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**CHERT BLADES FROM MIDDLE GHAGGAR BASIN WITH SPECIAL REFERENCE  
TO SRI GANGANAGAR DISTRICT, RAJASTHAN**

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**Abstract:**

Present paper discusses the characteristics of chert blades of the middle Ghaggar basin with special reference to Sri Ganganagar District, Rajasthan. During the exploration many various shape and type of chert blades collected on surface. Chert, which may be found in the Rohri hill close to Sukkur in Sindh, central Pakistan, is distinct and simple to recognize. The widespread use of standardized Rohri chert blades is frequently seen as evidence of how effectively long-distance trade and artisan production operate. Due to the limitations of raw material supply, the potential of locally produced Rohri chert blades in this area is frequently ruled out. This view is supported by the fact that most of the sites in the Sri Ganganagar district lack Rohri chert working debitage. However, there are blades, a sizable fluted blade-core, and a few Rohri chert debitage at the sites Chak-Baror, Chak-IKPM-I, Chak-IKPM-II, and Chak-4JST. These have prompted the archaeologists to hypothesis that some of the blades discovered in this area were made locally using supplies delivered to the site from the Rohri hills. In this context, the typo-technological characteristics of the Rohri chert assemblage from this area have been examined. To verify the validity of the suggested "limited local production," these traits are compared with metrical ones from the assemblage and Rohri chert assemblages from other significant Prehistoric and Protohistoric sites in the region.

## **Introduction**

Study area, the northernmost Sri Ganganagar district of Rajasthan state in western India, is situated between 28°46'48 to 30°09'24 North latitudes and 73°04'17 to 74°11'24 East longitudes. It has a total geographical area of 10978 sq. km. Sri Ganaganager, Sri Karanpura, Sadulshahar, Padampura, Raisinghnagar, Suratgarh, Anoopgarh, Sri Vijaysinghnagar, and Ghursana are the nine tehsils that make up this district. According to the 2011 census, there are 3018 villages in the study area with a total population of 1969168. It is bordered by the Pakistani districts of Bahawalpur and Bahawalnagar in the west, Bikaner in the south, Hanumangarh in the east, and Fazilka in the north of Rajasthan.

Due to the Vedic Saraswati River's location in the study region (now known as dried-up Ghaggar) and the presence of Pre-Harappan and historical sites like Bijnor, Baror, Chak-86, Chak-90, Chak-59, and Tarkhanwaladhera, it has significant historical and archaeological potential. For the study of historical socio-economic conditions, the subject matter of the current study is important. Exploration and the small amount of excavation have largely revealed it. We need to seek other sites to learn more about this region, despite a few sites being mentioned by various researchers. We'll try to reconstruct the region's geographical, cultural, and socioeconomic past using its artefacts. 243 archaeological sites, 180 of which are newly discovered, are found while the researcher explores 3018 villages.

## **Methodology of Study**

To collect raw materials from the sites' surfaces while conducting a village-to-village exploration survey of the entire research area. The classification of the lithic assemblage began with the identification of various basic materials. The raw materials were separated into crypto crystalline siliceous materials like chert, chalcedony, banded agate, moss agate, Rohri chert, quartz, and carnelian and noncrypto crystalline siliceous materials like quartzite. The lithic assemblage was separated into tools and lithic debitage, or manufacturing waste, based on their morphological traits. There were several non-geometric blade varieties used in the tools. The tools and debitage were measured using a digital caliper and a light weight machine. Attributes recorded for all the tools, broken as well as intact, were similar.

