



Magnum Cementing Services LLC LLC  
600 17th Street, Ste 2800S  
Denver, Colorado 80202

Field Ticket

Job Date: August 25, 2020  
Job Number: JOB00086592

Bill To:  
PDC Energy  
PO Box 26  
  
Bridgeport , West Virginia  
26330

UWI: Lesser 7-21  
Surface: Greeley, CO  
Pricing Area: Area 1  
Competitive: STDU  
Depth: 6997  
Job Type: Balanced Plug

	Units	Per	Unit Price	Cost
<b>Services and Equipment</b>				
PCMP Add Time: Operating		3 HR		
PCMP Unit Travel		60 MI		
PCMP - Primary Set Up (6 Hr min)		7,000 FT		
<b>Equipment</b>				
MDAC		1 Job		
Communication Headsets		2 RDIO		
<b>Material Handling &amp; Delivery</b>				
Bulk Material Blending	213.53	SKS		
Bulk Material Blending	214.68	SKS		
Bulk Material Delivery	12,811.8	SKMI		
Bulk Material Delivery	12,880.8	SKMI		
<b>Products &amp; Materials</b>				
MCA-1		100 LB		
MCR-3		27.8 LB		
MCR-3		27.8 LB		
MCDF-P		18.53 LB		
MCDF-P		18.53 LB		
MCDF-L		2 GAL		
MCDF-L		2 GAL		
MAG S 14.1		213 SKS		
MAG S 14.1		213 SKS		

Customer Stamp:

SERVICES PROVIDED BY MAGNUM CEMENTING SERVICES LTD. ARE GOVERNED BY AND SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.

Received By: Ryan Beam 970-405-8585

Comments:

All totals are estimated (including mileage), and are subject to change depending on actual amounts used. Applicable taxes will be added to the invoice. Prices may change without notice due to fluctuating market conditions. Prices are in effect for 30 days from date shown.



## US Treatment Report

**Customer:** PDC Energy  
**Rep:** Ryan Beam  
**Supervisor:** Travis Tolman  
**Job Type:** Remedial  
 Balanced Plug

**Rig:**  
**Well:** Lesser 7-21  
**UWI:** Lesser 7-21  
**Surface:** Greeley, CO

**Job #:** JOB00086592  
**Job Date:** Aug 25 @ 00:00  
**Time Requested:** Aug 25 @ 08:00  
**Time Arrived:** Aug 25 @ 08:00  
**Time Released:** Aug 25 @ 17:00

213 sk MAG S 14.1 + 0.15% MCR-3 + 0.10% MCDF-P + 0.05% MCA-1

Yield: 1.28 ft<sup>3</sup>/sk = 48.56bbls      Mix Water: 5.89 gal/sk = 1254.57gal

213 sk MAG S 14.1 + 0.05% MCR-3 + 0.10% MCDF-P

Yield: 1.28ft<sup>3</sup>/sack = 48.56bbls      Mix Water: 5.89gal/sack = 1254.57gal

BHCT (F)	131	BHST (F)	161	Casing 1 Casing Size (in)	8.625
Hole Size (in)	8	Max Pressure (psi)	1500	Mud Density (lb/gal)	10
Mud Type	WBM	TMD (ft)	7000	Tubing (in)	2.875
Tubing Grade	PH6	TVD (ft)	7000		

Treatment Info:      Sacks Used: 0      Sacks Not Used: 0

Preflush: 27bbls Fresh Water

Circulation Time: 0.5

Displace:

Slurry Temp:      Bulk Sample: No

Water Temp:      Water Sample: No

Bulk Temp: 68      Slurry Sample: Yes

Slurry Returns:      Plug Bumped:      Pump Out Lines: No      Float Held:

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/min	Treatment Detail
08:00	0.00					Arrive on Location - Met with company man to discuss job and safety
09:00	0.00					Safety Meeting - Held safety meeting with company man, rig hands and crew to discuss job and safety
09:20	725.00		27	27	2	Fill Lines - Load well and lines with fresh water
09:44	2,480.00					Start Pressure Test - Pressure test with fresh water
09:55	808.00		48.5	48.5	2.4	Pump Slurry - Pump 213sks/48.5bbls of lead cement at 14.1#-1.28Y-5.89gps
10:20	42.00		29	29	2	Displace - Displace with fresh water, calculated displacement 34bbls, calculated top at 6228'
10:36	0.00					Stop Pumping - Actual displacement was 29bbls
10:38	0.00					Open Valve to Balance Plug - Well is balanced
10:44	0.00					Rig Pulls Tubing - Rig tagged cement top at 6228'
15:41	395.00		27	27	3	Fill Lines - Load well and lines with fresh water
15:55	817.00		48.5	48.5	3.8	Pump Slurry - Pump 213sks/48.5bbls of lead cement at 14.1#-1.28Y-5.89gps, calculated top at 3203'
16:12	49.00		14.5	14.5	3.5	Displace - Displace with fresh water, calculated displacement 16.8bbls

