

MISSION 15 PLANNING GUIDANCE

Mission 15 has been designed to bring together everything you have learnt so far throughout the campaign, it is intended to present you with a challenge in both planning and execution. However not all players will seek such an in-depth experience and if this isn't to your taste then the mission can still be attempted head on without much preparation...total success will of course be less likely, but as ever in Cerberus North, you can fail or abort the objective and still pass the mission...all you need do is survive.

But for those that are still here...please feel free to experiment, the mission has a number of systems, variables and reactions built in and aims to offer an environment that reacts to your approach and offers a variety of challenges, surprises and replayability.

The following pages will offer thoughts on the various pros and cons different approaches contain and will highlight the key threats and considerations you may wish to take into account when planning your strike.

It will also contain a fuel planner for those that would like to use it, note that this is not required and for those that don't wish to use this, just knowing the bingo number should suffice. However for those that wish to plot more complex routes or longer, low level ingresses, these documents may support this.

One final suggestion - opening a blank mission in the mission editor can be an excellent planning tool to help you work out routes, distances and timings.

The mission will begin behind the tanker at waypoint 3 at 06:00, you will have up to 10 minutes in active pause before the AI flights activate and push to their targets at 06:20.

Good luck!

KEY CONSIDERATIONS

Attack route:

The most obvious and direct route will be to attack through the Bekaa Valley, this will offer jamming protection against the SA-10 during Spartan's Vul window, however should you get caught here outside the 20 minute window then things could get messy. The main disadvantage to this approach will be the lack of surprise as the electronic attack will be a clear indication to the Syrian defences that something is approaching. The SA-15 north of the target will also come into play here and has an excellent ability to intercept air launched weapons such as JSOW and HARM. This approach trades surprise for safety.

There are many other routes to the target, your only limit on them is fuel. However please note the restricted area surrounding west Lebanon and Beirut which cannot be entered - straying too far into this area will fail the mission. When considering other routes careful thought to SAM coverage should be given, as should the position and TOTs of the Damascus SEAD, EW and OCA flights. By utilising other routes you can achieve more surprise by using the EW support as a decoy and also avoid the SA-15 issue. However this approach will potentially expose you to a more dense threat environment without the protection of a jamming escort. The unknown variable for you is the impact the SEAD strikes against Damascus will have.

Altitude:

A low altitude ingress and/or attack will offer the primary advantage of terrain masking, hiding you from the SAM radars if you get it right. Combined with toss bombing using your JDAMs and JSOWs this has the potential to be very effective. This approach however has a significant tradeoff. You will burn much more fuel, reducing your range and loiter time should you be looking to completely dismantle the SAM battery. Flying at low level will also expose you to more AAA and IR SAM threats, of which there are many both in the Bekaa Valley and around Damascus, as such any low level route should be carefully planned to avoid threat locations.

Operating at higher altitudes will offer protection from AAA and IR SAMs and will be more fuel efficient. It will also give you a far greater range on your weapons. But you will lose all terrain advantages this mountainous area provides and you will be detected by SAM systems far easier. The extra range on your weapons may also be negated as the SA-15 and SA-10 will more likely make short work of them given the extra engagement time.

Jamming:

As you may have already learned throughout the campaign, jamming by the Navy's E/A-18G Growlers can be very effective and enable you to enter airspace that would otherwise be impossible to survive in. There are a number of things to be aware of though, first the jammers work over a specific location, in proximity to the jamming aircraft. These areas are marked on the threat map. Second, jamming works best at range from SAM radars, if you get too close to any SAM then it will burn through the jamming screen and will be able to engage you, more modern SAMS also have better burnthrough capability. Third, pay attention to the vul times of the EW support, they can't and won't operate past them.

HARM Deployment:

Once within 60 nm of the target you will have the ability to order Woody to launch his HARMS.. These weapons have the potential to force the SA-10 offline temporarily and may even damage the SAM radars if you are lucky.

