488
76	0.000838	0.00159

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 80

77	0.000724	0.001246
78	0.000904	0.001542
79	0.000761	0.00135
80	0.000801	0.001076
81	0.000879	0.001529
82	0.000879	0.001157
83	0.000764	0.001282
84	0.000583	0.001115
85	0.000947	0.001444
86	0.000814	0.001069
87	0.000627	0.001158
88	0.000482	0.001389
89	0.000861	0.001178
90	0.000777	0.00139
91	0.000745	0.001127
92	0.000671	0.000877
93	0.000904	0.001129
94	0.000623	0.001021
95	0.000517	0.001265
96	0.000807	0.001222
97	0.000596	0.000924
98	0.000655	0.001182
99	0.000775	0.001015
100	0.000805	0.001029

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 81

## APPENDIX I

Unit Response For Wells Constructed  
Into the B-Groove and R-6 Formations  
Within Zone "B"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.01078	0.033117
2	0.013909	0.038419
3	0.007399	0.02407
4	0.006778	0.021215
5	0.004762	0.016731
6	0.00496	0.015454
7	0.003467	0.012397
8	0.003271	0.009889
9	0.003122	0.00883
10	0.002606	0.008071
11	0.002371	0.007714
12	0.002192	0.007221
13	0.002511	0.006515
14	0.002514	0.006744
15	0.00213	0.006325
16	0.002121	0.005536
17	0.002168	0.00587
18	0.001925	0.005416
19	0.001963	0.005248
20	0.001917	0.00497
21	0.001917	0.004718
22	0.001859	0.004582
23	0.001793	0.00441
24	0.001704	0.004456
25	0.001692	0.004196
26	0.001672	0.003888
27	0.001715	0.003816
28	0.001499	0.004037
29	0.001623	0.00375
30	0.001292	0.003572
31	0.001538	0.003807
32	0.001588	0.003111

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 82

33	0.001341	0.003574
34	0.001546	0.003043
35	0.001456	0.003181
36	0.001361	0.00303
37	0.001205	0.00295
38	0.001271	0.002941
39	0.001452	0.002751
40	0.001204	0.002806
41	0.00156	0.00255
42	0.001139	0.00257
43	0.001343	0.002703
44	0.001152	0.002625
45	0.001067	0.002155
46	0.001078	0.002547
47	0.001259	0.002497
48	0.001	0.002586
49	0.001294	0.002093
50	0.000942	0.002388
51	0.001177	0.001927
52	0.000911	0.002295
53	0.001029	0.001966
54	0.001045	0.002262
55	0.000965	0.001988
56	0.000996	0.002148
57	0.00098	0.00223
58	0.000984	0.001964
59	0.000802	0.001778
60	0.000947	0.001931
61	0.001044	0.001807
62	0.000959	0.001691
63	0.00079	0.001785
64	0.000738	0.001753
65	0.000782	0.001441
66	0.000923	0.001676
67	0.000855	0.001827
68	0.000933	0.001707
69	0.000895	0.001532
70	0.000816	0.001445
71	0.000752	0.001492
72	0.000781	0.001691
73	0.0009	0.001576
74	0.000916	0.001455
75	0.000657	0.001309
76	0.00086	0.001428

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 83

77	0.000819	0.001399
78	0.000742	0.00132
79	0.000821	0.001411
80	0.000657	0.001575
81	0.000923	0.001287
82	0.000644	0.001332
83	0.000686	0.001438
84	0.000784	0.001416
85	0.000728	0.001061
86	0.000819	0.001298
87	0.000741	0.001211
88	0.000513	0.00125
89	0.000525	0.001165
90	0.000877	0.001162
91	0.000681	0.00126
92	0.000785	0.001288
93	0.0007	0.001024
94	0.000522	0.001382
95	0.000637	0.0009
96	0.00073	0.001101
97	0.000627	0.001334
98	0.000741	0.001165
99	0.000762	0.000977
100	0.000598	0.001079

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 84

## APPENDIX J

Unit Response for Wells Constructed  
Into the B-Groove and R-6 Formations  
Within Zone "C"

<u>Year</u>	Yellow Creek <u>Basin</u> cfs/cfs	Piceance Creek <u>Basin</u> cfs/cfs
1	0.008906	0.042368
2	0.011803	0.043046
3	0.006031	0.025772
4	0.006182	0.022899
5	0.004207	0.018322
6	0.003991	0.014655
7	0.003352	0.011947
8	0.002912	0.011071
9	0.002439	0.009714
10	0.002472	0.008768
11	0.002098	0.008332
12	0.002065	0.007721
13	0.001908	0.007526
14	0.001922	0.007236
15	0.002077	0.006429
16	0.001669	0.006177
17	0.001673	0.006228
18	0.001728	0.006059
19	0.001806	0.005775
20	0.001635	0.005421
21	0.001754	0.00516
22	0.00174	0.004882
23	0.001522	0.004855
24	0.001334	0.004526
25	0.001388	0.004677
26	0.001691	0.004289
27	0.001272	0.004229
28	0.001416	0.0043
29	0.001399	0.004063
30	0.001371	0.00369
31	0.001225	0.003644
32	0.001509	0.003413
33	0.00095	0.003503

