

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ORIGINAL

FIELD NOTES

OF

THE RETRACEMENT AND DEPENDENT RESURVEY OF
A PORTION OF THE UTAH-COLORADO STATE BOUNDARY

FROM MILE POST 115 TO MILE POST 122,

THE DEPENDENT RESURVEY OF

A PORTION OF THE SOUTH BOUNDARY,

A PORTION OF THE NORTH BOUNDARY,

AND A PORTION OF THE SUBDIVISIONAL LINES,

IN

TOWNSHIP 24 SOUTH, RANGE 26 EAST,

OF THE SALT LAKE MERIDIAN
IN THE STATE OF UTAH

EXECUTED BY

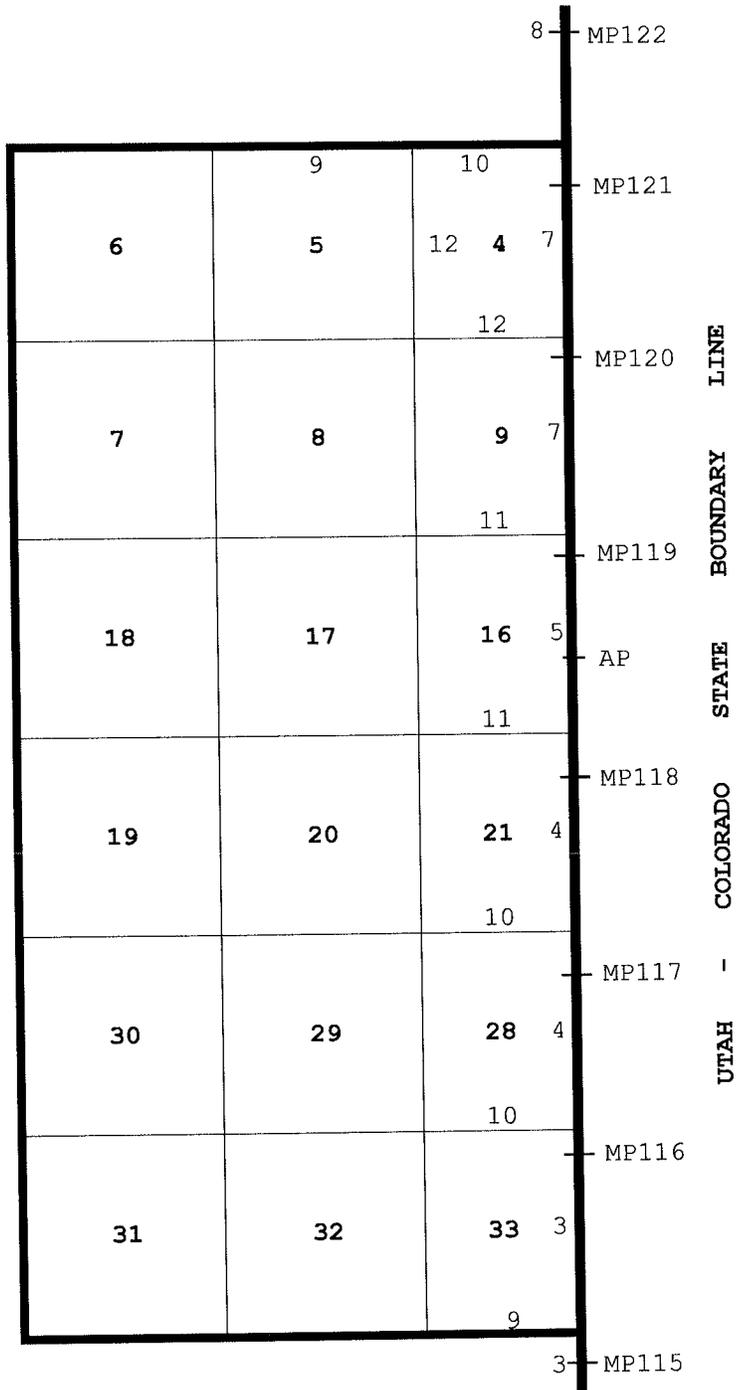
Scott A. Burkhardt
Cadastral Surveyor

Under Special Instructions dated and approved **May 1, 2014**, which provided for the surveys included under Group No. **1255**, and Assignment Instructions dated **May 1, 2014**.