This opens up possibilities to consider for the timing and coordination of your attack.

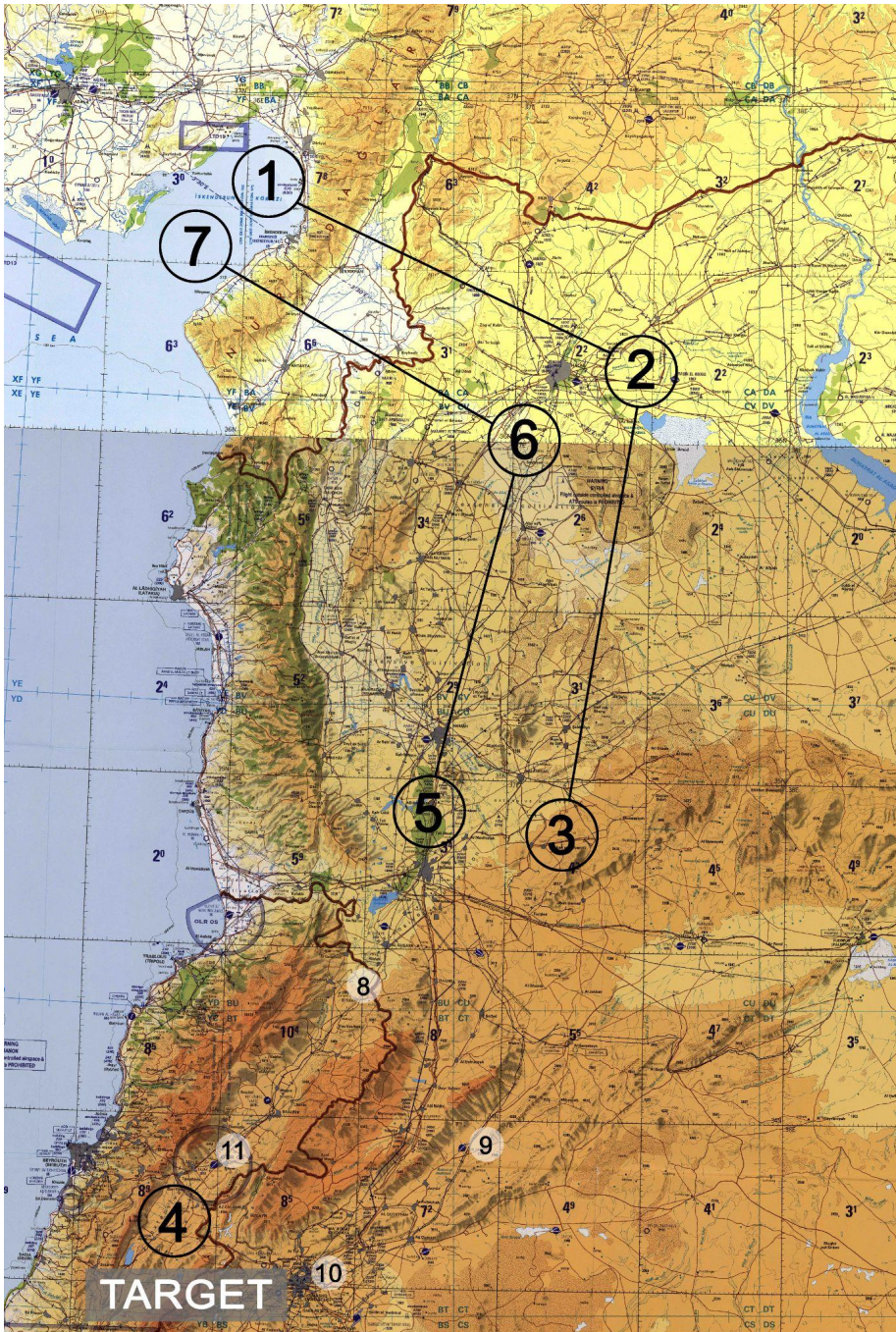
Woody JDAMs:

Once within 20 nm of the target Woody will be available to attack any of the primary or secondary targets as well as the SA-15 with his JDAMs. However, ordering Woody to attack will put him at real risk of being shot down.

