

ELR LOCATION SCOUTING & TARGET SETTING TIPS



ELR LOCATION IDENTIFICATION

Source the location

- ⦿ Friends input / referrals
- ⦿ Shooting in the area
- ⦿ Driving the Area

Programs to confirm Source

- ⦿ Garmin BaseCamp
- ⦿ State Hunt maps for computers
- ⦿ Google Earth

Field Tools

- ⦿ Hand Held GPS with color display
 - ⦿ State Hunt Maps installed
- ⦿ High End PLRF with low beam divergence
- ⦿ Trimble Nomad with DGPS
- ⦿ FFS (Field Firing Solutions) program with programmable DGPS FFP
- ⦿ Trimble iPad app with Hunt Maps subscription
- ⦿ Do NOT rely on devices that need cell service!!!!

Location assets

- ⦿ No or low vegetation in target areas to promote spotting misses
- ⦿ No or low vegetation in shooting areas to allow for line of sight when shooting prone
- ⦿ No heavily rocky areas (can hide misses)
- ⦿ Need jeep trails to target – Ideally close to shooter location

Ideal Areas

- ⦿ Something that promotes a good shooting AD
- ⦿ BLM or National Forest – must be in both shooter and target locations

Geographic features

- ⦿ Dry lakebeds or areas called Sinks (careful driving on them)
- ⦿ Prefer flat with some hills (but Sat imagery misleadingly looks flat & pure flat like the middle of a sink = no-go
 - ⦿ For Back stops
 - ⦿ For PLRF returns
 - ⦿ To overcome rolling rises that can obscure the target once prone
 - ⦿ Can help with Mirage
- ⦿ Flat to Peak
 - ⦿ For me works better than Peak to Flat in the angles are high. The rifle butt doesn't have to be supported very high and long as the bipod can adjust up enough (or be supported higher)
 - ⦿ Flat to Peak seems (antidotal) that mirage is less
 - ⦿ Setting targets can be harder and vegetation can spoil misses
- ⦿ Peak to Flat
 - ⦿ Peak to Flat is almost always easier to set up.. And shooters can pack up hills easier than targets and cam
- ⦿ Peak to Peak
 - ⦿ Best to reduce Mirage
 - ⦿ Harder to read wind
 - ⦿ Setting targets can be harder and vegetation can spoil misses
 - ⦿ Harder to reduce or increase distances
 - ⦿ Can be hours to go from one peak to the next

ELR LOCATION SELECTION

Prequalification of location

2 - Preview general area in Basecamp w/ State hunt Maps

- ②A in a wide search look for Yellow BLM land
- ②B Check County restrictions and congested zones for the selected area
- ②C Zoom in to reveal land features and jeep trails on BLM Land

3 – Find access points to selected BLM land

- ③A Zoom out and follow trails to freeways
- ③B Zoom back in to look for access points – If access looks good proceed to next step

4 – Scale and view Details

- ④A Scale features in Basecamp to match to Google Earth – add pin location pins (these will show in Google Earth)
- ④B Select view area from Basecamp in “Google Earth”
- ④C Zoom in Google Earth and view details looking for housing, trails land features etc.
- ④D Zoom in in Google Earth @ the entrance looking for gates etc

5 – Create overlays to check position and land features

- ⑤A Output or screen capture the images from Google Earth and BaseCamp, (same areas and same relative scale). Using a photo editing program overlay the BaseCamp BLM over the Google Sat imagery. Lower the opacity on the top BLM layer to easily reveal roads and land features in the satellite imagery. Scale the top BLM layer to match the roads and land feature on both.
- ⑤B Mark map in BaseCamp with rough GPS points of prospect location for FFP and FTP and download to GPS with the State Hunt maps installed

On Site Visit

6 – Range Targets From FFPs

- ⑥A Range targets with PLRF from possible FFPs. Make sure to **range with same line of site as if shooting ie. prone**. The line of site must be clear below, to the sides of the target and the backstop visible. Check the location on the Hand help GPS with Hunt maps to **ensure FFP is on BLM land**. Mark the FFP location with GPS