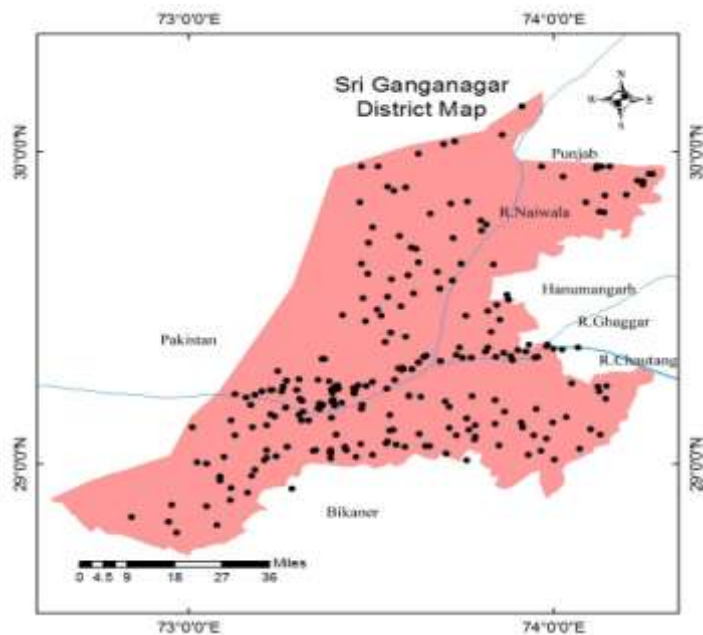


Fig. 1 Map showing of Study Area and Explored sites of District Sri Ganganagar, Rajasthan.

## Discussion

Different material remains of ancient cultures, such as ornaments of various semiprecious, toys, household utensils, terracotta bangles, terracotta human & animal figures others terracotta artefacts, were found during the course of exploration and excavations. These remains are the important tools for the reconstruction of various aspects of ancient cultures specially their socio-economic life. They are not only the art pieces but represent the activities of people of an unseen society of which we have no other documentary evidences. It will have to be admitted that thousands of pages or words may be unable to convey the inner feeling and ideas of people in the manner in which they are revealed by the finds associated with the ancient culture.

During the exploration in Sri Ganganagar district, Rajasthan, the researcher has brought to light a variety of miscellaneous finds of stone and terracotta etc., from archaeological sites ranging from Pre-Harappan to Medieval times in the region of present study. These miscellaneous antiquities include bangles, sling balls, cakes, terracotta figures, toy cart wheel, others objects, etc. The chronological position of these finds could be possible by typological comparison and on the basis of culture of their find spot. The description of these antiquities is given below material-wise:

## Core and Blades

Chart blades are the common lithics tools used during the Pre- Harappan, Early Harappan and Mature Harappan period. These were not used during the Late Harappan or PGW period probably copper tools were used. Among the lithics collected from the study area, we can classify them into two categories viz. non Rohri and Rohri Chart. Non Rohri Chart was used for manufacturing blades during the Harkra period, where as Roheri Chart was used during the Early and Mature Harappan period. The sickle blades occupy large number as the case of other Harappan sites. The stone was imported from the Rohri hills region and blades were prepared locally as is evident from the discovery of fluted core from Rakhigarhi and Tarkhanwala Dera during the explorations and the excavations at Balu, Bhirrana and Kalibanga has also yielded such cores. Some of the lithics objects collected during the explorations are discussed below:

### Pl.-1 Chart core

- 1 Stone, A core of Chart, light brownish Early Harappan period from Chak-89GB.
- 2 Stone, A half core of Chart, light brownish, Early Harappan period from Chak-5UDM-A.
- 3 Stone, A core of Chart, light grey, Early Harappan period from Baror.
- 4 Stone, A core of Chart, brown color, Early Harappan period from Chak-5UDM-A.
- 5 Stone, A core fragment of Chart, grey color, Early Harappan period from Chak-4MSR.
- 6 Stone, A core fragment of Chart, grey color, Early Harappan period from Chak-89GB.

**Table -1 Measurement of Chert Core from Sri Ganganagar District, Rajasthan ( PL.1)**

Sr. No.	Site Name	Material-1	Material-2	Form	Length (mm)	Width (gm)	Thickness (mm)	Weight (gm)
1	Chak-89GB-9	Stone	Chart	Core	71.98	-----	50.87	287.32
2	Chak-5UDM-A-1	Stone	Chart	Core	61.54	59.25	21.75	97.84
3	Baror-12	Stone	Chart	Core				140.28
4	Chak-5UDM-A-2	Stone	Chart	Core				147.61
5	Chak-4MSR-1	Stone	Chart	Core	51.68	36.2	29.7	48.88
6	Chak-89GB-8	Stone	Chart	Core	36.04	23.08	16.84	11.37

