GW14652
0230005-03

Coded By Q 9/93
Checked By 05-17-94
Entered By
Date 5-94

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
MISSISSIPPI DISTRICT

E-Log No. 177
County HANCOCK
Agency

Well No. K473

Kiln Quad

WELL RECORD

Agency Code: USGS
Site Id: 1=303212415089122148011
Project No.: 5=
Station Name: 12=K473 DIAMONDHEAD
Latitude: 9=303212415
Longitude: 10=0891221481
Lat/Long Ac.: 11=S F M
Dist: 6=28
State: 7=28
County: 8=045
IYY Land Net: 13=IRNES03T018SR14W
Location Map: 14=WHDIL-IIA
Altitude: 16=140
Met/Meas: 17=A L M
Accuracy: 18=15
Hydrologic Unit: 20=03110710101091
Agency Use: 803=A I O
Date Inventoried: 711=
Station Type: 4=Y
Data Type: 804=
Instru.: 805=
Remarks: 806=
Relia.: 3=C L M U
2=W X
Date of Construction: 21=07/24/1993
Well Use: 23=W (WA)
Water Use: 24=P
Primary Aquifer: 714=12 1GRMF
Hole Depth: 27=1767
Well Depth: 28=1710
Water Level: 30=
Water Level Date: 31=
Method: 34=
Status: 37=
Source: 33=

MOCW on permit

CONSTRUCTION DATA

R=58 T=A 723#1 Construction Date: 60=03/01/1994 Contractor: 63=964 Name: Layne Method: 65=H Finish: 66=S

CONSTRUCTION CASING DATA

				Top/Casing	Bot/Casing	Diameter
R=76	T=A	725#1	59#1	77=10	78=1640	79=16
R=76	T=A	725#2	59#1	77=1610	78=1650	79=10

CONSTRUCTION OPENINGS DATA

				Top/Depth	Bot/Depth	Diameter	Type	Length	Width
R=82	T=A	726#1	59#1	83=1651	84=1712	87=10	85=S	89=	88=1012
R=82	T=A	726#2	59#1	83=	84=	87=	85=	89=	88=

CONSTRUCTION LIFT DATA

R=42 T=A 254#1 Lift Type 43=T Date 38=03/01/1994 Intake 44=

Power 45=5 H.P 46=15 Serial No. 49= (4 stage)

MISCELLANEOUS OWNER DATA

R=158 T=A 718#1 Date of Ownership 159=03/01/1994 Owner Name 161=DIAMONDHEAD Water & Sewer District

MISCELLANEOUS OTHER ID DATA

R=189 T=A 736#1 E-Log No. 190=177 Assigner 191=MISSISSIPPI

MISCELLANEOUS QW DATA

			Date of Measurement	Aquifer Sampled	Temp	Value
R=192	T=A	738#1	193= / /	195=	196#00010	197=
R=192	T=A	738#2	193= / /	195=	So Cond 196#00095	197=
R=192	T=A	738#3	193= / /	195=	pH 196#00400	197=

MISCELLANEOUS LOGS DATA

			Log Type	Beg. Depth	End Depth
R=198	T=A	739#1	199=E	200= 0	201= 764
R=198	T=A	739#1	199=D	200= 0	201= 764

MISCELLANEOUS NETWORK DATA 706=QW WL WD *

			Beg. Year	End Year		Agency Source	Freq.
R=114	T=A	730#1	115= 19	116= 19	120=A*	117=	118=
R=121	T=A	730#2	115= 19	116= 19		117=	118=

MISCELLANEOUS REMARKS DATA

			Date of Remarks	Remarks
R=183	T=A	311#1	184=03/10/1/1991	185= MSGW 14652

DISCHARGE DATA

				Date	Type	Discharge	So. Capacity
R=146	T=A	Pump/ Flow	147#1	148=03/01/1991	703=PF	150= 100	272=

GEOHYDROLOGIC DATA

			Depth Top	Depth Bot.	Unit Id	
R=90	T=A	721#1	91=	92=	93=121GRMA	304=?

