



Continental Divide National Scenic Trail

Map Book: NEW MEXICO

Cartography and edits: Jerry Brown

Cover photo: Chris "Freefall" Sanderson captured fellow CDT Thru-Hikers Joe "Samurai" eValesko and Sheryl "Hell Fire" Valesko in Piedre Lumbre, New Mexico. Stunning sunsets and sandstone features showcase this landscape in the southern Rocky Mountains.

The Continental Divide National Scenic Trail New Mexico Map Book

*The complete map set for the official route of the
CDNST in New Mexico*



Cartography by Jerry Brown, Bear Creek Survey Service, LLC

5.00

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Map base from United States Geological Survey 1:24,000 quadrangles and Forest Service Single Edition digital maps. Scans, reprojections and digital images produced by Igage Mapping Corporation. These maps were produced using the Igage 'All Topo Maps V7 Pro New Mexico' product.

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Bear Creek Survey Service, LLC
3065 East 2nd Avenue
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(970) 403-3527

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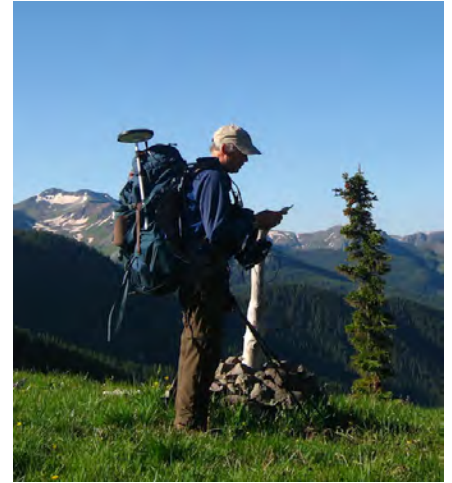
Cover design by Shannon Freix, edited by Jerry Brown

Forward

Some new trail in the Burro Mountains near Silver City opened to public use this year. The re-route there is still a work in progress. Users of the new tread are warned that they should exit the newly constructed trail at waypoint 06_26.0 and follow roads from there to Silver City. Continuing ahead on the new trail will end in a dead end from which it is difficult to get back to the trail.

See you on the trail.....

Jerry Brown



Acknowledgements

This map collection is the result of a joint agreement between Bear Creek Survey Service, LLC and the United States Forest Service. The crew for the project consisted of Jerry Brown, Project Manager, and GIS technicians Eric Herbst and Karen Gordon. Additional help came from friends and family who joined the crew in several locations. Special thanks go to Greg Warren of the US Forest Service, who's backing and support made the original and continued projects possible.

Additional thanks go to Mark Silver, president of Igage Mapping Company of Salt Lake City, Utah. Mark has been involved with numerous mapping projects over the years and is always available for help or advice regarding equipment and software. The maps in this book were all created using Igage software. www.igage.com

New Mexico's Continental Divide National Scenic Trail



Segment Names and Mileages - New Mexico

Seg.#	Length Miles	Accum. Miles	Segment Name	Map Plates
1	25.6	0.0	Mexico Border AP	1-4
2	19.6	25.6	NM Hwy 81 AP	4-7
3	12.8	45.2	NM Hwy 9 AP	7-10
4	25.3	58.0	NM Hwy 113 AP	10-13
5	32.6	83.3	NM Hwy 494 (Shakespeare AP)	13-18
6	45.4	115.9	Burro Peak TH	18-22
7	20.1	161.3	Silver City AP (US Hwy 180)	22-24
8	21.8	181.4	NM Hwy 15 (Arrastra Site TH)	24-27
9	13.0	203.2	NM Hwy 35 AP	27-28
10	34.6	216.2	Rocky Point AP (FR 150)	28-33
11	15.1	250.8	FR 226 AP	33-34
12	25.5	265.9	NM Hwy 59 TH	34-38
13	32.4	291.4	NM Hwy 163 AP	38-4
14	27.4	323.8	Coyote Stock Tank AP (County Rd. 16)	43-46
15	23.2	351.2	FR 3070 AP	46-48
16	36.4	374.4	NM Hwy 12 TH	48-54
17	42.2	410.8	US Hwy 60	54-59
18	22.7	453.0	NM Hwy 36 & 117 Jnct AP	59-63
19	55.2	475.7	NM Hwy 117 AP	63-71
20	27.3	530.9	Zuni-Acoma TH (NM Hwy 117)	71-75
21	26.4	558.2	Mt. Taylor TH	75-79
22	17.9	584.6	FR 239 AP	79-82
23	29.8	602.5	FR 239A TH	82-86
24	35.5	632.3	Cerro Colorado AP	86-91
25	19.7	667.8	Los Pinos TH	91-94
26	14.3	687.5	NM Hwy 96 AP	94-96
27	14.4	701.8	Skull Bridge TH	96-98
28	22.8	716.2	US Hwy 84 AP	98-101
29	30.9	739.0	NM Hwy 110 AP	101-104
30	17.7	769.9	Hopewell Lake AP (US Hwy 64)	104-107
31	21.0	787.6	Lagunitas CG AP	107-109
	2.8	808.6	NM/CO State Line	109
		811.4	Cumbres Pass TH	109

Disclaimers

CDNST

Beware! Trail users need to be prepared for any and all contingencies!

Throughout its length, the official route of the CDNST is a work in progress, with continuously ongoing changes occurring even as this information is published. With this in mind, it is the Trail user's responsibility to contact local land management agencies for the most current Trail information. It is also the responsibility of the CDNST user to be prepared and understand the risks. Failure to have the necessary knowledge, equipment and conditioning may cause extreme physical danger, injury or even death. **Know you are utilizing the CDNST and the information contained in this book at your own risk!**

Trail users may find portions of the official route closed or restricted due to ongoing forestry issues such as fires, salvage logging, dangerous downfall, or other events. Users may have to deviate from the maps at times because of these issues. Generally, any closed areas will be identified and alternate routes described. Trail users must utilize these alternate routes where directed to do so.

The CDNST is not fully constructed yet and in places users will find themselves on paved highways and improved roads which can be extremely hazardous, particularly for stock animals. Paved highways and improved roads are not part of the "official" CDNST. No "official" route yet exists in these places. It is the trail users responsibility to study and find alternate safe access around these areas. **You are responsible for your own safety!** Generally, these highways and paved roads currently exist along portions of the CDNST due to private land ownership negotiations still in progress. It is a long term goal to develop Trail off of all these locations strategically over time. In the meantime, please respect private land owners by not trespassing on privately owned property. Landownership is not depicted on the maps and access through non-Federal areas is only allowed at the discretion or by agreement with the landowner.

There are numerous areas where the trail is faint, unmarked, and largely unbuilt. Navigation through these areas can be extremely challenging. It is strongly suggested that users carry and understand how to operate navigation gear such as GPS and compass. There are places where large streams and rivers must be forded and at times of high water the potential for drowning is high. If you are hiking in a high water time, it is strongly suggested that you travel with another biker and carry adequate equipment for dealing with deep, dangerous fordings.

Data Accuracy/Liability

The Continental Divide National Scenic Trail (CDNST) GIS map data, developed cooperatively by the Bear Creek Survey Service, LLC and the U.S. Forest Service, the lead federal agency with stewardship responsibility of the CDNST, represents a digital depiction of the Continental Divide National Scenic Trail centerline for recreational and entertainment purposes. The information contained in these data is dynamic and may change over time. Bear Creek Survey Service, LLC and U.S. Forest Service shall not be responsible for errors or omissions in the data and shall not be obligated to provide updates, additions, or corrections to the data in the future. Bear Creek Survey Service, LLC and U.S. Forest Service give no warranty, expressed or implied, as to the accuracy, reliability, or completeness of this data, including travel route data. It is the responsibility of the data user to use the data appropriately. Bear Creek Survey Service, LLC and U.S. Forest Service shall not be held liable for improper or incorrect use of the data described and/or contained herein.

Equestrian or Pack Stock Use

Please check all agency regulations ahead of time for the specific locations you plan on bringing stock. National Parks, Forest Service and BLM, to name a few, may have different regulations across the CDNST states.

Prepare yourself and your stock or pack animals. Much of the CDNST is over 8,000 feet in elevation and in many areas above tree line. Acclimation of stock or pack animals for 2-3 days is advisable. Never push the animal until you are certain that they have totally acclimated to the altitude. Stock and riders with little or no mountain experience may have problems with rapid stream crossings, slide areas, and other unfamiliar conditions.

For more information and sources for stock use on Trails:

Yosemite National Park's website <http://www.nps.gov/yose/planyourvisit/stock.htm>

Horse & Mule Trail Guide USA <http://www.horseandmuletrails.com/Packh.htm>

Backcountry Horsemen of America <http://www.backcountryhorse.com/>

The Backcountry Llama <http://bcllama.com/>

Leave No Trace !

The responsibility of stewardship falls to every individual who uses and enjoys the backcountry. When we set foot here, we should accept a simple creed – that we will respect these places in their natural state and that we will strive to leave no trace of our presence.

1. Plan ahead and prepare
2. Travel and camp on durable surfaces
3. Dispose of waste properly
4. Leave what you find
5. Minimize campfire impacts
6. Respect wildlife
7. Be considerate of other visitors

For more information please visit www.lnt.org.