## PL.-2            **Blades**

- 1        Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Kalibangan
  - 2        Stone, brownish color, flat and grinding surface, parallel sided a blunt cutting edge, flat rectangular section with both the ends are broken, Early Harappan period from Chak-4JST
  - 3        Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Shivnathpura-I
  - 4        Stone, Chart blade, brownish color and middle in black pinch, triangular shap, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early harappan period, from Birthwala-II
  - 5        Stone, Chart blade, brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Chamar Khera-I
  - 6        Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends are broken, early Harappan period from Kalibangan
  - 7        Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Kalibangan
  - 8        Stone, Chart blade, brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends are broken, early Harappan period from Kalibangan
  - 9        Stone, Chart flake, light brownish color, sharp section, secondary flake, Early Harappan period, from Chak-4JST.
  - 10       Stone, Chart flak, white color, blunt section, secondary flake, part of cortex, Early Harappan period, from Chak-89BG.
  - 11       Stone, Chart flak, white color, blunt section, secondary flake, part of cortex, Early Harappan period, from Chak-2GDSM-II.
  - 12       Stone, Chart flak, white color, blunt section, secondary flake, part of cortex, Early Harappan period, from Chak-2GDSM-II.
  - 13       Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Chamar Khera-I
  - 14       Stone, Chart blade, light brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Shinathpura-I
  - 15       Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Shinathpura-I
  - 16       Stone, Chart blade, Brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Chak-3MSR.
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17 Stone, Chart blade, brownish color, convex, well polished, parallel sided a blunt cutting edge, trapezoidal section with both the ends broken, early Harappan period from Baror.

18 Stone, Chart blade, white color, convex, well polished, parallel sided a blunt cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-5UDM-A

19 Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Shvinathpura-I

20 Stone, Chart blade, light brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-3MSR.

**Table -2 Measurement of Blades from Sri Ganganagar District, Rajasthan ( PL.2)**

Sr. No.	Site Name	Material-1	Material-2	Form	Length (mm)	Width (mm)	Thickness (mm)	Weight (gm)
1	Kalibangan-3	Stone	Chart	Blade	51.76	13.16	3.01	2.81
2	Chak-4JST-4	Stone	Chart	Blade	43.01	20.26	7.15	8.65
3	Shinathpura-I-1	Stone	Chart	Blade	43.13	12.10	3.45	2.53
4	Birthwala-2-1	Stone	Chart	Blade	40.47	25.4	9.03	8.43
5	Chamar Khera-I-1	Stone	Chart	Blade	33.01	13.70	4.06	2.54
6	Kalibangan-4	Stone	Chart	Blade	28.02	14.68	4.26	2.38
7	Kalibangan-5	Stone	Chart	Blade	26.48	13.27	2.34	1.28
8	Kalibangan-6	Stone	Chart	Blade	23.73	15.01	4.31	1.98
9	Chak-4JST-5	Stone	Chart	Blade	38.68	18.18	4.75	2.93
10	89GB-7	Stone	Chart	Core	31.40	22.07	10.50	7.12
11	2GDSM-II-2	Stone	Chart	Blade	30.11	20.97	5.24	3.10
12	2GDSM-II-3	Stone	Chart	Blade	28.43	22.43	6.84	3.45
13	Chamar Khera-I-2	Stone	Chart	Blade	24.34	10.93	2.43	1.08
14	Shinathpura-I-2	Stone	Chart	Blade	21.57	14.95	3.91	1.23
15	Shinathpura-I-3	Stone	Chart	Blade	19.96	14.76	2.40	1.17
16	3MSR-3	Stone	Chart	Blade	20.08	12.37	3.64	1.50
17	Baror-47	Stone	Chart	Blade	19.32	14.56	9.20	3.04
18	5UDM-A-10	Stone	Chart	Blade	16.51	11.29	2	0.64
19	Shinathpura-I-4	Stone	Chart	Blade	13.29	15.18	3.18	0.85
20	Chak-3MSR-4	Stone	Chart	Core	16.17	12.72	5.58	1.20