7 – Setting the Targets and shooting

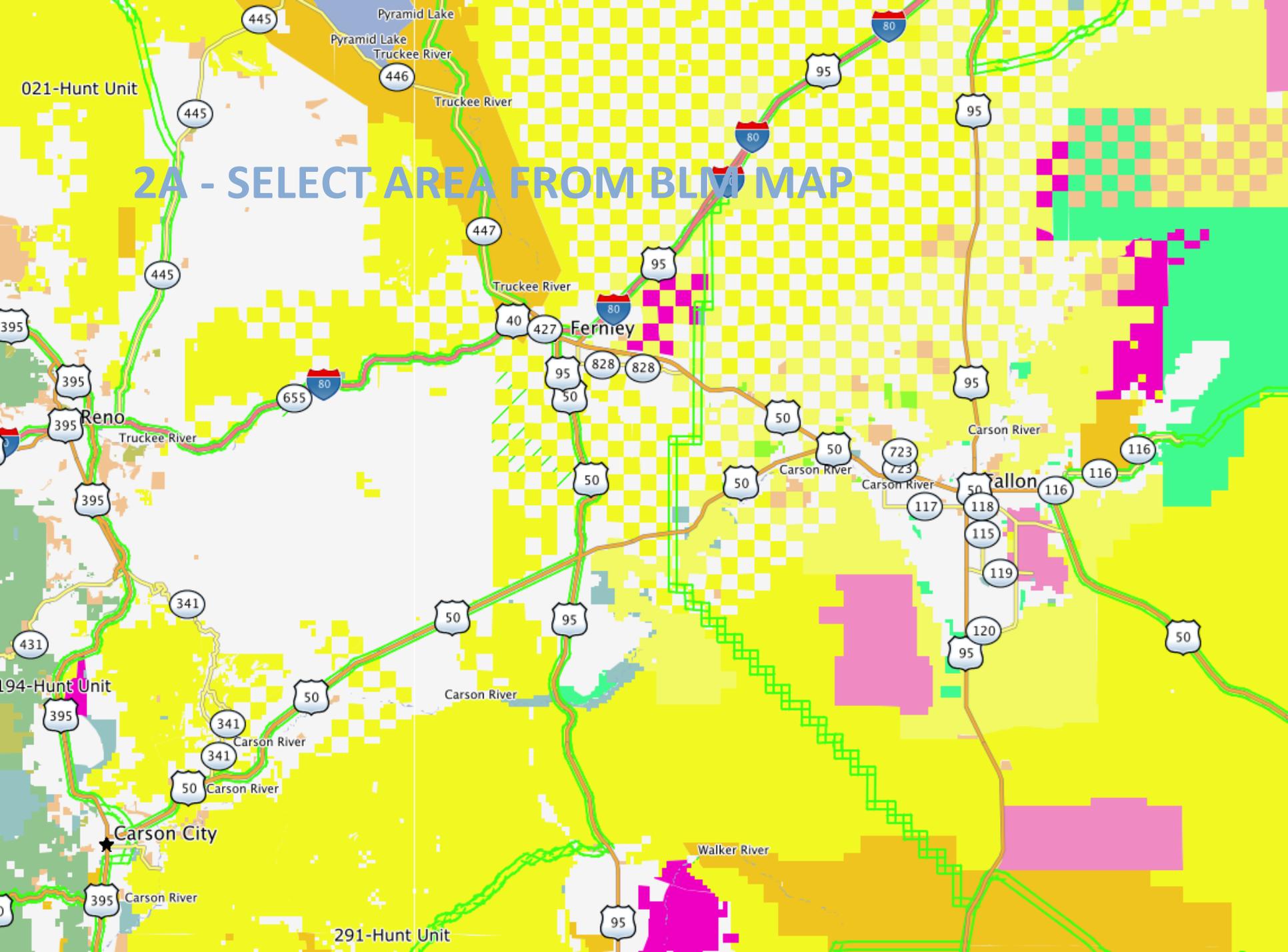
- ⑦A Set the face of the **target to be square with the FFP**. Having another person or vehicle back at the FFP for reference helps. **Mark the Target location** with both the **DGPS** and Handheld GPS. Use a shovel to dig back legs into hills to level and small leg extensions in the front (low side of the hill) to level the target stand.
- ⑦B Return to the FFP. **Mark the FFP** with both the **DGPS** and Handheld GPS.
- ⑦C **DOUBLE CHECK THE DISTANCE** from DPGS against the PLRF. (**edited to add** – ranging a small object **via a reticle** at this range in **NOT reliable!**). Run the dope solution via the marked FFP in FFS (Field Firing Solution)

8 – Post shooting

- ⑧A Transfer actual Handheld weigh points and driving routes back to BaseCamp for future reference.
- ⑧B From BaseCamp select “View>View Selected Data in Google Earth” if you wish to have you Data displayed over the actual Satellite imagery.

