



**MATE: Machine Analysis of Tactical Environments v 1.1**

Date: 09/20/11. Time: 13:13:57. Description: Operation Moshtarak: The Battle for Marjah, February 13, 2010



**Terrain analysis:**

Water: 0.30 % of map.  
 Swamp: 0.00% of map.  
 Forest: 1.38% of map.  
 Urban: 5.30% of map.  
 Scrub: 0.52% of map.  
 Light Road: 4.25% of map.  
 Good Road: 0.00% of map.

**Elevation analysis:**

Elevation ranges from 775 meters to 790 meters.  
 The average elevation is 775 meters.

**BLUEFOR Analysis:**

Unit ID	Type	Location (X,Y)	Terrain	Elevation	Strength	Morale	Group	Threat Level	Friend Level
0	☒	660, 500	Clear	775	50	50	0	-5.91	25.98
1	☒	680, 530	Clear	775	50	50	0	-5.42	11.47
2	☒	710, 560	Clear	775	50	50	0	-4.89	24.41
3	☒	730, 520	Clear	775	50	50	0	-4.88	23.47

**REDFOR Analysis:**

Unit ID	Type	Location (X,Y)	Terrain	Elevation	Strength	Morale	Group	Threat Level	Friend Level
0	☒	360, 420	Urban	775	50	50	0	-5.71	25.22
1	☒	360, 390	Urban	775	50	50	0	-5.55	5.03

2	☒	360, 320	Urban	775	50	50	0	-5.10	2.97
3	☒	370, 280	Urban	775	50	50	0	-4.92	20.15

### Predicate Generation:

ID	Predicate Statement
0	BLUEFOR consists of 1 group.
1	Weighted strength of BLUEFOR Group 0 is: 200.
2	The elevation at the center of BLUEFOR Group 0 is: 775.
3	The weighted elevation metric for BLUEFOR is: 51666.
4	REDFOR consists of 1 group
5	Weighted strength of REDFOR Group 0 is: 200.
6	The elevation at the center of REDFOR Group 0 is: 775.
7	The weighted elevation metric for REDFOR is: 51666.
8	The enemy group that can be reached quickest by BLUEFOR Group 0 is REDFOR Group 0.
9	REDFOR Group 0's frontage is an unbroken line of overlapping ROIs.
10	0 of 4 BLUEFOR units crossed an ROI to reach the Flanking Goal.
11	The Anchored Line Value is 0.00.
12	<b>REDFOR flanks are not anchored.</b>
13	<b>The Interior Line Value is 90509. (BLUEFOR has interior lines).</b>
14	There are 7 choke points between REDFOR and its avenue of retreat.
15	<b>REDFOR's avenue of retreat is not restricted.</b>
16	There are 8 choke points on BLUEFOR's avenue of attack.
17	<b>BLUEFOR's avenue of attack is not restricted.</b>
18	Unweighted BLUEFOR strength = 200.
19	Unweighted REDFOR strength = 200.
20	The weighted ratio of REDFOR / BLUEFOR = 1.000000.
21	<b>BLUEFOR has the superior force.</b>
22	The weighted elevation ratio of REDFOR / BLUEFOR = 1.000000.
23	The slope of the attack is = 0.01.
24	<b>BLUEFOR is attacking across level ground.</b>

### Tactical Analysis:

ID	Tactical Statement: Mortar Platoon
25	BLUEFOR has a weapons platoon (60 mm. mortar) within range. Unit ID 3.
26	Closest REDFOR unit (Unit ID 0) to Mortar Platoon.
27	Range: 851 meters from Mortar Platoon to REDFOR Unit 0.
28	Uninterrupted line of sight from Blue Unit 3 to Red Unit 0.



<b>ID</b>	<b>Tactical Statement: Suggesting Envelopment Maneuver</b>
4	REDFOR consists of 1 group
12	<b>REDFOR flanks are not anchored.</b>
17	<b>BLUEFOR's avenue of attack is not restricted.</b>
21	<b>BLUEFOR has the superior force.</b>
24	<b>BLUEFOR is attacking across level ground.</b>
∴	<b>Tactical Statement: Suggesting Envelopment Maneuver</b>
→	Envelopment Maneuver (Right Flank):
⊗	Blue Unit 0: Fixing Force advancing to 400 meters to fix the enemy in place.
⊞	Blue Unit 3: Fixing Force, not advancing, fire support to hold the enemy in place.
⊗	Blue Unit 1: Flanking Force. Approximate distance of maneuver: 3222 meters. Approximate time for maneuver: 69 minutes.
⊗	Blue Unit 2: Flanking Force. Approximate distance of maneuver: 3177 meters. Approximate time for maneuver: 68 minutes.





→ Envelopment Maneuver (Left Flank):

☒ Blue Unit 0: Fixing Force advancing to 400 meters to hold the enemy in place.

☒ Blue Unit 3: Fixing Force, not advancing, fire support to hold the enemy in place.

☒ Blue Unit 1: Flanking Force. Approximate distance of maneuver: 1222 meters. Approximate time for maneuver: 26 minutes.

☒ Blue Unit 2: Flanking Force. Approximate distance of maneuver: 1288 meters. Approximate time for maneuver: 27 minutes.