New Mexico: Hazards / Challenges

- Trail users planning to be near the border of Mexico are strongly encouraged to check in (just prior to your trip) with Border Patrol's Lordsburg office at (575) 542-3221 or in person at 441 Duncan Hwy, Lordsburg, NM 88045. If you encounter the Border Patrol while in this area, be prepared to provide identification.
- Be advised that the border region is a high crime area for drug trafficking and can be dangerous. The trail has been located to avoid confrontation but with caution in mind. Because of high speed travel, the Border Patrol has requested that hikers not walk on the roads. Do not rely on the good Samaritan principal in this area, with ranchers or strangers!
- Do not leave vehicles at the Mexico border.
- For safety reasons especially, please sign in and out at trailhead registers.
- Do not trespass on private property by approaching ranch houses. Frequent trespassing by both hikers and illegal aliens has local ranchers and landowners in an aggravated state. Further complaints from local landowners could lead to trail closures. The BLM and CDTA are working to establish the groundwork for a CDNST-friendly trail community in southern New Mexico and local landowners are key to these efforts. Please respect the rights of private property owners along the Trail.
- Many wells and water facilities are owned by ranchers and they are responsible for maintenance of all of the facilities, regardless of ownership. Do not adjust or tamper with water facilities. They are under no obligation to supply water to trail users.
- Dehydration is a serious concern in NM. CDTA has documented locations of water on the maps and in the waypoints provided but just because there was water there during documentation doesn't mean there will be water available when you are there. Streams are ephemeral and water tanks can run dry. Trail users are responsible to provision their own water. Do not expect to find potable water along the trail. Do not rely on hearsay for potential water locations. Stashing water is strongly encouraged, especially in desert areas. Be twice as prepared as you think you should be. Plan accordingly.
- It is strongly encouraged to use the official route! The southern NM region catches even the most experienced hikers dry and without water. By working with ranchers and locating water stash boxes at critical locations (where you provide for your own), opportunities will have been created for non-potable water sources every 10 – 15 miles. Contact the Las Cruces BLM for water stash box locations: (575) 525-4300 or go to this website for more information: http://www.blm.gov/nm/st/en/prog/recreation/continental_divide_nst.html.
- Don't be fooled! Flash flooding makes camping in dry watercourses, such as arroyos, unwise.
- Lock your vehicle, storing valuables and WATER out of sight.
- While the Trail has been located to avoid open mine shafts, these hazards exist regionally and are not always apparent.

Creating the maps:

The lines depicting The Continental Divide Trail in this book are actually GPS recordings collected by a field crew during the summers of 2009-2011 and maintained since to reflect changes. The GPS gear consists of two professional grade Ashtech receivers with sub-meter or better accuracies. The receivers are allowed to run continuously, with positions collected systematically while hiking. Whenever features such as intersections, roads, creeks, etc. are encountered the GPS is held stationary for a period of time to enhance accuracy. The data is differentially corrected, either by satellite based augmentation (SBAS) or post-processing to improve accuracy. More than 5.2 million points were recorded over about 3,047 miles of trail then thinned to favor accuracy based upon satellite geometry. The resulting database contains individual points with average spacing of about 6 feet which are connected to make a very detailed line. The map images are made by digitally cutting and combining hundreds of USGS topographical maps into smaller maps that reflect the trail corridor. The line and waypoint data was added and final images created for printing. Old map lines depicting the CDT, which are wildly erroneous in some places, were removed to prevent confusion.

How to use these maps:

These maps are intended to be used in conjunction with navigation tools such as a GPS receiver and/or compass. The maps show positions at critical intersections, stream crossings, and other features along the way. To save weight, the maps were reduced in scale from the original 1 inch = 2000 feet of the USGS maps to a scale of 1 inch = 3000 feet. The maps have UTM grid lines drawn on them to assist in navigation. There is a scale bar on every map to assist in locating a GPS position from the UTM grid. (See **With a GPS** for details.)

The trail is divided into hiking segments for the purpose of the guide. A typical title looks like this: **Map 1 Seg 1 Mi 0.0 to 06.1**. This means that the map covers part of Segment 1, and is used to travel from waypoints at mile 0.0 to mile 6.1. A subsequent map titled **Map 2 Seg 1 Mi 5.6 to 13.9** would cover Segment one, mile 5.6 to mile 13.9. The mileages begin in each segment with 0.0 and finish with the length of the segment.

Map symbols and GPS Coding:

Red lines depict trail. **Black lines** depict roads.

A gps point name consists of a mileage and descriptor. Decimal points are assumed to 1/10th of a mile. The coding for the point **12_363XR** means segment 12, mile 36.3, Intersection, turn Right.

Codes:

TH, AP=Trailhead or Access Point.

XX, XR, XL describe trail intersections. **XR**=Right turn. **XL**= Left turn. **XX**=Ahead without turning.

RX, RR, and RL describe road intersections. **RR** = Right turn. **RL** = Left turn. **RX** = Ahead without turning.

HP, T, RT= High Point. Ridges, passes, saddles.

MC, MS= Markers, Cairns or Signs. Noted in places where the trail is poorly defined. Very useful as gps navigation points.

GT=Gate

WT= Water - found in dry year 2014. **WS**= Seasonal Water - not reliable in drouth.

M=Mileage marker only, no feature.

OP= Other Point. This is a sort of catch-all for miscellaneous points along the trail such as boundaries, power lines, buildings, etc.

Understanding UTM Coordinates

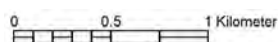
The best way to think of a rectangular coordinate system is to view the earth as a giant checkerboard of equally sized squares. UTM coordinates tell you where you are on the board. The easting (X) value is how many meters you are east of a projected longitude line. The Y value tells you how far north you are of the equator. If you are heading towards a waypoint, your gps will display where you are on the checkerboard, and how far you have to go to get where you want to go. This is also possible in a latitude and longitude system, but it is generally easier to think of your position in terms of meters as opposed to degrees, minutes, and seconds. The maps have this checkerboard already drawn as light blue lines in 2000 meter intervals.



This example shows part of a map with the trail on it. The light blue lines are the UTM grid. The Eastings (X) are printed along the bottoms and tops of the maps, and the Northings (Y) are printed along the sides in blue. In the example, the first Northing is 4,922,000. The first Easting is 388,000. To locate a place on the map, you have to measure how far east (or west) and north (or south) it is from the nearest blue lines. (Remember the lines are 2,000 meters apart.) Now look at the waypoint located at mile 12.5. It is possible to determine its UTM position by measuring how far east it is of the nearest north-south line and how far north (or south) it is of the east-west line. Without even measuring, I would guess it is not quite halfway to the 390,000 meter line. I would guess about 900 meters east of the 388,000 meter line.

Adding this value to the value of the line measured from, plus my easting (X) would be 388,900. It is north of the blue line, which is 4,922,000 meters. I would guess halfway, or 4,923,000 meters. Checking the actual position of the waypoint in the file, it is 388,865 E and 4,923,013 N.

My guess was within 40 meters of the actual location! If you use a specialized ruler, known as a scale, you can do much better than a guess. Scales are printed on every map. You can easily create your own portable scale by tracing a printed one onto a piece of paper or thin cardboard. Then you will be able to quickly determine your gps location on the maps.



Map Scale

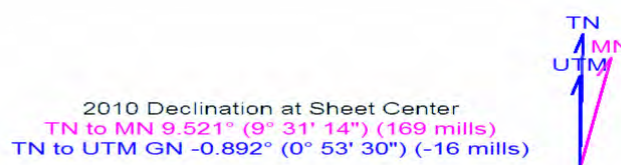
If you think you might be lost simply reverse the process to find out where you are. Turn on the gps, read your UTM location, and transfer that to the map using

the scale. You will be able to see where you are on the map. To get back on track navigate to the nearest waypoint to where you are and continue your trek.

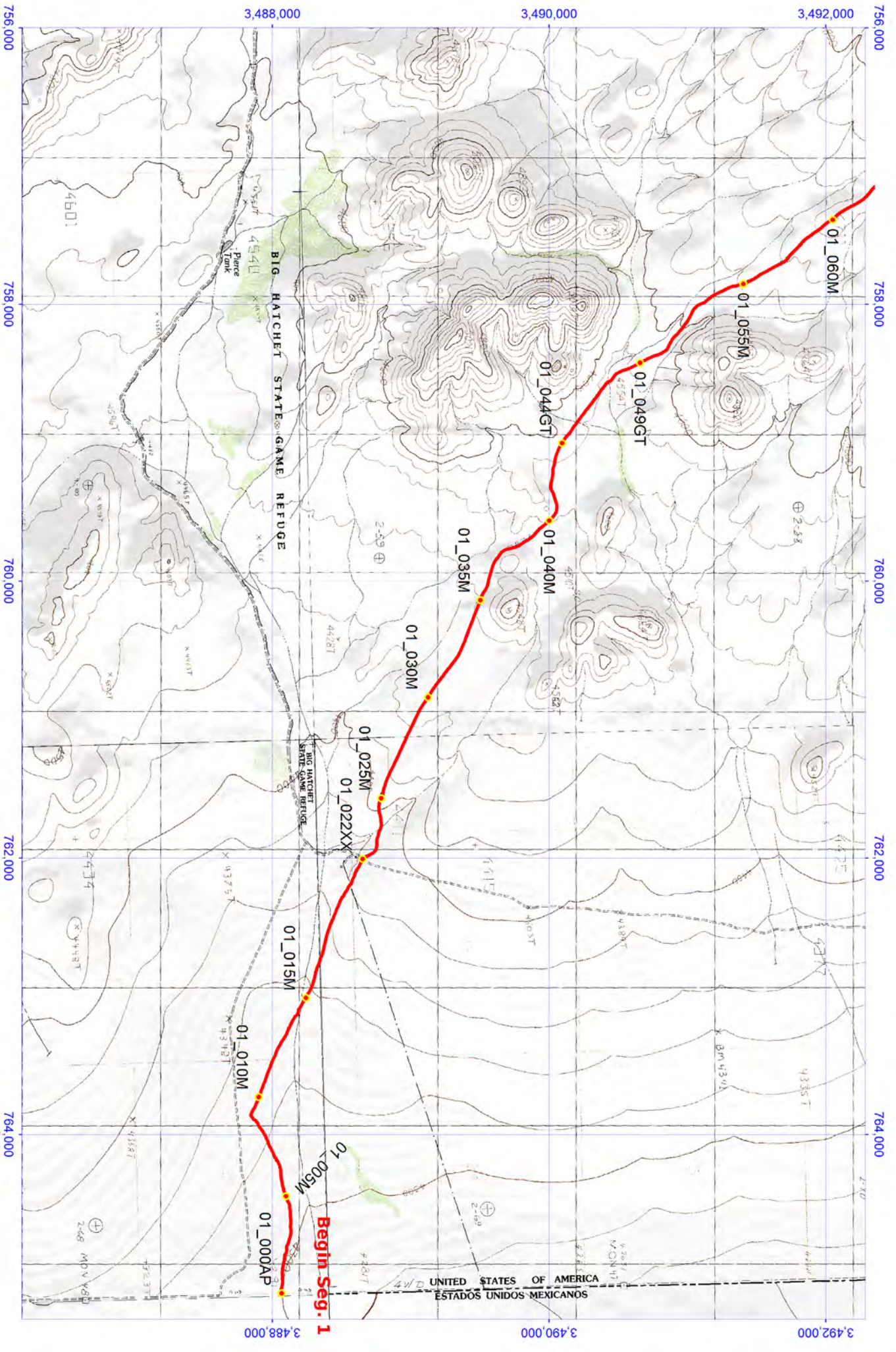
Important!!! None of this information will be of much help if your gps is set up wrong. In order to use this data your gps *MUST* be set up in **WGS84** BEFORE you type in any data! If you want your gps data to match the maps then it must be this way.

