



WYOMING DEPARTMENT OF AGRICULTURE

ANALYTICAL SERVICES

1174 Snowy Range Road

Laramie, WY 82070

Internet: <http://wyagric.state.wy.us/aslab/aslab.htm>

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ANALYTICAL REPORT

Water Supply

Irrigation, Production Agriculture

Roy Ready
123 S. 12th Street
Thermopolis, WY 82443

Phone No: 307-864-5738

Lab Number: 69563
Date Collected: 17-Mar-2008
Date Received: 19-Mar-2008
Date Completed: 24-Mar-2008

Purchase Order No:

WDA Invoice No 108899

Amount Due: \$ 70.00

Amount Paid: \$ 70.00

Net 30 Days, Payable to: Wyoming Department of Agriculture

Sample ID: Bull Pasture Coal Draw Bridge
Analysis: Irrigation

ANALYTE	UNITS	RESULT
Cations		
Calcium	mg/L	390
Magnesium	mg/L	59
Sodium	mg/L	170
Potassium	mg/L	35
Metals		
Strontium	mg/L	5.6
Other Analytes		
pH	pH Units	7.8
Conductivity	umhos/cm	2700

ANALYTE	UNITS	RESULT
Anions		
Carbonate	mg/L	0
Bicarbonate	mg/L	320
Chloride	mg/L	110
Fluoride	mg/L	1.7
Nitrate as N	mg/L	<0.05
Nitrite as N	mg/L	<0.05
Sulfate	mg/L	1200
TDSbySummation	mg/L	2100
SAR		2.1
T. Alk. as CaCO3	mg/L	260
Hardness as CaCO3	mg/L	1220
Boron		0.74

Ref.	Analyte	Method	Units	Result
1				
2				
3				
4				

Prepared By: mkw *RWH*

I hereby certify that the above sample was analyzed by myself or my assistant.

Section Supervisor

Marko Sedell
State Chemist/Lab Manager



**Wyoming Department of Agriculture
Analytical Services**

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IRRIGATION WATER QUALITY ANALYSIS

Date Received: 19-Mar-08			Lab No: 69563		
CATIONS	mg/L	meq/L	ANIONS	mg/L	meq/L
Calcium	390.0	19.46	Carbonate	0.0	0.00
Magnesium	59.0	4.85	Bicarbonate	320.0	5.24
Sodium	170.0	7.39	Chloride	110.0	3.10
Potassium	35.0	0.90	Fluoride	1.7	0.09
			Nitrate as N	0.0	0.00
			Nitrite as N	0.0	0.00
			Sulfate	1200.0	24.98
T. CATIONS		32.60	T. ANIONS		33.42
Conductance		2700	Boron		0.74
TDS by Summation		2100	T Alk CaCO3		260
pH		7.8			

ANALYSIS

S A R (sodium)	2.12	Residual NaCO3	0.00
Sp Cond (salinity)	2700	Boron	0.74

CLASSIFICATION

S A R (sodium)	1	Residual Na ₂ CO ₃	1
Sp Cond (salinity)	4	Boron	3

ERROR CHECKING

$$\% \text{ ERROR} = \frac{|(\text{meq/L cations} - \text{meq/L anions})| * 100}{(\text{meq/L cations} + \text{meq/L anions})} = 1.24 \text{ (<5\%)}$$

$$\text{TDS/COND} = \frac{(\text{ROE mg/L})}{(\text{Specific Conductance})} = 0.78 \text{ (0.65 TO 0.85)}$$

$$\text{IONIC} = \frac{(\text{meq/L cations} + \text{meq/L anions})/2}{(\text{Sp. Conductance})/100} = 1.22 \text{ (0.8 TO 1.2)}$$

OVERALL = 0.007888 MAX. OVERALL ALLOWED = 0.0531