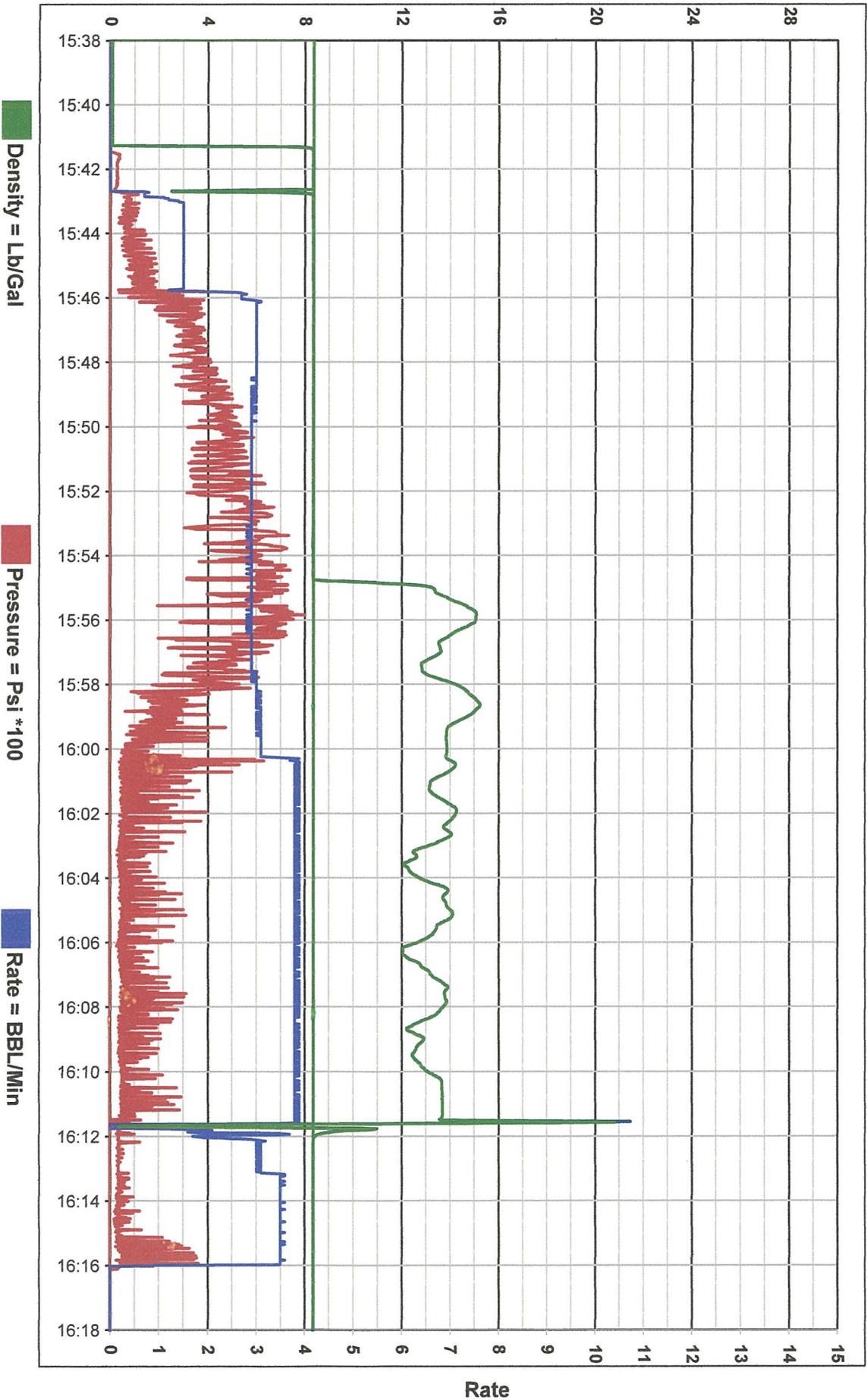


Customer: PDC  
Date: Aug 25 2020  
Ticket: 86592

Well Name: Lesser 7-21  
UWI: Lesser 7-21  
Job Type: Plug 2

Unit  
1507

### Pressure and Density





Magnum Cementing Services LLC LLC  
 600 17th Street, Ste 2800S  
 Denver, Colorado 80202

