

GOVERNMENT OF RAJASTHAN

SURVEY & RESEARCH

GROUND WATER DEPARTMENT

PALI

GROUND WATER RESOURCES OF
JALORE DISTRICT
PART - I
HYDROGEOLOGY

OFFICE OF THE SENIOR HYDROGEOLOGIST
GROUND WATER DEPARTMENT (B.P.A.F.)
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RAJASTHAN.

PART-I = HYDROGEOLOGY

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A B S T R A C T.

To study the ground water resources of Jalore district, detailed hydrogeological investigations under drought prone area programme were initiated in the year 1976 to evaluate the available ground water potential and also for precise delineation of fresh water aquifers in salinity infested areas as existing sources were not sufficient to cope up with the present and future water requirements.

Prior to these investigations individual Panchayat Samities were surveyed for assessing ground water surplus by the department and detailed investigation were also carried out in part of the district by exploratory tubewell organisation under United nations assistance programme. Based on the findings of these investigations, a number of minor irrigation schemes and other development projects for exploitation of ground water have been implemented.

Jalore district is located towards south-western part of Rajasthan and has an areal extent of 10640 sq.kms. District lies in the arid zone of Rajasthan with extreme of climate. The mean annual rainfall over Jalore Station is observed to be 379.86 mm(period 1901-1981)

Major part of the district is covered by extensive alluvial plains with a few scattered isolated hills and rugged hill ranges towards south-east. Sand dunes are common topographic features in mic-eastern and western part. Geomorphologically, the alluvial valley floor belongs to mature land scape system and both erosional and depositional land form units are found in the region. The area is well drained by Luni drainage system, all rivers in the area are ephemeral which flow in direct response to precipitation.

Present land use studies reveal that above 58% cultivable land has no irrigation facilities in the district. Out of total irrigated area, the area irrigated by wells, canals and other sources are 99.25%, 0.62% and 0.13% respectively. Bhinmal Tehsil has maximum cultivable and irrigated area where as minimum area falls under Ahore Tehsil. Soils of the area in general are deep uniformly layered, fine, sorted sand on the dunes and coarse to medium textured on the plains. The soils in the district are poor in fertility as the nitrogen, phosphorus contents & proportion of organic matters are low.

The general geological succession has been prepared on the basis of various bore holes drilled in the district. The rock units range in age from Pre-cambrian to Recent. Study of the geological sections and correlation of bore hole data indicate that basement abruptly deepens towards west of Saila - Sankad axis which may be due to some major dislocation in the area which is parallel to Pali - Sirohi lineament. In the bore holes drilled towards west of this axis, a sequence of sand, gravel and clays is encountered. The lower horizons of the sand, gravel and clay sequence resembles with Tertiary deposits, in the other area. Another dislocation having almost east-west trend is deciphered, which runs along Jawai-Sukari river. From this section it appears that south-west part of the basin was sinking even during holocene period.

Hydrogeology of various aquifers has been studied from the sections of 1039 wells inventoried. Subsequently 189 key wells were selected on grid pattern, for recording seasonal water level fluctuations and collection of water samples. Another set of 38 key wells and 21 piezo-

meters were monitored monthly for closer and regular study of water level fluctuation. In all, 698 vertical electrical soundings along 41 sections and 178 spots were conducted during study period. Results obtained were used for deciding the sites for exploratory drilling and delineation of various aquifers.

On the basis of hydrogeological investigations and additional sub-surface information obtained from geo-electric surveys, 35 exploratory bore holes and 26 observation bore hole/piezometers were drilled to ascertain the thickness and areal extent of different aquifers. Twelve pumping tests were conducted for determining the aquifer parameters.

Generally ground water occurs under unconfined and semiconfined conditions. Confined condition have also been observed in alluvial deposits and Tertiary formation(?) towards west and SSW part. At village Jodhawas, a free flowing conditions at the rate of 0.20 cubic metres/hour has been observed.

Ground water movement in the district is from south-east to north west in the south and east to west in the northern and western part. Slope of the water table is steep towards east of Saila-Sankad axis and

gental towards west of it, which shows the control of fault on the ground water movement.

Younger alluvium comprises of fine to coarse sand, gravel, and clays, their thickness varies from 20 metres to 65 metres. Ground water occurs under unconfined and semiconfined condition. Discharge of existing wells varies from 5 cubic metres/day to 620 cubic metres/day whereas yield of tubewells range from 129.6 cubic metres/day to 1344 cubic metres/day.

Major part of the area is covered by older alluvium and ground water occurs under water table, semi confined as well as in confined conditions. These formations comprises. Sandy loam, Kankar, coarse to fine sand and gravel with clay lenses and their thickness varies from 11.0 to 80 metres. Discharge of existing wells varies from 5 cubic metres/day to 480 cubic metres/day and of tubewell ranges between 27 cubic metres/day to 1072 cubic metres/day.

In granites and rhyolites ground water normally occurs under water table conditions. Discharge of existing wells in Granite formation varies from 15 cubic metres/day to 480 cubic metres/day whereas yield of tube wells ranges between 14.40 cubic metres/day and 736 cubic metres/day.

I INTRODUCTION

1.1 PURPOSE AND SCOPE:

The problem of meeting ever increasing demand of water for drinking and irrigation purpose have become many-fold due to fast increasing population urbanisation and industrialisation in Jalore district. The situation was becoming more grim due to frequent drought conditions. The surface water resources being limited the demands for ground water exploitation have been continuously increasing.

Based on the findings of semi-detailed hydrogeological investigations of the Jalore district conducted by the Ground Water Department and detailed investigation carried out in part of the district by Exploratory Tube wells Organisation under U.N. assistance programme, a number of minor irrigation schemes and other development projects for exploitation of ground water have been implemented. As a consequence of these programmes, certain fresh water areas have been over exploited while vast tracts have remained untapped, mainly because of inadequate information regarding hydrogeological, hydro-chemical characters of the aquifers and their areal extent and ground water storage.

Therefore, detailed hydrogeological investigations under Drought Prone Area Programme

(D.P.A.P.) were initiated from the year 1976-77 to evaluate the available ground water potential and also for precise delineation of fresh water aquifers in salinity infested areas of the district.

1.2 HISTORY OF SURVEYS.

The first few months were utilised for collection and interpretation of all available hydrogeological and geological literature and maps from various departments. These data were collected from the following agencies other than the Department-

- i) Central Ground Water Board (C.G.W.B.),
- ii) Geological Survey of India (G.S.I.),
- iii) Central Arid Zone Research Institute (C.A.Z.R.I.).

Central Arid Zone Research Institute and Exploratory Tube well Organisation (presently Central Ground Water Board) had carried out detailed investigations in parts of the district. Central Arid Zone Research Institute covered Ahore, Jalore and Saila blocks and part of Central Luni Basin in respect of Geomorphology and land transformation. Ground Water Survey carried out by Exploratory Tubewell Organisation under United Nations Assistance programme covered only 6750 sq.kms. area between latitude $25^{\circ}00''$ and $25^{\circ}30'$ and longitude $71^{\circ}45'$ and $73^{\circ}00'$ (45K and 45 of Survey of India Topographic Sheets) along Jawai-Sukri river valley in the Ahore, Jalore, Saila (Jalore district), partly Sumarpur (Pali district) and Siwana (Barmer district) blocks. Therefore, fairly good hydrogeological data were available for part of Jalore district. These data were used for deciding

various Geophysical Sections and sites for exploratory bore holes during detailed studies. Beside these studies, systematic hydrogeological reconnaissance and semi detailed hydrogeological investigations of different blocks of Jalore district were carried out by the department during the year 1969- to 1973. These studies enabled to delineate fresh and saline water areas and their ground water potential assessment. Based on the surplus of ground water potential calculated during these surveys, various minor irrigation schemes for exploitation of ground water have been proposed and implemented.

1.2(ii) Various data collected from other agencies along with data collected by the department during earlier phases of surveys were used for preparation of base maps, deciding geophysical sections and sites for exploratory bore holes.

Hydrogeological reconnaissance were started from May, 1976. Field operation included geological and hydrogeological studies, selection of representative wells, sampling of water for chemical analysis and meteorological data collection. These were followed by geoelectrical surveys and exploratory drillings. Details of reconnaissance survey were plotted on the base map of area having 1:2,50,000 scale. During reconnaissance 1039 wells were inventoried and 919 water samples were collected. Data so collected during reconnaissance were then used in projecting various hydrogeological and hydrochemical maps.

1.2(iii) Subsequently 855 wells were again monitored in 1973 out of which 189 key wells were finally selected on grid pattern which cover entire area and fairly represent various aquifers. These key wells were monitored for seasonal water level fluctuations and sampling of water during June (Pre-monsoon), October (Post monsoon) and in March (Post irrigation), the seasonal observations were made during the year 1977 to 1981 and during June, 1982 respectively.

1.2(iv) Another set of 38 key wells and 21 piezometer/observation wells were monitored for recording monthly water level fluctuation during June 1980 to Jan. 1981 but due to the shortage of funds for petrol, oil and lubricant, it was discontinued and again started from June, 1982 to Jan. 1983. These data have been utilised for projecting water level hydrographs.

1.2(v) During these investigations 41 sections and 162 spots were chosen for Geo-electric surveys. In all, 576 vertical electrical soundings along sections and 178 vertical electrical soundings on spots were conducted during 1976-77 to 1981-82. Results of Geo-electric surveys were used for deciding the sites for exploratory bore holes and delineation of various aquifers.

1.2(vi) On the basis of hydrogeological investigations and additional subsurface information obtained from geo-electrical survey, 35 exploratory bore holes and 26 observation bore holes/piezometers were drilled to ascertain the thickness and areal extent of different aquifers encountered in the area.

1.2(vii) Twelve pumping tests were conducted for determining the hydraulic parameters of different aquifers.

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II. PHYSIOGRAPHY AND CLIMATE

2.1

LOCATION AND EXTENT:

Jalore district has an areal extent of 10,640 sq.kms. between latitudes $24^{\circ}30'$ to $25^{\circ}45'$ and longitude $71^{\circ}7'$ to $73^{\circ}6'$ (Fig.1) and is covered by the survey of India topographic sheet no. 45C, 45D, 45G & 400 & 40P. The Jalore district is located towards south-western portion of Rajasthan and primary boundaries are Luni river to the west, part of central Luni Basin to north, and it shares to common boundary with Gujarat State to the south and Sirohi and Pali District to south-east and east respectively.

The district has 613 villages, 2 major towns Jalore and Bhinmal, 4 tehsil head-quarters at Jalore, Ahore, Jaswantpura and Sanchoe and 7 Panchayat Samiti headquarters at Jalore, Ahore, Saila, Bhinmal, Jaswantpura, Raniwara and Sanchoe.

2.2

CLIMATE - RAINFALL - DROUGHTS:

District lies in the arid zone of Rajasthan with extremes of climate and high diurnal variation in temperatures. The highest maximum temperature 46.5°C over Jalore Station recorded on 18th June, 1979 while lowest maximum temperature 13.2°C observed on 31st January, 1976. The highest minimum temperature 36.6°C on 7th June, 1981 and lowest minimum 1.2°C on 29th Jan., 1973 was recorded respectively. The maximum 100% relative humidity was observed in rainy days (period April, 1972 to December, 1981).

In the last 80 years of climatic history of Jalore, lowest annual rainfall (27.1mm) experienced in the year 1901 while highest annual

rainfall (849.6mm) has been recorded in 1973.

The mean annual rainfall over Jalore station is observed to be 379.86 mm (period 1901-1981). The departure and cumulative departure of annual rainfall reveal that most dry condition prevailed over the region upto 1978 while wet period observed during 1979 onward. Hence, this inferred that rainfall trend increasing in the region. The normal annual rainfall trend over Jalore district is increasing from WNW to ESE and it ranges from 35°mm to 45°mm. The climate and rainfall have been described in detail in the volume IV, Ground water resources of Jalore district.

2.3

PHYSIOGRAPHY, GEOMORPHOLOGY-DRAINAGE-
LAND USE - SOILS:

Major part of the district consist of extensive alluvial plains with regged hill ranges occuring in the north-eastern (near Bhadrajun), central (Jalore & Israna) and south-east parts (Dorrag - Jaswantpura). These hill ranges are generally composed of Jalore granites, rhyolites with some admixture of granite in north-eastern part. These hill ranges rise to maximum height of 991 metres above mean sea level in south-east near Jaswantpura, Apart from these hill ranges numerous other small isolated hills are spread over the extensive alluvial plains. The more prominent of these are at Kishangarh (660 metres), Panchota (582 metres), Takhatpura (508 metres) in north, central and eastern part and Ratnagar (477 metres), Ranawal - Bhakar (404 metres), Kolar (528 metres) and Lakhawas (384 metres) in south. The elevation of the area ranges from 609.60 metres above mean sea level in the east to 76.20 metres above mean sea level in the west at the confluence of the Luni and Jawai - Sukari rivers. The average elevation of the Valley floor ranges from 60.96 metres to 213.36 metres above mean sea level. Generally, terrain slopes towards west. In the eastern part of area, the hill tops are normally shaped by weathering which has given rise to tors and boulders of various shap as and sizes while plain covered with sand dunes are a common topographic features in mid eastern and western part.

2.3(i) Geomorphologically, the alluvial valley floor belongs to mature land scape system and present land form units are the product of the past

fluvial erosion and sub-areal denudation. As a result, hard resistant rock masses occur as steep hill ranges surrounded by extensive aggraded alluvial plains. Thus, these aggraded alluvial plains were formed by well developed drainage system prevailing in pleistocene and sub-recent times. The fluvial cycle was then followed by arid cycle and as a result of this process sand dunes, sandy plains and deflation hollws have been formed, Wind erosion became a predominant process in the region due to change in climatic cycle. The occassional floods in the present river courses have deposited fluviatile sediments on their margins.

Therefore, both erosional and depositional land form units found in the region are (1) Residual rugged hills (2) Upper piedmont zone (3) Lower piedment plain (bajada) (4) Aggraded older alluvial plains (5) Sandy plains and dunes (6) Recent flood plains (Younger alluvium) (7) Graded river bed and (8) Shallow saline depressions. Out of 8 geomorphic units, only 1 and 2 are the erosional land form units while 3 to 8 are depositional units and have significant direct bearing on hydrogeological conditions.

2.3(ii) The area is well drained by the Luni drainage system, originating from the Aravalli hill ranges. The main rivers in the area, the Jawai - Sukri, Bandi and Sagi are tributaries to the Luni river, while Bargaonra river in south of the district flows to Gujarat. All rivers are ephemeral with graded and meandering courses and wide flood plains. Besides these, there are net work of small drainage channels emanating from local hills which flow to considerable distance during monsoon period and then, eventually

are lost in aggraded alluvial plains. Additionally there are in-numerable old channels buried under wind blown sand. Jawai river initially flows east to north-west upto Paharpura and then follows a westerly course. While river Bandi & Sagi flow from south-east, north west and then follow a westerly course along general topographic slope. All these rivers are coarse to medium textured and develop sub-dendritic drainage pattern in the upper part which become parallel in the middle and lower part Radial drainage pattern have developed at Shadrajun, Isarana and Lakhawas due to local structural high or headward erosion. The beds of Jawai river form distinct land unit which are absolutely graded and are filled up by their detritues consisting of assorted material. The average width of the course is about 800 metres with large and small sand bars. The average length and width of these sand bars are 400 metres and 1.5 metres respectively. In these beds the kankar zone is found at 1 to 2 metres depth.

2.3(iii) To have a review of present land use in the district, land use data of all the 4 Tehsil namely Ahore, Jalore, Bhinmal and Sanchoe were collected. The agricultural statistics indicate that 36.97% area of the total land is suitable for irrigation and out of this 18.67% area is irrigated in the district. It is apparent from the above facts that about 58% cultivable land has no irrigation facilities. Out of the total irrigated area, the area irrigated by wells, canals and by other sources are 99.25%, 0.62% and 0.13% respectively.

The agricultural statistics of the district during the year 1980-1981 are as follows:-

1.	Total area of the district	10,64,000	hectors.
2.	Total uncultivable area.	1,20,133	"
3.	Total land suitable for irrigation.	9,18,852	"
4.	Total area of forest	17,459	"
4.1	Total area of hills	7,556	"
5.	Total irrigated land.	1,70,671	"
6.	Total area irrigated by wells.	1,69,385	"
7.	Total area irrigated by tanks.	Nil	
8.	Total area irrigated by canals.	1,055	"
9.	Total area irrigated by other sources.	231	"
10.	Total population of the district (1981 census).	9,03,073	"
11.	Total No. of cattles (1977)	13,30,534	

The other details of agricultural statistics are tabulated in Table-I & II.

TABLE-I
SHOWING LAND UTILISATION FOR IRRIGATION PURPOSES IN JALORE DISTRICT
PERIOD 1980-81

S.No.	Name of Tehsil	Total culti- vable area in heacters.	Area under irrigation By wells. By canals.	By other sources.	Total area irrigated in heacters.	
1.	AHORE	1,63,750	26,928	607+	52	27,587
2.	JALORE	1,95,396	45,677	-	24	45,701
3.	BHINMAL	2,85,475	61,298	448	155	61,901
4.	SANCHORE	2,74,231	35,482	-	-	35,482
TOTAL:						1,70,671

TABLE-II
SHOWING DETAILS OF CROPS GROWN IN JALORE DISTRICT.

S. No.	Name of crops grown.	AREA IN HECTARES				TOTAL AREA IN HECTARE
		AHORE TEHSIL	BHINMAL TEHSIL	JALORE TEHSIL	SANCHORE TEHSIL	
1.	2.	3.	4.	5.	6.	7.
<u>MAIN CROPS</u>						
1.	Barley	1084	305	262	521	2172
2.	Bajra	39429	119949	71619	127427	358424
3.	Corn	200	49	242	1	492
4.	Jwar	25	815	97	119	1056
5.	Rice	-	36	-	-	36
6.	Wheat	10957	12045	11663	5395	40060
<u>PULSES</u>						
7.	Chola	17	198	24	41	280
8.	Gram	4834	25	213	-	5072
9.	Moth.	58	279	7	924	1268
10.	Mung.	6078	11254	3555	1384	22271
<u>OLD SEEDS</u>						
11.	Alsi	2	-	-	-	2
12.	Arandi	52	783	36	942	1813
13.	Ground-nut	2	-	2	-	4
14.	Mustered oil	-	105	8	25	138
15.	Raira.	27198	30881	37321	18445	113845
16.	Taramira.	9705	15694	742	16319	42460
17.	Til seed.	20062	5746	3549	292	29599
<u>OTHER CROPS.</u>						
18.	Dhanial	2	-	-	21	23
19.	Jhamba	-	-	3367	-	3367
20.	Jhira	181	3775	179	9910	14045
21.	Mirch.	99	152	441	23	715
22.	Isabgol.	83	2571	58	468	3182
23.	Tobacco	14	-	-	-	14
24.	Methi	1701	24	18	-	1743
25.	Pattato	1	11	-	-	12
26.	Ambari	4	-	-	-	4
27.	Cotton	1454	10	109	-	1573
28.	Khar	15035	36892	30731	43142	125800

The Table-I shows that maximum cultivable and irrigated area is in Bhinmal Tehsil and minimum area under cultivation and irrigation in Ahore Tehsil. Main source of irrigation is through wells, canal irrigation is exclusively restricted to Ahore and Bhinmal Tehsils where as in Sanchores Tehsil wells are the only source of irrigation. Over all 18.67% of the cultivable area is irrigated in Jalore district.

It is apparent from Table-II that 28 types of crops are usually grown in the district. Wheat, Raida, Bajra, Til, Moong, Tara-mera, Barley, Jera, Khar are sown in major part of the district. Rice crops is sown in small part of Bhinmal Tehsil, Alsi and Tobacco crops are grown only in Ahore Tehsil, Other important crops grown in the district are Gram, Mustard, Castor, Methi, Maize, Jawar, Moth, Chilly and Cotton. Bajra is the main Kharif crop covers maximum area of Sanchores Tehsil, Barley, Gram, Alsi, Tobacco, Methi, Til, Ground-nut and Cotton are grown in Ahore, Tehsil and Raida, Jhamba, Maize, Ground-nut, Chilly, are grown in Jalore Tehsil, Wheat, Mustard, Potato, Jawar, Moong, Gram are grown in Bhinmal Tehsil, Castor, Tara-mera, Dhanian, Jera, Bajra, Moth, Khar are grown in Sanchores Tehsil.

2.3(iv) Systematic soil survey of the district has not been carried out so far. However, detailed reconnaissance studies on the nature of the soils in Ahore, Jalore and Saila blocks were carried out by the

Central Arid Zone Research Institute. Detailed soil survey of about 38 water sheds covering an area of 59,612 hectors has been done by soil survey division of State Agriculture Department.

On the basis of details available, the soils in the district can be classified into 6 associations taking into consideration the morphology of the soil profiles, pH value and fertility aspect etc.

The details are as follows:-

<u>ASSOCIATION.</u>	<u>CHARACTERISTICS & OCCUPATION</u>
1. Sandy aeolian soils with sand dunes and hummock.	Confined mostly to the north west of Jalore on both side of Sukari river.
2. Sand to loamy sand.	Coarse textured soils, around Jalore hills and covering north-eastern region.
3. Sandy loam to loam	Coarse to medium textured soils.
4. Clay loam to clay with drainage impendence.	Soils of alluvial nature having medium to heavy texture, occur in valley fills and as isolated patches in stream channels and low lying areas to south of Sukari river.
5. Shallow, stony, gravelly soils.	Identified in upper piedmont plains along the foot hill slopes.
6. Dissected sand dunes.	Deep fine sand forming ravines and gullies, predominantly in the northern part of the district.

It is apparent from the details given above that soils of the area in general are deep, uniformly layered, fine, sorted sand on the dunes and coarse to medium textured on the plains. Deep to very deep, medium heavy textured soils occupy only small area along the valley fills and river channels.

Soils along the hill slopes are mostly shallow consisting of weathered rock and calcareous gravelly materials. Soils with weak, sub-angular blocky structure having fair water retention capacity with moderate permeability are identified in flat and undulating plains, While soils on dunes are loose and structure less with low water retaintion capacity and high permeability. Generally, soils are calcareous with CaCO_3 ranging from traces to almost 4% on the surface and it increases upto 8 to 20% with in depth of 75 to 100 cm. Therefore, in general, the soils in the district are poor in fertility as the nitrogen, phosphorus contents, proportion of organic matter are low. However, potassium content is moderate to high.

III. GENERAL GEOLOGY

3.1 STRATIGRAPHY

Latouche (1902), Heron(1932), Auden(1933), Coulsen (1933), Taylor(1955) and Pascoe (1959) built up the geology and stratigraphy of the area and laid the foundation in the form of basis work. Since then a number of workers from different institutions have contributed to the geology of the area. The drilling work under the United Nation Development Programme for locating aquifers has also revealed the nature of Palaeozoic strata. Accordingly, Jalore district forms the extreme south western continuation of dissected precambrian plateau of the Aravalli ranges. Broken and scattered hills occur as prominent land marks above the desert sand and river alluvium.

In the central and eastern part, the Quaternary and pleistocene deposits rest directly on the late palaeozoic formations which are crystalline intrusives and volcanics. The volcanics appear to rest over the intrusives. Such junctions are observed near village Nun (25°10' : 72°30'45") and Bhadrarjun (25°36' : 72°52'30") and form a capping over crystalline rocks, indicating that volcanic activity took place much later than the igneous intrusives. In this part, no other formations occur inbetween the late palaeozoic and quaternaries, which indicate that the region stood above sea level after the formation of igneous and volcanic rocks. These rocks were subjected to weathering and erosion due to which the Quaternary formations have deposited.

The general Geolocial succession in the area is as follows:-

Table-III
GEOLOGICAL SUCCESSION OF JALORE
DISTRICT

<u>Era.</u>	<u>Period</u>	<u>Systems.</u>
Quaternary.	Recent and sub recent to Pleistocene.	Aeolian sediments Alluvium younger Alluvium older.
Tertiary.		Consolidated clays and coarse to medium sand with shale fragments.
Late Pala- eozoic to Pre cambrāan.	Post Delhi Delhi super group.	Malani volcanics Jalore granites Erinpura granites Meta-sediments.

3.1(a) META SEDIMENTARY ROCKS:

Cheest formations are represented by meta sedimentary rocks such as schist, limestone, marble and quartzites belonging to Delhi super group, which occur as inclusion with in the dominant granites and rhyolitxes. Pandants of limestone have been indentified near Bhadrajun and schist has been recorded in well section located between Bhadrajun and Malgarh.

3.1(b)(i) ERINPURA GRANITE:

Erinpura granites, the oldest intrusive igneous rocks exposed in southern part of Bhinmal are essentially gray coloured, medium to coarse grained mainly composed of quartz, potash feldspar with biotite and horn blends as minor constituent. These are weathered, fractured and well jointed.