HYDRAULIC DATA

R=98	T=A	790#1	Unit Tested	100=	103=

55' dd after 8hrs @ 100 gpm

DESCRIPTION OF FORMATIONS ENCOUNTERED	FROM	TO
Orange Clay	0'	11'
Sand With Clay Stks	11'	21'
Sand	21'	50'
Clay	50'	69'
Clay With Sand	69'	73'
Sand	73'	77'
Clay	77'	184'
Shale With Sandy Clay Bds	184'	215'
Sand with Some Clay	215'	246'
Shale and Clay	246'	266'
Sand and Clay	266'	270'

FORMATIONS (Continued)	FROM	TO
Clay & Shale	270'	336'
Sandy Shale	336'	360'
Shale	360'	382'
Soft Sandy clay	382'	400'
Clay & Shale	400'	420'
Soft Sandy Clay	420'	450'
Clay	450'	570
Sandy Clay	570'	580'
Sand With Clay	580'	610'
Sand With Some Clay Bds	610'	640'

IF MORE SPACE IS NEEDED, USE BACK

Cont'd.

	FROM	TO
Sand With Some clay Stks	640'	670
Sand With Some clay Stks	670'	701
Sand with little clay	701'	733
Sand with Some clay	733'	736
Sand with clay	736'	743
Clay	743'	764

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
Bureau of Land and Water Resources

P. O. Box 10631
Jackson, MS 39289-0631
WATER WELL DRILLERS LOG

COUNTY WELL LOCATED: Hancock
WELL NUMBER: 3 CODED: ✓
K 470
DATE WELL COMPLETED: March 1994

PERMIT NUMBER: MS-GW-14652
NAME OF DRILLING FIRM: Layne-Central Co., A Division of Layne, Inc.

NAME & MAILING ADDRESS OF LANDOWNER
Diamondhead Water & Sewer Dist.
4351 Park Ten Drive
Diamondhead, MS 39520

WELL LOCATION: SEC 3 TOWNSHIP 8 (S) RANGE 14 (W)
DISTANCE ____ Miles DIRECTION ____ NEAREST TOWN ____ of
OTHER LANDMARK
WELL PURPOSE: Home, Irrigation, Municipal, Industrial, Fish Pond, etc.

PUMP DATA

PUMP TYPE (Circle One): Submersible, (Turbine), Jet, Flowing Well, Other (Describe) ____
POWER TYPE (Circle One): (Electric), Tractor, Diesel, Gasoline, Butane, Other (Describe) ____ H/P 25

Pump Capacity (GPM)	No. of Stages	Setting Depth
1000	4	FT.

PUMP TEST
Well yielded 1001 GPM with a drawdown of 55.3 ft. after 8 hours of pumping

WELL DATA

Well Depth	Casing Diameter (In.)	Casing Length (Ft.)
720'	16"	640'

Type of Casing	Hole Depth	Depth to Static Water Level
Steel	720'	

TYPE OF COMPLETION: (Circle One or More): (Gravel Packed), (Underreamed), Telescoped, Natural Development, Open Hole, Other (Describe) ____
Top of Lap Pipe or Reduction in Casing: FEET
IF TELESCOPED OR MORE THAN ONE SCREEN: USE BACK PAGE

SCREEN DATA

Diameter - Inches	Length - Feet	Slot Size - Inches
10"	70	.020"

Screen Type: Stainless Steel
Depth to Bottom - Feet:

LOG DATA

TYPE OF LOG RUN (Circle One): (Electric), (Gamma Ray), Density, Sonic, Neutron, No Log Run, Other (Describe) ____
Name of Organization Running Log: Layne-Central Co.