Field Ticket

Job Date: August 26, 2020  
 Job Number: JOB00086692

Bill To:  
 PDC Energy  
 PO Box 26  
  
 Bridgeport , West Virginia  
 26330

UWI: Lesser 7-21  
 Surface: Greely, CO  
 Pricing Area: Area 1  
 Competitive: STDU  
 Depth: 6997  
 Job Type: Balanced Plug

	Units	Per	Unit Price	Cost
<b>Services and Equipment</b>				
PCMP Unit Travel	60	MI		
PCMP Add Time: Operating	1	HR		
PCMP - Primary Set Up (6 Hr min)	3,687	FT		
Crew Travel	60	MI		
<b>Equipment</b>				
MDAC	1	Job		
Communication Headsets	2	RDIO		
<b>Material Handling &amp; Delivery</b>				
Bulk Material Blending	262.86	SKS		
Bulk Material Delivery	15,771.6	SKMI		
<b>Products &amp; Materials</b>				
MCA-1	226.2	LB		
MCDF-P	22.62	LB		
MCDF-L	2	GAL		
MAG S 14.1	260	SKS		
<b>Customer Stamp:</b>				
<p><u>SERVICES PROVIDED BY MAGNUM CEMENTING SERVICES LTD. ARE GOVERNED BY AND SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.</u></p> <p>Received By: Ryan Beam 970-405-8585            Comments:</p>				

All totals are estimated (including mileage), and are subject to change depending on actual amounts used. Applicable taxes will be added to the invoice. Prices may change without notice due to fluctuating market conditions. Prices are in effect for 30 days from date shown.



## US Treatment Report

**Customer:** PDC Energy  
**Rep:** Ryan Beam  
**Supervisor:** Travis Tolman  
**Job Type:** US Remedial  
 Balanced Plug

**Rig:** Ensign 352  
**Well:** Lesser 7-21  
**UWI:** Lesser 7-21  
**Surface:** Greely, CO

**Job #:** JOB00086692  
**Job Date:** Aug 26 @ 00:00  
**Time Requested:** Aug 26 @ 08:00  
**Time Arrived:** Aug 26 @ 08:00  
**Time Released:** Aug 26 @ 16:00

260 sk    MAG S 14.1 + 1.00% MCA-1 + 0.10% MCDF-P

Yield: 1.28ft<sup>3</sup>/sack = 59.27bbls      Mix Water: 5.89gal/sack = 1531.4gal

BHCT (F)	131	BHST (F)	161	Casing 1 Casing Size (in)	8.625
Hole Size (in)	8	Max Pressure (psi)	1500	Mud Density (lb/gal)	10
Mud Type	WBM	TMD (ft)	3687	Tubing (in)	2.875
Tubing Grade	PH6	TVD (ft)	3687		

Treatment Info:    Sacks Used: 0      Sacks Not Used: 0

Preflush: 28bbls Fresh Water & 25bbls Fresh Water

Circulation Time: 0.5

Displace: 15bbls Fresh Water & 4.5bbls Fresh Water

Slurry Temp:                      Bulk Sample: No

Water Temp:                      Water Sample: No

Bulk Temp: 68                      Slurry Sample: Yes

Slurry Returns:                      Plug Bumped:                      Pump Out Lines: No                      Float Held:

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/mi n	Treatment Detail
08:00	0.00					Arrive on Location - Met with company man to discuss job and safety
09:00	0.00					Safety Meeting - Held safety meeting with company man, rig hands and crew to discuss job and safety
09:21	688.00		28	28	3	Fill Lines - Load well and lines with fresh water
09:31	822.00		10.7	10.7	3	Pump Slurry - Pump 47sks/10.7bbls of lead cement at 14.1#-1.28Y-5.89gps, Needed to bring top up on 2nd plug 3515', tagged at 3687'
09:35	110.00		15	15	3	Displace - Displace with fresh water, calculated displacement 16bbls
09:41	0.00					Stop Pumping - Actual displacement was 15bbls
09:43	0.00					Open Valve to Balance Plug - Well is balanced
09:46	0.00					Rig Pulls Tubing -
10:44	471.00		25	25	3	Fill Lines - Load well and lines with fresh water
10:52	399.00		48.8	48.8	3.2	Pump Slurry - Pump 214sks/48.8bbls of lead cement at 14.1#-1.28Y-5.89gps
11:09	108.00		4.5	4.5	3.2	Displace - Displace with fresh water
11:11	0.00					Stop Pumping
11:13	0.00					Open Valve to Balance Plug