3.1(b)(ii) JALORE GRANITES:

Jalore granite belongs to Malani suite of igneous rocks. These are generally fine to coarse grained with phenocryst of feldspar. The Jalore granite is pink in colour composed of quartz orthoclase feldspar with some plagioclase feldspar, biotite and aegirine. Biotite in Jalore granite is the most abundant mineral amongst the ferromagnesian minerals. The biotite has generally altered to chlorite, leaving behind greenish patches and it appears that this granite range in composition from granite to granodiorite.

These granites are considered to be intrusive in rocks of Delhi system, and occur in the form of large bosses. Joints are well developed in the Jalore granite. These joints are vertical, angular and horizontal, the strike frequency of the joints is more towards east and west. The topography of the region and the development of the drainage system are controlled by these joint systems. The vertical joints are good conduits of ground water movement while the angular joints are not much effective conduits.

3.1(b)(iii) MALANI VOLCANICS:

Rock types of this group consist of rhyolites associated with agglomerate, volcanic ash, felsites, intercalated with acid tuffs and pyroclastic materials. Jalore and Israna hill-tops are partly composed of Malani volcanics. These rocks also exhibit well patterned joints which show a tendency of becoming tight with depth. At places, it shows

obscure bedding planes which are probably developed due to stresses operating during cooling of magma.

3.1(c) TERTIARY FORMATIONS:

Thick layers of buff to grayish, clays, silts with intercalation of medium to coarse sand and gravel are encountered in exploratory bore holes drilled at Batera, Plader, degaon, Chajjala, Jodhawas, Binjrol-ka-golia and Dahiwa towards western part of the district. The clays are sticky, variegated and occur as dissected lenses. The marker horizon is identified as friable shale fragments with medium to coarse sand brown to reddish in colour which is encountered at different depth during drilling. The sands are medium to coarse with gravel horizons subangular to subrounded and fresh in appearance.

3.1(d) QUATERNARY ALLUVIAL DEPOSITS:

These forms the most significant lithological unit in the region. These consists of aeolian deposits and valley fills. These sediments are broadly classified as (i) Wind blown sands, (ii) Younger alluvium and (iii) Older alluvium.

3.1(d)(i) OLDER ALLUVIUM:- occupies large area of the district and is identified in the form of piedmont alluvial sediments and high river terrace deposits. Piedmont alluvial sediments are located along the slopes of the Jalore, Israna and Other granite hills as alluvial fans and cones. These consist of unsorted disintegrated rock fragments, accumulated as a result of weathering, gravel, sand with high clay content. High river terrace

deposits cover entire area between the piedmont plains and low terrace deposits. These deposits are identified between Khari-Bandi river, north of Jawai - Sukari rivers between Dangara and Dadhal. These sediments consists of an upper layer of sandy loam, kankar and lower layer of medium to fine sand and gravel with minor silt.

3.1(d)(ii) YOUNGER ALLUVIUM is second wide spread lithological unit and occurs in the form of river flood deposits and low terrace deposits confined to the present and past drainage channels. These are heterogeneous sediments comprising of unconsolidated sand, gravel and intercalated clay and silt beds. The extent and thickness of these deposits are highly variable. The sand grains, gravels, pebbles and cobbles are practically, sub-rounded to rounded in shape. Better sorting of sediments is found in river flood deposits as compared to low terrace deposits. In fact, it is difficult to separate them in the field. These deposits are well identified on both sides of the Jawai - Sukari river channel.

3.1(d)(iii) WIND BLOWN SANDS are the recent aeolian deposits in the district. The occurrence of sand dunes is more pronounced in the mid central and north-western part of the area. These blown sands are generally non calcareous, though calcareous in nature at few places and are fine to medium grained

and are not as hydrolo-

3.2(i) STRUCTURE AND TECTONICS

The structure of the area is difficult to decipher due to thick deposition of sand and alluvial sediments. The principal structures are intermontane valley, depressions and large basins which have developed due to the igneous and volcanic rock basement. These basins or depressions are now filled up with Quaternary alluvial formation in the eastern part. However, correlation of bore hole data indicates that the depth to basement suddenly increases towards west of Saila - Sankad axis. Bore hole drilled towards west of this axis have not encountered basement upto 300 metres depth. Towards, lower part of these bore holes, the sequence of sand, gravel and clays is encountered which resembles Tertiary deposits in other areas. The sudden deepening of basement can be explained on the basis of some major fault in the area which is parallel to Pali - Sirohi lineament (NNE -SSW). Another ~~xx~~ dislocation having almost E-W trend is deciphered from geological sections along Pladar - Chajjala and Binjrol ka golia - Dahiwa. From these sections, it appears that, south western part of the basin was sinking even during holocene period.

3.2(ii) STUDY OF GEOLOGICAL SECTIONS:

To decipher the sub surface geology, the lateral extension of different stratigraphic horizons, structural and tectonic features associated with them, few geological cross sections have been prepared on the basis of bore hole records. The bore holes drilled under detail hydrogeological investigation by Ground Water Department and the bore holes drilled under United Nations assistance programme(ETO) have been taken into consideration.

1. PLADAR - MEDA-ARNAI-BINJROL-ka-
GOLIA-JODHAWAS-BATERA-CHAJJALA
SECTION:

This section is located at eastern side of Sanchole village and runs approximately north-south. The main stratigraphic horizons encountered in the bore holes are fine to medium sand and medium to coarse sand with alternate bands of clay. The clay acquires maximum thickness between Arnai and Binjrol ka Golia. The lithologs of the bore holes reveal the presence of peculiar horizon which is mainly composed of medium to coarse sand and fragment of shale with minor amount of clay. This horizon has been assumed as the marker horizon between Quaternary and Tertiary formation(?). The depth of occurrence of the Tertiary horizons in the bore holes of Pladar, Meda, Arnai, Binjrol ka Golia, Jodhawas and Batera were - 170 metres, 156 metres, 127 metres, 134 metres, 122 metres and 146 metres respectively. However, in the Chajjala bore hole this horizon was encountered at shallow depth i.e. at 29.0 metres. This sudden uplift of the horizons can be interpreted by major fault in region, which probably runs along Sukri river having approximately east-west trend. Due to this fault, the northern portion from the Sukri river, is at a higher elevation in comparison to southern portion.

2. BINJROL KA GOLIA-JODHAWAS-DUMARIA-
DADHAL-ALWARA-DAHIWA SECTION:

This section is located in the NW of Bhinmal and runs almost NE-SW. Section exhibits the depth of marker horizon of tertiary formation in the

bore hole drilled at Binjrol ka golia, Jodhawas, Dumaria-Dadhal-Alwara and Dahiwa. Tertiary horizons encountered at shallower depth in the bore hole at Alwara (-14 metres) and Dahiwa (-0met) as compared to Binjrol ka golia (-134 metres) Jodhawas(-122 metres) Dumaria(-122 metres) and Dadhal (-126 metres). Upliftment of these horizons in the NW part and basement encountered at 272 metres depth further confirms the fault in the region.

3. BAUTRA-KUABER-BALWARA SECTION;

This section is located towards northern side of Saila and runs in a east-west direction approximately. The main stratigraphic horizons encountered in the bore holes were sand medium to coarse. Sand coarse with clay and gravel with fine to medium sand. The amount of clay continuously increase in the south-western direction of the section and acquires a maximum thickness in the bore hole at Bautra with few horizons of clean gravel at depth of 220 metres. The drilling depth of these bore holes were 290.0 metres, 221.0 metres and 127.0 metres respectively. Basement was encountered in Kuaber and Balwara bore holes and in Bautra basement was not encountered upto depth of 290.0 metres.

The section reveal that the depth to basement increases in the south-western direction. The depth of basement suddenly increased from 127.0 metres at Balwara to 221.0 metres at Kuaber and it is not encountered at Bautra upto 290.0 metres. This sudden deepening of the basement can be explained on the basis of major lineament runs along Sayla-Sankad axis which is parallel to Pali-Sirohi lineament(NNE-SSW)

4. DAHIWA-BAUTRA -SAILA SECTION:

This section is located towards west of Jalore town and runs in east-south-east to north-west direction. The main stratigraphic horizons encountered in the bore holes were thick sequence of clay with few horizons of gravel and coarse to medium sand. The gravel horizons encountered in the Dahiwa bore holes were thick which ultimately pinch out in the south-east. However, the clay horizons is prominent in all the three bore holes. In the litholog of Dahiwa bore hole occurrence of shale fragments at depth of 119.0 metres marks the top of tertiary sequence. Basement was encountered in the Dahiwa-II bore hole at a depth of 272 metres below land surface.

5. BAGORA - DADHAL -GOLIA - SAILA - ELANA SECTION:

This section extends along north-eastern and western side of the Saila village. It has an almost east-west trend.

The section reveals that the thickness of the alluvium increases from east-west as the basement was encountered in the bore hole of Elana at the depth of 174.95 metres and it was not encountered in the other bore holes upto the depth 175.50 metres, 124.66 metres, 220.98 metres and 195.07 metres, at Saila Golia, Dadhal and Bagora respectively. The coarse sand and gravel horizons have been encountered as lenses with in clays. The horizons of fine to medium sand encountered in the bore holes upto a few metres depth only. However the percentage of clay increase in the eastern portion of the section when the gravel

horizon almost pinched out and amount of coarse sediment is also reduced.

6. SANKAD-DIGAON-PUNASA -SEWARI SECTION:

This sections runs along north-south axis towards west of Bhinmal village.

The main stratigraphic horizons encountered in the bore holes are sand medium to coarse. Gravel horizons intercalated with thick clay bands and coarse sediment. This sequence of fine sand was encountered in the bore hole of Punasa. However, this horizons was not encountered in the bore holes at Sewari and Digaon. The amount of clay also reduce and became almost negligible in Punasa and Digaon bore holes. Deeper horizons in the bore holes of Digaon and Punasa encounter clean and coarse gravel. Sediments which suggests fluvialite mode of deposition. The drilling depth of Digaon, Punasa and Sewari Bore holes were 285.0 metres, 300.00 metres and 210.62 metres respectively. In all the three exploratory bore holes basement was not encountered.

7. SEWARI - DASPA - MODHARAN SECTION:

This section is located in north of Bhinmal and runs paralalled to ENE-WSW direction. The main stratigraphic horizons encountered in the bore holes were medium to coarse sand and gravel with alternate bands of clay. The amount of clay reduces from Sewari to Daspa and the amount of coarse sediment increases towards east.

8. PAHARPURA - NAWA KHERA - BHAINSWARA - GUDA - BALOTAN - UMMEDPURA SECTION:

This section is located towards north east of Jalore and runs parallel to west-north-west

to east - south- east direction. The main stratigraphic horizons encountered in the bore holes were fine to medium sand, coarse sand intermixed with gravel. At the base thick sequence of clay was encountered. The basement was encountered in the Bhainswara-Guda-Balotan and Ummedpura bore holes at the depth of 70.0 metres, 86.0 metres and 81.0 metres respectively. However, basement was not encountered in the Nawakhera and Paharpura bore holes upto the depth of 85.96 metres and 77.72 metres respectively. The amount of clay reduces from Ummedpura to Paharpura in section simultaneously the sediments became coarse and thickness of the coarse sediment increases.

9. RAMA - JAITPUR - JOGNI - UMMEDPURA
SECTION:

This section is located at western side of Bhadrajun and runs in a north-south direction. The lithologs of the bore holes revealed that the stratigraphic horizons mainly comprise of clay and kankar except at a few places where clear horizons of gravel and kankar were encountered. The basement was encountered in all the three bore holes at 53.0 metres, 72.0 metres and 81.0 metres respectively. The depth to basement is deeper in Ummedpura bore hole as compared to Jaitpura, Jogni and Rama where basement was encountered at shallow depth.

IV. HYDROGEOLOGY

Hydrogeology of phreatic aquifers has been studied from the sections of 189 key wells selected on grid pattern. Hydrogeological data in terms of depth, diameter, yield of wells, depth to water, lithological formation encountered below water level, mode of operation, command area of well and cropping pattern etc. were collected and analysed. Water samples from these wells have been collected to study the hydrochemical characteristics of ground water.

Alluvium is the most extensive and prominent water bearing formation occurring along river courses and wide spread valley fills. It overlies the Jalore granite and malani volcanics in major portion of the district, but towards west, these over lie unclassified Tertiary formations. Generally Tertiary formations do not form good aquifer as they are mostly clayey with intercalations of sand and gravel. However, occasionally thick gravel horizons have been encountered in the bore hole of Pladar, Binjrol ka Golia, Jodhawas and Alwara. These gravel beds form productive ground water horizons in Tertiaries, but the quality of water varies from moderately saline to saline. The pre cambrian formations occupying 5 to 6% area have very little scope for ground water development, except for isolated and restricted drinking water supplies where the quality of water is suitable.

The data of 189 key wells, which fairly represent various aquifers in the area have been used for study of mode of occurrence, quality and quantity

of ground water. Table-IV summarised distribution of wells monitored in different blocks and different water bearing formations of the district.

Table-IV

Distribution of wells in different hydrogeological formations

S.No.	Name of block.	HYDROGEOLOGICAL FORMATION				Total
		Younger alluvium.	Older alluvium	Rhyolite	Granite	
1.	Ahore	4	20	-	3	27
2.	Bhinmal	8	17	-	1	26
3.	Jalore	2	12	-	4	18
4.	Jaswantpura	-	9	-	8	17
5.	Raniwara	10	9	3	5	27
6.	Sanchore	17	32	-	-	49
7.	Saila	10	15	-	-	25
Total		51	114	3	21	189

Water bearing properties of these formations have been discussed by classifying them into four hydrogeological units. These units are as follows:-

UNIT

PHYSICAL CHARACTER

- | | |
|---------------------|---|
| 1. Younger alluvium | Comprising of loosely consolidated & to unconsolidated stream laid deposits. |
| 2. Older alluvium. | Unconsolidated to semiconsolidated sand & gravel with minor amount of silt clay and kankar. |
| 3. Granites. | Weathered, fractured & well jointed. |
| 4. Rhyolites. | Hard & Compact with minor amount of fractures. |

The distribution of hydrogeological units is shown on hydrogeological map Pla tel and hydrogeological data of key wells has been given in Appendix-1. The details of exploratory bore holes drilled by Ground Water Department, by Exploratory Tubewell Organisation is appended in Appendix 2a and 2b where-as production tubewells drilled for cultivators given in Appendix-3.

4.1 YOUNGER ALLUVIUM:

In all 51 well sections tapping younger alluvium were examined during the survey. This formation is confirmed along river coarses and extreme south-western part of the district. The thickness of the younger alluvium gradually increases towards western portion and acquire a maximum thickness in run area i.e. south western part of the district.

The depth to water in the wells tapping younger alluvium varies from 0.82 metres to 15.65 metres and the average depth to water is 5.98 metres below ground level. The depth of open wells in this formation ranges from 2.70 metres to 26.88 metres. The discharge of existing wells varies from 5.0 cubic metres/day to 620.0 cubic metres/day and the average discharge is 145.21 cubic metres/day.

To determine the extent and saturated thickness and hydrologic parametres 8 exploratory bore holes were drilled. It reveals that the bore holes drilled near rivers have greater thickness of younger alluvium.

The discharge of the tubewells drilled during investigation varies from 129.6 cubic metres/day to 1344.0 cubic metres/day in the younger alluvium.

Two pumping tests were conducted to determine the hydrological parameters of aquifer. The transmissivity (T) and storage coefficient (S) were calculated by different methods.

The transmissivity varies from 151 metres $\frac{2}{\text{day}}$ to 5427 metres 2 day. The storage coefficient varies from 7.7×10^{-4} to 8.77×10^{-4}

Table-V

Showing depth to water, discharge and total depth of open wells and tubewells in the younger alluvium.

S.No. Properties.	Open wells.		Aver- age.	Tube wells		Av- er- age
	Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.	
1. Depth to water level in metres.	0.82	15.65	5.98	2.15	25.0	9.41
2. Discharge in cubic metres/day	5	620	145.2	129.6	1344.0	681.7
3. Total depth in metres.	2.70	26.85	10.8	30.0	305.0	116.56

4.2 OLDER ALLUVIUM.

In all 114 well sections tapping older alluvium were examined during survey. This formation covers the major part of the area. The thickness of the older alluvium increases in the south-west and western side of the district.

The depth to water in the wells tapping older alluvium varies from 1.00 to 45.00 metres and the average water level is 11.40 metres below ground level. The depth of open wells in this unit varies from 2.90 to 73.10 metres. The discharge of existing wells varies from 5 cubic metres to 480 cubic metres/day and

and the average discharge is 155.40 cubic metres/day.

The discharge of the wells is mainly controlled by nature of sediments that is, coarseness fineness and clay content.

To determine the extent, saturated thickness and hydrologic parameters 27 exploratory bore holes were drilled in this formation during the course of present studies. It reveals that the thickness of alluvium increases west ward. The discharge of the tubewells varies from 27 cubic metres/ day to 1072 cubic metres/ day in the older alluvium.

In all six pumping tests were conducted by the division to decipher the hydrogeological parameter of aquifer. The transmissivity(T) and storage coefficient(S) were calculated by different methods. The transmissivity varies from 44.0 metres²/day to 1013 metres²/day. The storage coefficient varies from 1.27×10^{-2} to 9.65×10^{-4}

Table-VI

Showing depth to water, discharge and total depth of open wells and tubewells in the older alluvium.

S.No. Properties.	Open wells		Ave- rage	Tube wells		Ave- rage.
	Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.	
1. Depth to water level in metres.	1.0	45.0	11.40	2.80	49.50	13.65
2. Discharge in cubic metres/day	5.0	480	155.40	27.0	1072	577.83
3. Total depth in metres.	2.90	73.10	20.01	23.0	315	165.0

4.3 GRANITE:

21 wells sections tapping granites were examined during survey. It is exposed in the well sections in the south-eastern, eastern and north-eastern part of the district around Jaswantpura Ladermer-Punakala and Golwara-Dadoki-Vandar axis, Siyana-Mora uparla and Kaonla-Rundmal ki dhani respectively and also at an isolated patch between Mandoli-Akoli section. Granites are overlain by thin alluvial cover which increases towards west. These are usually fractured and jointed while weathering is confined generally, to upper few metres of the formation. Extent of weathered zone depends on topography of the area and nature of granites. Depth to water in the wells tapping granite varies from 2.20 metres to 15.85 metres with an average 6.48 metres. The total depth of open wells in these rock units varies from 4.70 to 26.20 metres. Discharge of existing wells varies from 15 cubic metres to 480 cubic metres per day depending upon the saturated thickness of weathered and fractured zone.

In all, 7 exploratory bore holes were drilled in this formation to determine the extent of thickness of saturated, weathered and fractured zone and other hydrologic parameters. The discharge of tubewells tapping granites varies from 14.40 cubic metres/day to 736.0 cubic metres/day and the average recorded discharge is 223.80 cubic metres/day.

In all four pumping tests were conducted to determine the hydrological parameters of the granite aquifer. The transmissivity (T) and storage coefficient (S) were calculated by various methods. The transmissivity varies from 147 metres²/day to 806 metres²/day

and storage coefficient varies from 3.3×10^{-4} to 6.7×10^{-5} .

Table-VII

Showing depth to water discharge and total depth of open wells and tubewells in granites.

S.No. Properties.	Open wells		Ave- rage.	Tubewells		Ave- rage.
	Mini- mum	Maxi- mum.		Mini- mum	Maxi- mum	
1. Depth to water level in metres.	2.20	15.85	6.48	4.0	10.50	6.75
2. Discharge in cubic metres/day.	15.0	480	114.25	14.40	736	223.87
3. Total depth in metres.	4.70	26.20	15.09	9.05	57.0	36.60

4.4 RHYOLITE.

Only 3 wells sections tapping rhyolite were examined during survey. This formation is exposed in the south-western part of the district around Karda, Chatwara and Lakhwas. The extent of distribution of this formation is limited. Rhyolites are overlain by thin alluvial cover which gradually increases towards west. These are highly fractured and jointed in nature, while weathering is confined generally to the upper few meters of the formation. The extent of weathered zone depends on topography of the area and subsurface undulating nature of rhyolite.

The depth to water in the wells tapping rhyolites varies from 6.15 to 11.14 metres and the average

water level is 8.38 metres below ground level. The depth of open wells in this rock unit varies from 11.60 to 19.0 metres. The discharge of existing wells varies from 25 cubic metres to 50 cubic metres per day depending upon the saturated thickness of weathered and fractured zone.

One exploratory bore hole was drilled at Chatwara. It reveals that although weathered zone extends from 8.00 metres to 47.0 metres and it forms a poor aquifer because of the clays released by decomposition of rhyolites are sticky in nature and are not leached out. The discharge of the tubewell is meagre.

Table-VIII

Showing depth to water, discharge and total depth of open wells and tubewells in Rhyolites.

S.No. Properties.	Open wells		Ave- rage.	Tubewells
	Mini- mum.	Maxi- mum.		
1. Depth to water level in metres.	6.15	11.14	8.38	10.80
2. Discharge in cubic metres/day.	25	50	35	Abandoned
3. Total depth in metres.	11.60	19.0	14.78	47

V. GROUND WATER

5.1 OCCURRENCE OF GROUND WATER.

The subsurface occurrence of ground water can be divided into zone of aeration and zone of saturation. The excessive water that percolates downwards from ground surface moves through soil water zone, intermediate zone and the capillary zone. The zone of aeration consists of interstices occupied partially by moisture and partially by air.

The zone of saturation consists of all interstices filled with water under hydrostatic pressure. Water occurring in the zone of saturation is commonly referred to as ground water.

A. ZONE OF AERATION:

Perched aquifers: In the zone of aeration subsurface water some times occurs over impermeable strata of small areal extent which are separated from the main ground water body and lie above the zone of saturation. These form shallow perched water bodies.

In Quaternary formation such perched water aquifer of extensive nature have been observed in interdunal areas in the south-western part of the Jalore district towards north, north-west- and west of Sanchole covering Bhadrana, Dhanigudahema, Amli, Chitalwana, Lalpur, Sangdava etc. The base of these aquifers have been marked by clayey deposits. The depth is shallow ranging from 4.75 metres to 13.45 metres. The yield of wells tapping such perched water bodies is very limited

It ranges between meagre to 30 cubic metres/day. The small supplies of ground water through these aquifers is used only for domestic and livestock purposes. The quality of ground water occurring in perched aquifers is fresh to brackish. Their storage is very limited withdrawal causes frequent dewatering and subsequent recharge from rainfall refills them, thus the quality of ground water remain almost fresh in these aquifers.

B. ZONE OF SATURATION:

In the zone of saturation water occurs under different conditions (i) where water only partly fills a permeable bed. The upper surface of the saturated zone, the water table is free to rise and fall. The water in such aquifer is said to be unconfined or under water table conditions (ii) where water completely fills an aquifer which is overlain by an aquiclude the upper surface of this saturated zone remains fixed, water in such aquifers is said to be under confined conditions.

In the zone of saturation some times impermeable lenses of small extent occur which causes semi-confined conditions. These impermeable beds comprise of mixed clay sand or gravel sequences. Thus allowing meagre vertical seepage, as such confined condition only partly exist within such aquifer.

In Jalore district generally the ground water occurs under water table and semiconfined conditions. Confined conditions have been observed in thick alluvial deposits and tertiary formations towards western and S.S.W. part of the district as revealed by bore

holes drilled at Jodhawas and Plader. Free flowing conditions were observed at Jodhawas with a positive head of 2.01 metres above ground level. This bore hole is tapping Tertiary(?) gravel and sand horizons from 210 metres to 266 metres giving free flow of 0.20 cubic metres per hour.

5.2 GROUND WATER OCCURRENCE IN DIFFERENT
HYDROGEOLOGICAL FORMATION:

In crystalline formations ground water occurs under unconfined or water table condition, wherein joints and fractures provide conduits for ground water occurrence and movement. These formation in general do not yield high discharge.

Granites which are hard and compact are not productive but when fractured and jointed they form good aquifer as in Korita, Paoli and Khanpur where the discharge of tubewells varies from 80 cubic metres/day to 288 cubic metres/day.

Rhyolites are not productive. Tubewell drilled in this formation was dry and quality of water is saline.

The Quaternary formation include fine to coarse sand, gravel and clays. The coarse sediments form productive horizons in Quaternary formations. At places, the quaternaries are dominated by thick clay sequences and the coarse sediments like gravel and sand are also embeded in clay beds, as a result these do not form good aquifers. At Janwi drilling was abandoned because clean beds of granular sediments were not encountered upto 305.0 metres and whole sequence comprises of clays with sand. The older

alluvium of quaternary forms extensive aquifers in the area. Ground water occurs within granular beds comprising of fine to coarse sand and gravels, clay lenses and sequences with kankars are also common. Some times these clay lenses when underlie and overlies granular horizon produces confined to semiconfined aquifer in the area.

5.3 DEPTH TO WATER:

Depth to water is shallow in younger alluvium while it is comparatively deeper in older alluvium. Variation in depth to water in wells tapping different hydrogeological units in the district is shown in Table-IX showing depth to water associated with different hydrogeological units.

