

**Client:** Ensign Energy Services  
**Well:** Green 13-24  
**State:** CO  
**Country:** USA

**Field:** Wattenberg  
**County:** Weld  
**State:** CO  
**Country:** USA

**Client Rep:** John Schmitt  
**Date Prepared:** 01/21/2021

**Prepared By:** Shadoc Jensen  
**Service Company:** Rock Hard Cementing

## Cementing Treatment Report



## Post Job Log



Service Date:	1/21/2021	Well Name:	Green
Customer:	Ensign Energy Services	Well Number:	13-24
Address:	15015 Vickery Drive	County:	Weld
City:	Houston	State:	CO
State:	TX	API Number:	05-123-22330
Customer Rep:	John Schmitt	Legals:	NWSW Sec.24 T7N, 65W
Supervisor:	Shadde Jensen	Ticket Number:	2104
Job Type:	PTA		

### Casing Data

Description:	Size (in)	Weight (lb/ft)	Grade	Max PSI	TVD (ft)	MD (ft)	Tools:	MD (ft)
Casing	8 5/8	24			495'	495'		
Casing	4 1/2	10.5			7420'	7420'		
1-Tubing	2 3/8	4.7			1890'	1890'		
2-Tubing	2 3/8	4.7			699'	699'		

### Fluid & Cement Data

Description With/Without Additives	Sacks	Volume (bbls)	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)	Returned to Surface (bbl)	Depth (ft)
1-G neat	100	20.4	15.8	1.15	5		1890'
1-Displacement		6.2	8.33				
2-G neat	305	62	15.8	1.15	5		699'
3-G neat (topoff)	15	3.1	15.8	1.15	5		48'