Survey Commenced, **June 17, 2014**
Survey Completed, **April 13, 2015**

INDEX DIAGRAM

TOWNSHIP 24 SOUTH, RANGE 26 EAST, SALT LAKE MERIDIAN, UTAH



TOWNSHIP 24 SOUTH, RANGE 26 EAST, SALT LAKE MERIDIAN, UTAH

The following field notes describe the retracement and dependent resurvey of a portion of the Utah-Colorado state boundary line from Mile Post 115 to Mile Post 122, and the dependent resurvey of a portion of the south boundary, the dependent resurvey of a portion of the north boundary and a portion of the subdivisional lines, in T. 24 S., R. 26 E., Salt Lake Meridian, Utah.

HISTORY OF SURVEYS

Surveyed by		Retr. or Resurveyed by	
SOUTH BOUNDARY			
All	H.W. Miller	1911	
EAST BOUNDARY (Utah-Colorado state boundary line)			
All	R.J. Reeves	1878	
All		A.D. Wilson	1885
All		H.W. Miller	1911
WEST BOUNDARY			
All	H.W. Miller	1911	
All		C.F. Moore	1933
NORTH BOUNDARY			
All	H.W. Miller	1911	
SUBDIVISION			
All	H.W. Miller	1911	

TOWNSHIP 24 SOUTH, RANGE 26 EAST, SALT LAKE MERIDIAN, UTAH

The survey was executed in accordance with the specifications set forth in the Manual of Surveying Instructions, 2009, and the Special Instructions for Group No. 1255, dated May 1, 2014.

The direction of the lines was determined by references to true meridian, established by Global Positioning System (GPS) utilizing Real-Time Kinematic (RTK) techniques throughout the survey. The positional accuracy of this survey complies with the *Standards for the Positional Accuracy of Cadastral Surveys When Using Global Navigation Satellite Systems (GNSS)*, dated February 23, 2009. Trimble model R8 GPS receivers were used for field collection. Cadastral Automated Plat Drafting (CAPD) software was the primary software utilized for project calculations.

Preliminary to the resurvey, the lines of the prior surveys were retraced and a search was made for all corners and other calls of record. Identified corners were remonumented in their original positions. Lost corners were reestablished and remonumented at proportionate positions based on the official record. The retracement data were thoroughly verified and only the true line field notes are given herein.

Geodetic control was derived from GPS static observations, post processed by National Geodetic Survey, Online Positioning User Service (OPUS), utilizing Continuously Operating Reference Stations (CORS): DE6238 MC01 MESA CNTY COOP CORS ARP, DL3522 MC06 MACK CORS ARP, and DH6912 MC02 MESA CNTY 02 COOP CORS ARP.

The geographic position of Mile Post 122, on the Utah-Colorado state boundary line, as determined by direct RTK methods from the National Geodetic Survey OPUS solution, is as follows:

Latitude: **38°46'03.955" N.**
Longitude: **109°03'30.386" W.**, N.A.D. 83 (2011) EPOCH: 2010.00,
Network Accuracy = 0.200 meter at 95% confidence.

The geographic position of Mile Post 115 on the Utah-Colorado state boundary line, as determined by direct RTK methods from the National Geodetic Survey OPUS solution, is as follows:

Latitude: **38°39'57.815" N.**,
Longitude: **109°03'34.768" W.**, N.A.D. 83 (2011) EPOCH: 2010.00,
Network Accuracy = 0.200 meter at 95% confidence.