DO NOT SKIP STEPS FOR BEST RESULTS

2A - SELECT AREA FROM BLM MAP



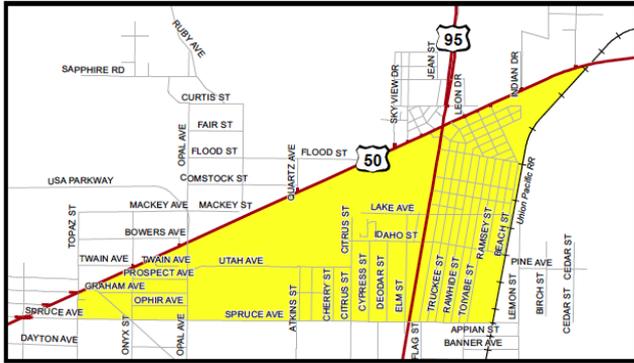
Congested Areas

Per County Code: 7.02.02

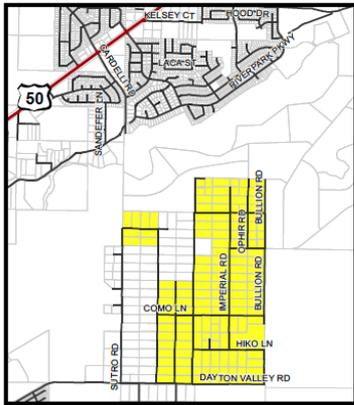


2B – CHECK LOCAL RESTRICTIONS

Inset A



Inset B



Map Elements

- Truckee Canal
- Congested Areas



Inset B

DAYTON

Inset A

SILVER SPRINGS

FERNLEY



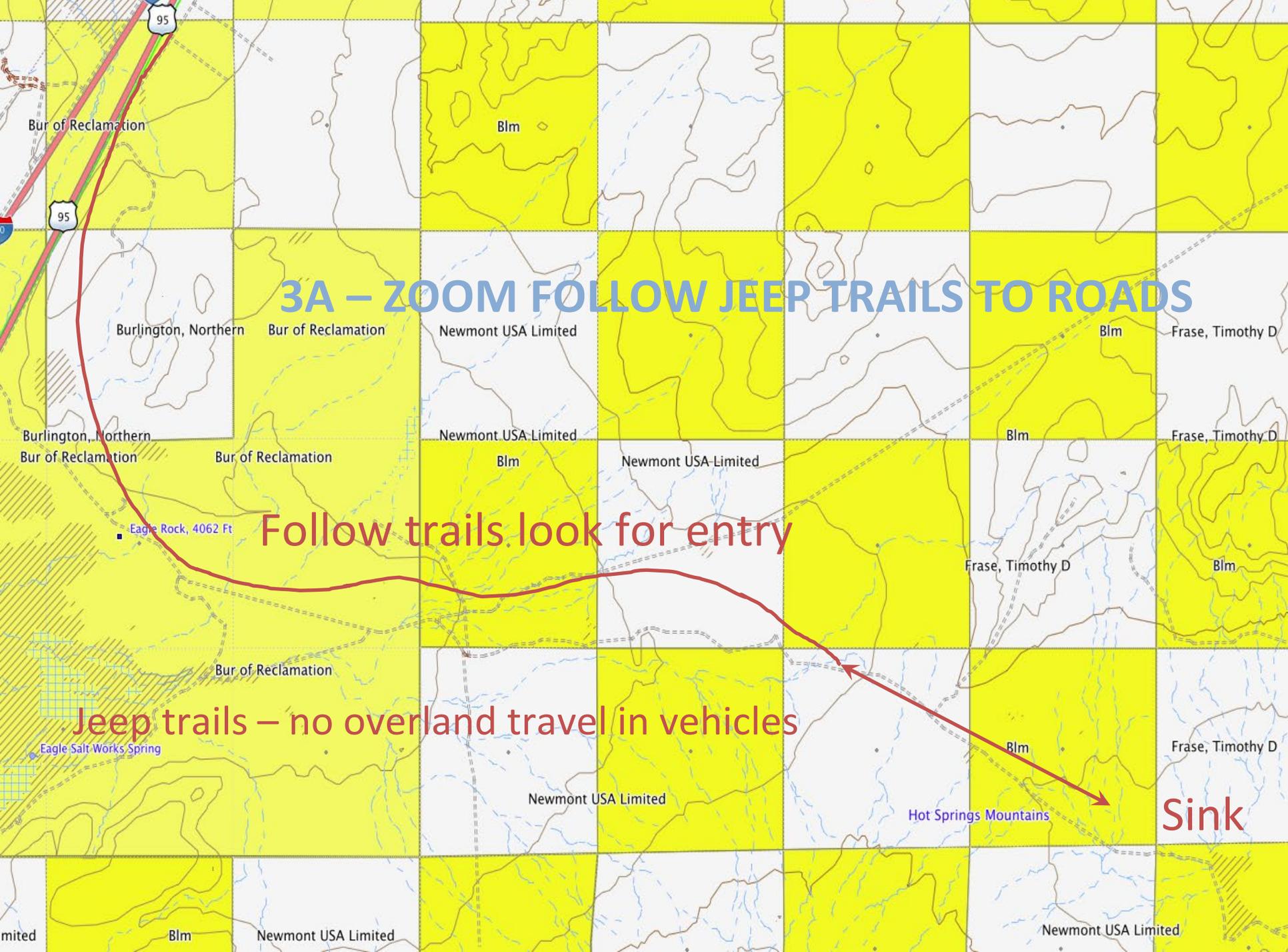
The data contained herein has been housed and/or compiled in a geographic information system (GIS) by the Douglas County GIS Division for the use of Lyon County. The data does not represent survey delineation and should not be construed as a replacement for the authoritative source, plat maps, deeds, resurveys, etc. No liability is assumed by Lyon County or Douglas County or as to the sufficiency or accuracy of the data.

T:\4181\ColMgr...CongestedAreas\CongestedAreas.mxd

Nevada Counties That **DO NOT** Prohibit Shooting at Night or Spotlighting in the Unincorporated Areas of the County:

- Churchill County – actual site OK
- Lyon County (see section 7.02.02 - Discharge of weapons in congested area)
- Humboldt County
- Douglas County (see 9.68.030 Discharge of Firearms)
- Mineral County
- Nye County (see section 9.16.010 Discharge Prohibited)
- Esmeralda County (must be at least one mile away from an occupied residence)
- Carson City County (see chapter 8.12 Firearms and 8.12.010 - Discharge of Firearms unlawful)
- Storey County (see Chapter 9.16 Weapons)
- Clark County (see ordinance on congested areas)
- Lincoln County (see ordinance on congested or incorporated areas)