It is apparent from the above table that 50% wells tapping younger alluvium have their water levels upto 5 metres while 59.81% wells have their water levels between 5 to 15 metres. In granite formation 85% wells tapping granite lie in the depth range from 5 to 10 metres whereas more than 99% wells in rhyolite have their water level between 5 to 15 metres.

The isobath map have been prepared on the basis of data collected during the period June, 1978, October, 1978 and shown in Plate-2.

5.4 YIELD OF WELLS AND TUBEWELLS:

The yield of open wells recorded in the month of June, 1978 varies from 5 cubic metres/day to 620 cubic metres/day whereas yield of the tubewells varies widely from 7.20 cubic meters/day to as much as 3336.'

Table-IX: Showing depth to water associated with different hydrogeological units (Period June, 1978.)

S.No. Hydrogeological units.	Percentage of wells in different depth in metres									
	5	5-10	10-16	15-20	20-25	25-30	30-35	35-40	40-45	
1. Younger alluvium	50	37.50	10.42	2.08	-	-	-	-	-	
2. Older alluvium	19.64	38.39	21.42	7.15	3.57	5.35	3.57	-	0.89	
3. Rhyolite.	-	66.66	33.33	-	-	-	-	-	-	
4. Granites.	40.00	45.00	10.00	5.00	-	-	-	-	-	

Table-X showing yield of well associated with different hydrogeologic units.

S. Hydrogeolo- No. gical unit.	Percentage of well in different range in cubic meter/day.											
	0-50	50-100	100-150	150-200	200-250	250-300	300-350	350-400	400-450	450-500	500-550	550-600-650
1. Younger alluvium.	55.31	4.25	8.52	-	8.52	-	-	8.52	4.25	-	-	6.38 4.25
2. Older alluvium	42.10	9.47	8.42	3.15	6.32	6.32	7.37	9.47	3.16	4.22	-	-
3. Granites	30.00	10.00	30.00	10.0	-	5.00	5.00	5.00	-	5.00	-	-
4. Rhyolite.	100.00	-	-	-	-	-	-	-	-	-	-	-

Table-XI showing yield of tubewells associated
with different hydrogeological units.

S. No.	Range in cubic metres/day.	Percentage of tubewell in different range	
		Alluvium	Granite
1.	2.	3.	4.
1.	0 to 50	3.17	18.85
2.	50 to 100	3.04	7.14
3.	100 to 150	11.10	7.14
4.	150 to 200	7.39	3.57
5.	200 to 250	8.26	10.71
6.	250 to 300	11.26	17.85
7.	300 to 350	3.26	-
8.	350 to 400	5.00	3.57
9.	400 to 450	12.18	17.85
10.	450 to 500	4.34	-
11.	500 to 550	6.09	-
12.	550 to 600	14.78	3.57
13.	600 to 650	10.44	-
14.	650 to 700	3.00	-
15.	700 to 750	9.52	3.57
16.	750 to 800	4.09	-
17.	800 to 850	3.00	-
18.	850 to 900	18.49	-
19.	900 to 950	-	3.57
20.	950 to 1000	7.84	-
21.	1000 to 1050	5.43	-
22.	1050 to 1100	2.17	-
23.	1100 to 1150	-	-
24.	1150 to 1200	14.14	-
25.	1200 to 1250	1.96	-
26.	1250 to 1300	2.17	3.57
27.	1300 to 1350	1.96	-
28.	1350 to 1400	-	-
29.	1400 to 1450	7.60	-
30.	1450 to 1500	1.96	-
31.	1500 to 1550	1.08	-
32.	1550 to 1600	1.08	-
33.	1600 to 1650	-	-
34.	1650 to 1700	-	-
35.	1700 to 1750	1.08	-
36.	1750 to 1800	-	-
37.	1800 to 1850	-	-
38.	1850 to 1900	-	-
39.	1900 to 1950	-	-

1.	2.	3.	4.
40.	1950 to 2000	5.00	-
41.	2000 to 2050	-	-
42.	2050 to 2100	1.96	-
43.	2100 to 2150	-	-
44.	2150 to 2200	-	-
45.	2200 to 2250	-	-
46.	2250 to 2300	-	-
47.	2300 to 2350	-	-
48.	2350 to 2400	-	-
49.	2400 to 2450	-	-
50.	2450 to 2500	-	-
51.	2500 to 2550	-	-
52.	2550 to 2600	-	-
53.	2600 to 2650	-	-
54.	2650 to 2700	1.96	-
55.	2700 and above	1.96	-

cubic metres/day. The yield of wells and tubewells drilled in different hydrogeological formation by various agencies under exploration and exploitation programmes have been considered and given in Table-X and XI respectively.

Table-X showing yield of wells associated with different hydrogeological Units.

Table-XI showing yield of tubewells associated with different hydrogeological Units.

It is thus apparent from the tables that alluvium is the most productive formation in the district whereas crystallines have limited yield

5.5 GROUND WATER MOVEMENT

Ground water in its natural state is invariably moving. It moves due to gravity and direction of the effective component of the force in directly down the slope of water table. The movement of ground water is very slow and depends upon the gradient and permeability of formation.

A ground water contour which connects the points of equal elevation of water table indicates the direction of flow of ground water which is at right angle to the normal drawn on contour because no flow crosses an impermeable boundary, flow lines must be parallel to it. From field measurements of static water level in key wells and piezometers and by determining the reduced levels of these observation points a ground water contour map has been prepared for the month of June and October, 1978 Plate-2.

The ground water contour map (June, 1978) indicates that the general direction of ground water movement is south east to north west in the south and east to west the northern and western part of the district. It changes in the month of October, 1978 towards west. It is also evident that the slope of water table is steep towards east of Saila-Sankad axis and gentle towards west of it. Which shows the control of this fault on the ground water movement. The hydraulic gradient in the month of June, 1978 along sections are A-B 6.41 metres/km., C-D 1.90 metres/km., E-F 1.23 metres/km., G-H 5.16 metres/km.

5.6(ii) TYPES OF FLOW:

a) Eastern portion: Towards north-eastern part of the district where hydrogeological formations comprise of older alluvium granites and younger alluvium along rivers. The ground water contours show wide spacing i.e. low gradient (1.23 metres/km) as such the permeabilities of these formation can be interpreted as moderate to high.

b) South-eastern portion: Towards south-eastern and southern part of the district where main hydrogeological formation comprise of granite, older alluvium and younger alluvium along river. The ground water contour show narrow spacing i.e. steep gradient and hence permeability of these formations can be interpreted as low.

c) Southern portion: Towards southern part of the district where main hydrogeological formation comprise of granites, older alluvium, younger alluvium and rhyolites. The ground water contour which shows steep gradient (6.41 metres/km) and hence low permeability

as near Korita, Paoli, Bhinmal and west of Digaon, which indicate comparatively high permeability in the area. It has been proved by drilling on these sites.

d) Western portion: Towards the western part of the district where main hydrogeological formations are older alluvium and younger alluvium along river. The ground water contours show wide spacing i.e. low gradient and indicate the high permeability of these formations. It has been further confirmed by drilling of tube wells at Saila, Dadhal, Modern, Daspa, Jodhawas, Batera and Punasa.

5.7 FLUCTUATION OF GROUND WATER.

Water levels in wells are almost constantly fluctuating and rise or fall in response to change in storage. The amount of water in storage in an aquifer responds to both recharge to the aquifer and discharge from it. When recharge exceeds discharge storage increases and water level rises. When discharge exceeds recharge water is drawn from storage and water level declines. For practical purpose precipitation is the principal source of recharge under natural conditions. It is, therefore, intermittent varying from day to day, season to season and year to year.

Changes in ground water storage are determined by repeated measurements of the depth to water in observation wells below a permanent reference point. In Jalore district 189 key wells have been used for recording water levels in June, October and March every year from 1976. The table-XII shows range of water level fluctuation in different hydrogeological formations. Quantitative analysis of well hydrographs has been dealt in the volume IV, Ground water resources of Jalore district.

Table-XII showing range of water level fluctuation in different hydrogeological formation(in metres)

S. No.	Hydrogeological unit.	P E R I O D													
		1976		1977		1978		1979		1980		1981			
		June	Oct.	June	Oct.	June	Oct.	June	Oct.	June	Oct.	June	Oct.		
1.	Younger alluvium	-0.80	+2.39	-1.23	-	+3.14	-6.58	+2.70	-1.48	-	+5.69	-4.20	+2.21	-1.73	+6.01
2.	Older alluvium	-1.75	+4.59	-4.81	-	+7.68	-4.70	+5.64	-3.21	-	+10.12	-3.14	+2.16	-5.57	+12.50
3.	Granite	-1.55	+3.65	-0.18	-	+3.30	-7.90	+3.05	-2.90	-	+8.54	-5.41	+1.97	-1.60	+7.30
4.	Rhyolite	+0.59	+1.18	+1.37	-	+3.63	+0.10	+1.39	+0.29	-	+1.57	-2.00	+0.60	+0.60	+1.29

5.7

WATER LEVEL FLUCTUATION IN DIFFERENT
HYDROGEOLOGICAL FORMATION:

a) Granite: Twentyone wells located in granites were monitered for recording water level fluctuations. The fluctuation in metres vary from -1.55 to +3.65, +0.13 to +3.30, -7.90 to +3.05, -2.90 to +8.54, -5.41 to +1.97 and -1.60 to +7.30 in the year 1976 to 1981 respectively, The key well at Jalore shows rising trend upto October, 1978 and an over all decline thereafter. With a resultant decline as compared to initial observations. The key well of Korita shows wide fluctuations and resultant depletion up 1980 but rising trend during 1981. The key well at Ropsi shows marginal fluctuation and in general there is declining trend upto May, 1981, beyond which rising trend is noticed. The key well at Bhinmal also shows in general depletion in water level, during study period.

b) Rhyolite: Three key wells located in rhyolite were monitored for recording water levels fluctuation. The fluctuation in water level in this formation vary from +0.59 to +1.18, +1.37 to +3.63, +0.10 to +1.39, +0.29 to +1.57, -2.00 to +0.60 and +0.60 to +1.29 metres in the year from 1976 to 1981 respectively. The key well at Chatwara shows resultant decline with intermitttent rise during the month of October every year.

The key well at Lakhawas also shows the regular depletion in water level after October, 1978.

c) Older alluvium: In all one hundred and fourteen wells located in older alluvium formation were

monitored for recording water level fluctuations. The fluctuation in water level in this formation varies from -1.75 to +4.59, 4.81 to +7.68, -4.70 to +5.64, -3.21 to +10.12, -3.14 to +2.16 and -5.59 to +12.50 metres in the years 1976 to 1981 respectively. The behaviour of water level fluctuations in older alluvium is described as follows:

c) (i) North-eastern part: The observation in this portion of district shows over all depletion in water level, but in a few cases steep rise and fall is also observed. The key wells at Bala, Bijali, Ghana & Bhadrajun, Kidhani shows marginal fluctuations of water levels upto June, 1979 except a decline in case of Bijali and Ghana before January, 1977 to March, 1977. Steep rise in all these wells is observed between June, 1979 to October, 1979. Thereafter, gradual decline upto June, 1981. Wells at Ghana and Bijali ki Dhani show rise from July, 1981 and declining trend thereafter.

c) (ii) North-western portion: The observation in this portion of district shows insignificant change in storage. The key wells at Sirana, Ratunja, Nandia and Dahiwa show marginal fluctuations in different seasons but the resultant change in water levels are negligible.

c) (iii) South-western portion: This portion of district comprises of maximum number of key wells in older alluvium. The key wells at Bisala and Bakra shows marginal trend of fluctuation upto July, 1980 and after it shows continuous depletion in water level upto June, 1982. In this portion maximum number of key wells have been located. Generally, the water level fluctuations are gradual in Sarnau,

Sankad and Rawat. A resultant rise has been observed whereas in Sewari, Bukara, and Raniwara gradual depletion is exhibited by the records of key well. The key wells at Bisala, and Phagotra show insignificant change. Ratanpura well shows abrupt rise in October, 1977 and gradual depletion thereafter and the well at Junjani and Dhaspa became dry from March, 1980 and June, 1981 respectively after showing a regular depletion in the earlier period.

d) Younger alluvium: In all fifty one wells located in younger alluvium were monitored for recording water level fluctuation. The fluctuation in water level in this formation vary from -0.80 to +2.39, -1.28 to +3.14, - 6.58 to +2.70, -1.48 to +5.69, -4.20 to +2.21 and -1.73 to 6.01 metres in years from 1976 to 1981 respectively.

For the description of the behaviour of water level fluctuation in the area covered by younger alluvium it has been divided into different portions as described.

d) (i) Western portion: The observations in this portion of district show resultant there is depletion of water levels. The key well at Saila shows general depletion in water level from October, 1977 to June, 1982 except in the month of October, 1978 and October, 1980 when rises in water level have been recorded.

The key wells at Dadhal shows rise in water level from July, 1976 to October, 1977 except in May, 1977 where depletion of water level is observed. From October, 1977 to March, 1982, it shows continuous

depletion in water level and ultimately became dry. There is slight rise in water levels in the month of October, 1979 and October, 1981.

The key well at Harmu shows a continuous depletion in water levels from October, 1977 to June, 1982.

d) (ii) South-western portion: The observation in this portion of district shows a resultant depletion in water level. The key well at Kushalpura shows significant rise and fall in water levels. The water level shows continuous depletion from October, 1979.

The key well at Alri also show significant fluctuations in water levels and resultant depletion in water level from June, 1980 to June, 1982.

The key well at Ajodar shows marginal fluctuations with a resultant rise in water level. The key well at Bamanwara shows marginal fluctuations in water level. It shows rising trend during 1977 and 1978 thereafter depletion from October, 1979 to June, 1982 except in June, 1981, when rise in water level is recorded. The key well at Rampura shows insignificant fluctuation and a resultant rise in water level.

5.7(ii) Monthly water level behaviour:

A net work of 38 key wells and 21 piezometers was monitored from March, 1980 to January, 1983 from June, 1982 closer and more regular observations on the trend of water level have been recorded. The regular monitoring of piezometer started from June, 1982. These data have been used for analysis of well hydrograph.

In granite formation two observation wells and five piezometers were monitored for monthly water level observation. * The piezometers at Korita and Paoli monitored from June, 1982 to January, 1983 and shows similar trend offluctuation in water level. There is rise in water level from June, 1982 to September, 1982 and after it shows continuous depletion in water levels.

The piezometers at Khanpur, Panseri and Bhinmal shows rise in water level in the month of August-September, 1982 due to flood in the area and after September, 1982, it shows continuous depletion in water levels.

In older alluvium formation 20 observation wells and 11 piezometers were monitored for monthly water level observation.

The piezometer of Daspa shows that there is rise in water level from June, 1982 to September, 1982 and after it shows continuous gradual depletion in water levels. The piezometers at Jaitpura - Jogni shows rise in water level from June, 1982 to October, 1982 After it shows depletion in water levels upto Jan., 1983 The piezometer at Kaaber shows smooth trend of water level. However, there is slight depletion in water level from June, 1982 to January, 1983. The piezometer at Rama shows fall in water level from June, 1980 to November, 1980 and after this piezometer was not monitored from December, 1980 to May, 1982 and from June, 1982 it again shows the depletion in water level upto August, 1982. Water level rises in month of September, 1982-October, 1982 and after it shows depletion in water level upto month of Jan., 1982 The piezometer of Ummedpura shows rise in water level

in the month of August, 1982 and September, 1982 resultantly it shows the depletion in water level upto January, 1983.

In younger alluvium 13 observation wells and 5 piezometers were monitored for monthly water level observation. The piezometer at Bagora shows slight rise in water level from June, 1982 to August, 1982 after it shows continuous depletion in water levels from September, 1982 to January, 1983. The piezometer at Bhainswara shows marginal rise in water levels in the month of August, and September. then it resultantly shows the slight depletion in water levels. The piezometers at Saila shows slight rise in water levels in the month of August, 1982 and September, 1982 and resultantly it shows depletion in water levels upto January, 1983.

VI. AQUIFER PROPERTIES

6.1 PUMPING TEST:

Pumping tests were carried out to ~~determine~~ the well properties and aquifer characteristics. Step draw down tests were carried out in two to three stages for determining well properties. Long duration pumping test. i.e. aquifer performance tests were carried out with constant discharge for a period of 24 to 52 hours duration for determining aquifer parameters.

In Jalore district pumping tests were carried out at Bagra, Bhainswara, Jetpura(Jogani) Modran, Rajanwari, Rama, Sankarna, Umedpura, Khanpur, Kolar, Korita and Paoli. Results of pumping test carried out at different sites have been given in Table-(XIII)&(XIV). The transmissivity was determined in case of 12 test wells whereas the values of storage coefficient could be determined in case of only 10 test wells, because there was no observation well with remaining test well.

Table XIII showing details of pumping test conducted in
Jalore District.

1.S.D.T.=Step drawdown test. 2.A.P.T.=Aquifer performance test 3.S.W.L.=Static water level 4.P.W.L.=Pumping level 5.D.D. =Draw down.												
S. No.	Name of village of bore hole.	Stage	Duration in hours.	Discharge in litre/minutes.	Test well		Observation well			Specific capacity per hour per metre of Drawdown.		
					Zones tapped SWL	PMW	DD in mts.	Zone tapped SWL	PMW		D.D.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
A. ALLUVIUM.												
1.	BAGRA S.D.T. Adjacent to village tank on road to Nagane	I II III	2 2 2	982.50 1035.00 1132.50	7.60	22.72 24.49 24.48	15.12 16.89 16.88	- - -	- - -	- - -	- - -	3.89 3.67 4.02
	A.P.T.	-	37	982.50		24.50	16.80	7.75	8.54	0.79		3.50
2.	BHAINSWARA About 2 fur- long from village due south.	I II III	2 2 2	937.50 1132.50 1335.00	10.49	15.52 16.75 18.30	5.03 6.26 7.81	- - -	- - -	- - -	- - -	11.18 10.86 10.25
	A.P.T.	-	49	1132.50		16.99	6.50	10.77	11.87	1.10		10.45
3.	JAITPURA 1.75Km. from Jogni village towards east of road leading to Ahore.	I II	2 2	622.50 768.75	10.57	14.87 16.29	4.80 6.22	4.80	4.80	- -	- -	7.78 7.41
	S.D.T.	-	31.5	787.50		15.76	6.15	10.00	10.81	0.81		7.68
	A.P.T.	-										

1.S.D.T.=Step drawdown test.
2.A.P.T.=Aquifer performance test
3.S.W.L.=Static water level
4.P.W.L.=Pumping level
5.D.D. =Draw down.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	13.
4.	<u>MODRAN</u>	About 2km.	I	2	0918.75	9.15	11.79	2.64	-	-	20.88
	S.D.T.	from Mataji ka temple due N 5°W	II	2	1132.50	-	12.38	3.23	-	-	21.03
	A.P.T.		III	2	1335.00	-	12.82	3.67	-	-	21.82
			-	50	1132.50	-	12.19	3.04	8.60	8.75	0.14 22.35
5.	<u>RAJANWADI</u>	About 300 metres from village due N 20°E.	I	3.5	60.00	7.11	32.30	24.27	-	-	0.14
	S.D.T.		II	3.5	82.50	-	37.67	29.48	-	-	0.16
	A.P.T.		-	26.16	212.25	-	50.34	43.33	5.82	7.11	0.25 0.29
6.	<u>RAMA</u>	About 1½km. from village due 287°	I	2	168.75	6.22	13.39	7.17	-	-	1.56
	S.D.T.		II	2	240.00	-	17.35	11.13	-	-	1.29
	A.P.T.		III	2	305.25	-	21.08	14.86	-	-	1.23
			-	43.75	240.0	-	18.07	11.85	6.06	10.38	4.32 1.21
7.	<u>SANKARNA</u>	About 1km. from village due south.	I	1	194.25	3.61	7.95	4.28	-	-	2.72
	S.D.T.		II	1	262.50	-	16.62	12.95	-	-	1.21
	A.P.T.		-	51.66	229.50	-	30.07	26.36	3.71	4.26	0.55 0.52
8.	<u>UMEDPURA</u>	310° from village & 235° from bus stand	I	2	622.50	7.99	16.52	8.62	-	-	4.33
	S.D.T.		II	2	768.75	-	23.30	15.40	-	-	2.99
	A.P.T.		III	2	937.50	-	27.09	19.19	-	-	2.93
			-	47	768.75	-	14.98	13.92	8.01	9.47	1.46 3.31

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
B.	<u>CRYSTALLINE</u>											
9.	<u>Khanpur</u> <u>S.D.T.</u>	Due south from village about ½ furlong near- Govt.primary School.	-	24	305.25	9.17	14.26	5.09	8.90	9.76	0.86	4.45
	A.P.T.											
10.	<u>KOLAR</u> <u>S.D.T.</u>	1 furlong from village ENE OF village hill	-	-	-	-	-	-	-	-	-	-
	A.P.T.		-	31.25	111.75	8.00	18.38	10.38	7.63	9.31	1.68	0.65
11.	<u>KORITA</u> <u>S.D.T.</u>	2 furlong from village due S 30° E.	-	-	-	-	-	-	-	-	-	-
	A.P.T.		-	24	133.75	9.04	12.45	3.41	-	-	-	2.35
12.	<u>PAOLI</u> <u>S.D.P.</u>	1 Km. due N. 30° E from village	-	-	-	-	-	-	-	-	-	-
	A.P.T.		-	24	262.50	9.67	10.93	1.26	-	-	-	12.5

Showing aquifer parameters determined by different methods.

S. No.	Location of bore hole.	Housing in metres (+a.g.l) metres.	In take in metres.	S.W.L. in metres.	Discharge in litres minutes.	Draw down in metres.	Type of well.	Jacob method $\frac{T_2}{M^2}$ day	Theiss method $\frac{T_2}{M^2}$ day	Theiss recovery method $\frac{T_2}{M^2}$ day
<u>A. ALLUVIUM</u>										
1.	Bagra	21.0	65.0	8.75	937.5	0.79	P Obs.	962 2.6x -10	788 4.9x 10 ⁴	900
2.	Bhinswara	25.0	37.0	11.65	1132.5	1.20	P Obs.	859 8.77x 10 ⁻⁴	600 7.7x 10 ⁻⁴	859
3.	Jaitpura Jogni	26.0	44.0	11.0	787.5	0.86	P Obs.	944 1.14x 10 ⁻³	948 9.65x 10 ⁻⁴	1013 800
4.	Modran	29.75	39.25	10.15	1132.5	0.16	P Obs.	4265 1.5x 10 ⁻³	4560 6.9x 10 ⁻³	5427
5.	Rajanwadi	20.0	45.5	7.70	86.25	0.26	P Obs.	490 1.27x 10 ⁻²	400 1.68x 10 ⁻²	-
6.	Rama	19.60	26.20	7.28	240.0	4.32	P Obs.	53 2.2x 10 ⁻⁴	44 3.0x 10 ⁻⁴	49 58
7.	Sankarna	17.50	20.07	4.91	229.5	0.55	P Obs.	-	-	151

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Umedpura	16.0	29.0	9.05	622.5	1.49	P	332	2.65x 10 ⁻³	332	332	349	322
						Obs.						
B. CRYSTALLINES												
9. Khanpur	9.50	47.50	9.17	305.25	4.11	P	806	6.7x 10 ⁻³	-	-	-	-
						Obs.						
10. Kolar	13.50	25.50	8.0	111.75	10.38	P	147	3.3x 10 ⁻⁴	-	-	-	-
						Obs.						
11. Korita	6.50	50.50	9.04	138.75	3.41	P	-	-	-	-	183	-
						Obs.						
12. Paoli	9.90	17.10	9.67	262.50	1.26	P	-	-	-	-	532	-
						Obs.						

T= Transmissivity in cubic meter/day

S= Storage coefficient

Values of T & S determined for Modran test are seems to be abnormal

CONCLUSION

Jalore district lies in the arid zone of Rajasthan. The physiographic set up of the district constitutes of extensive alluvial plains with rugged hill ranges occurring in central and south-eastern part. These hill ranges are generally composed of Jalore granites, rhyolites with some admixture of granite. Hill tops are normally shaped by weathering which has given rise to tors and boulders whereas sand dune are common topographic features in mid eastern and western part of the district. The present land form units are the product of the part fluvial, erosion and sub-aerial denudation and hence, both erosional and depositional land form units are found in the region. The area is well drained by the Luni drainage system. All rivers in the area are ephemeral with braided meandering course and flow in direct response to precipitation. The climate of the district is extreme, low and erratic rainfall of -ten results in recurring droughts.

The detailed hydrogeological investigations of the district comprised well inventories, regular monitoring of key wells and piezometers, geophysical

and hydrogeological studies, exploratory drilling and pumping tests. As a result of these findings number of ground water potential areas have been demarcated which are suitable for further ground water development.

The results of hydrogeological studies reveals that there are two major dislocations in the area one in the west along Saila, Sankard axis and another along present course of Jawai, Sukri river. The thickness of quarternary sequence across these faults suddenly increases and a thick sequence of sand gravel and clays, probably of Tertiary period, it encountered in the bore holes drilled.