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE UTAH-COLORADO
STATE BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

Retracement and Dependent Resurvey of a Portion of the Utah-Colorado
State Boundary Line, From Mile Post 115 to Mile Post 122

Reestablishment of the Survey Executed by R.J. Reeves in 1878, and
the Retracement and Resurveys by A.D. Wilson in 1885
and H.W. Miller in 1911.

Beginning at Mile Post 115 on the Utah-Colorado state boundary
line, monumented with a sandstone, 17 x 8 x 5 inches, firmly set,
projecting 8 inches above the ground, with no discernible marks
(1911 record: a limestone, 16 x 10 x 6 inches, marked as described
in official record of 1855 survey; 1855 record: a sandstone, 36 x
12 x 10 inches, marked U on west face, C on east face, 1885 on
north face, and 115 on south face).

At the corner (sandstone)

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 22
inches in the ground, magnet at base, in a mound of stone, 3 feet
base, to aluminum cap marked

115M
UTAH | COLO
2014

Raise a mound of stone, 2 feet base, 2 feet high, northeast of
the corner, on a boulder.

Corner is located on a southwest-facing rocky hillside,
immediately southwest of a boulder, 10 x 3 x 3 feet.

N. 0°05.5' W., on the 116th mile.

- 1.270** Point for the closing corner of sections 4 and 33, Townships 24
and 25 South, Range 26 East.

From which the amended 1911 closing corner, monumented with an
iron post, 3 inches diameter, firmly set, projecting 15 inches
above the ground, with brass cap marked as described in the
official record of the 1911 resurvey, bears N.89°54.9'W., 9.0
links distance; with a mound of stone, 1 foot diameter, 1 foot
high, southwest of the corner.

From which the remaining 1911 bearing tree

A dead pinon, 9 inches diameter, bears N. 54 1/4° W., 48 links
distance, marked T24S R26E S33 BT.

Add marks AM and 2014 to cap.

- 77.517** Point for Mile Post 116 on the Utah-Colorado state boundary
line, at proportionate distance by the irregular boundary

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE
BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

CHAINS

adjustment method. There is no remaining evidence of the 1885 marks (found in 1911) chiseled into bedrock or the mound of stone.

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 26 inches in the ground, magnet at base, in a collar of stone, 2 feet diameter, with aluminum cap marked

116M
UTAH | COLO.
2014

Corner is located on a gentle northwest-facing slope, with pinon and juniper trees.

NORTH, on the 117th mile.

- 8.677** Point for the closing corner of sections 28 and 33.

From which the amended 1911 closing corner, monumented with an iron post, 2 inches diameter, loosely set, in a mound of stone, 3 feet base, 2 feet high, with brass cap marked as described in the official record of the 1911 resurvey, bears N.89°54.7'W., 10.5 links distance.

Add marks AM and 2014 to cap.

- 80.569** Point for Mile Post 117, on the Utah-Colorado state boundary line, at proportionate distance by the irregular boundary adjustment method. There is no remaining evidence of the 1885 marks chiseled into a large boulder (found in 1911).

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 25 inches in the ground, magnet at base, in a collar of stone, 2 feet diameter, with aluminum cap marked

117M
UTAH | COLO
2014

Corner is located on a moderately-steep northwest-facing slope.

NORTH, on the 118th mile.

- 7.899** Point for the closing corner of sections 21 and 28, at the intersection of the section line through the point for the 1911 closing corner. The location for the 1911 closing corner was determined at record bearing and distance from the remaining 1911 bearing tree, falling on a large boulder, 16 x 9 x 6 feet (record: 7 x 5 x 4 feet). There is no remaining evidence of the

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE
BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

CHAINS

1911 marks chiseled on the boulder.

From which the remaining 1911 bearing tree

A juniper, 36 inches diameter, bears N. 41° W., 115 links
distance, with illegible markings (record: marked T24S
R26E S21 BT).

