The Geographical Considerations Involved in Timur's Campaign into the Arab Middle East.

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PREFACE

Maps supplied important information for the geographical section as well as the route section of this work. In several instances point elevations were taken directly from maps. Maps give the experienced map reader a conception of the general lay of the land. Large scale maps, of course, present a better picture of the land, but in many instances no large scale maps for the area exist. Therefore small scale maps had to be used.

The general map used for the entire area was Asia 1:1,000,000 published by the Army Map Service and Her Britannic Majesty's Stationery Office.

Other maps used for specific areas were: Iran, 1:250,000 published by The Master Joint Fund Operations Engineering and Construction Division 1955, Turkey Highway Map 1953, published by the Turkish General Directorate of Highways, and Liban 1:200,000, Beirut Catholic Press 1948.

Footnotes in the text refer to these maps.
In the fall of 1399, having recently returned from a victorious campaign in India, Timur was forced by circumstances existing in the province of his son Miran Shah, to leave Samarkand on a campaign that was destined to lead him into the Arab Middle East.

The initial route which Timur followed was the Khorasan Road which was one of the old hajj routes which linked Bagdad to the Islamic countries of the east. The route was also a trade route, and joined with other routes along the way which served to connect the west with the far east, commercially.

He followed this route to Ray where it continued south-west toward Bagdad. From Ray he followed the route to the northwest which eventually led to the commercial cities on the southern shore of the Black Sea in Asia Minor.

His first destination was the troubled province of his son Miran Shah. He conducted punitive campaigns against the peoples who had revolted against his son’s rule, and replaced Miran Shah with one of his grandsons. And having thus attended to these matters, he moved into Asia Minor in the summer of 1400 and attacked Sivas.

In the meantime Timur and Bayazid I, the ruler of a budding Ottoman dynasty in Western Asia Minor, had decided to be on unfriendly terms. The difficulty was over a couple of enemies of Timur, Sultan Ahmed of Bagdad and Kara Yusuf of Kurdistan, who had sought refuge with Bayazid. Views were exchanged on the subject of the two refugees, and relations, between Timur and Bayazid, grew steadily worse. It was after
relations had deteriorated that Timur decided to move against Bayazid.

After capturing Sivas, Timur moved south from Sivas to conquer Syria, defeat the army of the Mamluks at Aleppo, and then moved on to Damascus, where the leaders of an assembled Egyptian army decided to return to Egypt because of a more pressing need, there, for their presence. The Egyptian army followed.

Next Timur moved to Bagdad via the piedmont route. Baghdad was besieged and fell, and Timur returned to his territory. It was now too late in the season to move against Bayazid in western Asia Minor. He was also awaiting the arrival of the army from Samarkand to assist him against Bayazid.

By this campaign in the Arab Middle East, Timur had isolated Bayazid from his allies, the Syrians, the Egyptians, and Sultan Ahmed of Bagdad. This gave him the freedom to move against western Asia Minor the following summer, without having to worry about his left flank and rear being threatened.

After his campaign into the Arab Middle East, Timur continued his preparations to move against Bayazid.

Geographic, climatic and military considerations help us to understand the problems involved in moving a large force through such a vast and varied area as the one crossed by Timur in his campaign into the Arab Middle East.
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I INTRODUCTION

Timur was born on 8 April 1336 near Kesh in Transoxiana which is located about fifty miles south of Samarkand. The city of Samarkand is now the Capitol of the Uzbek Republic of Soviet Russia. Timur was the son of Terazai, the head of the Barlas tribe of Turks and the great grandson of Karachar Nevian who was commander in chief under Jagatai, the son of Genghis Khan.

After rather unimpressive beginnings, Timur managed to make himself the sole ruler of the area around Samarkand by the year 1369. By 1370, he felt that he was strong enough to begin his first of a series of campaigns which were to continue until his death in 1405. This period is described as thirty-five years of terror by some. In these campaigns he ranged far and wide and in all directions. By so doing, it was inevitable, in his campaigns, that, in many instances, he covered the same ground more than one time.

The purpose of this thesis is to investigate the geographical considerations which were involved in Timur's campaigns into the Middle East. Also, by its preparation, the author hopes to gain a broad experience of the area through this study and the travel required by it.

In this connection it is proper to advance a definition as to what is generally accepted by the term geography as well as a modern definition, by country, as to what comprises the Middle East. First let us define geography.
One definition of geography is "the science or branch of knowledge which treats of the world and its inhabitants, describing more especially the external features of the world...physical geography, which describes the earth's features and explains their relation to each other, treating also of climate, animals, and plants and their distribution; the ocean and its phenomena, & c.; and political geography, which treats of the states and peoples of the earth and their political and social characteristics...".

From this definition it is easy to see that geography has a rather broad application. However we shall be more concerned with the physical aspects of the term.

There are diverse and sundry definitions of the terms Near East and Middle East as well as a number of schools of thought on the two terms. Some prefer to use one term rather than the other. It is not the purpose of this study to enter into this controversy. It should be pointed out that the physical characteristics of the areas have changed very little since the time of Timur although almost all of the states have changed their political boundaries.

The first use of the term Middle East came out of World War II, and was used to designate the Cairo command of the British Army. Before that, people usually referred to the Near East, which meant in a general way the Arabic-speaking areas of the Ottoman Empire, from Egypt to Iraq and

from Syria to the Arabian Peninsula.

The Middle East today usually includes the predominantly Moslem countries, (also Lebanon and Israel) from Morocco to Afghanistan, including Morocco, Algeria, Tunisia, Tripolitania, Egypt, Israel, Jordan, Lebanon, Syria, Iraq, Saudi Arabia, the Yemen, The Aden Protectorate, Oman, Kuwait, Bahrain, Iran and Afghanistan. One may add, if one desires, Pakistan and the Sudan.

The British Government, in defining the Middle East, has included up to twenty-one countries - Malta, Tripolitania, Cyrenaica, Egypt, Cyprus, Lebanon, Syria, Palestine, Transjordan, Iraq, Iran, the shiekhdoms of the Persian Gulf, Saudi Arabia, The Yemen, Aden and the protectorate, Eritrea, Ethiopia, British, French, and Italian Somaliland, and the Sudan.

The United States State Department defines the Middle East as being constituted of the following countries: Lebanon, Syria, Israel, Jordan, Iraq, Egypt, The Sudan, and Saudi Arabia, along with the small shiekhdoms around the Arabian Peninsula.

The above examples will suffice to show the various definitions of the Middle East. The area in which this study is primarily interested is the Arab Middle East which would make the area of interest more closely related to the definition

offered by the United States State Department.

It has been mentioned that Timur ranged far and wide during his period of conquest and reconquest from 1370 to 1405. It might be worth-while to give a summary of his expeditions as an example of the extent and diversity of his wanderings. The following summary of his expeditions is extracted from the Introduction of *Tamerlane or Timur the Great Amir*, translated by J. H. Sanders from *The Arabic Life* by Ahmed Ibn Arabshah.

"A.D."

1370
Invasions of Jat country.

1371-2
Invasions of Khwarizm.

1374
Invasion of Jat country.

1375
Invasion of Khwarizm, Jat country and Kipchak. Timur sets up Toktamish against Urushkan. Timur defeats the army of Urushkan.

1376
Toktamish enthroned at Saganak.

1377
Birth of Shah Rukh, youngest son of Timur. Toktamish defeats Timur Malik of Kipchak. son of Urushkan, and becomes Khan of Kipchak.

1378-9
Conquest of Khwarizm.

1380-1
Conquest of Khorasan.

1382
Conquest of Persia.

1383
Invasion of Jat country and of Sistan. Taking of Kandahar.

1384-5
Conquest of Mazanderan and Sultania.

1386
Conquest of Azarbaijan (incl. Tabriz) and Georgia.

1387

1388-9
Campaigns against Toktamish.

1389
Invasion of the Jat country incl. part of Mongolia.

1391
Invasion of Kipchak. Flight of Toktamish.

1392-3
Invasion of Iran (Persia) to suppress revolts.

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"A.D.

<table>
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<th>Year</th>
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<td>1393-4</td>
<td>Invasion of Iraq. Capture of Bagdad, Avenik, Erzinjan, etc. Invasion of Georgia.</td>
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<td>1395</td>
<td>Defeat of Toktamish in Kipchak. Invasion of parts of Russia: Sharifuddin says that his troops reached the Dnieper and that he himself went to Moscow, and plundered it. Invasion of Kuban (Circassia). Destruction of Astrakhan and Serai.</td>
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<tr>
<td>1396</td>
<td>Conquest in South Persia.</td>
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<tr>
<td>1398-9</td>
<td>Invasion of India. Occupation of Multan, Delhi, Jammu, etc.</td>
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<tr>
<td>1399-1400</td>
<td>Invasion of Georgia.</td>
</tr>
<tr>
<td>1400</td>
<td>Invasion of Rum (Anatolia) and Syria.</td>
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<tr>
<td>1401</td>
<td>Taking of Damascus, Bagdad and other cities.</td>
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<tr>
<td>1403</td>
<td>Death of Bayezid. Expedition in Georgia.</td>
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<tr>
<td>1405</td>
<td>Expedition against China sets out. Death of Timur at Otrar&quot;.</td>
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From the above it can be seen that Timur was often required to lead his armies into areas where he had been previously. It should also be noted that the areas he passed through, at least until he reached Asia Minor, on his principal invasion into the Middle East in 1400 and 1401, had for the most part been subjugated and, for all practical intents and purposes, were part of Timur's Empire. It should also be noted that Timur first invaded Khwarizm, the area lying west and south west of Samarkand as early as 1371-2 and that he conquered it in 1378-9; and again was required to re-conquer it in 1388. This reflects that his early conquests were not conquests for empire.

He conquered Khorasan in 1380-1 and the following year
he had extended his conquests into Persia. By 1385 he had reached out as far as Sultania. By 1386 he had conquered Azarbaijan, with its prize of Tabriz, and had moved on north-west into Georgia. By 1387 his expeditions had resulted in the submission of Erzinjan. In 1392-3 he was again on the march, this time to suppress revolts in Persia, and the following year 1393-4 he was in Iraq and back at Erzinjan and into Georgia. In 1396 he was operating in South Persia. In 1399 and 1400 he was on his way to Georgia headed for Anatolia and Syria. This will serve to show that Timur was, for at least several hundred miles, operating in friendly territory and was attacking out of a large friendly base into enemy territory.

During the summer of 1956 the author travelled through a good portion of the area over which Timur conducted his operations while he was en route to the Middle East. By performing this trip the author gained an appreciation of the terrain and geography of the area in which Timur was operating.

Considerable research has been devoted to the task of discovering the approximate route over which Timur travelled. In cases where evidence is lacking, at least a plausible route is given. In some instances it was impossible for the author to visit some parts of the route due to its being situated in the U.S.S.R. In the chapter dealing with climate it will be necessary to consult other studies, rather than to base the work on personal observation, since climatic data is gathered over a considerable period of time. The section on Military
Considerations is added with the idea of making some comparison with military operations at the time of Timur with those which might be required to operate in this area at the present time.

In reference to the route which Timur followed, sources indicate that he often followed the existing trade routes of his day. These trade routes have been in existence since time immemorial, and usually represent the easiest or safest routes for travel within an area. Trade, at the time of Timur, was conducted over-land along the old silk route which connected the Far East to the Middle East. The Great Khorosan Road, is often mentioned in accounts of Timur's campaigns. This route ran from Bagdad through Persia and on through Timur's capitol at Samarkand, and derives its name from part of the area through which it passes. Its western terminus was Bagdad.

The area which we are considering has always been the meeting ground for East and West. There have been periods when one side has prevailed over the other with the consequent decrease of the activity of the other side. But these periods of lack of activity have been only temporary, and invariably the Middle East reassumed its role of providing an area of interest for the people of the West as well as the people of the East.

There is no lack of examples of the importance of this Middle East. Alexander the Great, The Romans, The Arabs, and The Turks, all seized the area and made it the keystone of

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their empires. Great Britain did the same when she built her
great Empire. Other nations have tried and failed to add this
prize to their empires. Recent examples have been the German
attempts during World War I and II. The reasons why this area
has been sought after so much lies in its geographic position.

From ancient times, until the discovery of the sea
route around South Africa, the Middle East was the area through
which almost all of the products of the Far East reached the
West. Even in Roman times there was a tremendous trade. It
was only after the sea route to the Far East was discovered
that the Middle East became a backwater area, and it remained
so until the opening of the Suez Canal in 1869. Then the area
again assumed importance.

With modern transportation in this air age, which we
enjoy today, the Middle East is becoming even more important.
Time and space relationship make it imperative that not only
the area but the people who inhabit it be known and understood.

The Middle East still serves as a bridge between three
continents as far as land transportation is concerned. In
addition to this strategic consideration the development of
petroleum in this area adds to its importance, not to mention
the fact that it is becoming an area of important foreign
investment for the United States.

The route which Timur followed into the Middle East
came from inside the U.S.S.R. Such a route is still available
to any power in a similar position and with similar desires
for expansion.
Many of us have heard of the "impassable deserts" and "inaccessible" mountains of the area. These will be considered in the text and are in fact among the reasons this subject is so fascinating and challenging.
II THE ROUTE - SAMARKAND TO QARABAGH

From a review of his campaigns we have seen how Timur struck out in all directions; we have seen how, in many instances, he was required to return to an area he had previously conquered to restore order, or to reconquer it. Such campaigns as he conducted were possible because his military power grew. At first he often had only a few followers, but later his armies grew until they were feared throughout western Asia. His early campaigns might well be considered nothing more than raids designed to gain booty, or to preserve the security of his small holdings in the vicinity of Samarkand. As his power grew, and his influence spread, and as his home base became more secure, his campaigns became real campaigns aimed at territorial aggrandizement and all that is included in the meaning of the term "Empire".

In 1388 his authority was challenged in Samarkand for the last time. At that time he was required to return to Samarkand from an expedition, which he was conducting in western Persia, to defend his home base against Toktomish, a prince of the Crimea who later became master of the Golden Horde, and who had invaded his territory of Transoxiana and had burned a palace at Bokhara.

In 1392-3 he was on the march again, having to return

8. Sanders, op. cit. p. xvii
to Persia to suppress revolts which had broken out in the area. Even at this late date his authority was not fully accepted because there were always disturbances in his realm. During this campaign his forces went on to capture Bagdad which was on the fringe of his area of influence at this time. But Bagdad always presented a problem of control and was never firmly within his realm of authority until sometime later.

The ruler of Bagdad at this time was Sultan Ahmed the Jalair, also known as Sultan Ahmed Il-Khan. He was a cruel ruler who was suspicious of everyone. He organized an alliance with the Mamluk Sultan of Egypt, who also controlled Syria, and with Kara Yussuf, chieftain of the Black Sheep Turkomen of Kurdistan. This alliance was designed to protect him from Timur.

At a later time Sultan Ahmed also became allied with Bazayid I who was the fourth ruler of the Ottoman dynasty of Turkey and the great grandson of Othman, the founder of the dynasty. This completed the alliance between Sultan Ahmed, Bayazid, and Kara Yussuf.

By these alliances Sultan Ahmed managed to escape from Timur. He was never captured. When he sought refuge with the Mamluks he managed to return to Bagdad as the governor for Egypt. Later when he fled to Bayazid's protection he was not

10. Sanders, op. cit. p. xvii
surrendered at Timur's demand.

Timur's restless character was such that he could never be satisfied with his accomplishments so long as there was any part of the world which he did not control. As his conquests broadened so did the scope of his ambition. He allowed himself little time between campaigns and always seemed to be compelled to plan another campaign. By 1397 he had conceived the idea of his Indian Campaign and set about the execution of his plans during 1398-1399.

Timur's Campaign into the Arab Middle East seemed preordained, for even while he was still conducting his Indian campaign, the reason to start him on his campaign westward was germinating in the province of his son Miran Shah, the ruler of Azerbaijan Province. He had been inspired to conduct this Indian Campaign, as asserted in the Zafar-nama, ii p 15, by his desire to promote the faith of Islam and to crush idolatry. Also, he was reported to be impatient with the Moslem rulers of India and the tolerance they displayed toward their Hindu subjects. The campaign in India was going very well, Delhi had fallen, the booty was great, and his forces, as usual, were invincible. But, upon receiving the news that all was not as it should be in the realm of his son Miran Shah, he cut his Indian campaign short and returned to Samarkand. He crossed the Indus on this return trip on 8 March 1399, just

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five months and seventeen days after he had crossed it on his way to India. Three weeks later he crossed the Oxus; on 7 April he reached his native town of Kesh and was in Samarkand on 27 April. Lamb says that he returned to Samarkand on 20 May and by 28 May had busied himself with the supervision of the building of a great mosque in Samarkand to commemorate his Indian victory. This mosque was modeled after one he had seen in India, but he was not destined to witness its completion since his presence was demanded elsewhere.

The area which had been the fief of Hulagu, with its capitol at Tabriz, had been placed under the governorship of Timur's son, Miran Shah. Initial reports of Miran Shah's misconduct reached Timur while he was on his Indian Campaign. These reports were to the effect that Miran Shah was courting disaster by his insane vagaries, which were attributed to an injury to his head which he had sustained when he had fallen from a horse. Reports reached Timur of his mad deeds, such as wealth being scattered from the windows of buildings to the mobs in the street below and of drinking bouts being held within the mosques. Miran Shah had given orders to pull down the walls of the hospitals and palaces of Tabriz and Sultania. The body of a celebrated Persian philosopher buried in Sultania was dug up and reinterred in a Jewish cemetery. His name was

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Rashid-ud-Din Fadlu'llah.

To these reports was added the final stroke when Khan Zade, the widow of Timur's oldest son, came to him seeking his justice and protection from Miran Shah who had dishonored her. She had fled from the city of Miran Shah to Samarkand to beg the protection of her lord. She confirmed the destructive acts which Miran Shah had accomplished. It was at this point that Timur determined to set out for Miran Shah's province without delay.

The bad government of Timur's son, Miran Shah, in northwest Persia, had led many chiefs, who had been deposed by the conquerer, to attempt to recover their lost territories. Among these was Ahmed Il-Khan, who succeeded in repossessing himself of Bagdad. Sultan Ahmed's reign started in 784 AH (1382) and continued until his death in 813 AH (1410). He was repeatedly expelled by Timur from 796-807 AH (1393-1404).

Sultan Ahmed heard of this odd behavior and interpreted it as meaning that Timur's power in the area was decaying. So with the help of the Egyptians, he decided that the time was ripe for him to reconquer Bagdad. When Miran Shah heard of this he set off for Bagdad with great haste and reached the city in record time. His mobilization of troops to accomplish

27. Lane-Poole, Stanley, The Mohammedan Dynasties, pp. 246-248.
this march, and to prevent Ahmed from regaining authority, had been rapid and thorough, but by doing this he had practically denuded Western Persia of troops. Naturally, without the forces which represented authority, the local population rose in revolt. The Turkomen rose up in rebellion; the Christian Georgians took advantage of this temporary state of affairs to expel their governors from their cities; and tribes of Bedouins from the Syrian deserts invaded Persia. These events forced Miran Shah to return to Tabriz at top speed.

The state of affairs, as described, was definitely unpalatable to the old conquerer who had only a few months previously returned from India. So again it was his duty to lead his troops on a campaign to a province of his empire to re-establish order. This march was to be the first leg of his great campaign which extended into the Arab Middle East.

After his talk with Khan Zade, Timur "...ordered his officers to prepare at once to ride to Sultania". Browne fixes the date that Timur left Samarkand as 9 September 1399. It would have been logical to send a group of officers and men forward as an advance party and this group would have left Samarkand before Timur.

Lamb describes the entourage of Timur as it was proceeding toward the Arab Middle East.

"at first Timur advanced leisurely, and in state,

Serai Khanum and two other imperial princesses and several grandsons were with him. The great Khorasan Road saw the splendor of the Tartar court". 32

There are few references to the initial part of this campaign. Browne mentions that "At Aywanak, near Ray, he (Timur) was joined by his son Shah-rukh and by another army which he had dispatched by way of Mazandaran". Fortunately there is considerable information available about the Khorasan Road. There seems to be little doubt that Timur travelled, during this part of the trip, over the Khorasan Road. This road was the ancient trade route and ran through the area over which he had to travel to reach his destination.