Air to Air Threats:

Now the Syrian Air Force is getting back in the air in numbers the air to air threat has increased. Take note of the timings of the fighter sweeps by Mystic 3 and Bear 2. There is a risk of isolating yourself in Syrian territory without additional fighter support.

ROUTE PLANNING



Four additional waypoints have been programmed into your flight plan to aid with navigation.

WP 8 - North end of Bekaa Valley.

WP 9 - An Nasiriyah Airbase.

WP 10 - Damascus.

WP 11 - Rayak Airfield.

You could also use the mission editor to obtain coordinates if you wished to add custom waypoints.

FUEL PLANNING

Use the following optional pages if you wish to plan your fuel usage.

As a basic calculation:

- You will be able to fly approximately 220 miles at 25,000 feet and M0.75 and spend a minimum of 60 seconds over the target until you hit Bingo.
- You will be able to fly approximately 140 miles at low level and M0.75 and spend a minimum of 60 seconds over the target until you hit Bingo.
- Approaching the target head on (100nm as the crow flies) at 25,000 feet and M0.75 should allow nearly 3.5 minutes over the target.

If you wish to make more complex calculations you may use the following approximate values. This table shows the pounds of fuel used per nautical mile travelled. Note it may be wise to arrive over the target with fuel to spare to allow for hard maneuvering at afterburner.

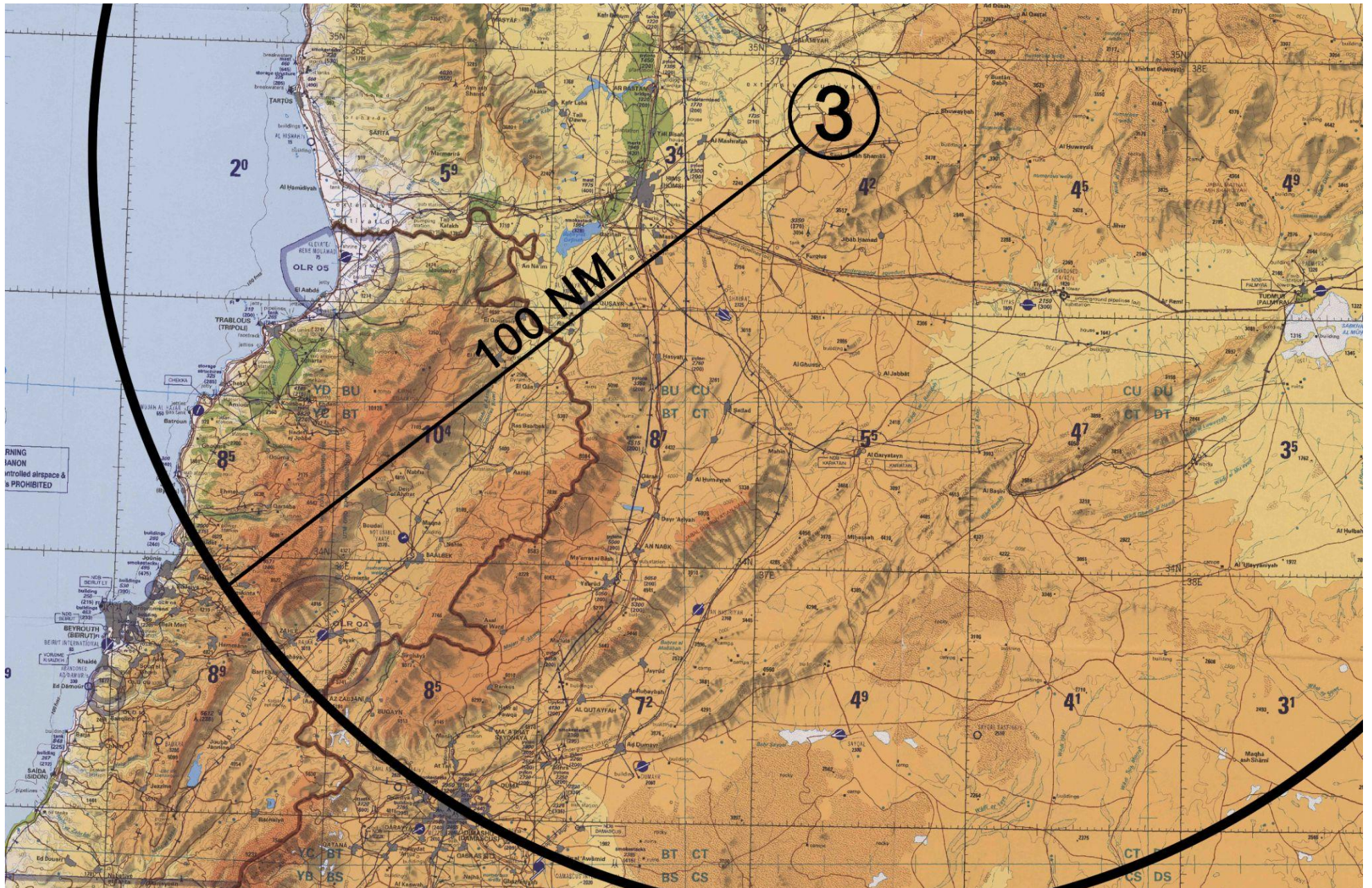
Altitude (Feet MSL)	Mach number	Fuel Burn (lb / nm)
25,000	0.75	18
25,000	0.85	22
15,000	0.75	20
15,000	0.85	27
2000	0.75	28
2000	0.85	37