At the point

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 24
inches in the ground, magnet at base, in a collar of stone, 2
feet diameter, with aluminum cap marked

T24S
R26E
S21 C
S28 C
2014

From this point, the point for the 1911 closing corner bears
N.89°58.6'W., 23.0 links distance.

Corner is located east of a large boulder.

- 80.569** Point for Mile Post 118, on the Utah-Colorado state boundary
line, at proportionate distance by the irregular boundary
adjustment method. There is no remaining evidence of the 1885
marks chiseled into a large boulder, (1911 record: cross marked
chiseled on the sandstone bedrock).

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 6
inches in the ground to bedrock, magnet at base, in a mound of
stone, 4 feet base, with aluminum cap marked

118M
UTAH
COLO
2014

Corner is located on a steep northwest-facing slope, with dense
brush and pinon and juniper trees.

N. 0°07.9' E., on the 119th mile.

- 7.385** Point for the closing corner of sections 16 and 21.

From which the amended 1911 closing corner, monumented with an
iron post, 2 inches diameter, firmly set, projecting 12 inches
above a mound of stone, 3 feet base, 2 feet high, with brass cap
marked as described in the official record of the 1911 resurvey,
bears S.89°55.8'W., 66.4 links distance; with a mound of stone, 2

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE
BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

CHAINS

feet base, 2 feet high, west of the corner.

Add marks AM and 2014 to cap.

Corner is located on the edge of a mesa top, with a vertical drop to the west.

- 33.507** 1878 Mile Post 119 1/2, monumented with a sandstone, 42 x 14 x 4 inches, firmly set, projecting 18 inches above a mound of stone, 3 feet base, 2 feet high, with no discernible marks (1878 record: a sandstone, 36 x 24 x 18 inches, marked UT 119 1/2 M on west face, COL WC on east face, in a mound of stone, 5 feet base, 4 feet high; 1911 record: a sandstone, 34 x 15 x 4 inches, marked 119 1/2 M U on west face, C on east face, in a mound of stone).

At the corner (marked sandstone)

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 3 inches in the ground to bedrock, magnet at base, in a mound of stone, 3 feet base, to aluminum cap marked

AP
UTAH | COLO
2014

Bury original stone in mound of stone.

This corner now functions as an angle point only, on the Utah-Colorado state boundary line.

Corner is located on the edge of a mesa, with a steep drop to the north.

N. 0°51.7' E., beginning new measurement.

- 47.433** Point for Mile Post 119, on the Utah-Colorado state boundary line, at proportionate distance by the irregular boundary adjustment method. There is no remaining evidence of the 1911 iron post or mound of stone.

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 22 inches in the ground, magnet at base, in a mound of stone, 3 feet base, to aluminum cap marked

119M
UTAH | COLO
2014

Corner is located on a gentle southwest-facing slope, with pinon and juniper trees.

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE
BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

CHAINS

N. 0°51.7' E., on the 120th mile.

6.375 Point for the closing corner of sections 9 and 16.

From which the amended 1911 closing corner, monumented with an iron post, 2 inches diameter, loosely set, in an embedded mound of stone, 4 feet diameter, with brass cap marked as described in the official record of the 1911 resurvey, bears N.89°59.7'W., 17.2 links distance.

Reset original iron post to 6 inches in the ground, to bedrock, in a mound of stone, 4 feet base, 2 feet high. Add marks AM and 2014 to cap.

From which the 1911 bearing trees

A pinon snag, 13 inches diameter, bears S. 5° E., 54 links distance, marked T24S R26E S16 BT, (record: S. 1/2° W.).

A dead and down pinon, 15 inches diameter, bears N. 43° W., 80 links distance, marked T24S R26E S9 BT.

80.956 Point for Mile Post 120, on the Utah-Colorado state boundary line, at proportionate distance by the irregular boundary adjustment method. There is no remaining evidence of the 1911 marked stone or mound of stone.