http://www.ndow.org/Hunt/Seasons_and_Regulations/Furbearer/Coyote/



95

95

3A – ZOOM FOLLOW JEEP TRAILS TO ROADS

Follow trails, look for entry

Jeep trails – no overland travel in vehicles

Sink

Bur of Reclamation

Blm

Burlington, Northern

Bur of Reclamation

Newmont USA Limited

Blm

Frase, Timothy D

Burlington, Northern
Bur of Reclamation

Bur of Reclamation

Newmont USA Limited

Blm

Newmont USA Limited

Blm

Frase, Timothy D

Eagle Rock, 4062 Ft

Bur of Reclamation

Frase, Timothy D

Blm

Eagle Salt Works Spring

Newmont USA Limited

Blm

Frase, Timothy D

Hot Springs Mountains

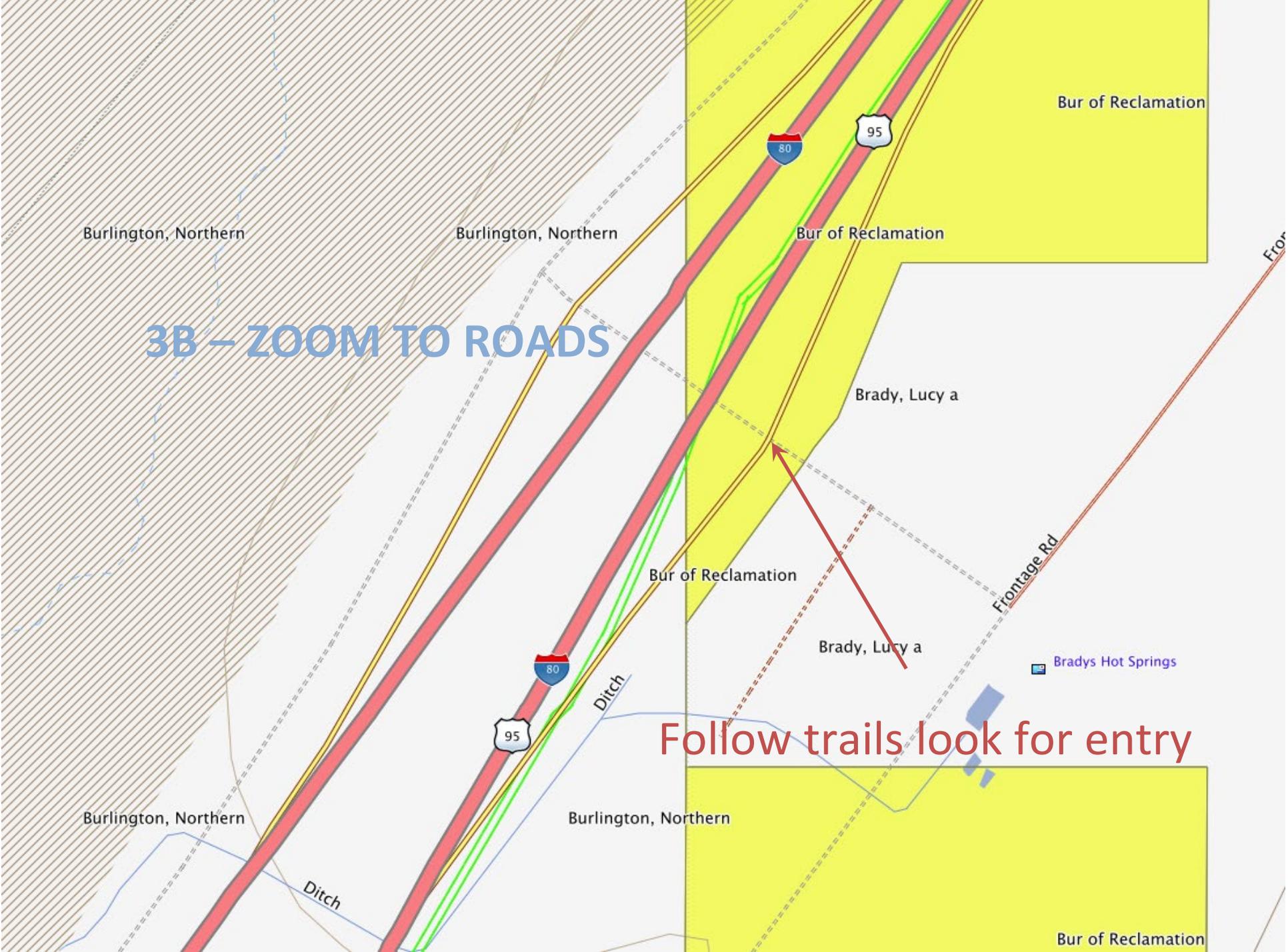
Newmont USA Limited

Blm