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 85

34	0.001225	0.003556
35	0.001161	0.003383
36	0.001336	0.003674
37	0.001181	0.00336
38	0.001121	0.002761
39	0.001236	0.003114
40	0.000894	0.003141
41	0.000957	0.00295
42	0.001019	0.002682
43	0.001305	0.002545
44	0.001268	0.002787
45	0.001021	0.002579
46	0.000829	0.00261
47	0.001055	0.002465
48	0.001331	0.002797
49	0.001081	0.002367
50	0.000749	0.002569
51	0.001094	0.002192
52	0.000867	0.002344
53	0.001002	0.002717
54	0.000942	0.001959
55	0.00102	0.001801
56	0.000919	0.002134
57	0.000723	0.002238
58	0.000746	0.001941
59	0.001048	0.002189
60	0.000975	0.001851
61	0.000863	0.002017
62	0.000884	0.001549
63	0.00063	0.002012
64	0.001034	0.001803
65	0.000706	0.001829
66	0.00077	0.001545
67	0.00065	0.001959
68	0.000861	0.001638
69	0.000774	0.001637
70	0.000595	0.001658
71	0.000764	0.00153
72	0.000731	0.001666
73	0.000736	0.001675
74	0.000813	0.001676
75	0.000686	0.001824
76	0.000737	0.001464
77	0.000629	0.001614



Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 86

78	0.00069	0.001274
79	0.00051	0.001212
80	0.00098	0.001351
81	0.000987	0.001249
82	0.00056	0.001638
83	0.000666	0.001415
84	0.000696	0.001655
85	0.000727	0.001381
86	0.000696	0.001339
87	0.000962	0.00114
88	0.000483	0.001203
89	0.000494	0.001369
90	0.000723	0.001459
91	0.00064	0.001101
92	0.000705	0.001102
93	0.000694	0.001362
94	0.000442	0.001316
95	0.000546	0.000983
96	0.000936	0.00133
97	0.000498	0.001309
98	0.000649	0.001221
99	0.000573	0.001364
100	0.000843	0.001028

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 87

## APPENDIX K

Unit Response For Wells Constructed  
Into the B-Groove and R-6 Formations  
Within Zone "D"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.007414	0.055416
2	0.010596	0.046483
3	0.004879	0.027231
4	0.005142	0.023706
5	0.003366	0.018208
6	0.003647	0.014682
7	0.002759	0.013033
8	0.00262	0.011315
9	0.001885	0.010088
10	0.001953	0.009629
11	0.001772	0.008612
12	0.001903	0.008255
13	0.001841	0.008099
14	0.001534	0.007629
15	0.001763	0.007088
16	0.001325	0.006866
17	0.001834	0.006541
18	0.001448	0.006465
19	0.001381	0.006108
20	0.001417	0.005668
21	0.001388	0.005528
22	0.001441	0.005191
23	0.001501	0.005422
24	0.001278	0.004854
25	0.00108	0.004852
26	0.001313	0.004493
27	0.001101	0.004374
28	0.001164	0.004453
29	0.001314	0.004073
30	0.00116	0.004284
31	0.001133	0.00409
32	0.001073	0.003955

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 88

33	0.001151	0.00381
34	0.000985	0.00404
35	0.001056	0.003709
36	0.001294	0.003351
37	0.001021	0.003247
38	0.000977	0.00312
39	0.000964	0.003353
40	0.000854	0.003142
41	0.001037	0.003117
42	0.001079	0.002919
43	0.000933	0.002752
44	0.000901	0.002889
45	0.000927	0.002701
46	0.000973	0.002873
47	0.000742	0.002783
48	0.000721	0.002676
49	0.000977	0.002344
50	0.000882	0.00252
51	0.000874	0.002428
52	0.000829	0.00248
53	0.00053	0.002184
54	0.000883	0.002193
55	0.000797	0.002514
56	0.000992	0.002239
57	0.000699	0.002275
58	0.000898	0.002032
59	0.00061	0.002121
60	0.00077	0.002164
61	0.000966	0.00183
62	0.00069	0.00231
63	0.000847	0.001788
64	0.000674	0.001948
65	0.00076	0.002042
66	0.000792	0.001588
67	0.00069	0.002086
68	0.00076	0.001877
69	0.000615	0.001696
70	0.000795	0.001576
71	0.000739	0.001869
72	0.000587	0.001594
73	0.000891	0.001702
74	0.000731	0.001913
75	0.000744	0.001536
76	0.000748	0.00174

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 89

77	0.000593	0.00178
78	0.000635	0.001253
79	0.000632	0.001684
80	0.000558	0.001508
81	0.000754	0.001446
82	0.000465	0.001477
83	0.000969	0.001551
84	0.000553	0.001315
85	0.000286	0.001471
86	0.00063	0.001486
87	0.000649	0.001462
88	0.000588	0.001286
89	0.000683	0.001465
90	0.00064	0.001356
91	0.000275	0.001411
92	0.000935	0.001135
93	0.000468	0.001315
94	0.000716	0.0013
95	0.000613	0.001179
96	0.000553	0.001243
97	0.000543	0.001418
98	0.000531	0.001069
99	0.00049	0.001482
100	0.000774	0.001062