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 17 inches in the ground, magnet at base, in a mound of stone, 3 feet base, to aluminum cap marked

120M
UTAH | COLO
2014

Corner is located on a bench on South Beaver Mesa, with scattered pinon and juniper trees.

N. 0°51.7' E., on the 121st mile.

4.546 Point for the closing corner of sections 4 and 9, at proportionate distance. There is no remaining evidence of the 1911 iron post or mound of stone.

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 15 inches in the ground to bedrock, magnet at base, in a mound of stone, 3 feet base, to aluminum cap marked

T24S
R26E
S4 C |
S9 C |
2014

RETRACEMENT AND DEPENDENT RESURVEY OF A PORTION OF THE
BOUNDARY LINE, FROM MILE POST 115 TO MILE POST 122

CHAINS

Corner is located on a bench on South Beaver Mesa, with scattered pinon and juniper trees.

- 80.956** Mile Post 121, on the Utah-Colorado state boundary line, monumented with an iron post, 3 inches diameter, firmly set, projecting 12 inches above the ground, with brass cap marked as described in the official record of the 1911 resurvey; with a mound of stone, 3 feet base, 1 1/2 feet high, west of the corner.

Corner is located just south of an improved gravel road.

N. 1°32.5' E., on the 122nd mile.

- 4.341** Closing corner of sections 4 and 33, Townships 23 and 24 South, Range 26 East, monumented with an iron post, 3 inches diameter, firmly set, projecting 18 inches above a mound of stone, 4 feet base, 1 foot high, with brass cap marked as described in the official record of the 1911 resurvey.

Rebuild mound of stone around iron post, 4 feet base, 3 feet high, to cap.

Corner is located just south of an improved gravel road.

- 79.960** Mile Post 122, on the Utah-Colorado state boundary line, monumented with a sandstone, 26 x 22 x 8 inches, firmly set, projecting 14 inches above a mound of stone, 3 feet diameter, 1 foot high, with no discernible marks (1911 record: a sandstone, 36 x 14 x 10 inches, marked 122M U on west, C on east), with an accessory mound of stone west, 3 feet diameter, 2 feet high.

At the corner (sandstone)

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 24 inches in the ground, magnet at base, in a mound of stone, 4 feet base, to aluminum cap marked

122M
UTAH | COLO
2014

Set a steel fence post north.

Corner is located in desert brush, on a gently, south facing slope.

DEPENDENT RESURVEY OF A PORTION OF THE SOUTH BOUNDARY
T. 24 S., R. 26 E., SALT LAKE MERIDIAN, UTAH

CHAINS

Dependent Resurvey of a Portion of the South Boundary
T. 24 S., R. 26 E., Salt Lake Meridian, Utah

Reestablishment of the Survey Executed by
H.W. Miller in 1911.

From the on-line witness corner to sections 4, 5, 32, and 33, monumented with an iron post, 3 inches diameter, loosely set, in a mound of stone, 4 feet base, 2 feet high, with brass cap marked as described in the official record of the 1911 survey; with a mound of stone, 3 feet base, 2 feet high, south of the corner.

Rebuild mound of stone around iron post.

Corner is located east of a steep drop off.

S. 89°54.9' E., between sections 4 and 33.

- 35.542** The amended 1911 closing corner of sections 4 and 33, hereinbefore described.
- 35.632** The point for the closing corner of sections 4 and 33, on the Utah-Colorado state boundary line.
-

Dependent Resurvey of a Portion of the North Boundary
T. 24 S., R. 26 E., Salt Lake Meridian, Utah

Reestablishment of the Survey Executed by
H.W. Miller in 1911.

From the 1/4 section corner of sections 5 and 32, monumented with an iron post, 1 inch diameter, firmly set, projecting 12 inches above a mound of stone, 2 feet base, 2 feet high, with brass cap marked as described in the official record of the 1911 survey; with a mound of stone, 2 feet base, 2 feet high, north of the corner.

