United States Department of the Interior



NATIONAL PARK SERVICE 2280 National Register of Historic Places 1201 "I" (Eye) Street, NW Washington D.C. 20005



The Director of the National Park Service is pleased to announce actions on the following properties for the National Register of Historic Places. For further information contact Edson Beall at (202) 354-2255 or E-mail: Edson_Beall@nps.gov Visit our web site at http://www.cr.nps.gov/nr

WEEKLY LIST OF ACTIONS TAKEN ON PROPERTIES: 4/20/09 THROUGH 4/24/09

KEY: State, County, Property Name, Address/Boundary, City, Vicinity, Reference Number, NHL, Action, Date, Multiple Name

ARKANSAS, MULTIPLE COUNTIES, We've Gotta Get Tough: History of World War II Home Front Efforts in Arkansas, 1941-1946 MPS, 64501021, COVER DOCUMENTATION ACCEPTED, 4/22/09

CALIFORNIA, LOS ANGELES COUNTY, Marguerita Lane Historic District, Marguerita La. off South Morengo Ave., Pasadena, 09000177, LISTED, 4/10/09

CALIFORNIA, SAN FRANCISCO COUNTY, Veterans Affairs Medical Center--San Francisco, California, 4150 Clement St., San Francisco, 05001112, LISTED, 4/20/09

COLORADO, MONTROSE COUNTY, Denver & Rio Grande Western Railroad Caboose No. 0577, Approximately 1 mi. N. by NE of US 50 at Cimarron, adjacent to Morrow Point Dam Rd., Curecanti National Recreation Ctr., Cimarron, 09000222, LISTED, 4/21/09

COLORADO, MONTROSE COUNTY, Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender, Approximately 1 mi. N. by NE. of US 50 at Cimarron, near Marrow Point Dam Rd., Curecanti National Recreation Center, Cimarron, 09000223, LISTED, 4/21/09

CONNECTICUT, NEW HAVEN COUNTY, Stone, Medad Tavern, 197 Three Mile Course, Guilford, 08001378, LISTED, 1/30/09

INDIANA, HANCOCK COUNTY, Lockheed PV-2 Harpoon No. 37396, 3867 N. Aviation Way, Mount Comfort, 09000234, LISTED, 4/23/09

IOWA, SCOTT COUNTY, St. John's Methodist Episcopal Church,

NPS Form 10-900 United States Department of the Interior National Park Service National Register of Historic Places Registration Form

This form is for use in nominating or requesting determination for individual properties and districts. See instruction in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking `x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter `N/A" for ``not applicable." For functions, architectural classification, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender

other names/site number 5MN.9097

2. Location

street & number <u>Approximately 1 Mile North by Northeast of US 50 at Cimarron, near Morrow Point Dam Road, Curecanti</u> National Recreation Center (CURE) [N/A] not for publication

city or town Cimarron

state <u>Colorado</u> code <u>CO</u> county <u>Montrose</u> code <u>085</u> zip code <u>81220</u>

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this [X] nomination [] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property [] meets [] does not meet the National Register criteria. I recommend that this property be considered significant [] nationally [X] statewide [] locally. ([] See continuation sheet for additional comments.)

Signature of certifying official/Title

State or Federal agency and bureau

In my opinion, the property [X] meets [] does not meet the National Register criteria. ([] See continuation sheet for additional comments.) State Historic Preservation Officer

Signature of certifying official/Title

Office of Archaeology and Historic Preservation, Colorado Historical Society State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:	Signature of the Keeper	Date of Action
 [] entered in the National Register [] See continuation sheet. [] determined eligible for the National Register 		
National Register. [] removed from the		
National Register		

[] See continuation sheet.

OMB No. 10024-0018

[N/A] vicinity

Date

Date

(Describe the historic and current condition of the property on one or more continuation sheets.)

County/State

5. Classification

(Check as many boxes as apply)	Category of Prope (Check only one box)	(Do not count previou		ithin Property
[] private	[] building(s)	Contributing	Noncontributin	g
[] public-local [] public-State	[] district [] site	0	0	buildings
[] public-Federal	[X] structure [] object	0	0	sites
	[]]00]001	1	0	structures
		0	0	objects
		1	0	Total
Name of related multiple (Enter "N/A" if property is not part of a multiple N/A			contributing listed in the I	
<u></u>		0		
6. Function or Use				
		Current Funct		
(Enter categories from instructions)	lated	(Enter categories from ins	tructions)	RE/ museum
	lated		tructions)	RE/ museum
(Enter categories from instructions)	lated	(Enter categories from ins	tructions)	RE/ museum
(Enter categories from instructions)	lated	(Enter categories from ins	tructions)	RE/ museum
(Enter categories from instructions)	lated	(Enter categories from ins	tructions)	RE/ museum
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		(Enter categories from ins	tructions) AND CULTU	RE/ museum
(Enter categories from instructions) TRANSPORTATION/ rail re		(Enter categories from ins RECREATION	tructions)	
(Enter categories from instructions) TRANSPORTATION/ rail re		(Enter categories from ins <u>RECREATION</u>	tructions)	
(Enter categories from instructions) TRANSPORTATION/ rail re		(Enter categories from ins RECREATION Materials (Enter categories from ins foundation walls roof_	tructions) AND CULTUI tructions)	
(Enter categories from instructions) TRANSPORTATION/ rail re		(Enter categories from ins RECREATION Materials (Enter categories from ins foundation_ walls	tructions) AND CULTUI tructions)	

<u>Montrose County/ Colorado</u> County/State

8. Statement of Significance

Applicable National Register Criteria

(Mark ``x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [] **B** Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [] **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark ``x" in all the boxes that apply.)