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 90

## APPENDIX L

Unit Response For Wells Constructed  
Into the B-Groove and R-6 Formations  
Within Zone "E"

<u>Year</u>	Yellow Creek Basin cfs/cfs	Piceance Creek Basin cfs/cfs
1	0.005464	0.06994
2	0.008375	0.052727
3	0.003634	0.029817
4	0.004176	0.023701
5	0.002861	0.017847
6	0.002986	0.015961
7	0.002172	0.013903
8	0.001797	0.01281
9	0.001923	0.010941
10	0.001561	0.010278
11	0.001423	0.009568
12	0.001248	0.009222
13	0.001502	0.008842
14	0.001424	0.008365
15	0.001243	0.008094
16	0.001303	0.007319
17	0.001175	0.006684
18	0.001178	0.007248
19	0.000978	0.006503
20	0.001344	0.006486
21	0.001114	0.005614
22	0.001222	0.005904
23	0.001174	0.005522
24	0.000934	0.005157
25	0.001136	0.005369
26	0.001124	0.005194
27	0.000778	0.00466
28	0.000957	0.004691
29	0.000963	0.004559
30	0.000689	0.00405
31	0.000907	0.004512
32	0.000823	0.00389

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 91

33	0.00078	0.004198
34	0.000982	0.003888
35	0.0011	0.003779
36	0.000774	0.003498
37	0.00097	0.003429
38	0.000656	0.003574
39	0.000807	0.003353
40	0.000858	0.00352
41	0.000663	0.003234
42	0.000837	0.002981
43	0.000721	0.0032
44	0.000701	0.002518
45	0.000811	0.003129
46	0.000699	0.003079
47	0.00071	0.00244
48	0.000652	0.00274
49	0.000759	0.002788
50	0.00076	0.002654
51	0.000522	0.002617
52	0.000782	0.002481
53	0.000814	0.002251
54	0.000657	0.002464
55	0.000756	0.002226
56	0.000761	0.002486
57	0.000627	0.001999
58	0.000597	0.002514
59	0.00048	0.001816
60	0.000567	0.002129
61	0.000736	0.002353
62	0.000748	0.002219
63	0.000689	0.001919
64	0.000587	0.002114
65	0.000654	0.002041
66	0.000489	0.00169
67	0.000589	0.002032
68	0.000643	0.002263
69	0.000718	0.001602
70	0.000479	0.001161
71	0.000618	0.002002
72	0.000695	0.001856
73	0.00053	0.002032
74	0.000627	0.001587
75	0.000625	0.001641
76	0.000617	0.001791

Case No. 88CW420  
Findings of Fact, Conclusions of Law,  
Judgment and Decree of the Water Court  
Page 92

77	0.000519	0.001577
78	0.000533	0.001538
79	0.000527	0.001706
80	0.00041	0.001555
81	0.00067	0.001977
82	0.000648	0.001452
83	0.00034	0.001155
84	0.000578	0.001569
85	0.000553	0.00143
86	0.00044	0.001584
87	0.000714	0.00133
88	0.000616	0.001646
89	0.000663	0.001217
90	0.000452	0.001666
91	0.000387	0.001489
92	0.00074	0.001014
93	0.00054	0.001496
94	0.000565	0.001527
95	0.000452	0.000982
96	0.000668	0.001181
97	0.00066	0.001393
98	0.000442	0.001358
99	0.000431	0.000851
100	0.000191	0.000769



**Granted**

The moving party is hereby ORDERED to provide a copy of this Order to any pro se parties who have entered an appearance in this action within 10 days from the date of this order.

**James B. Boyd**  
**District Court Judge**

Date of Order attached  
**EFILED Document**

**CO Garfield County District Court 9th JD**

**Filing Date: Nov 26 2011 9:58AM MST**

**Filing ID: 41067877**

**Review Clerk: Kathy Hall**

**Exhibit B**

**DISTRICT COURT, WATER DIVISION NO. 5,  
STATE OF COLORADO**

Garfield County Courthouse  
109 8th Street, Suite 104  
Glenwood Springs, Colorado 81601

**CONCERNING THE APPLICATION OF  
NATURAL SODA, INC. FOR SURFACE WATER  
RIGHTS, WATER STORAGE RIGHTS AND  
APPROVAL OF A PLAN FOR AUGMENTATION,  
  
IN RIO BLANCO AND GARFIELD COUNTIES.**

**▲ COURT USE ONLY ▲**  
Case Number: 1998CW315

**FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE,  
JUDGMENT AND DECREE OF THE COURT**

This matter comes before the Court, and the Court having reviewed the pleadings, the evidence and the testimony presented to the Court, and having taken judicial notice of the pleadings and documents within the Court's files, does hereby enter the following Findings of Fact, Conclusions of Law, Ruling of the Referee, Judgment and Decree of the Court:

**FINDINGS OF FACT**

1. The name, address and telephone number of the Applicant is as follows:

Natural Soda, Inc.  
3200 County Road 31  
Rifle, Colorado 81650  
(970) 878-3674

The Applicant is also referred to in this Decree as "Natural Soda." Natural Soda, Inc. was substituted as the Applicant in place of AmerAlia, Inc. by order dated December 20, 2000.