Ground water generally occurs under watertable and semi confined conditions. Confined conditions have been observed in thick alluvial deposits and Tertiary formation(?) towards west and SSW of the district as revealed by bore hole drilled at Jodhawas where free flowing condition at the rate of 0.20 cubic metres per hour has been observed.

Younger alluvium is the most productive formation in the area, it is generally confined

along river courses. The thickness of productive horizons varies from 20 to 65 metres and they yield from fresh to moderately saline ground water. The yield of existing wells varies from 5 cubic metres per day to 620 cubic metres per day, whereas the tubewells yield 130 cubic metres per day to 1344 cubic metres per day. Transmissibility of the aquifer varies from 151 square metres per day to 5427 square metres per day and the storativity between 7.7×10^{-4} to 8.77×10^{-4} , which reflects confined conditions.

Older alluvium covers major part of the district, ground water generally occurs under water table and semiconfined conditions. However, confined conditions were observed in the bore hole drilled at Plader and Jodhawas. These sediments consist of an upper layer of sandy loam and kankar, unsorted disintegrated rock fragments and lower layer of medium to fine sand and gravel with clay lenses of variable thickness. The thickness of these aquifers range from 11.0 to 80.0 metres and generally yield saline to highly saline water. The discharge of existing wells varies from 5 cubic metres/day to 480 cubic metres/day and of tube wells ranges between 27 cubic metres/day and 1072 cubic

metres/day. Transmissivity varies from 44 to 1013 square metres/day storage coefficient ranges between 9.65×10^{-4} and 1.27×10^{-2} .

In crystalline formations ground water generally occurs under water table conditions wherein joint and fracture provide conduits for ground water movement. Yield of these formations depend on extent and degree of weathering and number of fracture per unit area below water table. Normally, crystallines are not good aquifers but wherever enough weathered zone and number of fractures are encountered below water table, they give moderate yield. Both fresh and saline water occurs in these formations.

Discharge of existing wells in Granite varies from 15 cubic metres/day to 480 cubic metres/day whereas yield of tubewells ranges between 14.40 cubic metres/day and 736 cubic metres/day. Transmissivity varies from 147 square metres/day to 806 square metres/day and storage coefficient varies from 6.7×10^{-5} to 3.3×10^{-4} . Rhyolites occupy very limited area and discharge of existing wells varies from 25 cubic metres/day to 50 cubic metres/day.

RECORD OF REPRESENTATIVE WELLS OF JALORE DISTRICT

S. No.	Code No.	Name of village/ well number.	Type, location and owner's name	Total depth below land surface in mtrs.	Diameter below land surface in mtrs.	Water level below land surface in metres.	Quaternary formation	DMP/I	29	325	186.88	Meth- od of lift/ use of well.	Grou- nd water temp- erat- ure in °C.	Yield of wells meas- uring point.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
AHORE BLOCK.														
1.	1	45C15Bc	Dug well, 360° from village opposite to Hr. Secondary School, Surendra Kumar Jain	27.25 x 2.45	3.70	14.30	Sand & gravel with kankar OLDER ALLUVIUM	Quaternary						
2.	2	BALA 45C14Bb	Dug well, 70° from hill top, about 3 km. from village on way to Khurana P/W (Shiv Sagar)	39.65 x 3.40	3.80	16.32	Clay and kankar, compact. OLDER ALLUVIUM	-do-	Idle	27	-	-	-	150.06
3.	3	BANKLI 45C14Dc	Dug well, west of (Nichli) village about 1 furlong. 75° from Tormd hill, Rajaji S/o Thanji Choudhary.	8.30 x 2.50	2.10	2.10	Clay & kankar with gravel OLDER ALLUVIUM	-do-	EMP/I	25.5	190	167.570		
4.	4	BAORI 45C10Id	Dug well, 210° from village. At the entrance of village near Hotel, public well.	19.70 x 3.15	2.44	2.44	Clay & kankar, OLDER ALLUVIUM	-do-	Un- used.	27.5	-	-	-	161.280

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
5.	5 BHADRA	Dug well, 270° from village	25.20	25.20	5.50	6.00	Clay & kankar with gravel OLDER ALLUVIUM	Quater -nary	Idle	26.5	14.	195.5
	JUNKI on Jochpur-DHANI											
	45C14Eb	Ahor& road near overhead water tank public well										
6.	6 BHAINS- WARA	Dug well, 100° from village at the entrance of village, Kr.Devisingh S/O Madhosingh, Ex.MLA.	17.80	2.90	8.45		Sand and gravel YOUNGER ALLUVIUM	Quater -nary	EMP/I	28	558	184.385
7.	7 BHAWARANI	Dug well, 320° from village about 1 km. away, Indaj S/o dayaramji Tarak Choudhary	15.30	2.90	-		Sand & gravel 1 with clay OLDER ALLUVIUM.	-do-	DEP/I	28	50	150.320
8.	8 BHUTI	Dug well, 180° from village temple near river bank, Raja S/o Dhula Mali.	14.40	1.40	6.90		Granite	Post Delhi	BM/I	28	40	212.780
9.	9 BEDANA,	Dug well, due north about 2 fur- long from village, 280° from road crossing Omsingh S/o premsingh Sarpanch.	18.30	3.50	8.80		Clay and kankar OLDER ALLUVIUM	Quat-ernary	EMP/I	29	325	212.850
10.	10BIJLI	Dug well, 360° from village at the entrance of village Public well.	10.52	1.80	4.92		Sand with clay &kankar OLDER ALLUVIUM	-do-	BM/D	29	40	158.585
11.	11BITHURA	Dug well, 50° from road for Bithura to Chandaro about 1 km., Majia S/o Nathia Meena	11.80	1.80	5.90		Sand, gravel & clay, OLDER ALLUVIUM	-do-	EMP/I	29	150	197.315

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
12.	12	DAYALPURA 45C15Eb	Dug well, 202 from village at about 1/2km. Keshar Singh S/o Ajay Singh.	27.50	3.00x9.00	3.50	Clay, kankar & gravel OLDER ALLU- VIUM.	Quaternary	EMP/I	29.5	250	196.305
13.	13	DAYALPURA (MADRI) 45C15Eb	Dug well, at centre of village Madri (Kumaro ki Basti) Public well.	13.80	3.20	-	Sand & gra- vel, YOUNGER ALLUVIUM	-do-	Buck- et/D	-	20	195.860
14.	14	DODIYALI 45C15Fc1	Dug well, 320° from hill top on road to Harji about 3km. before village, Imadudin S/o Sayed Allumddin.	17.00	4.80	7.70	Sand & grav- el, YOUNGER ALLUVIUM.	-do-	EMP/I	27	620	209.960
15.	15	DUDIA 45C14Cd1	Dug well near villa- ge 107° from Khambhi hill, 320° from vill- age Tehmal Tarachand	17.00	2.80	5.00	Sand, gra- vel & kankar OLDER ALLU- VIUM.	-do-	DMP/I	25.5	325	176.550
16.	16	GHANA-I 45C13Cd1	Dug well, 295° from vil- lage about 1km. Prabhu Ram S/o Pannaji Chau- dhary.	22.75	2.80	11.25	Sand, clay & kankar, OLDER ALLUVIUM	-do-	-do-	27.5	130	164.980
17.	17	GHANA-II 45C13Ed2	Dug well, 360° from vil- lage, adjacent to it, Public well.	15.60	1.90	6.80	-do-	-do-	Idle	27	-	165.255
18.	18	JAITPURA 45C15Ac	Dug well, 320° from vil- lage on way to Jogni, Ajaysingh S/O Ramsingh Tajaram S/o Magaram.	21.90	2.40	8.45	Clay & kan- kar, OLDER ALLUVIUM.	-do-	EMP/I	26.5	255	177.69
19.	19	KAONLA 45C13Aa	Dug well 210° from Math and 140° from Temple Suaji S/o Gajaji.	15.50	4.40	5.81	Granite	Post	-do-	28.5	150	211.210
20.	20	MANPURA	Dug well, 265° from vil- lage, at the entrance of village, Chandarsingh S/o Veersingh Rajpoot.	16.20	3.30	9.17	Sand, clay & te kankar OLDER ALLUVIUM	Quaternary	DMP/I	29	325	199.000

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
21.21	NIMBIA	Dug well, south of village about 1/2km. on Jalore road, Girdh-ari Bhara Ganchi.		11.80	2.60	4.60	Sand, clays gravel, OLDER ALLUVIUM	Quaternary	EM/I	29	84	173.14
22.22	PADARLI	Dug well, 260° from village about 1 1/2 km. on road to thumba Thanji Serpanch.		8.10	4.30	3.70	Clay and kankar, OLDER ALLUVIUM.	-do-	DMP/I	26	175	205.110
23.23	PALASIA	Dug well, 96° from hill top and about 1 furlong from village, Buralel, Bharatsingh Purohit.		24.40	3.30	5.17	-do-	-do-	EMP/I	28	260	226.990
24.24	RAMA	Dug well, 80° from village at the entrance of village, Public well PHED		27.10	2.60	9.00	-do-	-do-	EMP/D30 & L		325	186.820
25.25	RUNIMAL	Dug well, 10° from village at 1 furlong distance, 140° from Meghpura hill, Prabhuji S/o Janianji Chqudhary		13.70	2.20	3.15	Granite, weathered.	Post Delhi	BM/I	26	105	195.320
26.26	SANPHWALI	Dug well, 155° from temple, about 2 furlong from PHED tank, Mangal singh S/O BHURSINGH.		21.15	3.00	12.00	Sand and gravel, OLDER ALLUVIUM.	Quaternary	DMP/I	27.5	285	185.090
27.27	UMEDFURA	Dug well, 340° from village adjacent to it, Sajjansingh Motisingh.		19.17	3.00	9.20	Sand & gravel, YOUNGER ALLUVIUM.	-do-	EMP/I	26	250	207.720
<u>BHINMAL BLOCK.</u>												
28.28	BAGAWAS	Dug well, N 45°W just outside the village, public well.		34.60	1.70	10.56	Sand & gravel, OLDER ALLUVIUM.	-do-	Buck-	29	25	101.595
29.29	BHAGAL BHIM	Dug well, due E., about 1/2 furlong from village, near temple Mod Singh.		26.85	1.85	15.65	Sand & gravel, YOUNGER ALLUVIUM.	-do-	EMP/I & D	-	240	137.290

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
30.	30	BHIM- PURA 45C8Bc	Dug well, in the village, Public well.	27.35 x 2.65	2.80	14.83	Clay & Quat- kankar, ernary Idle OLDER ALLUVI- UM.					152.380
31.	v31	BHINMAL 45C8b	Dug well, S15°W about 1 furlong from rail- way brid- ge, Amarsingh Basantsingh.	12.90 5.05	5.05	4.10	Granite Post DMP/I weather- Delhi red.		28	300		155.890
32.	32	CHAJJALA 40015Hb1	Dug well, N 60°E just out side the village Public well.	35.90 1.35	1.35	34.60	Clay & Quat- Budk- kankar, ernary et. OLDER ALLUVIUM.		31	20		103.920
33.	33	DAMAN 45C4Ad	Dug well, N 60°E abo- ut 1 furl- ong from village Public well.	13.25 2.10	2.10	4.00	Sand & -do- gravel, YOUNGER ALLUVIUM.		-do- 27	20		94.825
34.	34	DASPA 45C4Hc	Dug well, N 40° W about 1 furl- ong from villa- ge Sonaram S/o Kesararam Mali	15.60 2.85	2.85	9.63	Sand & -do- gravel, OLDER ALLUVIUM		EMP/I -	360		116.840
35.	35	DEVDAKA GOLIYA 40016Dd	Dug well, N 25°W. about 1/2 furlong from vill- age, Public well.	5.00 2.60	2.60	3.88	Fine & -do- sand YOUNGER ALLUVIUM.		Buck- 28 et	20		65.585

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13.	36. 36. 45C4Ba	DUMARIA Dug well, due E, in side village, Public well.	10.80	2.50	6.90	Sand & gravel, YOUNGER ALLUVIUM.	Quaternary et	Buck-25	12.40	77.385
37. 37. 45C8Ca	GOLIA Dug well, due N, about 1 furlong from village Yka S/o Rawata Chowdhary.	23.00	4.15	14.20	Sand & gravel, semi consolidated YOUNGER ALLUVIUM.	Sand & gravel, semi consolidated YOUNGER ALLUVIUM.	EMP/I 29	120	141.590	
38. 38. 45C4Fa	GERAN Dug well, N.50°W about 1 km. from village Makhansingh S/o Kishan Singh Rajput.	13.40	2.10	9.68	Sand & gravel with kankar, OLDER ALLUVIUM.	Sand & gravel with kankar, OLDER ALLUVIUM.	DMP/I 29	480	100.030	
39. 39. 45C3Ca1	JASAWAS Dug well, N.50°E just out side the village, Public well.	10.90	2.40	8.00	Sand & gravel with clay & kankar, OLDER ALLUVIUM.	Sand & gravel with clay & kankar, OLDER ALLUVIUM.	Buck-29 et	20	81.840	
40. 40. 45C4Hb1	JETU Dug well, due E. about 50 Mtrs. from village Public well.	11.25	2.80	8.49	Sand & gravel with clay, consolidated OLDER ALLUVIUM.	Sand & gravel with clay, consolidated OLDER ALLUVIUM.	Buck-29 et	30	112.185	

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
41.	41	JUNJANI Dug well, due W about 1/2 km. from village Ranchor S/o Lalaji Kalby.	20.85	2.50	19.36	Sand & gravel with clay & kankar OLDER ALLUVIUM.	Quaternary	BNP/I			120	138.640
42.	42	KHUSAPURA Dug well due W, about 1/2 furlong from village Jagmalsingh Rajput.	14.65	4.00	6.25	Sand & gravel loosely consolidated. YOUNGER ALLUVIUM.	-do-	-do-			360	139.580
43.	43	LADERMER Dug well, north of village adjacent to it Public well.	17.00	2.70	8.40	Sand & gravel with clay consolidated OLDER ALLUVIUM	-do-	Bucket	25		20	170.190
44.	44	MEDA Dug well, due south about 1/2 furlong from village, Public well.	6.60	1.60	3.65	Fine sand with few kankar OLDER ALLUVIUM	-do-	-do-	28		30	74.830
45.	45	MORSIM Dug well, due S. from village near temple Public well.	6.90	3.00	3.20	Fine sand YOUNGER ALLUVIUM.	-do-	-do-	29		40	57.450

1	2	3	4	5	6	7	8	9	10	11	12	13
46.	46	NANDIA	Dug well, 400151d S.40°W, about ½ furlong from village, Public well.	5.15	2.25	4.55	Fine sand with little kankar, OLDER ALLUVIUM.	Quater- nary et.	Buck	29	30	71.285
47.	47	NEVARAUTA	Dug well, S 40016Ca 55°W about 50 mtrs. from village Public Well.	5.90	2.35	3.80	Fine sand YOUNGER ALLUVIUM.	-do-	-do-	28	15	69.415
48.	48	NIMBAWAS	Dug well, 45D1Dc due S. about ½ furlong from village Public well.	41.25	2.60	9.25	Sand & gravel with clay & few kankar OLDER ALLUVIUM	-do-	-do-	28	25	121.300
49.	49	PHAGOTRA	Dug well, 45C4Cb due E about 1/2 furlong from village near temple Public well.	39.53	1.80	18.85	Sand & gravel with minor amount of clay consolidated OLDER ALLUVIUM	-do-	-do- DMP	-	20	93.545

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
50.	50	PUNASA 45D1A01	Dug well, due E about 1 furlong from vill- age, P.H.E.D. well.	46.00	1.90	18.95	Sand, clay & gravel little consolidated OLDER ALLUVIUM	Quate- rinary mer- sible Pump.	-	-	320	98.375
51.	51	RANGALA 45C3Ba	Dug well, due E about 1 furlong from village Public well.	13.30	2.40 x 2.60		Sand & gravel with few kankar	Buck- et.	29	30		82.565
52.	52	SEWRI 45C4Bd	Dug well, N 40°E about 3 furlong from village Praladji Lunbaji Bisnoi.	10.60	2.20	7.90	Sand & clay with little gravel, semi consolidated OLDER ALLUVIUM	EMP/I	29	480		87.815
53.	53	SOBRANA 40015Hb2	Dug well N 30 W about 30 mtrs. of village Public well.	10.45	3.60 x 3.80	7.45	Fine sand with little kankar OLDER ALLUVIUM.	Buck- et.	28	20		76.925

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<u>JALORE BLOCK</u>												
54.	54	AKOLI	Dug well	12.45	3.00	7.10	Sand & gravel with little clay	Quate- DMP/I	23	40	160.405	
		45C12Ea	north of village on the bank of river, Dhebjai Joga Bhil				semicon-solidated YOUNGER ALLUVIUM.					
55.	55	ARTHWAIYA	Dug well,	7.70	3.50	3.72	Sand & gravel loosely consolidated, YOUNGER ALLUVIUM.	-do-	-	40	170.550	
		45C16Ec	N W of village about 2 km. Ginoi Dhanna Sutar.									
56.	56	BAGRA	Dug well,	12.28	3.00	6.25	Clay & kankar OLDER ALLUVIUM.	-do-	Pers- sion wheel/I	120	154.785	
		45C12Db	near Ramdev temple, S.W. of village Bhuraji Babra Ganchi.									
57.	57	BAKRAJ.OAD	Dug well,	11.40	2.60	8.60	Sand & clay OLDER ALLUVIUM.	-do-	DMP/D	20	144.900	
		45C8Gc	near Railway Station, Pratapmal Bheru Suttar.									

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
58.	58	BHAWAI	Dug well	27.50	4.20	24.50	Sand & gravel with clay	Quaternary	Idle	26.5	-	187.180
		SINDHAWANDEAR			x							
		45C11Fa PHED	Tank, 5x5		4.20		OLDER ALLUVIUM.					
			from village, 172° from Raja Bhakar, Public well.									
59.	59	BILBAR	Dug well, 45C12Eb ½ km. from village on R.H.S. of road to Jalore, Mangji Jaita Kaba	14.09	3.85	5.80	Granite Post weathered.	Quaternary	DMP/I	25	180	177.810
60.	60	EAKRA	Dug well, 45C11Dd 210° from village, 323° from Desu hill about ½ km. from village, Bhópalsingh S/o Prathvisingh.	23.70	4.00 x 4.00	14.70	Sand & clay OLDER ALLUVIUM.	Quaternary	-do-	27	380	160.575
61.	61	DHANPURA	Dug well, 45C12Ac east of village about 1 Km. Dhoksingh, Baghsingh.	22.25	3.00	4.35	Clay & kankar OLDER ALLUVIUM	-do-	BM/Idle	-	-	151.675

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
62.	63	COLLEEN Dug well, 45C11Hd south of road Ahore to Jalore near 1 km. stone & 180° from hill, Mega, Dalla, Choudhary.	16.90	2.90	11.20	Sand coarse with kan. & little gravel, OLDER ALLUVIUM	6300	Emp	270	177.320		
63.	63	JALORE 45C11Ed Dug well, east of Jalore- Bhirmal road about 1 km. from city, P.H.E.D. well.	26.20	5.20	15.85	Granite Post weathered Delhi D&L	29		350	183.815		
64.	64	JALORE 45C11Ed Dug well, inside Surajpole, opposit to bank building well, Jain Samaj.	19.40	2.90	-	Granite	-do-	Idle	-	183.685		
65.	65	MAYLAWAS 45C12Gd Dug well, south of the village Ukhoji Megaji Bhil	16.00	3.50	4.95	-do-	-do-	Pers- ion wheel	23	150	223.560	

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
66.	66	MEKA UPARIA 45C15Cc	Dug well, 140° from village & adjacent to it Lakhaji S/o Jetaji Rebari.	23.95	3.75	8.95	Sand medium with clay & kankar OLDER ALLUVIUM.	Quate- rinary.	DMP/I	29	325	242.320
67.	67	MESPPURA 45C11Ec	Dug well, 295° from Ratan Pura hill, Bagh singh S/o Mohabbat singh.	20.70	3.00 x 2.00	4.80	Sand, medium kankar with gravel, OLDER ALLUVIUM	Quate- rinary	DMP/I	28	210	182.702
68.	68	MITHRI, 45C11Gb	Dug well, 25° from village about 1.50km., Katura S/o Hukma Choudhary.	22.50	3.00 x 1.90	14.00	Sand, gravel with clay, OLDER ALLUVIUM.	-do- with clay, OLDER ALLUVIUM.	-do-	29	380	166.040
69.	69	RAJAN VADI 45C11Ic	Dug well, 110° from village, 35° from hill top, Durjansingh, Raghunathsingh Rajput.	25.80	3.50	8.90	Sand, clay- & kankar OLDER ALLUVIUM.	-do-	-do-	30	100	208.570
70.	70	REWAT 45C11Cd	Dug well, 360° from vil- lage adjacent to it Public well.	27.00	3.30 x 3.30	18.60	Clay & kankar OLDER ALLUVIUM	-do- & l	DMP/D	-	70	168.435

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
71.	71	SIYANA Dug well	45C16Ha north of village, Sukhraj Tara chand Mahajan.	11.10	2.00	5.30	Clay & kankar OLDER ALLUVIUM	Quoted	EMR/A	480	172.155	-
<u>JASWANTPURA BLOCK</u>												
72.	72	BHARUDI Dug well, 45P5Dd west of village near school on road side, Bhura, Shankar Suthar.	24.00	3.15	8.70	Granite Post weathered. Delhi	-do-	-	-	180	198.155	-
73.	73	BUGAON 45Q5Ha Dug well, 70° from village at a distance of 1/4 mile, Ramdan Avedan Charan.	20.60	3.80	5.40	Granite	-do-	DMP/1	-	60	196.190	-
74.	74	CHANDUR 45D5Pb1 Dug well south of village, about 2 km. on Jaswantpura road, Lalpat singh S/o Eherusingh Rajput.	18.60	3.10	7.80	-do-	-do-	-do-	25	360	224.800	-

1	2	3	4	5	6	7	8	9	10	11	12	13
75.	75	DHAN JI Dug well, KA BERA NE of 45C8Ea	village about 1 furlong Kan Singh Jalamsingh Rajput.	17.00	3.65	12.10	Clay & kankar OLDER ALLUVIUM	90	DMP/Idle	90	143.095	
76.	76	DHANSA 45C8Aa	Dug well, NE of village at about 1 furlong, Medsingh Mchvatsingh Rajput.	14.60	3.35	12.85	--do--	20	--do--	120	124.850	
77.	77	GOLANA 45D5Dd	Dug well, scuth of village about 1 fur- long Bhartaram S/o Kesha- ram Purohit.	13.75	3.00	4.84	Granite Post Delhi	Pers- ion wheel/ I	23	120	259.395	
78.	78	JHAK 45C12Fb	Dug well, 315° from village about 2 furlong Idan Jagtu Chowdhary	19.80	3.35	6.30	Clay & kankar OLDER ALLUVIUM	DMP/ Idle	-	-	211.885	

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1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
83.	83	MODRAN 45C8Ad	Dugwell, 320° from Rly. station about ½ km. Krishna Manak Mali.	14.00	2.95	7.80	Clay with sand medium OLDER ALLUVIUM	Quate- rmary	BMP/I	360	140.450	
84.	84	MURTARA SILLI NW of 45C8Fd	Dug well, village about 1/4 km. Thura Gonga.	16.40	3.35	13.20	Granite Post weathered Delhi	DMP/I	-	120	190.605	
85.	85	PANSERI 45D6Cc	Dug well N 80° E. about 1 km. from village, Shersingh S/o Ratansingh Thakur.	7.60	3.40	3.48	Sand, fine, clay with rock fragment, OLDER ALLUVIUM.	Quate- rmary	BM/I	29	40	247.330
86.	86	PAOLI 45D5Gb	Dug well, 35° from village about 1.5 furlong Soma, Rupa Ranchor	14.70	4.15	6.85	Granite Post Delhi	BMP/I	-	120	184.215	

1	2	3	4	5	6	7	8	9	10	11	12	13
87.	87	POH	Dug well, KAL. on road 45D9Ac side near village, Trilokchand Rawal	11.60	3.00 X 1.90	4.40	Clay & Quartz Rashtar emary I OLDER ALLUVIUM	DMP/	-	-	-	221.40
88.	88	TATOL 45C12B	Dug well, near village Vena. Jama Koli.	22.15	3.35	11.95	-do-	-do-	-	-	60	150.790
PANIWARA BLOCK:												
89.	89	AJODAR 45D2Gc	Dub-cum- bore, due S.E. about 1/2 km. from village Jivaji Bhurji Chowdhary	8.20	2.35	4.04	Sand & gravel YOUNGER ALLUVIUM.	-do-	DMP/ Idle	27	-	216.140
90.	90	ALRI 45D5Ab3	Dug well, N 80° E about 1.25 km. from village, Tulsaji Motaji.	22.00	2.90	9.10	-do-	-do-	DMP EMP I	29	600	164.550

