

Observations and questions concerning Barrier Posts on the Northern Plank Road

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May 2012

Introduction

This document is best appreciated by also accessing the background information for the Qing Period Scroll Map (of which a good knowledge is assumed) described at the Shu Roads website:

http://www.qinshuroads.org/LOC_Scroll_web/LOC_Scroll.htm

There are a number of places in the map which seem to be Guard Stations or guarded Barriers with residences for the garrison and flying an official flag. A typical station in the northern section at Madao is shown below:



The characters on the left read “馬道驛塘” or Madao Yi Tang. Madao is a place about half way between Fengxian and Hanzhong which has a long history as a postal station and garrison on the Northern Plank Road. It was a postal station (indicated by the name Yi) with the infrastructure needed to water horses and probably grow food (using water from the Tang) for the garrison and travellers. The characters to the left of the image above (宿站) are in a different hand from the base map and were apparently annotations made by the traveller who used the map. It means “overnight station”. So they stayed at this place. The name “Yi” indicates that a place is a courier station for the extensive postal system that was at least in operation in the Yuan Period. Herold Wiens (Wiens, 1949) quoted a Qing period Chinese source (Baocheng Xien Zhi or Baocheng Gazetteer) as recording that Madao Yi and Qingqiao Yi (south

of Madao Yi) were both large postal stations having “52 horses each, and for every two horses there was a groom”. So perhaps some of the smaller buildings are stables!

What we are particularly interested to discuss in this document are the combinations of five “bottles”, the flag, the tower and the various buildings. Various forms of these stations, all containing most of these items, can be found along the way from Baoji to the Sichuan border at Qipan Pass. The flag in the image above is typical of the northern section under management of Fengxiang Fu and the Feng Zhou or Liuba Ting county administrations.

In their discussion of this scroll map, Bi Qiong and Li Xiaocong (Bi and Li, 2004) write:

“In the map are twenty two postal stations (“pu” and “tang”), characterised by yellow flags, buildings and five bottle shapes. Some have watch towers or memorial arches. This is especially the case near Da'an Xun [garrison] and Kuanchuan Yitang [a horse rest and change station]. Huangba Yi Tang is even painted in a yellow circle to indicate a wide and low relief area. The portrayal of the landforms indicates that from the Guanzhong Plain to the Sichuan Basin, after crossing the mountains, the roads enter the Hanzhong basin. From the Hanzhong Basin you then go south west to western Sichuan or south east to eastern Sichuan. Furthermore, Baocheng is at the north edge of the entrance to the Hanzhong Basin, consequently below Baocheng where the terrain flattens is a good place to put postal stations (Pu and Tang), as it is convenient to gather and transmit documents through this area. This is the reason that so many “tang” points occur below Baocheng. So behind this there is a change in terrain. From the map we have calculated that between stations labelled Pu, Tang or Yi there is on average 15 Li.” (Chinese provided in Endnote [1]).

On the same topic, Feng Suiping (Feng, 2010) writes:

“In the present scroll, within the borders of Feng County, there are 11 barracks at Huangniu Pu, Changqiao, Honghua Pu, Caoliang Yi, Wuxing Tai, Baijia Dian, Liushu Wan, Feng Ling, Xinhong Pu and Sancha Yi, and two granaries at Caoliang Yi and Feiqiu Guan. Caoliang Yi has a Qianzong (military) administrative HQ and Feiqiu Guan has a Bazong administrative HQ. A “Tang” provides infrastructure for the transport of mail, and the passage of official documents. In these cases, “Xun” is the ground level unit of the (Chinese) Green Banner military led by Qianzong, Bazong or Waiwei commanders. The Bazong Office was for the Bazong commanding officer who was appointed at the 7th Level, in charge of the Xun's military area patrol. The Qianzong was appointed at the 6th level and in charge of his Xun area (Qianzong is a higher position than Bazong). The public granary was a warehouse run by local people but supervised by an official. From these pieces of information, we can get an idea of the Qing general and postal management systems. However, apart from Feng County, the other “county seats” (comprising the Xian, Ting and Zhou) seem to have little more additional information.