Newmont USA Limited

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3B – ZOOM TO ROADS



Follow trails look for entry

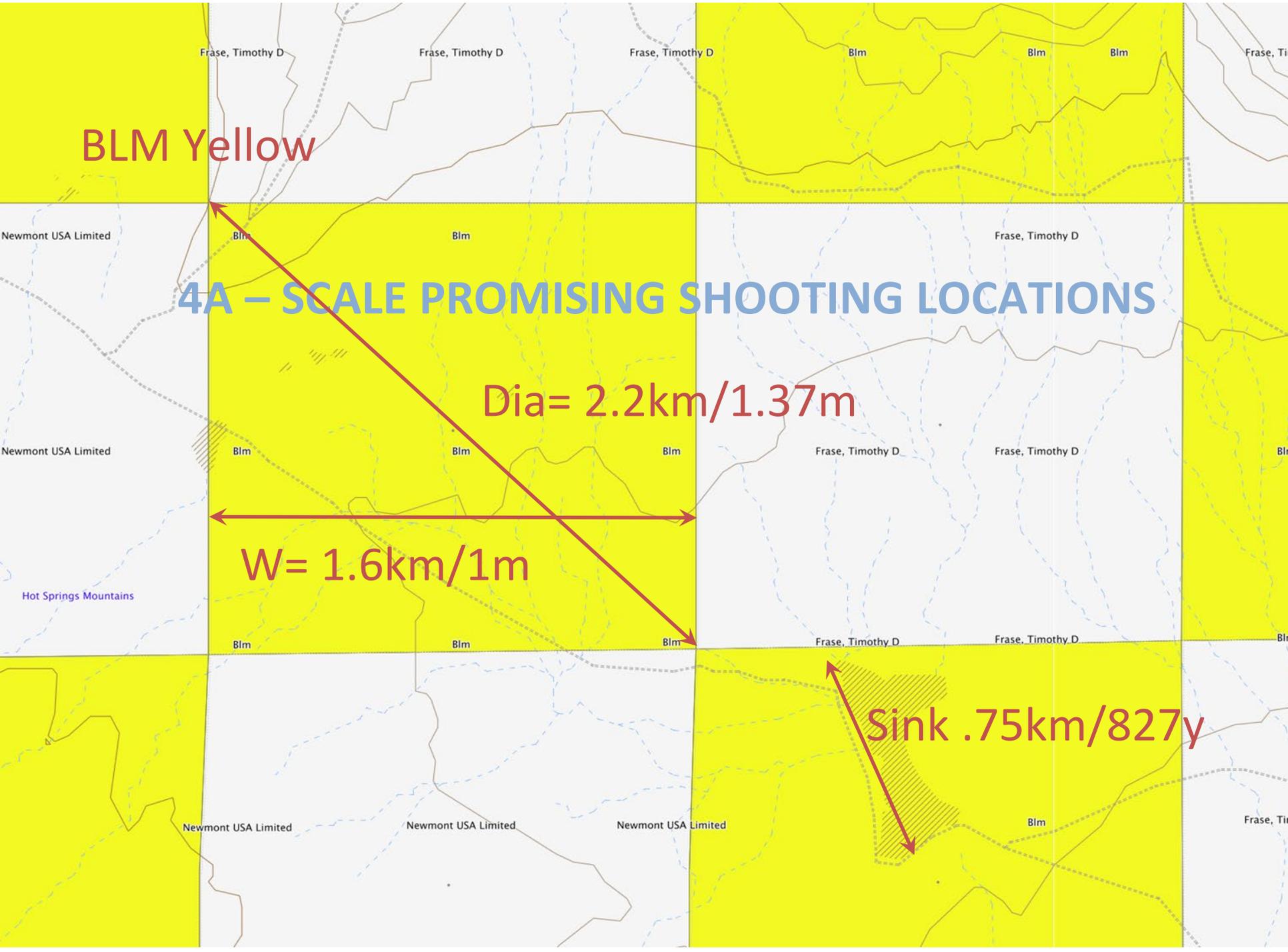
BLM Yellow

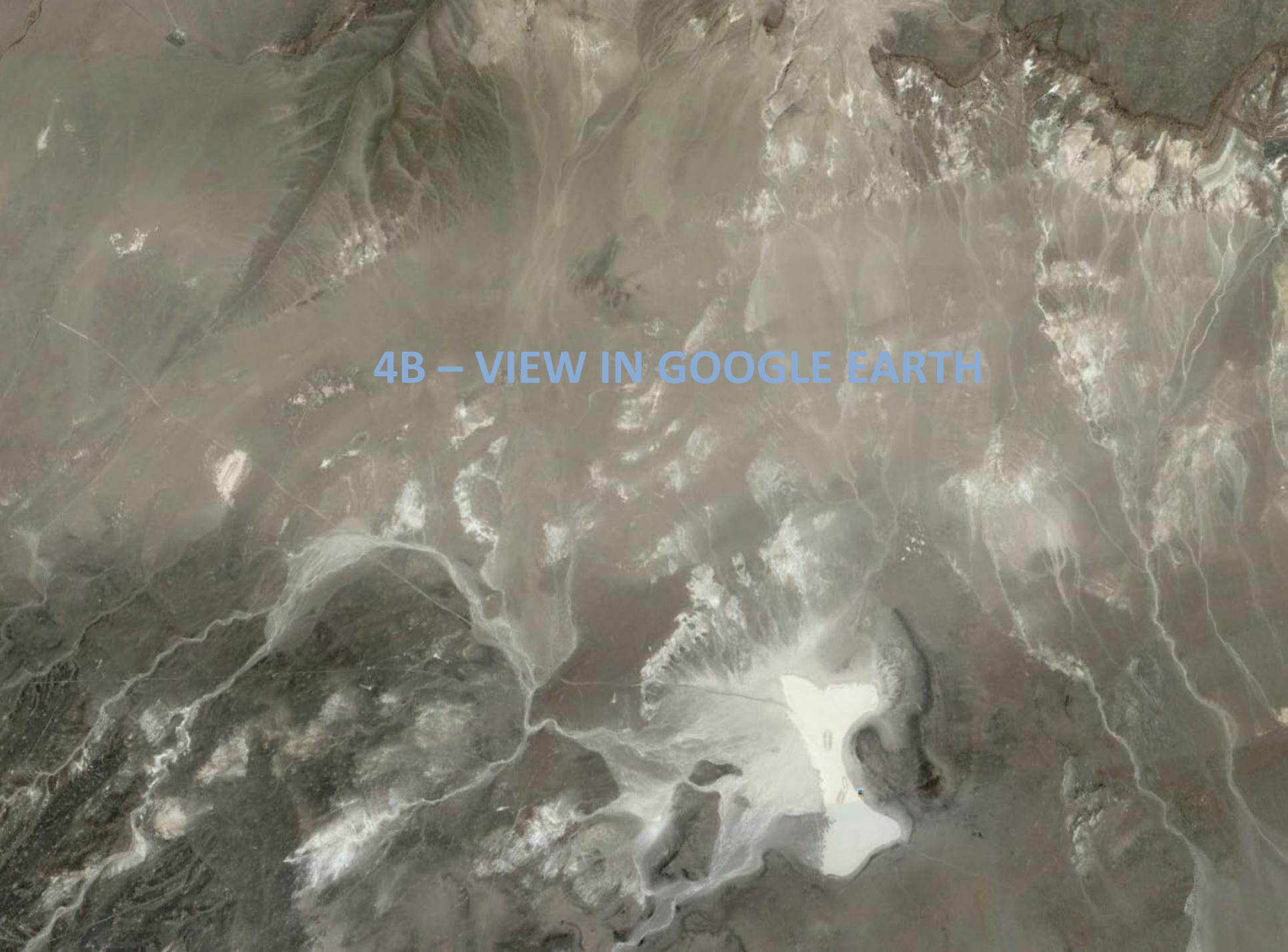
4A – SCALE PROMISING SHOOTING LOCATIONS

Dia= 2.2km/1.37m

W= 1.6km/1m

Sink .75km/827y



An aerial satellite-style view of a mountain range. The terrain is rugged with numerous ridges and valleys. A prominent valley runs north-south through the center, containing a large, light-colored lake or reservoir. The surrounding slopes are covered in sparse vegetation, appearing in shades of brown and tan. The overall scene is a high-altitude, mountainous landscape.