1	2	3	4	5	6	7	8	9	10	11
91.	91	BAMANWARA 45D2Bc1	Dug well, bore, N 30° W about 1km. from vil- lage Var- da S/o Harji Koli.	7.00	2.70	0.82	Sand, coarse YOUNGER ALLUVIUM.	Quartz- rnary I	29	120 347.60
92.	92	BARETHA 45D1Hc	Dug well, 11.95 in side village, near Hanuman ji ka temple Public well.	11.95	2.15	6.25	Granite, Post weathered & frac- tured.	Buck- et./D	29	15 171.90
93.	93	BHATWARA 45D1Dd	Dug well, N 20°E about 1 km. from village, Kheta S/o Premaji Chowdhary	11.60	2.85	7.85	Rhyolite, -do- weathered, jointed.	BM/I	30	50 162.50
94.	94	DADOKI 45D5Bb	Dug well, in side village, Public well.	8.50	2.20	3.15	Granite, -do- weathered & fract- ured.	Buck- et/D	27	30 222.00

1	2	3	4	5.	6.	7.	8.	9.	10.	11.	12.	13.
45D1Ga	about 50 mtrs. from temple, Public well.	19.90	2.30	13.85	Sand & gravel, YOUNGER ALLUVIUM.	Quaternary D	EMP/ I&D	30	60	114.455		
96. 96 DHANWADA Dug well, 45D1Ga	just out side the village, Arjunsingh Thakur.	20.80	3.10	13.07	Sand & gravel, YOUNGER ALLUVIUM.	-	EMP/ I&D	-	240	151.295		
97. 97 DIGAON Dug well, 45D1Ba	N 40° E from house of Ramchandra Sarpanch about 2 furlong, Public well (Thalika Bera)	49.50	1.50	45.00	Sand & clay & kankar with little gravel, OLDER ALLUVIUM.	Buck- et/D	30	30	114.455			
98. 98 FATEHURADug well, 45D6Cb	about 100 Mtrs. from village Dharma Gogaji Hargara.	14.95	2.40	8.35	Sand & kankar with clay and few gravel pieces, OLDER ALLUVIUM.	EMP/ I	28	240	250.885			

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1	2	3	4	5	6	7	8	9	10	11	12	13
103.103	KARDA	45D1Ea	Dug well, about 3/4km. from village, Buda S/o Vageer Kumar	21.05	6.05	5.00	with gravel and few pieces of kanjar YOUNGER ALLUVIUM.	20	360	13	22	13
104.104	KARDA	45D1Ea	Dug well, due S. from temple about 50 mtr. Parbatnath Motinath Mahant.	21.55	2.10	8.65	Sand & -d. clay with little gravel OLDER ALLUVIUM.	30	20	30	20	147.055
105.105	KORKA	45D1Ab	Dug well, due E. about, 1 furlong from vill- age near temple.	42.55	2.20	24.77	-do- -do- Buck- et./D	30	-	-	-	105.850
106.106	LAKHAWAS	45D1Ec	Dug well, due E. about 1 1/2 furlong from temple Public Well	19.00	2.40	6.15	Rhyolite Post weathered & fract- ured.	-do- Delhi	30	25	25	188.980

1	2	3	4	5	6	7	8	9	10	11	12	13
107.107	45D2Ea	RAJAWADA Dug well, bore, N. 85 E. just out side the village Tikma S/o Ganna Rebari	12.60	2.20	9.60	Sand & gravel, YOUNGER ALLUVIUM.	420	133.38				
108.108	PAL 45D1Fb	Dug well due S. about 1 furlong from village. Public well.	28.35	1.70	15.27	Sand & clay with few pieces of kankar OLDER ALLUVIUM.	25	196.96				
109.109	RAMPURA 45D6Ad	Dug well, N 80° W about 1½ furlong from village, Nar-naji Miyaji Chawdhary.	7.00	2.60	1.70	Sand gravel with few kankar YOUNGER ALLUVIUM.	120	234.47				
110.110	RAJAWADA 45D1Id	Dug well, N 5° W from Raniwara Kala about 1 km. Pirsingh Devji Thankur	12.30	2.90	3.70	Fine and-do- with clay OLDER ALLUVIUM.	-	222.145				

1	2	3	4	5	6	7	8	9	10	11	12	13
111.111	RATANPURA 45D2Dd	Dug well, S 45° W about 1 furlong from Rly. station Vijesingh Samelsingh Rajput	18.50	3.20	6.00	Sand, fine to medium YOUNGER ALLUVIUM.	Quate- rinary I	DMP/	29	600	175.140	
112.112	ROPSI 45D1Gd	Dug well, S 20° E. about 1 furlong from village, Public well.	10.70	2.40	6.62	Granite, Post weathered & Delhi. fractured.	BM/D -		30		155.450	
113.113	PORA 45L6Ac1	Dug well, just out side the village due NE, Public well	8.65	1.80	3.65	-do-	-do-	Buck- et/D	29	15	245.065	
114.114	SEWARA 45D1Cb	Dug well, N. 65° W about 1 furlong from temple, Public well.	47.90	1.60	31.20	Sand & gravel with kankar OLDER ALLUVIUM	Quate rinary ble. pump/D	Subm- ersi- ble.	30	360	151.720	

1	2	3	4	5	6	7	8	9	10	11	12	13
116.115	45D1001	ACHALPUTA	Dug well near residence of Mola Kalbi, Public well.	13.75	3.60	11.11	Rhyolite weathered, alluvial et./D				30	158.220

ANCHORE BLOCK

116.116	40P10Dd	ACHALPUTA	Dug well N 50 E. about 1 furlong from village, Pannasingh Rajput.	10.90	2.05	6.60	Clay & kankar OLDER ALLUVIUM.	Quaternary	BM/I	29	30	38.00
117.117	40P9Ab	AGDAWA	Dug-cum-bore, due N. about 1/2 km. from village, Hira S/o Guman Mali.	12.60	1.40	9.80	Sand, fine YOUNGER ALLUVIUM.	Quaternary.	BM/I	30	60	49.40
118.118	40P9Ia	AMLI	Dug well, S. 55E. just outside the village Public well.	4.75	2.10	3.33	Sand fine with clay, OLDER ALLUVIUM.	-do-	Buck-et Idle	30	-	38.90

111.

1	2	3	4	5	6	7	8	9	10	11	12	13
119.119	ANKURD,	Dug well,	4.15	2.50	2.92	Sand	-do-	Buck-	28	5	64.80	
40016Fa	in side	village,				fine,		et/D				
	near resi-	dence of				NGER						
	Amararam	Rebari,				ALLUVIUM						
	Public	well.										
120.120	ARNAI	Dug well,	30.70	1.45	25.30	Sand,	-do-	-do-	-	40	81.120	
40P13Ed	due E.	out side				Clay &						
	the	village,				kankar						
	Public	well.				with li-						
						ttle gravel,						
						OLDER ALLUVIUM.						
121.121	ARWA	Dug well,	6.40	1.10	-	Sand,	-do-	-do-	29	10	35.005	
40P6Dc	due S W	about ½ km.				fine		D&L				
	from	village-				YOUNGER						
	school,	Public well.				ALLUVIUM						
122.122	BAWARIA	Dug well,	5.65	2.40	4.87	Clay &	-do-	Buck-	29	30	38.40	
40P9Fd	due E just	out side		x		kankar		et/D				
	the	village		2.05		OLDER						
	near Bargad	tree, Public				ALLUVIUM.						
	well.											

1	2	3	4	5	6	7	8	9	10	11	12	13
123.123	SHADRUNA	Dug well,	due NE	13.45	1.60	11.15	Sand, clay & few kankar, OLDER ALLUVIUM.	date-Buck-27	20	59.90		
	40P13Dd	about 100 mtrs. from village, Public well.										
124.124	SHAWATRA	Dug well,	due N.	2.85	1.50	2.35	Sand, fine YOUNGER ALLUVIUM.	-do-	15	16.005		
	40P6Gc	about 1/2 furlong from village, near temple.										
125.125	BINJROL	Dug well,	due E.	17.60	1.70	13.34	Sand, fine-do- with kankar, clay & gravel OLDER ALLUVIUM.	-do-	20	73.100		
	40P ₁₃ Gbl	about 1 furlong from village, Public well.										
126.126	BINJROL	Dug well,	N.15°W	18.25	1.40	12.10	Sand medium with clay OLDER ALLUVIUM.	-do-	40	68.80		
	GOLIA	about 1 furlong from village, Public well.										
	40P ₁₃ Dcl											

1	2	3	4	5	6	7	8	9	10	11	12	13.
127.127	BIRAWA	Dug well,	5.05	1.70	3.75	Sand, Quate- Buck- 29	25	35.00				
40012Fb	in side	village,	Public	well.	1.25	5.05	Sand, fine with clay, OLDER ALLUVIUM.	-do-	Buck- et/d	20	37.60	
128.128	CHITALWANA	Dug well	6.40	1.25	5.05	Sand, fine with clay, OLDER ALLUVIUM.	20	37.60				
40P9Ec	S.50°W	from villa- ge near Rest House Public well.	Irreg- ular.	2.60	2.70	Kacha well, S.80°E about 1 fur- long from village, Public well.	Mea- gre 5	10.570 T.O.C.				
129.129	CHOTA AKODIA	00P6Aa	9.65	1.50	9.08	Sand fine with clay, OLDER ALLUVIUM.	-do-	-do-	-do-	10	48.10	
130.130	DEDUA	40P13Bb	4.80	2.15	4.65	Dug well, N.40°W. about 1km. from vill- age, Chokaram Bisnoi.	Mea- gre 5	37.20				
131.131	DHANI HEMA	40015Cd	just outside village near school, Public well.									

1	2	3	4	5	6	7	8	9	10	11	12	13
132.132	DANTA Dug well 40P13Fadue W. about 1 furlong from vill- age, Public well.	26.65	1.60	20.62	Sand medium with clay OLDER ALLUVIUM	Quate- rnary et/D	Buck-	26	20	64.40		
133.133	DUGAWA Dug well, due 40P14Ha S. about 1/2 furlong from vill- age, Public well.	18.05	2.30	1.60	Sand, clay & kankar with little gravel OLDER ALLUVIUM	-do-	-do-	26	25	120.80		
134. 134	DUNGRI Dug well, 40P5Gb S. 40°E. about 1 furlong from village, Public well.	25.60	0.95	-	Sand fine YOUNGER ALLUVIUM	-do-	-do-	32	10	33.40		
135.135	GARDALI Dug well, 40P14Ab N. 15°W. about 1 furlong from village, Mcmanasa S/o Sahibsa Musalman.	18.75	2.10	13.20	Sand fine with clay OLDER ALLUVIUM	-do-	DMP/I	24	240	56.59		

1	2	3	4	5	6	7	8	9	10	11	12	13.
136.136	HADEWAR	40P13Pb2	Dug well, due N.40°E about 1km. from village, Wakfaji t/O Chelaji Kalbi.	28.23	2.45	16.43	Sand medium with clay & kankar & few gravel OLDER ALLUVIUM	-Quaternary.	DMP/I	27	240	69.00
137.137	HETIGAON	40A9Bc1	Dug well, S.50°E. about 30 Mtrs. from Kul Mukteshwar Mahamandir Mahadevji Ka Mandir.	6.20	2.20	4.05	Sand, fine YOUNGER ALLUVIUM.	-do-	Buck-set/D	30	5	32.10 T.O.C
138.138	JANWI	40A9Cc	Dug well, N.30°W. about 1 furlong from village, public well.	4.45	2.15	2.10	Sand, fine YOUNGER ALLUVIUM	-do-	-do-	30	20	29.15 T.O.
139.139	JHAB	40016Cd	Dug well, due N about 1/2 furlong from temple near school public well.	4.70	1.20	2.60	Sand, fine with clay. OLDER ALLUVIUM	-do-	-do-	28	Meagre 5	57.10

1	2	3	4	5	6	7	8	9	10	11	12	13
140.140	JODHAWAS	Iug well, 400163d1 due west, about 1 furlong from temple Public well.	6.65	2.55	2.95	Sand fine with clay OLDER ALLUVIUM	Quate- rinary et/D	28	40	58.940		
141.141	KERIA 40P9Dd1	Iug well, N.70°W about ½ furlong from temple, Public well.	7.60	1.80	2.70	Sand, fine YOUNGER ALLUVIUM	-do-	29	15	42.050		
142.142	KHARA 40P13Hc	Iug well, S.60°E. about 1 furlong from village Public well.	47.65	1.30	33.33	Clay & kankar OLDER ALLUVIUM.	-do- B.M./D	26	40	101.58		
143.143	KHEJDIYALI 40P5Cd	Kacha well, S-30° E about 1 furlong from village, Public well.	2.95	Irre- gular	2.60	Sand fine YOUNGER ALLUVIUM	-do- Bucket/32 D	5	16.015			

1	2	3	4	5	6	7	8	9	10	11	12	13
144.144	LALPUR	Dug well,	12.00	1.90	9.11	Sand, fine clay	Quaternary	DMP	-	-	-	43.45
	40P10Gb	due W. about 3/4km. from village, Jona S/o Naga Chowdhary.				OLDER ALLUVIUM.						
145.145	MELAWAS	Dug well, about 1/2 furlong from village Public well.	3.90	1.45	2.75	Sand, fine YOUNGER ALLUVIUM.	-do-	Buck-et/D	28	25	34.80	
	40012Id	S.20°E										
146.146	NALDARA	Kacha irregular pond, due N. about 1/2 furlong from village Public well.	3.55	Irregular.	2.80	Sand, fine with little clay YOUNGER ALLUVIUM.	-do-	-do-	29	20	19.610	
	40P6Gc											
147.147	NILAW	Dug well, about 1 furlong from village Madho S/o Rupa Kalbi	14.40	1.55	10.82	Sand, medium kankar & gravel with clay. OLDER ALLUVIUM.	Quaternary	DMP/I	29	120	65.500	
	40016Ia	S.45° W.										

1	2	3	4	5	6	7	8	9	10	11	12	13.
148.148	PATHMEDA	Dug-cum- 40P14Da1 bore	23.35	1.95	17.10	Sand, kankar, rinary gravel & clay OLDER ALLUVIUM.	-do-	BM/D	27	30	65.500	
		N.8C°E about 4km. from village Mora S/o Bhima										
149.149	PLADAR	Dug well, N.35°	29.40	2.25	10.20	Sand & clay with gravel. OLDER ALLUVIUM.	-do-	BM/D	27	30	60.595	
	40P14Ac2	about 1 furlong from village Public well.										
150.150	RAMPURA	Dug well, N.50°E.	3.60	2.40	3.25	Sand, fine YOUNGER ALLUVIUM.	-do-	Buck/ et/D	28	Mea- gre 5	60.505	
	40016Bd	out side the vil- lage, Public well.										
151.151	RANODARKA	Dug well	3.05	2.10	1.70	Sand, fine with clay, OLDER ALLUVIUM.	-do-	-do-	29	25	32.00	
	GOLIA	S.10°E.										
	40P9Gc	about 1/2 furlong from village, Public well.										

1	2	3	4	5	6	7	8	9	10	11	12	13.
152.152	SAKATA	KI DHANI	Racha well, 4.10	Irre- 3.60	Sand, fine	Quaternary	Buck- 33	Mea- 16.785				
	40P5Db	about 1 furlong from Nimtree, Hagnlo S/o Gangda Koli										
153.153	SANCHORE	Dug well, due S.40° W about 1 km from Golia.	15.90	1.40	11.74	Sand, fine with kankar & gravel OLDER ALLUVIUM.	-do-	EMP/I	-	360	57.72	
	40P13Cd											
154.154	SANGADAVA	Dug well, 8.50° W, about 1 km from village, near road, Har Lal S/o Bherlu Bisnoi.	5.80	1.50	4.30	Sand, fine with clay, OLDER ALLUVIUM.	Buck- 28	et/D	20	38.40		
	40P9Hb											
155.155	SANKAD	Dug well, due N. about 50 mtrs. from village Public well.	33.05	1.80	25.17	Sand, medium with clay & gravel OLDER ALLUVIUM.	-do- Idle	26.5	-	120.20		
	40P13Id											

1	2	3	4	5	6	7	8	9	10	11	12	13
156.156	SARNAU	Dug well, 40P131b due to out side the village, Public well.	73.10	2.10	25.62	Clay & Quaternary kankar OLD ALLUVIUM						
157.157	SHILU	Dug well, 40P10E due to about 1 furlong from vil- lage, Public well (P.H.E.D.)	22.25	3.00	8.50	Sand, fine with clay OLD ALLUVIUM	do-	Su- Pump D			135	58.10
158.158	SIWARA	Dug well due to about 100 mtrs. from village Public well.	7.70	2.40	6.03	Sand, fine with clay OLD ALLUVIUM	do-	Bucket			20	49.80
159.159	SUNTRI	Dug well, 40P51b N.10°E about 30 mtrs. from village Public wall.	4.05	1.50	2.75	Sand, fine YOUNGER ALLUVIUM.	do-	do-/D			15	29.68

1	2	3	4	5	6	7	8	9	10	11	12	13.
160.160	SURAM	40P14Gd	Dug-cum-bore, due N. 10°E about 4km. from village Vazo S/o Kevda Kalbi.	13.50	2.10	4.65	Sand, fine clay & kankar few gravel, OLDER ALLUVIUM.	Quate- rmary.	DMP/I	25	360	133.305
161.161	TAMFI	40P9Hd	Dug well, S.15°W about 50 mtrs. from village, Public well.	2.90	1.80	1.00	Sand, fine with little xxxxx clay OLDER ALLUVIUM.	-do-	Buck- et/L	29	20	25.105
162.162	TENTROL	40P13Aa	Dug well, N.30°W. about 200 mtrs. from village, Public well.	7.00	1.95	6.64	Sand, fine & clay OLDER ALLUVIUM.	-do-	Buck- et/D	-	20	42.00
163.163	VANK	40P10Ad	Kacha well, S.60°E about 1 furlong from village, Scma S/o Shika Shambhi	3.00	4.85	3.12	Sand, fine YOUNGER	-do-	BM/I	29	5	28.145

1	2	3	4	5	6	7	8	9	10	11	12	13.
164.164	MIROL	40P14Ea3	Dug well lined, S. 60°W front of village (outside the village) Public well.	38.65	1.65	-	Sand with clay OLDER ALLUVIUM.	Quaternary. Idle.	Buck-	-	-	-
DATA BLOCK.												
165.165	BAKRA	45C7Ib	Dug well, 20° from village near PHED water tank & school, Public well.	11.10	3.00	8.70	Clay & kankar OLDER ALLUVIUM.	-do-	Idle	26	-	137.910
166.166	BISALA	45C4Ga	Dug well, 30° from village about 1 furlong, Public well.	13.25	1.70	9.95	Sandy clay & kankar OLDER ALLUVIUM.	-do-	-do-	26	-	106.110
167.167	BAUTRA	45C3Id	Dug well, in the centre of the village Public well.	32.05	2.40	30.50	Clay and kankar, OLDER ALLUVIUM.	-do-	BM/ D&L	26	70	134.390

1	2	3	4	5	6	7	8	9	10	11	12	13
168.168	BISANGAR	Dug well, 147°	18.80	4.20	11.15	Clay & Quate- kankar rmary. OLDER ALLUVIUM.	-do-	DMP/I 26	295	400	119.600	
	45C11Ad	from village about 1km. from water tank, lam singh S/o Balwant Singh.										
169.169	CHARAU	Dug well, 135°	15.50	3.25	8.50	Sandy clay & kankar OLDER ALLUVIUM.	-do-	DMP/I 26	295	400	116.540	
	45C7Ca	from village S. of taila Surana road Tulsaji Mahajan										
170.170	DADHAL	Dug-cum-bore, N. 45°W about 1½km. from village Koti S/c Wathu Kumar	6.80	1.60	4.76	Sand & gravel YOUNGER ALLUVIUM.	-do-	-do- Idle	-	-	74.680	
	45C4Aa											
171.171	DAHIWA	Dug well, S. 45°W about 1½km. from vil-lage, Sopa S/o Javaji Kalvi	29.50	2.60	27.40	Sand, fine with clay & kankar & gravel.	-do-	-do-	-	-	118.890	
	45C3Ea											

1	2	3	4	5	6	7	8	9	10	11	12	13
172.172	DETA	45C4Ga	Dug well, 2550' from river bank Tehsingh S/o Ajaysingh Rajput.	11.90	2.90	7.80	Sand and gravel. YOUNGER ALLUVIUM.	-do-	DMP/I	-	446	101.48
173.173	GOL	47C7Hb	Dug well, 230' from village, on west of Sorita to Jalore road Suraj S/o Heerchand Gurasa.	9.35	2.80	5.90	Sand & gravel YOUNGER ALLUVIUM.	-do-	EMP/I	26	384	125.460
174.174	GOLIA	45C3 Ib	Dug well, 200' from Meglwa water tank, 340' from GOLIA village, west of Sayla-Sarnau road, Kesar singh S/o Vijaysingh Rajput.	13.60	2.40	10.30	Clay & kankar OLDER ALLUVIUM.	-do-	DMP/I	28	446	106.440
175.175	HARMU	45C4Da	Dug-cum-bore, 11.56 about 1 furlong from village, Pabudan S/o Sarden ji charan.	11.56	2.80	7.00	Sand & gravel YOUNGER ALLUVIUM.	Q-do-	DMP/	28	-	84.840

1	2	3	4	5	6	7	8	9	10	11	12	13.
176.176	KHETLAVA 45C3Fal	Dug well N.70°E	15.05	2.60	10.13	Clay& kankar. rnary I&D OLDER ALLUVIUM.	-do-	-do-	EMP/I	25	433	9C,170
		just out side the village, Vijaysingh S/o Sohensingh Rajput.										
177.177	KESHWANA 45C7Hc	Dug well, 317° from hill top 360° from village,adjacent to village,Devisingh S/o Joghhsingh.	14.10	2.90	8.10	-do-	-do-	-do-	EMP/I	25	433	136.330
178.178	KUABER 45C7Ec	Dug well, 340° from centre of village adjacent to village Public well.	27.90	2.15	25.63	Sand, clay & kankar OLDER ALLUVIUM.	-do-	-do-	BM/D &L	26	90	149.220
179.179	MEGALWA 45C3Ia	Dug well, opposit Post office in the Village Public well.	11.95	1.55	9.95	-do-	-do-	-do-	BM D&L	29.5	10	110.590

1	2	3	4	5	6	7	8	9	10	11	12	13
180.180	MOKNI	HERA	Dug Well	29.10	2.90	27.15	Sand, clay & kankar	Quaternary	BM/ D&L	27.5	90	133.820
	45C7Bb		270° from village adjacent to it, Public well.				OLDER ALLUVIUM					
181.181	OTHWARA		Dug well, 290° from village, south of Sayla-Jalore road,	9.40	2.30	5.35	Sand & gravel	-do-	BM/I	-	90	123.150
	45C7Ed		Basantsingh Jeevsingh Bhunia.				YOUNGER ALLUVIUM.					
182.182	PAHARPUJA		Dug-cum-bore, 150° from Mori hill most of jalore Sayla road Kanaji S/o Lakmajji Bhambi.	19.65	2.70	11.50	-do-	-do-	EMP/I	28.5	210	150.400
	45C11Ad											

1	2	3	4	5	6	7	8	9	10	11	12	13.
183.183	PANTIARI	Dug well, near Maha-deo temple in the village Public well.	45C8Ab	21.55	2.50	12.15	Sticky clay & kankar OLDER ALLUVIUM.	Quaternary.	Idle	-	-	-
184.184	RANTUJA	Dug well, 270° from village, north of Sayla to Jalore road Okhash Kheema Bhil.	45C7Gd	7.30	2.50	5.25	Sand, fine with kankar OLDER ALLUVIUM	-do-	DMP/T	25.5	250	135.970
185.185	SANPHARA	Dug well, 300° from village, adjacent to it, Public well.	45C11Bc	12.90	2.00	7.30	Sandy clay with gravel YOUNGER ALLUVIUM.	-do-	BM/D	28	20	146.500

1	2	3	4	5	6	7	8	9	10	11	12	13.
186.186	SAYLA-I	Dug well, 45C7Fa	east of Sayla-Jalore road near village, Kesaji Jesaji Purohit.	10.60	3.80	7.25	Sand & gravelly YOUNGER ALLUVIUM.	Quate-EM/I	25	130	121.130	
187.187	SAYLA-II	Dug well, 45C7Fa	Meg-7.90 walo-ki-Basti Public well.	2.05	-	-do-	-do-	Idle	-	-	121.130	
188.188	SIRANA	Dug well, 45C3Ad	N.25°W. about ½km. from village, Ramsingh S/o Bhimsingh.	28.80	3.60	14.70	Clay & kankar OLDER ALLUVIUM	DMP/I	32	480	99.180	
189.189	TILORA	Dug-cum-bore 45C4Da1	S.35.W. about ¼ furlong from village, Devaji Mali.	7.05	2.50	5.87	Sand & gravel YOUNGER ALLUVIUM.	-do-	30	360	82.860	