The Lianyun route also has many places designated as "Tang"¹ and "Xun"² etc. Feng County has 9 "Tang" at Jiaoyan Pu Tang, Wuqu Pu Tang, Madao Yi Tang, Er'shili Pu Tang, Qingqiao Pu Tang, Hujia Pu Tang, Mapping Temple Tang, Jitou Guan Tang and Beiguan Tang. Mian Xian has two "Xun" at Qingguan Yi Xun and Ban Temple Xun. Ningqiang Zhou has Jindui Pu Tang, Da'an Xun Tang, Liejin Ba Tang, Kuanchuan Yi Tang, Wuding Guan Tang, Dishui Pu Tang, Huanshi Pu Tang, Jiepai Tang, Huishui He Tang, Laogu Guan Tang, Huangba Yi Tang and Jieguan Ting Tang. Altogether in this section they add up to 12 "Tang", so one finds in the complete section that 21 places are designated "Tang" and 2 places are designated "Xun". (Chinese text provided as Endnote [2]).

In regard to the flags he writes (Feng, 2010):

“Based on other currently preserved maps (such as) Bi Yuan's "Qinzhan map" and Yan Ruyi's "Northern plank road map", it seems that in the "Qinzhan" maps in the Qing dynasty from the Qianlong to Jiaqing periods, all the most important towns flew a flag. The flags in the "Shu Road Scroll" basically fly to the north, and only in a few places, such as Huangniu Pu, Xinhong Pu, Sancha Yi etc do they fly to the south. It is not clear if these differences in the map have any significance. The flag poles are mostly red, but in some places they are black, where perhaps the most readily available paint was used. However, in some places red and black are superimposed, so that it was first done in black and then red. We also investigated the appearance of the banners. In between Baoji and Baocheng they use a triangle, between Mianxian and Ningqiang Zhou they are a square, and only Jieguan Ting has a triangle. In regard to the map symbols used for flags and flag poles, it seems the map maker was not a government official or professional painter. He was more likely a person of lower skill, but one who was very familiar with the Plank road and its surroundings.” (Chinese text included as Endnote [3]).

The present note seeks to list the places with the combination of factors described above (a flag, five “bottles”, buildings and possibly a tower or gate), provide the name of the image available on the web site where the places are to be found and conjecture whether they are postal stations (as suggested by both of the previous papers), military posts, customs stations or something other than that. In particular, the “bottles” are of interest. Their purpose seems to be interesting and have a possible explanation but are not fully clear at this time. Finally, the stations used are the 23 listed by Feng (2010) rather than the 21 (the 2 “Xun” need to be included) counted by Bi and Li (2004).

List of “Tang” and “Xun” posts

The list of Tang and Xun posts were located in the full resolution version of the scanned scroll map and their details and names (traditional characters) checked. There are no other similar posts in the extent scroll and the names given by Feng (2010) are all correctly transcribed into simplified characters. The list below links the sites to the

¹ Tang, 塘, originally indicated a small pool and may have provided watering for postal and or military horses.

² In this case Xun, 汛 could possibly "flood control" or engineering such as dams and diversions rather than a military unit but it can also be a military unit.

images available on the web site in the first column in the Table headed “Quick Look images of the full extent of the scroll”. In the Table of Full Resolution Images, only “Chickenhead Pass” and Da An Zhen” show barrier stations.

The order of the stations is from the north (from Baoji in the Wei Valley) to the south (to Qipan Guan and the border with Sichuan). The places highlighted in yellow could not be found on a modern map nor (up to now) in Google Earth. Characters for the barrier station names are provided in Endnote [2] but are simplified characters.

Image	Extent	Full Station Number	Name	Contents
ct002454a	Baoji to Fengxian	None		11 simple flag and hut in Baoji 6 in Feng with annotation “Barracks”
ct002454b	Fengxian to Chaiguanling	None		5 simple flag and hut in Feng but huts have “Barracks” 4 simple flag and hut in Liuba do not have annotation
ct002454c	Zhangliang Temple and Liuba	None		5 simple flag and hut in Liuba no annotation
ct002454d	Passes through Wuguanyi	None		2 simple flag no annotation also in Liuba. After this reach Baocheng County
Baocheng				
ct002454e	Extends to Wuqupu	1	Jiaoyan Pu Tang	5 “bottles” in shed; tower and 7 houses
		2	Wuqu Pu Tang	5 “bottles” on ground; tower and 8 small houses
ct002454f	Passes through Madao	3	Madao Yi Tang	Major barrier; 5 “bottles” on ground; tall tower; 3 big houses and 6 small ones.
ct002454g	Ershilipu to Qingqiaopu	4	Er’shili Pu Tang	5 “bottles” on ground; tower; 3 houses
		5	Qingqiao Pu Tang	5 “bottles” on ground; tower; 6 houses. Two gates, one at each end.
ct002454h	Qingqiaoyi to Shifo	6	Hujia Pu Tang	5 “bottles” in house; NO tower; 6 houses.
		7	Maping Si Tang	5 “bottles” on ground; tower; 6 houses.
ct002454i	Jitouguan to Qingyangyi	8	Jitou Guan Tang	5 “bottles” on the ground; large tower of different kind; 3 houses including temple.
		9	Beiguan Tang	5 “bottles” on ground; NO tower; 5 houses and gate.