The table on the following page can be used to make your calculations, it assumes 12,400lb of starting fuel as you will burn a little fuel during the active pause phase at mission start.

Example calculations are on the following page, a blank form can be found at the end of this document.

Leg of route	Miles	Burn Rate	Fuel Needed for Leg <i>(miles x burn rate)</i>	Fuel Remaining <i>(previous leg fuel remaining - fuel needed)</i>
<i>Initial position (IP)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>12400</i>
<i>IP to WP 8, @ FL250 and M0.75</i>	<i>50</i>	<i>18</i>	<i>50 x 18 = 900</i>	<i>12400 - 900 = 11500</i>
<i>WP8 to Tgt, @ FL20 and M0.85</i>	<i>52</i>	<i>37</i>	<i>52 x 37 = 1924</i>	<i>11500 - 1924 = 9576</i>

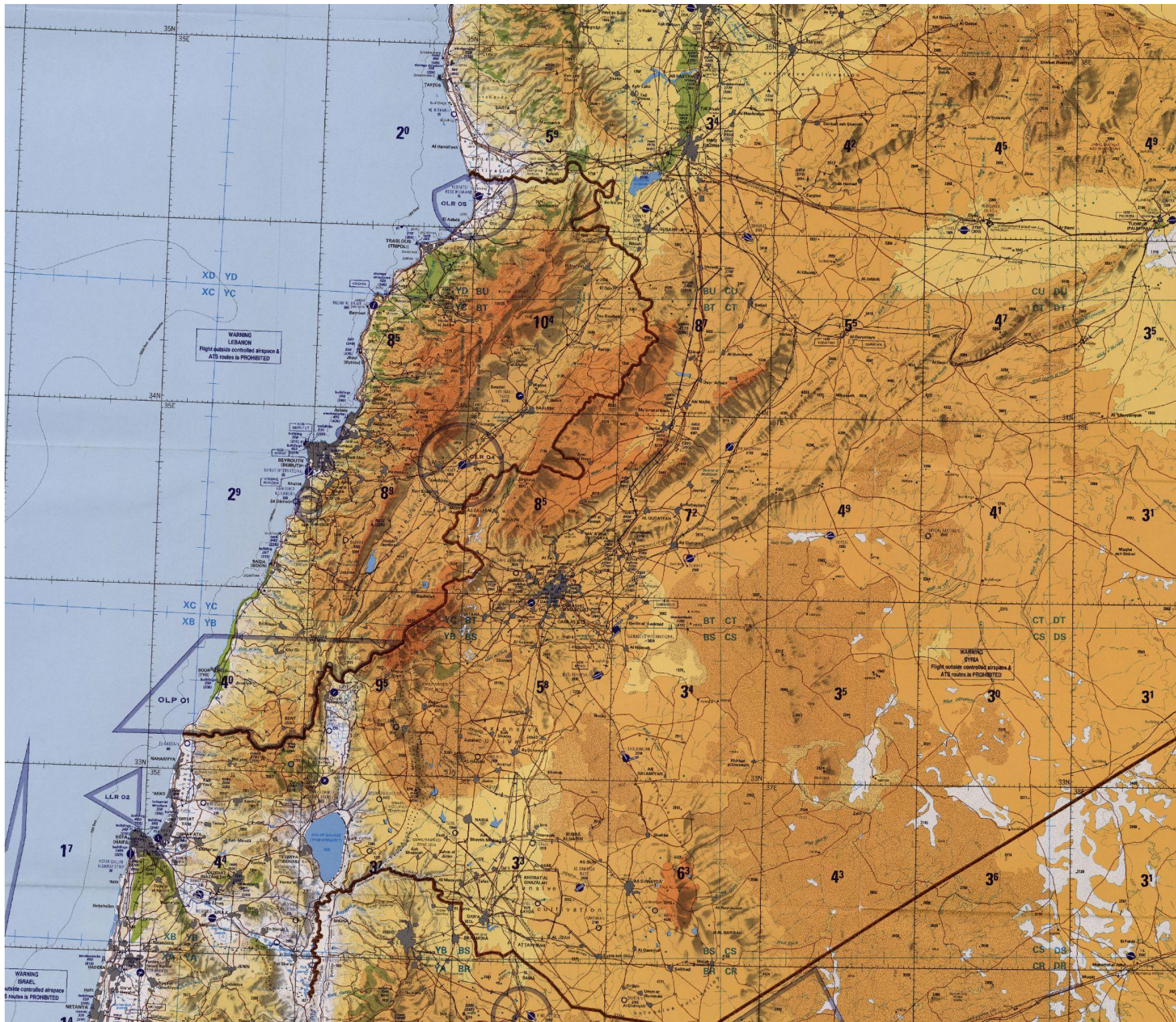
Leg of route	Miles	Burn Rate	Fuel Needed for Leg <i>(miles x burn rate)</i>	Fuel Remaining <i>(previous leg fuel remaining - fuel needed)</i>
<i>Initial position (IP)</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>12400</i>
<i>IP to WP 10, @ FL20 and M0.75</i>	<i>100</i>	<i>28</i>	<i>100 x 28 = 2800</i>	<i>12400 - 2800 = 9600</i>
<i>WP10-WP11, @ FL20 and M0.85</i>	<i>25</i>	<i>37</i>	<i>25 x 37 = 925</i>	<i>9600 - 925 = 8675</i>