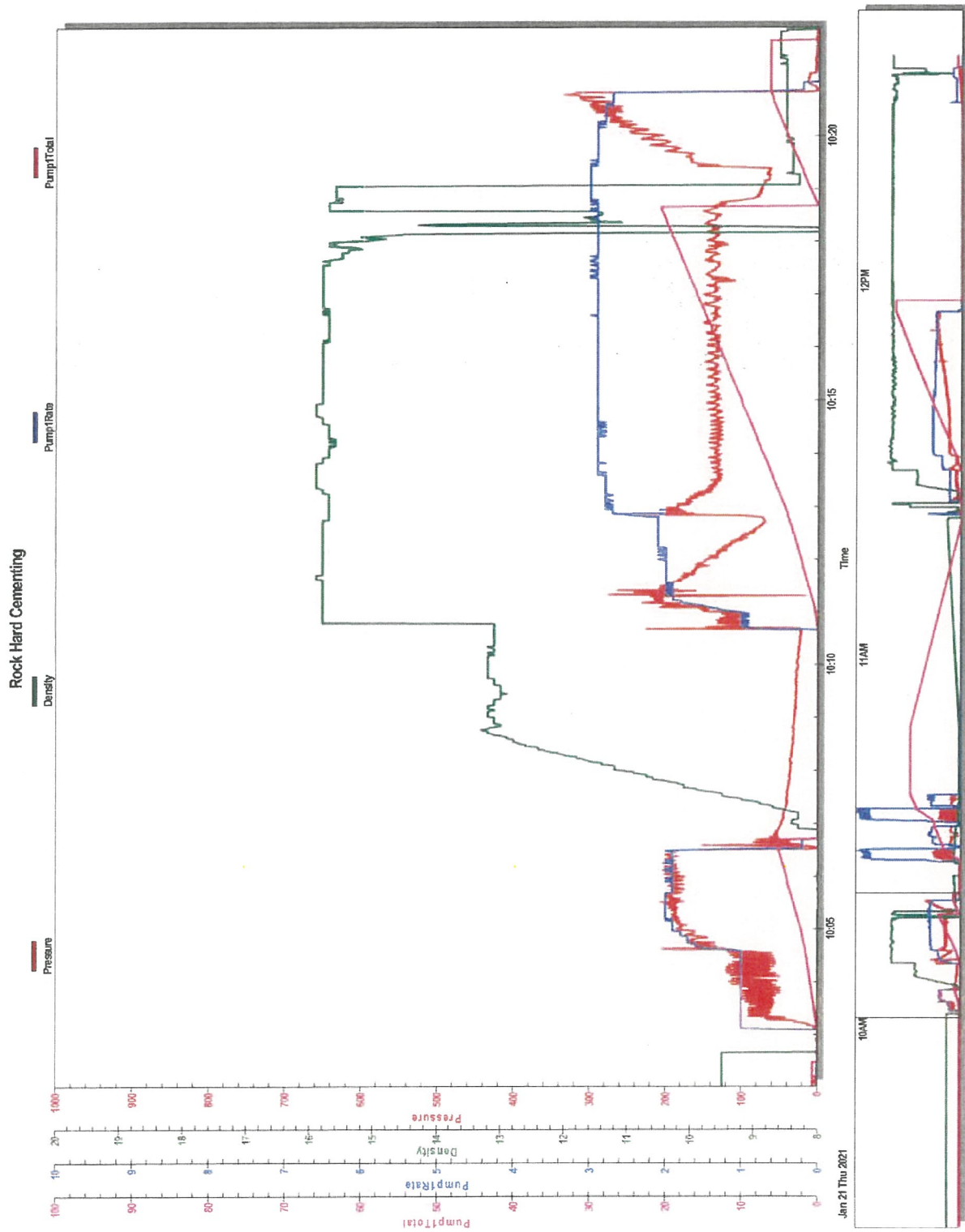
### Plug Data

Type of Cement	Tools in Hole	Tool Depth in Hole	Height of Plug	Bottom of Plug	Top of Plug
1-G neat			270'	1890'	1620'
2-G neat			699'	699'	0'
3-G neat (topoff)			48'	48'	0'