	Break in Scroll			Boundary between Baocheng and Mian Counties missing
Mian County		22	Qingguan Yi Xun	5 “bottles” in shed; NO tower; 5 houses, different flag.
Mian County		23	Ban Miaozi Xun	5 “bottles” in shed; NO tower; 1 house.
	Now in Ningqiang county			Boundary just before Jindui Pu
		10	Jindui Tang Ba	5 “bottles” on ground; NO tower; 1 house, square yellow flag and gate.
ct002454j	Da’an to Ningqiang	11	Da’an Xun Tang	5 “bottles” on ground; NO tower; 3 houses; gate; Low wall?
		12	Liejin Ba Tang	5 “bottles” on ground; NO tower; 1 house.
		13	Kuanchuan Yi Tang	5 “bottles” on ground; NO tower; 3 houses; Low wall?
		14	Wuding Guan Tang	5 “bottles” on ground; NO tower; 1 house.
		15	Dishui Pu Tang	5 “bottles” on ground; NO tower; 1 house.
		16	Huanshi Pu Tang	5 “bottles” on ground; NO tower; 1 house.
ct002454k	Ningqiang to Huangba Yi	17	Jiepai Tang	5 “bottles” on ground; NO tower; 1 house.
		18	Huishuihe Tang	5 “bottles” on ground; NO tower; 1 house.
		19	Laogu Guan Tang	5 “bottles” on ground; NO tower; 1 house.
		20	Huangba Yi Tang	Major barrier; 5 “bottles” on ground; NO tower; 5 houses; gate; Low wall?
ct002454l	Small final section to Qipanguan	21	Jieguan Ting Tang	5 “bottles” on ground; NO tower; 1 house; gate.

General comments and discussion

Bi and Li (2004) and Feng (2010) have covered most of the issues and interesting points with regard to these stations. However, some additional general comments may be useful:

There are no fully equipped stations until after Liuba Ting gives way to Baocheng Xian. Baocheng managed the common southern section of the Lian Yun and Baoye Roads in the Bao River valley after Wuguan Jie. But there are in total 33 places before the northern border of Baocheng County, including Liuba, with a flag and hut

only that are not called a “Tang”. To be precise, there are 11 stations consisting of a flag only next to a small hut in the area controlled by Baoji. After the border between Baoji and Feng counties, there are another 11 stations that also have a flag and hut in Feng County. Feng (2010) notes there are 11 stations and names them (see above) since at these places each hut is annotated with “营房” or “Barracks”. So they are clearly marked as military posts. This occurs up to the border between Feng and Liuba Counties (Liuba was a “Ting”). In Liuba County, there are 11 stations with only flag and hut and none have the annotation above. Feng (2010) includes San Cha Yi as a main station and allocates a granary to Feiqiuguan. The barrier station is very big but San Cha Yi is well separated from San Cha Zhen and very close to Feiqiuguan. The first station is not actually Huangniu “Pu” but a major border post just after Huangniu Pu which is also called Huangniu Pu (Barracks). Huangniu Pu and San Cha Yi are the two ends of the Feng Zhou section and strongly guarded. At the time the map was published, Liuba had only just become a Ting but had been under the Hanzhong administration for some time. Later Liuba Ting had responsibility up to Feiqiuguan. The Feng mountain range was a very significant dividing place in the terrain and seems mirrored in the administrations as well.