### PL.-3 Blades

- 1 Stone, Chart blade, light brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Baror.
- 2 Stone, Chart blade, white color, convex, well polished, parallel sided a blunt cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-3MSR.
- 3 Stone, Chart blade, light yellowish color, flat and grinding surface, well polished, parallel sided a sharp cutting edge, flat rectangular section with both the ends broken, early Harappan period from Chak-89GB.
- 4 Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-89GB.
- 5 Stone, Chart blade, light brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-89GB.
- 6 Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Baror.
- 7 Stone, Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, flat triangular section with both the ends broken, early Harappan period from Baror.
- 8 Stone, Chart blade, light brownish color, convex, well polished, parallel sided a blunt cutting edge, triangular section with broken ends, early Harappan period from Baror.
- 9 Stone, Chart blade, light brownish color, convex, well polished, One sided sharp and other side blunt cutting edge, triangular section with broken ends, early Harappan period from Baror.
- 10 Stone, Chart blade, white color, convex, well polished, parallel sided a blunt cutting edge, trapezoidal section with broken ends, early Harappan period from Chak-I-MLD-A.
- 11 Stone, a fragment of Chart blade, light brownish color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Baror.
- 12 Stone, a fragment of Chart blade, white color, convex, well polished, parallel sided a sharp cutting edge, trapezoidal section with both the ends broken, early Harappan period from Baror.
- 13 Stone, Quartzite, A fragment of core, black color, Early Harappan period from Baror.
- 14 Stone, Chart, A fragment of core, light yellowish color, Early Harappan period from Chak-3MSR.
- 15 Stone, Chart, A fragment of core, light grayish color, Early Harappan period from Chak-7SGM.

- 16 Stone, Chart, A fragment of core, light yellowish color, Early Harappan period from Chak-7SGM.
- 17 Stone, Chart, A fragment of core, light grayish color, Early Harappan period from Chak-7SGM.
- 18 Stone, Chart, A fragment of core, light yellowish color, Early Harappan period from Chak-I-MLD-A.
- 19 Stone, Chart, A fragment of core, light yellowish color, Early Harappan period from Chak-I-MLD-A.

**Table -3 Measurement of Blades from Sri Ganganagar District, Rajasthan ( PL.3)**

Sr. No.	Site Name	Mate rial-1	Material -2	Form	Length (mm)	Width (mm)	Thickness (mm)	Weight (gm)
1	Baror-22	Stone	Chart	Blade	58.74	11.98	5.59	5.40
2	Chak-3MSR-2	Stone	Chart	Blade	44.44	8.34	4.72	1.50
3	89GB-3	Stone	Chart	Blade	30.61	14.64	2.27	1.60
4	89GB-4	Stone	Chart	Blade	31.29	10.14	4.29	1.60
5	89GB-2	Stone	Chart	Blade	28.92	10.56	3.37	1.40
6	Baror-24	Stone	Chart	Blade	29.68	10.35	2.38	1.10
7	Baror-25	Stone	Chart	Blade	25.61	15.07	3.86	2
8	Baror-23	Stone	Chart	Blade	27.77	13.57	3.23	1.80
9	Baror-27	Stone	Chart	Blade	22.67	15.51	2.25	1.20
10	I-MLD-B-1	Stone	Chart	Blade	21.01	6.85	3.10	0.59
11	Baror-28	Stone	Chart	Blade	21.45	21.8	4.46	2
12	Baror-26	Stone	Chart	Blade	14.34	15.11	3.12	0.8
13	Baror-11	Stone	Quartzite	Core	-----	-----	-----	16.38
14	Chak-3MSR-1	Stone	Chart	Blade	30.04	15.45	10.9	5.25
15	Chak-7SGM-1	Stone	Chart	Core	31.55	22.46	11.22	7.40
16	Chak-7SGM-2	Stone	Chart	Core	30.05	20.70	10.26	5.27
17	Chak-7SGM-3	Stone	Chart	Core	27.33	23.42	15.20	8.30
18	I-MLD-B-3	Stone	Chart	Blade	18.76	16.10	7.12	1.83
19	I-MLD-B-4	Stone	Chart	Blade	24.16	15.11	2.62	0.62