4B – VIEW IN GOOGLE EARTH

4C – VIEW AND ZOOM IN GOOGLE EARTH



Bordered 2 sides
With hills

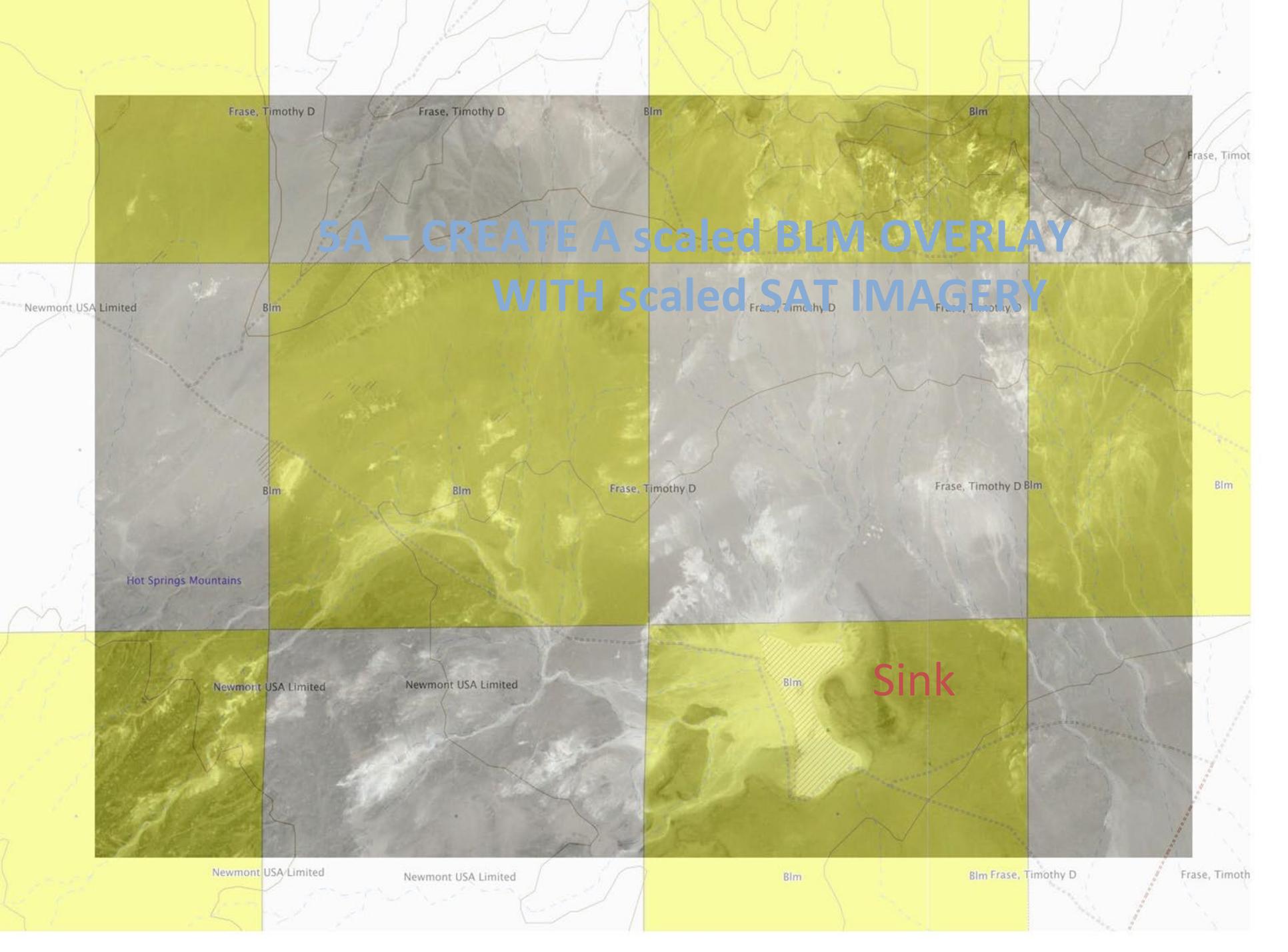
Sink .75km/827y

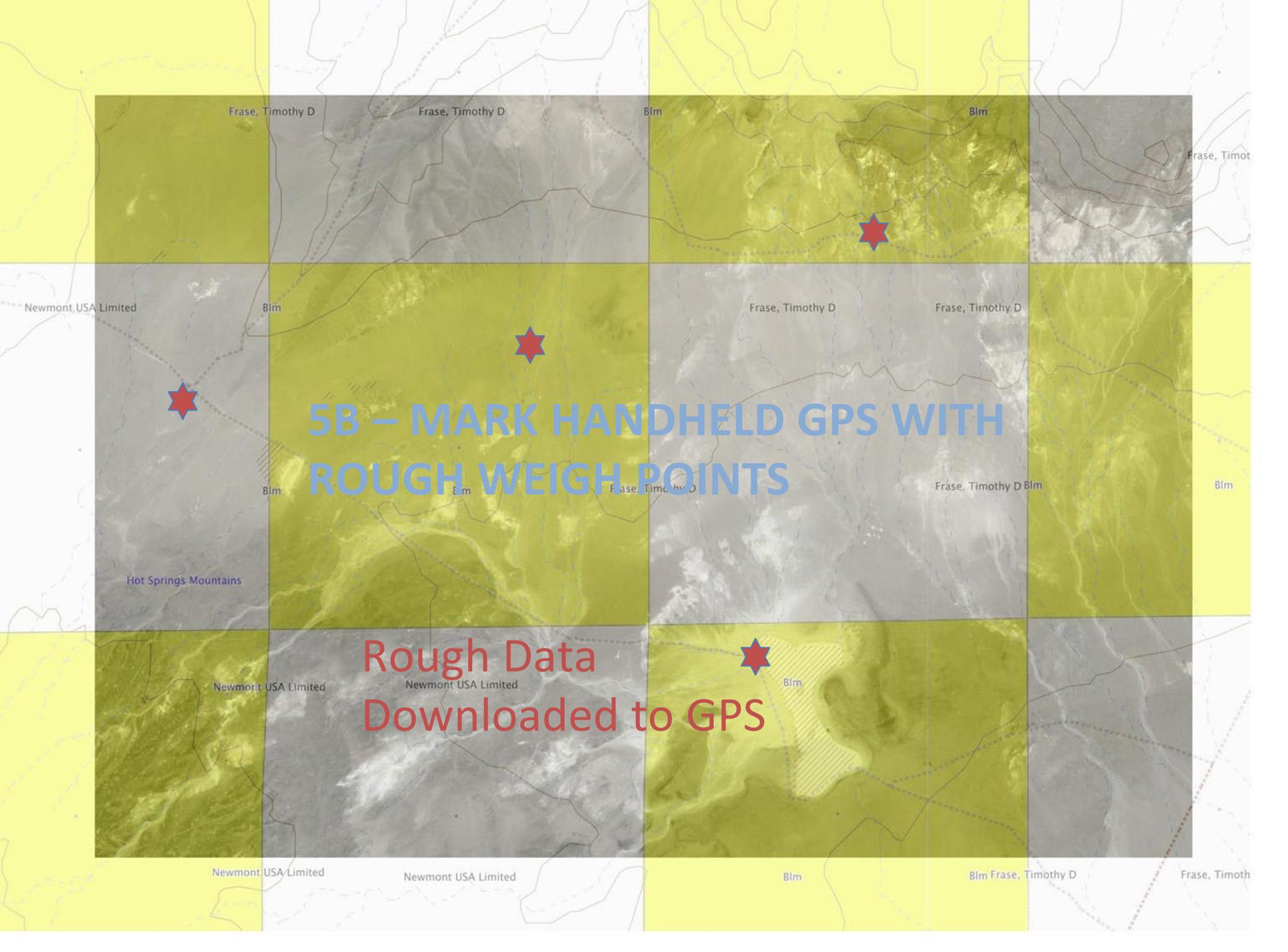
An aerial photograph of a desert landscape. A paved road with a double yellow line runs diagonally from the top left towards the bottom right. To the right of the road, there is a large, rectangular, light-colored area that appears to be a construction site or a cleared area, with some sparse vegetation. In the bottom right corner, there is a building with a white roof and a parking lot. The overall terrain is arid with scattered small shrubs and patches of dry grass.