After Wuguan Jie, in Baocheng County along the Bao River Valley, there are only fully equipped stations (called “Tang”) starting at Jiaoyan Pu Tang. There are 9 of these to the border with Mian County after Jitou Guan and Baocheng are reached. South of the boundary between Liuba and Baocheng, only the fully equipped stations (Tang and Xun) have a flag. The full significance of these facts is not known but it seems clear that the discussion needs to separate six sections based on county administrations:

Section	Number	Type
Baoji County to boundary with Feng County	11	Simple triangular flag and hut
Feng County to the border with Liuba Ting	11	Triangular Flag and hut labelled “Garrison”
Liuba Ting to the southern border with Baocheng near Wuguan Jie	11	Simple triangular flag and hut
Bao River Valley in Baocheng County and Baocheng	9	Fully equipped “Tang” with Tower and triangular flags
Mian County in the Han River Valley (Missing Section)	2	Fully equipped Tang, square flag
Ningxiang County in the Han River Valley	12	Fully equipped Tang with different square flag

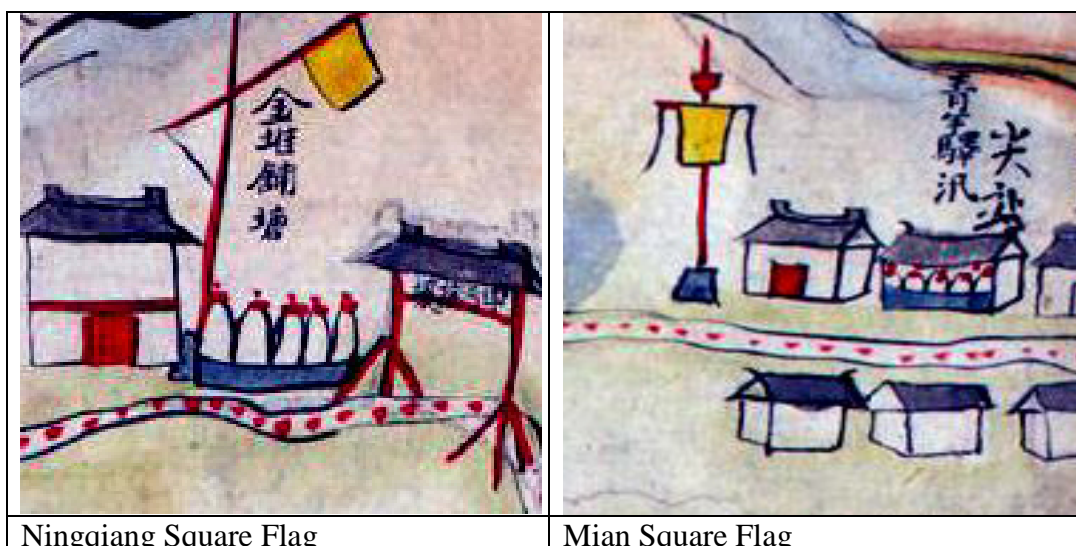
As this note is primarily about the fully equipped stations (Tang and Xun), a list of the simple flag and hut stations in Baoji, Feng and Liuba county areas is included as an Appendix.

Bi and Li (2004) note that there are fewer (fully equipped) stations spaced out along the Bao River Valley of the northern road, and that there is a greater density of stations after Baocheng has been passed. That is, they occur at more frequent intervals along the Han River valley to the Sichuan border. The southern stations along the Han River valley also seem to be smaller than those along the Bao River valley, often with only 1 guard house, more like the ones at the Baoji end of the route – but with

“bottles”. Da’an seems to be a military barracks town as may also be Huangba Yi. This is consistent with what Alexander Wylie (Wylie, 1870) reported on his journey through this area in 1870. It is not clear if the 32 small stations before Wuxiuguan can be called “dense” or “sparse” with respect to the Han Valley although the first group in Baoji County, especially along the Tian He (see the Appendix) are certainly dense. Using a modern map should resolve this scaling issue but the missing section in Mian County is a problem as the number there is unknown and since the border with Baocheng is also missing the precise number in Baocheng County is also unknown.

All of the names of the fully equipped stations seem to be the local township’s name plus “Tang” indicating that the posts mark the “Tang” at that place. Perhaps it should be translated as “barrier” and mark the barrier set up at that place to serve the combined needs of the postal service, the military, customs etc. In Mian county there are only two places in the remaining section and they are both called “Xun” rather than “Tang”. Both Tang and Xun can also involve water management, watering horses and providing support for cavalry etc. The well spaced stations of the Bao River valley also all (apart from one) have a tall tower. This may have been for communication or keeping watch which would have been much harder in the mountains. There are *NO* towers in the Han River valley to Qipan Guan on the border with Sichuan, nor to the north from before Jiaoyuan Pu Tang to Baoji. The visibility in the Han Valley would certainly have been better while in the mountainous northern area they would have been very useful.