2. Applicant filed the Application on December 31, 1998 and an Amended Application on January 7, 1999, and the Water Judge referred it to the Water Referee for Water Division No. 5 for the State of Colorado on January 7, 1999.
3. Timely and adequate notices of this Application, as amended ("Application"), were published as required by law, and the Court has jurisdiction over the subject matter of this proceeding and over all persons and property affected hereby, irrespective of whether



those persons or property owners have appeared. None of the lands or water rights involved in this case are within the boundaries of any designated groundwater basin.

4. The time for filing Statements of Opposition or Entries of Appearance has expired. The following parties filed Statements of Opposition: En Cana Oil and Gas (USA) Inc. ("EnCana"), White River Nahcolite Minerals Limited Liability Company, the State and Division Engineer, the Bureau of Land Management, the Colorado Division of Wildlife and American Soda L.L.P. Shell Frontier Oil and Gas (USA) Inc. was substituted as an Opposer in place of EnCana on April 22, 2005. American Soda L.L.P. withdrew its Statement of Opposition on March 21, 2000. White River Nahcolite Minerals Limited Liability Company withdrew its Statement of Opposition on April 14, 2003. Shell Frontier Oil and Gas (USA) Inc. withdrew its Statement of Opposition on February 7, 2007. The Colorado Division of Wildlife signed a Stipulation with Natural Soda on September 23, 2004. EnCana signed a Stipulation and Agreement with Natural Soda in this case on September 30, 2002. The Bureau of Land Management signed a Stipulation with Natural Soda on August 28, 2009. The State Engineer and Division Engineer for Water Division 6 signed a Stipulation with Natural Soda dated April 7, 2011.
5. The Application filed in this case originally requested determination of conditional surface and water storage rights, underground water rights and approval of a plan for augmentation.
6. Natural Soda has determined that the portion of the Application pertaining to underground water rights and the plan for augmentation are no longer required. Those portions of the Application are hereby dismissed from this case without prejudice.
7. Subsequent to filing of the Application in this case, Natural Soda acquired White River Nahcolite Minerals Limited Liability Company. Natural Soda is the successor in interest to the White River Nahcolite Minerals Limited Liability Company. Natural Soda and its predecessors have operated, and continue to operate, a solution sodium mining operation in Rio Blanco County, Colorado.
8. The Findings of Fact, Conclusions of Law, Judgment and Decree entered in Case No. 88CW420 on August 13, 1991, by the Water Court in and for Water Division No. 5, determined various water rights that were changed and decreed for use as a water supply for the sodium solution mining operation. In addition to the other uses confirmed in this Decree, the water rights confirmed herein will be used under paragraphs 56.c and 56.d of the decree entered in Case No. 88CW420 as a source of replacement water after mining operations end to replace ongoing depletions that will continue to affect the stream after mining operations end.

9. The sodium solution mining operation currently operates pursuant to four federal sodium leases comprising approximately 8,224 acres in the Piceance Creek Basin and Yellow Creek Basin in Rio Blanco County, Colorado (collectively "Sodium Leases"). The Sodium Leases pertain to the following land areas:

Lease No. C-0118326

Township 1 South, Range 98 West, 6th P.M.

Section 13: Lots 9 to 24, inclusive

Section 14: Lot 5, Lots 9 to 23, inclusive

Section 15: Lots 1 to 13 inclusive

Section 21: NE1/4NE1/4, S1/2NE1/4, NE1/4SW1/4, SE1/4

Section 22: Lots 12, 13, and 14

Total area = 2,159.64 Acres

Lease No. C-0118327

Township 1 South, Range 98 West, 6th P.M.

Section 23: Lots 1 to 16 inclusive

Section 24: Lots 1 to 16 inclusive

Section 25: Lots 1 to 16 inclusive

Section 26: Lots 1 to 16 inclusive

Total area = 2,483.36 Acres

Lease No. C-0119986

Township 1 South, Range 98 West, 6th P.M.

Section 21: S1/2SW1/4

Section 27: Lots 1 to 16 inclusive

Section 28: All

Section 29: SE1/4NE1/4, S1/2S1/2, NE1/4SE1/4

Section 33: All

Section 34: Lots 3 to 6 inclusive

Total area = 2,379.60 Acres

Lease No. C-37474 (out of C-0119985)

Township 1 South, Range 98 West, 6th P.M.

Section 16: N1/2NE1/4, SW1/4NE1/4, W1/2, NW1/4SE1/4

Section 17: All

Section 20: NE1/4NE1/4

Section 21: NW1/4NW1/4  
Total area = 1,200.00 Acres

Natural Soda intends to use the water rights decreed herein for the uses decreed herein and to replace depletions to Yellow Creek associated with mining operations on the Sodium Leases upon entry of a future decree for a plan for augmentation or approval of a substitute water supply plan or interruptible water supply agreement under C.R.S. §§ 37-92-308 -309 or successor statutes utilizing the subject water rights, or pursuant to paragraphs 56.c-d of the decree entered in Case No. 88CW420 on August 13, 1991 by the District Court in and for Water Division 5.