APPENDIX



TARGET

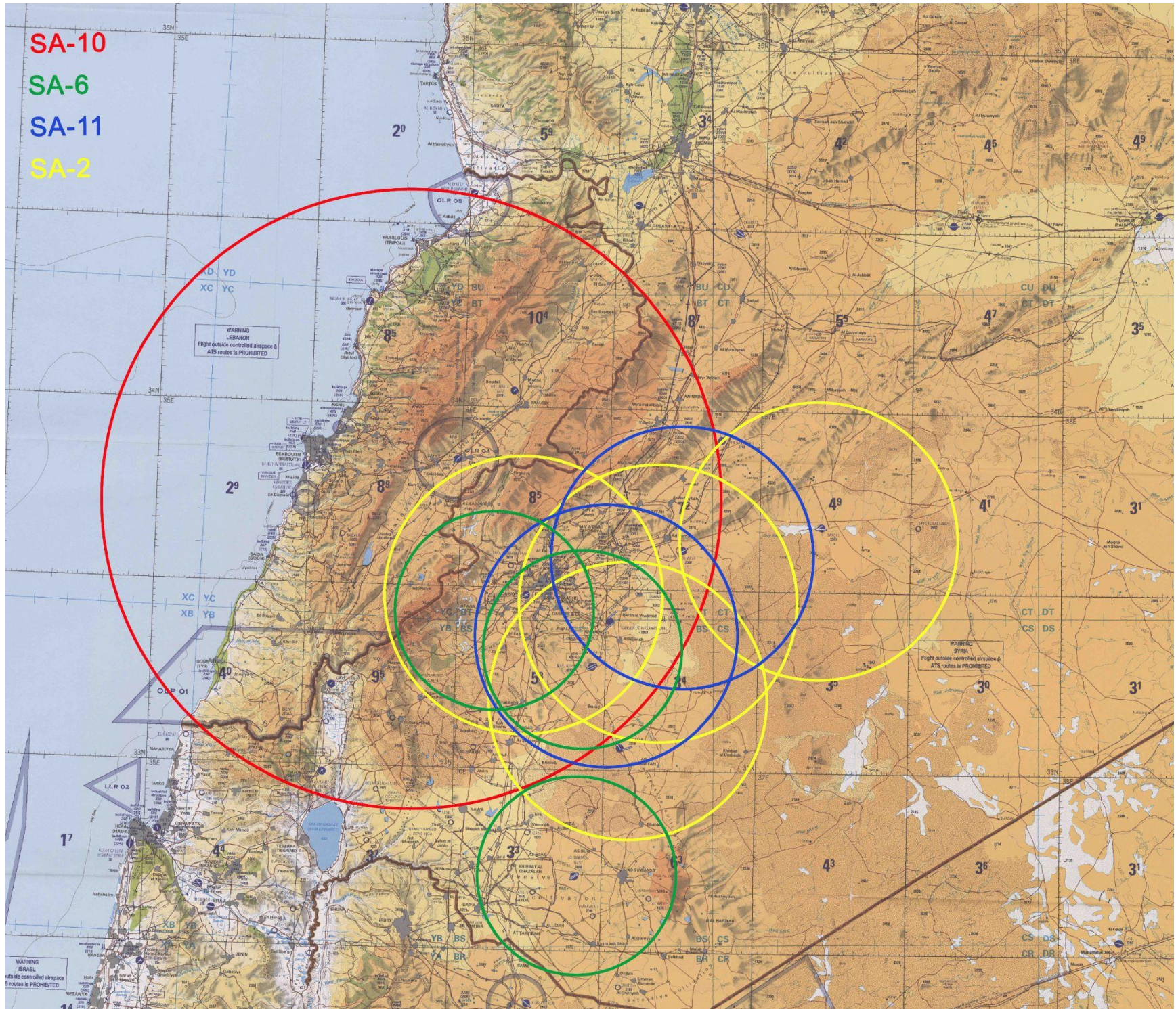


SA-10

SA-6

SA-11

SA-2

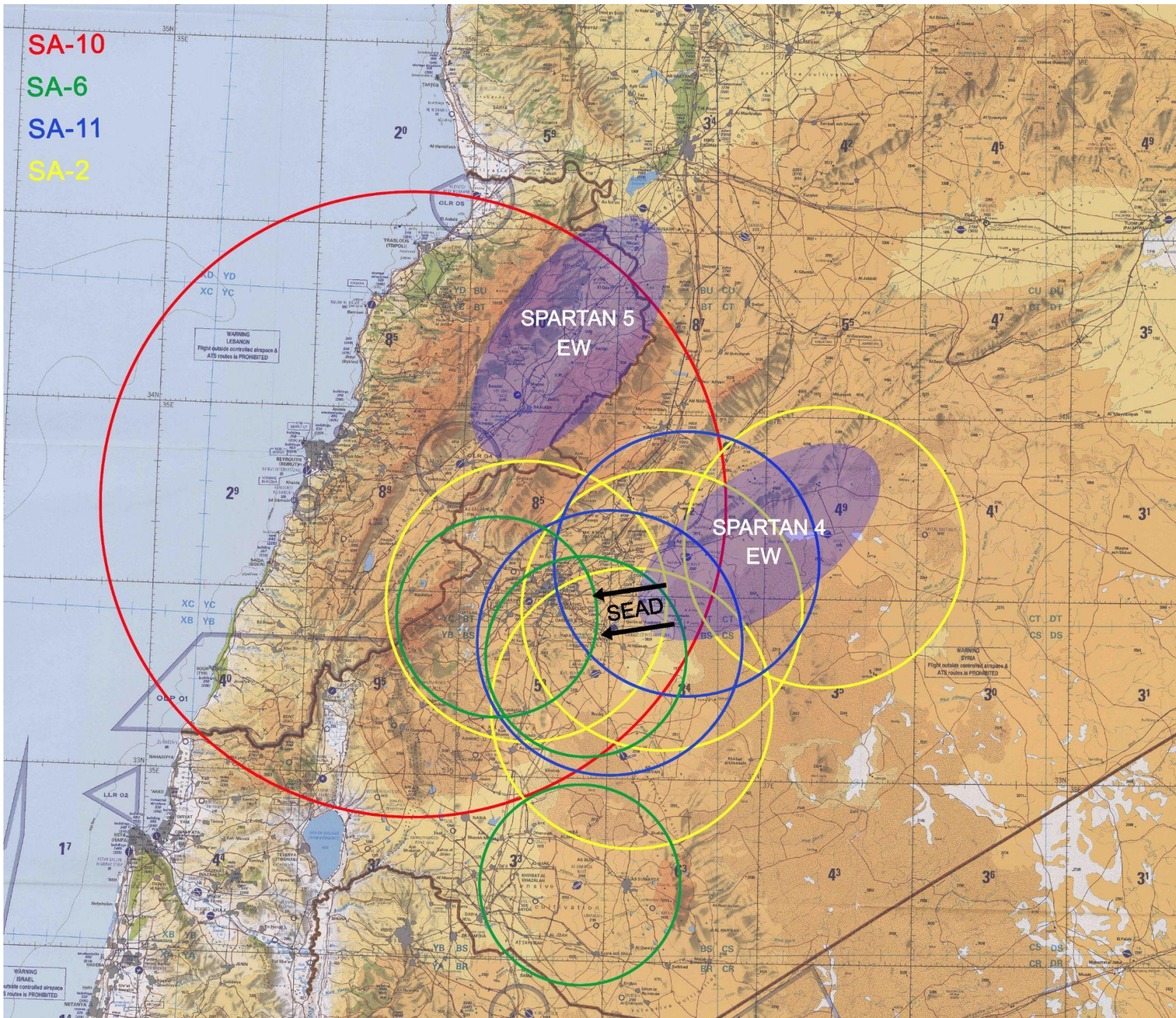


SA-10

SA-6

SA-11

SA-2





LOW LEVEL THREAT

RESTRICTED AIRSPACE

WARNING
LEBANON
Flight outside controlled airspace &
ATS routes is PROHIBITED

WARNING
SYRIA
Flight outside controlled
ATS routes is PROHIBITED