The Khorasan Road extended from Bagdad to the frontier towns on Jaxartes River on the borders of China, passing through Samarkand. This road had been in existence for centuries and was part of the trade route which connected the Middle East with the Far East.

The Fifth Pillar of Islam requires a Moslem to make a pilgrimage to Mecca once during his life time. Under the Abbasids, when the Moslem empire was at its high water mark, the pilgrimage was made easier by a good system of high roads which radiated from Bagdad. Here the Haj coming from the east could cross the Tigres and continue on toward the Hijaz. This road system had been inherited from an earlier Persian kingdom, and many of the present day post roads crossing Persia, but centering in Teheran, near the older Ray, follow the same track which

32. Lamb, op. cit. p. 568-569.
early Arab geographers have described.

Le Strange gives us the following description of the Khorasan Road:

"The most famous of the trunk roads was the great Khurasan road, which, going east, united the capitol with the frontier towns on the Jazartes on the borders of China. This, too, is perhaps that which of all the roads is best described. Leaving East Bagdad by the Khurasan gate, it went across the plain, passing over numerous streams by well-built bridges, to Hulwan at the foot of the pass leading up to the highlands of Persia. Here it entered the Jibal province and after a steep ascent reached Kirmanshah, the capitol of Kurdistan. Crossing the Jibal province diagonally, northeast, the road passed through Hamadan to Ray. From Ray onwards it went almost due east through Kumis, having the Tabaristan mountains on the left, and the Great Desert on the south, till it entered the province of Khurasan near the town of Bistam. Continuing onwards it came to Nishapur, then to Tus, and on to Marv, beyond which it crossed the desert to the Oxus bank at Amul, thence reaching successively Bukhara and Samarkand in the province of Sughd." 35

This outlines the main points along the main high road which runs to Samarkand from Bagdad. There are two possible alternate routes, which should be outlined before we go into the details of the route for the initial stage of the campaign. Both of these routes are indirectly suggested by Le Strange in the following:

"From Marv a high road followed up the Marv river to Lesser Marv (Marv-ar-Rud), where joining a road coming down from Herat, it went on to Balkh and the eastern frontier lands beyond the Oxus". 36

The route went north east from Mashhad to Sarakhs and then across the waterless Qara Qum, the desert of the Black

34. Le Strange, op. cit. pp. 9-10.
Sands, for 110 miles to Marv. This connects Marv and Mashhad. The other variation of the route is by way of Herat. From Marv-ar-Rud, there was a route to Herat, and from Herat a route ran generally northwest to the vicinity of Mashhad.

From Balkh the route approaches Samarkand from the south instead of from the west, as suggested by the description of the main points along the Khorasan Road. The combination of possible routes are now thru, the one suggested by the Khorasan Road, the Balkh, Marv-ar-Rud, Herat route, and the Balkh, Marv-ar-Rud, Marv, Sarakhs Mashhad route. The possibility of the use of the second and third suggested routes by Timur should not be overlooked.

The route from Marv ran generally south and joined with a route which ran northward from Herat, at Marv-ar-Rud; and from there it ran eastward to Talikan where it split, the north fork went to Balkh by way of Faryab and Shuburkan, and the south fork went to Balkh by way of Maymanah and Anbar. From Balkh the route ran northeast until it reached the River Oxus and crossed near Tirmid. At Tirmid the route ran northwest to Hashimjird, the Iron Gate and Kandak, and from there almost due north to Kesh, Timur's birthplace, and continued on north to Samarkand.

We have evidence that Timur was joined near Ray by two armies, one of which had come from Herat under the command of

his son Shah-Rukh, and another which he had sent there by way of Mazanderan.

Timur's meeting of the army from Herat, near Ray, brings up another question. Did it join Timur, after his arrival, or had it been alerted to proceed him there? It is also possible that if Timur had travelled by way of Herat, using the alternate route mentioned previously, that he would have wanted his son Shah-Rukh and his army to travel with him. This would add to the greatness of his court. Since he met Shah-Rukh near Ray, they probably did not travel there together so it would seem likely that messages were dispatched when Timur decided to move, instructing Shah-Rukh to have his army on hand near Ray upon his fathers' arrival. Therefore, it is doubtful that Timur used that portion of the route through Herat.

Arabshah does not throw any exact light on the problem of selecting which of the initial routes Timur may have followed:

"Then leaving Samarkand, he hastened to Syria, taking with him the leaders of the army of India and its chief ministers and the Sultan and its Princes and the elephants of its Sultan, and delighted with that great company, journeyed in the beginning of the year 802 (AD 1399) and poured with that deluge from the Oxus into Khorasan..." 39

The province of Khorasan in old Persian means the Eastern Land. In the early middle-ages the name was applied to the Moslem provinces east of the Great Desert as far as the frontier of the Indian mountains. Later (probably by Timur's

time) the boundaries extended only as far as the Oxus River on the northeast but still included all the highlands beyond Herat, in what is now north-western Afghanistan.

Since the Oxus was the boundary between Persia and Transoxiana, any point at which the Oxus bordered Khorasan this "deluge" could have poured into Khorasan.

The alternate routes mentioned above are also mentioned by Le Strange:

"One stage beyond Naysabur at Kasr-ar-Rih or Dizbad (Castle of the Wind) the Khurasan road bifurcated. To the right, southeast, the way went down to Herat... From the Castle of the Wind, turning left and northeast, the road went to Mashhad and Tus, and from here to Mazdaran to Sarakhs, at the crossing of the Tajand river. From Sarakhs the desert was crossed to Great Marv, and thence by the desert again the road reached the Oxus bank at Amul, (or Chahar-Juy), whence, after leaving Khurasan, Bukhara was the terminus. This stretch of the Khurasan road from Naysabur to Amul of the Oxus passage is given with but slight variations by nearly all the Itineraries, and most of its stages still exist at the present day under the old names". 41

There were side roads at Sarakhs and Marv which lead to Marv-ar-Rud where the route from Herat went on to Balkh and continued on and crossed the Oxus to Tirmidh.

"From Sarakhs, and from Great Marv, respectively, two roads converged on Marv-ar-Rud, the first crossing the desert between the two great rivers, the last coming up the Marghab through the fertile lands and towns on its bank. The desert route, passing by a number of successive Rubats, or guardhouses...

"From Marv-ar-Rud to Balkh, through the Juzjan district, the earlier itineraries give the road by Talikan and thence on, either by Faryab and Shaburkan, or by Yahudiyyah (Maymanah) and Anbar, to Balkh...From Balkh the Oxus was reached opposite Tirmidh in two

40. Le Strange, The Lands, p. 382.
stages, passing through Siyahjird." 42

We have mentioned that the great Khurosan Road crossed the Oxus at Amul. From there it proceeded to Firabr, and on by way of Baykand and through the gate in the Great Wall to Bokhara. From Bokhara the road went up the left bank of the Sughd river to Samarkand.

The road which passed from Khurasan to Balkh crossed the Oxus to Tirmidh.

"Northwest from Tirmidh another road went up to the Iron Gate, and at Kandak, one stage beyond this, bifurcated. Running due north, the road on the right hand went by Kish, and thence on to Samarkand..." 44

The route which Timur probably followed was the main route which runs westward from Samarkand to Bokhara. In 1863 Arminius Vamberry, a member of the Hungarian Academy of Pesth, made a trip over this part of the road. He mentions milestones, which existed at that time, which were attributed to Timur. He leaves us stages for cart travel for that time which probably had not changed since the time of Timur. Vamberry travelled from Bokhara to Samarkand. Here are the stages reversed from Samarkand to Bokhara.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Parasangs</th>
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</thead>
<tbody>
<tr>
<td>Samarkand</td>
<td>Daul</td>
<td>4</td>
</tr>
<tr>
<td>Daul</td>
<td>Kette Kurgan</td>
<td>6</td>
</tr>
<tr>
<td>Kette Kurgan</td>
<td>Mir</td>
<td>5</td>
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</tbody>
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42. Ibid., p. 432.
43. Ibid., p. 472
44. Ibid., p. 472
<table>
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<tr>
<th>From</th>
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<th>Parasangs</th>
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<tbody>
<tr>
<td>Mir</td>
<td>Kermine</td>
<td>6</td>
</tr>
<tr>
<td>Kermine</td>
<td>Mezar</td>
<td>6</td>
</tr>
<tr>
<td>Mezar</td>
<td>Bokhara</td>
<td><strong>Total</strong> 5/32</td>
</tr>
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Vambery gives us an idea of the amount of time required to travel the distance by various means.

"This journey is performed by two wheeled loaded carts in six days. Mounted on a good horse, one may accomplish it in three: The couriers take but two days, but they travel night and day." 47

The above description gives us an example of travel by a slow means, one by a normal means and one by perhaps the fastest means available at that time. This gives us a basis by which we can judge the speed of movement within this area.

From Bokhara, Marv may be reached by travelling south west to Chardjuy. From here there are two routes leading to Marv and a third may be reached by travelling southeast down the Oxus to a point called Kutnam. These three parallel routes are mentioned in Vambery.

"The traveler must here (Bokhara) go to Tchardjuy, from which city there are three different routes.

(a) By Rafatak. There is one well, and its distance is 45 farszakhs. (parasangs)

(b) By Utchkadji. Two wells, and a distance of 40 farszakhs. (parasangs)

(c) By Yolkuyu. This is the route most to the east, the distance is 50 farszakhs." 48 (parasangs) 49

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49. Parasang is 3 3/4 miles.
Timur may have used one, two, or all three of these routes to go from Bokhara to Marv.

The number of routes which he used, no doubt, depended on the size of his party, and the speed with which they wished to cross this particular area. It would seem logical to split a large group into smaller parties, to converge on Marv, by separate routes, if for no other consideration than water. Also, smaller groups moving in parallel columns can travel faster than one long column.

From Marv the route continues to the southwest to a point on the present Iranian-Russian border which is known as Sarakhs. The straight line distance between Marv and Sarakhs, by map measurement appears to be about 75 miles or 20 Parasangs or approximately 120 kilometers. Le Strange describes the area over which the road crossed, between Sarakhs and the Oxus as being desert:

"From Sarakhs the desert was crossed to Great Marv, and thence by the desert again the road reached the Oxus bank at Amul".

From Sarakhs the road runs generally southwest passing through the villages of Shuraq and Mazdaran and continues until it crosses the Mashhad River, (Kashuf) and follows up the valley of the Mashhad River to Mashhad. The ancient route ran directly to the ancient city of Tus from Mazdaran and then back to the southeast to Mashhad. The distance over the route from Mashhad to Sarakhs is 192 kilometers.

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50. Le Strange, The Lands, p. 431.
51. Map, Iran, 1:250,000, 1955. All distances given for Iran are based on this map.
From Mashhad the route went south to a point known as Dih Bad and then slightly north-west to Nishapur. The present route for the post road goes south from Mashhad to a point called Sharifabad which is near Dih Bad and then follows on to Nishapur. The distance over the present route from Mashhad to Nishapur is 137 kilometers. From Nishapur to Bistam there were two routes, a northern route, and a southern route, for the Khorasan road. The northern road runs northwest from Nishapur to the plain of the Juvayn river and follows the plain by way of Azadvar to Jajarm and to Bistam. This was known as the caravan route, and was shorter than the southern route. The present road follows this route from Nishapur to Salmanbad and then follows a more southerly route. However, the new railroad, under construction between Teheran and Mashhad, follows the caravan route very closely in this area.

The other route was the southern route, and the present road follows it in part. The ancient route ran due west from Nishapur to Sabsevar, while the present road runs northwest to Salmanbad and then cuts back to the southwest to Sabsevar.

From Sabsevar the present route follows rather closely the ancient southern route, and reaches the vicinity of Bistam near the present town of Shahrud. The general direction of the route is almost due West. The distance over the present road from Nishapur to Shahrud is 254 kilometers.

At Shahrud, near ancient Bistam, the two routes come

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together again. The present day road closely follows the caravan route from this point on until the Teheran area is reached. The new railroad which is being laid from Teheran to Mashhad closely follows the old caravan route. The railroad requires more gentle slopes than the animals of the caravan and for that reason the railroad avoids some of the foothills over which the caravan route passed.

From Shahrud the route heads south-west passing through Damghan and continues on to Semnan. The distance from Shahrud to Semnan is 182 kilometers. By the railroad route, which lies slightly south of the caravan route, the distance is slightly greater.

From Semnan the route continues south-west. The railroad parallels the road for about two thirds of the way to Teheran, then each proceeds to Teheran by separate ways. From Semnan the ancient route went southwest to a point called Khuvar and then headed north-west to the old city of Ray. The railroad seems to follow this same route. The present day road leaves the railroad in the vicinity of Eyvankeye and heads north-west to the modern city of Teheran, located just north-west of the ancient site of the city of Ray. The present day distances from Semnan to Teheran is 218 kilometers.

From Ray the route ran northwest to a point just south of the present day city of Kazvin. The point was known as Sumghan but it does not show on present day maps. From this point the route went west to a point called Farsinjan and then northwest to Abhar which still is to be found on present day maps.
From Abhar the route continued on to Sultania which lies to the north-west and is just off of the present day road through this area. The town of Sultania was founded by the Arghun Khan and was completed by Uljaytu Sultan in 1305 and became the capitol city of the Il-Khan dynasty.\footnote{Ibid, p. 222.}

Zanjan lies on the high road west of Kazvin and has been well known since ancient times. It is located about 50 miles northwest of Abhar, and is on the Zanjan river which flows west to the Safid Rud. This town lay on the high road to Azerbaijan. From Teheran to Zanjan the road distance is 314 kilometers. At Zanjan there was a road which ran off the high road in a northerly direction. This road ran north by way of Khunaj and Khalkhal to Ardabil. (This part of the road does not show on modern maps). From Ardabil it continued on north to Barzand and Bajarvan and across the Araxes River into what is now the U.S.S.R., to Baylakan and then to Bardhaah where it ran northwest parallel to the Kur River to Tiflis.

This route may have been the route that Timur used to reach his favorite wintering spot when he was in this area, the Qarabagh Valley.

The other route from Zanjan continued on to the northwest crossing the Safid Rud or White River, and the Hasht Rud near Miyanj (the present day Mianeh) and continued on to the northwest by Ujan to Tabriz. The road distance from Teheran to Tabriz is 628 kilometers, Zanjan being the half-way point.
This is the route then that Timur followed on the first leg of his campaign into the Middle East. The reason for his coming was to undo the damage to his empire which his son, Miran Shah, had allowed to be done. It is uncertain whether this phase of the journey ended in Sultania, Tabriz, or the Qarabagh Valley. The details of the fate of Miran Shah only tend to add to the confusion. Prawdin mentions Tabriz:

"When he (Timur) reached Tabriz, Miran Shah appeared before him with a rope around his neck as a greeting, and wished to be informed of his sentence. All the emirs and officers found excuses for Miran Shah...he did not inflict the death penalty, as he had at first intended". 54

Lamb would have us believe that the first phase of the march led to Sultania:

"There, (Sultania) after he had investigated the havoc wrought by Miran Shah he condemned his son to death. The high amirs intervened - even those who had suffered at the hand of this wayward prince. Miran Shah was brought before his father, a rope around his neck."  
"And Timur consented to let him live; but all authority was taken from him. Broken in spirit, a shadow without power, he was compelled to remain in this province where others now ruled." 55

Brown says: "At Aywanak, near Ray, he (Timur) was joined by his son Shah-rukh and by another army which he had dispatched by way of Mazandaran. Miran Shah was induced to come to his fathers' camp to render account of his misconduct, which included the waste or embezzlement of a large proportion of the revenues, the putting to death on mere suspicion of certain men of consequence against whom he had conceived a spite, the wanton destruction of certain historic building, and the exhumation of the eminent Minister and historian Rashidu'd-Din Fadlu'llah, whose body he re-interred in the Jews' cemetery. Miran Shah was punished by his fathers' displeasure and the virtual transference of

the authority he had misused to his son Abu Bakr."

It would seem logical that Timur would want to personally investigate the mis-deeds attributed to his son before taking any action against him, therefore it is safe to assume that Timur went directly to the points where the most destruction was alleged to have happened, i.e. Sultania and Tabriz.

There is one other consideration which should be expounded upon during the treatment of this first phase of the campaign. The basis for this is a statement from Arabshah:

"And he came on the seventeenth day of the first month Rabi’ in the year 802 (1399) to Qarabagh, where he made his riding camels halt and gave rest to his beasts of burden and occupied the territories of Azerbaijan and put to death those dangerous men and evildoers, but did not harm Amiranshah, his own son, whom he had himself reared; and complex affairs passed between the two, which none but Allah can unfold". 57

This would seem to indicate that Timur went to Qarabagh first and then down into Azerbaijan to deal with Miran Shah and his friends.

Arabshah mentions a letter which Miran Shah supposedly wrote to his father while Timur was on his Indian campaign. This letter was received by Timur while he was in India and called upon him to prepare to meet his God, to turn over the reigns of government to his sons and grandsons, and restrain himself from laying waste to the earth, and the writer promised to teach the old conqueror to "walk right". Arabshah says that

57. Sanders, op. cit. p. 105.
59. Ibid., p. 105.
when Timur received this letter, he started for Tabriz. We know that there were other reports about Miran Shah which reached Timur after he returned to Samarkand from India.

It is possible that he travelled as far as Sultania on his way to Tabriz, and witnessed the destruction there, and, as Lamb purports, condemned Miran Shah to death. He then could have travelled on to Zanjan and headed northward through Ardabil, Barzand, Bajarvan, across the Araxes River into the Qarabagh plain where he rested his men and animals before moving down into Aberbaijan province, as seems to be suggested by Arabshah. Or he could have proceeded to Sultania and Tabriz as Lamb and Prawdin suggest, and then moved on to the Qarabagh Valley for the winter.

The route to Tabriz from the Qarabagh would probably be up the Araxes to a point north of Tabriz, and then south to Tabriz. Or Tabriz could be reached from Qarabagh by going south-east to Ardabil and then moving west along the high road connecting Ardabil and Tabriz.

This, then, covers the first phase of Timur's campaign into the Middle East. Whether Timur went to Tabriz first before he went into winter quarters or went into winter quarters first and then went to Tabriz to investigate what his son had done, is very difficult to determine from the source material available. We are certain, however, that he wintered at Qarabagh. It would seem that a father, anxious to investigate allegations

60. Ibid, p. 105
against his son, would hasten to the scene of the crime directly, i.e. Sultania and Tabriz. So Timur probably proceeded to Sultania and Tabriz before going to Qarabagh.
III THE ROUTE - QARABAGH TO THE ARAB MIDDLE EAST

The winter of 1399-1400 was spent by Timur and his followers in the Qarabagh Plains area near the Araxes River. In the spring of 1402, Henry III of Castile sent two envoys to the Levant to report on what was going on there. They met Timur outside Angora. Timur sent an envoy with them when they returned to King Henry. The next year, 1403, the Clavijo embassy was sent to Timur. Timur's envoy accompanied it. This mission lasted from 1403 until 1406 and during that time Clavijo travelled from Spain to Samarkand and back again. His description of Timur and his court, the events of the time, and of various places along his route, is most enlightening. Clavijo mentions the Qarabagh Plains as a wintering place:

"There are certain immense plains providing excellent pasture during that season (winter) for the climate there is very mild, snow seldom falling or should it do so melting rapidly". 62

These plains are located between the Araxes River and the Kur River west of the point where the two rivers join before emptying into the Caspian Sea. A point location in the area is given by Clavijo:

"As has been said it had been the custom aforetime for Timur himself to come to these plains, where he would establish his winter quarters, and indeed he had but lately ordered a city (called Baylagan) to be built here, where already there was in residence a population of 20,000 settled folk". 63

62. Le Strange, Clavijo, p. 309.
63. Ibid, p. 312.
The city mentioned appears to be in the vicinity of the modern city of Agdam on present day maps, and gives us a point of reference within the area. Le Strange says that no trace of the city exists in modern times. Clavijo, on his return trip from Samarkand, had occasion to travel to the Qarabagh Plains from Tabriz. His description of this part of his trip is worthwhile to help us locate this area in relation to Tabriz and other points which are important in considering the second phase of the route:

"On Thursday the 19th of March therefore we sat out, and after crossing several high ranges of mountains lying to the north of Tabriz came to a valley that was full of orchards, and many villages, with rich vineyards; for the climate here was mild and fruit is grown in great abundance. Across this valley runs the great river Aras (Araxes). Our journey onward through the lands of these villages with their orchards lasted for four whole days, and at the end of this time we came to the great plains...all over these plains the nomads who form the Horde of Prince Omar were encamped in tents with their herds". 65

So the Qarabagh Plain is the starting point for the second phase of Timur's campaign into the Arab Middle East.