GPS receivers all have a Setup screen where you can choose between many different systems, datums, and formats. On many Garmin units, try **SETUP> UNITS>** and select **UTM UPS** from the list. Click on **MAP DATUM** and select **WGS 84** from the list. That's it – you are ready to go. Some of the newer Garmins will use slightly different terms: **SETUP> Position Format>UTM UPS>Map Datum WGS84**. Magellan units are similar. Press **MENU>Setup>Map Datum>WGS84** Then press **Coord System>UTM**.

Using a compass: A North-South arrow is printed on every map. The pink line represents magnetic north. To orient the map, lay a compass parallel and along the edge of the pink line, then rotate the map until the compass needle points to zero. The map should now be oriented properly. Move the compass around on the oriented map to determine a bearing ahead. To set the declination in the compass, follow the step above then move the compass to the left or right edge of the map. (Note: this will differ depending upon whether the map is printed in a portrait or landscape orientation.) Being careful to not move the map, adjust the compass so the needle points to zero. Now the compass will point to true north whenever the needle points to zero. Declinations are calculated for every map and change along the way, so the easiest way to orient is by using the declination arrow. Declinations are in a constant state of change. You should change the declination settings in your compass occasionally to that shown on the map currently in use. Any declination on a map published more than ten years in the past is likely to be significantly erroneous and should not be trusted.

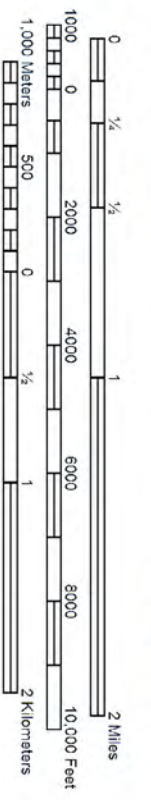


Example of a Magnetic Declination Arrow

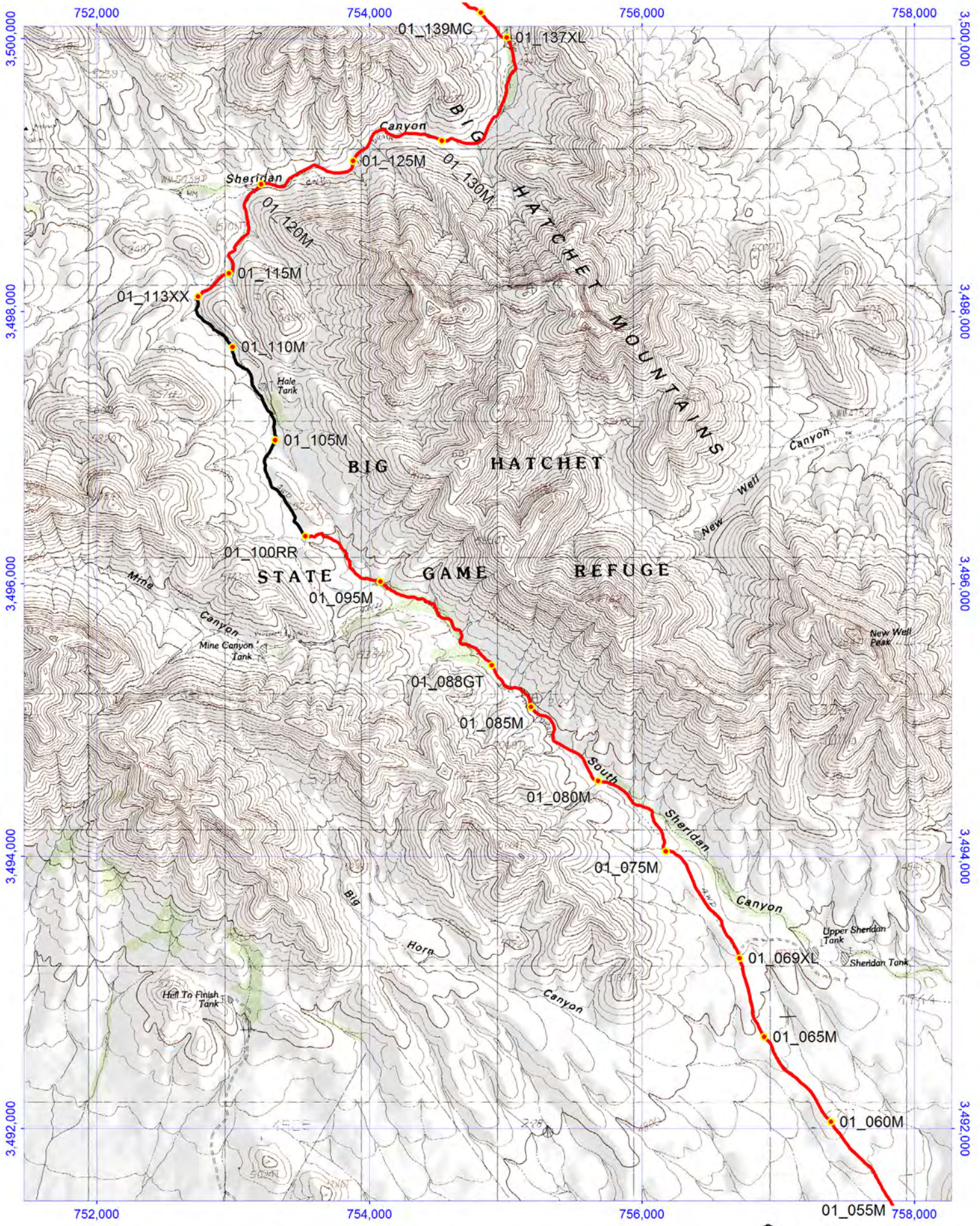


Map Projection: UTM, Zone 12N, Meters, NAD83
 UTM Grid: UTM, Zone 12N, Meters, NAD83
 Data: www.fgdl.gov
 Copyright: © 2011, National Geographic Society, Washington, DC, USA
 Contour Interval: 10 Feet

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 TN to UTM GN: 1.434° (1" 28 4') (28 miles)

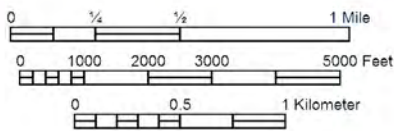


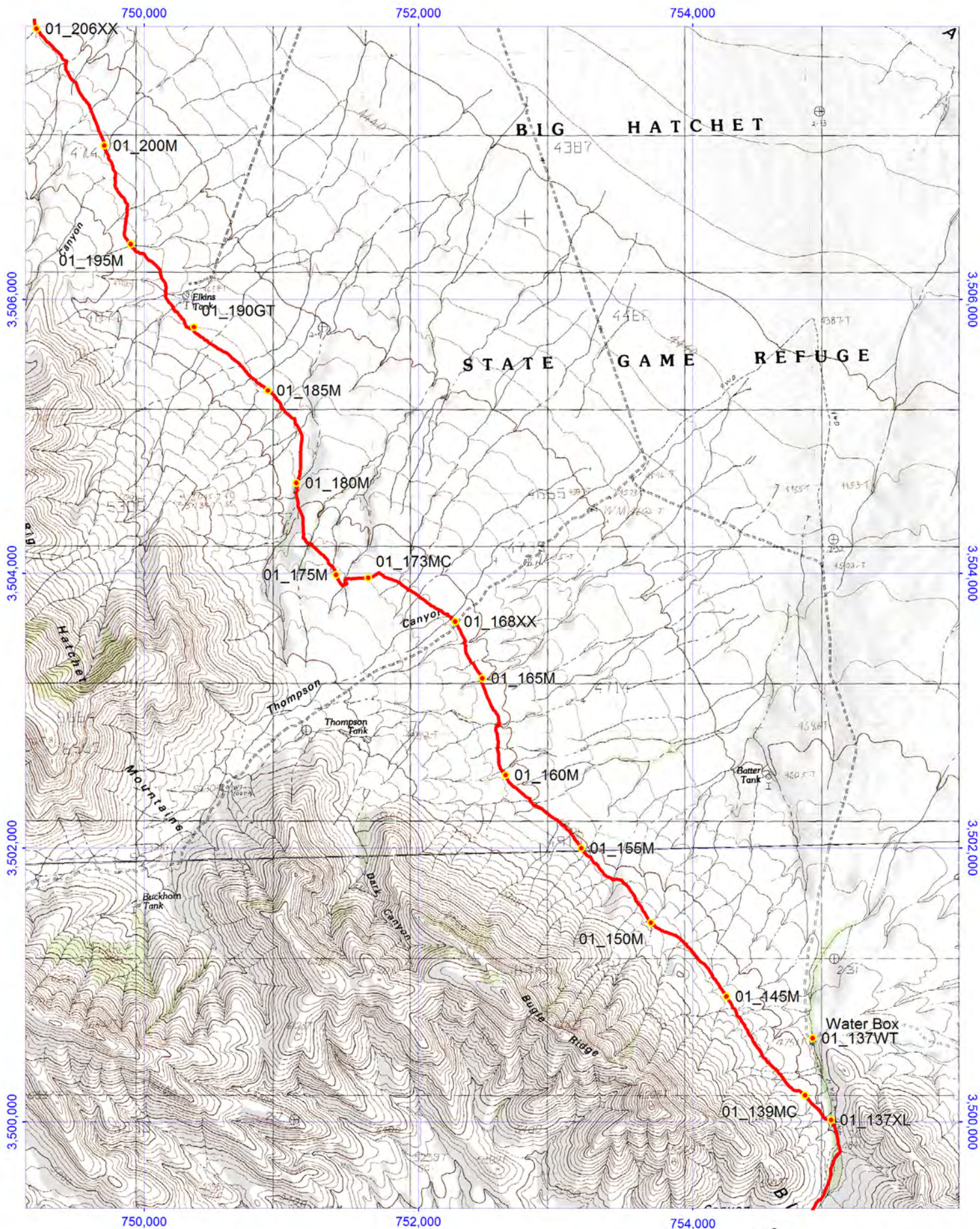
www.bearcreeksurvey.com
 Map 01 Seg 01 Mi. 0.0 - 06.1