Property is:

- $[\]$ A owned by a religious institution or used for religious purposes.
- [] **B** removed from its original location.
- [] **C** a birthplace or grave.
- [] D a cemetery.
- [] E a reconstructed building, object, or structure.
- [] F a commemorative property.
- [] **G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

#

(Cite the books, articles and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

[] preliminary determination of individual listing (36 CFR 67) has been requested

[] previously listed in the National Register

[] previously determined eligible by the National Register

[] designated a National Historic Landmark

[] recorded by Historic American Buildings Survey

[] recorded by Historic American Engineering Record

Areas of Significance

(Enter categories from instructions)

TRANSPORTATION ENGINEERING

Periods of Significance 1882-1953

Significant Dates

1882

Significant Person(s)

(Complete if Criterion B is marked above).

Cultural Affiliation

<u>N/A</u>

Architect/Builder BALDWIN LOCOMOTIVE WORKS

Primary location of additional data:

- [X] State Historic Preservation Office
- [] Other State Agency
- [] Federal Agency
- [] Local Government
- [] University

I Jother Name of repository: Colorado Historical Society Cimarron Visitor Center, CURE

Montrose County/ Colorado County/State

10. Geographical Data

Acreage of Property less than one

UTM References

(Place additional UTM references on a continuation sheet.) (NAD 27)

1.	13 Zone	277604 Easting	4258775 Northing	
2.	Zone	Easting	Northing	The UTMS were derived by OAHP from heads up digitization on Digital Raster Graphic (DRG) maps provided to OAHP
3.	Zone	Easting	Northing	by the U.S. Bureau of Land Management
4.				
	Zone	Easting	Northing	[] See continuation sheet
Verbal Boundary Description				

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Lance C. Westfall, NPS Intern/ Historian; Fra	nk Carl Barna, Historian	(Forest Frost- NPS contact)
organization <u>National Park Service; Bureau of L</u>	and Management	date <u>August 5, 2008</u>
street & number <u>12795 W. Alameda Pkwy; 2850</u>	O Youngfield St.	telephone <u>(970) 240-5433</u>
city or town <u>Lakewood</u>	state <u>Colorado</u>	zip code <u>80210; 80228</u>

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location. A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional Items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name City of Montrose (Contact- Dennis Erickson, Parks Planner/ Project Manager)

street & number	<u> 107 S.</u>	Cascade	Avenue/	<u>P.O. Box <i>i</i></u>	ζ.

city or town Montrose

x 790

state Colorado

zip code 81402

telephone (970) 240-1430

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

DESCRIPTION

The Denver and Rio Grande (D&RG) narrow gauge Locomotive No. 278 and its Tender are currently on static display on the historic D&RG Pratt Truss Bridge. The D&RG Pratt truss bridge is listed on the National Register as D&RG Narrow Gauge Trestle, NRIS #76000172.¹ The D&RG ran through what is now the Curecanti National Recreation Area (NRA) and was a vital influence on the locality. The outdoor rail exhibit at the visitor center and the last remaining Pratt truss bridge of the Black Canyon of the Gunnison both provide an appropriate setting and location for the car, and allow the locomotive to convey its association with the railroad. The locomotive and its tender are one of a number of historic transportation-related resources within Curecanti NRA. (For ease of reading, Denver & Rio Grande, Denver & Rio Grande Western, and Rio Grande are used interchangeably throughout the nomination.)

Specifications

Baldwin Locomotive Works received the order for a narrow gauge locomotive from the D&RG in December 1880 with the specific requirements it needed to operate in the Colorado high country. Baldwin assigned the locomotive with the construction number 6030 and classified it as a Class 10–24 and ½ E 48. In company parlance, this meant that all 10 wheels of the locomotive were on the rails. The number 24 was a cylinder classification indicating a 15-inch diameter cylinder. The fraction ½ indicated that the locomotive had some slight mechanical differences from others of its type, and in this case, No. 278 had a 2-inch longer cylinder stroke than the normal 10-24 class. The capital letter E indicated there are eight coupled drive wheels and 48 indicated that Locomotive No. 278 was the 48th locomotive built in this class plan.²

Locomotive 278 Specifications

Locomotive and tender leng	gth: 50 ft.
Driver wheel size:	36 in.
Pilot wheel size:	24 in.
Tender wheel size:	26 in.
Cylinders:	15 x 20 in.
Weight on locomotive:	60,000 lbs
Tractive effort:	15,000 lbs.

No. 278's design is as a freight locomotive and it ran on soft or bituminous coal. The locomotive and tender have a wheelbase of less than 42 feet, and from locomotive pilot to tender coupler, she measured a little over fifty feet in length. When fully loaded, the locomotive and tender weighed 111,600 pounds.³

The locomotive weighed 60,000 pounds, and exerted a tractive effort on the rails (the force necessary to start and move a locomotive) of some 15,000 pounds. Her drive wheels had a 31-inch diameter core or center and were 36-inches in diameter over heat-shrunk steel tires. The first and last driver pairs are flanged and the middle pair is blind or plain. Her cylinders were 15 x 20, i.e. 15-inch in diameter with a 20-inch stroke, and she utilized Stephenson-type valve gearing.

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¹ In the 1976 National Register nomination the bridge is incorrectly identified as a trestle. The correct engineering terminology for the span of bridge is Pratt truss. The NR Nomination should be amended to update the nomination and correct the name.

² Baldwin Eng. Bks; Baldwin Locomotive Works Illustrated Catalogue of Narrow Gauge Locomotives, 3rd ed. (Philadelphia: J.B. Lippincott & Co., 1885), pp. 6, 29; James W. Alves, "Baldwin Locomotive Class Numbers," MODELTEC, January 1994, p. 35.

³ Denver and Rio Western Railroad Folio Sheet 9 Folio 4, Colorado Historical Society, Mss# 513, ff# 2057; Baldwin Specification [sheet] for Engines Class 10 – 24 ½ E, (cited hereafter as Spec. sheet) DeGolyer Library, Southern Methodist University, Dallas, TX, Mss 61.

Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

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The configuration of Locomotive No. 278's Tender is that it rides on two trucks of four wheels that are 26-inches in diameter, is oak-framed, and carries a cistern with a capacity of 2,500 gallons of water and 6 tons of coal.⁴

Baldwin applied a standard company diamond-shaped smoke stack, a bracket-mounted keroseneburning 23-inch reflector headlight over the front of the smoke-box door, a wooden pilot, and Westinghouse airbrakes supplied by the railroad. A 24"x 54" air brake drum reservoir originally sat at the rear of the tender.

As built, No. 278 had an iron boiler; safety laws later required a steel boiler be installed. Her furnace, or firebox, was steel and the flues were iron. The locomotive had her test trial in February 1882, at which time Baldwin fired her up for the first time to check for mechanical problems prior to shipment to the Rio Grande.⁵

Typical of most of the D&RG narrow gauge equipment, the locomotive and tender shipped from Philadelphia by Baldwin via standard gauge flat cars to their destinations, in this case to the Rio Grande's Burnham shops in Denver.⁶

Paint Schemes

Locomotive No. 278's construction took place in the early 1880s when railroad locomotives epitomized the success, technological prowess, and prominence of American heavy industry. To emphasize this, and to promote the presence and accomplishments of individual railroads and the pride of artisanship by their manufacturers, locomotives were painted in schemes that proclaimed their majesty and grandeur.

According to Baldwin painting and finishing standards, Locomotive No. 278 was delivered in 1882 with the designated paint scheme: Finish F10. This indicated the manner in which different components of a locomotive were to be finished, e.g. painted or polished metal. Freight locomotives of the period typically had more painted components while passenger locomotives had more polished metal, and No. 278 conformed to that practice.⁷

Painting style 103 indicated that the locomotive and tender were done in "Black & color." It was the standard Baldwin ground paint scheme for narrow gauge locomotives. Black referred to the base color of the locomotive and tender unit, and "color" indicated whether the unit was trimmed in real gold leaf or a gold paint color. In this case, an imitation gold paint color was used. No. 278 was not finished in the standard olive green that Baldwin Locomotive used. Instead, the Rio Grande Railroad preferred the locomotive to be finished in black.

Style 103 also included decorative red, yellow ochre - gold box and line striping around the cylinder jacket (referred to as "cylinder 6") and sand box, and likely the steam dome was given as "sand box 2," "tender tank 23", and "driver 11". Headlight painting "style 5", which referred to the decorative trim on the headlight box, was also applied to No. 278. The wooden cab interior was varnished ash and the

⁴ Spec. sheet; Interstate Commerce Commission, Division of Valuation, D.V. Form No. 308, D&RG RR., Gunnison, CO., 6-21-19.

⁵ Spec. Sheet; Baldwin Eng. Bks.

⁶ Jerry B. Day, "The History of C-16 #278," The Prospector, First Quarter 2003, p. 3.

⁷ Spec. Sheet; Wilke, oral communication; Wilke, The Prospector, pp. 13-14, 19-21.

Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

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cab roof was gray. The tender sides were striped per 'scheme 23' and lettered with the simple title "Denver and Rio Grande." While not a specified color, No. 278's boiler jacket was fashioned of a planished metal referred to as American Iron, a dark charcoal-gray color, and bound with four iron bands. By 1880, these iron bands had replaced the earlier bright brass jacket bands Baldwin used.

It is difficult to determine when the original paint scheme changed, but a glass plate photograph of Locomotive No. 278 at Anthracite, Colorado, around 1882 to 1890 shows a polished paint scheme without stripes. Therefore, the Denver & Rio Grande Railroad painted the locomotive sometime after it was delivered and put into service in March 1882.

The next possible change in paint came sometime in the early 1900s. Photographs from the 1920s show the locomotive with a different paint scheme than the more widely photographed 1940s scheme. These photographs show the locomotive with the old style of lantern box and a one-color paint scheme. Due to the black and white of the photos, it is difficult to determine any color schemes. However, Kenton Forest. the Head Archivist at the Colorado Railroad Museum Library, stated that D&RGW locomotives of this era were painted in a dark green color that often appeared black.⁸ Photograph H5 is an excellent example of the difficulty determining the color towards the end of the 1920s. Though there is a herald located on the tender, it is difficult to determine which D&RGW herald it is.

In 1939, a new paint scheme was introduced to the narrow gauge locomotives of the D&RGW. Photographs from 1940 and later show the locomotive painted mostly black with a silver smoke box. Photographic evidence shows that Locomotive No. 278 carried this scheme into retirement. When retired, No. 278 sported the "Flying Rio Grande" paint scheme introduced in 1939. In Jerry Day's article "The History of C-16 #278," in *The Prospector*, he confirms the last known painting occurred in 1975, when the 1930s paint scheme and the Royal Gorge and Moffat Tunnel herald were applied.⁹ This paint scheme is currently how Locomotive No. 278 and its Tender are exhibited in Curecanti NRA.

Alterations

Like all mechanical equipment, Locomotive No. 278 and its Tender were repaired and underwent many modifications and upgrades during their seventy-one years of faithful service to the D&RG. These alterations reflected improved technology to comply with evolving safety standards and new railroad operating requirements. This evolution can be traced through D&RG records; Interstate Commerce Commission (I.C.C.) safety standards, starting with the first Safety Appliance Act of 1893; I.C.C. valuations; historic photographs; and National Park Service preservation reports.¹⁰ Other than the seldom-seen internal mechanical modifications that No. 278 underwent during her career, the most notable elements of No. 278's evolution were those that reflected her outward appearance. No builder's photo of No. 278 has been located, but an early photo shows the locomotive and a Bobber-style caboose in the area of Crested Butte (see photo H4).¹¹ Most of the major external modifications can be traced through the sources referred to previously.

The most noticeable external changes began in 1903, when the I.C.C. outlawed the original link and pin

⁸ Kenton Forest (Head Archivist at Colorado Railroad Museum), telephone conversation with Lance Westfall, July 1, 2008.

⁹ Jerry B. Day, "The History of C-16 #278," The Prospector (First Quarter 2003, Vol. 2, Number 1), p. 9.