Corner is located south of a gravel road, on a fairly level bench.

S. 89°54.7' E., between sections 5 and 32.

- 21.966** Point for the 1911 witness corner to sections 4, 5, 32, and 33, at proportionate distance, falls near the present left bank of the Dolores River. There is no remaining evidence of the 1911 iron post or mound of stone.

DEPENDENT RESURVEY OF A PORTION OF THE NORTH BOUNDARY LINE
T. 24 S., R. 26 E., SALT LAKE MERIDIAN, UTAH

CHAINS

- 39.939** Point for the corner of sections 4, 5, 32, and 33, at proportionate distance, falls in Dolores River. Not monumented.
-

S. 89°54.7' E., between sections 4 and 33.

- 38.398** The closing corner of sections 4 and 33, on the Utah-Colorado state boundary line, hereinbefore described.
-

Dependent Resurvey of a Portion of the Subdivisional Lines,
T. 24 S., R. 26 E., Salt Lake Meridian, Utah

Reestablishment of the Survey Executed by
H.W. Miller in 1911.

From the corner of sections 28, 29, 32, and 33, monumented with an iron post, 2 inches diameter, loosely set, projecting 13 inches above a mound of stone, 4 feet base, 2 feet high, with brass cap marked as described in the official record of the 1911 survey.

From which the remaining 1911 bearing trees

A pinon snag, 13 inches diameter, bears N.48 1/2° E., 215 links distance, marked T24S R26E S28 BT, (record: 218 links distance).

A pinon snag, 5 inches diameter, bears S.58° W., 162 links distance, marked T24S R26E S32 BT, (record: bears S.54 1/2° W., 160 links distance).

Rebuild mound of stone around iron post.

Corner is located on the edge of a steep drop off sloping northwest.

S. 89°54.7' E., between sections 28 and 33.

- 36.211** The amended 1911 closing corner to sections 28 and 33, hereinbefore described.

- 36.316** The point for the closing corner to sections 28 and 33, on the Utah-Colorado state boundary line.
-

From the corner of sections 20, 21, 28, and 29, monumented with an iron post, 2 inches diameter, firmly set, projecting 7 inches above a mound of stone, 3 feet base, 2 feet high, with brass cap marked as described in the official record of the 1911 survey.

From which the remaining 1911 bearing trees

DEPENDENT RESURVEY OF A PORTION OF THE SUBDIVISIONAL LINE
T. 24 S., R. 26 E., SALT LAKE MERIDIAN, UTAH

CHAINS

A juniper, 12 inches diameter, bears S.79° W., 19 links distance marked T24S R26E S29 BT, (Record: 26 links distance).

A pinon snag, 9 inches diameter, bears N.14 1/2° W., 40 links distance, marked T24S R26E S20 BT, (Record: 70 links distance).

S. 89°58.6' E., between sections 21 and 28.

35.786 The point for the 1911 closing corner to sections 21 and 28.

36.016 The closing corner to sections 21 and 28, on the Utah-Colorado state boundary line, hereinbefore described.

From the corner of sections 16, 17, 20, and 21, monumented with an* iron post, 2 inches diameter, firmly set, projecting 16 inches above the ground, in a collar of stone, 2 feet diameter, with brass cap marked as described in the official record of the 1911 survey.

From which the remaining 1911 bearing trees

A pinon snag, 9 inches diameter, bears S.43° E., 106 links distance, marked T24S R26E S21 BT.

A pinon, 17 inches diameter, bears N.38 1/4° W., 138 links distance, with a partially healed blaze, marked T24S R26E S17 BT.

N. 89°55.8' E., between sections 16 and 21.

35.046 The amended 1911 closing corner to sections 16 and 21, hereinbefore described.

35.710 The point for the closing corner to sections 16 and 21, on the Utah-Colorado state boundary line.

From the corner of sections 8, 9, 16, and 17, monumented with an iron post, 2 inches diameter, firmly set, projecting 17 inches above the ground, with brass cap marked as described in the official record of the 1911 survey.