Map Projection: UTM, Zone 12N, Meters.
 NAD83
 UTM Grid: UTM, Zone 12N,
 Meters, NAD83
 Built with BigTopo9 www.bigtopo.com (B9015)
 Source Maps: Sheridan Canyon, NM

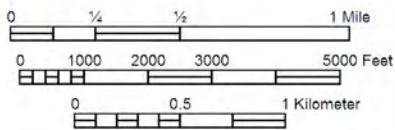
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 TN to UTM GN 1.406° (1° 24' 21") (25 mills)

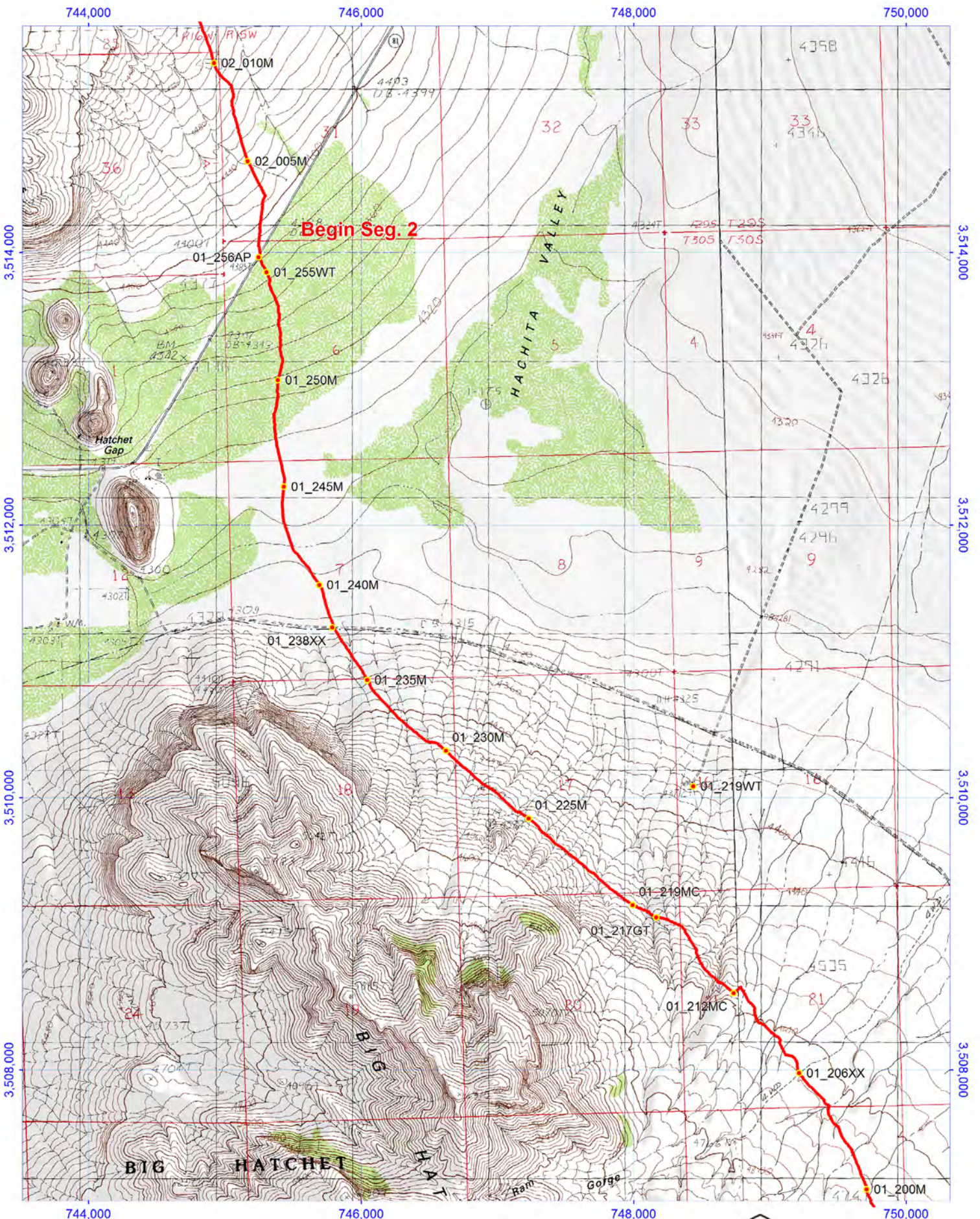




Map Projection: UTM, Zone 12N, Meters, NAD83
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 Built with BigTopo® www.igage.com (B6015)
 Source Maps: Sherridan Canyon, NM, Hatchet Ranch, NM

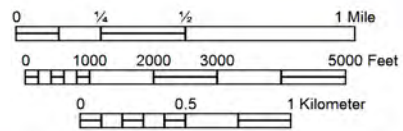
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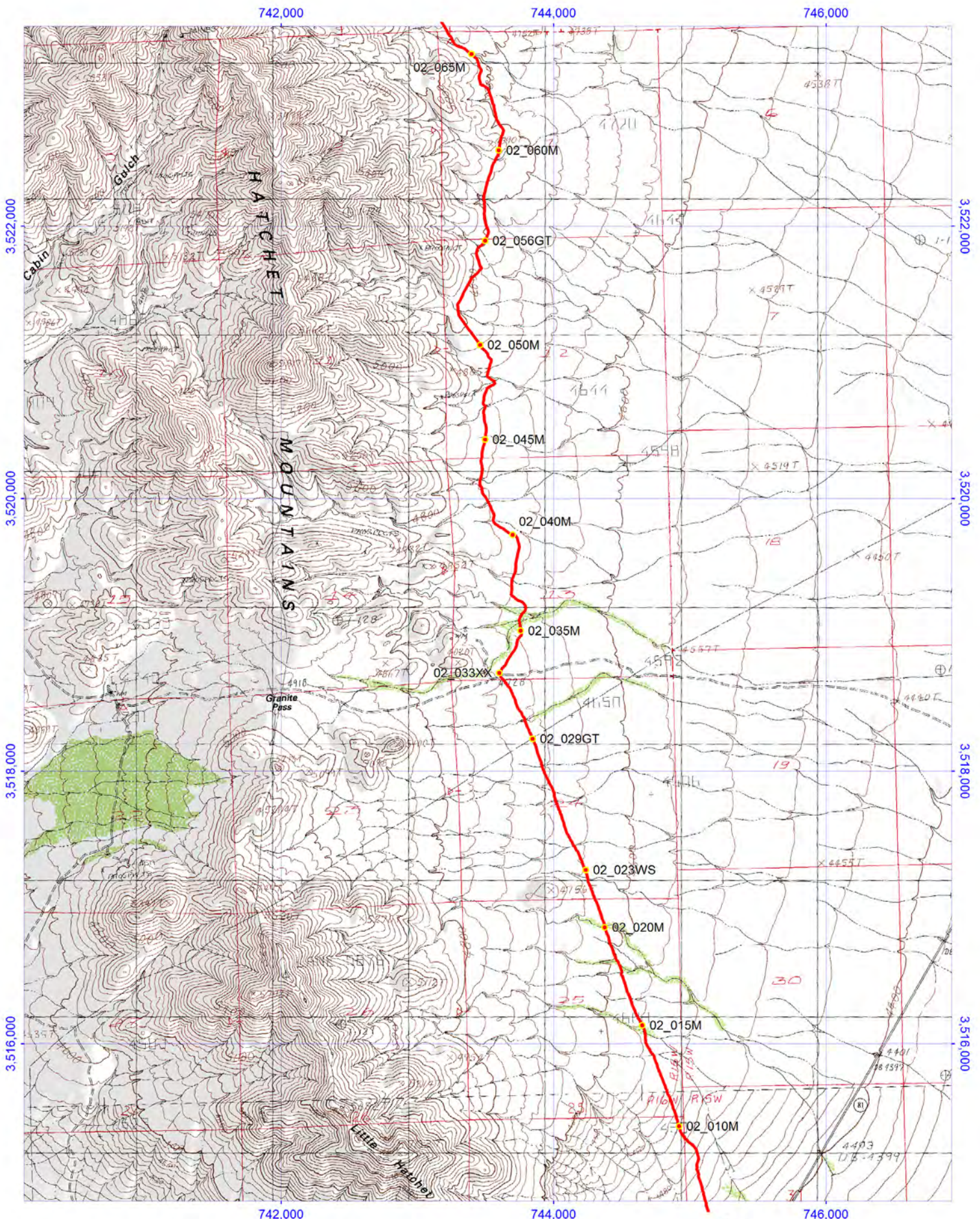


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 Built with BigTopo9 www.igage.com (R0207)
 Source Maps: Hatchet Ranch, NM; Big Hatchet Peak, NM; Doyle Peak, NM; Hachita Peak, NM

2012 Declination at Sheet Center
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 TN to UTM GN 1.370° (1° 22' 11") (24 mills)

