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Area VI and to the north in Area V. The base of fresh water is shallow over some of the domes. Therefore caution should be exercised in drilling deep water wells on these structures. Deep aquifers are present in Harrison and Hancock Counties which have the ability of supplying large volumes of fresh water to properly constructed wells. A test well 2,460 feet deep (USGS) located in Gulfport's industrial park had a water level of about 100 feet above land surface.

CATAHOULA AQUIFER

Most of the water supplies in the northern part of Area VI are from the Catahoula aquifer. The wells are generally shallow (100 to 1,000 feet deep) and yield large volumes of water. The aquifer consists of beds of sand or gravel separated by clay layers. The sand and gravel beds thicken toward the Gulf and are several hundred feet thick in south Mississippi.

Numerous municipal, industrial, and domestic water supplies are completed in the Catahoula aquifer across this area. The aquifer is used as far south as northern Pearl River, Stone and George Counties. The use of this aquifer has been limited south of the above mentioned area because of the availability of shallower aquifers. Wells yielding up to 2,000 gpm are possible from this aquifer at some locations such as Carson in Jefferson Davis County and Wiggins in Stone County. The sands are generally lenticular in the northern part of Area VI. Test drilling is recommended for most locations because of the lenticular deposits.

Large volumes of water are pumped from the Catahoula aquifer at Hattiesburg, Richton, Purvis, and McComb. A large number of wells for rural water systems and domestic supplies utilize this aquifer in the northern part of Area VI.

Water levels are above the land surface along some of the streams. Flowing wells are primarily located in the Bogue Chitto, Okatoma Creek, Pearl River, Pascagoula River, Chickasawhay River, and some of the smaller creeks across the area. Some of the deeper water levels reported are from 250 to 380 feet. A well which is 796 feet deep in the Catahoula aquifer at Baxterville, Lamar County, had a water level of 264 feet in 1964. A well 425 feet deep at Bassfield, Jefferson Davis County, had a water level of 380 feet in 1964. Slightly deeper water levels may be ex-

pected on tops of high hills. Water levels are depressed in areas of heavy pumpage in a small area such as the Hattiesburg well field located at the new water plant.

HATTIESBURG AQUIFER

The Hattiesburg aquifer is not as widely used as the Catahoula aquifer. The Hattiesburg aquifer has the potential of supplying large wells in the central and southern part of Area VI. A number of shallow domestic and small municipal wells utilize this aquifer in southern Lamar, southern Forrest, Perry and Greene Counties. The municipal wells at Lucedale and two community supply wells north of Lucedale are completed in the Hattiesburg aquifer at a depth of about 1,000 feet. Most of the ground-water development from this aquifer is in Pearl River, Stone and George Counties and slightly north of these counties. The extreme depth is the limiting factor south of these counties. The aquifer is presently being used for ground-water supplies in Wilkinson, Amite, Pike, Walthall, and Marion Counties, which are along the Louisiana boundary.

Separating the Hattiesburg from the underlying Catahoula or the overlying Pascagoula is extremely difficult in the subsurface in Area VI. One solution to this problem is to refer to these units as "Miocene aquifers" and not designate particular aquifers.

Water levels will be similar to those in the Catahoula aquifer. The higher water levels will be located along the streams. A well 1,008 feet deep for the Town of Lucedale had a water level of 100 feet in 1960.

PASCAGOULA AQUIFER

The Pascagoula aquifer is an important source of water supply in the three coastal counties, Hancock, Harrison, and Jackson. Numerous municipal, industrial and domestic wells utilize this aquifer in these counties. Most of the municipalities along the coast have wells completed in this aquifer. Yields from this aquifer are as much as 3,000 gpm at the NASA Test Site. The aquifer consists of thick sands and gravels at a number of locations along the coast. Multiple aquifers or zones of sands are present at most locations.

Water levels are generally above or near the land surface except in areas of concentrated withdrawals. A number of the

to be associated with the organic material (lignite, leaves, roots, etc.) deposited in the aquifer material. The Kosciusko and Cockfield aquifers are known to contain colored water of varying degrees in the Jackson area, Bay Springs, Waynesboro and other locations.

Treatment for color removal (coagulation with alum) is expensive and uneconomical for most purposes. Aquifers that contain colored water are not recommended for well development provided shallower aquifers are available for use. Most people prefer clear water for domestic use.

An investigation in 1969 determined that the high chlorides in a city well at Prentiss was caused by industrial pollution from a local plant. The situation is serious at that particular area and should not be allowed to continue.