11:15	0.00					Rig Pulls Tubing - Rig tagged plug at 1190'
11:30	0.00					Wash Up Truck
12:30	476.00		100	100	3	Displace - Roll hole with fresh water, set at 1108'
13:02	0.00					Stop Pumping
13:15	394.00		50	50	3	Displace - Roll hole with fresh water
13:32	0.00					Stop Pumping
14:59	0.00					Released from location, issues with rig.
15:00	0.00					Rig Out
16:00	0.00					Leave Location

\_\_\_\_\_



Customer: PDC

Date: Aug 26 2020

Ticket: 86692

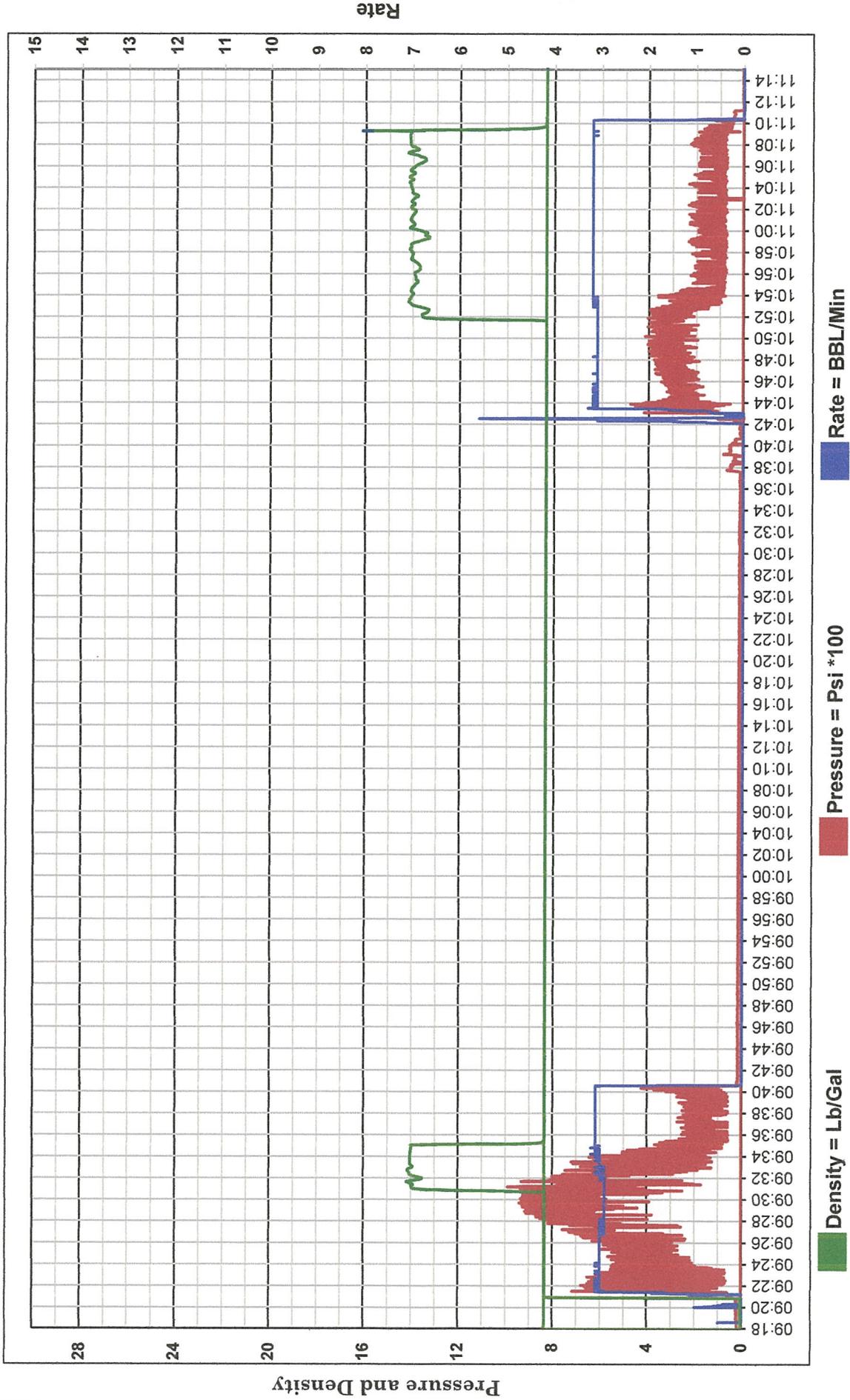
Well Name: Lesser 7-21

UWI: Lesser 7-21

Job Type: Plug 3+4

Unit

1507





Customer: PDC

Date: Aug 26 2020

Ticket: 86692

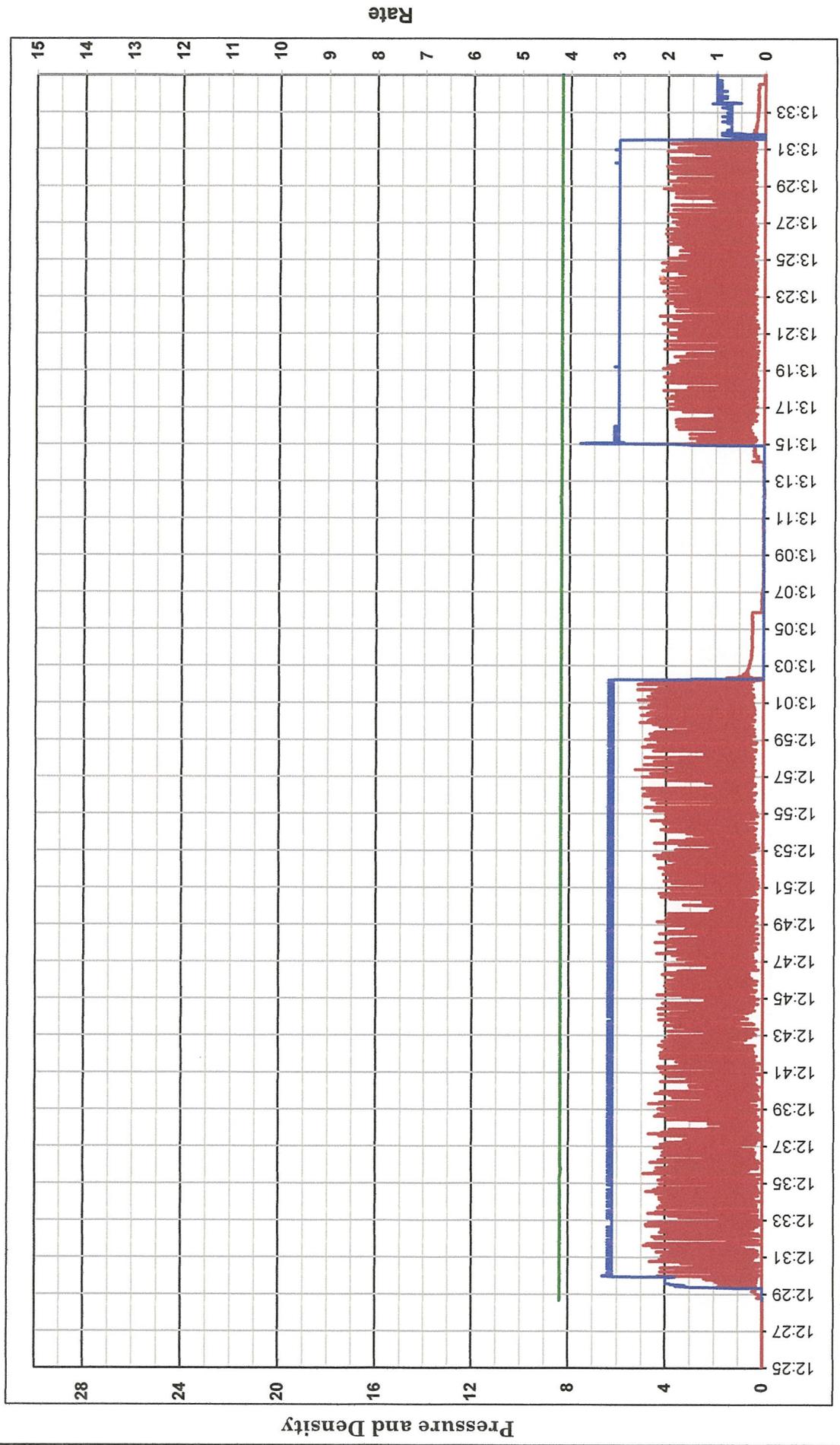
Well Name: Lesser 7-21

UWI: Lesser 7-21

Job Type: Roll Hole

Unit

1507



Density = Lb/Gal  
Pressure = Psi \* 100  
Rate = BBL/Min



Magnum Cementing Services LLC LLC  
 600 17th Street, Ste 2800S  
 Denver, Colorado 80202

