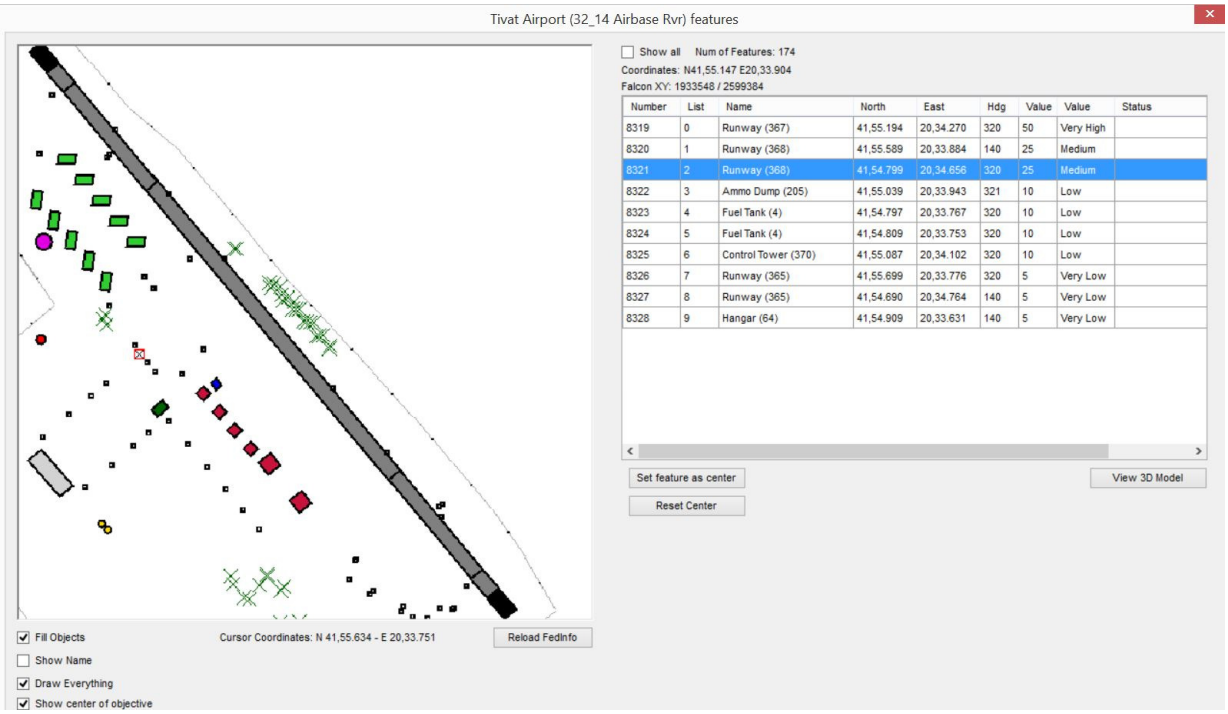
Zipgun's War College (185th VFS Confidential)

OCA Done Right

Taking out an airfield is not as simple as flying down the middle, ripple releasing BLU-107s in pairs. Yes, you can do it that way, but the intent is to deny the airfield's use to the enemy for as long as possible. In BMS, as in real life, runway segments can be destroyed and repaired in sections. The more work the repair crew has, the longer it takes. If you take out one segment, it will take 3 hours to repair it. Take out 3 segments and it is not back in service for 9 hours. So, a well-placed single BLU-107 or a pair of penetrator bombs will possibly be MORE effective than the ripple pass. Here is why:

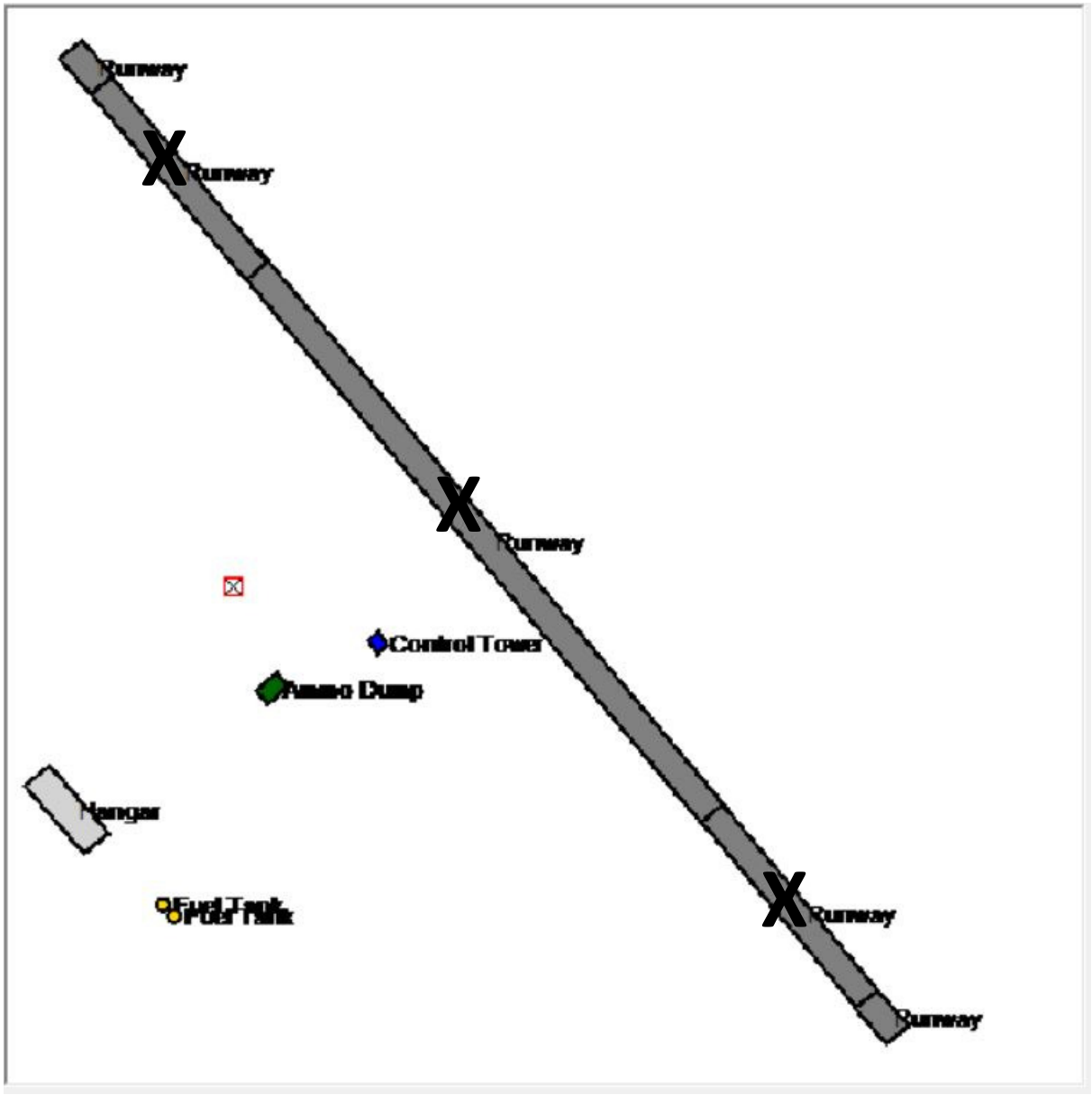
Let's look at how the game sees Tivat airbase:

This is the "object" map for the airfield, on the left is the scenery overlay with "hit zones" and the right shows a table of elements and their value to the game.



If an object is not listed in the table, it isn't worth dropping ordinance on it. This is the same table and values you see during RECON.

Let's look at the valued targets with their labels turned on:



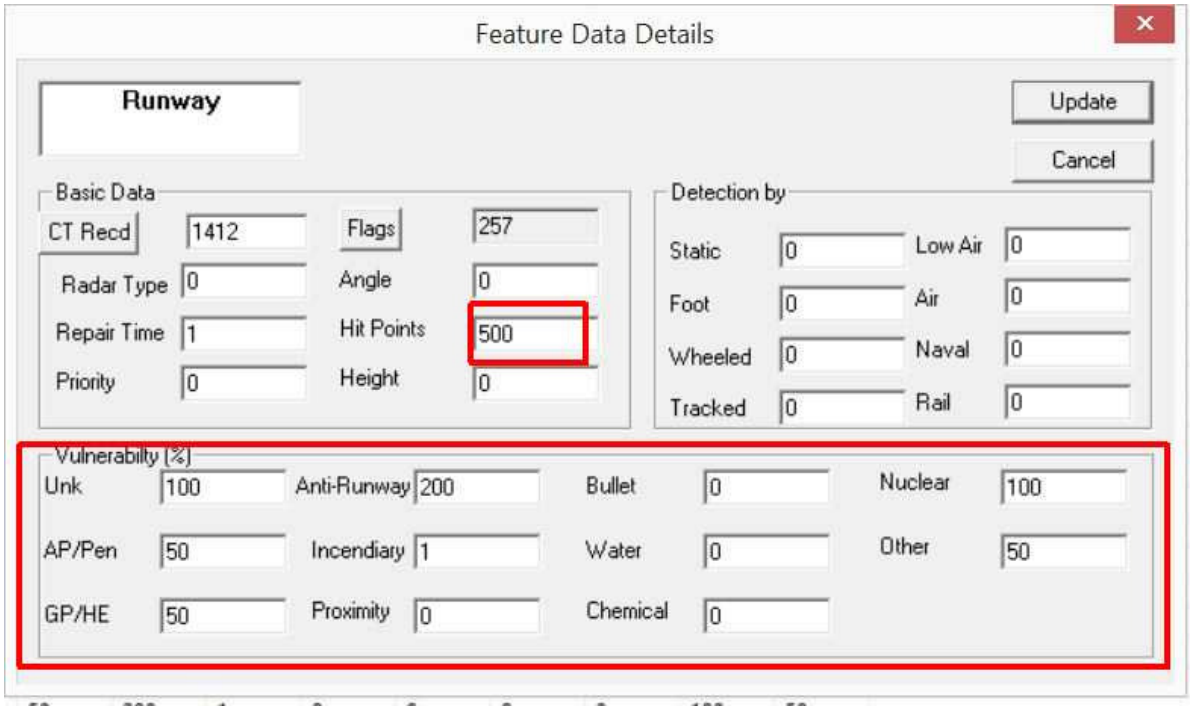
Now we see there are 5 segments to the runway, the long one in the center is high value, and they go down in value as we get to the ends. Not every runway is 5 segments, some have more, and some have less. In general, they will always have at least 3 valued elements (twice that number for parallel runways).

Now, how to maximize the down-time? Skip the very low value "ends" – use CCIP and drop one bomb at about 15-20% of the length, one in the middle, and one at 80-95%. 3 hits, 9 hours, and you still have bombs left over for another target!