There is also a distinct possibility that Tabriz, as well as the Qarabagh plain, was one of the starting points for phase two of the campaign into the Middle East. Both Lamb and Prawdin mention Tabriz. Lamb mentions that while Timur was moving along the great Khorasan Road, his officers were making the city of Tabriz into a base for operations in the west and making the plains of Qarabagh into a remount station for the

64. Le Strange, The Lands, p. 178
65. Ibid, pp. 310-311.
herds of horses which would be needed.

Prawdin mentions that when Timur had returned to western Asia to restore order in Miran Shah's area he had occasion to move "westward from Tabriz". At the news of this movement Sultan Ahmed of Bagdad, as well as Kara Yussuf of Kurdistan, fled in terror, seeking protection from Bayazid. Timur demanded their surrender, only to be rebuked by Bayazid. Their flight to Bayazid was the beginning of the formation of an alliance which was to bind Mesopotamia, Syria, and Egypt with Bayazid's Turks against Timur.

So now we are able to see the possibility of two starting places for the second phase of the campaign. We shall investigate each one of them.

Arabshah mentions that Timur went to Qarabagh and then descended upon the territories of Azerbaijan and put to death the evil companions of Miranshaw. In reference to Georgia he said:

"Then, setting out with that army, on the second day of the latter month of Jumadi, which was the fifth day of the week, he took the city of Tiflis and advancing to the countries of the Karj (Georgia) laid waste whatever forts and towers he took and drove the people to castles and defended forts and slew all without distinction, who submitted, as well as those who resisted, and cut off their heads and forlocks". 70

2 Jumada II would be 30 January 1400.

Browne says that with the Spring melting of the snow

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68. Ibid, p. 490.
69. Sanders, op. cit. p. 105.
70. Ibid, p. 105-106.
Timur once more invaded Georgia, devastating the country, destroying churches and monastaries, and slaying great numbers of people.  

72 Lamb says that Timur sent separate divisions against the Georgians in the Caucasus. The Christian armies were shattered after the Tartars cut roads through the defiles to reach them. The country was laid waste, churches were burned, and vineyards were uprooted. No quarter was given; Timur wanted this campaign to be decisive.

This campaign into Georgia was a rapid lightening-like thrust which lasted only a short time. Its primary effect was to pacify the area which had risen up against Miran Shah and at the same time dispel any ideas which the populace might have about future uprisings. Another purpose was to secure Timur's right flank and rear for his future campaign into Asia Minor.

73 Arabshah gives the date of the starting of the campaign against Georgia as the second day of the latter month of Jumada, 30 January 1400. By the twenty-eighth day of Rajab, 25 March 1400, the troops had turned toward Bagdad, causing Sultan Ahmed to flee to Kara Yussuf.

After a while Sultan Ahmed and Kara Yussuf returned to Bagdad thinking that Timur was still in Georgia. But they were wrong, and soon they learned that he was advancing again so they turned and fled to Rum.

72. Lamb, op. cit. p. 570.
73. Sanders, op. cit. p. 106.
74. Ibid, p. 106.
At an earlier date Taharten, the governor of Erzinjan, came to Azerbaijan and submitted to the protection of Timur. The territories of Erzinjan bordered on the territories of the Turk, Bayazid. Bayazid had agreed to become the protector of Sivas and brought troops there and set up his son, Amir Suliman, as ruler of the territory of Sivas. Bayazid then proceeded to Erzinjan, which was under Timur's protection. At the prospect of his approach, Taharten fled Erzinjan and went to Timur. Bayazid captured the wealth and treasures of Taharten, distributed it among his followers, and returned to Istanbul.

What Bayazid desired most of all in the territory of Taharten was the fortress Camag (Kamakh), located southwest of Erzinjan on the banks of the western Euphrates, but Taharten had applied to Timur for protection and Timur had accepted his submission. So when Bayazid wanted Taharten to surrender the fort to him, he refused to do so, and applied to Timur for assistance. Timur dispatched an envoy to Bayazid informing him that Taharten was his vassal and that he could not allow any dishonor to be done to him.

This was the beginning of the relations between Timur and Bayazid. There are many accounts of what resulted but, at this point, what is important is that relations between the two deteriorated to the point that Timur eventually moved against Bayazid. Another factor, of course, was Timur's desire to

75. Ibid, p. 88.
76. Ibid, p. 115.
77. Le Strange, Clavijo, pp. 131-132.
obtain delivery of Kara Yussuf and Sultan Ahmed of Bagdad who had fled to Bayazid.

Clavijo, who wrote only a few years after the time in question, leads us to believe that the campaign into Asia Minor started from the Qarabagh Plains. Referring to the correspondence which had been going on between Timur and Bayazid, in which Bayazid kept goading the old conqueror, he says:

"On receiving this message Timur determined to give the Sultan a proof of his power in war. He immediately took his departure from the Qarabagh lands where he had been resting in winter quarters, namely in those famous plains which lie (on the north-western frontiers) of Persia, and marched at the head of his army to the city of Arzinjan". 78

This would suggest that Timur moved directly from Qarabagh to the southwest into the territories of Erzinjan. Browne gives the names of points along Timur's route. After completing his campaign against Georgia, Timur began his march in August into Asia Minor by way of Avnik, Erzerum, and Erzinjan to Sivas.

In reference to Timur's campaign against Bayazid, in 1402, Clavijo has this to say:

"He (Timur) marched out from Persia invading the Sultan's country, taking the same road along which he passed on the previous campaign namely through the Arzinjan lands to the city of Sivas". 80

We know that Timur returned to Qarabagh after his campaign into Syria and Iraq, so he probably moved over the same route, that he used to reach Sivas earlier, since he was familiar with the route.

78. Le Strange, Clavijo, p. 132.
80. Le Strange, Clavijo, p. 135.
Prawdin says that Timur had just finished laying waste to Georgia and Armenia as punishment for their revolt against Miran Shah when he moved on Sivas.

This would suggest that Timur had moved down out of Georgia into Armenia and then headed west. It might well suggest also, that Timur had sent separate units into Georgia from Qarabagh. At the same time he may have dispatched units from the vicinity of Tabriz into Armenia, or from Qarabagh by a different route. The units from Georgia could have met the units in Armenia and then proceeded westward together along the route by way of the Erzerum Valley.

Lamb relates that as soon as the snows melted, Timur's main divisions were on the march into Asia Minor by way of the Erzerum Valley, and by mid summer of 1400 he had conquered all the towns and cities as far west as Sivas. This would allow troops to come from Qarabagh up the Araxes, from Georgia, and from the Tabriz area into the Erzerum Valley.

Eversley agrees with Prawdin in that he says that Timur decided in 1400 to attack Asia Minor from Armenia. He goes on to say that historians estimate Timur's horde as totaling not less than 800,000 armed men.

All this seems to substantiate the fact that Timur entered Asia Minor by way of the Erzerum Valley. It would be logical to send a campaign into Georgia to secure that area.

82. Lamb, op. cit. p. 570.
against future contingencies. The units in Armenia may well have been advance units preceeding the main force.

There is a possibility which should be considered if a force moved from Tabriz, and that is the route westward from Tabriz into Asia Minor. This route is mentioned by Le Strange. The roads which constituted this route had been established by the Mongol Il Khans and were still in existence during Timur's time. These roads could have been used by Timur in a westward movement from Tabriz. Le Strange says:

"From Tabriz Mustawfi likewise gives the road on to Arjish on the Lake of Van, whence bearing away from the left road along the lake shore to Khalat, he rec-ords the distance going northwest to Malasjird, and on by Arzan-ar-Rum (Erzerum) through Arzinjan to Sivas, the capitol of the Saljuk province of Rum." 34

The route to which Le Strange refers is the old caravan route which runs from Tabriz to Khroi and then west and north around Lake Van and then up to Erzerum. There is no road across the Turkish border west of Khroy today. Maps show only a trail in this area.

The route which Clavijo used to reach Tabriz is also worth mentioning as a possible route. The lack of detail seems to lie in the route which Timur used to reach Erzerum and from where he started. The sources available are not detailed to the extent to give this information beyond doubt.

Clavijo left Erzerum on Thursday and slept that night at Partir Javan (Hasan Qal'ah). On Friday they reached Ischu where they rested until Sunday. On Sunday they reached Delilarkent

34. Le Strange, The Lands, pp. 230-231.
(Deli Baba). Clavijo mentions that when Timur passed through this place he stayed with the Chief Dervish. They left Deli-larkent on Monday and camped that night on the banks of the Araxes River. On Tuesday they reached Nau Jay, travelling along the Araxes and then on to the area of Surmari, the ancient Surmari. (About 40 miles west of Mount Ararat) on Thursday. Clavijo mentions that the whole country was at peace under the rule and government of Timur. They left Surmari on Friday and went to the castle of Igdir which was at the foot of Ararat, and continued on Saturday to the castle called Bayazid. Clavijo mentions that Bayazid had been besieged by Timur six years earlier, but the Lord of the castle came to terms with Timur and paid him tribute. On Sunday, 1 June, the group arrived at Maku. Clavijo mentioned that Timur in the past had besieged the castle at Maku, was unable to capture it, but came to terms with the lord who was to supply him with twenty horsemen upon call. Then on Monday, 2 June, they left Maku and spent the night in the open, and the next night slept at an encampment of some Chagatay Tartars who were pasturing their flocks. Again on Wednesday they slept at the camps of another group of Tartars. And on Thursday, 5 June, they arrived at Khroy. Leaving Khroy at noon on Sunday, 8 June, they camped along the way and came by way of Tassuj near Lake Urumeyiah and went on to Kuzah Kunan for the night. The following day they went by Chauscad and slept in the open, reaching Tabriz on Wednesday, 11 June.

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85. Le Strange, Clavijo, pp. 139-151.
This route, or a variation of it, could have been to move into Asia Minor from Tabriz. The route today, which runs from Tabriz to Maku, might well have been used to move into Asia Minor. This route goes by way of Marand and Khroy to Maku, and from Maku northwest by way of Diyadin, Karakose, the vicinity of Avnik to the Araxes and then west into Erzerum.

This route might well have been used by Timur to reach the Erzerum Valley. Now we should consider the route from the Qarabagh Plains area to Erzerum.

We have previously located the Qarabagh Plain. This area is located in present day Soviet Azerbaijan between the rivers Kur and Araxes. Based on the description of the Araxes Valley by Clavijo it is easy to see that this valley should provide a good route. We also mentioned that Timur sent units into Georgia. The route these units took was probably up the Kur River to Tiflis and then, assuming that they linked up with other units in eastern Asia Minor, south through the mountains to a point near the present city of Kirovakan and then west and south to Kars and on southwest to the Erzerum area.

That Timur was in the vicinity of Kars in the summer of 1400 is confirmed by the Encyclopedia of Islam. He came there after his attack on Tiflis in the spring of 1400, and rested in the summer quarters known as Min-gol ("1000 Lakes") near Kars.

Timur's main army probably moved up the Araxes River from the Qarabagh Plains. A map study of this area would indicate

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that this would be a logical route to move westward. The lay of the land indicates a gradual increase in altitude, but no real barriers. It is known that the Caspian Sea lies below sea level, in fact 92 feet below sea level, as of 1955. Probably at Timur's time it was well below sea level, but probably not so low as at present. The slope of the land is toward the Caspian Sea.

There are a number of points on the eastern Qarabagh plain having low elevations above sea level. So the route would follow up the Araxes River from these relatively low elevations, gradually gaining altitude as it went westward.

The route would follow the Araxes Valley into the province of Nakhichevan where a bridge existed across the river. The location of the bridge is not precise, but it was probably in the vicinity of Julfa. The bridge is mentioned by Malcolm in reference to Timur's first campaign against Georgia. Timur crossed into Georgia after having conquered Tabriz, and the easiest route northward is along the Tabriz – Julfa route. The bridge was known as "the bridge of Zeal-ul-Mulk".

If the river were crossed at Julfa the valley of the river could be followed up stream until the wide valley which leads toward Maku is reached. Eastern Turkey may be reached via Maku. After crossing over a ridge west of Maku, the route follows a broad valley which runs along the lower reaches of

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87. Map, Iran, 1:250,000, 1955.
Mount Ararat. This well-watered valley is a natural passageway into this area. The route then follows on by way of Avnik up to the Araxes and then westward to Erzerum. From the Iranian borders to Erzerum the present day road distance is 318 Kilometers. From the lower Qarabagh Valley up the Araxes Valley to the Turkish Border the distance is about 300 Kilometers.

From Erzerum on the route which Timur travelled is fairly well documented by point. We are told that he went from Erzerum to Erzinjan to Sivas. The old caravan route ran west from Erzerum for a while paralleling the western branch of the Euphrates River. Then the route left the river and went slightly southwest while the river continues on west and then turns almost due south. The route crosses the river and then generally follows its course all the way to Erzinjan. It is doubtful that a route following the river would have been possible since in many areas the river has cut deep gorges which are difficult to cross and difficult for a large body of troops to move through. Therefore, it is safer to assume that Timur again followed the established route.

The old caravan route ran west and north from Erzinjan through high mountains and over winding roads to the Kalkit Valley and then follows this valley to a point north of Zara and then cuts back over the mountains to Zara. From Zara the route followed the Kizil or Halys River Valley down to Sivas. The present day road distance from Erzinjan to Sivas is 299

89. Road distances are based on the Turkey Highway Map, 1953.
kilometers.

Timur arrived at Sivas on the seventeenth day of Zulhaja 802, or A.D. 9 August 1400. Timur is reported to have said that he would storm the city on the eighteenth day. Fischel gives us the date of the fall of Sivas as 15 Muharram 803, or A.D. 7 September 1400, and mentions that already the Syrians were sending warnings to Cairo. The city of Sivas held out only eighteen days, and after the city had been taken Timur ordered its fortifications repaired.

Next Timur turned south. He was not disposed, at this time, to move on west to engage Bayazid, who had raised his siege on Constantinople, and was moving into Asia Minor. To do so would have left his rear and left flank exposed to an attack from Syria. So at this time he moved south to dispose of this threat before it became a reality. He, no doubt, left a garrison at Sivas to protect his rear right flank when he turned to the south.

The route from Sivas to Malatiya, located to the southeast, followed the lowlands south of Sivas and then crossed over the mountains and followed the streams and valleys down to the broader valley which lies north of Malatiya, and from there on into the city. The present day road distance from Sivas to Malatiya is 234 kilometers. Timur moved down to Malatiya by

94. Lamb, op. cit. p. 570.
forced marches and surprised the city, arriving almost in time to catch the Turkish governor. Malatiya held out less than twenty-four hours and after conquering it, Timur moved toward Syria by forced marches.

The following tends to confirm that Timur moved toward Syria, but not by forced marches.

"But Timur came to Bahasna, and laid waste utterly the surrounding country and took the fort after a siege of twenty three days...Then he crushed the city of Malatia and destroyed it and razed its hills. Then he advanced to the fort of Arrum,...and he halted there one day, but did not take Arrum...Then that cloud came to Aintab..."  

It would seem that if Timur had moved by forced marches he would have taken a more direct route. The Arrum which is referred to here was the Ar-Ruha of the Arabs, and the Urfa of today.

The locations of the points are sufficient to lead us to believe that Timur moved by a more direct route. Bahasna is located south of Malatiya and it would seem logical that he should reach Malatiya before attacking Bahasna. It would be a rather direct route from Malatiya to Bahasna, to Aintab; but to go to Urfa seems to take one out of the way, not to mention the fact that two crossings of the Euphrates River are involved.

Timur was concerned about what Bayazid might do. So it would seem logical to attempt to conquer Syria rapidly. We have said previously that Sivas fell on 7 September. No dates are available for Timur's arrival at, and departure from, the other

96. Lamb, op. cit. pp. 570-571.
points along the route until Aintab.

We can arrive at the date Timur departed Aintab, and the date of his arrival outside Aleppo, from the following:

"Then Timur moved his troops and arrived on the seventh day at Haleb from Aintab and halted with that army, on the ninth day of the first month Rabia, the fifth day of the week; ..." 100

Timur, then, spent seven days enroute from Aintab to Aleppo, which would mean that he left Aintab on 2 Rabi\textsuperscript{1} or 21 October 1400. His arrival outside Aleppo fell on 9 Rabi\textsuperscript{4} or 28 October.

According to the dates mentioned above there is sufficient time for Timur to have moved to all of the places mentioned and to have arrived at Aintab and Aleppo on the dates given. This is arrived at by allowing that he was able to move his army 25 to 30 miles each day and allowing a day to cross the Euphrates going to and returning from Urfa.

From Aintab the route was probably directly south down the valley of the Karanlik Dere to Aleppo. This distance is about 100 kilometers. It was at this point that he slowed his movement, for he spent 7 days for this portion of the movement.

Timur arrived at Aleppo from Aintab on the ninth day of the first month of Rabi\textsuperscript{1}. He defeated the Syrian Army at Aleppo (Safar, 803 A.H., October 1400 A.D.) Arabshah, quoting from the Chronicle of Ibn-al-Shihmah, gives the date of the fall of the city of Aleppo as 11 Rabi\textsuperscript{1}, or 30 October. The notables of the

100. Sanders, op. cit. p. 123.
101. Ibid., p. 123.
103. Sanders, op. cit. p. 127.
city took refuge in the Citadel, but Timur took the fort on 14 Rabi’ or 2 November 1400.

Some confusion exists as to the date Timur left Aleppo. Arabshah, quoting Ibn-al-Shihnah, said: "And on the first day of the second month Rabia, he left the city, making for Damascus". 1 Rabî’ II would have been 19 November 1400 A.D.

In another place Arabshah says:

"Then Timur, after completing the business of Haleb, collected baggage and the other goods and booty, which he had taken there, which he placed in the fort and entrusted to an Amir that had valor and courage, namely Amir Musa... and set out with that swelling sea of troops on the tenth of the second month Rabia to Syria and reached Hama, plundering whatever came to his hand, but he cared little about booty and prisoners and about advancing quickly, but marched slowly, for he was devising cunning". 105

10 Rabi’ II would have been 28 November 1400 A.D.

So we have two dates as to when he left Aleppo. And we also have the next portion of his route included. There is an inscription in the mosque in Hama to the effect that, "we pitched our camp at Hama on the twentieth of the second month Rabia in the year 803", (8 December 1400 A.D.) So we can assume that it took Timur ten or twenty days to march from Haleb to Hama, dependant on which reference we accept. Fischel mentions that Timur spent twenty days at Hama. From Hama, Timur marched to Homs, which he did not destroy. Then he continued his march to Baalbek, where the people came out and begged for peace, but he

104. Ibid, p. 131.
scorned their requests, plundering and slaughtering them.

Timur left Baalbek on 3 Jumāda I, 803 AH or 20 December 1400 A.D. We have evidence that a clash occurred, between advance units of Timur's force and the advance units of Sultan Faraj in the vicinity of Damascus, on 25 December 1400. Therefore, we know that Timur's forces had reached the Damascus area by this time.

The points of the route from Aleppo to Damascus allow us to know how Timur reached Damascus. He travelled across the plains south of Aleppo via Hama and Homs, then up the Bekaa Valley past Baalbek and continued on to a point west of Damascus, where he crossed the Anti Lebanon Mountains and came down in the vicinity of Damascus. The road distance today over approximately the same route is 199 kilometers from Aleppo to Homs, and from Homs to Baalbek 100 kilometers. From Baalbek to Damascus by the most direct road route is 96 kilometers.