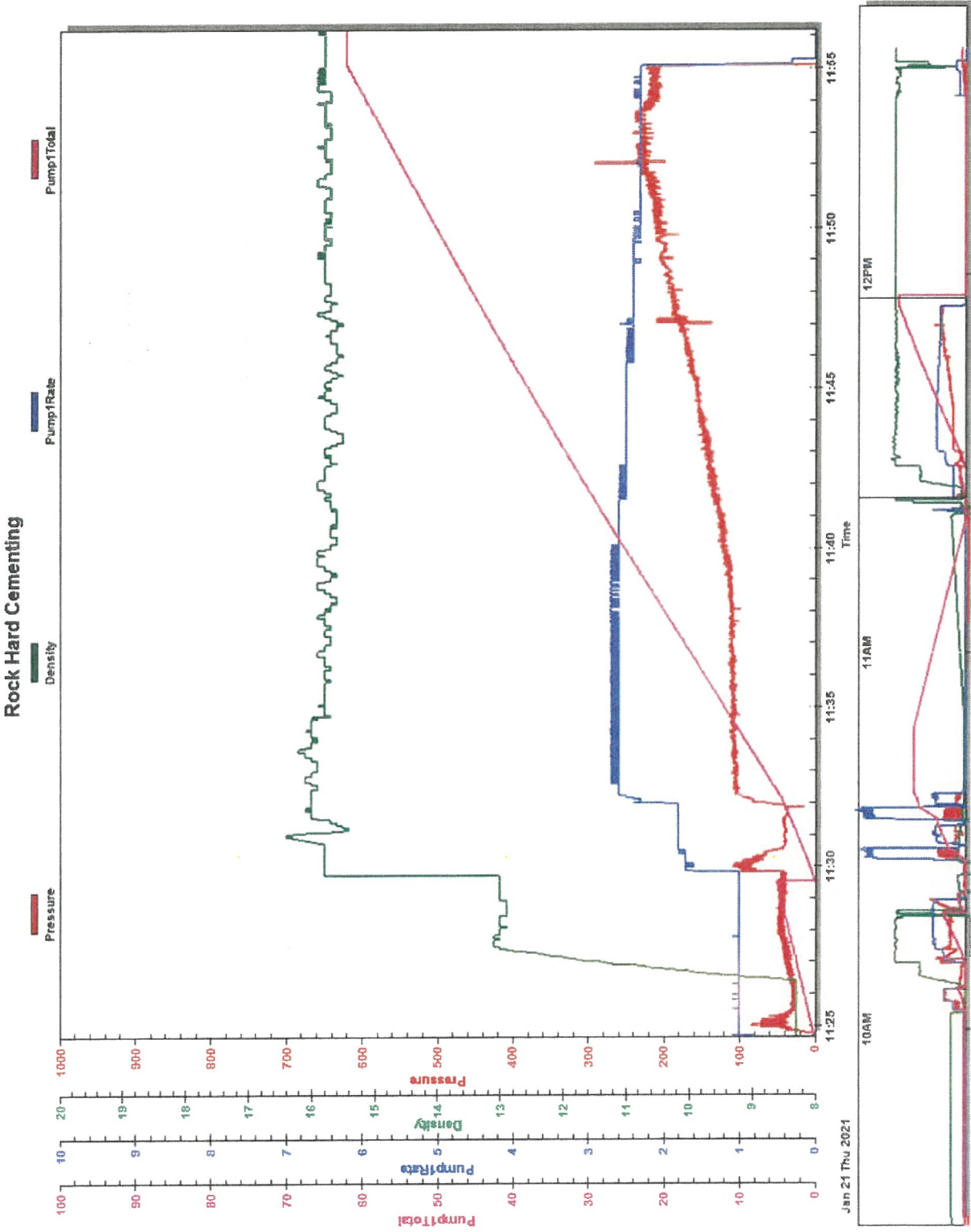
### Squeeze Data

Type of Cement	Tools in Hole	Tool Depth in Hole	Sacks in Formation	Sacks Below Tool	Sacks on top of tool

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Time	Pressure (psi)	Density (ppg)	Pump1Rate (bpm)	Pump1Total (bbl)	
10:02:10	2.00	9.50	0.00	0.60	
freshwater ahead to break circulation					
10:03:10	5.00	8.00	1.00	0.10	
10:04:10	54.00	8.00	1.00	1.10	
10:05:10	190.00	8.00	2.00	2.50	
10:06:10	192.00	7.90	1.90	4.40	
shutdown to mix up cement					
10:07:10	45.00	8.30	0.00	0.00	
10:08:10	35.00	11.60	0.00	0.00	
10:09:10	29.00	13.20	0.00	0.00	
10:10:10	26.00	13.20	0.00	0.00	
pump cement					
10:11:10	182.00	15.80	1.70	0.50	
10:12:10	119.00	15.80	2.00	2.50	
10:13:10	158.00	15.70	2.80	4.80	
10:14:10	128.00	15.60	2.90	7.60	
10:15:10	141.00	15.80	2.90	10.50	
10:16:10	129.00	15.70	2.90	13.40	
10:17:10	146.00	15.80	2.90	16.40	
10:18:10	145.00	9.00	2.90	19.30	
pump displacement					
10:19:10	64.00	8.30	3.00	1.50	
10:20:10	263.00	8.50	2.90	4.50	
shutdown					
10:21:10	12.00	8.50	0.00	6.30	
10:22:10	1.00	8.60	0.00	0.00	
wait for rig to lay down tubing					
10:23:10	3.00	8.60	0.00	0.00	
11:24:16	-4.00	13.80	0.00	0.00	
freshwater ahead to break circulation					
11:25:16	47.00	8.30	1.00	0.60	
11:26:16	26.00	8.30	1.00	1.60	
11:27:16	33.00	12.30	1.00	2.70	
11:28:16	42.00	13.00	1.00	3.70	
11:29:16	39.00	13.00	1.00	4.70	
pump cement					
11:30:16	72.00	15.80	1.70	1.00	
11:31:16	41.00	15.50	1.80	2.70	
11:32:16	100.00	16.00	2.60	4.70	
11:33:16	109.00	15.90	2.70	7.30	
11:34:16	114.00	16.10	2.70	10.00	
11:35:16	106.00	15.80	2.60	12.60	
11:36:16	106.00	15.70	2.60	15.30	
11:37:16	114.00	15.80	2.60	17.90	
11:38:16	112.00	15.60	2.70	20.60	
11:39:16	117.00	15.70	2.60	23.30	
11:40:16	124.00	15.60	2.60	25.90	
11:41:16	125.00	15.70	2.60	28.50	
11:42:16	139.00	15.80	2.50	31.10	
11:43:16	146.00	15.60	2.50	33.60	
11:44:16	154.00	15.60	2.50	36.20	
11:45:16	156.00	15.70	2.50	38.70	
11:46:16	166.00	15.60	2.40	41.20	
11:47:16	189.00	15.90	2.40	43.60	
11:48:16	194.00	15.70	2.40	46.00	
11:49:16	202.00	15.90	2.40	48.40	
11:50:16	212.00	15.80	2.30	50.80	
11:51:16	206.00	15.70	2.30	53.10	
11:52:16	220.00	15.80	2.30	55.40	
11:53:16	219.00	15.80	2.30	57.70	
11:54:16	210.00	15.70	2.30	60.10	