**PL.-4            Blades**

- 1        Stone, Chart blade, white color, convex, parallel sided a sharp cutting edge, flat rectangular section with both the ends broken, Pre- Harappan period from Chak-I KPM-II.
- 2        Stone, Chart blade, light yellowish color, convex, parallel sided a sharp cutting edge, flat rectangular section with both the ends broken, Pre- Harappan period from Chak-I KPM-II.
- 3        Stone, Chart blade, light yellowish color, convex, parallel sided a sharp cutting edge, flat rectangular section with both the ends broken, Pre- Harappan period from Chak-I KPM-II.
- 4        Stone, Chart blade, light brownish color, convex, parallel sided a sharp cutting edge, trapezoid transverse section with broken ends, Pre- Harappan period from Chak-I KPM-II.
- 5        Stone, Chart blade, white color, convex, parallel sided a sharp cutting edge, trapezoid transverse section with broken ends, Pre- Harappan period from Chak-I KPM-II.
- 6        Stone, Chart blade, light pinkish color, convex, parallel sided a sharp cutting edge, trapezoid transverse section with both the ends broken, Pre- Harappan period from Chak-I KPM-II
- 7        Stone, Chart blade, light grayish color, flat surface, parallel sided a sharp cutting edge, flat rectangular section with broken ends, Pre- Harappan period from Chak-I KPM-II.
- 8        Stone, Chart blade, white color, convex, parallel sided a sharp cutting edge, flat rectangular section with both the ends broken, Pre- Harappan period from Chak-I KPM-II
- 9        Stone, Chart blade, Light purple color, convex, parallel sided a sharp cutting edge, flat rectangular section with broken ends, Pre- Harappan period from Chak-I KPM-II
- 10       Stone, Chart blade, white color, convex, parallel sided a sharp cutting edge, flat rectangular section with broken ends, Pre- Harappan period from Chak- I-MLD-B.

**Table -4 Measurement of Blades from Sri Ganganagar District, Rajasthan ( PL.4)**

<b>Sr. No.</b>	<b>Site Name</b>	<b>Material -1</b>	<b>Material -2</b>	<b>Form</b>	<b>Length (mm)</b>	<b>Width (mm)</b>	<b>Thickness (mm)</b>	<b>Weight (gm)</b>
1	Chak-I KPM-II-8	Stone	Chart	Blade	24.93	6.64	2.12	0.40
2	Chak-I KPM-II-7	Stone	Chart	Blade	22.92	5.66	2.56	0.40
3	Chak-I KPM-II-6	Stone	Chart	Blade	23.74	5.07	2.31	0.30
4	Chak-I KPM-II-2	Stone	Chart	Blade	11.17	3.46	5.55	0.50
5	Chak-I KPM-II-4	Stone	Chart	Blade	17.37	6.87	2.97	0.50
6	Chak-I KPM-II-5	Stone	Chart	Blade	11.16	8.16	2.94	0.40
7	Chak-I KPM-II-16	Stone	Chart	Blade	11.40	11.23	2.74	0.50
8	Chak-I KPM-II-15	Stone	Chart	Blade	10.50	9.36	2.04	0.50
9	Chak-I KPM-II-9	Stone	Chart	Blade	9.01	7.96	2.51	0.30
10	I-MLD-B-2	Stone	Chart	Blade	10.22	7.62	2.74	0.30

### **Acknowledgment**

It is our pleasure to thank the many people who helped us during the research process, especially Prof. Manmohan Kumar, Prof. Rajpal, Prof. M.R. Mughal, and Dr. Vivek Dangi for their encouragement, support, and helpful recommendations. Dr. Akinori Uesugi and Hitoshi Endo deserve our heartfelt thanks for all of your support.

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Pawar, V; 2015, *Archaeology Settlement Pattern of Hanumangarh District*, Unpublished Ph.D. Thesis, M.D.U. Rohtak.



**Pl.-1 Chart Core**



**PL.-2 Blades**



**PL.-3 Blades**



**PL.-4 Blades**