The flags discussed by Feng (2010) are as he described with all of the flags in the northern section (including the 32 flags at the single house with flag posts north of the Bao River Valley) flying to the north and all being yellow triangular flags as shown in the previous image of the Madao station. In Ningqiang County (the southern section) they are square flags. However, as noted by Feng (2010), the final flag at the border with Sichuan (at Jieguan Ting Tang) is also triangular. It is not clear if it is a mistake or not. The two stations (Xun) in the incomplete scroll in Mian County have square flags but they are flown differently from the other two. Since a section of the scroll is missing here it is not possible to know if all of the stations in Mian county are the same or not. It may be that the three different forms indicate different military or civilian management. The previous image shows the northern (triangular) flag at the station of Madao. The two extracts below are from the scroll map past Jitou Guan and show flag presentations in Mian and Ningqiang counties.



Not all of the barrier posts in the scroll map can be located on modern maps. The ones I could not find are highlighted in Yellow. The question remains whether they are still on the road, but not in my maps, or that I did not yet see them or they are still on the road and not in the maps? Perhaps this will require some field investigation.

The “Bottles”

A particular interest here is in the nature and use of the five “bottles” that are to be found at every one of the stations. I think it is possible that they are fuel storages for smoke beacons. If a message needs to be passed along, the guard uses the material in the “bottles” to start a smudge pot fire. In the northern mountains, the signals could possibly be from the top of the tower so that they are visible a long way away or viewed from the tower.

The British missionary Alexander Wylie, travelling from Chengdu to Hanzhong in 1868, made the following notes (Wylie, 1870):

“Our day’s journey took us through a number of poor and insignificant villages, with a military guard station about every four or five miles. an official is said to be attached to each, whose services are sometimes required to forward a despatch. These stations are found throughout the greater part of China, at least the northern portions; and are ostensibly intended to furnish escorts to travellers whenever demanded: but such an appendage on the road we were travelling would have been an utter superfluity. At many of the stations, three or five turrets, representing the old smoke telegraphs, still remain, but it is needless to say, they merely stand as symbols of the past.”

The use of smoke signals and the formal collection of five small towers on the Great Wall are well known. In the article by Ensor (Ed) (2004) on use of smoke for military purposes we find:

“Though there is evidence that smoke signals were used early in China’s history, the codification of China’s smoke signalling system was not formalized until 1468 AD

under the rule of the Ming dynasty, which brought the Great Wall to its current state of completion. Under the formalized coding, one smoke column represented up to 100 enemies, two columns indicated 500, and three columns indicated 1,000, based on the best, quick estimate by the watchmen (Guo et al., 2003). Using these remote communication methods, watchmen could send warnings that would travel hundreds of kilometers in a few hours, although the response could still take days to weeks depending on the distance to and the terrain between the nearest adequately equipped outpost.”

As further evidence from a foreigner (but with none so far from Chinese), Dr Joseph Needham (Needham & Needham, 1948) travelled along some of this road and on into Gansu in 1943. Much of the road between Chengdu and Tianshui had been modified (to a greater or lesser degree) for motor transport but from his experiences, especially in Gansu as far as Lanzhou he reported:

“As for communications, radio-telegraphy has proved of great advantage in this wild and desolate country; the remotest oases now possess hand-worked radio-transmitters, and a network of communications has thus been established throughout Central Asia. Telegrams in the Chinese ideographic language are sent according to a code, each character having its own number, and it is a remarkable sight to see the clerks transliterating their messages rarely at a loss for the right character or number, though the latter often reach five figures. The radio network forms an interesting contrast to the methods in use in the Han Dynasty (contemporary with the Romans), the beacon towers of which are met with so frequently by the traveller. Besides each ten-Li fort there stand five small square conical towers, about 8 ft. in length and breadth and 10 ft. high; in this way the Han garrisons protecting the road could send to each other elaborate messages about the movements of the unsubdued tribes in the mountains to the southwest or the desert to the north-east. The positions of some of these buildings show that the fort was used as a receiving station and the five towers as transmitting stations.”