Timur engaged the Egyptian Army south of Damascus. The Egyptian Sultan fled, and Timur sent a unit to pursue the Egyptians. This unit went as far as Akka. Lamb says that one division was sent down the coast of Syria as far as Akka (Acre) to pursue the Egyptian Army. Lamb goes on to say that several other divisions were ordered due east to invest Bagdad.

110. Ibid, p. 58.
111. Browne, op. cit. p. 197.
112. Lamb, op. cit. p. 577.
113. Ibid, p. 577. Arabshah says that 20,000 troops were sent to Bagdad, Sanders, op. cit. p. 167.
This last statement, by Lamb, brings up the question as to which route these forces followed. It is well known that there are several tracks east from Damascus in the direction of Bagdad.

Mail routes existed in the Syrian desert since Abbasid times. There was a direct courier route from Damascus to Bagdad via Dumeir and Hit. The map opposite page 258 of the book *The Syrian Desert* shows two possible routes which Timur's troops might have taken in their march from Damascus to Bagdad. On this map there is a courier route which runs almost due east passing by way of Bir Melossa, Muhaiwir, Hubaisa to Hit on the Euphrates River, and then follows the river to Ramadi and Fellaqa and then to Bagdad. The other route swings slightly to the south of the first route and is about fifty miles south of the first route at Rutba Wells and then swings very gradually back toward the first route and joins it at Ramadi and then on to Bagdad.

Timur "returned the way he had come as far as Aleppo". Actually, this is the only source found which says that he returned the way he had come, most sources merely say that he returned to Aleppo by way of Homs and Hama.

But Timur, in his demand to Cairo for the release of Atlimish, one of his emirs who had been taken prisoner at Aleppo,
said that he would await the arrival of Atlimish at Qaraa, Salamya, Homs, or Hama. These first two points are on the route to the east of the Anti Lebanon Mountains. When Timur left he went by this route. The road distance by the present day road from Damascus to Aleppo is 365 kilometers.

When he arrived in the vicinity of Aleppo, Timur sent his men to Aleppo to pick up the valuables which he had stored in the Citadel of that city. After that the army turned to the Euphrates, crossing the river in skiffs and by other means and from there he went to Arruha (Urfa) and plundered it. The road distance from Aleppo to Urfa is 235 kilometers.

After returning north by Aleppo, Timur moved over to the Euphrates and allowed the troops with him to hunt. This may have well been in the area west of Urfa. Here, Timur established fuller communication with his base and received messages from the emirs in command there. The base he refers to is probably Tabriz. He also received reports from Samarkand and from Sivas. Sivas was the gateway of Bayazid and Timur wasted no time in bringing his main strength back within two hundred miles of it.

While in this area Timur received a message from his emirs before Bagdad, which sent him south. When we review the route which Timur followed, it would seem more likely that Timur

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120. Sanders, op. cit. p. 163.
121. Lamb, op. cit. p. 577.
122. Ibid, p. 577.
123. Ibid, p. 577.
was in the vicinity of Mardin when he received the message from his commander at Bagdad, because he left the fort without capturing it and turned toward Bagdad. The road distance from Urfa to Mardin is 285 kilometers.

We have a reference which gives details and dates about Mardin:

"On the second day of the week the tenth of the month Ramzan, the enemy approached Mardin and pitched their camp at Dunisir and in the morning approached to besiege the place, but the citizens had left the city and retired to their well protected fort". 125

10 Ramadan would have been 24 April 1401 A.D.

Still referring to Mardin, we find:

"And he continued the struggle and strife until the twentieth day of the month Ramzan, but in vain and without gaining his desire". 126

20 Ramadan would have been 4 May 1401 A.D.

Here we have the dates of his arrival at Mardin and the length of time he spent trying to reduce the fort. Failing to take the fort, or perhaps not wishing to spend any more time, or perhaps it was here that he received the message from his commander charged with the Bagdad operation. Whatever the reason, he turned south and started toward Bagdad. But, before he left, he laid waste the city of Mardin.

These points along the route from Mardin to Bagdad give us a general idea of the line of march:

"Then Timur...withdrew from Mardin...the twentieth of the month of Ramzan, which is the fifth of Ayar, and descended upon those parts; and he laid waste Nisibin

125. Sanders, op. cit. p. 164.
126. Ibid, p. 165.
and devoured its crops, then wiped it out of the volume of existance - chapter and verse--". 128

Another reference follows:

"Then he turned his greed to Mosul and destroyed it with his black army and after he had given it to ruin, presented it to Husein Beg, son of Husein. Then with great noise he hastened to the bridge, spreading a rumor that he was ending his raids and seeking his own country..." 129

From the second quotation we know that Timur crossed the Tigris near Mosul. The ancient caravan route also crossed in this area. And a review of the routes given by Le Strange 130 confirms this. The route then ran east of the Tigris river, south to the Bagdad area. This, then, is the route which Timur probably followed to reach Bagdad.

Timur's main strength was concentrated at Tabriz against the coming of Bayazid. At first, Timur had not expected to have to go to Bagdad himself. But when it became necessary to go, he ordered Shah-rukhr to move down from Tabriz with ten veteran divisions, the engineers, and a siege train.

This now brings up the question of the route which Shah-rukhr used to reach Bagdad from Tabriz. From Tabriz to Bagdad today, perhaps the shortest and fastest route, during the warm months, is by way of the Ruwandiz Gorge. This may have been the route which Shah-rukhr used to reach Bagdad. The route runs southwest from Tabriz skirting Lake Urmia on the east and south

128. Ibid, p. 166; the fifth of Ayar is the fifth of May.
129. Ibid, p. 166.
130. Le Strange, The Lands, maps pp. 25, 87.
131. Lamb, op. cit. p. 578.
and coming to Miyanduab, Saujulagh and Qal'eh Paswah, then over a pass and through the gorge to Ruwandiz. From Ruwandiz the route goes down to the plain of Erbil, then south along the foothills until it reached the Khorasan Road, and on to Bagdad. This probably would have been the fastest route. Le Strange does not show any principal route through this area, but no doubt trails existed through this area, even at this early date. With Shah-rukhh came ten veteran divisions, as well as engineers, and a seige train. It is possible that some of the more lightly armed, and mounted contingents came by this route, while the more heavily equipped engineers and siege train had to proceed by another route.

Le Strange does show a route south from Tabriz to Maraghah south to Barzah and from there on southeast by way of Sisar to Dinavar near Kermanshah. At Kermanshah the route joins the Khorasan Road and continues on to Bagdad. This is also a possible route for all or part of the contingents which moved to Bagdad.

The city of Bagdad was destroyed. After this Timur resolved to return to his own territory:

"Then he marched with those Turks, each of whom would be truly called in Turkish an insolent tyrant, and resolved to make winter quarters in a place rightly called Qarabagh among the Turks and Arabs in accordance with its qualities and nature". 133

Bagdad fell in June 1401 and Timur, anxious to remove

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133. Sanders, op. cit. p. 169
himself from the heat of Bagdad, left his main force, with their baggage train and siege equipment, and hurried back to Tabriz. After he successfully assaulted Bagdad, Timur marched to Tabriz where he rested his army. The fact that he was resolved to winter at Qarabagh does not mean that he went directly there. Bagdad had fallen in June, or July, and while there probably was not sufficient time for him to move against Bayazid, even if he had been prepared to do so, there was time for him to send reconnaissance forces into Asia Minor to keep Bayazid's activities under surveillance. He was also awaiting the arrival of Prince Mohammed and the Samarkand Army.

After Baghdad, Timur again turned his attention to the Georgians until winter forced him to move to his winter quarters at Qarabagh in November of 1401. He probably went to Georgia by way of Tabriz. It would have been logical for him to attack the Georgians again, for the same reasons he had attacked them before the campaign which he had just completed.

By his campaign into the Arab Middle East, Timur had succeeded in eliminating all of Bayazid's allies before he met Bayazid. For all intents and purposes the campaign in the Arab Middle East ends with the fall of Bagdad. We know that Timur eventually returned to Qarabagh to winter in preparation for the campaign the following year against Bayazid. He may have sent some of his forces there while others were conducting operations against the Georgians.

137. Browne, op. cit. p. 197.
IV GEOGRAPHIC CONSIDERATIONS

Geographic considerations were all important in Timur's campaign into the Middle East, as they are in any military operation. The ground that he had to cover and the season in which it could be crossed were of primary importance since, in some instances, they were the determining factors as to whether his armies could or could not move. For example, it is almost impossible to move an army through heavy snow in a mountain area without special training and equipment. And even with special training and equipment the number of troops which can be moved and supported under these conditions is limited.

Among the land features which Timur had to consider were mountain ranges, highlands, rivers, marshes, and deserts. He had to be able to operate in spite of the difficulties imposed by these features. To add to his problem he had to pick a route which would allow him water and food for his soldiers as well as the animals which gave his force the mobility for which it was well known.

Fortunately, for Timur, the first several hundred miles of his route toward the Arab Middle East lay within friendly or at least subjugated territory. This fact gave him freedom of movement within this area, as well as other advantages. He did not have to plan his movements with the idea that at any time he might be confronted by the enemy. He could mobilize his forces without fear of any enemy interference, and he had this large base from which to draw reinforcements, remounts, and
supplies as he might need them. So the primary geographical consideration for the first phase of this campaign, and until he reached enemy territory, was merely how to reach the area to which he wished to go, or more simply the choice of a route.

Having eliminated the consideration of enemy action, the next was the area over which the movement was to be conducted. This primarily involves the physical features of the area concerned.

Timur left Samarkand in September of 1399. We believe that he travelled westward through the valley of the Sughd River to Bokhara, then by way of Baykand Amul, Marv, and Sarakhs into present day Iran. The distance between Samarkand and Bokhara is 150 miles. Bokhara is located almost due west of Samarkand. The route between these two cities follows the valley of the Sughd River, and presents no particular hazards or difficulties to travel. When Clavijo left Samarkand, he travelled this route he says:

"It was Friday, the 21st of November, when we set out leaving Samarkand and our journey lay through the plain along a good road and through a populous country. We marched thus for six days passing through their villages, and we were every where supplied with provisions and well lodged". 139

The route on from Bokhara by way of Baykand to the Oxus presented no great problem even though the area between Baykand and the Oxus is desert. Le Strange says "beyond the town lay

139. Le Strange, Clavijo, p. 301.
the sandy desert bordering the Oxus. Clavijo mentions that it took his group three days to travel from Bokhara to the Oxus travelling through a well-populated plain. They crossed the Oxus by ferry boat.

A river of the volume, depth, and breadth of the Oxus would normally present an obstacle to any army which had to cross it. The difficulty of the crossing would be magnified greatly if the river were defended by an enemy, not to mention the river current, and the air and water temperature. The animals probably had to swim the river.

The city of Amul is located on the western bank of the Oxus, and still exists today, but with the name of Chahar Juy. This is the route of the Great Khorasan Road.

In describing the desert west of the Oxus, Clavijo gives this description:

"Its banks on the further side consist in great sandy plains, and the wind here continually drives the sands backwards and forwards from one spot to another. Thus the dunes are ever in motion, being here blown down by the wind and heaped up there at another place. The sand is very fine and as it is moved about no one can look down on it but must hold his eyes off the glitter. The way across these sands can only be traversed by those who know the signs that have been set up as guide posts, and there desert guides are commonly known by the name of Yamchis... but even he many times almost lost his way in the desert. There is no water to be met with in this land except at the interval of the day's march, when you will come to a well-shaft dug down in the sand, and protected by a dome that rises above a surrounding wall of fire-baked bricks; and but for this protecting wall the sand would soon blind the well". 142

140. Le Strange, The Lands, p. 463.
141. Le Strange, Clavijo, p. 302.
From the description of this desert, it is easy to imagine the difficulties involved in moving a large force across it. The problem of water alone would make any commander hesitate before attempting this crossing. Not only food for each individual, but also food for the animals of the army, had to be carried. Also it was necessary to carry a certain amount of water for drinking and emergency purposes.

Le Strange gives the distance from Amul to Marv as 120 miles. He also mentions the desert and the wells:

"All along the road south-west to Marv there were wells at each stage, but otherwise the territory of the Amul was inclosed on all sides by the desert which here came close up to the river bank". 143

Marv is located on the Murghab or Marv river, and is a well watered place. The river was dammed south of the city and sufficient water backed up to irrigate a sizeable area:

"...two marches to the south-west of Marv on the road to Sarakhs, lay the important town of Ad-Dandankan. This was small but well fortified, having a single gate, with hot baths outside the wall.....This was the limit of cultivation of the Marv oasis to the south-west, while Kushmayhan, one march from Marv on the Bukhara road, was the limit of cultivation on the north-eastern side". 144

An area of cultivation of this extent would certainly be anticipated with great pleasure by the weary, dry, and thirsty traveller, going southwest from Amul.

Beyond the area of cultivation southwest of Marv, desert is again encountered. The desert extends from this point on to the vicinity of Sarakhs which is located on the Iranian-Russian

143. Le Strange, The Lands, p. 403.
144. Ibid, p. 400.
border. Sarakhs is located on the banks of the Mashhad or Tajand River. A village exists today on both sides of the border. To the southwest of Sarakhs is Iranian territory. Much of the following is based on personal observations made during a trip across northern Iran, eastern Turkey, Syria, and Lebanon during the summer of 1956.

Even a hasty look at the map of northern Iran will allow one to pick out the prominent terrain features of the country. Going from west to east these features are:

1. The Zagros Mountains, 2. The Elburz Mountains, 3. The Ala Dagh range, 4. The Kopet Dagh range, 5. The Central Plateau which is bordered by the above mountain ranges.

Timur entered Iran from the northeast. Most of the route, over which he travelled, in northern Iran, was along the edge of the central plateau. This will be the first area to consider.

In the northeast portion of Iran, the central plateau may be entered from the northeast; i.e. the route from Sarakhs, Marv, and Bokhara, by passing around the eastern end of the Kopet Dagh between Sarakhs and Mashhad, and then south of Mashhad by passing around the eastern end of the Ala Dagh.

The Central Plateau consists of a series of closed basins. These basins have no outward drainage. This central plateau receives very little rain, so much of the region is desert. But in spite of scanty rainfall, these closed basins have a deep deposit of mud in them. And since they are closed, without outlet, they have become saline. Since this is such an arid
area the rapid rate of surface evaporation has resulted in the salt crystalizing and forming into a salt crust. As evaporation goes on the crusts increase in size, force against each other, break up into all shapes, and take on the general appearance of a glacier or an ice flow. Beneath this crust lies the sticky marsh mud. Some drainage from the mountains brings water to these areas, but how such a marsh can exist in such an arid area is a mystery. The idea that some water may still exist from a times when the basins were occupied by lakes has been advanced. Another theory is that some soakage has taken place from the water table existing in the mountains above the central plateau.

Needless to say such an area as a salt marsh would be exceedingly difficult to cross. This fact, in addition to the fact that most of the remaining area of the central plateau is desert, probably accounts for the fact all routes of importance go around this area. One quarter of the area of the Central Plateau consists of these salt marshes. The rest of the area is desert in which a firm surface, or sand dunes, may be found.

The northern highlands extend across most of northern Iran. Starting at the western edge of the Caspian Sea, coming inland to the hill region, then coming south and east we have the Talish Hills which tend to serve as a connection between the Elburz Mountains and the Caucasus of southern Russia. Running almost due east we have the Elburz range. As the Elburz run east they finally become lower and become a plateau between the higher mountains of the western Elburz and the Ala Dagh and

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145. Fisher, op. cit. p. 266.
Kopet Dagh to the northeast. These two ranges run from the northwest to the southeast, and part of the Kopet Dagh, to the north, lies across the Russian border.

The Elburz range is very steep. A number of peaks exceed 10,000 feet within 30 miles of the shore of the Caspian Sea. The high point, of course, is Mount Demavend, located just northeast of Teheran, and exceeds 18,000 feet in altitude.

To the northwest the Kopet Dagh reaches 10,000 feet in maximum elevation. South of the Kopet Dagh we find the Ala Dagh (Aleh Dagh) which has an altitude of 10,414 feet. As this same range runs to the southeast the name of the range becomes Kuh-i-Binalud, and the highest point, at a point north of Nishapur, is listed as being 11,200 feet, while a number of other points are in excess of 10,000 feet.

The other portion of Iran, through which Timur passed, is the northwest portion of the country. This portion includes part of the Zagros Mountains. Within this area there are geographical features, also worthy of note. The most spectacular, of course, is Lake Urmia. This lake is what is known as a downthrow basin. Its area covers 20,000 square miles. Other downthrow basins occur in the area, as at Khoi, and Ardabil.

Fisher gives the following description of the area:

"The uplifted horsts from a series of blocks that increase generally in elevation towards the northwest,

148. Ibid, p. 263.
149. Map, Asia 1/1,000,000.
150. Fisher, op. cit. p. 256."
giving the appearance of an extensive plateau that is
tilted towards the southeast. Numerous deeply-incised
valleys separate the individual blocks, so that, despite
the general impression of a plateau, relief is extremely
varied. Some of the river valleys are no more than
gorges on defiles; but others (owing to tectonic action)
are much wider, e.g. The Aras valley, which forms a
corridor some 10 to 40 miles wide;..., and the Safid
Rud (named in its lower course the Qizil Uzan), where
there is a lowland basin 15 miles in width around the
town of Mianeh." 151

In this same area there are a number of high peaks which
are volcanic cones. Mount Sahand, just south of Tabriz, reaches
152
as high as 12,189 feet, while the highest point in the area is
Mount Savalan, located east of Tabriz toward Ardabil. This
mountain is about 14,000 feet in altitude. The result of the
volcanic activity is evident in certain areas where lava still
covers the ground. Such an area as this is not a hospitable
place for habitation.

Fisher comments on the climate of this mountainous area,
describing it as "intolerably hot and arid in summer, and bitter-
ly cold in winter-possibly with the most extreme climate of any
153
part of the world"...This fact alone would be a consideration
which any commander would have to ponder if he planned to operate
in or through this area. The climate of the area is discussed
in Chapter V.

What are the physical features along Timur's route which
would have affected his crossing of the area?

The route ran southwest from Sarakhs to Mazduran and then

151. Ibid, p. 256.
152. Map, Asia 1/1,000,000.
along the Kashuf River to Mashhad. In the area around Sarakhs there is an area of desert which extends down from the area to the north. Water and food are considerations, but there is no difficulty imposed on movement by the terrain. A hilly area is crossed before reaching Mazduran but it imposes no particular difficulty to mounted (horse) troops. In the lowlands of the Kashuf River, difficulty to movement might be encountered during seasons of high water. But in the summer (July) there was very little water in the river at all.

From Mashhad the route went south and skirted the eastern end of Kuh-i-Binalud, and then ran by Nishapur and west until the foothills of the Elburz were reached at Shahrud. The route ran along the edge of the Central Plateau. This area is desert, except in the areas of habitation where water permits irrigation. This area presents no difficulty to movement, except heat and cold and the scarcity of food and water make travel more arduous. It is still the practice today, as it was in caravan days, for people to travel at night during the hottest seasons.

The route ran from Shahrud to a point just southeast of the modern city of Teheran. This route followed along the edge of the foothills of the Elburz range. This is a rocky area where the wind has blown away the finer particles of soil and sand so only a rocky surface exists. South of the route lies the desert area, and an occasional salt marsh. There are streams at intervals running down from the foothills. Many of the villages are watered by qanats.
The old caravan route ran from Ray, just south of Teheran, northwest to a point just south of Qasvin, then across the plateau and through the Zagros Mountains to Tabriz.

Just before reaching Ray the route passed through a defile which would slow the movement of a large force. This defile is known as the Caspian Gates. After leaving Ray, the route continued across the plateau and ran through the Zagros. The incline of the land in this area is toward the northwest. In the mountainous area the route often followed along stream beds. Some of these valleys are deep with steep sides. Where the route passed through such defiles, ease of movement would naturally be slowed to a very slow pace. If the force was large it would necessarily become extended in length over a great distance. In addition to the defiles, through which the route passed, there are grades which are steep enough to impede movement. Winter cold and snow would stop movement in some places.