Field Ticket

Job Date: August 27, 2020  
 Job Number: JOB00086768

Bill To:  
 PDC Energy  
 PO Box 26  
 Bridgeport, West Virginia  
 26330

UWI: Lesser 7-21  
 Surface: Greeley, CO  
 Pricing Area: Area 1  
 Competitive: STDU  
 Job Type: Balanced Plug

	Units	Per	Unit Price	Cost
<b>Services and Equipment</b>				
PCMP Unit Travel		60 MI		
PCMP - Primary Set Up (6 Hr min)		550 FT		
<b>Equipment</b>				
MDAC		1 Job		
Communication Headsets		2 RDIO		
<b>Material Handling &amp; Delivery</b>				
Bulk Material Blending		333.63 SKS		
Bulk Material Delivery		20,017.8 SKMI		
<b>Products &amp; Materials</b>				
MCA-1		348 LB		
MCDF-P		34.8 LB		
MCDF-L		3 GAL		
MAG S 14.1		400 SKS		
<b>Customer Stamp:</b>				
<p><u>SERVICES PROVIDED BY MAGNUM CEMENTING SERVICES LTD. ARE GOVERNED BY AND SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.</u></p> <p>Received By: Ryan Beam 970-405-8585</p> <p>Comments:</p>				

All totals are estimated (including mileage), and are subject to change depending on actual amounts used. Applicable taxes will be added to the invoice. Prices may change without notice due to fluctuating market conditions. Prices are in effect for 30 days from date shown.



## US Treatment Report

**Customer:** PDC Energy  
**Rep:** Ryan Beam  
**Supervisor:** Vitalijs Neverdasovs  
**Job Type:** Remedial  
           Balanced Plug  
**Rig:** Ensign 352  
**Well:** Lesser 7-21  
**UWI:** Lesser 7-21  
**Surface:** Greeley, CO

**Job #:** JOB00086768  
**Job Date:** Aug 27 @ 12:00  
**Time Requested:** Aug 27 @ 12:00  
**Time Arrived:** Aug 27 @ 12:00  
**Time Released:** Aug 27 @ 16:30

400 sk    MAG S 14.1 + 1.00% MCA-1 + 0.10% MCDF-P

Yield: 1.28ft<sup>3</sup>/sack = 91.19bbls      Mix Water: 5.89gal/sack = 2356gal

Treatment Info:      Sacks Used: 0      Sacks Not Used: 0

Preflush:	Circulation Time:	
Displace:	Slurry Temp: 93	Bulk Sample: No
	Water Temp: 85	Water Sample: Yes
	Bulk Temp: 90	Slurry Sample: Yes
Slurry Returns:	Plug Bumped:	Pump Out Lines: Yes      Float Held:

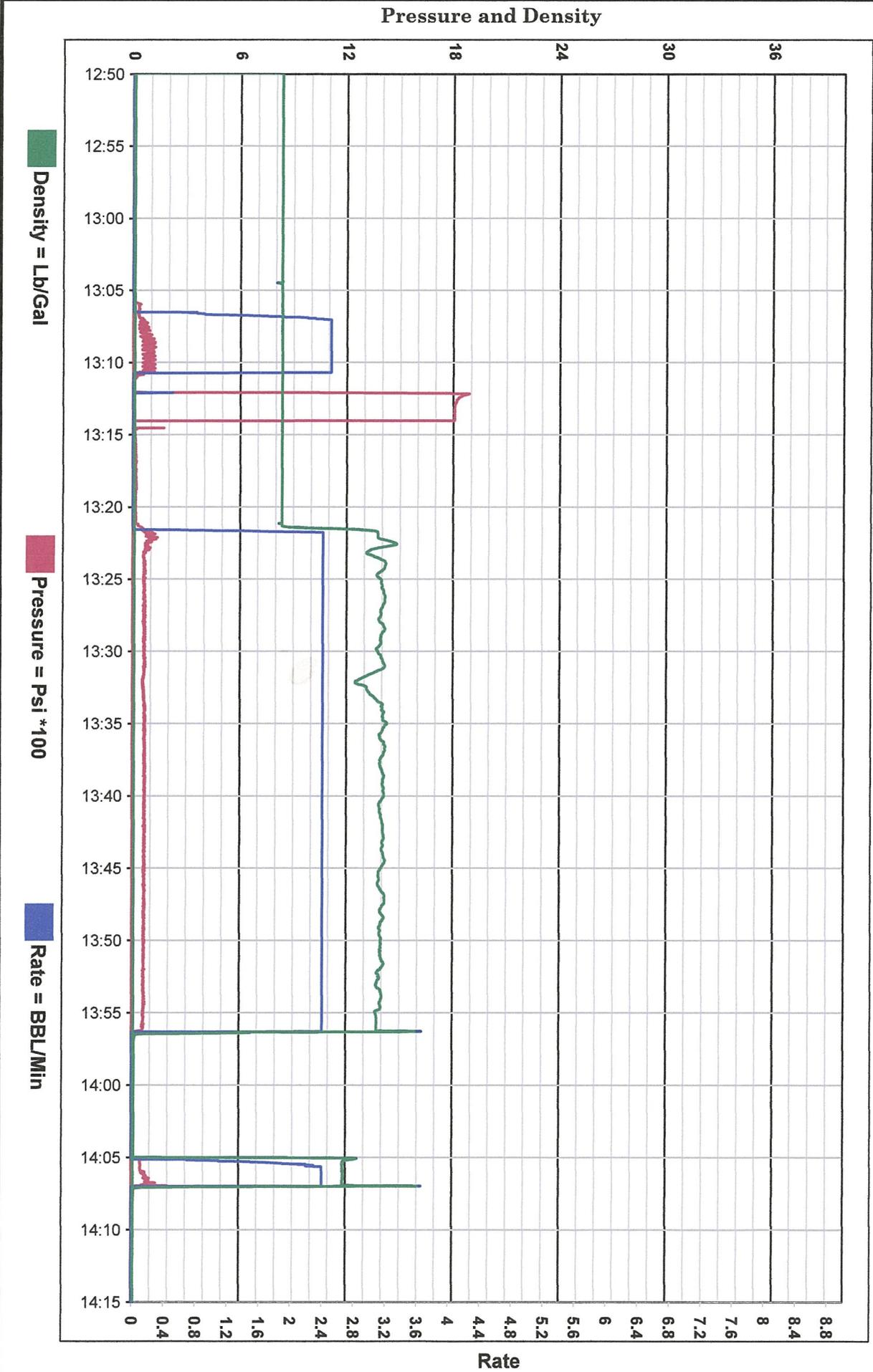
Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/mi n	Treatment Detail
11:00	0.00					Arrive on Location - ARRIVED ON LOCATION. CUSTOMER REQUESTED CREW @ 12:00
12:52	0.00					Safety Meeting - HELD PRE JOB SAFETY MEETING AND JOB PROCEDURE
13:08	119.00		15		2.5	PUMP FRESH WATER TO BRAKE CIRCULATION
13:14	1,823.00		.1		.5	Start Pressure Test - PRESSURE TEST TO 1823 PSI
13:23	68.00		84		2.4	Pump Slurry - BATCH/ WEIGHT PUMP 400 SKS OF MAG S 14.1.
13:59	0.00		0		0	Stop Pumping - SHUT DOWN. NO CEMENT TO SURFACE.
14:03	65.00		5		2.2	Pump Slurry - PER CUSTOMER REQUEST BLOW DOWN BULK TRUCK, BATCH UP AND PUMP DOWN HOLE. NO CEMENT TO SURFACE.
14:09	0.00					Stop Pumping - SHUTDOWN
14:15	0.00					CUSTOMER WILL BE TAGGING CEMENT @ 16:00
14:20	0.00					Wash Up Truck - WASH UP PUMP AND LINES
15:00	0.00					Rig Out



Customer: PDC  
Date: AUG 27 2020  
Ticket: 86768

Well Name: LESSER 7-21  
UWI: GREELEY, CO  
Job Type: SURFACE PLUG

Unit  
1507





Magnum Cementing Services LLC LLC  
 600 17th Street, Ste 2800S  
 Denver, Colorado 80202