10. Request for Conditional Surface Water Right:

A. Name of the surface diversion structure. Raven Pump and Pipeline.

B. Legal description.

Raven Pump and Pipeline is located in the SW1/4 of the NW1/4 of Section 21, Township 1 South, Range 98 West of the 6th P.M. at a point 830 feet from the West Section line and 2135 feet from the North Section line.

C. Source. Yellow Creek, tributary to the White River.

D. Amount. 1.0 c.f.s., conditional, from Yellow Creek:

E. Date of Appropriation. November 14, 1996.

F. How appropriation was initiated. Property lease, preparation of engineering report, field inspection, and formation of intent to appropriate water.

G. Uses. Industrial, domestic and to fill those reservoirs listed in paragraphs 16 and 17 for augmentation of current and future depletions to Yellow Creek associated with mining operations on the Sodium Leases. As noted above, augmentation use can only occur upon approval of a future plan for augmentation or approval of a substitute water supply plan or interruptible water supply agreement under C.R.S. §§ 37-92-308 -309 or successor statutes that utilizes the subject water rights, or pursuant to paragraphs 56.c-d of the decree entered in Case No. 88CW420 on August 13, 1991 by the District Court in and for Water Division 5.

H. Remarks. A map showing the general location of the Raven Pump and Pipeline is attached as Exhibit "A." Simultaneous diversions at the Raven Pump and

Pipeline and the alternate points of diversions described below shall not exceed the amount decreed to the Raven Pump and Pipeline.

11. Request for an Alternate Point of Diversion for the Raven Pump and Pipeline Conditional Surface Water Right

A. Name of the surface diversion structure. Eagle Pump and Pipeline.

B. Legal description.

The Eagle Pump and Pipeline is located in the NW1/4 of the NE1/4 of Section 29, Township 1 South, Range 98 West of the 6th P.M. at a point 1640 feet from the East Section line and 1345 feet from the North Section line.

C. Source. Yellow Creek, tributary to the White River.

D. Date of appropriation. As described in paragraph 10.E.

E. Amount claimed. As described in paragraph 10.D.

F. Uses. As described in paragraph 10.G.

G. Remarks. A map showing the general location of the Eagle Pump and Pipeline is attached as Exhibit "A." The Eagle Pump and Pipeline is an alternate point of diversion for the Raven Pump and Pipeline, described above in paragraph 10. Simultaneous diversions at the Raven Pump and Pipeline, the Eagle Pump and Pipeline and the 84 Ranch Pump and Pipeline shall not exceed the amount decreed to the Raven Pump and Pipeline and shall be limited to that amount of water physically and legally available at the Raven Pump and Pipeline.

12. Request for an Alternate Point of Diversion for the Raven Pump and Pipeline Conditional Surface Water Right

A. Name of the surface diversion structure. 84 Ranch Pump and Pipeline.

B. Legal description.

84 Ranch Pump and Pipeline is located in the NE1/4 of the SW1/4 of Section 29, Township 1 South, Range 98 West of the 6th P.M. at a point 2147 feet from the West Section line and 2092 feet from the South Section line.

- C. Source. Yellow Creek, tributary to White River.
  - D. Date of appropriation. As described in paragraph 10.E.
  - E. Amount claimed. As described in paragraph 10.D.
  - F. Uses. As described in paragraph 10.G.
  - G. Remarks. A map showing the general location of the 84 Ranch Pump and Pipeline is attached as Exhibit "A." The 84 Ranch Pump and Pipeline is an alternate point of diversion for the Raven Pump and Pipeline, described above in paragraph 10. Simultaneous diversions at the Raven Pump and Pipeline, the Eagle Pump and Pipeline and the 84 Ranch Pump and Pipeline shall not exceed the amount decreed to the Raven Pump and Pipeline and shall be limited to that amount of water physically and legally available at the Raven Pump and Pipeline.
13. Measurement and Accounting for Water Use. Natural Soda shall install measuring devices to record diversions of the surface water rights decreed herein into the water storage rights detailed described below. Natural Soda shall also file an annual report with the Division Engineer summarizing diversions into the subject ponds and reservoirs and supply information on replacement of current and future depletions pursuant to an approved substitute water supply plan or interruptible water supply agreement under C.R.S. §§ 37-92-308 -309 or successor statutes, or a judicially approved plan for augmentation or pursuant to paragraph 56.c-d of the decree entered in Case No. 88CW420 on August 13, 1991 by the District Court for Water Division 5. Natural Soda may file such information annually when it submits its annual reports to the Division Engineer under the decree entered in Case No. 88CW420.
14. Feasibility. The conditional surface water rights can be and will be diverted and controlled and the water will be beneficially used and the project can and will be completed with diligence and within a reasonable time.
15. Approval of Surface Water Rights. The conditional Surface Water Right for the Raven Pump and Pipeline with Alternate Points of Diversion at the Eagle Pump and Pipeline and the 84 Ranch Pump and Pipeline is in accordance with law and should be granted subject to the terms of this Decree. Nothing herein shall preclude Natural Soda from diverting water at the Raven Pump and Pipeline, Eagle Pump and Pipeline, and the 84 Ranch Pump and Pipeline at a rate greater than 1 c.f.s. when there is no downstream call.