GROUND WATER

AREA VI

South Mississippi is underlain by several thick aquifer systems and at most locations multiple aquifers are present. The aquifers present in Area VI include the Catahoula, Hattiesburg, Pascagoula, Graham Ferry and Citronelle (fig. 10 and Table 18). Recent publications on the ground water resources in Harrison and Hancock Counties referred to "Miocene aquifers" for the fresh water section in those areas. The Graham Ferry aquifer is recognized in Jackson County and is the principal aquifer for industrial and municipal supplies in the vicinity of Pascagoula.

The aquifers in the coastal counties consist of thick beds of sand or gravel separated by clay layers. The sands are generally lenticular, thereby are not continuous over a large area. Most of these aquifers are capable of supplying large volumes of water to wells in the coastal counties.

The base of fresh water is about 500 feet below sea level across the northeastern part of Area VI in Covington, Jones, Wayne and part of Greene and Perry Counties (fig. 2). The deepest fresh water is present in northwestern Hancock and southwestern Pearl River Counties to a depth of 3,000 feet below sea level. Very few water wells have penetrated the entire fresh-water section in the southern half of Area VI (Table 19). A number of shallow piercement-type salt domes are located in

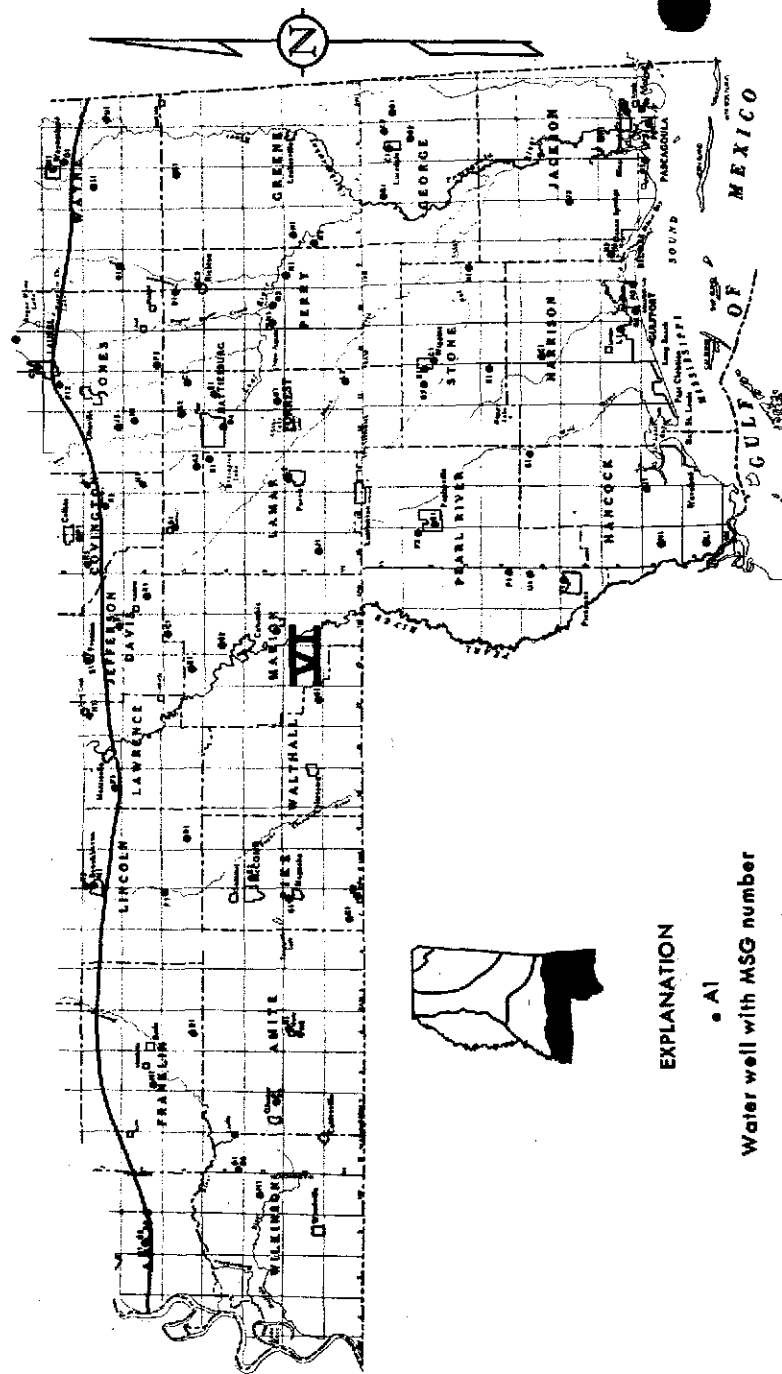


Figure 10.—Location of selected wells in Area VI.