The elevated position of the barrier at Jitouguan would have been especially important in this system but it seems the signalling system was not in use north of the border between Baocheng County and Liuba Ting near Wuguan. Why it is not used there is not clear unless the mountain relief is too great for this type of signal and the mountains too steep and rough to use the mountain tops so only the main river valleys south along the Bao River and then west along the Han River have been used. Perhaps the answers can be found in the local Fangzhi.

Finally, yet another foreigner can provide support. A writer and artist called Staunton accompanied an early (Qianlong period) high level visit to China. While he was there he drew scenes around Beijing. One of these appears last here. It is a guard post in the late 18th Century and shows the five “bottles” awaiting the call to send the signals while a guard stands lookout in the tower. This photograph was included in Joseph Needham’s “Science and Civilization in China”, Vol.4. Maybe some of the posts along the northern plank road were at one time like this:



Fig. 718. A military guard at a post-station in 1793 (from Staunton, 1). See pp. 33 ff.

From the foreign sources, it seems likely that the five “bottles” were part of an ancient communication system. It seems to have been in operation since the Han times and still intact in 1793 but only existing in relict form by the time Wylie travelled this way in 1868 and then relics still only seen north in out-of-the-way Gansu when Joseph Needham travelled the northern road in 1943. The question and its possible answers are, however, still open for suggestions and clearly need corroboration from Chinese sources to be finally accepted!

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 April 2012 (update February 2016).

References

- Bi, Qiong and Li, Xiaocong (2004). Research into “The Shu Road from Shaanxi to the Sichuan Border”. *Cartography* (China, in Chinese), **4**, 45-50. (Translation available [HERE](#))
- “Shan jing shu dao tu” yan jiu. Bi Qiong & Li Xiaocong, Ditu, 2004(4), ye 45
 《陕境蜀道图》研究, 毕琼李孝聪 (作者), 地图 2004(4), 页 45
- Needham, J. and Needham, D. (Eds) (1948). *Science Outpost*. Papers of the Sino-British Science Co-operation Office (British Council Scientific Office in China) 1942-1946. The Pilot Press Ltd, London, 1948.
- Feng, Suiping (2010). Further investigation of the Qing period "Map of the Shu Road to the Shaanxi border", Wenbo (Museums & Cultural Relics), Number 2, 2010 (In Chinese) (Translation available [HERE](#))

"Qing 'Shanjing Shudao Tu' zai tan", Feng Suiping, Wenbo, 2010 nian, di 2 qi.
 "清《陕境蜀道图》再探", 冯岁平者, 《文博》2010年, 第2期

Wiens, H.J. (1949). "The Shu Tao or the Road to Szechuan: A study of the development and significance of Shensi-Szechuan road communication in West China." PhD Dissertation, University of Michigan, Ann Arbor.

Wiens, H.J. (1949). The Shu Tao or Road to Szechwan, Geographical Review, Vol. 39 No 4 (Oct., 1949), pp. 584-604.

Wylie, A. (1870). Notes of a Journey from Ching-Too to Hankow, Proceedings of the Royal Geographical Society of London, Vol. 14, No. 2 (1869 - 1870), pp. 168-185. (Material available [HERE](#)).

Appendix – List of northern simple flag plus hut stations

The first image starts in Baoji County. **Highlight** means not found in present map.

Image	Extent	Station Number	Name	Contents
ct002454a	Baoji to Fengxian	1	Yimen Zhen, 益门镇	11 simple flag and hut in Baoji
		2	Dawan Pu, 大湾铺	
		3	Yangjia Wan, 杨家湾	
		4	Erli Guan, 二里关	
		5	Guanyin Tang , 观音堂	
		6	Fengpo Pu , 丰坡铺	
		7	Jiancha Ping , 煎茶坪	
		8	Donghe Qiao, 東河橋	
		9	Wuli Pu , 五里铺	
		10	Shiyao Pu, 石窑铺	
		11	Huangniu Pu, 黄牛铺	May be post station

Now pass into Feng County from Baoji County (NOTE: No station at Sancha Yi)

		12	Huangniu Pu, 黄牛铺	營房 or Barracks
		13	Changqiao , 长桥	營房 or Barracks
		14	Honghua Pu, 红花铺	營房 or Barracks
		15	Caoliang Yi, 草凉驿	營房 or Barracks
		16	Wuxing Tai, 武星台	營房 or Barracks
		17	Baijia Dian 白家店	營房 or Barracks
ct002454b	Fengxian to Chaiguanling	18	Wangjia Dian, 王家店	營房 or Barracks