In Timur's time there was a route from Zanjan north to Ardabil, and on northwest to the Qarabagh Plain. This route no longer exists from Zanjan north. Today a traveler must proceed from Zanjan to Mianeh and there find a route to the northeast which leads to Ardabil and on to the north.

It is possible that Timur may have reached Qarabagh by the route which ran north from Zanjan, or by another route, before he went to Tabriz. It is also possible that he went to Tabriz first, then north to the Araxes Valley, and then down the valley into the Qarabagh area. We know that he spent the winter of 1399-1400 in the Qarabagh Valley.
During the trip in 1956, no attempt was made to follow the route Timur may have taken from Zanjan to Qarabagh and then up the Araxes River toward eastern Asia Minor, because the area along the Russian frontier is a restricted military zone, and travel is not permitted in this area.

So the trip proceeded to Tabriz; from there northwest to Marand, then west to Khroil, and north and northwest through Maku into Turkey.

The route from Tabriz to Khroil presented no difficulty to travel. North of Khroil the route entered the foothills and ran through a pass known as Khamzian Pass, the mountains on either side of the pass are in excess of 6,000 feet. This pass would slow travel. The route continued on to Maku without encountering any impediment to travel. The valley where Maku is located leads northwest into eastern Asia Minor.

The country between Tabriz and Maku is fairly well watered. This area consists of both plateau and mountains, the mountains lie to the west of the route toward Asia Minor. The valley that runs by Maku is the natural route which connects the valley of the Araxes River with eastern Turkey.

Timur spent the winter at Qarabagh before he continued his campaign into the Arab Middle East. The Qarabagh valley was his favorite wintering place in the area, and is located on the lower Araxes.

When he decided to move against Sivas he may well have come up the Araxes valley and on by Maku into eastern Turkey. This route would present no difficulty to travel since the valley
of the Araxes is a natural corridor and is quite wide enough, along the entire route, to accommodate a large army.

A look at the map of eastern Turkey will immediately show that the most prominent terrain feature of eastern Turkey is Mount Ararat which is just short of 17,000 feet in height, \(154\) (16915). Another outstanding feature of eastern Turkey is Lake Van.

Asia Minor has long been a land bridge connecting southeastern Europe to Asia and points east. The area through which Timur passed is not an area of easy travel. The route leads through highlands and mountains which are difficult to move through even during the best seasons of the year.

In Chapter VII there is a description of how Timur's army moved and lived while on the march. This may provide us with the key as to how Timur's large force moved through this area. They no doubt had their herds and flocks with them which provided them with food and facilitated their movement.

The route from Maku, Iran into eastern Turkey followed along a highland valley, within sight of Mount Ararat, with mountains on both sides of the route. The valley is wide and the grades are gentle. From the Iranian border the land slopes down to a plain around Bayazit (Karakose). The altitude of this valley is about 5000 feet. From Bayazit the route ran northwest, crossed a range of mountains, and came down in the valley formed by the Araxes River. There are peaks on both sides of the route.

within sight of the route, that exceed or approach 10,000 feet, and the route itself ran through mountains at altitudes of from 6500 feet up to 8,200 feet. A large force travelling through these mountains would have to travel slowly and would become extended.

The route descended the mountains to the valley of the Araxes. The altitude of this highland valley is almost 5000 feet above sea level. This river was crossed at the town of Khorasan which must have been so named because it was the place to turn south to join the Khorasan Road, or to reach Khorasan in Iran.

From Khorasan, the route followed along the Araxes for a distance and continued up the valley to Erzerum. Again, this valley is about 5000 feet above sea level. An area was crossed, just before reaching Erzerum, which exceeds 6500 feet. Erzerum itself is about 6000 feet above sea level. The route was not a difficult route. Grades are gentle and the valley is wide.

The route ran west from Erzerum along a valley which is formed by the headwaters of the north branch of the Euphrates River. This valley is in excess of 5000 feet above sea level. The route followed the valley then turned southwest across mountains. These mountains are not very high, and appear more as hills in relation to the surrounding country. The country is broken and cut; but not to the extent to make travel through it extremely difficult for horse mounted troops.

155. Map, Asia 1/1,000,000.
156. Map, Asia, 1/1,000,000.
East of Erzinjan the route followed the gorge of a river for miles. This is a narrow gorge and the road runs along the river, crossing it by bridge at various points, and then running along the other bank of the river. This gorge is extremely narrow and would cause an army of mounted troops to be extended for miles.

Erzinjan is located in a valley which is about 4500 feet above sea level. The northern branch of the Euphrates River runs through this valley.

The route west from Erzinjan followed a broad valley for several miles. As the route approached rougher country the width of the valley became more restricted. As it continued, the route followed up a stream course which wound and climbed until the summit of the first mountain was reached. Often the sides of the valley which the route followed were quite steep. Usually, as the route approached the summit, the terrain would become more rolling and less steep until the route descended the other side of the mountain. The route down the other side of the mountain was usually almost as steep and difficult as the side which had just been climbed. There are a series of mountains northwest of Erzinjan over which the route passed. So the process of climbing and descending had to be repeated several times. In many areas movement would be almost restricted to the road itself. Often, near the summit of the mountains, the route followed along narrow valleys. This terrain is extremely rugged and difficult to travel over.

After the first series of ranges had been crossed, the
route followed along a valley which is about 3000 feet above sea level. Then, as the route approached the head of the stream, which flows in the valley, it wound and climbed upward. The route continued westward through the mountains, but these grades are not so steep, nor the road so winding as in the area just described to the northwest of Erzinjan.

The road ran south and recrossed the range of mountains, but the route was not so steep, nor winding. The grades are more gentle and the altitude is generally less than 6000 feet. By the time the road reached Zara the altitude had dropped to about 4,500 feet. From Zara the route followed the valley of the Halys River down to Sivas which has an altitude of about 4,000 feet above sea level.

From Sivas the route ran south. Within a short distance south of Sivas the altitude is above 5,000 feet and the country is rolling and the mountains appear more as hills in relation to the surrounding country side. The route crossed areas having an altitude of almost 6,500 feet, but the terrain was not difficult to move across once the mountains south of Sivas had been climbed.

South of Sivas the route passed over an upland plateau region having an altitude of more than 5,000 feet. When the route followed stream beds it was usually winding and narrow, but much of the route passed over a high rolling plateau which was not very difficult to traverse. Farther south the terrain became more rugged and the route became steeper and more winding as another chain of mountains had to be climbed. After the
summit of the mountain had been reached the route followed a stream which runs to the southeast. Near the headwaters of the stream the grades are steep and the route winding, but as the stream loses altitude the grades became gentle and the road straight. The route followed the stream down to the plain north of Malatiya.

Directly south of Malatiya are mountains, the highest of which approaches 10,000 feet in elevation. These mountains are the Gerlerli Dagh and Kurd Yusuf Dagh. The route went southwest from Malatiya through a valley at the foothills of these mountains, turned south as it descended the Baruk Dagh. In this area the route followed a stream down the mountain and the route was steep. From this point the general slope of the land was toward the Euphrates. The route went by Bahasna, and possibly to Urfa.

The southern slopes of these mountains are well watered. There are numerous streams in the mountains so the terrain is quite rough, but movement through it is not exceedingly difficult.

If Timur went to Urfa from Bahasna his army had to cross the Euphrates and then recross it when the army went to Aintab. The area south of the mountains is rolling country, cut by numerous streams. Movement through this area would not be difficult. The altitude at Aintab is about 3,000 feet above sea level.

From Aintab the route followed down the river valley of the Karanlik Dere to Aleppo. The altitude drops from about 3,000 feet at Aintab to about 1,200 feet at Aleppo.
By keeping the Kurd Dagh range to the right, while heading south, a force would be able to have easy travelling across the rolling plains of northern Syria, all the way to Aleppo. In an area such as this, a nomadic army would probably move on a wide front to afford grazing for their animals.

The route went southwest from Aleppo toward Hama through an area of rolling plainland. This area is easily traversed. The only barrier to travel lies to the west where the swamps of the Orontes River are found. This area is known as the Ghab, and can easily be avoided by an army travelling south.

From Hama the route ran south across the plain until the valley of the Orontes was reached. Then it followed this valley on south towards Homs. The area south of Hama is rolling plainland. The high point, known as Jebel el Arba'in, rises to an altitude of more than 2,000 feet south of Hama.

The route continued across plains and followed the Orontes River to Homs. South of Homs the route followed along generally parallel to the Orontes until it reached the northern end of the Bekaa Valley. The Bekaa Valley is located between the Lebanon Mountains and the Anti-Lebanon Mountains. The terrain between Aleppo and the Bekaa Valley does not impose any great difficulty to travel.

The Bekaa is a natural passageway to the south. In its northern reaches it is watered by the Orontes River which has its source in the vicinity of Baalbek. South of Baalbek it is watered by the Litani River which also has its source near Baalbek but flows south. The Bekaa is a wide, level valley
which is easy to travel through. It is separated from the Damascus area by the Anti-Lebanon Mountains.

There are two possible routes by which Timur might have reached Damascus from the Bekaa. He could have followed the route which the present day railroad follows, or he could have followed the route of the present day highway. The railroad route is more direct and probably the easier route. The railroad route crosses the Anti-Lebanon at an altitude of 4,610 feet and descends to the plain of Damascus by following the Barada River. The highway route passes through an area in excess of 1,500 meters or about 4,900 feet above sea level. These routes do not present any great difficulty to travel.

From Damascus, Timur followed a route to the east of the Anti-Lebanon Mountains and through the foothills to Homs. The route ran through the foothills. The terrain of this area is barren and rugged. This terrain is quite rough when compared to that of the Bekaa. There is an occasional oasis to break the monotony of the route from Damascus to Homs. The route from Homs to Aleppo was the same route as described previously.

North of Aleppo is a valley which presents a natural approach to the city from the north. This valley can be followed northward to a point about half way to Aintab and then by going northeast along the route followed by the modern railroad, the ancient Piedmont route to Mesopotamia can be reached. The route

158. Map, Liban, 1/200,000.
crosses the great western bend of the Euphrates, and continues east. The degree of latitude at which is proceeds depends upon the time of the year. If it is during the rainy period, a passage is possible much further south than in the dry season. During the dry season it is necessary to pass from watering place to watering place.

The southern route passed by Harran or Carrhae, Resaina or Ras-el-Ain, and Nisibus, and was about 1,400 or 1,500 feet above sea level. North of this line the slope from the marginal highlands was steeper, the valleys were deeper because of the swifter drainage from above, and the general character of the country was more rugged. All of these factors presented obstacles to movement.

In dry times an army or a caravan took the northern route which crossed the Euphrates at Biredjik, went east to Urfa, and then passed by a number of ruined villages which still contain cisterns, and on eastward through the upper hill towns to Mardin. This northern route maintained a general level of about 2,000 feet, and was nearer the springs which fed the streams, and offered better pasturage for animals. From Mardin it dropped down to Nisibus which is located on the Gargar, a perennial stream. From Nisibus the route followed the foot of the Tur Abdin escrampment to the Tigris, and then ran down the river to Mosul. A wet season route ran east to a point about twenty miles east of Nisibus, then ran southeast and met the

159. Semple, op. cit. p. 192.
Tigris just north of Mosul.

The entire route from the Persian Gulf to the Mediterranean is aptly described by the following:

"As far back as we can penetrate into the remote past, we find that the main line of communication from the Persian Gulf to the Mediterranean followed a land road east of the Tigris along the base of the Persian highlands north to Assur or Mineveh near modern Mosul, ran thence along the piedmont of northern Mesopotamia to the great western bend of the Euphrates, which it crossed by ford or ferry according to the place and time of year. Thence it continued west past Charlybon (Aleppo) to the Mediterranean..." 161

In reference to the route from the Persian Gulf north, probably the reason the route followed along the base of the Persian highlands was to avoid the marshy areas along the Tigris River.

The route crossed the Tigris in the vicinity of Mosul, then ran south along base of the foothills parallel to the river to the Diyala River, and then down the Diyala to the Baghdad area.

There are no particular obstacles to travel along the route from Mosul south to Baghdad. Baghdad fell in June, which is a month when there is usually considerable water in the Tigris, 162 the month of maximum flow being May. This brings up the possibility that Timur may have had to wait until after the flood season to attack Baghdad. If this particular year happened to be one of heavy precipitation in the areas feeding the tributaries to the Tigris, then certainly swollen streams, which had to be

162. The Economic Development of Iraq, p. 212.
crossed, would have imposed difficulties to travel and would have impaired the speed of movement of his Army.

The fact that Timur was caught at Bagdad during the hot month of June may have been the result of heavy precipitation, rather than being unable to keep ahead of the sun, or faulty planning.
V CLIMATIC CONSIDERATIONS

The climatic considerations involved in Timur's campaign into the Middle East are closely tied to the geographic considerations. It is well known that geographical features, such as mountain barriers, have a distinct effect upon weather and climate. Weather is always a consideration for any military operation. For example, temperature, precipitation, and humidity, and sometimes winds can be important considerations in planning an operation. If the operation is to last over a period of time then the considerations are more complex. Instead of the commander being concerned with the short term prospects of weather he must prepare himself and his soldiers to operate over a longer term and under varying conditions, and it is in this respect that he must have accurate climatic information. We know that Timur's campaign into the Middle East occupied a period of about two years. He left Samarkand in September 1399 and the campaign ended with the sacking of Bagdad in the summer of 1401. Since his operations were conducted over a broad area and over a period of almost two years, a knowledge of the climate in the area in which he was operating was of utmost importance to the success of his operations. Timur had to know the climatic conditions under which he would be operating and know where his units would be at certain times for planning purposes.

We have hinted at the distinction between weather and climate. Most of us, when we think of weather, think in terms of temperature, precipitation, and humidity for a short period
of time, usually a day or a week. This then is weather, but climate is something more. Climate is a composite generalization of the variety of day to day weather conditions for a period of time which includes the constant variations of weather and the changes of the season. Climate is a long-term affair.

The climatic discussion will be limited to the areas included in the modern countries of Iran, Turkey, Syria, Iraq, and a portion of Lebanon, since these are the countries in which Timur conducted his operations during his campaign into the Arab Middle East.

A few general remarks about climate are necessary before considering the climate of the area.

There are certain climatic controls and elements which cause climate to vary from place to place and season to season. These are worth mentioning, but to go into detail in discussing them could take us beyond the scope of this work into the field of climatology. These climatic controls and elements are:

**Climatic controls**

1. Sun or latitude
2. Distribution of Land and water
3. Winds and air masses
4. Altitude
5. Mountain barriers
6. Semi-permanent low and high pressure centers
7. Ocean currents
8. Storms

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163. Trewartha, Glenn T.; *An Introduction to Weather and Climate*, p. 5.
Climatic Elements

1. Temperature
2. Precipitation and humidity
3. Air pressure
4. Winds

These controls and elements should be kept in mind during this general discussion of the climate of the area.

The intense summer heat of southern Asia causes the monsoonal low pressure area of India. The center of this low is found over the Gulf of Oman. This low is a permanent feature during the summer months and is responsible for the system of winds in the area during that season. The center of this low extends up the Persian Gulf.

Another permanent summer low pressure area develops over the Island of Cyprus as a result of the unequal heating of sea and land, and the physical confirmation of the island itself, i.e. the basin-like structure of the island. This is a separate low from the one which develops over the Gulf of Oman.

The general summer air movement might be described as follows: Air currents developing over the Indian Ocean enter the monsoonal circulation. After starting over the Deccan the winds move north and west parallel to the Himalaya Mountains, and cross the Zagros Mountains, into western Iran, and continue northward into Armenia, west across Asia Minor, and south over the Aegean Sea, and then southeast in response to the Cyprus low,

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165. The following general remarks about the climate of the Middle East are based on Fisher, W.B., The Middle East, pp. 28-56.
east over the Levant and southeastward over Arabia, in response to the low over the Gulf of Oman and the Persian Gulf.

Another low pressure center exists in the region of Abyssinia and the Upper Nile Valley, but does not directly affect the area involved in this paper, so it will not be discussed.

The monsoonal circulation exists as a permanent feature during the summer months, i.e. late May or June until September, with the result that the wind blows from the same direction almost all of the time during these months. This briefly, then, is the air circulation pattern of the area, as it exists during the summer.

During the winter a permanent high pressure area develops over the interior of Asia, actually over Siberia. This high often extends as far south as Iran. Also temporary highs develop over the Anatolian Plateau, but disappear completely and depressions advance eastward across the plateau from the Mediterranean or Black Seas. During winter pressure conditions are very variable throughout the Middle East. Sometimes the Siberian anticyclone may extend westward covering a large area of the Middle East, but more often disturbed cyclonic developments associated with generally low pressure conditions are found.

Atlantic depressions arrive in the Middle East via northwest Europe, Spain, or northwest Africa. These depressions, which have lost moisture enroute, pick up moisture again as they cross the Mediterranean and often continue as far east as Armenia and Iran. This, then, is one source of moisture for the area.
Also, low pressure systems develop within the Mediterranean area itself and become more intense as they move eastward. Generally speaking, these Mediterranean depressions tend to follow a sea track. From northern Italy they often pass down the Adriatic into the Ionian Sea where they divide under the influence of the Asia Minor land mass, some going east into the Levant and on to Iraq, others moving northward into the Agean and Black Seas and even reach as far as the Caspian. Another route lies along the southern portion of the Mediterranean basin. Depressions travelling along this route bring rain to the Levant, and often reach the Persian Gulf or even into the interior of Iran.

There are four types of air masses which affect the Middle East at various times of the year. The first is Monsoon air which comes to the Middle East from the Indian Ocean during the summer months, and is due to the development of summer low pressure areas in Cyprus and the Persian Gulf area. The route this air follows has been described previously in this chapter. These air masses are found in the Middle East between June and September.

The second type of air found is Maritime air which is damp and usually of a lower temperature. This air usually originates over the Atlantic Ocean and comes into the Mediterranean by way of northwest Europe, Spain, or northwest Africa. This air is moisture laden, and upon uplift, or intermixture with other masses, condensation results. These air currents come from the west and penetrate the Middle East region between
October and May.

Maritime air exerts its greatest influence on the western exposures of the area, but often depressions penetrate as far east as Iran. These westerlies grow progressively drier as they advance toward the continental interior. This affects the amount of precipitation inland.

Tropical Continental air is the third type of air found in the Middle East. Its season is usually in the fall and/or in the spring. This is nothing more than hot, dry desert air which is drawn into the area by the passage of a depression. Temperatures rise, often 30 degrees to 40 degrees in the short period of a few hours, relative humidity drops to less than 10 percent. Fortunately, these conditions are usually of short duration.

During winter and spring it is also possible to find Polar Continental air in the area. This is the fourth type of air which may be found in the area. This flows out of the cold continental interior of Eurasia and consists of two types. The first type originates in south central Asia overflowing into Iran and may for a short time extend as far as the Mediterranean. This is cold stable air which is quite dry. Temperatures are low, but sunshine during the day mitigates the worst effects of these low temperatures.

The second type of Polar Continental air comes from central and eastern Europe. Anticyclonic conditions often develop in central and eastern Europe during January, February, and March. This is a damp air and is often drawn into the rear
of a cycle of depressions moving east along the Mediterranean. The lower layers of this air become warm and absorb moisture along their route over the sea. As the warmer layers of air are mixed with the colder upper layers, instability results with heavy rainfall.

Rainfall in the Middle East is almost entirely the result of cold fronts. Cold fronts are always regions of instability. When cold fronts come in contact with mountain ranges they are greatly intensified. Here we can see the importance of local topography upon the development of weather. Rainfall is heavy on the windward side of mountains but is lighter on the leeward side.

The main characteristics of summer in the area are the high temperatures which are common everywhere. The reason for this is the clear summer skies which allow direct insulation. Other considerations are the influence of the mountainous coastline of most of the area, which limits the tempering influence of the sea to a narrow coastal strip. The absence of soil and vegetation also favors intense heating of the arid surface.