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11:55:16	-4.00	15.80	0.30	62.00	
shutdown, good cement to surface					
11:56:16	-6.00	15.90	0.00	62.00	
11:57:16	-6.00	15.90	0.00	0.00	
wait for rig to lay down tubing and pull BOP					
11:58:16	-7.00	15.90	0.00	0.00	
12:28:16	-10.00	15.90	0.00	0.00	
topoff well with cement					
12:29:16	-5.00	15.70	0.50	0.30	
12:30:16	-6.00	15.50	0.50	0.80	
12:31:16	-6.00	15.70	0.50	1.30	
12:32:16	-5.00	15.30	0.50	1.80	
12:33:16	1.00	11.90	0.80	2.50	
shutdown					
12:34:16	-5.00	15.80	0.00	3.10	
12:35:16	-7.00	15.80	0.00	3.10	

[illegible]

**Client:** Ensign Energy Services  
**Well:** Green 13-24  
**State:** CO  
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### Recorded Job Parameter Summary:

Total Slurry Volume (bbl)	Total Displacement Volume (bbl)	Total Pump Time (min)
		60.42

Maximum Treatment Pressure: 335.00 psi  
 Maximum Slurry Rate: 62.00 bbl/min  
 Maximum Hydraulic Horsepower:

Average Treatment Pressure: 12.29 psi  
 Average Slurry Rate: 0.00 bbl/min  
 Average Hydraulic Horsepower:

Minimum Treatment Pressure: -55.00 psi  
 Minimum Slurry Rate: 0.00 bbl/min  
 Minimum Hydraulic Horsepower:

### Job Message Summary:

#	Time	Message	Treating Pressure (psi)	Rate (bbl/min)	Density (lb/gal)	Total (bbl)
1	09:30:10	Start	-42.00	0.60	9.50	0.00
2	12:36:01	Stop	-6.00	3.10	15.80	0.00
3	10:20:46	Max Pressure	335.00	6.10	8.50	2.70
4	11:55:05	Max Rate	218.00	62.00	15.80	2.30
5	11:23:24	Min Pressure	-55.00	0.00	8.30	0.00
6	10:02:30	Min Rate	0.00	0.00	9.50	0.00

#### Notice:

This information is presented in good faith, but no warranty is given. No liability is assumed for advice or recommendations made. The Operator has superior knowledge of the well, the reservoir, the field and conditions affecting them. If the Operator is aware of any conditions whereby a neighboring well or wells might be affected by the treatment proposed herein it is the Operator's responsibility to notify the owner or owners of the well or wells accordingly.



## RMWS - Service Ticket:

**Rocky Mountain Wireline Service**  
2144 Hwy 6 & 50  
Grand Junction, CO 81505  
970-245-9828



**Ticket Number**

**117826**

**Date**

1/20/2021

**Well**

Green 13-24

**Field**

Wattenberg

**County / State**

Weld / Colorado

### Services provided for:

ENSIGN WELL SERVICE  
2154 Hwy 6 & 50  
Grand Junction, Colorado 81505

### Services ordered by:

Logan Hancock  
(970)712-4498  
Logan.Hancock@ensignenergy.com

## Job Data

### Field Office

Johnstown- **Line Truck #**  
CO 222

**Crane #**

**Pickup  
Truck #**  
71

**Explosives Permit  
#**

### Crew Members

G. Graham, G. Torres, E. Clark

**CSG Size**

4.5

**WT**

10.5

**Zero**

GL W/KB 10'