¹⁰ AFE No. 278; I.C.C. Gunnison; William R Jones, "D&RG Locomotive 278, Historical Chronology 1882-1953," (National Park Service: Curecanti National Recreation Area, cited hereafter as CURE) n.d; Act of February 17, 1911; Interstate Commerce Commission, Locomotive Inspection Law, as Amended March 4, 1915, June 7, 1924, April 22, 1940 and May 27, 1947 (Washington, D.C.: Government Printing Office, 1947).

¹ Gordon Chappell, Scenic Line of the World (Denver: Colorado Railroad Museum, 1977), p. 40.

Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

couplers and required the use of knuckle type couplers, and again after 1911 when the I.C.C. began a more stringent oversight of locomotive boilers. Then, in 1913, the Rio Grande began modernizing its fleet of C-16s. As part of the modernization plan, the smoke-box was extended, allowing installation of new internal cinder screens that resulted in the original diamond smoke stack being replaced with a tapered stack. The original American iron boiler was wearing out and it was replaced with a steel one to conform with new I.C.C. safety requirements relating to boiler tensile strength, testing, and inspection. By this time, iron plates had been added to cover the original wooden cab sides, and the locomotive's footboards, running boards, and grab irons had also been changed to comply with I.C.C. safety standards.

In order to coordinate the high demand for rail transportation during World War I, the United States Railroad Administration (USRA) took control of America's railroads. During the USRA period, 1918 to 1921, additional modifications and upgrades were applied to the Class 60 locomotives. The locomotive's original kerosene headlamp was converted to an electric headlight in early 1920 at a cost of \$70. The original box headlight fixture was kept until approximately 1936, when it was replaced by a Pyle-National 12-inch headlight, and a Pyle turbo generator. Its original wooden pilot was converted to an all steel tube type. When built, a single eight-inch air brake pump was located on the engineer's side of the boiler. While under the USRA, this pump was replaced by two 9.5-inch pumps located on the fireman's side. The cost of a pump was \$135. An air reservoir was added to the engineer's side resulting in a change to the running board configuration on the right side. In 1924, the Rio Grande changed the classification for the C-60 class locomotives to C-16, indicating 16,000 pounds of tractive effort.

However, change was not limited to the locomotive alone. It was common practice for a locomotive returning to maintenance shops to depart with a completely different tender. This is due to bad mineral water along the route on which the locomotive served. Tender shells, or cisterns as they are properly referred, tended to rust out.¹² The constant loading and shoveling of coal also took its toll on the metal fabric. By 1911, No. 278's Tender shell was in need of replacement. A second shell was added at the Alamosa shops, lasting until about 1927, after which a third shell was installed.

There has been considerable speculation as to the origin and installation date of this last shell. Undocumented restoration work claimed evidence that this shell came off D&RGW K-27 number 460 in 1935. However, there is no evidence of any K-27 locomotives being scrapped before 1939.¹³

Integrity

Since its retirement in 1953 and preservation work in 1975, Locomotive No. 278 exhibits a high degree of integrity. No. 278 clearly represents the elements of design, materials, and methods of construction used by the Baldwin Locomotive Works and by the D&RG in constructing and maintaining an active working narrow gauge locomotive over a span of approximately seventy years, a length of service clearly indicative of the soundness of her design. Some condition issues do exist, however, such as rust, the rotting out of historic fabric on the boiler and cylinder jackets, and in the use of inappropriate replacement materials, such as Plexiglas for the cab windows. Perhaps the biggest issue in this regard is the current metal cab roof. Originally, a tar and canvas roof covering was typical for these locomotives.¹⁴ However, the varied and extreme conditions to which the locomotive is subjected

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¹² Kenton Forest (Head Archivist at Colorado Railroad Museum), telephone conversation with Lance Westfall, June 25, 2008.

¹³ Jones, ibid.; Day, p.5; Day, email communication 11/26/07 on file at CURE.

¹⁴ Andrew L. Dahm, "Survey of D&RGW Equipment on Display at Cimarron, Colorado." July 2, 1997. Unpublished report on file at

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suggest that maintaining the current metal roof is the best preservation practice.

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Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

SIGNIFICANCE

Denver & Rio Grande Western Railroad Locomotive No. 278 and its Tender are eligible for the National Register at the state level of significance under Criterion A in the area of **Transportation** for its association with the history of Rio Grande's narrow gauge railroad operations in Colorado. Built by the Baldwin Locomotive Works of Philadelphia, Pennsylvania, the locomotive represents one type of early motive power on the D&RG that reflects the evolution of the railroad's growth. As the fortunes of the railroad improved, expanded operations into the mountainous country of western Colorado required the use of heavier and more powerful locomotives than its initial equipment roster could provide. Number 278 is an excellent example of the 2-8-0 Consolidation or C-16 class locomotive that came into service to replace smaller and less powerful locomotives such as the 4-4-0 American and 2-6-0 Mogul types. These earlier locomotives could not handle the increased traffic demands, heavier trains, and steeper grades that the railroad encountered as its narrow gauge transportation system moved westward off the plains and into the mountains. The period of significance for Criterion A is from 1882 to 1953, the service dates of the locomotive and tender on the railroad.

Locomotive No. 278 is also eligible under Criterion C in the area of *Engineering* as a representative of the type and method of construction of narrow gauge locomotives built by the Baldwin Locomotive Works for use by the Denver and Rio Grande. Baldwin produced standard locomotive designs based on standardized and interchangeable parts, but also developed railroad-specific designs for narrow gauge outfits like the Rio Grande.¹⁵ Locomotive No. 278 is an excellent and rare example of only three surviving C-16 class narrow gauge locomotives used by the D&RG. The other two C-15 Class Locomotives are on static display in Salt Lake City, Utah and Gunnison, Colorado.¹⁶

Historic Context

Denver & Rio Grande Western and Narrow Gauge

While many railroads eventually came to Colorado, there was no railroad that would come to be identified with, and symbolize the greatness of the state more than the Denver & Rio Grande (D&RG). In addition, no railroad was to make as significant a contribution to the economic development of the Colorado-Utah region than the D&RG. Indeed, it was often said that wherever the Rio Grande went, development and settlement followed.¹⁷

Incorporated in 1870, the Denver and Rio Grande Railway was the dream of William Jackson Palmer, a Civil War veteran turned railroad man. In a time when most railroads were busy building east to west, Palmer envisioned a north-south line linking Denver and El Paso, Texas, and, eventually, Mexico City. Palmer was an avid believer in the West's vast mineral and agricultural potential, especially for the raising of livestock, and he desired to build a transportation system that would tap into the wealth these resources could provide.