16. Request for a Conditional Water Storage Right.

A. Name of Structure. Grouse Reservoir.

B. Legal Description.

The left dam abutment for Grouse Reservoir is located in the SW 1/4 of the NW 1/4 of Section 21, Township 1 South, Range 98 West of the 6th P.M., at a point 510 feet from the West Section line and 2010 feet from the North Section line.

C. Date of appropriation. November 14, 1996.

D. How appropriation was initiated. Field inspection, preparation of engineering report, and formation of intent to appropriate water.

E. Date water applied to beneficial use. N/A.

F. Amount claimed. 125 acre feet, conditional.

G. Active capacity. 125 acre feet.

H. Dead storage. 0.0 acre-feet.

I. Surface area. 50 acres.

J. Dam length. 848 feet.

K. Pond depth. 30 feet.

L. Uses. Industrial, domestic, and augmentation of current and future depletions to Yellow Creek associated with mining operations on the Sodium Leases. Augmentation use can only occur upon approval of a future plan for augmentation that utilizes the subject water rights, approval of a substitute water supply plan or interruptible water supply agreement under C.R.S. §§ 37-92-308 -309 or successor statutes, or pursuant to paragraphs 56.c-d of the decree entered in Case No. 88CW420 on August 13, 1991 by the District Court in and for Water Division 5.

M. If off-channel reservoir, rate of diversion in c.f.s. for filling the Reservoir.

1.0 c.f.s. from Yellow Creek, November 14, 1996. The Reservoir is to be filled via the Raven Pump and Pipeline and/or the 84 Ranch Pump and Pipeline and/or the Eagle Pump and Pipeline. These structures are more fully described in the paragraphs 10-12. Nothing herein shall preclude Natural Soda from diverting water at the Raven Pump and Pipeline, Eagle Pump and Pipeline, and the 84 Ranch Pump and Pipeline at a rate greater than 1 c.f.s. when there is no downstream call.

- N. Remarks. Natural Soda will construct the reservoir(s) or pond(s) described in paragraph 17, addressing Alternate Points of Storage for Storage Water Right, as necessary, following completion of a feasibility and/or geotechnical analysis of the Grouse Reservoir site and the alternate points of storage. Natural Soda will not construct any reservoir described herein that would be classified as a jurisdictional dam pursuant to 2 CCR 402-1 Rule 4.A.(6)(a), without first obtaining approval of plans and specifications for such construction of such reservoir(s) from the State Engineer's Office as required pursuant to 2 CCR 402-1 Rule 5, *et. seq.* In addition, Natural Soda shall not construct any reservoir described herein without first obtaining any and all: (1) permitting; (2) administrative approvals; and/or (3) rights-of-way required by applicable Federal, State and/or local laws, statutes and/or regulations. Water stored in Grouse Reservoir and the alternate places of storage listed in paragraph 17 under the water storage right decreed herein shall be limited to a combined total of 125 acre feet in any single water accounting year.

17. Request for Alternate Points of Storage for the Grouse Reservoir Conditional Water Storage Right.

- A. Name of structures and legal descriptions of alternate points of storage.

Name of Structure	Legal Description
<u>Bobcat Pond</u>	The East corner of Bobcat Pond is located in the SW 1/4 of the SW 1/4 of Section 20, Township 1 South, Range 98 West of the 6th P.M. at a point 500 feet from the West Section line and 360 feet from the South Section line.
<u>Lynx Pond</u>	The East corner of Lynx Pond is located in the SW 1/4 of the SW 1/4 of Section 20, Township 1 South, Range 98 West of the 6th P.M., at a point 810 feet from the West Section line and 775 feet from the South Section line.

<u>Lion Pond</u>	The East corner of Lion Pond is located in the SW 1/4 of the SW 1/4 of Section 20, Township 1 South, Range 98 West of the 6th P.M. at a point 1090 feet from the West Section line and 1190 feet from the South Section line.
<u>Bobwhite Reservoir</u>	The left dam abutment for Bobwhite reservoir is located in the NW 1/4 of the SE 1/4 of Section 20, Township 1 South, Range 98 West of the 6th P.M. at a point 1530 feet from the East Section line and 2300 feet from the South Section line.
<u>Magpie Reservoir</u>	The left dam abutment for Magpie Reservoir is located in the SW 1/4 of the N/W 1/4 of Section 29, Township 1 South, Range 98 West of the 6th P.M. at a point 780 feet from the West Section line and 2470 feet from the North Section line.
<u>Lark Bunting Reservoir</u>	The left dam abutment for Lark Bunting Reservoir is located in the NE 1/4 of the N/E 1/4 of Section 19, Township 1 South, Range 98 West of the 6th P.M. at a point 760 feet from the East Section line and 600 feet from the North Section line.
<u>Robin Reservoir</u>	The left dam abutment for Robin Reservoir is located in the SE 1/4 of the N/W 1/4 of Section 30, Township 1 South, Range 98 West of the 6th P.M. at a point 1900 feet from the West Section line and 2390 feet from the North Section line.
<b>TOTAL</b>	Not to Exceed 125 Acre Feet in combination with Grouse Reservoir