APPENDIX 2(a) (A) STATEMENT SHOWING THE DETAILS OF EXPLORATORY DRILLING CARRIED OUT IN DISTRICT DURING THE PERIOD 1976-77 TO 1982-83.													
S. No.	Village	Panchayat	Year of const- ruction.	Type of well/ Ex/Ob/ Pz.	Depth in metres.	Pipe assy. mtrs.	SWL low-in mtrs.	Draw- down in mtrs.	Disch- rg in M ³ /day.	Quality of water	EC	F	No ₃ Mg/ Stene litre, litre
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	
1.	Bhinwara Ahore	76-77	E		70.00	68.60 (10"x8")	6.61	3.88	864	1800	1.32	15.00	
2.	Sankarna Jelote	77-78	E		56.00	51.37 (10"x8")	3.65	8.18	216	6750	2.40	Traces	
3.	Jaitpura- Jogni Ahore	77-78	E		77.00	77.00 (8")	7.60	2.00	736	10700	2.40	15.00	
4.	Umedpura "	"	E		81.00	82.00 (10")	9.05	23.50	592	2711	2.00	Tr.	
5.	Saila	"	E		175.50	175.11 (12"x8"x6")	8.00	5.00	1152	1320	1.60	-	
6.	Bautra "	"	E		290.00	251.00 (12"x6")	30.00	4.00	1008	880	Tr.	55.00	
7.	Rama Ahore	"	E		53.00	51.70 (10"x8")	8.00	11.85	320	3796	-	75.00	
8.	Raniwara Raniwara	"	E		51.00	52.00 (8")	7.40	3.10	1008	1080	1.60	15.00	
9.	Bhadrajun Ahore	"	E		53.50	-	-	-	-	-	-	-	352
10.	Narsana Saila	"	E		108.00	-	-	-	-	-	-	-	6550
11.	Bhimmal Bhimmal	"	E		60.00	25.00 (6")	5.50	-	16	10350	1.00	15.00	

1	2	3	4	5	6	7	8	9	10	11	12	13
12. Sankad		Sancho	77-78	0	49.50	45.00 (6")	33.0	8.0	216	4500	1.04	228
13. Bagora		Bhinmal	"	0	30.00	31.00 (6")	2.15	2.45	776	5555	2.5	28
14. Rajanwadi Jalore			78-79	E	75.00	75.00 (10"x8")	7.8	17.00	184	1650	7.00	10
15. Siyana Jalore			"	"	31.00	31.50(8")	4.20	2.00	736	-	-	-
16. Hariyalli Sancho			"	"	300.00	130.50 (10")	10.00	-	896	16200	0.40	25
17. Meda		"	"	"	280.0	162.00 (10"x8")	15.00	2.00	576	6200	0.80	110
18. Bagra Jalore			"	"	101.00	98.00	4.75	7.75	536	3400	2.80	-
19. Raithal Ahore			"	"	30.00	Abandoned	2.80	due to saline formation water.				
20. Kolar Jaswantpura			"	"	99.00	13.50 (6")	6.00	10.38	80	1470	4.00	125
21. Jaswantpura			"	"	9.05	-	8.00	Abandoned due to hard formations				
22. Degaon Raniwara			79-80	"	285.00	275.75 (10"x6")	49.50	7.50	4.80	6400	2.80	25
23. Modran Ehinmal			"	"	80.00	78.50 (10"x6")	8.30	3.05	1344	1080	5.32	10
24. Bhuti Ahore			"	"	19.00	-	4.00	Abandoned due to poor discharge.				
25. Tarwara			"	0	23.00	20.60 (6")	8.00	-	160	35000	7.68	-
26. Panseri Jaswantpura			80-81,E		33.00	31.10 (10"x8")	5.15	5.00	592	480	-	5.00
27. Jaitpura Raniwara (Badgaon)			"	"	57.00	55.00 (10")	13.00	-	592	360	-	10.0
28. Pladar Sancho			"	"	300.00	278.00 (10"x6")	14.50	-	576	5400	2.8	75

1	2	3	4	5	6	7	8	9	10	11	12	13
29.	Punasa	Bhimmal	80-81	P	300.0	101.00 (4")	20.50	-	432	1410	1.32	25.00
30.	Daspa	"	81-82	E	310.00	198.00 (4")	19.12	6.00	737.6	9000	0.44	-
31.	Bhimmal	Golia "	"	"	116.00	117.00 (8")	17.50	8.50	396	3400	3.60	60
32.	Balware	Saila	"	"	127.00	122.50 (4")	6.50	-	504	15300	-	-
33.	Dungri	Sanchoe	"	E	100.00	97.00 (4")	25.00	-	129.6	40000	3.20	15.00
34.	Korita	Jasvantpura	"	"	57.00	6.50 (6")	8.00	-	144	6200	7.60	15.00
35.	Khanpur	Bhimmal	"	"	57.00	9.50 (6")	8.00	4.21	288	5000	1.08	10.00
36.	Chatwara	Raniwara	"	"	47.00	9.60 (6")	Abandoned due to poor discharge					
37.	Chandur	Jasvantpura	"	"	10.00	-	Abandoned due to compact formation.					
38.	Jodhawas	Sanchoe	"	O	305.00	284.70(4")	1.75	2.0	320	5650	1.60	15.00
39.	Kuaber	Saila	"	"	221.00	219.85 (4")	26.35	-	6576	3000	-	10.5
40.	Paoli	Jasvantpura	"	P	27.00	9.90 (6")	10.50	-	288	1750	7.00	410.0
41.	Batera	Bhimmal	82-83	E	305.00	288.68 (4")	4.10	-	576	7500	-	-
<p>B.STATEMENT SHOWING THE DETAILS OF EXPLORATORY DRILLING CARRIED OUT IN JALORE DISTRICT DURING THE PERIOD(1978-79 TO 1982-83) UNDER LUNI BASIN SCHEME.</p>												
42.	Janwd	Sanchoe	80-81	E	300	Abandoned due to lack of granular zone.						
43.	Golana	Jasvantpura	81-82	"	57.0	12.0 (6")	7.80	-	14.40	1680	2.8	15
44.	Dahiwa	Saila	82-83	"	276.0	241.85 (4")	5.80	-	792	1760	1.20	45

1	2	3	4	5	6	7	8	9	10	11	12	13.
45.	Chajjala Bhinmal	82-83	E		315.0	287.25 (4")	33.0	-	790	14700	1.0	55
46.	Alwara Saila	"	"	"	300.0	288.80 (4")	10.35	10.0	576	1600	0.80	30
47.	Bingrol ka Sanchore Golia.	"	"	"	304.0	285.13 (4")	16.00	2.0	1072	12000	0.80	40
48.	Ratanpura Raniwara (Jakhri)	"	E		50.0	41.0 (4")	5.50	-	532	1102	1.20	45

C.STATEMENT SHOWING THE DETAILS OF BORE HOLE DRILLED UNDER FAMINE (PERIOD 1969)

49.	Bhagli Jalore	1969	-		99.0	63.47 (8")	28.30	7.62	435.2	1200ppm	-	-
50.	Jalore "	"	"		64.0	-	-	-	-	-	-	-
51.	Jakhali Sanchore	"	"		100.0	-	13.00	-	612	-	-	-
52.	Surawa "	"	"		100.0	-	5.80	-	720	1005ppm	-	-
53.	Mokhpura "	"	"		60.0	-	13.0	-	-	-	-	-
54.	Goindla Ahcre	"	"		79.50	-	3.50	-	208	-	-	-
55.	Bedana "	"	"		70.00	-	6.00	-	432	-	-	-
56.	Sankhwali "	"	"		70.00	-	22.50	-	288	-	-	-
57.	Thoor Bhinmal	"	"		80.00	-	11.00	3.00	208	-	-	-
58.	Harji Ahcre	"	"		54.00	-	6.00	4.00	208	-	-	-
59.	Bagalsepta Bhinmal	"	"		75.00	-	8.00	6.00	776	-	-	-
60.	Devra Sanchore	1969	"		80.00	-	11.00	6.00	288	-	-	-
61.	Kuda "	"	"		199.64	-	27.10	16.79	827	-	-	-
62.	Guda Inarpura Ahore *	"	"		53.00	-	4.00	10.00	2.08	-	-	-

NOTE:Details of only one bore hole(expl./obs./piez./etc.)are given for report purposes.

**DETAILS OF BORE HOLES DRILLED BY E.T.O. UNDER U.N.D.P.
IN JALORE DISTRICT (PERIOD 1964-65)**

S. No.	Name of site.	Drilling in metres.	Depth of tapping in base-ment in metres.	Granular zone tapped in metres.	Tested discharge in M ³ /day	S.W.L. in metres.	Draw-down in metres.	CHEMICAL QUALITY		
								T.D.S. (PPM)	Cl. (PPM)	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	Padarli Ahore	56.60	54.2	-	288	4.29	9.20	7440	3030	
2.	Panchwa "	58.22	54.25	20.19-43.05	180	5.35	11.94	520	160	
3.	Garah	85.00	70.70	27.8 -32.6	380.8	9.40	9.39	570	100	
				37.7-41.7						
				44.9-59.8						
4.	Ahore	57.91	50.90	18.26-24.38	579.2	8.10	5.93	385	50	
				27.43-47.55						
5.	Un	82.30	60.96	10.36-21.17	580.8	6.55	6.94	510	127	
6.	Leta Jalore	41.45	31.70	24.08-36.68	460.8	7.94	8.23	740	255	
7.	Taskant "	45.70	45.70	18.05-23.7	330	11.50	5.54	18484	5120	
	ki									
8.	Baori "	71.02	44.19	23.29-63.29	-	-	-	5360	1910	
9.	Mospura "	91.14	87.78	28.43-30.84	650.8	12.17	9.32	2920	1135	
	Mithri			33.56-71.78						
10.	Ghona Ahore	50.90	30.78	-	-	-	-	-	-	
11.	Sanphara Sadha	102.72	98.15	7.92-17-37	129.6	4.94	4.87	300	40	
				25.60-28.35						
12.	Nawa Khera "	85.95	-	6.3-48.57	496.0X.	5.13	10.83	360	40	
13.	Bokra Jalore	47.54	6.0	-	-	-	-	-	-	
14.	Paharpura Saila	77.72	-	11.75-14.80	359.5	6.21	6.33	340	40	
				21.58-27.90						
				20.95-43.14						
15.	Tikhi "	97.84	97.84	10.33-13.88	518.4	4.8	4.0	445	50	
				25.50-46.76						

1	2	3	4	5	6	7	8	9	10	11.
16.	Ratunja	Saila	154.85	154.84	91.44-137.76	21.6	4.42	13.2	4010	1730
17.	Elana	"	163.07	163.07	14.63-24.08	1226.7	4.31	6.26	1470	375
					30.48-44.20					
18.	Keshwana	"	161.54	151.48	43.59-48.16	1497.6	4.33	7.20	760	170
					51.57-55.47					
					58.82-62.18					
					62.69-72.85					
					76.81-81.99					
19.	Degaon	Jalore	78-94	71.02	17.83-30.66	944	5.34	7.27	1900	730
20.	Dudsi-I	"	90.83	88.70	34.83-83.10	-	-	-	-	-
21.	-do- II	"	74.68	74.68	-	-	-	-	-	-
22.	Santhu	"	68.58	44.2	9.10-24.34	972	3.34	8.00	1010	355
23.	Nun	"	104.50	91.22	31.04-41.10	432	7.71	7.80	1130	300
					25.60-38.71					
					41.94-80.16					
					81.69-86.89					
24.	Bakra	"	127.10	121.31	5.49-20.74	1530	5.12	3.86	2284	630
					64.63-112.58					
25.	Charau	Saila	221.89	-	27.43-33.67	1090.8	5.76	6.40	4960	2720
					64.30-70.40					
					85.87-98.27					
26.	Meghalwa	"	205.43	195.87	29.07-58.12	626.4	10.92	2.03	1960	570
					67.14-79.08					
27.	Golia	"	124.67	-	23.14-41.60	212.88	5.18	7.00	1100	145
28.	Surana	"	91.74	-	18.44-38.25	2613	4.41	6.33	550	80
29.	Tilora	"	121.31	-	16.64-36.50	810	5.24	6.29	900	195
					61.20-73.86					
30.	Dadhal	"	220.67	-	20.73-40.23	2096	-	6.96	690	115
					42.98-54.25					
					73.13-78.94					
					84.73-89.61					
					95.40-99.68					
					107.29-120.09					
					141.42-146.91					
					155.04-160.63					
					170.69-180.44					

1	2	3	4	5	6	7	8	9	10	11.
31.	Bagora	Saila	195.07	-	21.64-43.83 53.10-64.56 70.35-79.49	3336.4	2.61	3.98	1690	390
32.	Bhimmal	Bhimmal	45.78	31.70	24.78-43.03	-	-	-	-	-
33.	Bhagalbhim,	"	42.70	28.65	-	-	-	-	-	-
34.	Jujani	"	216.10	-	62.36-70.26 108.74-114.83 122.00-140.92 163.93-176.15 180.11-184.61 196.06-206.71	784.0	23.99	6.62	4660	2090
35.	Sewari	"	210.62	-	-	-	-	-	-	-
36.	Kura	Sanchoore	199.64	-	69.80-80.16 95.40-108.20 126.49-139.04 159.16-178.36 185.62-191.34	184.0	26.78	16.79	1130	305
37.	Arnai	Bhimmal	222.49	-	61.6-73.9 95.4-104.8 122.6-134.8 127.9-140.9 152.9-159.2 177.1-180.6	217.6	23.90	5.98	7674	3900
38.	Dhumaria	"	199.00	-	4.00-53.3	-	-	-	4996	2956
39.	Dangra	Saila	167.50	167.5	-	1935.5	-	-	-	-
40.	Batera	"	153.00	-	91.4-97.5 118.8-126.4 136.5-143.8	-	-	-	5088 5848 1484	2150 2850 550
41.	Posana	"	182.5	-	26.9 45.01 150	1987.2	-	-	890 614 2234	130 80 860
42.	Thuran	"	182.8	-	52.4-54.8 88.3-92.3 111.2-112.7 146.3-150.5 153.3-160.6	-	-	-	5414 3824 2676 4516 -	2960 2100 1100 2100 -

1	2	3	4	5	6	7	8	9	10	11
43.	Dangra-II	Saila	167.6	167.6	9.31	1935.3	-	-	352	45
					40.88				696	195
					84.51				1690	710
					101.2				3760	1890
					121.4				10628	5570
					137.3				14540	8500

APPENDIX-3

DETAILS OF TUBEWELLS CONSTRUCTED UNDER EXPLOITATION PROGRAMME
(C.T.S. AND D.P.A.P.) BY GROUND WATER DEPARTMENT (PERIOD-
YEAR 1974 - 1982)

S. No.	Village name.	Owner's name	Total depth in metres.	Aquifer tapped.	Discharge in cubic meter/day.	Remarks
1.	2.	3.	4.	5.	6.	7.
A. ALLUVIUM (Successful)						
1.	<u>AHORE</u>	Shri Hazarilal	76	Older	648	
2.	<u>BHADVI</u>	" Anaram S/O Gangeoji	123	"	1080	
3.		" Ganesh S/o Lakha	125	"	1080	
4.		" Roopa, Kana, Sajiya	123.33	"	1080	
5.	<u>BHAGLI</u>	" Dungarsingh	120	"	864	
6.		" Shivnathsingh	130	"	864	
7.	<u>BHINMAL CHARLI</u>	" Anilkumar Bishnoi	76	Younger alluvium.	864	
8.		" Shaitansingh	51.80	Older alluvium.	720	
9.		" Asharam	57.9	"	864	
10.		" Durgaram	41.8	"	864	
11.		" Hanumanprasad	66	"	612	
12.		" Devram	49	"	576	
13.		" Megraj	42	"	720	
14.		" Hanuwantsingh	52.43	"	720	
15.	<u>DESU</u>	" Okhsingh	60	"	864	
16.	<u>DHANWARA</u>	" Mohabatsingh	122	Younger alluvium	1152	
17.	<u>GODAN</u>	" Alikhan	98	"	720	
18.	<u>GURA INDER PURA</u>	" Gajaisingh	63.6	"	864	
19.	<u>MANDHAR</u>	" Khemsingh S/o Jaharsingh	70.1	"	1152	
20.	<u>KUDA</u>	" Asraf	120	Older alluvium	612	
21.		" Suja Mohammad	121.95	"	576	
22.		" Ratnaram	122	"	684	
23.	<u>MADRI</u>	" Gehrilal Mathur	47.85	Younger alluvium	540	
24.	<u>NIMBAWAS</u>	" Ajitsingh S/o Motisingh	125	"	1152	
25.		" Sohan Singh S/o Tej Singh	121.9	"	972	
26.		" Ajit singh S/o Rawatsingh	125	"	972	

1	2	3	4	5	6	7
27.		Sh. Vela S/o Tikama	123	Younger	1152	
				alluvium		
28.	NOHRA	"Hanwantsingh s/o	121.68	Older	864	
		Khemsingh		alluvium		
29.		"Anoop Singh S/o	121.68	Younger	648	
		Dansingh		alluvium		
30.		"Balwantsingh S/o	121.68	"	864	
		Roopaji.				
31.		"Nadsingh S/o	121.63	"	432	
		Chimansingh.				
32.	<u>PHAGOTRA</u>	"Hukamsingh S/o	121.9	Older	864	
		Sohansingh.		alluvium.		
33.		" Panna, Sattar, Sajjan	128.5	"	1152	
34.		" Peersingh S/o	130	"	864	
		Heersingh				
35.		" Sawa S/o Jora	133	"	1152	
36.		" Pannesingh S/o	121.92	"	1152	
		Sohansingh.				
37.		" Rakha S/o Kana	127	"	1152	
38.	<u>PUNASA</u>	" Vijay singh	121.68	Older	1440	
				alluvium	648	
39.		" Danaram S/o	122	"	1440	
		Dhularam				
40.		" Heeralal S/o	130	"	1440	
		Punamchand				
41.		" Moolsingh S/o	121.68	"	1440	
42.		Jogsingh				
43.		" Haringa S/o Jodha	123.44	"	1440	
		" Hukamsingh S/o	123	"	1584	
		Bhavsingh				
44.		" Naga, Tola S/o	123	"	1440	
		Meghraj				
45.		" Sona S/o Chaina	99.14	"	1440	
46.		" Rajuram S/o Ganesh	121.68	"	1440	
47.		" Mala, Sona, Prema	123.44	"	1728	
		S/o Lumba				
48.	<u>SEWARA</u>	" Khetrām	121.3	"	864	
49.		" Ukha S/o Dharma	121.0	"	720	
50.	<u>UMEDPURA</u>	"xChandanmal	72	Younger	720	
				alluvium		
51.	<u>VELDHARA</u>	" Navalsingh	44	Older	432	
				alluvium		
<u>ALLUVIUM (Failure)</u>						
1.	<u>BHADRAJUN</u>	" Chhogaram	48.7	"	57	Due to low di-
2.	<u>CHARLI</u>	" Ratilal	53	"	Meag-	schARGE.
3.	<u>DAYALPURA</u>	" Chunnilal	46	Younger	288	-do-
				alluvium.		-do-

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1	2	3	4	5	6	7
4.	<u>DELWARA</u>	Shri Hazarimal	42.26	Older alluvium.	144	Due to low discharge.
5.	<u>DESU</u>	" Shamboosingh	60	"	144	"
6.	<u>JALORE</u>	" Anilkumar	38	"	dry	"
7.	<u>JALERA KHURD</u>	"Tejaram	50	"	Meagre	"
8.	<u>JHACK</u>	" Daulatsingh	30	"	"	"
9.	<u>KARWARA</u>	"Mafatlal	52.8	"	"	"
10.	<u>LETA</u>	"Ramchhod Bharti	82	"	"	"
11.	<u>MEDA</u>	"Lakma Sarpanch	60	Younger alluvium.	dry	"
12.		"Maga/Lumba	68	"	360	"
13.		" Lama/Kana	52	"	288	"
14.	<u>MODRAN</u>	"Kesharsingh	100	"	432	Due to low salinity.
15.	<u>NIMBODA</u>	"Ajai S/o Vouka	123.44	Older alluvium.	288	Due to low discharge.
16.	<u>NOHRA</u>	"Jawansingh S/o Dansingh.	121.28	"	72	"
17.	<u>PAL</u>	"Modraram	60	"	Meagre	"
18.		"Ajaram	62.5	"	"	"
19.	<u>PANCHOTA</u>	"Ramjitsingh	74	"	"	"
20.		"Khetsingh	38	"	"	"
21.	<u>VALVARA</u>	"Damodarlal	33	"	129.6	"
22.		Smt. Sahebkunwar	44	"	129.6	"
23.		Shri Udaisingh	33	"	144	"
24.		"Shamboo singh	42	"	180	"
25.		Jawansingh	38	"	288	"
26.		"Rawala & Party	28	"	360	"
27.		" Damodarlal	49	"	Dry	"
28.		"Sultansingh	44	"	"	"
29.		"Bheeksingh	30	"	"	"
B. <u>CRYSTALLINE</u> (Successful)						
1.	<u>GOLWARA</u>	Shri Pratapa, Ragga	43	Granite	288	
2.	<u>HARJI</u>	"Lalchand	64	"	432	
3.	<u>KAGMALA</u>	"Hema/Jassa	26.2	"	432	
4.		"Vagta/Chela	25.2	"	432	
5.		"Lakha/Harji	32	"	432	
6.		"Karima/Teju	44	"	432	
7.	<u>KHANPUR</u>	" Mohanlal	45	"	216	
8.	<u>MANDHAR</u>	"Chogsingh	38.7	"	180	
9.	<u>PACLI</u>	"Pratapram	56	"	129.6	
10.		"Jeewaram	38.76	"	360	
11.		"Bhoopsingh	41.15	"	288	
12.		"Dharmadana	57	"	288	
13.		"Akham	50	"	144	

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1	2	3	4	5	6	7
14.	<u>RAMA</u>	Shri Amitkanwar	60	Alluvium	252	
				+ Granite		
15.		" Moolsingh	50	"	475	
16.		" Chodharam	50	"	475	

CRYSTALLINE (Failure)

1.	<u>BHARUDI</u>	Shri Choga/Bhura	25.5	Granite	Dry Dueto low discharge.	
2.	<u>GOLWARA</u>	" Fagloo	43	"	"	"
3.	<u>KANDA DEVAL</u>	" Nathusingh	47.25	"	7.2	"
4.	<u>MANDHAR</u>	"Nagsingh	56	"	Meagre	"
5.	<u>KHANPUR</u>	"Bhimsingh	55	"	"	"
6.	<u>PUNAK KALLA</u>	"Harjiram	37.5	"	Dry	"
7.		" Heeralal	30.5	"	7.2	"
8.	<u>RAMA</u>	" Prabhusingh	60	Alluvium	57.6	"
				+ Granite		
9.	<u>THOOR</u>	"Jesaram	38	Granite	57.6	"
10.		" Badarsingh	57.25	"	36	"

APPENDIX-4 DETAILS OF TUBE WELLS DRILLING FOR OTHER AGENCIES
(PERIOD 1972-73 TO 1980-81)

S.No.	Name of village.	Panchayat Samiti	Year of construction.	Depth drilled in metres.	Pipe assembly lowered in metres.	Static water level in mtrs.	Draw down in metres.	Discharge in cubic metres/day.
1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	Meghlwa	Saila	1972-73	78.0	-	18.29	4.57	350
2.	Jiwana	"	"	75.0	-	-	-	-
3.	Sirana	"	"	70.0	-	16.76	4.57	310
4.	Ahore	Ahore	"	70.10	-	14.63	-	490
5.	Shankhawali	"	"	70.0	-	21.34	7.62	315
6.	Rama	"	"	80.0	-	6.09	9.14	350
7.	Bhuti	"	"	43.0	-	-	-	-
8.	Bhagli-I	Jalore	"	80	-	-	-	-
9.	Bhagli-II	"	"	100.0	-	33.53	15.24	210
10.	Bhagalsepta Bhinnal	"	1973-74	75.0	61.0	7.92	4.87	530
11.	Harji	Ahore	"	54	45	-	-	-
12.	Dadhal	Saila	1977-78	115	100	5.5	15	700
13.	Sankad	Sanchore	"	60	-	-	-	-
14.	Ahore	Ahore	"	65	62.5	8	8.5	420
15.	Sankad	Sanchore	"	66	-	29.57	13.77	230
16.	Tikhi	Saila	1978-79	76	70.0	8	-	-
17.	Paharpur	"	"	80	69.0	7.40	4	560
18.	Sankad-I	Sanchore	"	105	101	28	3	280
19.	Sankad-II	"	"	100	98	28	4	315
20.	Surawa	"	"	100	97	5.80	2	700