**Fluid**

Water

**Level**

Surface

**RMWS TD**

7170

**Corrected**

**To Agree  
With**

**Dated**

**Consultant**

### Job Notes

R354

## Travel

### Report To Shop

1/20/2021 9:30 AM MST

### Arrive At Location

1/20/2021 12:45 PM MST

### On Well

1/20/2021 2:00 PM MST

### Off well

1/20/2021 5:55 PM MST

### Depart Location

1/20/2021 6:15 PM MST

### Return To Shop

1/20/2021 6:55 PM MST

### Travel Notes

## Activity

### General - Bid Work

Description	From	To	Units Used
Ensign - Packoff			1.00 Days

### Logging - Bid Work

Description	From	To	Units Used
Ensign - CBL 2,000' +		0	2100 1.00 Units

### Miscellaneous - Bid Work

Description	From	To	Units Used
Ensign - 4 1/2" 10K CIBP @ 5,000' +		7155	1.00 Units
Ensign - Dump Bail 2 SX Cement (STANDARD)		7153	1.00 Units
Ensign - 4 1/2" 10K CIBP @ 5,000' +		6865	1.00 Units
Ensign - 4 1/2" 10K CIBP @ 5,000' or less		2500	1.00 Units
Ensign - Dump Bail 2 SX Cement (STANDARD)		2498	1.00 Units
Ensign - Dump Bail 2 SX Cement (STANDARD)		6863	1.00 Units

### Pipe Recovery - Bid Work

Description	From	To	Units Used
Ensign - 4 1/2" Jet Cutter		1820	1.00 Units

## Signatures

## RMWS - Service Ticket:

### Rocky Mountain Wireline Service

2144 Hwy 6 & 50  
Grand Junction, CO 81505  
970-245-9828



### Services provided for:

ENSIGN WELL SERVICE  
2154 Hwy 6 & 50  
Grand Junction, Colorado 81505

### Services ordered by:

Logan Hancock  
(970)712-4498  
Logan.Hancock@ensignenergy.com

### Ticket Number

117827

### Date

1/21/2021

### Well

Green 13-24

### Field

Wattenberg

### County / State

Weid / Colorado

## Job Data

### Field Office

Johnstown-  
CO

Line Truck #  
222

Crane #

Pickup  
Truck #  
71

Explosives Permit  
#

### Crew Members

G. Graham, G. Torres, E. Clark

CSG Size

4.5

WT

10.5

### Zero

GL W/KB 10'

### Fluid

Water

### Level

Surface

RMWS TD

1820

Corrected

To Agree  
With

Dated

Consultant

### Job Notes

R354

## Travel

### Report To Shop

1/21/2021 6:00 AM MST

### Arrive At Location

1/21/2021 7:00 AM MST

### On Well

1/21/2021 7:20 AM MST

### Off well

1/21/2021 7:50 AM MST

### Depart Location

1/21/2021 8:10 AM MST

### Return To Shop

1/21/2021 8:35 AM MST

### Travel Notes

## Activity

### Pipe Recovery - Bid Work

### Description

Ensign - 4 1/2" Jet Cutter (LEGACY)

From

To

Units Used

1815

1.00 Units

## Signatures

### Authorization Signature

### Authorization Notes

1/21/2021 8:05 AM MST

### AFE

Cost Code

Well / Lease

Green 13-24

Approver Name

### Stamp

AK Welding and Fabrication  
670 Mark Rd  
Cheyenne, WY 82007 US  
akweldingandfabrication@gmail.com  
www.akweldingandfabrication.com

## Invoice

**BILL TO**

Matthew McGraw  
Ensign Well Services Inc.  
24020 Weld County Rd 46  
La Salle, CO 80645  
United States

**SHIP TO**

Matthew McGraw  
Ensign Well Services Inc.  
24020 Weld County Rd 46  
La Salle, CO 80645  
United States

INVOICE #	DATE	TOTAL DUE	DUE DATE	TERMS	ENCLOSED
388	01/29/2021		02/28/2021	Net 30	

**P.O. NUMBER**  
USR0039543

SERVICE	DESCRIPTION	QTY	RATE	AMOUNT
Plug and Abandon well	cut and cap well and haul away scrap iron for Green 13-24 on Jan 28 2021	1		
Plug and Abandon well	cut and cap well and haul away scrap iron for Green 22-34 on Jan 28 2021	1		

Thank you for your Business Checks can be mailed to 670 Mark Rd Cheyenne  
Wy 82007

**BALANCE DUE**