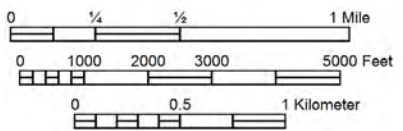


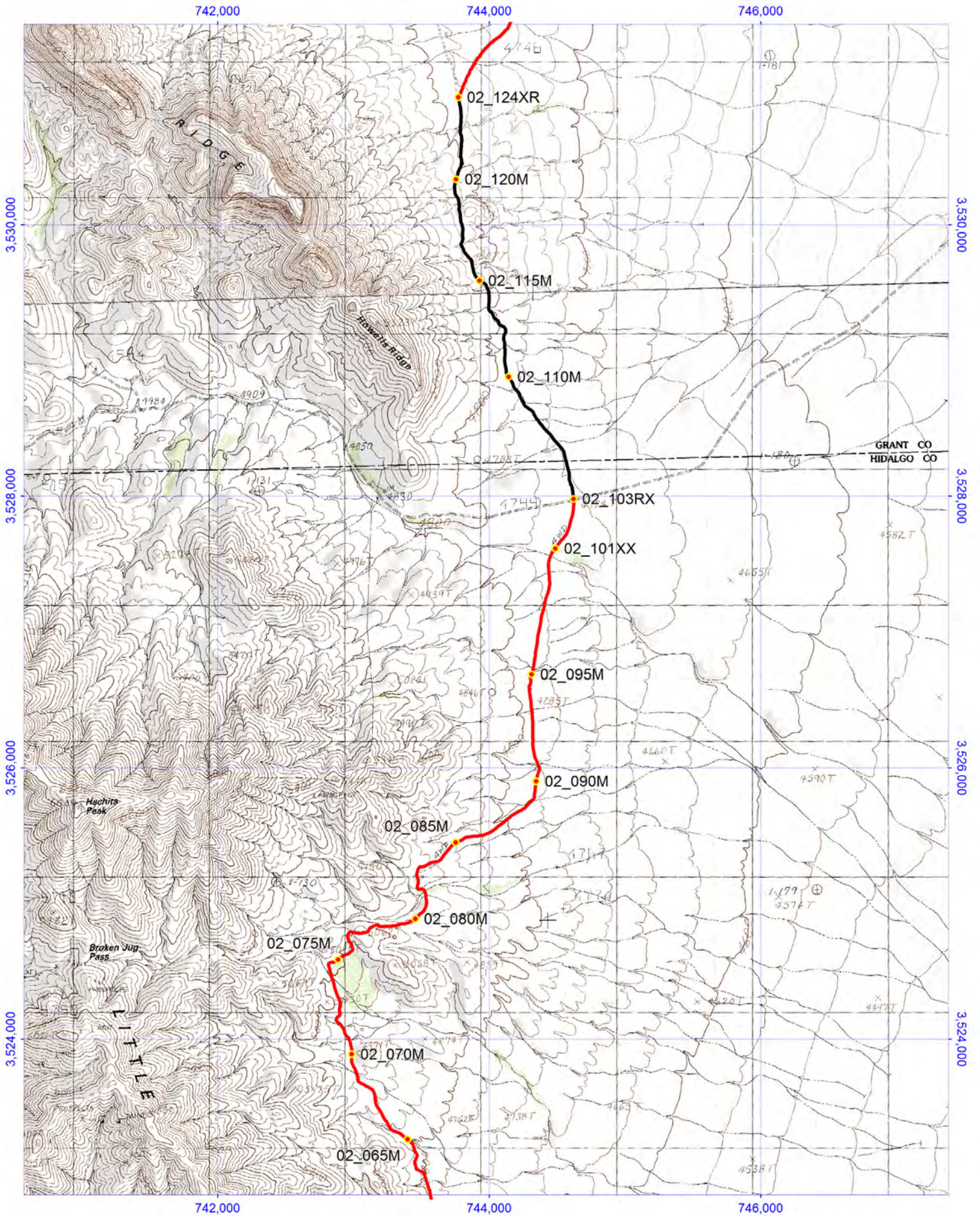
Map 04 Seg 01-02 Mi 20.0 - 01.5



Map Projection: UTM: Zone 12N, Meters, NAD83
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 Built with BigTopo9 www.igage.com (B9015)
 Source Maps: Big Hatchet Peak, NM; Hatchet Peak, NM

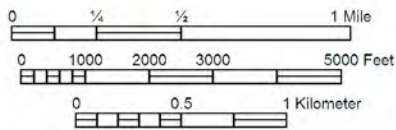
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 TN to UTM GN 1.355° (1° 21' 17") (24 mills)



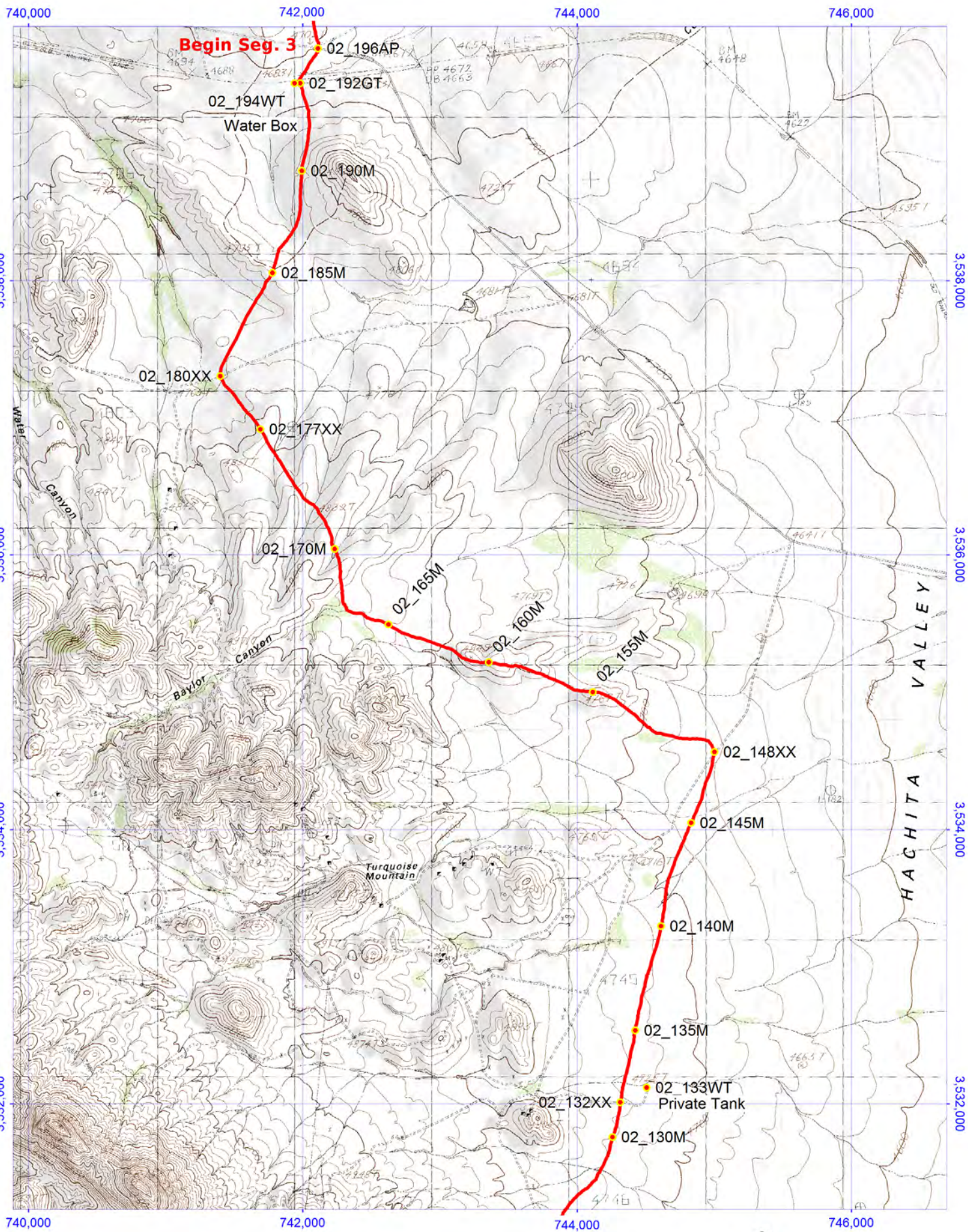


Map Projection: UTM; Zone 12N; Meters.
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 Meters; NAD83
 Built with BigTopo9 www.igage.com (i89015)
 Source Maps: Hachita Peak, NM; Playas
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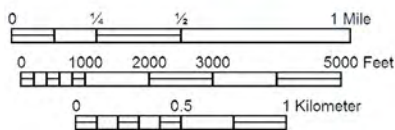