- B. Date of appropriation. November 14, 1996.
- C. If off-channel reservoir, rate of diversion in c.f.s. for filling the reservoir(s) or pond(s).
- 1.0 c.f.s. from Yellow Creek: November 14, 1996. Nothing herein shall preclude Natural Soda from diverting water at the Raven Pump and Pipeline, Eagle Pump and Pipeline, and the 84 Ranch Pump and Pipeline at a rate greater than 1 c.f.s. when there is no downstream call.
- C. Uses. As described in paragraph 16.L.
- D. Remarks. In the event that Grouse Reservoir is not constructed, or is constructed with a capacity of less than 125 acre-feet, Natural Soda claims the right to store the remainder of the 125 acre-feet of the Grouse Reservoir Conditional Storage Water Right in the ponds and reservoirs described above in subsection A, filling



such ponds and reservoirs by surface diversions from Yellow Creek made via the Raven Pump and Pipeline and/or the Eagle Pump and Pipeline and/or the 84 Ranch Pump and Pipeline. The surface diversions are more fully described in the paragraphs 10-12. A map showing the general location of the ponds and reservoirs, and the surface diversions is attached as Exhibit "A." Natural Soda will construct the Raven Pump and Pipeline and/or the Eagle Pump and Pipeline and/or the 84 Ranch Pump and Pipeline as necessary, following completion of feasibility and/or geotechnical analyses. Natural Soda shall not construct: (1) the Raven Pump and Pipeline; (2) the Eagle Pump and Pipeline; or (3) the 84 Ranch Pump and Pipeline without first obtaining any and all: (1) permitting; (2) administrative approvals; and/or (3) rights-of-way required by applicable Federal, State and/or local laws, statutes and/or regulations. Water stored under the water storage right decreed herein may be delivered out of the reservoir(s) for augmentation purposes associated with mining operations under the Sodium Leases only under a decreed plan for augmentation or approved substitute water supply plan or interruptible water supply agreement under C.R.S. § 37-92-308 - 309 or successor statutes, or pursuant to paragraphs 56.c-d of the decree entered in Case No. 88CW420 on August 13, 1991 by the District Court in and for Water Division 5. Water stored in Grouse Reservoir and the alternate places of storage listed in this paragraph 17 under the water storage right decreed herein shall be limited to a combined total of 125 acre feet in any single water accounting year.

18. At this time, the maximum number of surface acres associated with each of the ponds and reservoirs and the number of surface acres as a function of the depth of water in each pond or reservoir are not defined. Prior to the use of any of the pond(s) or reservoir(s), Natural Soda shall complete a survey of such pond(s) or reservoir(s) and determine: (1) the relationship between the depth of the water in the pond(s) or reservoir(s); (2) the volume of water in the pond(s) or reservoir(s) at various depths of water in each of the pond(s) or reservoir(s); and (3) the exposed surface acres at various depths of water in the pond(s) or reservoir(s). The survey and the methodology by which this information was determined shall be filed with the Division Engineer.
19. Measurement and Accounting for Water Use. Natural Soda shall install measuring devices to record diversions of the surface water rights decreed herein into the pond(s) or reservoir(s) described in paragraphs 16 and 17. Natural Soda shall also file an annual report with the Division Engineer summarizing diversions into and releases from the subject pond(s) or reservoir(s).
20. Feasibility. The conditional storage water right can be and will be diverted and controlled and the water will be beneficially used and the project can and will be completed with diligence and within a reasonable time.

21. Approval of Storage Water Right. The conditional Water Storage Right for Grouse Reservoir with Alternate Points of Storage at the Bobcat Pond, Lynx Pond, Lion Pond, Bobwhite Reservoir, Magpie Reservoir, Lark-Bunting Reservoir and Robin Reservoir is in accordance with law and should be granted subject to the terms of this Decree.

### **CONCLUSIONS OF LAW**

22. Incorporation. The foregoing Findings of Fact are incorporated herein.
23. Consistent with Law. The water rights decreed herein are contemplated and authorized by law. *See* C.R.S. § 37-92-302(1)(a).
24. Notice and Jurisdiction. The Water Court in and for Water Division No. 5 has jurisdiction over the subject matter of these proceedings and over all persons, owners of property and water rights that may be affected hereby, whether or not they have chosen to appear. The original Application in this matter, the amendments of the Application, and the resume publications of the Application and amendments thereto placed such persons on notice of the relief requested by the Application and granted by this Decree.

### **RULING OF THE REFEREE**

25. Incorporation. The foregoing Findings of Fact and Conclusions of Law are incorporated herein.
26. Conditional Water Rights.
- A. The conditional Surface Water Right for Raven Pump and Pipeline and the Alternate Points of Diversion for the Surface Water Right at the Eagle Pump and Pipeline and the 84 Ranch Pump and Pipeline for 1.0 c.f.s. for industrial, domestic and to fill those reservoirs listed in paragraphs 16 and 17 for augmentation of current and future depletions to Yellow Creek associated with mining operations on the Sodium Leases, is hereby approved subject to the terms and conditions of this Decree. Simultaneous diversions at the Raven Pump and Pipeline, the Eagle Pump and Pipeline and the 84 Ranch Pump and Pipeline shall not exceed 1.0 c.f.s., combined, and shall be limited to that amount of water physically and legally available at the Raven Pump and Pipeline
- B. The conditional Water Storage Right for Grouse Reservoir with Alternate Points of Storage at the Bobcat Pond, Lynx Pond, Lion Pond, Bobwhite Reservoir, Magpie Reservoir, Lark-Bunting Reservoir and Robin Reservoir for 125 acre feet

for industrial, domestic, and augmentation of current and future depletions to Yellow Creek associated with mining operations on the Sodium Leases is hereby approved subject to the terms and conditions of this Decree. Water stored in Grouse Reservoir and the Alternate Points of Storage at the Bobcat Pond, Lynx Pond, Lion Pond, Bobwhite Reservoir, Magpie Reservoir, Lark-Bunting Reservoir and Robin Reservoir under the water storage right decreed herein shall be limited to a combined total of 125 acre feet in any single water accounting year.