		19	Liushu Wan, 柳树湾	營房 or Barracks
		20	Feng Ling, 凤岭	營房 or Barracks
		21	Xinhong Pu, 心红铺	營房 or Barracks
		22	Feiqiu Guan, 废邱关	營房 or Barracks

Boundary between Feng County and Liuba Ting (density much lower in Liuba)

		23	Nanxing, 南星	11 simple flag and hut in Liuba no annotation
		24	Yulin Pu, 榆林铺	
		25	Gaoqiao Pu, 高桥铺	
		26	Chaiguan Ling, 柴关岭	
ct002454c	Zhangliang Temple and Liuba	27	Miao Taizi, 庙台子	
		28	Taoyuan Pu, 桃园铺	
		29	Luanshi Pu, 乱石铺[?]	
		30	Da Liuba, 大留坝	(Liuba Ting included among garrisons)
		31	Qingyang Pu, 青羊铺	
ct002454d	Passes through Wuguanyi	32	Qinglong Si, 青龙寺	
		33	Wuguan, 武关	Wuguan has a number of places quite big

After this image, you are in Baocheng County where the fully equipped stations start.

End Notes

Endnote [1] Chinese for quotation from Bi and Li (2004)

图中出现的 22 个铺塘，均由标志明显的黄色旗子，一组房舍建筑和 5 个瓶状物表示，有的还给有碉楼或牌楼。尤其是大安汛、宽川驿塘、黄坝驿塘均绘在一黄色圈内表示地势平坦宽阔。从地貌上讲，自关中平原出发到达四川盆地的诸条道路在翻越秦岭之后都汇集到汉中盆地，再从汉中盆地西南通向川西或向东南通往川东。而褒城所在恰好是进入汉中盆地的北端，因而在地势渐平的褒城以下设置塘站，将有利于文书的汇总和传递。这便是图中褒城以下出现“塘”的原因。而其背后的缘由却是在于地势的变化。从图上还可以推算出了各铺、塘、驿之间的距离里程大致为 15 里。

Endnote [2] Chinese Text from first Feng (2010) quotation.

长卷之中，凤县境内有黄牛铺、长桥、红花铺、草凉驿、武星台、白家店、王家店、柳树湾、凤岭、心红铺、三岔驿 11 处营房，有草凉驿、废邱关共 2 处社仓，草凉驿有千总署，废邱关有把总署。塘是邮递交通机构，司接递文书之

职。汛是清代绿营基层组织，即千总、把总、外委所统属的绿营兵。把总署，即把总之署，清绿营基层组织“汛”的领兵官，秩正七品，职掌巡守营哨汛地。千总，也是“汛”的领兵官，秩正六品，掌巡守营哨汛地。社仓为官督民办之仓。从这些信息可看出清代地方管理体制以及邮驿管理制度。不过除凤县外，图卷中其它县(厅、州)则基本付阙。

另外，云栈沿途还有塘、汛等。凤县有焦岩铺塘、武曲铺塘、马道驿塘、二十里铺塘、青桥铺塘、虎家铺塘、蔴坪寺塘、鸡头关塘、北关塘共 9 处，沔县的青关驿汛、板庙子汛共 2 处，宁羌州的金堆铺塘、大安汛塘、烈金坝塘、宽川驿塘、五丁关塘、滴水铺塘、浣石铺塘、界牌塘、回水河塘、牢固关塘、黄坝驿塘和接官厅塘共 12 处。所见残卷共 21 处塘，2 处汛。

Endnote [3] Chinese text for second quotation from Feng (2010).

从目前保存的毕沅《秦栈图》、严如煜的《南北栈道图》看，清乾隆——嘉庆年间的秦栈图，其沿途重要聚落均悬挂有旗帜。该长卷旗帜的方向基本朝北，但极少别地方如黄牛铺、心红铺、三岔驿等处则朝南。这个不同从图中丝毫看不出有什么特别的含义。旗杆的颜色基本作红色，但个别地方则为墨色，当为未填色所致；有的则是墨色与红色重叠，明显看出是先涂墨色后着红色。我们还注意到旗帜的形状，宝鸡县——褒城县之间为三角形，沔县与宁羌州之间则为方形，惟有接官厅为三角形。如果将旗帜与旗杆作为地图的图例，那么绘制者实非官府或水平较高者，大概是一位水平较低、但又与连云栈道有着紧密联系者。