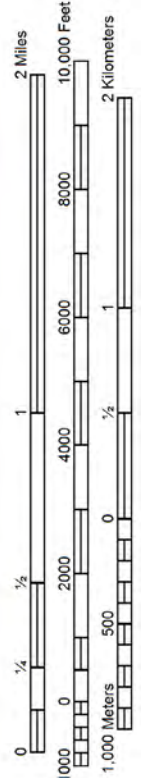
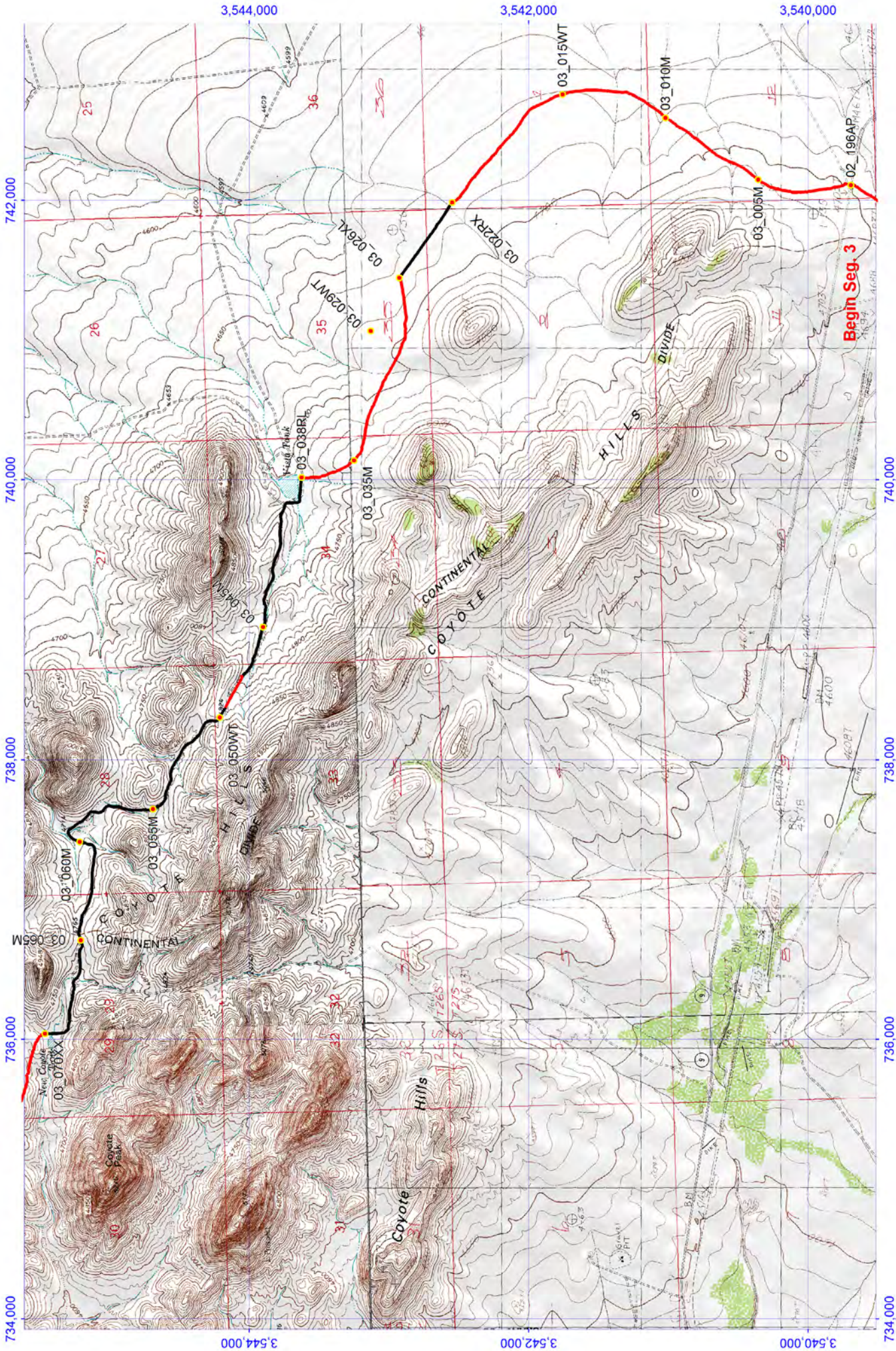
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Map Projection: UTM, Zone 12N, Meters.
 NAD83
 UTM Grid: UTM, Zone 12N,
 Meters, NAD83
 Built with BigTop9 www.bigtop9.com (B9015)
 Source Maps: Playas Peak, NMI

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 TN to UTM GN 1.361° (1° 21' 41") (24 mills)

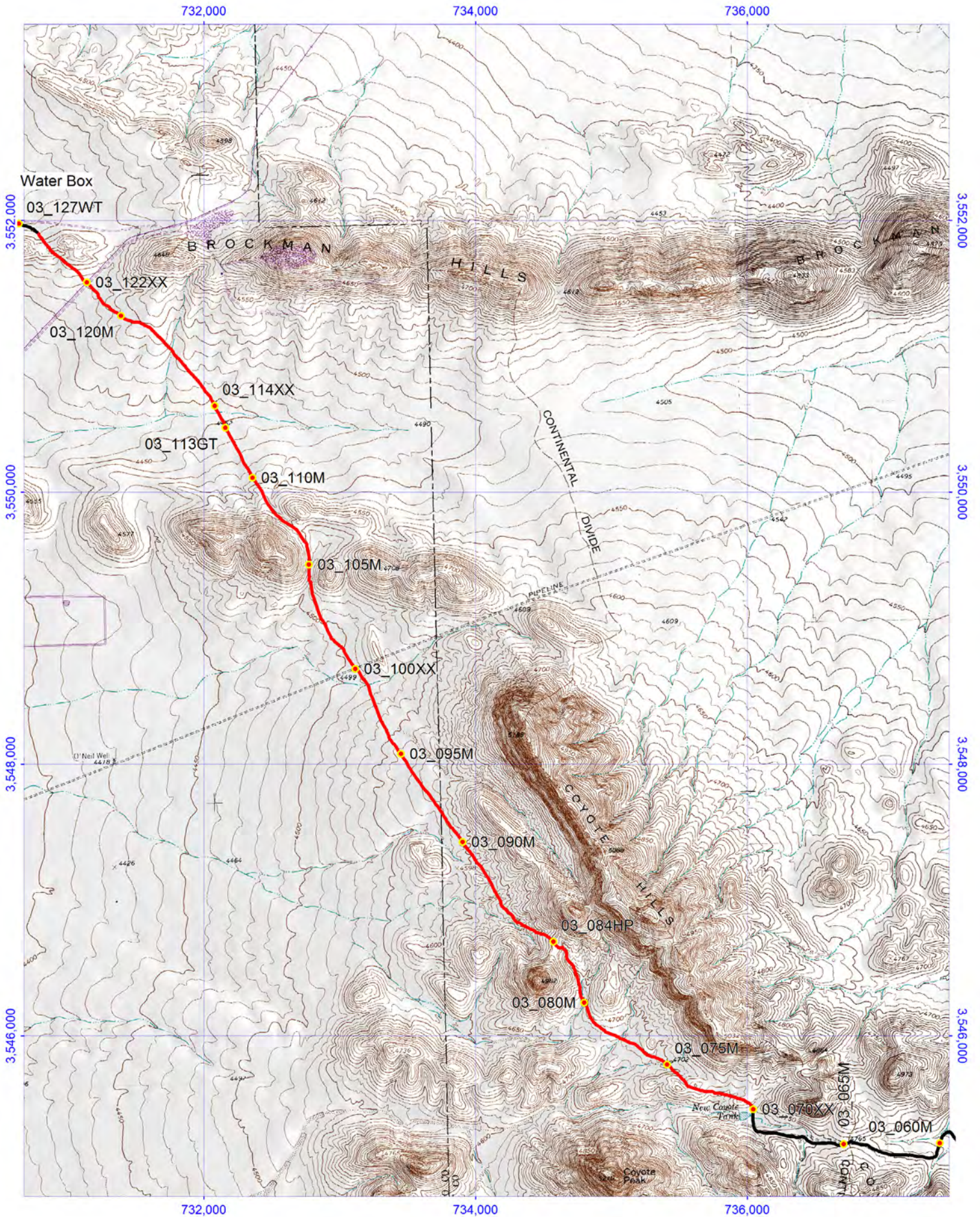




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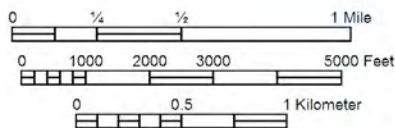
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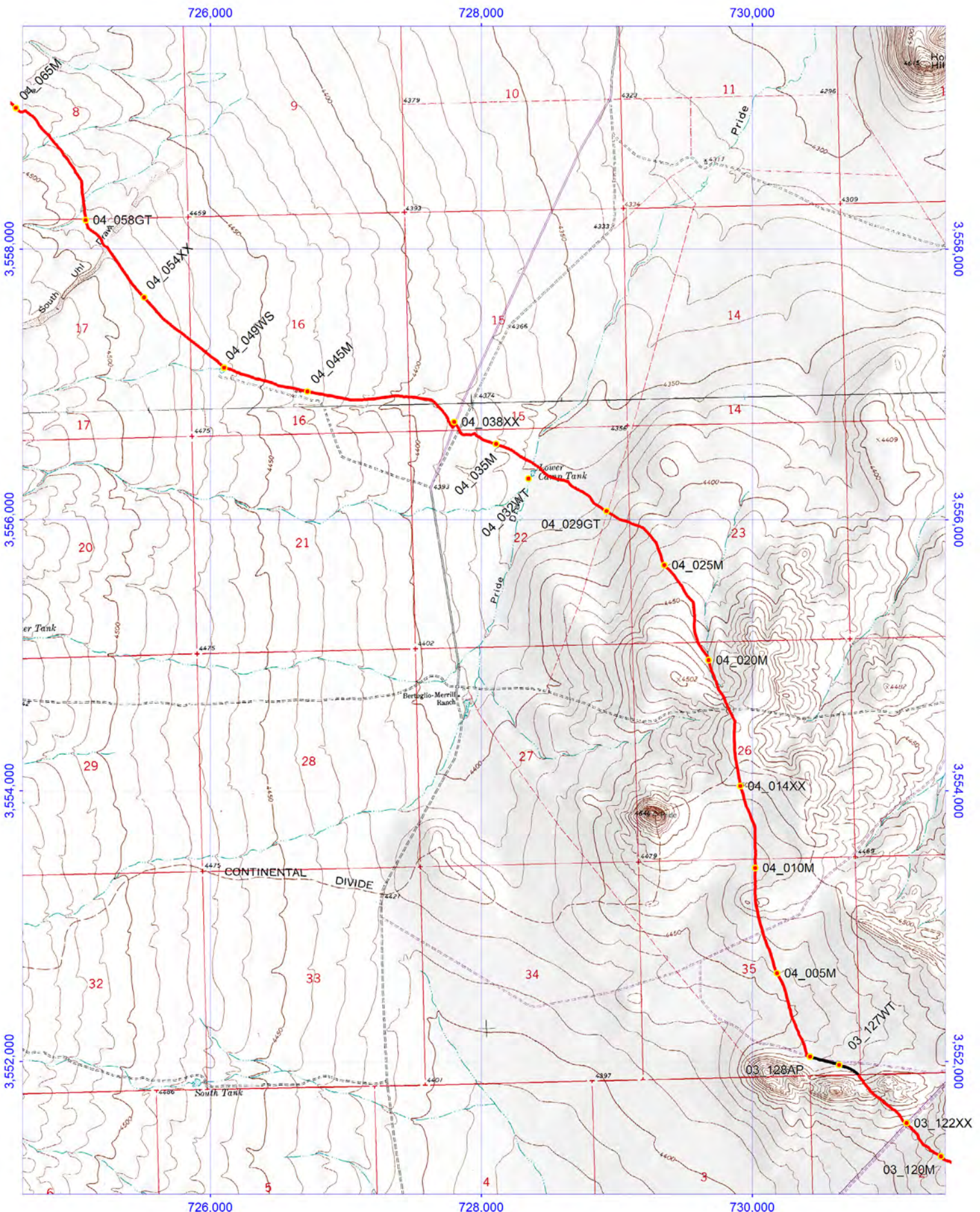