4D – ZOOM IN VIEW ENTRANCE AND
TRAILS LOOKING FOR GATES ETC.
GOOGLE EARTH

No gate

5A – CREATE A scaled BLM OVERLAY WITH scaled SAT IMAGERY



A topographic map showing terrain contours and land ownership. The map is divided into a grid of colored sections: yellow, grey, and olive green. Three red stars are placed on the map: one on the left edge, one in the center, and one in the lower right. The text '5B - MARK HANDHELD GPS WITH ROUGH WEIGH POINTS' is overlaid in blue. The text 'Rough Data Downloaded to GPS' is overlaid in red. Various labels like 'Frase, Timothy D', 'Blm', and 'Newmont USA Limited' are scattered across the map.

5B - MARK HANDHELD GPS WITH ROUGH WEIGH POINTS

Rough Data
Downloaded to GPS



6A – SCOUT LOCATION

Range Target locations FROM FFP - THE PRONE
POSITION AS SEEN FROM SHOOTING LEVEL....
Mark DGPS & GPS AT FFP AND target locations.



3,000 -3,300y FFPs

2,100 -2,700+ yard FFPs

7A.1 – SET TRAGETS Looking back to FFP

VIEW FROM TRAGET

AFTER SETTING TARGET, MARK WITH **Differential GPS & STANDARD GPS** AS WELL AS RANGING **FFP WITH VECTRONIX** AND WITH **DGPS**

The sending unit is about 20' of the side

7A.2 – SET TRAGETS

Camera is protected by plate

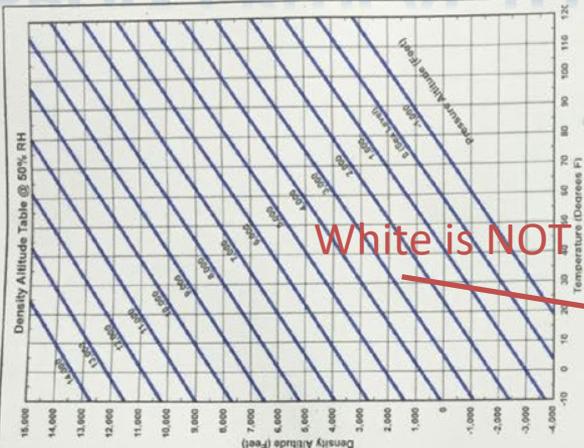
Range Target locations and
mark **DGPS & GPS** of targets!

7B – FFP ◦ FIELD FIRING LOCATION



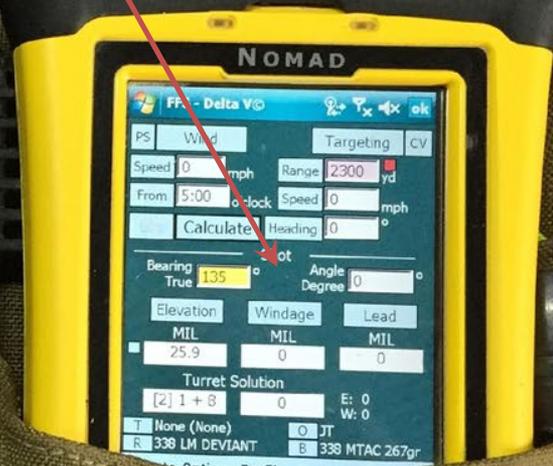
Range Target locations and mark FFP with DGPS & GPS – confirm distance of Range with calculated dope from FFS and with GPS

7C – NV HUNT MAPS ON HAND-HELD GPS WITH COLOR DISPLAY CRITICAL TO BE IN THE CORRECT BLM QUADRANT !