GEOLOGIC DATA (Office Use Only)

Surface Elev.	Geologic Unit	Unit Thickness	Depth to Top
Subs. SWL	Date	Analysis	Aquifer Test

Driller's Remarks

RECEIVED
MAR 28 1994
Dept. of Environmental Quality
Office of Land & Water Resources

DESCRIPTION OF FORMATIONS ENCOUNTERED	FROM	TO
Orange Clay	0'	11'
Sand with Clay strks	11'	21'
Sand	21'	50'
Clay	50'	69'
Clay with Sand	69'	73'
Sand	73'	77'
Clay	77'	184'
Shale with Sandy clay bks	184'	215'
Sand with Some Clay	215'	246'
Shale and Clay	246'	266'
Sand and Clay	266'	270'

FORMATIONS (Continued)	FROM	TO
Clay & Shale	270'	336'
Sandy Shale	336'	360'
Shale	360'	382'
Soft Sandy clay	382'	400'
Clay & Shale	400'	420'
Soft Sandy Clay	420'	450'
Clay	450'	570'
Sandy Clay	570'	590'
Sand with clay	590'	610'
Sand with Some Clay bks	610'	640'
IF MORE SPACE IS NEEDED, USE BACK	Cont'd.	

FORM BLW-AP-1
(rev. 10/88)
The box below is for office use only. MOCN

Issued: 6-22-93 Expires: 6-22-2003	Fee Paid X	Permit No. GW-14652
Lat. 30-22-45 Long. 89-22-48 Elev. 40		USGS No.
Quad. KILN Dist.		Basin No. 03170009
STAC		Dam inv. No.
		Dam appl. No.

Dept. of Natural Resources, Bureau of Land and Water Resources, P.O. Box 10631, Jackson, MS 39289-0631

RECEIVED
MAY 25 1993
Dept. of Environmental Quality
Office of Land & Water Resources

APPLICATION FOR PERMIT TO DIVERT OR WITHDRAW FOR BENEFICIAL USE THE PUBLIC WATERS OF THE STATE OF MISSISSIPPI

This application is for (circle one): GROUNDWATER SURFACE WATER

Beneficial Use (circle one or more): Irrigation Fish Culture Municipal (Rural Water Association) Industrial
Recreation Institutional (Examples: Church, School) Commercial (Examples: Hotel, Restaurant) Livestock Standby
Fire Protection Flood Protection Other: _____

LANDOWNER:

Diamondhead Water and Sewer District _____
(Name) (S/S or Tax ID No.)

4351 Park Ten Drive.
(Address)

Diamondhead, MS 39520 (601) 255- 5813
(City) (State and Zip) (Telephone Number)

APPLICANT, AGENT, OR LESSEE (If different from Landowner):

A. Garner Russell & Associates, Inc. 64-0475317
(Name) (S/S or Tax ID No.)

P. O. Box 1677
(Address)

Gulfport MS (601) 863 - 0667
(City) (State and Zip) (Telephone Number)

Location of diversion/withdrawal point (A suitable location map must accompany this application):

IR SW 1/4 of the IR NE 1/4 of Section 3, Township 8S, Range 14W, County Hancock

Volume of water diverted/withdrawn (Choose "a", "b", "c", or "d" ["d" is for units other than those shown in "a", "b", or "c"]):

(a) _____ acre-feet per year at a maximum rate of _____ gallons per minute

(b) 0.5 million gallons per day at a maximum rate of 1,000 gallons per minute

(c) _____ acre feet of storage at normal pool

(d) _____ per _____ at a maximum rate of _____

Construction of proposed work will begin on (date) June, 1993 and will be completed by (date) Oct 3 94, 1993.

Water will be used from (month) January to (month) December each year.

Does the land to which this application pertains have any source(s) of water other than that for which you are now applying (circle one)?
YES NO If yes, describe the nature and amount of any additional supply and, if applicable, list permit numbers.

MS-GW-12541 (350 GPM) MS-GW-12542 (1,100 GPM)

SECTION A (to be completed if application is for surface water source)

1. Source of water is from _____ which drains into _____ which drains into _____ which drains into _____
2. Description of pump/diversion works:
   (a) Pump (size and type): _____ Power Unit (size and type): _____
   Lift: _____ feet Maximum capacity: _____ gallons per minute.
   (b) Name of storage reservoir: _____ Dam height: _____ feet.
   Surface area at normal pool: _____ acres. Storage capacity at normal pool: _____ acre-feet.