Map Projection: UTM, Zone 12N, Meters.
 NAD83
 UTM Grid: UTM, Zone 12N,
 Meters, NAD83
 Built with BigTopo® www.igage.com (B0015)
 Source Maps: Brockman, NM; Coyote
 Peak, NM

2011 Declination at Sheet Center
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 TN to UTM GN 1.317° (1° 19' 0") (23 mills)

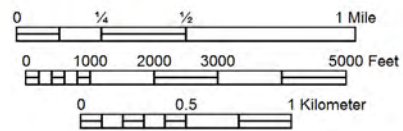


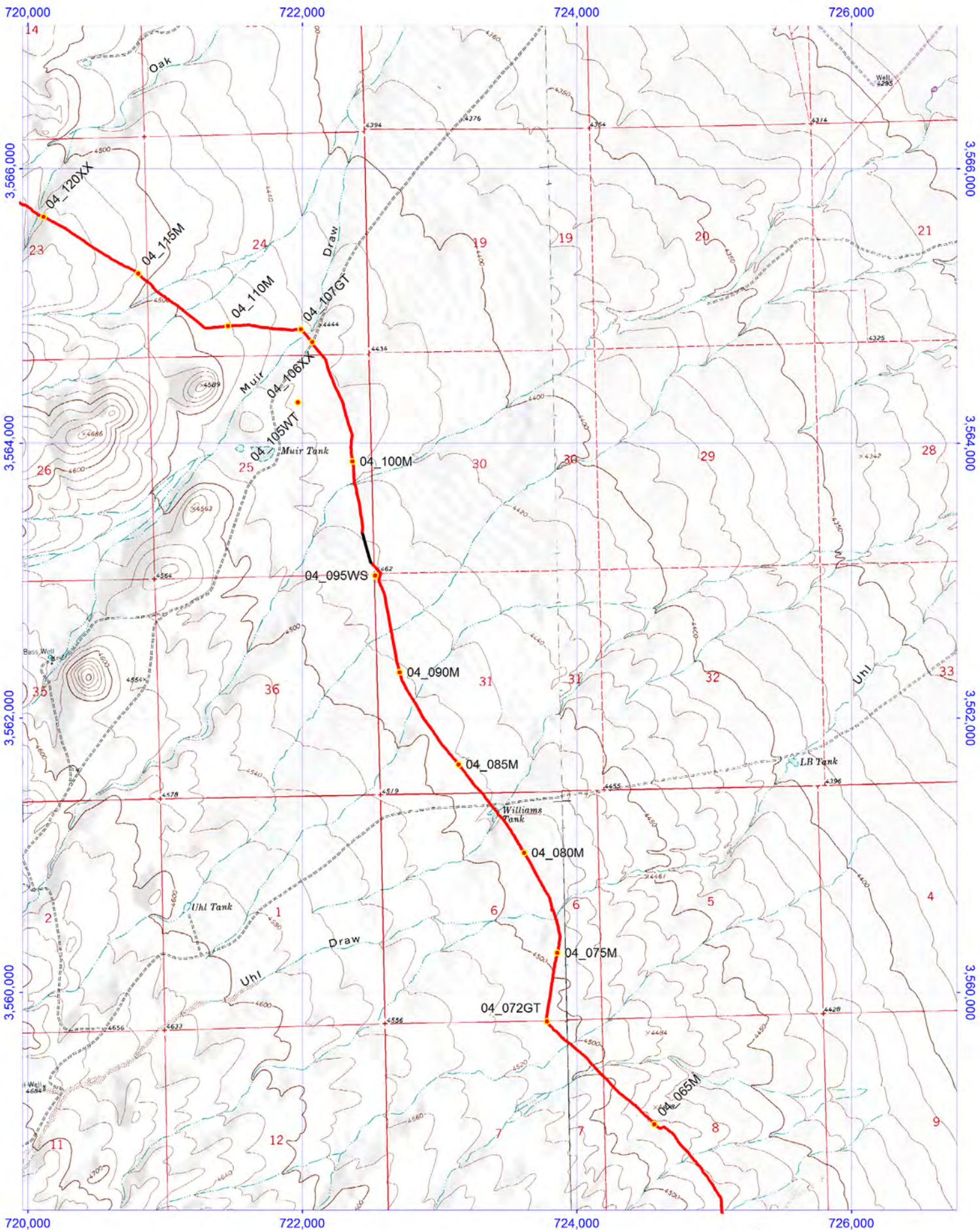
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Map Projection: UTM: Zone 12N, Meters.
 NAD83
 UTM Grid: UTM, Zone 12N,
 Meters, NAD83
 Built with BigTopo9 www.igage.com (B9015)
 Source Maps: Coyote Peak, NM; Muir
 Ranch, NM

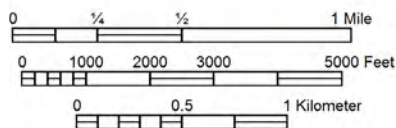
2011 Declination at Sheet Center
 TN to MN 9.666° (9° 39' 56") (172 mills)
 TN to UTM GN 1.285° (1° 17' 7") (23 mills)

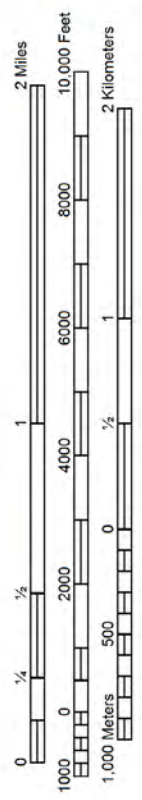
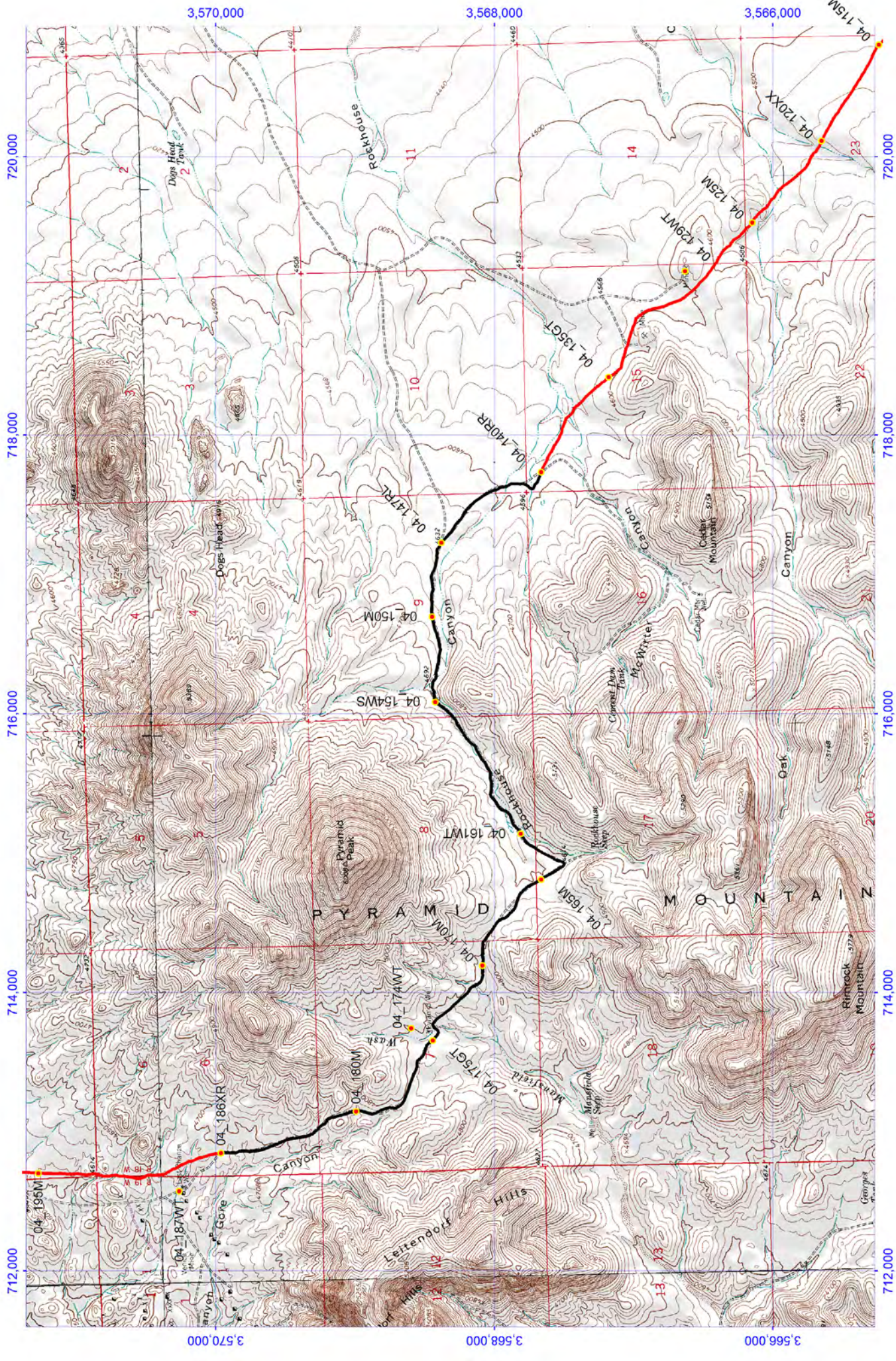