Field Ticket

Job Date: August 28, 2020  
 Job Number: JOB00086858

Bill To:  
 PDC Energy  
 PO Box 26  
 Bridgeport, West Virginia  
 26330

UWI: Lesser 7-21  
 Surface: Greeley, CO  
 Pricing Area: Area 1  
 Competitive: STDU  
 Depth: 6997  
 Job Type: Balanced Plug

	Units	Per	Unit Price	Cost
<b>Services and Equipment</b>				
PCMP Unit Travel	60	MI		
PCMP - Remedial Set Up (6 Hr min)	656	M		
<b>Equipment</b>				
MDAC	1	UNIT		
Communication Headsets	2	UNIT		
<b>Material Handling &amp; Delivery</b>				
Bulk Material Blending	500	SKS		
Bulk Material Delivery	20,017.8	SKMI		
<b>Products &amp; Materials</b>				
MCA-1	60.9	LB		
MCDF-P	6.09	LB		
MCDF-L	3	GAL		
MAG S 14.1	70	SKS		

Customer Stamp:

SERVICES PROVIDED BY MAGNUM CEMENTING SERVICES LTD. ARE GOVERNED BY AND SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.

Received By: Ryan Beam 970-405-8585  
 Comments:



All totals are estimated (including mileage), and are subject to change depending on actual amounts used. Applicable taxes will be added to the invoice. Prices may change without notice due to fluctuating market conditions. Prices are in effect for 30 days from date shown.



## US Treatment Report

<b>Customer:</b> PDC Energy	<b>Job #:</b> JOB00086858
<b>Rep:</b> Ryan Beam	<b>Job Date:</b> Aug 28 @ 00:00
<b>Supervisor:</b> Vitalijs Neverdasovs	<b>Time Requested:</b> Aug 28 @ 07:30
<b>Job Type:</b> US Remedial	<b>Time Arrived:</b> Aug 28 @ 07:30
Balanced Plug	<b>Time Released:</b> Aug 28 @ 11:00
<b>Rig:</b> Ensign 352	
<b>Well:</b> Lesser 7-21	
<b>UWI:</b> Lesser 7-21	
<b>Surface:</b> Greeley, CO	

70 sk MAG S 14.1 + 1.00% MCA-1 + 0.10% MCDF-P

Yield: 1.28 ft<sup>3</sup>/sk = 15.96bbls      Mix Water: 5.89 gal/sk = 412.3gal

BHCT (F)	70	BHST (F)	49	Casing 1 Casing Size (in)	8.625
Mud Density (lb/gal)	8.33	Mud Type	Fresh	TMD (ft)	6997
Tubing (in)	2.875	Tubing Grade	PH6	Tubing WT (lb/ft)	TBD

Treatment Info:      Sacks Used: 0      Sacks Not Used: 0

Preflush: 20bbls Fresh Water

Circulation Time:

Displace:

Slurry Temp: 86	Bulk Sample: No
Water Temp: 75	Water Sample: No
Bulk Temp: 80	Slurry Sample: Yes

Slurry Returns:      Plug Bumped:      Pump Out Lines: Yes      Float Held:

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/mi n	Treatment Detail
07:15	0.00					Arrive on Location - ARRIVED ON LOCATION. CUSTOMER REQUESTED CREW @ 07:30
08:18	0.00					Safety Meeting - HELD PRE JOB SAFETY MEETING AND JOB PROCEDURE. CUSTOMER TAG CEMENT @ 176'
08:29	76.00		10		2.5	PUMP FRESH WATER TO BRAKE CIRCULATION
08:35	1,475.00		.1		.5	Start Pressure Test - PRESSURE TEST TO 1476 PSI
08:44	112.00		15		2.4	Pump Slurry - BATCH/ WEIGHT PUMP 70 SKS OF MAG S 14.1.
08:50	0.00		0		0	Stop Pumping - SHUT DOWN. GOT CEMENT TO SURFACE.
09:30	0.00					Wash Up Truck - WASH UP PUMP AND LINES
09:50	0.00					Rig Out
21:16	0.00		.5			TOP OUT WELL



Customer: PDC  
Date: AUG 28 2020  
Ticket: 86858

Well Name: LESSER 7-21  
UWI: GREELEY, CO  
Job Type: SURFACE PLUF

Unit  
1507

### Pressure and Density