27. No Injury. The terms and conditions provided for in this Decree are adequate to assure that no injury to any water users will result from contemplated uses of the conditional water rights decreed herein.
28. Measuring Devices. Pursuant to C.R.S. § 37-92-502(5)(a), the state engineer and the division engineers have authority to order any owner or user of a water right to install and maintain at such owner's or user's expense necessary meters, gauges, or other measuring devices and to report at reasonable times to the appropriate division engineer the readings of such meters, gauges, or other measuring devices. Applicant shall install and maintain, at Applicant's expense, a staff gauge for any reservoir listed above in paragraphs 16 and 17 of this Decree and shall submit to the Division Engineer a table indicating the relationship between the depth and volume of water for any reservoir listed above in paragraphs 16 and 17 of this Decree as soon as is practicable. Applicant shall take monthly end of month gauge readings for any reservoir listed above in paragraphs 16 and 17 of this Decree and submit such readings to the Division Engineer annually at such time as Applicant submits its annual reports to the Division Engineer under the decree entered in Case No. 88CW420. Applicant may incorporate its accounting of the diversion and use of the water rights confirmed herein with its other accounting forms.
29. Priority. This Application in this matter was filed during 1998 and the water rights confirmed herein shall be administered as having been filed during 1998. This Application shall be administered as junior to all applications filed prior to 1998. As between all rights filed in 1998, priorities shall be determined by historical dates of appropriation and not affected by the date of entry of this Decree.
30. No Precedent. Parts of this Decree are the result of substantial negotiations and settlement discussions between the parties. Its terms are based on the specific facts and circumstances of this case and compromises by the parties. By stipulating to the entry of this decree, no party in this case intends that it become a precedent to resolve issues in any other case and all parties reserve their rights to challenge the engineering analysis conducted upon, and terms and conditions to be applied to, any other application for approval of a plan for augmentation or other Water Court applications.

31. Diligence. The conditional water rights awarded herein are continued in full force and effect for the following diligence period, which is six years from the date of the Water Judge's Order. If Natural Soda desires to maintain the conditional surface water rights and storage water rights, an application for finding of reasonable diligence shall be filed in the District Court for Water Division 6 by the end of the month six years from the date of the Water Judge's Order, or a showing made that the conditional surface and storage rights decreed herein have become absolute by reason of completion of the appropriation. *See* Senate Bill 09-15; Order of the Chief Justice of the Colorado Supreme Court, dated April 23, 2009. In determining reasonable diligence, the Court shall consider the water rights described herein and the water rights determined herein, and those water rights decreed and determined pursuant to the Final Decree in Case No 88CW420 to be a unified water system so that work done on any one part of the system shall be considered to be the exercise of reasonable diligence in the development of conditional water rights decreed herein and in Case No. 88CW420.
32. Pursuant to Rule 9 of the Uniform Local Rules for all State Water Court Divisions, upon the sale or transfer of the conditional water rights decreed herein, the transferee shall file with Division 6 Water Court, a notice of transfer which shall state:
  - A. The title and case number of this Case No. 98CW315;
  - B. The description of the conditional water right to be transferred;
  - C. The name of the transferor;
  - D. The name and mailing address of the transferee; and,
  - E. A copy of the recorded deed.

The owner of said conditional water rights shall also notify the clerk of the Water Court for Water Division 6 of any change of mailing address. The clerk shall place any notice of transfer or change of address in the case file of this Case No. 98CW315 and in the case file (if any) in which the court first made a finding of reasonable diligence.
33. Filing With Water Clerk. It is ordered that this Decree shall be filed with the water clerk and shall become effective upon such filing.
34. Filing With State and Division Engineer. It is further ordered that a copy of this Decree shall be filed with the appropriate Division Engineer and the State Engineer.

Dated this 25<sup>th</sup> day of October, 2011.



---

**Holly Kirsner Strablizky**  
Division 5 Water Referee

**JUDGMENT AND DECREE OF THE COURT**

**THE COURT FINDS THAT NO PROTEST WAS ENTERED IN THIS MATTER. THEREFORE, THE FOREGOING RULING IS CONFIRMED AND APPROVED AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.**

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

---

James Boyd  
Water Judge  
Water Division 5

This document constitutes a ruling of the court and should be treated as such.

**Court Authorizer**

**Comments:**

Exhibit A to the Ruling of the Referee is incorporated into this Decree. Any request for a further finding of reasonable diligence shall be filed in November 2017.

# EXHIBIT A