Rich gold and silver deposits were locked in the remote vastness of the mountains, but successful development of mines required reliable transportation. Palmer also recognized the unique quality of the

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¹⁵ John K. Brown, The Baldwin Locomotive Works, 1831-1915 (Baltimore: The Johns Hopkins University Press, 1995), pp. 78, 103; Baldwin Locomotive Works Illustrated Catalog of Narrow-Gauge Locomotives, 3rd ed. (Philadelphia: J.B. Lippincott&Co., 1885), p. 4.

¹⁶ Kenton Forest (Head Archivist at Colorado Railroad Museum), telephone conversation to Lance Westfall, June 25, 2008.

¹⁷ James H. Baker, ed., History of Colorado (Denver: Linderman Co., Inc., 1927), 818; O. Meredith Wilson, The Denver and Rio Grande Project, 1870-1901: A History of the First Thirty years of the Denver and Rio Grande Railroad (Salt Lake City: Howe Brothers, 1982), 62 and 114.

Denver & Rio Grande Western Railroad Locomotive No. 278 and Tender Montrose County/ Colorado

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wheat that could be grown in the high and dry mountain valleys. This type of hard, high protein wheat would eventually come to be in great demand by the milling industry. However, as Palmer and other enthusiastic boosters of the future state freely admitted, "Colorado without railroads is comparatively worthless."¹⁸

Railroad building in the Rocky Mountain West offered challenges not faced elsewhere in the country. Geography and topography presented formidable demands and barriers to railroad design and construction. The mountains and the steep-walled narrow valleys of western Colorado, especially environmental factors influencing curvature and gradient, tested the skills of engineers to develop equipment types that could operate in such settings.

One solution to the formidable construction challenges that Palmer faced was to build his railroad as a narrow gauge line. At this time, there was no standardized track gauge —the distance between the inside of the rail heads — in America. While President Lincoln recommended a five-foot gauge for the nation's first transcontinental railroad, there were other gauges in use — including a six-foot gauge on the Erie. Indeed, it was not until 1886 that a "standard gauge" of four-foot eight-and-one-half inches became the norm for American railroads.

Narrower-gauged railroads were popular in Europe and what was called "narrow gauge fever" spread to the United States during the 1870s. In 1876, for example, there were 81 narrow gauge railroads operating in 26 states, but nowhere were they more effective and longer lived than in the Rocky Mountain West.¹⁹ Howard Schuyler, a Palmer associate, visited the two-foot gauge Festiniog Railway in North Wales and compared its operation favorably with what the Rio Grande was considering. Palmer himself traveled to England on his honeymoon and talked with narrow gauge advocates there. Subsequently, Palmer decided to adopt a three-foot gauge for his "Baby Road," as its supporters affectionately called it. The Rio Grande was to be the first major narrow gauge railroad in the United States, and the first north-south line west of the Mississippi River.²⁰

Narrow gauge railroading promised several initial advantages. Proponents of narrow gauge argued strongly about the substantial cost savings that would be realized in construction and operating costs versus those for standard gauge. By following the local topography as tightly as possible, costs in mountainous terrain were estimated to be about one-fifth of what standard gauge costs would be. In broken and rolling country, the type of country where the Rio Grande would start, costs were estimated to be about one-half that of standard gauge. Roadbeds, cuts, trestles, and tunnels could be constructed with less dirt work in rugged terrain with the narrower gauge. Lighter, less expensive rails could be used to support smaller and lighter locomotives and rolling stock that could more easily negotiate the sharp curves needed to reach deep into the mountains. In addition, it was anticipated that the mining companies themselves would build some of the branch lines of the railroad that linked the mines to their supply sources. Thus, the narrower gauge would lower their construction costs too. Finally, since Palmer had little competition at first, he anticipated that his gauge selection would become the standard for other railroads entering Colorado.²¹

¹⁸ Robert G. Athearn, Rebel of the Rockies: A History of The Denver and Rio Grande Western Railroad (New Haven: Yale University Press, 1964; reprint, as The Denver and Rio Grande Western Railroad, Lincoln: University of Nebraska Press, 1977), 4–5.

¹⁹ Stewart H. Holbrook, The Story of American Railroads (New York: Crown Publishers, 1947), 360.

²⁰ LeRoy R. Hafen, Colorado and Its People: A Narrative and Topical History of the Centennial State, vol. 2 (New York: Lewis Historical Publishing Co., Inc., 1948), 647.

²¹ George W. Hilton, American Narrow Gauge Railroads (Stanford: Stanford University Press, 1990), 49–51; Athearn, 14.

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The decade of the 1880s was a peak period in terms of Colorado railroad construction. About 3,100 miles of track were constructed, with the majority being in the western mountains. By the summer of 1882, the railroad had reached into the Black Canyon of the Gunnison on its way to Montrose and Grand Junction — part of the original main line from Denver to Salt Lake City and Ogden in Utah. The company's 1882 annual report to its stockholders indicated that the stretch through the Black Canyon required heavier work than on any other stretch of railroad in the country, and that the rockwork required to navigate the canyon was more expensive than even that portion of the line from Durango to Silverton through the towering San Juan Mountains.²²

In spite of numerous successes in many states, narrow gauge railroading in America never lived up to the hype of its promoters. Perhaps William Jackson Palmer admitted as much in 1881 when the Rio Grande began to convert parts of its original line between Denver and Pueblo to dual gauge in 1888 and ordered its first batch of standard gauge equipment. In 1890, the railroad completed a standard gauge line to Grand Junction via Tennessee Pass. Because of the new line, the Rio Grande could offer standard gauge service between Denver and Salt Lake City and the narrow gauge main line from Salida to Grand Junction was demoted to secondary status.