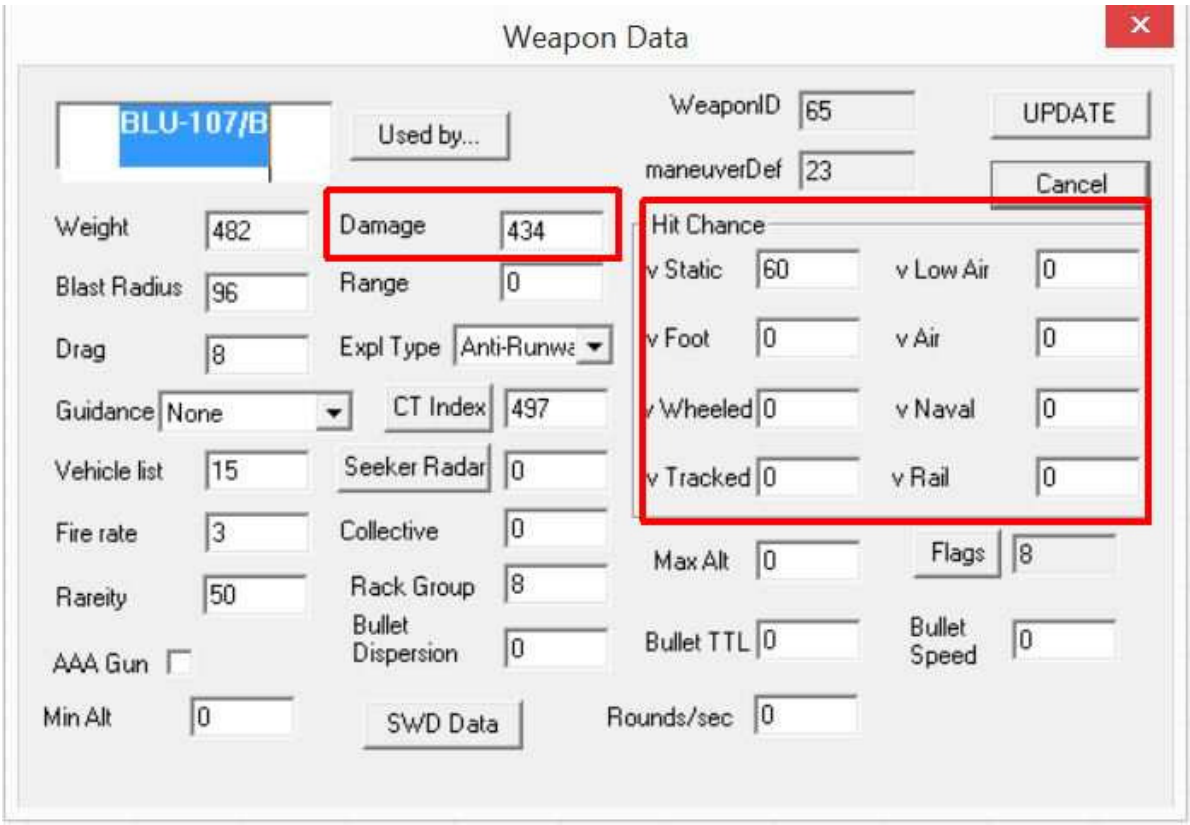
As you can see, the Tivat taxiway has no value, and cannot be destroyed. Remember this fact if your airbase has been trashed, you can land, hot-pit refuel, and takeoff using the taxiway.

Hit Points:

Objects in BMS are assigned “hit points” to measure the damage inflicted. A runway segment at Tivat requires 500 hit points to be destroyed (less for damaged status). The following table shows the vulnerability to each weapon type:



And here is the weapon data for a BLU-107/B



Warning: here comes the math!!

Generally, BMS will multiply the damage rating of the weapon (434) * the vulnerability (200%) = hit points

434 * 2 = 868 --- Previously, we said the runway requires 500 hit points to be destroyed

It looks like a single BLU-107-B is more than enough to crater the segment. Now there are other factors involved, like the Hit Chance, weapon delivery parameters (speed, release alt., burst radius, etc.) and wind – but GENERALLY, we can go with formula above.

What about JDAMS?

The RECON will give you the LAT/LON of the segments, so we are likely to get a good hit (if delivered within parameters). But what about the hit points?

GBU-31(v)3/B -- 2000lb – Damage= 745 type = penetrator

745 * .5 = 372 --Remember, we have to use the AP/Pen value from the runway object. It will take 2 to get a "KILL"

GBU-35(v)1/B -- 1000lb -- Damage=400 type = penetrator 400 * .5 = 200 --- It takes 3 to get a kill

GBU-31(v)1/B -- 2000lb -- Damage= 465 type = GP/HE (high explosive) 465 * .5 = 232 -- It will take 3!!!

GBU-32(v)1/B -- 1000lb – Damage= 400 type = GP/HE 400 *.5 = 200 --- It takes 3!!

So, in conclusion, if you want to take down Tivat, you have several options. The package commander must weigh the risk from SHORAD and other factors against the number of aircraft required to achieve target destruction. In the end, you may only enjoy 3-9 hours of peace and quiet before the industrious repair crews get things smoothed over and flights resume.

P.S. – Campaign success is fed by human mission success, the more missions with SUCCESS and Pilot EXCELLENT ratings the more motivation shifts from the enemy towards your troops. If you and I bomb the same runway segment, only one of us gets the "KILL" the other gets a "DAMAGED" report. While mission redundancy is often sought for tactical reasons, it may not be the best result for online campaigns like Falcon Online. If practicable without undue risk, plan on an in-package BDA with secondary targets available for unused ordinance.