1	2	3	4	5	6	7	8	9
21.	Jakhal	Sanchoe	1978-79	100	97	13	2	35
22.	Mokhpura	"	"	60	-	13 abandoned		
23.	Akoli	Jalore	"	50	50.5	9	-	350
24.	Guda Balo-							
	tan.	Ahore	"	50	50.0	8.5	-	560
25.	Thanwala	Jalore	"	45	39	8.5	-	630
26.	Mithri-I	Jalore	"	102	87	18	-	280
27.	Mithri-II	Jalore	"	98	86	18	-	280
28.	Bhagii	"	"	96	96	23	-	350
29.	Mokhpura	Sanchoe	1980-81	75	71	12.5	6	350
30.	Dumariya	Bhimmal	"	90	68.59	18	-	630
31.	Ahore	Ahore	"	48	40	13	8	350
32.	Dodiyali	Ahore	"	12.75	-	8.20Abandoned		
33.	Silu-I	Sanchoe	"	25	24	6	-	91
34.	Silu-II	Sanchoe	"	30	27.5	6	-	210
35.	Hariyali	Sanchoe	"	35	31	9.30	3	630
36.	Akoli (Del-	Jalore	"	38	32	14.0	-	280
	dari)							

RECORD OF WATER LEVELS (IN METRES) AS OBSERVED IN KEY WELLS OF JALORE DISTRICT (PERIOD 1976-1982)

S. Name of Code		DEPTH TO WATER (IN METRES) B.G.L.																					
No.	village. No.	1976			1977			1978			1979			1980			1981			1982			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.		
AHORE BLOCK:																							
1.	1.	13.40	14.89	13.97	13.95	14.65	14.30	13.75	16.13	16.47	15.65	17.45	18.25	21.25	22.25	21.75	22.25	25.25	22.10				
2.	2.	18.0	16.90	-	17.60	15.78	15.86	16.32	17.0	17.34	17.60	12.17	12.76	13.42	14.08	15.06	14.38	15.80	16.52	16.80			
3.	3.	1.65	-	-	2.80	1.60	1.74	2.10	2.45	2.21	2.05	1.65	1.39	1.40	2.68	6.00	3.79	4.55	5.57	6.00			
(NACHLI)																							
4.	4.	2.40	2.30	2.56	-	1.61	2.20	2.44	2.50	2.91	2.91	0.98	1.53	1.77	2.03	2.47	2.47	2.70	4.00	2.97			
5.	5.	5.10	-	-	12.00	4.32	-	6.00	6.10	7.90	7.47	3.79	5.25	7.10	7.58	14.70	19.10	6.60	11.80	14.80			
KI DHANI																							
6.	6.	7.05	6.75	7.15	7.45	6.92	8.82	8.45	8.25	9.65	10.25	9.26	10.72	10.95	10.55	12.70	14.07	14.75	15.35	15.75			
7.	7.	2.50	3.43	-	4.15	2.49	4.66	-	4.40	7.47	5.80	1.55	2.59	3.00	3.36	7.70	5.81	5.60	8.75	8.02			
8.	8.	4.45	6.00	-	6.60	3.60	7.35	6.90	5.55	8.40	6.92	3.40	5.80	5.95	6.20	14.74	12.30	8.30	14.00	11.40			
9.	9.	6.15	7.90	8.54	7.00	6.01	8.55	8.80	8.00	9.80	10.20	6.00	6.90	7.70	9.65	11.40	9.18	11.20	13.40	15.26			
10.	10.	3.50	3.50	-	7.80	4.20	3.64	4.92	4.90	4.56	5.00	1.82	2.44	3.64	3.88	4.73	5.10	5.32	8.60	7.15			
11.	11.	3.80	3.52	-	4.85	3.74	-	5.90	5.50	8.50	7.39	5.66	7.35	7.16	7.11	10.20	9.25	10.06	12.34	11.40			
12.	12.	6.65	6.38	7.85	6.90	6.60	11.50	9.00	10.00	15.70	12.74	10.55	9.80	6.00	14.20	21.00	21.00	20.50	20.30	18.36			
13.	13.	-	-	-	-	-	-	-	-	-	9.30	6.92	7.19	8.68	10.90	14.06	15.06	15.06	15.06	15.06			
14.	14.	4.80	-	-	5.80	6.70	-	7.70	7.20	7.70	7.50	6.00	6.95	7.69	8.00	10.70	12.20	13.35	14.20	14.20			
15.	15.	5.40	-	-	-	-	-	5.00	4.60	6.67	6.36	3.41	4.85	5.03	5.50	8.50	6.62	7.95	10.40	9.30			
16.	16.	6.90	-	-	11.45	10.32	-	11.25	10.80	13.09	12.12	5.72	9.65	9.61	9.83	13.66	11.91	11.75	13.95	13.23			
17.	17.	5.80	6.05	7.78	7.04	5.47	6.47	6.80	-	-	7.85	3.77	5.37	5.46	5.63	8.55	8.51	5.10	9.70	10.30			
18.	18.	8.35	8.59	-	8.20	6.39	-	8.45	10.30	-	9.83	6.77	16.45	8.09	8.03	12.78	10.93	16.00	15.20	13.40			
19.	19.	5.35	5.00	-	-	-	-	5.81	5.40	6.87	6.00	3.80	5.46	6.78	8.04	12.02	10.10	11.10	12.10	10.25			
20.	20.	6.80	6.40	-	8.90	6.50	-	9.17	8.00	11.14	9.88	6.76	9.70	9.33	9.04	14.70	12.11	10.20	17.20	13.52			
21.	21.	3.20	4.20	-	4.44	2.60	3.30	4.60	3.10	4.76	4.86	2.97	3.39	3.80	4.02	6.33	5.56	5.80	6.40	6.55			
22.	22.	1.85	-	-	-	-	-	3.70	2.65	3.26	4.05	1.63	2.28	3.33	3.85	5.05	5.19	8.70	8.70	7.05			
23.	23.	8.65	9.80	-	3.86	3.50	4.50	5.17	4.05	8.60	6.24	5.85	7.40	4.00	6.97	14.60	6.30	11.18	12.10	11.50			
24.	24.	7.30	8.40	-	7.98	6.62	8.29	9.00	7.40	9.10	8.90	3.93	4.68	5.62	6.30	6.40	10.40	7.50	9.90	9.50			
25.	25.	1.85	5.50	-	-	-	3.06	3.15	1.58	3.60	3.36	1.18	2.87	3.25	2.80	3.40	4.53	3.90	6.40	4.85			
KI DHANI																							

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
26. SHIMBHALI	26	9.45	8.55	12.94	11.94	7.48	12.10	12.00	9.00	13.40	13.41	7.10	14.50	10.62	13.50	19.27	16.50	9.60	18.00	19.20		
27. WEDPURA	27	6.35	6.75	6.95	5.87	7.30	9.71	9.20	11.15	10.45	11.11	6.87	9.45	10.40	11.47	13.45	15.37	12.95	16.95	16.95		
BEHMAI BLOCK:																						
28. B. G. S.	28	10.12	10.14	-	-	-	-	10.15	9.80	10.85	10.56	10.00	10.30	10.60	10.76	11.35	11.24	11.37	12.14	12.15	12.24	12.79
29. B. G. S.	29	14.99	14.95	-	-	-	-	15.01	13.95	-	15.65	15.35	18.85	17.30	11.61	18.95	17.45	17.85	18.85	21.94	18.35	19.75
30. B. G. S.	30	15.49	15.45	-	-	-	-	15.20	13.05	14.04	14.83	14.40	-	13.85	17.00	18.41	17.00	17.29	19.30	19.05	19.15	20.46
31. B. G. S.	31	3.56	3.10	-	-	-	-	4.00	3.15	7.90	4.10	3.68	6.69	4.47	4.00	5.37	4.69	5.98	6.92	6.92	4.57	6.65
32. B. G. S.	32	34.90	34.95	-	-	-	-	34.77	34.60	-	34.60	34.50	34.50	34.42	34.48	34.60	33.37	34.65	Dry.	35.04	34.81	34.97
33. B. G. S.	33	3.75	3.16	-	-	-	-	3.75	3.20	3.60	4.00	3.73	3.95	4.30	3.59	4.22	4.85	4.78	5.15	6.61	5.75	6.24
34. B. G. S.	34	12.00	7.70	-	-	-	-	10.10	7.37	9.15	9.63	8.70	10.37	10.77	11.24	12.40	12.76	13.00	14.00	14.44	Dry.	Dry.
35. B. G. S.	35	-	-	-	-	-	-	-	-	-	3.88	3.50	3.74	4.12	3.85	4.05	5.18	4.33	4.30	4.64	4.79	4.54
36. B. G. S.	36	8.91	7.65	-	-	-	-	7.75	7.05	8.70	6.90	6.80	6.90	8.05	7.85	7.90	8.41	8.80	8.86	9.45	9.38	9.56
37. B. G. S.	37	9.10	8.05	-	-	-	-	8.85	9.40	8.25	9.68	9.30	9.31	9.99	9.17	9.70	10.10	9.99	10.75	11.08	10.78	12.77
38. B. G. S.	38	8.78	8.93	-	-	-	-	8.70	9.37	8.20	8.00	7.80	8.00	8.51	8.34	8.56	9.00	8.80	8.84	9.94	8.55	9.04
39. B. G. S.	39	8.15	8.11	-	-	-	-	8.30	8.17	8.35	8.45	8.35	8.60	8.70	8.60	8.71	8.80	8.93	9.25	9.57	8.85	9.96
40. B. G. S.	40	18.10	18.00	-	-	-	-	18.45	18.90	20.10	19.36	18.95	19.90	19.32	19.20	20.65	-	-	Dry.	Dry.	Dry.	Dry.
41. B. G. S.	41	1.04	1.65	-	-	-	-	6.25	4.65	4.60	6.25	6.15	6.60	7.15	6.51	7.20	7.50	8.50	8.50	10.59	8.80	12.53
42. B. G. S.	42	7.54	1.70	-	-	-	-	8.70	5.45	-	10.30	-	-	10.10	8.42	9.20	13.90	13.90	9.70	10.20	9.40	10.70
43. B. G. S.	43	2.99	2.09	-	-	-	-	-	-	-	3.65	3.18	3.48	2.30	2.72	2.85	3.55	3.75	3.72	3.90	3.75	3.89
44. B. G. S.	44	5.56	5.40	-	-	-	-	5.45	4.92	5.20	3.20	2.40	3.03	2.90	2.67	3.37	3.90	3.93	4.02	4.47	4.23	4.42
45. B. G. S.	45	11.64	10.40	-	-	-	-	-	-	-	5.55	4.25	4.45	5.27	5.27	5.42	4.85	4.80	5.05	5.66	5.42	5.83
46. B. G. S.	46	18.95	18.91	-	-	-	-	10.85	9.70	8.85	9.25	9.05	9.25	9.40	10.44	11.31	11.71	12.52	13.62	14.14	14.92	15.68
47. B. G. S.	47	18.95	18.91	-	-	-	-	19.00	18.70	18.80	18.85	18.60	18.87	18.61	18.39	18.76	18.61	18.53	19.00	19.19	19.00	19.42
48. B. G. S.	48	18.45	18.44	-	-	-	-	18.80	18.90	19.60	18.95	18.33	18.35	18.22	17.65	18.30	18.22	18.30	18.60	19.12	18.79	20.00
49. B. G. S.	49	10.11	9.43	-	-	-	-	10.35	10.00	11.75	8.70	8.40	8.65	10.05	9.90	10.27	10.60	10.32	10.47	10.70	10.32	10.77
50. B. G. S.	50	8.20	7.90	-	-	-	-	8.20	7.90	9.60	7.90	7.85	8.29	8.20	7.90	8.20	8.25	8.61	8.87	8.94	9.08	9.81
51. B. G. S.	51	8.40	7.99	-	-	-	-	8.40	7.99	8.35	7.45	7.35	7.60	8.36	8.16	8.40	8.05	8.28	8.35	8.43	8.39	8.67
52. B. G. S.	52	8.53	8.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53. B. G. S.	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
JALORE BLOCK:																					
54.	AKOLI	54	-	-	-	-	-	7.07	7.10	4.45	-	7.50	6.40	8.42	8.50	7.63	9.65	10.85	10.07	11.96	11.40
55.	ABHAWARA	55	-	-	-	-	-	-	3.72	10.30	-	12.20	9.80	12.60	-	-	-	-	-	-	-
56.	BAGRA	56	-	-	-	-	-	6.36	6.25	5.85	-	6.80	8.80	8.70	8.10	8.20	8.50	9.30	9.50	11.38	10.25
57.	BAKRA ROAD	57	-	-	-	-	-	-	8.60	8.62	-	9.20	8.70	9.70	10.10	9.30	10.50	10.70	10.98	11.90	11.95
58.	BHAGLI	58	-	24.75	24.86	24.52	24.50	24.19	24.50	24.45	27.27	24.24	23.96	24.00	24.02	23.82	23.82	23.80	23.80	24.07	24.07
SINDHAN																					
59.	BILBAR	59	-	-	-	-	-	5.75	5.80	5.70	-	6.94	7.90	9.19	8.17	8.50	16.30	10.20	-	11.41	11.40
60.	BOKRA	60	-	13.10	-	-	14.00	13.20	-	14.70	11.80	17.75	17.88	16.70	16.80	15.55	16.80	20.36	20.00	19.70	21.40
61.	BHANPURA	61	-	-	-	-	-	7.33	4.35	3.40	-	4.12	3.30	4.25	5.25	3.94	4.40	-	-	-	-
62.	GOHAN	62	-	9.00	10.15	9.31	8.75	11.35	11.20	10.00	11.50	12.77	11.79	13.25	13.50	14.00	15.22	15.00	16.85	18.41	18.50
63.	JALORE	63	-	16.80	16.60	17.00	15.95	15.97	15.85	12.80	13.60	17.90	16.60	19.10	18.30	18.40	20.37	20.60	21.70	21.20	21.60
64.	JALORE	64	-	-	-	-	-	-	-	-	-	16.20	11.62	11.88	13.08	13.67	16.13	17.10	18.70	18.10	18.17
65.	MAYLAWAS	65	-	-	-	-	-	4.81	4.95	4.55	-	6.49	5.50	6.90	7.90	8.30	9.95	9.60	9.07	9.87	9.60
66.	MERAPURA	66	-	15.20	-	7.09	7.02	9.30	8.95	9.63	10.76	8.10	10.90	9.84	10.00	9.20	11.20	14.00	15.25	14.80	15.00
67.	MESHUPURA	67	-	4.85	-	4.39	3.74	4.85	4.80	5.50	6.35	5.52	4.10	6.15	5.67	5.07	7.80	6.69	9.72	8.80	8.40
68.	MITHRI	68	-	12.20	13.65	12.37	9.30	13.50	14.00	14.35	17.00	16.30	13.04	16.02	14.58	14.56	18.34	18.15	18.10	19.70	18.60
69.	RAJANWARI	69	-	16.80	-	-	-	12.00	8.90	8.20	9.31	9.35	12.60	9.46	10.90	11.90	13.95	10.90	10.15	10.20	11.30
70.	REWAT	70	-	18.40	-	-	-	18.00	18.60	18.60	18.83	18.82	18.67	19.00	19.15	18.70	19.37	19.87	25.44	18.90	18.40
71.	SIXANA	71	-	-	-	-	-	5.65	5.30	4.35	-	5.10	4.70	5.50	6.98	4.82	6.00	5.65	5.75	7.34	6.70
72.	BAHADI	72	-	5.60	-	6.75	-	11.30	8.70	10.90	-	10.90	8.10	12.16	10.70	16.11	13.30	13.05	11.35	12.90	12.70
73.	BUGTON	73	-	8.35	-	4.50	-	7.46	5.40	-	-	7.70	3.87	8.33	10.20	9.30	14.90	9.75	10.30	6.82	7.35
74.	CHANDUR	74	-	-	-	5.60	4.80	8.10	7.80	4.80	-	6.90	9.80	9.80	8.65	6.68	9.75	10.45	7.33	9.20	10.30
75.	DEHVI KA	75	-	10.83	-	11.75	10.03	13.30	12.10	11.60	-	12.45	11.00	14.43	13.30	13.15	15.65	15.20	15.14	16.58	16.90
BEHA																					
76.	DEHNSA	76	-	12.40	-	12.52	12.10	12.52	12.85	12.10	-	13.08	12.80	12.90	12.90	13.52	14.90	14.80	15.01	16.18	16.00
77.	GOLANA	77	-	2.35	-	3.77	2.48	3.39	4.84	-	-	4.10	3.00	6.60	7.70	6.66	18.35	9.40	8.55	10.89	9.80
78.	OHAK	78	-	6.88	-	-	-	6.20	6.30	11.00	-	9.84	8.35	8.50	10.10	10.91	18.80	13.90	13.30	12.20	11.95
79.	JASWANTPURA	79	-	-	-	2.30	1.80	-	2.20	1.85	-	3.12	2.40	2.71	2.90	2.27	3.75	4.68	2.17	3.82	3.55
80.	KHELA	80	-	3.55	-	7.20	2.85	-	8.85	8.90	-	9.40	7.50	8.00	11.05	11.10	14.55	14.70	14.40	16.70	16.60
81.	KORITA	81	-	7.10	-	13.05	3.85	-	10.77	9.09	12.10	14.87	6.33	14.50	14.17	18.29	13.48	18.23	10.93	15.59	15.17

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
82.	MANDOLI	82	-	7.45	-	7.10	-	9.76	8.70	7.05	-	11.26	8.72	13.17	12.42	11.08	14.15	14.65	12.27	15.13	15.30
83.	MODRAN	83	-	7.25	-	8.27	7.39	9.79	7.80	8.30	-	9.00	8.32	9.37	8.15	9.64	10.90	Dry.	-	-	-
84.	MURTARA-	84	-	-	-	12.80	-	15.03	13.20	21.10	-	18.40	13.14	15.90	16.59	15.15	15.90	16.20	16.09	16.34	13.50
	SILLI																				
85.	PANSERI	85	-	2.80	-	3.65	1.67	-	3.48	2.59	3.15	3.22	3.32	3.55	3.85	4.10	4.00	4.83	4.54	4.68	4.80
86.	PAOLI	86	-	-	-	6.30	3.00	7.05	6.85	5.05	-	7.10	5.20	8.50	9.60	9.45	10.90	10.80	7.77	10.99	8.90
87.	PUNAK KALA	87	-	2.40	-	3.01	3.00	3.80	4.40	6.05	-	5.40	6.75	7.91	5.90	4.76	6.05	6.90	6.10	7.44	7.30
88.	TATOL	88	-	12.03	-	11.90	11.40	-	11.95	12.50	-	14.20	14.25	16.95	14.92	15.98	18.50	18.35	19.35	20.25	19.85
*JASWANTHURA BLOCK																					
RANIWARA BLOCK:																					
89.	AJODAR	89	4.75	3.60	-	4.02	3.35	-	4.04	4.11	3.81	3.87	4.26	3.58	3.80	3.86	3.38	3.82	4.28	4.04	3.70
90.	ALRI	90	9.50	9.15	-	9.60	8.78	9.60	9.10	8.13	10.44	10.02	9.60	11.54	10.70	13.35	14.37	14.40	15.30	15.57	16.06
91.	BANAWARA	91	1.90	0.98	-	1.52	0.37	-	0.82	0.40	0.57	1.06	0.74	1.10	1.27	1.90	2.40	2.26	2.36	2.50	2.70
92.	BARETHA	92	5.62	3.78	-	-	-	5.38	6.25	5.30	6.55	7.54	4.75	6.15	7.55	8.07	9.07	9.62	8.51	8.46	8.52
93.	CHATWARA	93	8.13	7.54	-	8.25	6.83	-	7.85	7.38	7.50	8.02	7.73	8.90	9.19	8.59	9.31	10.28	8.99	9.84	9.98
94.	DADOKI	94	3.68	2.68	-	-	-	-	3.15	2.94	3.01	6.17	6.10	3.40	3.60	4.57	4.99	5.40	5.74	5.80	6.22
95.	DHANOL	95	16.01	15.68	-	-	13.25	-	13.85	13.05	13.55	13.95	14.00	14.35	14.88	14.57	15.04	15.50	9.49	9.55	9.75
96.	DHANWARA	96	15.00	14.60	-	-	13.42	12.45	13.07	11.70	12.90	13.52	13.35	13.60	13.85	14.00	15.00	15.55	15.87	15.50	16.99
97.	DIGAN	97	15.10	14.51	-	-	-	-	45.00	39.36	44.75	49.42	39.30	46.37	47.50	46.07	46.24	46.58	39.69	42.08	39.51
98.	FATEHPUR	98	8.35	6.46	-	8.18	9.63	6.95	8.35	6.46	8.05	8.22	8.45	10.65	5.77	10.80	10.95	11.05	9.99	11.30	11.05
MAREWARA																					
99.	GANG	99	13.35	13.02	-	-	10.75	-	12.75	10.95	12.65	13.16	12.42	12.75	13.30	12.94	13.05	13.25	14.55	15.38	13.71
100.	GOLWARA	100	3.52	2.35	-	3.95	1.95	3.15	3.80	3.25	3.70	4.12	3.95	4.00	7.30	7.16	8.79	9.00	8.02	8.88	8.56
101.	PURSHWARA	101	26.30	26.76	-	-	24.90	-	23.80	23.20	23.50	24.11	24.27	24.00	24.27	25.75	26.29	26.50	24.70	24.85	24.72
102.	SHARWARA	102	14.26	14.55	-	15.30	13.92	-	13.90	14.70	14.00	14.30	15.78	15.00	15.40	16.40	16.30	16.68	17.05	16.47	17.03
103.	SHIGAL	103	-	3.82	-	5.60	2.46	4.30	5.00	4.30	5.10	6.17	6.10	6.96	7.28	7.70	7.40	10.13	9.67	10.10	9.80
104.	WARDA	104	-	-	-	-	-	-	8.65	7.85	8.55	10.63	9.25	11.65	11.48	10.55	13.07	13.23	12.40	13.85	12.89
105.	KORWA	105	25.35	25.15	-	25.08	24.70	-	24.77	24.58	24.54	24.60	24.39	24.51	24.52	24.53	24.53	24.58	24.52	24.63	24.69
106.	PAHANWARA	106	5.49	4.58	-	6.55	4.32	5.25	6.15	6.05	6.40	8.77	7.20	10.70	11.20	13.20	14.20	15.20	14.89	14.67	14.67
107.	MAREWARA	107	10.35	10.15	-	-	-	-	9.60	9.74	10.10	10.77	10.35	10.60	11.05	10.51	10.60	11.41	10.11	10.34	11.46
108.	PAL	108	16.08	16.17	-	16.55	14.15	-	15.27	15.18	15.42	15.60	15.74	15.95	16.11	16.35	16.54	16.97	16.85	16.08	17.10

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
109.	RAMPURA	109	2.41	1.52	-	1.75	1.60	-	1.70	1.60	1.72	1.82	1.73	1.70	1.81	1.87	1.90	2.10	1.80	2.18	2.21
110.	RANIWARA	110	-	-	-	-	2.14	6.95	3.70	2.83	3.45	3.81	3.78	4.73	4.80	4.70	5.40	5.74	5.69	6.48	6.87
111.	RATANPURA	111	6.40	6.07	-	-	4.25	-	6.00	6.08	6.50	6.60	7.00	7.26	7.62	7.51	7.60	8.00	8.35	8.27	38.48
112.	ROPSI	112	5.60	4.56	-	-	-	-	6.62	5.11	6.60	5.70	4.46	5.60	5.68	6.03	8.56	7.48	7.75	8.04	7.67
113.	RORA	113	5.30	4.95	-	4.43	4.25	-	3.65	4.45	4.15	4.32	4.15	5.51	4.37	5.60	4.88	5.73	4.35	6.51	6.15
114.	SENARA	114	31.1531.73	-	-	31.5231.40	40	-	31.2030.7030.36	30.2730.1930.56	30.3030.3530.76	30.3030.3530.76	30.3030.3530.76	30.3030.3530.76	30.3030.3530.76	30.3030.3530.76	30.3030.3530.76	30.7830.8031.07	30.75	30.75	30.75
115.	VANDAR	115	9.48	8.30	-	10.55	6.92	-	11.14	9.75	9.85	10.15	9.15	9.65	10.5511.0512.05	12.4311.20	9.85	12.4311.20	9.85	9.84	
SANCHORE BLOCK:																					
116.	ACHALPURA	116	7.70	7.65	-	-	6.50	-	6.60	6.40	6.70	6.65	7.04	7.29	7.35	7.22	7.58	7.59	7.27	7.31	7.55
117.	AGDAWA	117	10.5710.08	-	-	-	6.9510.65	-	9.8010.0810.28	10.5810.2610.06	10.1710.2710.30	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.5310.5910.50	10.65
118.	AMLI	118	3.55	3.45	-	-	2.65	-	3.33	3.50	3.60	3.73	3.74	3.82	-	-	-	3.25	3.09	3.08	3.31
119.	ANKHOL	119	2.66	-	-	-	-	-	2.92	2.45	2.59	2.80	2.62	2.75	3.11	3.07	2.97	2.63	2.97	2.97	2.97
120.	ARNAI	120	-	-	-	-	22.70	-	25.3024.6124.40	24.7024.8925.10	25.5625.8625.84	26.3025.9125.33	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	
121.	ARWA	121	-	-	-	-	4.35	-	-	-	-	4.75	4.65	4.78	4.95	4.73	4.95	5.01	4.95	5.05	5.04
122.	BAWARLA	122	3.43	4.66	-	-	-	-	4.87	3.21	3.77	4.68	4.03	5.45	5.21	5.65	5.21	4.98	3.97	5.75	5.61
123.	BEADRUNA	123	11.9211.73	-	-	-	7.40	-	11.1511.0311.05	11.1511.3311.55	11.5611.6311.85	11.9111.9612.11	12.21	12.21	12.21	12.21	12.21	12.21	12.21	12.21	
124.	BEAWTRA	124	-	-	-	-	-	-	2.35	2.50	2.55	2.52	31	31	2.38	2.71	2.45	2.64	2.74	3.02	-
125.	BINROL	125	-	-	-	-	-	-	13.3413.0013.48	13.4013.3913.50	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.0113.6714.21	14.40
126.	BINROL	126	12.6512.50	-	-	-	12.10	-	12.1011.5011.90	12.0012.0812.31	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.3112.3012.51	12.82
KA GOLIA																					
127.	BERWA	127	4.68	4.65	-	-	3.83	-	3.75	3.68	3.75	4.05	3.90	4.53	4.45	4.25	4.60	5.01	4.50	4.71	4.91
128.	CHITALWANA	128	5.37	5.30	-	-	3.85	5.50	5.05	4.95	5.50	5.20	5.11	5.41	5.66	5.84	6.20	6.40	6.39	6.67	6.75
129.	CHOTAKODI	129	-	-	-	-	-	-	2.60	-	1.86	-	-	-	-	-	-	-	-	-	-
130.	DEWA	130	10.5010.40	-	-	-	8.76	-	9.08	8.95	9.24	9.27	9.30	9.38	9.40	9.50	9.50	9.89	9.74	6.89	9.90
131.	DEWANI GUDA	131	4.55	4.39	-	-	-	4.50	4.65	4.53	4.65	4.63	4.54	4.70	4.89	4.68	4.90	5.00	5.65	5.65	5.65
DEWA																					
132.	DEWANI	132	22.0521.95	-	-	-	20.95	-	20.6220.4120.40	20.0519.9520.20	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	19.0720.1320.00	18.87
133.	DUGAWA	133	9.18	9.00	-	-	-	-	1.60	0.91	1.10	1.45	1.65	2.05	2.15	3.07	3.23	3.93	3.59	3.00	4.24
134.	DUNGRI	134	25.1525.95	-	-	-	25.15	-	-	-	-	24.8024.7524.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.7624.8824.85	24.92
135.	GARDALI	135	14.9014.92	-	-	-	13.44	-	13.2013.6013.55	13.6213.6813.80	13.8713.9314.17	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.0514.0513.16	14.16