While initial construction costs of the narrow gauge were an apparent advantage, little after that was. Costs to operate the railroad in terms of train crew size, and the building of the physical plant, such as depots, maintenance, watering and coaling facilities, differed little between the two gauges. In addition, narrow gauge cars only carried about two-thirds of the capacity of standard gauge cars. When standard gauge became the dominant track gauge in the country, break-bulk points —places where cargo was transferred between the two gauges — proved costly in terms of labor and time. Finally, the automobile and the truck began to eat away at what little profits remained for the narrow gauge lines by furnishing cheaper and more readily accessible means of transportation.

For nearly a century, the Rio Grande's narrow gauge lines served Colorado well. While most of the line had been converted to standard gauge, the "slim gauge" still contributed to the state's economy through World War II, hauling mail, manufactured goods, commodities, and people. Following the war, freight revenues continued to increase due to the growth of industries along the D&RGW line; passenger traffic, however, declined. During the 1950s, the Rio Grande was involved in a series of legal disputes with the Union Pacific (UP) Railroad as the former attempted to expand its operations. While taking on the powerful UP, the D&RGW abandoned lines failing to produce revenue in a manner described by Robert Athearn as "the process of pruning dead branches from the main trunk in the interest of efficiency."²³

In 1948, the railroad abandoned a portion of its famous Black Canyon of the Gunnison route — part of the original main line constructed in 1882 by the D&RG.²⁴ Narrow gauge trackage continued to diminish over the years until finally in 1967, due to heavy financial losses, the Rio Grande decided to abandon the remaining portions of its narrow gauge mainline between Alamosa and Durango, Colorado, and the branch from Durango to Farmington, New Mexico. By the end of 1968, the last Rio Grande narrow gauge train made its final run.²⁵

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²² Hafen, 535; Denver and Rio Grande Railway Co., Annual Report (New York: William Mann and Son, 1882), 89.

²³ Athearn, 344–345.

²⁴ Athearn, 345.

²⁵ Athearn, 345.

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Black Canyon of the Gunnison Route

The ride through the Black Canyon of the Gunnison was one of the most scenic portions of the narrow gauge main line from Salida to Montrose, and it became popular with tourists. The awe-inspiring route through the canyon was fifteen miles long, beginning on the eastern end in Sapinero and ending at the western end in Cimarron. A spectacular outcropping of rock in the canyon known as the Curecanti Needle was even featured as part of the railroad's herald for forty years. It was one reason that the "Baby Road" considered itself "the Scenic Line of the World."

Begun in Pueblo, the D&RG reached Salida in 1880, Gunnison in 1881, Cimarron in August 1882, and Montrose a month later. Though the line did carry some transcontinental traffic until 1890,²⁶ most of the traffic consisted of ore and coal from the San Juan and Gunnison areas, and increasing numbers of livestock as that industry grew in the region. The Black Canyon of the Gunnison Route connected the silver mines of the San Juans and the Rockies to smelters in Leadville and Pueblo, and eventually to Denver and markets in the east.²⁷ Traffic decreased on the line following the Silver Crash of 1893; however, traffic from the San Juans resumed shortly after when the area experienced an increase in gold mining.²⁸ While hard rock minerals fluctuated, coal remained a constant cargo, moving both east and west, for over half a century. Gunnison coal fueled mills, smelters, and railroads, and heated homes.²⁹

After the opening of the D&RG standard gauge lines and the subsequent decrease in through passenger traffic, the railroad moved into the leisure travel industry by providing daytime runs through the canyon — a service which would continue into the 1930s.³⁰ At first, the D&RG offered the scenic narrow gauge route as an option for passengers traveling the Denver to Utah route. Later the railroad created popular travel packages which included riding the Marshall Pass–Black Gunnison line. Until the turn of the twentieth century, passengers left Salida at 6:30 in the morning on narrow gauge passenger cars, having traveled overnight on standard gauge trains from Denver, and arrived in Grand Junction at 6:00 in the evening where they would switch back to standard gauge cars and continue on to Salt Lake City.³¹ The D&RG then moved from providing a scenic connecting service for through passengers to promoting purely sightseeing excursions. For example, boarding in Denver, tourists stopped at the resort town of Colorado Springs and then continued on to Pueblo. From Pueblo, they rode the Black Canyon line to Montrose where they caught the Rio Grande Southern, which delivered them in Durango. From there, passengers rode to Alamosa on the Cumbres Pass Route and then continued back to Denver completing a circle.

Cimarron was an important stop on the D&RG's original line from Denver, Colorado, to Salt Lake City and Ogden, Utah. What began as a tent city when the railroad was under construction grew into a town of 300-500 people whose lives and schedules revolved around the arrival and departure of trains.³² Services for passengers included a quick twenty-minute meal in the restaurant or, for those who

³⁰ Hauck, 108.

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²⁶ In 1890 the D&RG converted their narrow gauge line to Grand Junction via Tennessee pass to standard gauge thereby diverting through traffic from the Marshall Pass-Black Canon main line.

²⁷ Cornelius W. Hauck, "Transcontinental II: Black Canyon Revisited," Colorado Railroad Annual, no. 8 (1970): 101.

²⁸ Hauck, 101.

²⁹ Hauck, 105.

³¹ Hauck, 108.

³² National Park Service, "Narrow Gauge Railroad Through the Canyon," National Park Service, http://www.nps.gov/cure/historyculture/railroad.htm (accessed 20 March 2008).

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wanted a longer rest, an overnight stay in the railroad's hotel. At Cimarron, the railroad added locomotives to westbound trains to assist in their climb up the difficult four-percent grade over Cerro Summit towards Montrose. In addition to serving as a "helper station," Cimarron became an important stop for loading cattle and sheep headed to markets via the railroad. Buildings formerly at the site that are no longer extant include the hotel, a depot, a roundhouse, and various other railroad structures.