White is NOT BLM

Differential GPS but no NV BLM hunt map



= Distance to Target (yards)
= Distance to Target (yards)

Mils = MOA x 3.4377
MOA = Mils / 3.4377

Mils = MOA x 3.4377
MOA = Mils / 3.4377

Altitude	Absolute Barometer
feet	inHg
0	30.0
500	29.9
1000	29.8
1500	29.7
2000	29.6
2500	29.5
3000	29.4
3500	29.3
4000	29.2
4500	29.1
5000	29.0
6000	28.8
7000	28.6
8000	28.4
9000	28.2
10000	28.0
15000	27.5

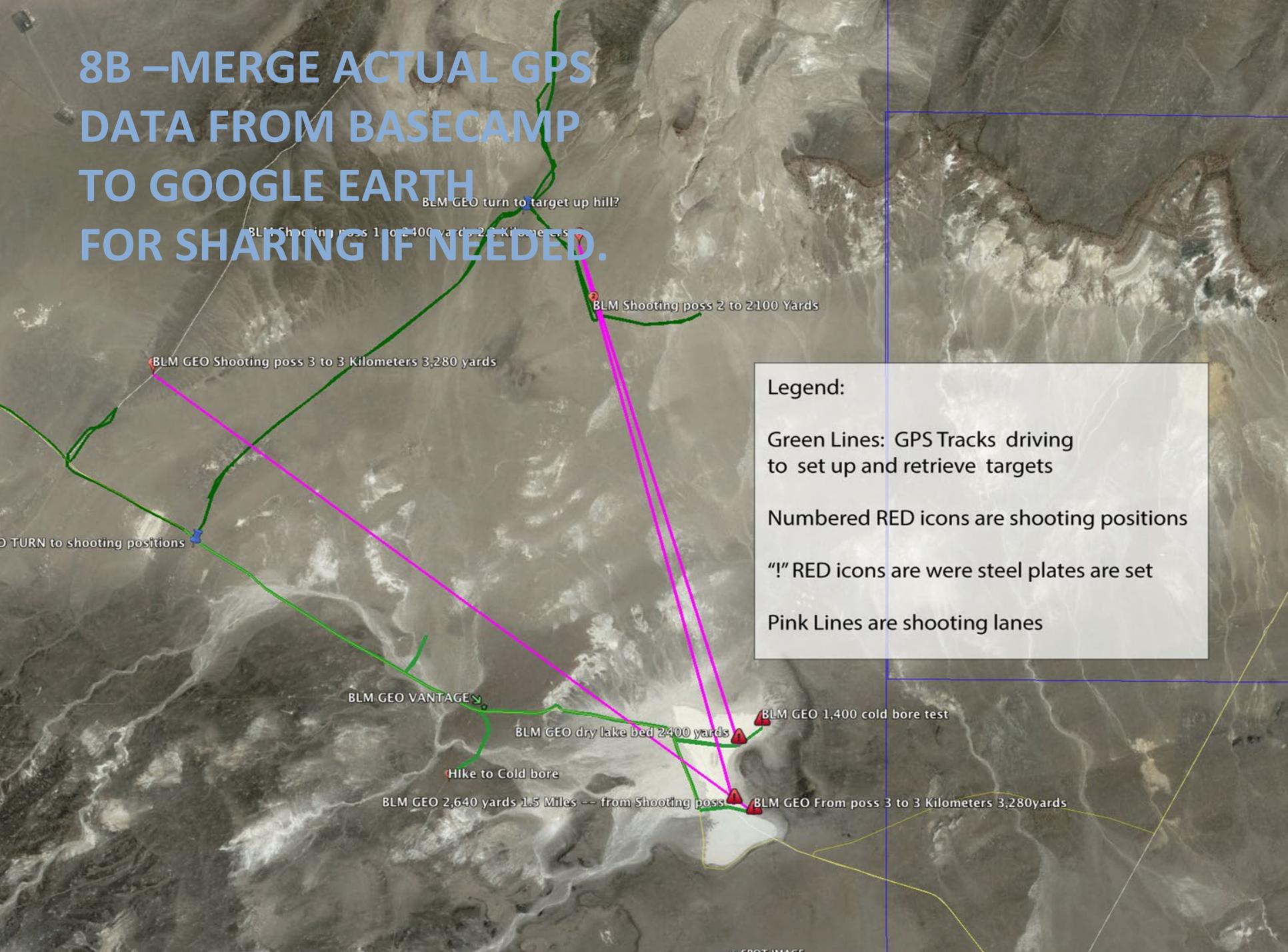
Corresponding Cosine Figure

Angle	Corresponding Cosine Figure
0°	0.985
1°	0.986
2°	0.988
3°	0.990
4°	0.992
5°	0.994
6°	0.996
7°	0.997
8°	0.998
9°	0.999
10°	1.000

1 yard = 0.9144 meters

Mark FFP & FTP with DGPS & GPS confirm distance of Range with calculated dope from FFS and with GPS.

8B –MERGE ACTUAL GPS DATA FROM BASECAMP TO GOOGLE EARTH FOR SHARING IF NEEDED.



Legend:

- Green Lines: GPS Tracks driving to set up and retrieve targets
- Numbered RED icons are shooting positions
- “!” RED icons are where steel plates are set
- Pink Lines are shooting lanes



HAVE FUN... 2.2 KILOMETER HITS --



TOOLS FOR FINDING AND SHOOTING ELR

Garmin Boot Camp **FREE** allows use of BLM Hunt maps on your computer

<http://www.garmin.com/en-US/shop/downloads/basecamp>

Works with Basecamp by first zooming into area the viewing route place mark or are in Google Earth

<http://www.google.com/earth/download/ge/>

Legacy Basecamp http://www8.garmin.com/support/download_details.jsp?id=4939

Hunt maps with BLM LAND <http://www.huntinggpsmaps.com/store/computer-maps/garmin-basecamp#.VYncGUvoi2Q>

Garmin handheld

https://buy.garmin.com/en-US/US/on-the-trail/handhelds/color-screen/accepts-data-cards/cOnTheTrail-cHandheld-atFILTER_FEATURE_COLORSCREEN_01-atFILTER_FEATURE_DATACARDS_01-p1.html

Field Firing solutions Nomad <http://www.lextalus.com/pda5.html>

Delta V

<http://www.lextalus.com/Delta5.html>

Kestrel

<http://kestrelmeters.com/products/kestrel-4500nv-applied-ballistics-meter>

G shock pro trek

http://www.casio.com/products/Watches/PRO_TREK/PRW5050BN-5/

ELR Camera Build

<http://mbd.scout.com/mb.aspx?s=541&f=5539&t=13236426>