Map Projection: UTM: Zone 12N, Meters, NAD83
 UTM Grid: UTM: Zone 12N, Meters, NAD83
 Built with BigTopo9 www.igage.com (B9015)
 Source Maps: Muir Ranch, NM; Pyramid Peak, NM

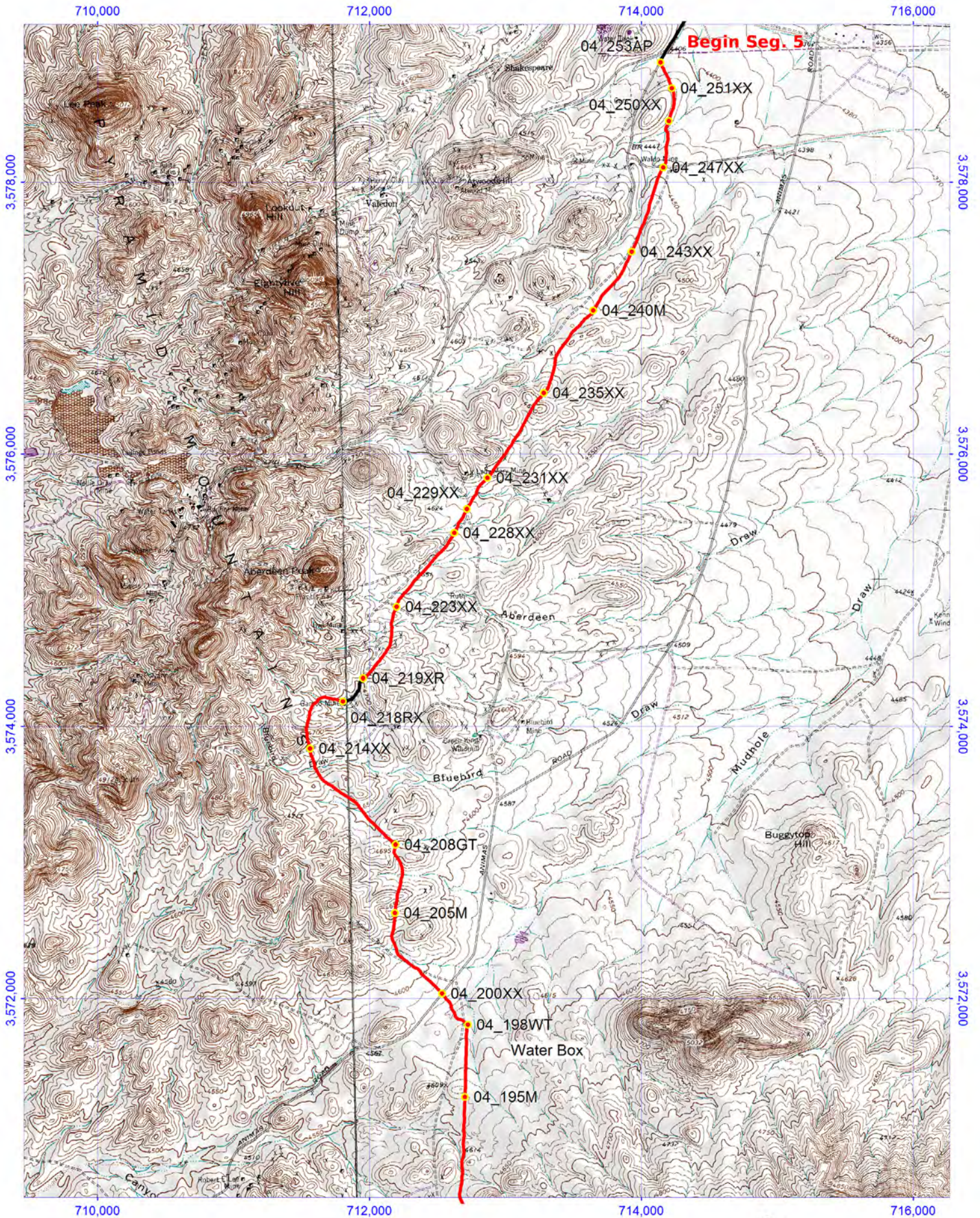
2011 Declination at Sheet Center
 TN to MN 9.692° (9° 41' 30") (172 mills)
 TN to UTM GN 1.263° (1° 15' 45") (22 mills)





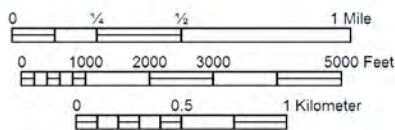
2011 Declination at Sheet Center
 TN to MN 5.724° (8' 43" 28") (172 mils)
 TN to UTM GN 1.225° (1° 13' 30") (22 mils)

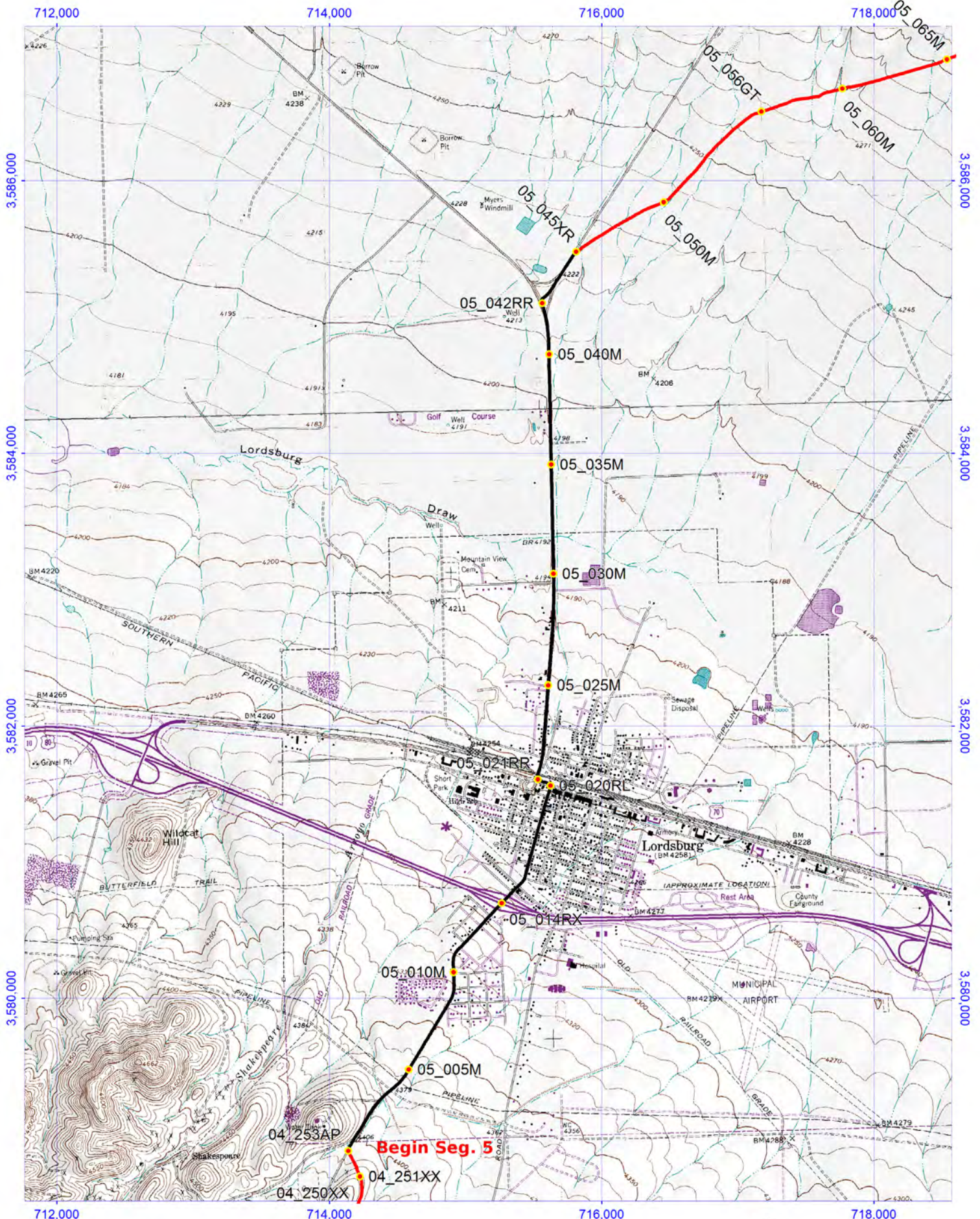
Map Projection: UTM, Zone 12N, Meters, UTM83
 Built with Esri's ArcGIS (www.esri.com) (E9015)
 Source Maps: Pyramid Peak, Mt. Swallow Fork Peak, Mt. Lenoir, Mt. Gary, Mt.



Map Projection: UTM, Zone 12N, Meters.
 NAD83
 UTM Grid: UTM, Zone 12N,
 Meters, NAD83
 Built with BigTop9 www.bigtop9.com (B9015)
 Source Maps: Lorusburg, NM, Cary, NM

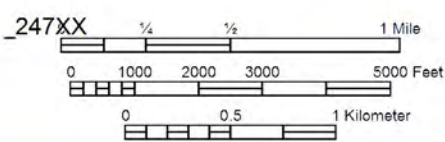
2011 Declination at Sheet Center
 TN to MN 9.744° (9° 44' 39") (173 mills)
 TN to UTM GN 1.208° (1° 12' 30") (21 mills)





Map Projection: UTM, Zone 12N, Meters, NAD83
 UTM Grid: UTM, Zone 12N, Meters, NAD83
 Built with BigTop® www.igage.com (©2015)
 Source Maps: Lordsburg, NM, Culberson Ranch, NMI

2011 Declination at Sheet Center
 TN to MN 9.744° (9° 44' 39") (173 mills)
 TN to UTM GN 1.225° (1° 13' 29") (22 mills)



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