The following general remarks about summer and winter temperatures for the area are revealing. July, with a few exceptions, is the hottest month inland, but on the coast the effect of the sea causes the high to come in August; while in winter January is the coldest month everywhere. Any considerable rise in temperature is usually delayed until the end of February or early March. In winter considerable temperature differences exist between the northeastern part of the Middle
East and the center and the south. Extremely low temperatures occur in Asia Minor, Armenia, and much of Iran. These temperatures, along with snow in some parts of these areas, make travel most difficult during the cold months.

It is now unknown for the Bosphorus and Black Sea to become jammed by pack ice in winter. Also, inland, many districts may be isolated by snowstorms even as far south as our own Beirut area. During the winter of 1956-1957 the road between Beirut and Damascus has been blocked by snow requiring as much as a day to clear a passage for automobiles.

In summer the diurnal variation of temperature in the area is most pronounced. The exception to this is the coastal areas where maritime influences affect the temperature ranges. Inland it is usually very hot during the day, but quite cool at night. Also in the mountain areas the daytime temperature is only slightly lower than the surrounding areas, but at night it may fall as much as 30 degrees F., while along the coast it may fall only 10 degrees F.

Concerning humidity, the Middle East shows a wide local variation. Some coastal areas have very high humidity, especially if the coast has a mountain barrier not far inland. The Persian Gulf coast is one of the most famous areas for high humidity and unpleasant living conditions during the summer. Beirut is usually quite uncomfortable during the summer because of the high relative humidity. The summer maximum for Beirut is 89 degrees F., with 70 percent relative humidity.

Inland, humidity is generally low, but usually changes
during the winter when maritime air is driven inland. Winter fogs often occur. An example of where this fog forms is in the salt marshes and deserts of Iran, as well as along river valleys in other areas.

Rainfall in the area occurs in winter; the summers are seasons of drought. The exceptions, where summer rains occur, are in the Black Sea and Caspian areas, and in the Yemen. In the area, as a whole, rainfall occurs during autumn when the dry air of the monsoonal circulation is pushed out by damp, vigorous, westerly winds. This is usually in late September or October. The period of heaviest rain usually comes after Christmas or the New Year. In the western half of the Middle East, January is the rainiest month. Moving eastward the date of maximum rainfall is increasingly delayed. For example in extreme western Syria there is a January maximum, and a February maximum in the rest of the country. In eastern Iraq the maximum comes in March. On the shores of the Caspian there is a minor maximum in spring with the major maximum in the fall.

By mid June, rains have ceased over most of the Middle East. In the area south of a line from the Elburz to Iskanderun there is no rain for a period of ten to fifteen weeks.

The distribution of rainfall in the Middle East is dependant upon two factors. The first is the topography of the land, the second is the disposition of land and sea in relation to the rain bearing winds. The Middle East is predominantly a continental area and is influenced only in certain areas by the nearness of the seas. Therefore, when air masses of oceanic
origin reach the Middle East they have lost some of their moisture before they arrive. It is only where these winds travel over a sea track to reach the area that partial rejuvenation of their moisture content allows considerable rainfall to develop.

The western facing mountain ranges or plateau edges receive heavy rainfall while those facing to the east suffer. The southeastward curve of the Turkish highlands towards the Zagros system gives rise to a fertile crescent of steppe land linking the east and the west of the area. Routes have passed through this area since ancient times.

A considerable amount of rain may fall in a short time. Cloudbursts are not at all unusual but they are usually of a local nature. Another characteristic is that the amount of rainfall is exceedingly variable from year to year. Areas such as Egypt and Arabia may go for years without so much as a drop of rain.

These general comments give us some insight into the climate of the area as a whole. We know that Timur travelled through Iran in the autumn of 1399 on the first stage of his campaign into the Middle East. So it is appropriate that we consider the climate of this area briefly.

Fisher summarizes the main features of the climate of Iran as:

"(A) Marked continentality, with extremely high summer temperatures, and an unusually cold winter—much colder, in general, than the average for the latitude."

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166. The following discussion is based on Fisher, W.B., The Middle East, pp. 267-272.
(B) Great contrasts in rainfall, the extreme north and west receiving considerable amounts, and the remainder of the country little or none.
(C) The frequency of high winds, which intensify the effects of extreme temperatures. 167

These conditions exist as a result of the mountainous nature of the region, and its location as part of the heartland of Asia. In summer the dried out monsoonal air from northwest India exists over the area giving it high summer temperatures. In winter this country is often under the influence of the Siberian anticyclone, with its cold dry air, while at the same time the maritime influence of the westerlies are held out of the interior by the mountains of the western Iran.

Altitude is partially the cause of the unusually low winter temperatures. For example: Teheran has a mean temperature during January of 35 degrees F., compared to Beirut's 56 degrees F. Both are within a few degrees of the same latitude. Altitude does not lower summer day time temperatures appreciably, but it does make the summer nights much cooler.

In the interior plateau region of Iran, frost is found from late autumn until early spring. In the higher parts of the mountains, temperatures are quite low and snow remains on the ground for long periods. The Mean January temperature at Tabriz is 17 degrees F. The northwest part of Iran is the coldest part. Temperatures below 0 degrees F. are not uncommon in this region.

Practically all of Iran's rainfall comes from eastward moving depressions which come from the Mediterranean Sea. The

The air from the Siberian anticyclone is dry, and no moisture is derived from it. The summer monsoon air has lost its moisture before reaching Iran so there is no moisture derived from it. The moisture bearing depressions which arrive from the west have been weakened by having passed over the highlands of Asia Minor and the Levant. They reach the Zagros and are again forced to drop their moisture, so that little or none of it reaches the central plateau of Iran.

Timur, on his way to the Arab Middle East, marched into eastern Asia Minor. This area includes old Turkish Armenia which is well known for its extreme climate where snow lies, even in the warmer valleys, for a third of the year. The Anatolian Plateau is higher than the interior of Iran, so altitude is responsible for lower winter temperatures there. These low temperatures often result in the frequent occurrence of a separate and distinctive high pressure system over Asia Minor. This occurs between November and April. This high diverts rain bearing depressions from the Mediterranean either to the north or the south, so that few depressions penetrate the interior. The high ranges receive the greatest amount of precipitation. The eastern portion of the plateau has an elevation of from 5,000 to 7,000 feet, so it receives more precipitation than the lower lying areas of western Anatolia.

Eastern Turkey is an area of extremes. The summers are hot and arid, especially in south and east where the steppes of

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Syria are near. Here, maximum summer temperature exceeds 100 degrees F. Farther to the northeast daytime temperatures are high, but nights are cool. Daytime temperatures often reach 90 degrees F., but cool nights bring the daily average down to 65 or 70 degrees F.

Even in the extreme south winters are cold; for example Diyarbekir has a mean temperature for January of 31 degrees F. Farther north the cold is more intense. Here, extreme minimum temperatures of -30 to -40 degrees F. are not uncommon, and snow stays on the ground for more than 120 days each year. But at Diyarbekir snow stays on the ground for only 7 to 10 days each year.

The higher altitude of the eastern area of Turkey causes it to be better watered than the central plateau. The months of heaviest rainfall are February and March, but in the northeast the influence of the Black Sea is felt, making May the wettest month at Erzerum.

Eastern Turkey has hot, arid, and dusty summers; winters are bitterly cold. Spring and autumn are both subject to sudden hot and cold spells which make weather conditions most unpredictable. Hot desert air may move in from the south, or cold air may move in from inner Asia. This cold continental air may bring snow as late in the year as May.

From Turkey, Timur moved south into Syria, going as far south as the Damascus area. It is worthwhile to briefly describe the climate of the area of Syria through which he travelled.

169. The climatic information for Syria is based on Fisher, W.B., The Middle East, pp. 384-389.
East of the crest of the coastal ranges, rainfall diminishes sharply. This is an example of the control of rainfall by relief. In the areas just east of the coastal ranges, climatic conditions approach those existing in steppe areas. The areas where this phenomenon occurs are the Ghāb of Syria and the Bekaa Valley of Lebanon. Parts of these areas receive moderate or somewhat deficient rainfall and have a hot summer and a cold winter. Ksara, located in the Bekaa at an altitude of about 3,000 feet, presents a worth-while example. The coldest month is January, having a mean temperature of 41 degrees F. The hottest month is August with a mean of 81 degrees F. In winter the diurnal variation is 17 degrees F, in summer 20 degrees F. The annual rainfall averages 25 inches.

In the Anti-Lebanon range, just east of the Bekaa, rainfall is heavier. To the east of these mountains, steppe conditions again prevail. In this area temperatures have a more pronounced variation, both diurnally and annually. Data are available for Aleppo. The coldest month has a mean temperature of 42 degrees F., the hottest month, 88 degrees F. Diurnal range is 17 degrees F. in winter, and 30 degrees F. in summer. Annual rainfall varies from 10 to 17 inches.

After laying waste Damascus, Timur marched north to Turkey, and east to Iraq. The climate of Iraq presented its problems to Timur as did the climates of the other areas he travelled through.

170. The climatic information for Iraq is based on Fisher, W.B., The Middle East, pp. 350-353.
In the lowland region of Iraq, there are two marked seasons - a dry, intensely hot summer which lasts from May to October; and a relatively cold, damp winter lasting from December to March. There are short periods of spring and autumn in between.

The summer monsoonal low over the Persian Gulf and north-west India gives rise to summer winds from the northwest which are known as the Shamal. This is dry air, which has moved over an arid region. The constant insolation of the sun causes shade temperatures to exceed 95 degrees F. on most days, while temperatures of 120 degrees F. are not unusual. Along the rivers and marshes intense evaporation causes the relative humidity to be high. This intense evaporation also lowers the temperature slightly. The nights are marked by a temperature drop which brings some relief to the unpleasant temperatures. During the day dust is blown through the region by the Shamal. This is the strong northwest wind which is prevalent during the summer season.

Winter temperatures are affected in the northern basin by the proximity of snow covered mountains located to the north and to the east. The southern area is milder due to latitude and the influence of the Persian Gulf. In the south, "hot" spells occur, but this is not true of the northern basin. Diurnal variation is of great importance, but it is smaller in the north, (16 degrees F.) than for the rest of the region, (20 degrees F.). Frost occurs in winter along the rivers and lowlands. Cold weather is usually brought to this area by the
Siberian anticyclone which sometimes extends down over Iran and adjacent regions.

The high humidity, along the river banks, in summer, is responsible for a high incidence of heat stroke and heat exhaustion. This fact, alone, would be sufficient to influence the commander of a military unit, operating in this area, to want to avoid operations during the summer season.

Winter is the only season of rain. Rain is usually the result of the arrival of moist air from the Mediterranean. This air reaches Iraq after having passed over either Anatolia or the Levant. Naturally, it has lost much of its moisture upon arrival. The amount of rainfall varies in the lowlands from 1 to 20 inches, but when this moist air crosses the Zagros Mountains, rainfall may exceed 40 inches.

The period of maximum precipitation is usually late January or early February. There is no rain between the end of May and the end of September. Over most of the country rainfall does not exceed 5 inches, but towards the mountains, on the east and north, there is a marked increase. Where the amount of rainfall exceeds 15 inches, cultivation can proceed without irrigation. The 15 inch isohyet marks the line between desert and cultivated land. This also has a distinctive effect on the pattern of settlement within the country.

Timur left Samarkand in September 1399 and moved west in order to restore order in the province of his son, Miranshah. The winter of 1399-1400 was spent at Qarabagh. The early spring of 1400 was spent devastating Georgia. In August he moved west
by way of Aynik, Erzerum, and Erzinjan to Sivas which he captured, and then moved south toward Syria. Aleppo fell in October 1400, and he moved on toward Damascus. Damascus was finally destroyed in March 1401 and Timur moved north to Turkey, then east into northern Iraq and then south to Bagdad. The campaign ended with the sacking of Bagdad, then Timur turned his attention to the Georgians until he was forced to return to winter quarters at Qarabagh.

Broadly speaking, the factors of weather which a military commander must consider, include: visibility, trafficability, and extremes of temperature. Rain affects visibility under all conditions, whether by day or night. The same is true for snow. Whether or not fog can be expected is also a consideration. In military operations today, the considerations of weather and climate are more involved than in the time of Timur. Today the ranges of weapons are constantly being increased, so visibility assumes an even greater importance. In Timur's day a fog, or considerable dust carried by the wind, might have been used to screen movement and thus gain surprise. With the weapons in use today, support operations such as air support and artillery support would be greatly hampered without visibility.

Since Timur's army was primarily an army of mounted men, we can assume that they did not have the problems of trafficability that modern wheeled and track vehicles encounter in moving across an area. Often times modern vehicles are practically

road-bound. The extent to which weather affects the ability of an army to move is always an important consideration. We know, for example, that Timur purposely avoided any attempts to move through the mountain and high-land areas during the season when snow blocked the way.

Temperature determined what type of clothing, food, and the amount of water the individual soldier must have to accomplish his mission. Of course, rain and snow make it imperative that he be able to protect himself against the elements and still be able to get his job done. The amount of humidity is important, for it tends to make the effects of temperature more pronounced. Everyone is familiar with the effect of dampness during the cold season. The diurnal variation of temperature is a consideration which must not be overlooked. If it is great, the individual soldier will need extra blankets or sleeping equipment to see him through the night. All of these considerations are imposed by the climate and affect transport, individual efficiency, food and water needs, clothing, and care of the equipment which armies carry with them.

When an operation continues over a period of time in a large area having varied topography, a knowledge of the climate of that area plays an important part in planning the operation. This statement is as true in reference to Timur's campaign into the Middle East as it is today.
VI TIMUR'S CAMPAIGN INTO THE MIDDLE EAST

Timur's campaign into the Middle East lasted two years from the time he left his capitol in Samarkand and moved to Azerbaijan and Qarabagh where he wintered before moving on into Asia Minor and then into Syria, back to Bagdad, and then back to his bases to prepare for his next campaign which was against Bayazid I, the Ottoman Sultan of Turkey.

By this first campaign Timur succeeded in isolating Bayazid from his allies to the south, namely Syria, Egypt and Iraq. Even before he moved into Asia Minor, Timur had devastated Georgia to make his right flank and rear secure from attack from that direction.

When Timur attacked Sivas, Bayazid's son, Sulayman, the ruler of that territory, requested assistance from his father who was preoccupied with his siege of Constantinople and hence did not come to his assistance. After the fall of Sivas, Timur turned his efforts to the south toward Syria which he ravaged in a few months time, crushing the Syrian and Egyptian armies. After that his attention was directed toward Bagdad which was the last important place which might be able to threaten his position during his coming campaign against Bayazid. After destroying Bagdad he returned to his base to make preparations for his campaign against Bayazid. The campaign into Syria and Iraq had isolated the Turk, Bayazid, from

his allies in Syria, Egypt, and Iraq. Timur had successfully dealt with these allies individually and was now able to direct all of his attention to the destruction of Bayazid’s forces. This campaign into the Arab Middle East was, then, in effect, a preliminary campaign to set the stage for the mammoth struggle with Bayazid.

The route which Timur followed during this campaign has been outlined; also the climatic and physical characteristics of the countries involved along the route have been discussed. It is only fitting that the battles, by which Timur accomplished his isolation of Bayazid, should be discussed.

When Timur turned toward Sivas, Amir Sulayman appealed to his father, Bayazid, for help. Bayazid could not send any assistance at the time so Sulayman set about strengthening the defenses of the city. As Timur approached, Sulayman relinquished command to his generals and decided that his father needed his services in the siege of Istanbul.

Timur came to the city of Sivas with his army on the 17th day of the month of dhu-al-Hijjah in the year 802 (9 August 1400). And when he had halted he said: "I will storm this city on the eighteenth day."

The Tartars assailed the walls of Sivas, mined under the walls, and propped up the foundations. Then the props were burned and whole sections of the walls came tumbling down.

175. Lamb, op. cit. p. 570.
MAP IV

PROVINCE OF HAM

Campaign from Siwn to Aleppo

Timur's Route

Author's Route
Timur pressed the siege vigorously. The garrison sent word that they wanted to negotiate. Terms were agreed upon. Timur guaranteed safe conduct to those who were to deliver the agreed upon sums of gold and silver to him. He said that he would not shed their blood. As soon as Timur had received the money, he notified the people of Sivas that he wanted to discuss a matter of importance with the chief leaders of the city. He said that what he wished to discuss with them would prove to be of great advantage to them. So, many of the leaders came out to see him, assuming that the safe conduct, which he had previously guaranteed, still applied. Unknown to these leaders, Timur had had a large number of deep pits dug. When these men were lured outside the gates, he told them it was true that he had promised not to shed their blood, but that he was going to have them smothered alive in the pits. He also informed them that he intended to sack their city. So Timur buried the chief men of Sivas alive. Next, his army breached the walls of the city, moved inside and levelled most of the houses, leaving the city a heap of ruins.

One account states that soldiers were buried at Sivas:

"---when the storming (of the city) was ended, when he had the soldiers in his power, he cast them all in chains and ordered a crypt under the earth to be dug for them, and ordered them to be hurled alive into these pits"...177

Estimates of the number of individuals buried differ.

176. Le Strange, Clavijo, p. 133.
177. Sanders, op. cit. p. 117.
Arabshah, states the number was three thousand. Browne, says
Timur caused all the Christian and Armenian soldiers to be
buried alive and that the number was four thousand. Lamb says
that the Mohammadans of the city were spared, but that four
thousand Armenian cavalrymen, who had harassed Timur's army,
were buried alive in the moat.

After this destruction, Timur ordered the fortifications
of Sivas repaired and moved to the south. The same day Timur
departed, Sulayman, son of Bayazid, arrived on the scene with
an army of two hundred thousand horse, but he failed to catch
up with Timur.

Timur moved to Bahasna, besieged it for twenty-three
days before it fell, and then crushed the city of Malatia.
Next he advanced on Arrum (Edessa, the modern Urfa) and next
came to Aintab, and from Aintab he approached Aleppo.

When news of Timur reached Syria and Egypt, an army was
assembled at Aleppo to stop him. This army moved to Aleppo in
the month of Safar in the year 803, (21 September - 19 October
1400).

The plan for the defense of the city advanced by Tamar-
dash, the Governor of the city, called for the army to move
outside the city and attack Timur. ..."the engagement should

178. Ibid, p. 117.
180. Lamb, op. cit. p. 570.
181. Le Strange, Clavijo, p. 133-134.
183. Ibid, p. 118.
be in a place where it is impossible to leave the battle and there is room everywhere for fighting." I presume that the Governor meant by this that there would be more room to maneuver outside the city, and it should be in a place advantageous to the defending army, not necessarily in a place where it is impossible to leave the battle which would appear to put the defenders at a disadvantage.

Actually, Timur may have been trying to lure the defenders out of the city of Aleppo. There are accounts which do not speak well of the quality of Timur's followers or their prowess in battle. One account relates that when Timur first arrived outside of Aleppo a band of about 2,000 Tartars advanced to fight. These 2,000 were repelled by 300 "Lions of Syria", "who broke them with broad swords, and scattered them with spears and dispersed and repelled and split them and put them to flight".

When Timur moved from Aintab toward Aleppo he moved slowly. Each day he would advance only a short distance. At the end of the day's march his army would dig trenches and erect barriers around their camp. The Mamluks and Syrians interpreted these actions as signs of weakness, and moved out of their city to meet Timur.

No doubt, Timur hoped that the enemy, after having observed his movements and tasted easy victory, would believe that

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184. Ibid, p. 121.
185. Sanders, op. cit. p. 123.
186. Lamb, op. cit. p. 571.
his army was weak, poorly equipped, manned by soldiers lacking in valor, and would be easy to defeat.