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
136.	HADETAR	136	16.95	16.98	-	-	-	-	16.43	14.87	15.43	15.00	14.81	15.23	15.15	15.08	15.73	15.78	15.11	15.74	15.59
137.	HOTIGACHON	137	-	-	-	-	-	-	4.05	4.25	5.08	5.17	4.70	5.22	5.17	5.15	5.68	5.78	5.55	5.77	5.81
138.	JANWI	138	-	-	-	-	-	-	2.10	1.70	1.77	2.07	-	2.40	2.50	2.28	2.15	2.21	2.13	1.37	3.99
139.	JHAB	139	2.69	2.02	-	-	-	2.12	2.05	2.60	2.30	2.84	4.03	2.47	3.04	3.24	3.03	3.00	3.57	3.36	3.50
140.	JODHAWAS	140	-	-	-	-	-	-	2.95	2.50	2.80	2.42	2.35	2.85	3.05	3.45	4.67	4.00	2.87	4.28	3.31
141.	KERIA	141	3.50	1.92	-	-	-	1.86	2.25	2.70	2.60	6.55	6.77	5.60	6.40	7.20	7.19	7.33	7.47	7.50	7.65
142.	KHARA	142	-	-	-	-	-	-	33.33	31.45	31.55	31.75	31.30	31.53	31.85	32.11	32.25	32.89	32.02	31.93	32.73
143.	KHEJDIYALI	143	-	-	-	-	-	-	2.60	-	2.95	1.85	-	-	-	-	-	-	-	-	-
144.	LALPUR	144	11.60	10.30	-	-	-	8.80	-	9.11	9.12	9.49	9.53	9.60	9.90	9.81	10.02	10.35	9.91	10.25	10.37
145.	MELAWAS	145	3.00	2.55	-	-	-	2.60	-	2.75	2.45	3.15	2.97	2.64	2.79	2.84	2.92	3.14	3.24	3.35	3.32
146.	NALDHRA	146	-	-	-	-	-	-	2.80	2.56	3.48	3.52	-	2.80	3.20	3.05	3.20	-	-	-	-
147.	NINBAU	147	11.26	10.76	-	-	-	10.14	10.95	10.82	10.50	11.50	11.02	13.39	11.65	11.75	11.49	11.70	11.79	11.30	12.20
148.	PATMEDA	148	-	-	-	-	-	-	17.10	16.84	16.79	16.65	16.56	16.72	16.61	16.52	16.80	16.83	18.40	16.93	16.86
149.	PLADAR	149	-	-	-	-	-	10.78	-	10.20	9.70	9.90	10.00	9.90	10.00	10.49	10.49	10.58	10.71	10.39	10.50
150.	RAMPURA	150	-	-	-	-	-	-	3.25	3.21	3.38	3.50	-	-	-	-	-	-	-	-	-
151.	RANGDAR	151	2.12	1.45	-	-	-	2.40	-	1.70	1.80	2.10	2.52	0.99	1.98	2.16	5.30	2.72	2.74	2.55	2.62
152.	SAKRIA KI DHANI	152	-	-	-	-	-	-	3.60	3.70	4.16	4.08	-	2.81	3.18	3.50	4.45	4.10	3.98	-	-
153.	SANGHORE	153	12.94	12.67	-	-	-	11.60	-	11.74	11.60	11.80	11.92	11.90	12.00	11.99	12.30	12.60	12.89	12.50	12.79
154.	SANGDAVA	154	5.25	5.20	-	-	-	4.07	-	4.30	4.50	4.70	4.57	4.95	4.32	5.20	5.30	5.38	5.24	5.29	5.09
155.	SANKAD	155	27.04	21.12	-	-	-	25.55	-	25.17	24.81	24.98	24.80	24.47	24.56	24.35	24.19	24.38	24.34	24.11	24.36
156.	SARNAU	156	27.73	27.65	-	-	-	26.28	-	25.62	25.18	24.94	24.84	24.68	24.61	24.47	24.34	24.29	24.30	24.12	24.11
157.	SHILU	157	-	-	-	-	-	-	-	8.50	8.25	8.90	8.50	8.45	8.55	8.75	9.25	10.05	10.25	10.15	11.75
158.	SEWARA	158	6.12	5.87	-	-	-	6.22	-	6.03	5.70	5.80	6.17	6.33	6.40	6.78	6.93	6.80	7.05	6.71	6.14
159.	SUNTRI	159	-	-	-	-	-	-	-	2.75	3.25	3.60	4.04	-	2.42	-	-	-	-	-	-
160.	SURWA	160	-	-	-	-	-	-	-	4.65	3.90	4.05	4.49	4.10	4.40	4.80	5.25	6.18	6.13	6.15	6.40
161.	TAPRI	161	-	-	-	-	-	-	-	1.00	1.20	2.15	1.97	-	2.23	1.68	1.98	2.64	2.69	2.05	2.45
162.	TENTROL	162	6.21	5.92	-	-	-	5.93	-	6.64	6.38	6.30	6.50	5.97	6.41	6.00	5.40	6.50	6.75	6.60	6.76
163.	VANKA	163	-	-	-	-	-	-	-	3.12	3.00	3.70	3.72	-	-	-	-	-	-	-	-
164.	VIROL	164	10.41	10.25	-	-	-	6.75	-	7.40	4.70	5.95	6.55	8.65	6.75	7.45	7.50	7.60	7.90	7.24	7.46

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
SAILA BLOCK:																					
165.	BAKRA	165	8.58	8.05	-	8.70	8.04	8.92	8.70	8.35	9.11	9.05	8.64	9.46	9.48	9.30	9.81	9.94	10.05	10.70	10.70
166.	BESALA	166	-	9.90	-	10.05	9.62	9.68	9.95	10.55	9.70	9.80	9.40	10.01	9.85	9.92	10.15	10.35	10.50	10.75	10.90
167.	BAUTRA	167	29.95	30.05	-	-	30.35	30.20	30.50	30.50	30.52	30.60	30.34	30.68	30.90	30.26	30.37	30.25	30.30	30.90	30.75
168.	BISANGARH	168	10.08	9.70	-	11.10	9.85	11.00	11.15	11.00	12.53	11.96	11.10	12.48	12.25	12.56	15.70	13.80	11.50	12.80	14.70
169.	CHARAU	169	8.18	7.47	-	-	7.63	8.35	8.50	8.30	8.69	8.55	8.35	9.00	9.02	9.18	9.25	9.69	9.70	10.16	10.80
170.	DABHAL	170	5.32	4.83	-	5.20	4.54	4.70	4.76	4.68	4.92	5.01	4.75	5.30	5.25	5.40	5.92	6.15	5.72	6.00	Dry.
171.	DEHIWA	171	27.60	27.55	-	27.75	27.48	27.50	27.70	27.41	27.53	27.48	27.35	27.76	27.60	27.78	27.80	27.81	27.85	28.15	27.04
172.	DETA	172	-	-	-	-	-	-	7.80	7.00	8.00	8.10	6.40	7.92	8.25	8.43	9.17	9.41	9.43	9.95	10.00
173.	GOL	173	5.33	4.55	-	4.85	4.15	5.35	5.90	5.85	7.05	6.25	5.43	5.75	6.46	6.90	7.57	8.26	8.15	8.60	8.70
174.	GOLIYA	174	9.90	9.90	-	9.80	9.52	10.14	10.30	10.15	10.41	10.34	10.05	10.45	10.47	10.60	11.30	11.27	10.95	12.60	11.60
175.	HARAU	175	7.00	6.92	-	7.05	6.58	7.15	7.00	6.93	7.19	7.18	7.45	7.45	7.37	7.53	8.05	8.11	8.25	8.05	8.71
176.	KHET LAVA	176	10.36	9.92	-	-	-	-	10.13	10.00	10.25	9.85	9.55	10.95	10.79	10.85	10.45	11.37	11.17	11.78	10.70
177.	KESWANA	177	7.53	-	-	7.55	7.00	7.54	8.10	8.00	8.37	8.20	7.76	8.80	8.56	9.10	10.00	11.00	10.25	12.00	12.20
178.	KUABER	178	19.15	-	-	-	-	-	25.63	25.10	25.20	25.60	26.05	26.10	25.60	26.00	26.50	26.10	27.05	27.35	26.60
179.	MEGALWA	179	9.29	8.85	-	9.45	9.25	-	9.95	8.75	10.15	9.91	9.66	10.27	10.20	10.57	10.60	10.61	10.55	10.05	11.09
180.	MOKNI	180	26.20	25.95	-	27.10	26.25	26.24	27.15	26.90	26.64	26.70	26.33	27.70	26.90	26.60	26.54	26.81	27.10	28.30	26.90
KHEDA																					
181.	OTHWARA	181	5.02	3.89	-	4.81	4.40	-	5.35	4.65	5.05	5.52	4.56	5.20	6.00	6.00	6.76	6.98	6.80	7.86	7.20
182.	PAPARPURA	182	10.04	9.27	-	11.07	9.65	12.80	11.50	11.00	13.22	12.35	10.30	12.98	14.00	18.20	16.00	18.00	8.40	20.50	20.80
183.	PANTHERI	183	-	9.75	-	11.95	11.75	11.55	12.15	11.55	12.15	12.15	11.85	12.20	12.23	12.25	12.60	12.64	12.70	13.10	13.15
184.	RATUNJA	184	5.38	5.25	-	5.72	5.20	5.65	5.95	5.65	6.02	6.04	5.43	5.95	6.05	6.16	5.69	5.90	6.80	-	-
185.	SANTHARA	185	5.28	3.48	-	6.25	4.13	6.50	7.30	6.60	6.52	7.42	5.87	5.68	6.40	8.50	9.07	10.22	11.95	11.50	12.90
186.	SALLA	186	6.65	6.00	-	-	6.12	7.15	7.25	6.65	7.39	7.57	6.70	7.38	7.72	8.02	8.70	8.95	8.80	8.80	9.60
187.	SALLA	187	-	-	-	-	-	-	-	-	-	6.60	5.52	6.30	6.68	7.00	8.65	Dry	Dry	Dry	Dry
188.	SURANA	188	15.15	15.05	-	14.95	14.68	14.60	14.70	14.63	14.75	14.70	14.78	15.00	15.00	15.05	15.49	15.32	15.21	15.43	15.58
189.	TILGORA	189	5.62	6.40	-	-	4.22	5.50	5.87	5.40	5.76	4.87	5.38	-	5.20	5.10	6.70	4.99	5.00	5.00	5.60
REMARKS:																					
I = Premonsoon period.																					
II = Postmonsoon period.																					
III = Post irrigation period.																					

APPENDIX-6

RECORD OF WATER LEVEL IN METRES (B.G.L.) AS OBSERVED IN KEY WELLS/PIEZOMETERS MONITORED MONTHLY.
(PERIOD 1980 TO 1983)

S. No.	Name of Village/ block.	Code No.	1980			1981			1982			1983										
			Mar.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.										
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
AHORE BLOCK:																						
1.	BEADRAJUN																					
	KIDHANI	5	5.25	7.10	6.26	6.36	6.78	7.58	6.87	8.20	14.70	19.20	6.30	11.80	14.80	16.30	13.67	5.80	16.80	16.50	15.25	14.70
2.	BHAINS- WARA	610.72	10.95	3-	-	-	10.55	-	-	12.70	14.07	14.75	15.35	15.75	16.00	16.90	16.75	16.25	17.00	17.35	17.35	
3.	BIJALI	10	2.44	3.64	3.38	3.27	3.56	3.88	4.24	4.59	4.73	5.10	5.32	8.60	7.15	-	-	-	-	-	-	-
4.	DAYAL- PURA (MADRI)	13	7.19	8.69	-	9.01	11.00	10.90	11.73	12.90	14.06	15.06	-	-	-	-	-	-	-	-	-	-
5.	JAIT- PURA	1816.45	8.09	-	-	-	8.03	-	-	12.78	10.93	16.00	15.20	13.40	13.05	12.46	12.10	12.00	14.40	20.00	19.25	
6.	RAMA	24	4.68	5.62	-	-	6.30	-	-	6.40	10.40	7.00	9.50	9.50	9.90	8.82	8.90	9.20	9.55	11.40	10.90	
7.	UNED- PURA	27	9.45	10.40	-	-	11.47	-	-	13.43	15.37	12.95	15.95	16.95	17.45	19.45	17.70	16.65	17.35	17.95	18.65	
BHINMAL BLOCK:																						
8.	BHIN- MAL	31	5.37	4.69	4.58	4.12	4.43	5.98	6.30	-	6.92	6.92	4.57	7.82	7.82	6.09	3.94	3.84	4.00	4.58	4.30	5.50
9.	DASPA	34	12.40	12.76	11.30	12.00	12.10	13.00	13.04	-	14.00	14.44	Dry	-	-	-	-	-	-	-	-	-
10.	KUSLA- PURA	42	7.20	7.50	7.80	7.75	7.85	8.50	8.20	-	8.50	10.59	8.80	12.85	12.85	13.24	12.89	12.42	12.69	12.50	12.70	13.00
11.	PHAGO- TRA	4918.	7618.	6118.	5818.	5218.	5818.	53	18.57	-	19.00	19.19	19.00	19.41	-	-	-	-	-	-	-	-
12.	SEWARI	52	8.20	8.25	3.29	8.27	8.31	8.65	7.46	-	8.87	8.94	9.08	9.81	9.63	9.62	9.50	9.51	9.60	9.64	9.50	9.50

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
JALORE BLOCK:																						
13. BHAGELI SINDH- WAN.	58	24.0024	0.0223	86	23.7523	8.523	82	23.8723	3.82	23.8023	9.223	80	24.0723	3.9523	65	23.70	23.302	3.8023	8023	8023	8023	8023
14. JALORE	64	11.8813	0.813	74	13.9013	0.613	67	14.5514	6.416	13	17.1018	7018	10	18.1718	2018	95	18.20	18.2018	8518	5018	5018	5018
JASWANTEPURA BLOCK:																						
15. Pat-SERI	85	3.55	3.85	3.72	3.69	3.72	4.10	4.02	-	4.00	4.83	4.54	4.80	4.80	4.44	4.45	4.47	4.64	4.77	4.85	4.85	4.85
RANIWARA BLOCK:																						
16. AJODAR	89	3.58	3.80	3.75	3.89	4.14	3.86	3.67	-	3.38	3.82	4.28	3.70	3.70	-	-	-	-	-	-	-	-
17. BAMAN- WARA	91	1.10	1.27	1.18	1.09	1.70	1.90	3.10	-	2.40	2.26	2.36	2.50	2.70	-	-	-	-	-	-	-	-
18. CHAT- WARA	93	8.90	9.19	8.63	8.62	8.47	8.59	8.30	-	9.31	10.28	8.99	9.98	9.98	-	-	-	-	-	-	-	-
19. RANI- WARA	110	4.73	4.80	4.70	4.57	4.43	4.70	4.85	-	5.40	5.74	5.69	6.87	6.87	6.38	3.18	4.90	7.10	6.15	6.10	7.44	7.44
SANCHORE BLOCK:																						
20. AGRAWA	117	10.0610	1.710	2.110	2.410	2.410	2.27	10.27	-	10.30	10.5310	5.910	6.55	10.6510	6.410	6.1	10.62	10.5110	6.010	8.010	8.010	8.010
21. BHADA- RUWA	123	11.5511	5.611	5.511	4.811	5.811	6.5	11.61	-	11.85	11.9111	9.612	2.1	12.21	-	-	-	-	-	-	-	-
22. BIRAWA	127	54.53	4.45	4.61	4.30	4.67	4.25	4.56	-	4.60	5.01	4.50	4.91	4.91	4.92	4.72	4.57	4.78	4.83	4.82	4.82	4.82
23. DUNGRI	134	24.8524	76	-	-	-	24.88	-	-	24.85	24.2825	0.224	92	24.9224	4.9224	88	24.02	25.0125	0.0525	0.0625	0.0625	0.0625
24. GARDANI	135	13.8013	8.713	8.713	8.013	9.213	9.7	13.97	-	14.17	14.0514	0.514	16	14.16	14.16	14.16	14.16	14.16	14.16	14.16	14.16	14.16
25. SANCH- ORE	153	12.0011	9.912	1.612	1.612	2.012	3.0	12.44	-	12.60	12.8912	5.612	75	12.7512	7.412	6.9	12.65	12.7112	7.612	8.012	8.012	8.012
26. SARNAU	156	24.6124	4.724	4.224	3.824	3.624	3.4	24.31	-	24.29	24.3024	1.524	11	24.11	-	-	-	-	-	-	-	-
27. SIWARA	158	6.40	6.78	6.53	6.44	6.78	6.93	5.64	-	6.80	7.05	6.71	7.19	7.19	7.60	6.76	6.69	6.97	6.66	6.73	6.73	6.73

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
SAILA BLOCK :																						
28. BAKRA	165	9.46	9.48	9.05	9.07	9.21	9.30	9.55	9.75	9.81	9.94	10.05	10.70	10.70	10.87	10.54	10.45	10.70	10.90	10.11.00	11.00	11.10
29. BAUTRA	167	30.68	30.90	30.39	30.65	30.24	30.26	30.32	30.40	30.29	30.37	25.60	30.90	30.75	30.75	30.74	30.80	30.80	30.80	30.90	30.90	30.90
30. DAHIWA	171	27.76	27.60	27.55	27.54	27.55	27.78	27.70	-	27.80	27.81	27.85	27.04	27.04	27.04	27.10	28.10	28.10	28.10	28.10	28.10	28.10
31. HARMU	175	7.45	5.20	7.38	7.38	7.48	5.10	7.64	-	8.05	8.11	8.25	8.71	8.71	8.72	8.67	8.73	8.87	8.89	8.85	9.18	9.18
32. KHARAL	-	-	-	4.87	7.00	8.42	-	7.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33. KUABER	178	26.10	25.60	-	-	-	26.00	-	-	26.50	26.10	27.05	27.35	26.90	25.80	25.40	-	26.10	26.10	26.20	26.10	26.10
34. MECH-	179	10.27	10.20	9.97	9.95	10.05	10.07	10.18	10.25	10.60	10.61	10.55	11.05	11.09	11.05	11.02	10.95	11.15	11.15	11.15	11.15	11.15
ALWA	-	-	-	-	-	-	6.00	-	-	6.76	6.98	6.80	7.86	7.20	7.50	8.00	7.90	8.15	8.20	8.45	8.65	8.65
35. OTH-	181	5.20	6.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WARA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36. SAILA	187	6.30	6.68	6.51	6.54	6.81	7.00	7.11	7.37	8.65	Dry	-	-	-	-	-	-	-	-	-	-	-
37. SAMP-	185	5.68	6.40	6.79	7.01	7.35	8.50	8.40	8.21	9.07	10.22	11.95	11.50	12.90	-	-	-	-	-	-	-	-
HARA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
PIEZOMETERS:																							
1. BAGORA/BHINMAL	-	-	-	-	-	-	-	-	-	-	-	-	4.53	4.52	4.39	4.46	4.59	4.68	4.90	5.06	-	-	-
2. BALWARA/SAILA	-	-	-	-	-	-	-	-	-	-	-	-	6.94	6.94	6.52	-	-	-	-	-	-	-	-
3. BHAINSWARA/AHORE	-	-	-	11.64	-	-	-	-	-	-	-	-	18.30	18.52	18.17	16.40	18.80	18.75	18.85	18.90	-	-	-
4. BHINMAL/BHINMAL	-	-	-	-	-	-	-	-	-	-	-	-	6.85	7.03	6.43	5.74	6.11	6.38	6.58	6.78	-	-	-
5. DASPA/BHINMAL	-	-	-	-	-	-	-	-	-	-	-	-	20.00	20.02	19.87	19.83	20.02	20.12	20.43	20.55	-	-	-
6. JAITPURA/RANIWARA	-	-	-	-	-	-	-	-	-	-	-	-	14.01	14.11	14.14	14.08	14.03	13.87	14.06	13.74	-	-	-
7. JAITPURA/JOGNI/AHORE	-	-	-	-	-	-	-	-	-	-	-	-	11.70	11.69	11.50	11.22	11.30	11.75	13.00	13.75	-	-	-
8. KHANPUR/BHINMAL	-	-	-	-	-	-	-	-	-	-	-	-	8.82	8.99	8.15	7.47	7.39	7.42	7.99	8.57	-	-	-
9. KORITA/JASWANTPURA	-	-	-	-	-	-	-	-	-	-	-	-	8.49	8.59	8.10	7.54	7.66	7.90	8.51	8.87	-	-	-
10. KUABER/SAILA	-	-	-	-	-	-	-	-	-	-	-	-	24.52	24.52	24.58	-	24.62	24.67	24.67	24.72	-	-	-
11. MEDA/SANCHORE	-	-	-	-	-	-	-	-	-	-	-	-	15.19	15.23	15.13	15.40	15.12	15.35	15.21	-	-	-	-
12. MODERAN/BHINMAL	-	-	-	-	-	-	-	-	-	-	-	-	12.00	12.06	-	-	11.35	-	12.25	12.55	-	-	-
13. PANSERI/JASWANTPURA	-	-	-	-	-	-	-	-	-	-	-	-	4.40	4.52	4.16	3.83	3.91	4.13	4.24	4.35	-	-	-
14. THOLA/JASWANTPURA	-	-	-	-	-	-	-	-	-	-	-	-	9.47	9.26	8.03	7.35	6.61	7.83	9.45	10.18	-	-	-
15. PHAGERA/BHINMAL	26.1526.14	26.13	26.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16. RAMA/AHORE	6.85	7.84	8.02	-	-	-	-	-	8.47	-	-	-	9.37	9.53	9.58	9.45	9.20	9.30	9.60	9.80	-	-	-
17. RANIWARA/RANIWARA	-	-	-	-	-	-	-	-	-	-	-	-	11.13	11.19	11.00	11.88	11.00	11.10	11.29	11.48	-	-	-
18. SAILA/SAILA	-	-	-	-	-	-	-	-	-	-	-	-	10.78	10.80	10.72	10.70	10.80	10.75	11.05	11.20	-	-	-
19. SANKAD/SANCHORE	28.5528.74	28.73	-	-	-	-	-	23.75	-	-	-	-	29.22	29.15	29.11	29.08	29.11	29.15	29.76	29.28	-	-	-
20. SANKARNA/AHORE	-	-	-	-	-	-	-	-	-	-	-	-	-	6.25	5.65	4.46	-	-	-	-	-	-	-
21. UMEDPURA/AHORE	8.67	-	-	-	-	-	-	-	-	-	-	-	15.62	15.72	15.29	15.34	15.84	16.04	16.39	16.54	-	-	-