Locomotive 278 and Tender

Matthias Baldwin began building railroad locomotives in 1832. After the Civil War, Baldwin rose to dominate the American locomotive market, and became the largest locomotive manufacturer in the world by the turn of the century.³³ Due the instability of demand in the railroad industry, Baldwin frequently fell into financial difficulties and was forced to take on a number of partners over the years. Because of these partnerships, there were frequent changes to the company's name. By the time of Locomotive No. 278's completion in February 1882, Baldwin had passed away and the company became known as Burnham, Parry, Williams & Co.

In 1866, the Baldwin Locomotive Company introduced its 2-8-0 Consolidation-type locomotive, one of the most popular designs ever produced. Locomotive No. 278 was to become a member of that distinguished group.³⁴ In 1871, Baldwin built the first narrow gauge locomotive, christened the Montezuma, for a main line common carrier, the Rio Grande, and issued the industry's first catalog of narrow gauge locomotives. From that point, the company was to go on to become the nation's dominant builder of narrow gauge locomotives, cornering forty-five percent of the market. The "Baby Road," as the Rio Grande was affectionately known by its supporters, was to become one of Baldwin's best customers, purchasing the largest number of narrow gauge Consolidations in the world.³⁵

Acting through a subsidiary company known as the Rio Grande Extension Company, the D&RG ordered Locomotive No. 278 from the Baldwin Locomotive Works of Philadelphia, Pennsylvania, in December 1880, and took delivery in March 1882. When she joined the road, No. 278 was one of 43 freight locomotives acquired by the Rio Grande that year, and she was one of 86 locomotives of her type to serve on the line.³⁶

It was no accident that the order was placed with Baldwin Locomotive Works. Philadelphia was a major center for railroad finance. After the Civil War, the group was keen to promote railroad building in the West. Head of the group was J. Edgar Thomson, Palmer's former boss on the Pennsylvania Railroad, which was headquartered in Philadelphia. The group helped to fund the construction of the Kansas Pacific, another railroad with which Palmer was intimately connected. Robert H. Lamborn, who soldiered with Palmer during the war, was the D&RG's first vice president, and served on its first Board of Directors. Lamborn hailed from Philadelphia. The Rio Grande's first construction contract was leased to a Philadelphia firm, the North South Construction Company. Through this interconnected web of personal contacts, the Baldwin Locomotive Works found its way to the Rio Grande.³⁷

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³³ John H. White, Jr., A History of The American Locomotive, Its Development: 1830-1880 (New York, Dover Publications, Inc., 1979), p.20, Brown, pp. ix, 6. ³⁴ White, pp. 65, 427.

³⁵ Forest, Locomotives of the Rio Grande, pp 5,7; Jim Wilke, "Glory in the Rockies: Locomotive Paint Schemes of the Denver and Rio Grande, 1871-1881," The Prospector, Third Quarter 2004, pp. 13, 19; Brown, p. 43.

³⁶ Forest, pp. 18-20; Denver and Rio Grande Railway, Annual Report for the Year 1882 (New York: William Mann & Son, 1883), p. 77; Baldwin Locomotive Works Engine Registers and Order Books, 1822-1956, California State Railroad Museum. Originals located in Archives Center, National Museum of American History.

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The early 1880s were good years for the D&RG and other Colorado railroads. Construction boomed and demands for locomotives and other types of rolling stock increased. When originally ordered in December 1880 by the Rio Grande Extension Company, Baldwin quoted a price of \$10,250 with the standard company caveat "price to be fixed 3 mos. before delivery." This took into account unexpected increases in such things as the cost of materials, etc. The final price was \$11,290.07. The Baldwin Construction Number for the locomotive was 6030.³⁸

During this period, it was customary for locomotives to have names, such as the *Montezuma* referred to previously. It is possible that 278 also had a name, but current research has not shown any evidence of one.

During most of her career with the "Baby Road," No. 278 wandered the Third Division. Operating mostly out of Gunnison, No. 278 hauled coal, livestock, and fluorspar on the Baldwin, Crested Butte, Lake City, and Sapinero branches, fought snow on Marshall Pass and elsewhere on the Division, double-headed trains over Cerro Summit through Cimarron, and served as a switcher in the Salida yards. While it double-headed trains over the Cerro Summit through Cimarron, it traversed the National Register-listed D&RGW Pratt Truss Bridge crossing the Gunnison River (NRIS #76000172).

As C-16s, like No. 278, replaced earlier locomotives on the Rio Grande, so too were they replaced in mainline service by the newer, more powerful locomotives of the C-19 Class and the later heavier "K" class locomotives of the 2-8-2 Mikado type. The railroad responded, in most cases, to the demands of the new locomotives by upgrading its track and bridge standards, but this was not economically feasible everywhere. In those cases, older locomotives like number 278 soldiered on, servicing branch lines such as the Baldwin branch where the K-class locomotives could not operate due to weight restrictions on track and bridges.

Locomotive No. 278 spent her last days hauling lumber, cattle, and sheep on the Crested Butte and Sapinero branches. She made her last revenue-service runs in September 1952. In May 1953, she was stricken from the roles and donated to the City of Montrose, where she reposed for some twenty years, along with caboose 0577. When retired, No. 278 sported the "Flying Rio Grande" paint scheme that was introduced in 1939. The railroad valued the locomotive at \$12, 823.27.³⁹

³⁹ Day, pp. 6-8; AFE No. 278.

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³⁷ Robert G. Athearn, Rebel of the Rockies: The Denver and Rio Grande Western Railroad (New Haven: Yale University Press, 1962), p.
15; Henry V. Poor, Manual of the Railroads of the United States for 1871-72 (New York: H.V. & H. W. Poor, 1871) p. 447; Brown, pp.
39-40.