From which the remaining 1911 bearing trees

A juniper, 24 inches diameter, bears N.20 3/4° E., 128 links distance, with a partially healed blaze, marked BT.

A juniper, 15 inches diameter, bears S.43° E., 97 links distance, marked T24S R26E S16 BT.

A juniper, 16 inches diameter, bears N.35° W., 124 links distance, marked S8 BT.

DEPENDENT RESURVEY OF A PORTION OF THE SUBDIVISIONAL LINE
T. 24 S., R. 26 E., SALT LAKE MERIDIAN, UTAH

CHAINS

S. 89°59.7' E., between sections 9 and 16.

- 36.040 The amended 1911 closing corner to sections 9 and 16, hereinbefore described.
- 36.212 The point for the closing corner to sections 9 and 16, on the Utah-Colorado state boundary line.

From the corner of sections 4, 5, 8, and 9, monumented with an iron post, 2 inches diameter, firmly set, projecting 13 inches above a mound of stone, 2 feet base, 1 1/2 feet high, with brass cap marked as described in the official record of the 1911 survey; with a mound of stone, 3 feet base, 2 feet high, west of the corner.

Corner is located on the east side of a remote drainage, on a moderately-steep west-facing slope, with scattered juniper trees.

S. 87°27.8' E., between sections 4 and 9.

- 37.174 The closing corner of sections 4 and 9, on the Utah-Colorado state boundary line, hereinbefore described.

From the corner of sections 4, 5, 8, and 9.

N. 0°00.1' W., between sections 4 and 5.

- 39.562 Point for the 1/4 section corner of sections 4 and 5, at proportionate distance, falls on steep, unconsolidated slope where it is impracticable to establish a permanent monument.

At a point selected for an off-line witness corner, bears N.0°59.4'E., 2.644 chains distance:

Set an aluminum post, 2 1/2 inches diameter, 30 inches long, 27 inches in the ground, with aluminum cap marked

WC
T24S R26E
1/4
S5 ↓ S4

2014

Corner is located on a steep, unconsolidated, west-facing slope, east of a large boulder.

- 40.878 Point for the 1911 witness corner to the 1/4 section corner of sections 4 and 5, at proportionate distance. There is no remaining evidence of the 1911 iron post or mound of stone.
- 79.154 The true point for the corner of sections 4, 5, 32, and 33, on the north boundary of the township, hereinbefore described.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD ASSISTANTS

Name	Capacity
Phil Freiberg	Survey Technician

CERTIFICATE OF SURVEY

I, *Scott A. Burkhardt*, Cadastral Surveyor, HEREBY CERTIFY upon honor, that in pursuance of Special Instructions bearing the date of the *1st day of May, 2014*, I have retraced a portion of the *Utah-Colorado state boundary line, from Mile Post 115 to Mile Post 122; dependently resurveyed a portion of the south boundary, a portion of the north boundary, and a portion of the subdivisional lines; in Township 24 South, Range 26 East, of the Salt Lake Meridian, in the State of Utah*, which are represented in the foregoing field notes as having been executed by me and under my direction; and that said survey has been made in strict conformity with said Special Instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in specific manner described in the foregoing field notes.

October 30, 2015

Date

Scott A. Burkhardt

Cadastral Surveyor

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT
Salt Lake City, Utah

The foregoing field notes of the retracement of a portion of the *Utah-Colorado state boundary line, from Mile Post 115 to Mile Post 122; the dependent resurvey of a portion of the south boundary, a portion of the north boundary, and a portion of the subdivisional lines; in Township 24 South, Range 26 East, Salt Lake Meridian, Utah*, executed by *Scott A. Burkhardt, Cadastral Surveyor*, having been critically examined and found correct, are hereby approved.

October 30, 2015

Date

Daniel W. Webb

Chief Cadastral Surveyor for Utah