Timur arrived at Aleppo on the 7th of Rabi I (26 October 187 1400). On the 11th (30 October 1400) the two armies met, the defenders moved toward Timur to drive him away, and Timur's army moved forward to meet them "...in front the lords and the 188 elephants of war". Arabshah gives the following description of what happened:

"...when night had come on, (Timur) drew up his armies, which he stretched around them and sent skirmishers against them and opposed the vanguard to them and kept them engaged with his front ranks, while the rest went round them and so came upon them from the rear and the right and the left". 189

While the battle was raging, the right wing of the defending (Syrian) army took to flight. Timur's army, which had managed to get behind these troops, attacked them from the front while those from whom the Syrians fled attacked them and harassed them from the rear. These defenders headed for the city, everyone trying to get through the gate at once. The result was that the weak and wounded were trampled to death in the rush, the gate was blocked with dead, so that many had to disperse and seek refuge in the countryside.

Then Timur advanced on Aleppo and entered the city, the governors having taken refuge in the Citadel.

Arabshah quotes the details of Aleppo from the Chronicle

188. Ibid, p. 123.
of Ibn-al-Shihnah who gives the date of 14 Rabi' I (2 November 1400) as the date Timur took the fort. He says... "after giving a promise of safety and an oath he took the fort...", the fort surrendered.

The same source gives the composition of the defending Army:

"...Tamardash...had armies of the cities of Syria, the Army of Damascus with its Governor Saidi Sudun and the Army of Turabulus with its Governor Al Muqar Al Saifi Sheik Al Khaski and the Army of Hama with its Governor Al Muqar Al Saifi Dgmaq and the Army of Safad and others,..." 192

Timur remained in Aleppo until the end of Rabi' I (20 October - 18 November 1400) and then during Rabi' II (19 November - 17 December 1400) he started south. He went by the route of Hama, Homs, then up the Bekaa to Baalbek and from Baalbek he went to Damascus.

Egyptian forces arrived in Damascus on Thursday, 6 Jumada I, 803 A.H., (23 December 1400 A.D.). Fischel quotes Sharaf-al-Din, Vol. III, p. 313 as the authority that Timur left Baalbek on 3 Jumada I, 803 A.H. (20 December 1400 A.D.). From this we have the date of the arrival of the Egyptian Army in Damascus, and the date Timur started toward Damascus from Baalbek. So the Egyptian Army was, no doubt, in the Damascus area when Timur arrived.

193. Ibn-al-Shihnah says Timur departed from Aleppo on 1 Rabi II, but Ibn Arabshah gives the date as 10 Rabi II.
195. Ibid, p. 56.
The Egyptian Army camped at a place known as Qubbat Yalbugha, about two miles south of the city walls, near the end of the modern Damascus race track. Timur camped on a hill overlooking Qubbat Yalbugha and remained in the vicinity for some time. During this time each army observed the other. The name of the hill where Timur was encamped is Qubbat Sayyar. It is located near Rubwa about two miles west of Qubbat Yalbugha.

The Egyptian Army was in the area for about two weeks after it went into camp. But Faraj left hurriedly for Egypt on 21 Jumada I, 803 A.H. (7 January 1401 A.D.), and the army followed. During this period Timur moved his camp south to Qatana, about twelve miles west of Qubbat Yalbugha and later to Kiswa, about ten miles south of Qubbat Yalbugha. During this time his troops ranged the area from Daraiya, four miles west of Qubbat Yalbugha, to Lake Hula, and even penetrated the Hauran.

During the period that the two armies were in the area there were some minor engagements. These engagements were clashes between the advance forces of the armies. One occurred on 25 December, the same day that Sultan Faraj encamped at Qubbat Yalbugha. According to Arabic sources, one hundred Egyptian horsemen routed one thousand of Timur's advance guard.

A more serious battle took place on 15 Jumada I, 803 A.H.

196. Ibid, pp. 30, 57.
197. Ibid, p. 57.
198. Ibid, p. 57.
199. Ibid, p. 58.
(1 January 1401). During this battle the Egyptian Army was able to prevent Timur's army from breaking through to the city. Success seemed at hand for the left wing of the Egyptian Army had been broken and put to flight, but the right wing held firm and repulsed a violent attack which was directed personally by Timur.

Another battle was fought south of Damascus in the vicinity of Kiswa on 19 Jumada I, 803 A.H. (5 January 1401). Timur had left his camp moving south toward Shaqhab and concealed his forces behind the hill of Kiswa. Thinking Timur had taken flight some of the Egyptians followed to attack him from the rear, but Timur's forces emerged from behind the hill, and, after making a stand, the Egyptians were forced to flee in disorder back to the city. Timur's forces pursued the Egyptians, killing and pillaging, but he did not pursue them all the way to their camp at Qubbat Yalbugha. He then camped at Kiswa.

In spite of these engagements the main Egyptian forces were still at Qubbat Yalbugha. There was evidence some of Timur's men were tired of the long campaign. This conclusion was arrived at by the Egyptians after they interviewed deserters from Timur's army. When soldiers desert to the enemy it is usually an indication of poor morale, and often times something more serious. So the Egyptians became confident of their ultimate victory over Timur. Among the deserters was no less a

201. Ibid, p. 58.
person than Timur's own grandson, Sultan Husain.

Timur had offered to make peace, free his Syrian prisoners, and leave Syria if Atlmish, one of his emirs, who had been captured at Aleppo, was released. So this state of affairs did not seem to indicate the destruction of Damascus.

On Thursday 20 Jumada I, 803 A.H. or 6 January 1401, the two armies were drawn up in battle array facing each other. Apparently a major battle was about to take place. The place of the would-be battle site was to the south of Qubbat Yalbugha. Timur's army was drawn up in seventy ranks, according to al-Aini. According to Sharaf ad-Din it extended three or four leagues in breadth, and had a rank of elephants in front. Engagements took place on both the right and the left and lasted all day. During the day, a great commotion among the Egyptians was observed. News had arrived which caused arguments among the emirs as to what to do. Timur noticed the Egyptian emirs standing in groups; they did not advance even when he, in person, went toward them. They did not seem to be interested in him or in the battle, so he surmised that they were about to flee. The great commotion apparently resulted when the report of a plot to make a certain Sheikh, Sultan in Cairo, reached the emirs. Ibn Khaldun says:

"Then the Sultan and his chief emirs learned that some

204. Ibid, p. 59.
207. Ibid, pp. 59-60.
of the other emirs were engaged in a seditious plot and were planning to flee to Egypt to bring about a revolt there. So they agreed to return to Cairo, fearing the defection of their followers there and the consequent overturn of their government". 208

The date of the disappearance of the seditious emirs is believed to have taken place on the day before the engagement occurred. This date was 19 Jumada I, 803 A.H., (5 January 1401). The Sultan left Qubbat Yalbugha on the night of 21 Jumada I, 803 A.H., the night of 6-7 January 1401, and overtook the fugitives at Gaza.

The troops of Faraj's armies, being left without their Sultan and believing that he had departed for Egypt, followed his example and started for home. This left no force outside the city except Timur's, and left the defense of the city to the inhabitants. Only a few lesser emirs remained in the city, so now the city depended upon the cadis for leadership and advice. The people of Damascus closed the city gates on the morning after Faraj's flight, 21 Jumada I, 803 A.H., or 7 January 1401; and even sent out a force which attacked the enemy.

The judges and jurists met. It was agreed to ask Timur for the security of the homes and families of the city. The viceroy of the Citadel objected to this decision, but despite this Timur was contacted. He promised immunity for the contact, and sent him back to summon the notables of the city.

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209. Ibid, p. 60.
210. Ibid, p. 60.
211. Ibid, p. 62.
The notables and cadis met with Timur and received notes of security. It was agreed that the city should be opened the following day, normal affairs should proceed as usual, and one of Timur's emirs should enter the city and take up the reins of authority. On Monday 24 Jumada I, 803 A.H., or 10 January 1401, Timur took possession of the city. He appointed a guard at each gate and proclaimed amnesty. This taking possession was in accordance with the terms previously mentioned. Later in the day the cadis of the city met with Timur to formalize the submission, and to make effective the amnesty which Timur had granted previously in his note.

Shortly after Timur took control of Damascus he proceeded to attack the Citadel. The Citadel was commanded by a Viceroy appointed directly by the Sultan in Cairo; he was independent of the other city officials and was directly responsible to the Sultan of Cairo. This probably accounts for the fact that the Citadel held out against Timur and resisted so stubbornly that some time elapsed before it surrendered.

Accounts vary as to how long the Citadel was able to hold out, but the number of days is relatively unimportant. What is important is that it fell; that it was unable to hold out against the Mongols.

After the defences of the Citadel had been shattered, and it was evident that no relief from Cairo could be expected, the

Viceroy surrendered. He had requested and received a promise of amnesty. The promise was not kept, the Viceroy was put to death.

During the time that the Citadel was being attacked, Timur was levying tribute on the city. A million dinars were first collected without difficulty. Seeing this, Timur raised the anti to ten million which was also collected and delivered to Timur. At this point he claimed that due to a difference in accounting, only three million dinars had been paid leaving a balance of seven million due. The original ten million had been raised by a levy on practically everything in Damascus, including pious foundations, and the collectors had resorted to the use of physical force to collect it.

Then Timur demanded that the money, baggage, and weapons left in Damascus by the armies of Egypt be delivered up. He also demanded the money of merchants and other prominent people who had fled Damascus. All animals in the city - mules, horses, donkeys, and camels - were to be surrendered. The number of animals surrendered amounted to 12,000. Also, all arms of every description were to be surrendered.

Timur claimed that seven million dinars was still outstanding. When his collectors reported that the city had been drained of money, that no more money was to be found, his response was to put them in chains. He kept them in chains.

216. Ibid, p. 92.
218. Ibid, p. 95.
until they agreed to prepare lists of all quarters, divisions, and dwellings of the city.

These lists were given to Timur's emirs who took over the task of collecting money. It was at this point the rape of Damascus started.

Fischel says: "Then began a period of barbarous torture, outrage, rapine and murder perpetrated on men, women, and children which lasted nineteen days..." (until 29 Rajab, 803 A.H., or 15 March 1401).

After the emirs reported that everything possible had been seized, the troops were allowed to enter the city and it was plundered for three more days. It was during this period that the city was fired, whether by accident or intent has not been fully determined. The Great Mosque was damaged severely during this fire.

After the rape of Damascus, Timur left the city on 3 Sha'ban 803 A.H. or 19 March 1401. He marched along the route which runs east of the Anti-Lebanon Mountains to Homs, Hama, and Aleppo. When he returned to Aleppo he ordered the destruction of the city. Here is a brief description:

"And on the seventeenth of Shaban in the same year Tamerlane, returning from Syria, reached the high mountains of Haleb, but he did not enter, but ordered those who held it for him to lay waste and burn the city, which they did, ... we made our way to tomb of

220. Ibid, p. 96.
221. Ibid, p. 96.
222. Ibid, p. 102.
Husein, ... and halting there we saw the fire, with which the whole city blazed, and after three days no one was left in it and when we returned to it, we saw no one therein; ... we could not remain there because of the stink and solitude, or for the same reason, walk through the streets.  

From Aleppo, after taking the things he had stored in the fort and destroying the city, he turned to the Euphrates which he crossed. From the river he proceeded to al-Ruha (Urfa) and from there to Mardin. After besieging Mardin for a period of about ten days, 10-20 Ramadan (24 April - 4 May 1401), he left without taking the fort but laid waste the city. Then he descended toward Bagdad by way of Nisibin and Mosul. Both of these cities he destroyed en route.

Timur, after crossing the Euphrates, received a message which sent him to the southern road, i.e. the road toward Bagdad. He may well have been involved in the siege of Mardin when he received this message. It was not his policy to abandon a siege once he had begun the operation, but in this case he did. The message from Bagdad might have caused him to abandon the siege. The message he received was that Bagdad would not surrender unless Timur himself appeared before the city.

Before Sultan Ahmad of Bagdad fled to Bayazid in Rum, he appointed a governor of the city by the name of Faraj. These instructions were left with Faraj:

"But especially he (Sultan Ahmad) enjoined him (Faraj) not to shut the gate against Timur, or to draw a curtain

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225. Sanders; op. cit. pp. 164-165.
before what he sought or unsheath the sword before him or oppose his will wither by denial or by demanding explanation". 227

From these instructions it would appear that Faraj was expected to submit to Timur, and to make every effort to please him. Another version of the orders left by Sultan Ahmed:

"...That if Timur appeared in person before the city it would be surrendered; but unless Timur came, it would hold out until the Turks could advance against the Tartars". 228

These instructions are conflicting with respect to Timur's presence. Regardless of what orders which were left for him to surrender the city, Faraj chose to defend Bagdad. He defended it before and after Timur's arrival.

The troops who sent this message to Timur were the troops which he had dispatched to Bagdad from Damascus. When Timur sent these troops to Bagdad they numbered about twenty thousand soldiers.

When Timur received the message, he set out for Bagdad. His arrival before the city was announced to the defenders, but no surrender or even negotiations to surrender were forthcoming.

Summer was fast approaching and perhaps the defenders felt secure behind their walls. Whatever the reason, the defenders kept the gate locked and prepared to defend the city.

At this time, Timur's main strength was gathered at his base in Tabriz against the coming of the Turks. He had planned 227. Sanders, op. cit. p. 167.
228. Lamb, op. cit. p. 577.
to be in Tabriz at the time, but he had fallen behind schedule. The heat of the summer had already reached Bagdad, and now Timur was faced with an important decision.

Timur considered Bagdad to be so important that he decided he must take it. He sent orders to Shah Rukh to move down from the north with ten veteran divisions, the engineers, and a siege train. A corps of observation was placed in Asia Minor to keep the activities of the Turks under surveillance. Orders were sent to Prince Muhammed, in Samarkand, to move west with the Army of Samarkand. Even now the preliminary work was being done for the campaign against Bayazid the following year. The ordering of the army of Samarkand west was a precautionary measure against the possible approach of Bayazid. This step was necessary to protect Persia, since Shah Rukh's leaving the Tabriz area would leave that area almost denuded of troops.

With the arrival of Shah Rukh's reinforcements the number of the attacking force at Bagdad reached one hundred thousand. A review was held to display this strength to the defenders and inhabitants of the city, but no surrender was forthcoming.

A pontoon bridge was thrown up across the Tigris below the city. This allowed more freedom of movement for the besiegers, and also gave them an opportunity to stop anyone attempting to escape down the river. The suburbs of the city

231. Ibid, p. 578.
were leveled, and the whole circuit of the city was closely invested. Siege engines were placed in well-chosen spots so that stones could be shot at the walls and down into the city.

Miners began burrowing under the foundations of the walls and after a few days the outer wall fell, but the defenders had erected inner walls and protected them with fire missiles.

As these preliminaries were taking place, the heat was becoming more and more unbearable. It became necessary to dispense with operations from mid-morning to late afternoon. The summer heat of Bagdad was too hot for siege operations during this part of the day. Even "...the grass was withered and the wells had dried up".

It was this heat which Timur used to defeat the defenders of Bagdad. It has been mentioned that during the heat of the day operations were suspended because of the heat. This applied to the defender as well as the attacker. Timur struck his blow at noon when the defenders, except for a few guards, had deserted the wall.

Picked Tartar troops, who had concealed themselves, ran out from their hiding places (probably pits dug beneath the ground and then covered over and camouflaged) with ladders and succeeded in taking the walls.

There is no doubt that Timur achieved surprise in his attack which breached the defences of the city.

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236. Lamb, op. cit. p. 579.
"One afternoon when the defenders had retired into their houses to escape the pitiless blaze, leaving merely their helmets on staves showing over the parapets to deceive the besiegers, Tamerlane's soldiers climbed the walls and forced their way into the town". 237

As the Tartars gained an entry into the city, the rest of them in the vicinity took advantage of this opportunity and exploited the situation by moving forward into the city. By mid-afternoon, in spite of the terrible heat, the Tartars had become the masters of part of the city, and were driving toward the river. The rest of the city would not withstand them.

All authorities seem to agree that about ninety thousand people lost their lives at Bagdad, and that Timur had built one hundred and twenty towers from the heads of the victims. Timur ordered the walls of the city to be destroyed, and all buildings to be pulled down or burned except mosques, schools, and hospitals.

The destruction of Bagdad marked the end of Timur's campaign into the Arab Middle East. After this victory he hurried back to Tabriz, accompanied by Shah Rukh and a few of his generals. The rest of the army followed at a more leisurely pace. He wanted to return his strength to the area of northwest Persia. The remarkable thing which this campaign accomplished was the elimination of all of Bayazid's allies before Timur faced him. Timur was able to accomplish this before Bayazid could come to their assistance.

239. Prawdin, op. cit. p. 493.
VII MILITARY CONSIDERATIONS

While the importance of the geographical and climatic considerations involved in Timur's campaign into the Arab Middle East is not underestimated, there are some other considerations which need to be investigated in order to make the overall picture of his campaign more comprehensible. In this chapter the composition and organization of Timur's army will be mentioned. Also it will be worthwhile to mention something of the tactics employed at that time. It will also be worthwhile to discuss operations in deserts, as well as in mountain and cold areas. Timur operated across desert areas, but even the great conqueror did not continue his operations in mountain areas in winter. These are some of the considerations which will add to an understanding of his campaign into the Arab Middle East.

The Spaniard Clavijo, after he returned from his embassy to Timur, left a description of the organization of the army:

"The host is divided into Captaincies: and there are captains of one hundred and of one thousand and of ten thousand men. Over the whole force is a single commander-in-chief....When any warlike expedition is on foot those captains each are called on, and by the number sent for it is known how great the force assembled is to be." 241

The terms Division and regiment appear in Lamb's work. A division was known as a tuman, and Division Commanders were known as Amirs of Tumans. There were greater emirs and lesser emirs, depending on the number of troops commanded, but officers were known as emirs.

241. Le Strange, Clavijo, p. 300.
The mode of life of the Tartars, from whom many of Timur's followers came, gives us an insight into their potentialities as soldiers. Clavijo described the life of a group which he encountered near Mashhad in the vicinity of the Tejend River.

"These Chagatays with whom we were thus guests are a nomad folk living in tents and booths, (yurts) for indeed they possess no other permanent habitations, both summer and winter living in the open. In summer they pass to the plains beside the river, where they sew their crops of corn and cotton, and tend the melon beds....They also raise crops of millet, a grain which forms their chief food, and which they eat boiled in sour milk. In winter Chagatays migrate to lands where the climate is fairly warm. After the like fashion indeed all the host of Timur moves from camp to camp living in the open, summer and winter. But since they fear no enemy they do not need to keep together for safety and the lord Timur will proceed with his own personal horde apart, accompanied by his servants and chief nobles and courtiers, with his wives and female relatives, while the rest of the horde passes elsewhere. Thus do they spend all their lives: for these (Tartars) possess great herds, namely of camels horses and sheep, also of cattle but of cows only few". 243

It is easy to visualize people such as these, who lived almost all of their lives outdoors, as being rugged, brave, independent, and vigorous people. They were excellent horsemen since they moved frequently. This type of man provided the basic material for Timur's army, and could be shaped into excellent cavalry soldiers.

When Timur called his people to go to war they assembled and travelled with him. Since they were to some extent nomadic, they travelled with their flocks, herds, worldly possessions, and

families. As they moved these flocks and herds served to supply food for the horde.

The food and eating habits of these people give us an insight into how we might expect them to live while on the march.

"In camp should they have victuals in plenty they eat their fill; if they have lack, milk and meat without baked bread suffices them, and for a long season they can thus march with or without halting to prepare bread stuffs, living on (the meat and milk of) their flocks and herds. They suffer cold and heat and hunger and thirst more patiently than any other nation in the whole world: when food is abundant they gorge on it gluttonously, but when there is scarcity sour milk tempered with boiling water suffices them, and of this for sustenance there is never a lack." 245

A diet, such as the one described by Clavijo, which is derived from animal products or from the animals themselves, which accompany the Tartars on the march, would certainly contribute to the speed and mobility of a moving force. At the same time, the individuals ability to withstand thirst, hunger, heat and cold would certainly contribute to his ability to accomplish his mission under the most adverse conditions and circumstances. The main supply problem for an army such as this would be grazing for the animals, and water for both men and animals. The army lived off of their animals if necessary, and off of the country side if possible.

The fighting force which accompanied Timur was not composed of men only. There were women who took part in the battles

244. Ibid, p. 191.
Often children were born on the march, grew up under these conditions, followed the army, and knew no other life.