³⁸ Baldwin Engine Order and Register Books (cited hereafter as Baldwin Eng. Bks.), California State Railroad Museum and the Smithsonian National Museum of American History Behring Center; Denver and Rio Grande Western Railroad, Authority For Expenditure Index Card for Locomotive 278 (cited hereafter as the AFE No.278), Colorado Railroad Museum, Golden, CO.

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In August 1973, the city began leasing the locomotive to the National Park Service (NPS) for one dollar per year. The current lease is scheduled to expire in 2088.⁴⁰ The NPS moved the locomotive for display purposes onto the center span of the original 1895 Rio Grande Pratt Truss Bridge spanning the Gunnison River at Crystal Creek.

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⁴⁰ Lease Agreement between the City of Montrose, Colorado, and the National Park Service, August 16, 1973, and March 15, 1989. (Copies on file at City of Montrose Office of Community Development and CURE.)

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GEOGRAPHICAL DATA

VERBAL BOUNDARY DESCRIPTION

The boundary of D&RG Locomotive No. 278 and Tender extends only to the locomotive and its associated tender. The Locomotive and its Tender, whose measurements are 8'7" x 50', are located on the D&RG Narrow Gauge Trestle (NRIS #76000172), or the Cimarron Visitor Center rail exhibit or the visitor center maintenance area, all within the Curecanti National Recreation Area.

Note: D&RG Locomotive No. 278 and its Tender are currently located at the D&RG Narrow Gauge Trestle crossing the Cimarron (NRIS #76000172). As such, the UTM points noted within this nomination are associated with the bridge location. (See footnote 1 for clarification on discrepancy with bridge type.)

BOUNDARY JUSTIFICATION

The boundary of D&RG Locomotive No. 278 extends only to the locomotive and its Tender. Locomotive No. 278 and its Tender and six other pieces of rolling stock are on display within Curecanti National Recreation Area. The National Park Service exhibits the railroad cars and locomotive as part of its interpretative programming on the history of the D&RGW and the company's famous Black Canyon of the Gunnison Route. Although the locomotive and rolling stock do not leave the recreation area, park staff may occasionally rotate the cars at the Cimarron Visitor Center with cars on exhibit at the D&RG Narrow Gauge Trestle. In addition, the cars may be moved to the visitor center maintenance area for repairs and preservation treatments.

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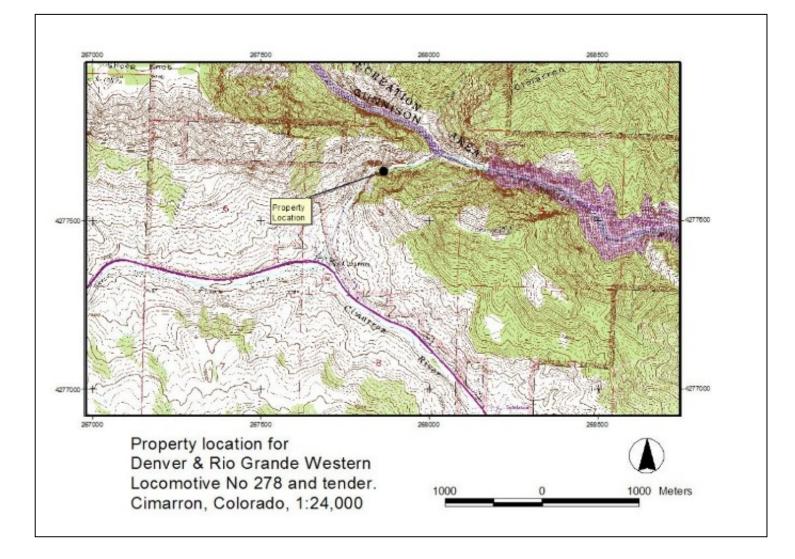
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USGS TOPOGRAPHIC MAP

Cimarron Quadrangle, Colorado 7.5 Minute Series UTM: Zone 13 / 277604E / 4258775N PLSS: NM PM, T48N, R6W, Sec. 5 NE¼, NE¼, NE¼, NE¼ Elevation: 6900 feet



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PHOTOGRAPH LOG

The following information pertains to photograph numbers 1-3 except as noted:

	Photographer: Forest Frost	
Date of Photographs: June 2008		
	Negatives: tif images on CD, on file with NPS in Washington, DC	
	Printed with HP Premium Paper and HP 100 Photo-gray Ink	
Photo No.	Photographic Information	
1	Left Profile of Denver & Rio Grande Western locomotive #278; CO-MontroseCounty-	
	D&RGW278-01.	
2	Front view of Denver & Rio Grande Western locomotive #278; CO-MontroseCounty-	
	D&RGW278-02.	
3	Side profile of tender for Denver & Rio Grande Western locomotive #278; CO-	
	MontroseCounty-D&RGW278-03.	

PHOTOGRAPH LOG - HISTORIC

These photographs may not be included in Internet posted documents and other publishing venues due to copyright restrictions.

Photo No.	Photographic Information
H1	This drawing shows the basic layout design for D & RG Locomotive No. 278 and other
	locomotives in its class.
H2	Baldwin paint schemes for Cylinder 6, Headlight 5, Dome 2, Driver 11, and Tender 23.
H3	Baldwin paint schemes on restored locomotive at Kansas Historical Society. Striping
	patterns would have been similar on D&RG No. 278.
H4	Coal Breaker and Mine, Anthracite Mesa, Crested Butte, Colorado with Locomotive No.
	278. Photograph by William Henry Jackson between 1882 and 1890, Denver Public
	Library, Western History Collection – photo CHS.J627.
H5	Denver & Rio Grande Western Railroad Locomotive No. 278. Otto C. Perry Collection,
	October 24, 1928. Denver Public Library, Western History Collection, photo OP-7460
H6	D&RGW Locomotive No. 278. Otto C. Perry Collection, May 20, 1940. Denver Public
	Library, Western History Collection – photo OP-7461
H7	Cimarron Roundhouse. Photograph by Charles Goodman, August 1885 Denver Public
	Library, Western History Collection- photo CHS.Z3