"There were also in his army many women who mingled in melee of battle and in fierce conflicts and strove with men and fought with brave warriors and overcome mighty herocs in combat with the thrust of the spear, the blow of the sword and shooting of arrows; when one of them was heavy with child and birthpangs seized her, while they were on the march, she turned from the way and with-drawing apart and descending from her beast, gave birth to the child and wrapping it in bandages, soon mounted her beast and taking the child with her, followed her company; and there were in his army men born on the march and grown to full age who married and begot children and yet never had a fixed home." 246

Timur was attracted to men of great learning. He admitted that he was intimate with learned men, devoted to them, and that he was delighted with their company. After his conquest of many places, it was not unusual for him to gather men of learning, as well as artisans, and send them back to Samarkand. Also, when he travelled with his army, men of learning travelled with them. These men performed various services for him and the army, and served as advisors to him. Arabshah gives us the following details:

"There were among them also men of intellect and learning and ability, poets and those excellent, doctors, and among them defenders of the truth and students of the sciences and subtle explorers thereof and men who in every sort of science and its full investigation com- bined the double path of inquiry, logic and perception..."

We have seen what type of people comprised Timur's army, and how it was organized. The next question which arises is:

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246. Sanders, op. cit. p. 324.
how was it employed?

Certain principles of the art of war are attributed to a Tartar treatise on the subject, and are found in the book, *A Handbook of Syria*, London. These principles are interesting for what light they can throw upon the discussion of tactics and the accounts of the battles which the army fought during the campaign in the Middle East. The principles are included below:

"It is there laid down as conditions of military success (1) that a battle should be fought on level ground, unbroken by natural obstacles and with ample room for extension in line; (2) that a sufficient supply of water should be available; (3) if possible the ground should slope towards the enemy; (4) above all, the sun should not be in the face of the troops as they advance."

These principles apply to battles fought outside of forts and cities. The best example of such a battle during the Middle East campaign was the battle of Aleppo. The most famous battle, in which water played a decisive role, occurred not long after the end of the Middle East Campaign. The site of the battle was near Angora where Timur defeated Bayazid in July 1402.

Timur, during his approach toward western Asia Minor, had studied the hill country west of Sivas and had found it unsuitable for cavalry operations. He decided to avoid this area, so he turned south and marched along the valley of the Halys River. Bayazid had moved east of Angora and was awaiting Timur on ground favorable to his infantry. Timur, by marching south,
succeeded in getting behind Bayazid's army and marched on to Angora where he occupied Bayazid's camp. The small river which runs into Angora was dammed to change its course to run behind the position of the Tartars, and the only other water, a spring, available to Bayazid was polluted. The outcome of the battle of Angora is well known. The part that water played in the outcome is significant. Bayazid's forces arrived on the scene, tired and thirsty after a long forced march, to find their camp occupied by the enemy, and even water denied them.

How did Timur employ his army against the enemy? Lamb says that Timur's secret of victory was that he kept his army in constant readiness to maneuver. He kept his forces in motion while he waited to profit from his enemy's mistake so as to be able to move his stronger units against the weakness of the enemy.

Timur usually placed his veteran cavalry on the right wing. It was composed of advance elements, the main body, and had its own reserve, and was usually commanded by one of his best emirs.

He often held his left wing and attacked with his powerful right wing in a sweeping movement. When the right wing had broken through the enemy line, he would then allow the left wing to advance.

When he held his left wing refused, he would not allow it to advance. By using the right wing to attack he was

250. Lamb, op. cit. p. 590.
utilizing the principle of mass, which means that he placed superior combat power at the point where he believed that it could overwhelm the enemy. In order to be able to apply the principle of mass, it is also necessary to use the principle of economy of forces. This means that only the necessary number of soldiers should be used at a given point at a given time, so that numbers, skills, and support could be massed for use at another point. This probably accounts for the fact that he held his left wing refused since he had to use the principle of economy of force to build up the strength of the right wing. So until the enemy had been weakened, the left wing could have advanced only with great difficulty.

Timur stationed himself to the rear of the center where he also kept his strong reserve forces, these were under his personal command. These forces were to hold their ground. In this way the reserve acted as a pivot for the two wings. The reserves were not usually committed until a decisive moment near the end of the battle after the cavalry had had a chance to set up a situation which the reserve could exploit into victory.

Timur could swing his whole front, pivoting it on his reserves. By swinging his front, he could advance obliquely after the right wing. The center followed the right, and the left followed the center. The formation of his army was a permanent one, each unit knew its position and duties.

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Timur's divisions attacked in a very close formation, much closer than was customary at that time. What this amounted to was that the attacking force was massed to the extent that when in actual contact the weight of two men could be thrown against a single man. Furthermore, units in close formation were easier to control than extended units.

The foregoing serves to give us an idea as to how Timur deployed his army in the field. Many of his battles were sieges. For example, the destruction of Bagdad was accomplished after a siege.

Sharaf-al-Din Ali Yazdi (d. A.H. 852/A.D. 1454), who travelled about with Timur and was present at several of his later battles wrote a history in which he described the fort of Takrit. This description will suffice to show us the manner in which Timur attacked fortified places.

Timur, before surrounding the fort, drew up his army in a display of force, and the war drums sounded the attack. Then the sappers began to undermine the outworks. Battering rams and machines that threw large stones were put up near the walls. Timur set up his headquarters near the lines to lend the example of his personal leadership. The walls of the fort appeared impregnable: they were either part of the bed rock, or, where bed rock did not exist, a masonry wall had been constructed which in height, depth, and solidity seemed to equal the masses

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254. The following description is based on Petit de la Croix's translation of Sharaf-al-Din as taken from Malcolm, op. cit. pp. 466-469.
of stone which these walls connected. The Tartars reached the foot of the wall and by a stroke of luck were able to take a key tower, thus forcing the garrison to have to abandon their outworks and withdraw into the fortress. A general attack was ordered: Specific zones were assigned to the units for the undermining, and the work went on earnestly. Seventy-two thousand men were thus employed for many days. The work went on incessantly. When the place had been undermined the troops filled the cavities with combustibles. These combustibles were dry wood and pitch. These were placed in the undermined cavities on the Sixteenth day after the beginning of the siege. Fire was set, the props gave way, the rocks and walls were rent, and fell taking with them many of the strongest towers. The Tartars rushed in through the openings to attack the defenders who managed to retreat into an inner citadel. This inner fort Timur ordered undermined in the same manner in which the outer walls had been breached. This work continued for another five days and the citadel was taken.

Sometimes in mining operations such as have been described, instead of causing the walls to tumble a force would dig under the city and burrow up inside the city, hoping to be able to enter without being discovered. If this type of operation is successful, a gate was siezed and opened and the forces outside the city poured in.

The organization and composition of Timur's army have been discussed. Its operations against another army and against a fortified city or fort have been discussed. Much has been
said about the deserts of the Middle East, so a brief discussion of desert operations should be worthwhile. Timur was required to cross the deserts of Turkestan and Iran in order to reach Turkey. After his victory at Damascus he dispatched troops east, across the Syrian desert to Bagdad.

A definition of a desert is in order. We usually think of a desert area as an arid area with a lot of sand. Actually the amount of precipitation is what determines whether land is desert or not. The usual figure with reference to rainfall is ten inches or less per year. Another characteristic of deserts is the high evaporation rate. Since there is little rainfall and the evaporation rate is high there is usually little or no vegetation in deserts. A desert is usually defined as an arid area having little or no vegetation, a high evaporation rate, and an annual rainfall of 10 inches or less.

The terrain in deserts may vary. It may be a plateau or it may be near sea level. The surface may vary as well, being anything from soft sand to sand dunes, or a rocky, barren surface, or it may consist of salt marshes as in Iran. There may be wadis, and wadis are places that can become quickly flooded during a sudden downpour. These downpours sometimes occur in the desert.

The climate in the desert is characterized by extremes of temperature. During the day the direct insolation of the sun on a barren landscape causes the temperature to be quite high. Once the sun has set it is apt to become quite cold at night. This type of temperature variation requires protection against
the sun and heat as well as from the cold at night.

In certain areas winds are quite strong on the desert. These winds carry dust. Sand and dust storms can seriously affect military operations.

The difficulties imposed on a horse-mounted unit which is required to operate in the desert include lack of water, grazing, heat and cold, as well as difficulty in travelling on certain surfaces such as soft sand. Actually, sustained operations in such an area would be most difficult. There are routes across desert areas where wells exist at proper intervals which will allow horses to cross, but the camel is the animal of the desert. The camel is better adapted to sustained operations in desert areas.

Military operations are difficult in the desert because of lack of concealment. It is difficult to move by day because of the dust which is raised by a moving unit. Another important factor is the practically unlimited visibility enjoyed by both attacker and defender.

Certain characteristics of terrain are peculiar to the desert. In a defensive situation difficulties usually arise which are caused by the lack of natural obstacles. A unit in defense always prefers to tie its flanks to a natural obstacle such as a river, a swamp, or mountains. This means that invariably a unit operating independently in a desert will be operating with one or both flanks exposed.

Desert terrain usually affords both the attacker as well as the defender ample room in which to maneuver his forces.
One of the prime reasons for maneuver is to get a decisive number of troops in a particular place at a particular time, or to gain surprise concentration of mass. This principle applies to both attacker and defender in desert operations, and no doubt will be used by both. Mobility, whether provided by animals or machines, is important in gaining this surprise concentration of mass.

Another consideration of utmost importance is that of security. Whether a unit is on the offensive or the defensive is of little importance when considering security. If a unit is on the move it is particularly vulnerable unless it has all around security. Such security will prevent the unit from being surprised. The same all around security applies to the unit on the defensive. Again, proper security prevents the unit from being surprised.

It should again be pointed out that Timur marched from Samarkand to the borders of Persia in a friendly territory. This meant that he could move at a greater rate of speed, and without the same security measures he would need to use if he were marching in enemy territory.

Timur had to operate in the mountains of northwest Persia, and eastern Turkey on his way to the Middle East. We know that he avoided operations in these areas during the winter months. It is worthwhile to know some of the problems and considerations involved in operations in mountainous areas, and also in areas of snow and extreme cold.

In areas of extreme cold the problem of survival alone
is of primary importance. This problem is magnified when an army depends on animal transport because not only do the troops have to manage to survive, they must also keep their animals fit. The other important problem is that of movement. This includes not only the movement of troops, but also the movement of supplies.

In order to survive in areas of extreme cold special clothing is required. This clothing must be light enough to allow movement and also, at the same time, to provide warmth and ventilation. The outer clothing should be water repellent and windproof.

If troops are moving in areas of extreme cold where they will be sleeping outside, special sleeping equipment is necessary. This may well include tents as well as sleeping gear.

Another consideration is the type of food required in areas of extreme cold. The diet must be of a high calorie type because of the cold.

Only certain animals are adaptable to survival and movement in areas of snow and extreme cold. Since horses are not considered as well-suited animals for areas where deep snow exists, and Timur's army was primarily cavalry, this is reason enough for him to avoid the cold mountainous areas of northwest Persia and eastern Turkey, where, in winter, snow is deep and temperatures cold.

Clavijo, on his return trip from Samarkand in February 1405, describes the amount of snow which his party encountered at Qazvin, Iran:
"Here we found that much snow had fallen, the streets were quite blocked by it, and the people were all occupied in making roads through the drifts....So much snow had come down that great was the peril lest it should stove in the roofs of the houses..." 255

Clavijo also described the amount of effort which had to be expended so that his party could move on:

"On the following Saturday at length we found we could set forth again, but thirty men had to go with us on foot with shovels to open a road for us by their labor. These men all came out from Qazvin for this work, but as soon as we had reached the first hamlet settlement outside they went back home, and the men of the hamlet were obliged to take on the work. 256

The climate of Qazvin is considered much milder than some of the areas of northwest Persia and eastern Turkey. Clavijo was travelling by horse through northern Iran when this was written. No wonder that Timur chose to remain in winter quarters at Qarabagh.

There are certain characteristics of mountain terrain. Usually mountain terrain hampers the mobility of a unit, and usually movement is more difficult in mountain areas. The nature of the terrain makes it difficult to move large numbers of men through defiles and narrow valleys in good time. What happens is that the unit becomes extended in length and the rate of movement is slowed considerably.

Weather conditions in mountain areas may change suddenly. Therefore, weather always must be considered in planning a mountain operation.

255. Le Strange, Clavijo, p. 307.
256. Ibid, p. 308.
As in other areas of extreme cold, special training and equipment may be required to operate in mountain areas. This training may include training in the use of skis, snow shoes, human pack carry and mountain climbing, while the equipment for winter in mountains would be the same as for operations in areas of extreme cold.

After Timur consulted his geographers and talked with people from the areas of northwestern Persia and eastern Turkey, he, no doubt, decided that his troops should spend the winter at Qarabagh, and move through these areas at a time of the year when climate would not be such a determining factor in the success of his operation.

In the time of Timur, battles were usually fought to conquer a fortified place or city. These are examples of battles being fought outside of a city on a plain, but the concept of an organized and sustained defense of an area had not yet been developed.

The shock power of that day was supplied by cavalry as today, in land warfare, it is furnished by the tank. Another characteristic of cavalry is mobility. These two characteristics allow the commander to strike with a tremendous impact of mass and speed. There is also a certain psychological effort on the enemy when they are subjected to such an attack by mass and speed.

There is no record in the accounts of the various campaigns which were studied where the terrain was organized and defended on a basis such as it is today. The reason for this is that modern fire power has changed the concept of defense.
As has been pointed out, battles were fought for cities or forts, and then Timur moved on to the next objective. Had there been a determined resistance fought on each succeeding terrain feature his campaigns might not have been so far reaching. However, this presumes that the defender and the attacker will remain in contact for long periods of time which creates logistical problems which were probably insurmountable in the time of Timur.

Cavalry is usually employed after a breakthrough has been accomplished and its role is primarily one of exploitation. The speed and mobility of a cavalry unit provides it with the ability to move through a breach in a defensive position into the rear to exploit the situation and thrust deep into enemy territory.

Timur marched from Samarkand to Syria and fought battles only at important places along the way. His main enemies were terrain and climate which he had to plan for and overcome in order to reach his objectives. The actual time spent in battle during the entire campaign was insignificant when compared to the time spent to reach the sites of the battles.
VIII CONCLUSION

The geography of the world changes very slowly. Rain erodes the surface of the land, ice freezes in cracks of rock and causes the rock to be chipped away, rivers may change their courses slightly, but the earth's surface remains much the same for generations on end.

Timur travelled from Samarkand, which is now in southern USSR. He entered Iran and travelled across it from east to west. He passed through deserts, through mountains, and across plateaus and plains. His army was horse-borne and his route had to include places where food and water could be found for his troops as well as for their transport.

Timur passed through the mountains and highlands of eastern Asia Minor and down into the plains of Syria. He saw the Bekaa and crossed the Anti-Lebanon Mountains to Damascus and then moved north back up to the piedmont of the mountains of southern Asia Minor and east to the Tigres and then down to Bagdad. Again he had to plan his movements to provide food, water, and forage for his men and animals.

Today the horse does not play a major role in war. Machines have taken his place, both for the transport of troops as well as the transport of supplies.

In Timur's day, he was able to move his army all the way from Samarkand to northwestern Persia without having to travel in enemy territory. Even after he entered enemy territory he
was able to travel as far as Sivas before conducting his first major siege. He had conducted campaigns against the Georgians to protect his rear and right flank before proceeding into Asia Minor. Also, in Timur's time battles were usually fought at a fort, or fortified city, or outside of a city, or on a plain where two armies met. The battle usually lasted for a few days and was then over. Then the victorious army moved on to the next objective, usually another city, or withdrew into its own territory.

There was no concept of a defence in depth, organizing each successive terrain feature and defending it, neither were the weapons of such a nature as to allow a sustained defence of an area, as today. Also the logistical support involved in a sustained defence could not be provided by the armies of Timur's time. So in effect, what Timur did was to march into the Middle East. He continued to march because he was successful whenever he met any resistance. Had he been defeated he might well have had to withdraw.

The main obstacles to Timur's advance, besides his enemies whom he encountered at various places along his route, were the terrain, and the climate. He had to be careful to avoid high mountains in the cold season; he tried to avoid being in the hottest desert areas during the summer season.

The terrain and the climate are still the same as they were during Timur's time. What has changed has been the weapons of war, the modes of transportation, and the concept of defence which is made possible by these weapons and means of mobility.
The terrain which Timur moved through represents some of the most rugged territory in this part of the world. Today, with modern weapons deployed in depth, and with determined, well-trained troops holding the ground, it would be extremely difficult to penetrate the mountainous areas through which he passed. Certain portions of the desert would also be difficult to penetrate. For example, in northern Iran it would be easy to tie a defensive position to the mountain on the north and the salt marshes on the south. There are places in northern Iran where this could be accomplished, and with a good road net to the rear of the position the position could be maintained and probably hold out for quite a period of time. It would be difficult to maintain any troops within the salt marshes. Troops along this flank would have to be very alert, since there are sometimes foot paths through these salt marshes over which small groups might be able to infiltrate into the rear areas of the defending force.

With the modern machines of war, the problem of fodder and water diminish to be replaced by the need for tires, tracks, gasoline, oil, grease, spare parts, trained personnel, and a good logistics system. But these machines can cover more ground than animals, and can do it in a shorter period of time. For example, where a horse-borne unit might expect to travel 35 miles each day, a motorized unit might make 150 or 200 miles each day. This means that the horse unit has to have fodder and water about every 35 miles, or less, while a mechanized unit must be refueled every 150 or 200 miles.
There are certain areas of northern Iran, where the desert is wide and firm, which lend themselves to armored operations. But the mountainous areas would be difficult for armor to operate in. The terrain would slow the armor down considerably and in some areas armor would be roadbound.

The terrain of western Iran and eastern Turkey lends itself to defence. The land is uneven and the mountain chains are difficult to travel through. There are highland valleys which would not present any great difficulty to travel, but they have to be reached by travelling from a lower altitude to a higher altitude.

In moving toward Syria, once the mountain areas of Turkey are left behind, the land becomes easier to move over. There are areas of southern Turkey and northern Syria which lend themselves to the use of armor, and generally movement through these areas is quite easy.

The Bekaa Valley is another area where movement is facilitated. The Syrian desert has many tracks across it over which armor could travel with ease, and today motor transport crosses between Damascus and Baghdad, traversing the Syrian desert over these tracks.

The Anti-Lebanon Mountains present an area where armor would have to follow the road or the passes through the mountains to get from the Bekaa to Damascus or the opposite.

The Arab Middle East occupies an important place in the world today. It is a land bridge between the three continents of Asia, Africa and Europe. The area has a large
percentage of the world's known reserves of oil, and it has within its boundaries the important link between the Mediterranean and the Red Sea, the Suez Canal. At the northern corner of the Mediterranean are the straits between Asia and Europe connecting the Agean Sea and the Black Sea. In addition to this, important air routes pass through this area; not to mention the fact that people of the area have not finally committed themselves as to whether they prefer the free world or the communist world. For these cogent reasons the area and its people demand to be understood by the western world.

The route which Timur used to move from Samarkand into Iran followed the ancient caravan route. These routes have been known since ancient times as the best routes into or through an area. Therefore, there is no reason to believe that this route could not be used again for another invasion from the same area from which Timur came. Once into Iran the invader could follow the old Khorasan Road all the way to Baghdad.

There are other possibilities by which other portions of Timur's route could be used. For example, entry into the Middle East could be gained from northwest Iran or northeast Turkey. The ruggedness of the terrain in these areas would make the areas easier to defend. But Timur's route could be reached from both the areas mentioned. If the invader decided to enter the Middle East through northwestern Iran, Timur's route would be crossed if he took the most direct route to the Arab countries, or Timur's route could be followed through Turkey and into Syria, even though the terrain presents diffi-
cully to movement.

What is important is that these routes have been in existence since caravan days and while today there are many means of transport faster, better, and more comfortable than caravan transport, the possibilities presented by these routes should not be overlooked.
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