(Continued on back)

SECTION B (to be completed if application is for groundwater source)

1. Source of water is Miocene aquifer.
2. Description of proposed water well:
   (a) DEPTH OF WELL: ~~830*~~ 720 feet. DRILLER (name): To be Bid / LAYNE CENTRAL.
   (b) SURFACE CASING: Length: 640 feet. Diameter: 16 inches. Type: Steel.
   (c) SCREEN: Length: ~~80*~~ 70 feet. Diameter: 10 inches. Type: Stainless Steel.
   (d) PUMP: Type: Turbine. Size: 12". Capacity: 1,000 gallons per minute.
   Number of stages: ~~5*~~ 4 Setting depth: 100* feet.
   (e) POWER UNIT: Type: Electric Motor. Size: ~~100*~~ 75 horsepower.
   (f) TYPE OF COMPLETION: Gravel Packed UNDERREAMED.

*Estimated

WATER USE DATA:

If for IRRIGATION, FISH CULTURE or any other areal use, show the number of acres to which water will be applied in the appropriate 40-acre block(s). Acreage must be shown on accompanying location map.

TOWN-SHIP	RANGE	SEC-TION	NE1/4				NW1/4				SW1/4				SE1/4				TOTALS
			NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	

1. **IRRIGATION:** List the number of acres of each crop to be irrigated: Rice_____; Cotton_____; Soybeans_____; Corn_____; Pasture_____; Truck_____; Wheat_____; Oats_____; Grain sorghum_____; Other (specify)_____ Acres_____
2. **FISH CULTURE:** Explain how water will be used: _____

   How often will reservoir(s) be emptied and refilled? _____
3. **MUNICIPAL** or **WATER ASSOCIATION**

   Choose "a" or "b". (a) The number of people served is _____. (b) The number of connections/customers is 1960.

   What is the estimated average daily consumption during periods of maximum use at the end of each five-year period during the next twenty years? 500K (Volume) 1993 (Year); 575K (Volume) 1998 (Year); 661K (Volume) 2003 (Year); 760K (Volume) 2008 (Year)
4. **INDUSTRIAL:** If water is to be released into a watercourse, indicate the amount released each year _____;

   Rate of release _____; Location of release point in reference to diversion/withdrawal point _____; Explain any change in quality of water to be released: _____ NPDES Permit No. _____.

   Explain how water will be used: _____.

   How much groundwater will be used for once-through non-contact cooling? _____
5. **RECREATION:** Explain how water will be used: _____
6. **OTHER** use: Explain in detail: _____

REMARKS: _____

List below the person to be contacted for additional information if required:

John Campton, P.E.
(Name) A. Garner Russell & Associates, Inc.
P. O. Box 1677
(Address)
Gulfport, MS 39502
(City, State, Zip)
601-863-0667
(Telephone)

The accompanying map is hereby declared a part of this application. The **TEN DOLLAR ($10.00) permit fee** is enclosed herewith.

John Campton
(Signature)

Subscribed and sworn to before me this 21st day of May 19 93, at Gulfport,
County of Harrison. My commission expires 11/4/93
John Campton, Notary Public

DEPARTMENT OF ENVIRONMENTAL QUALITY - OLWR

PUBLIC SUPPLY WELLS PROJECT

GPS LOG

USER NAME(S): Stewart/Everett DATE: 11/28/98

UNIT DEQ #: _____ FILE #: A0128 23B

HEALTH DEPT. #: 230005-03 ELEV. 20± 40'

USGS #: K470 OLWR #: GW146552

OWNER: Diamondhead Utilities North

LOCATION: NE Irreg S 3 T 8S R 14W COUNTY: Hancock

LOCATION DESCRIPTION: _____

_____

CASING DIA: _____ PUMP TYPE & SIZE: _____

GPS FIELD LOCATION: LAT. 30°22.252 LONG. 89°22.819

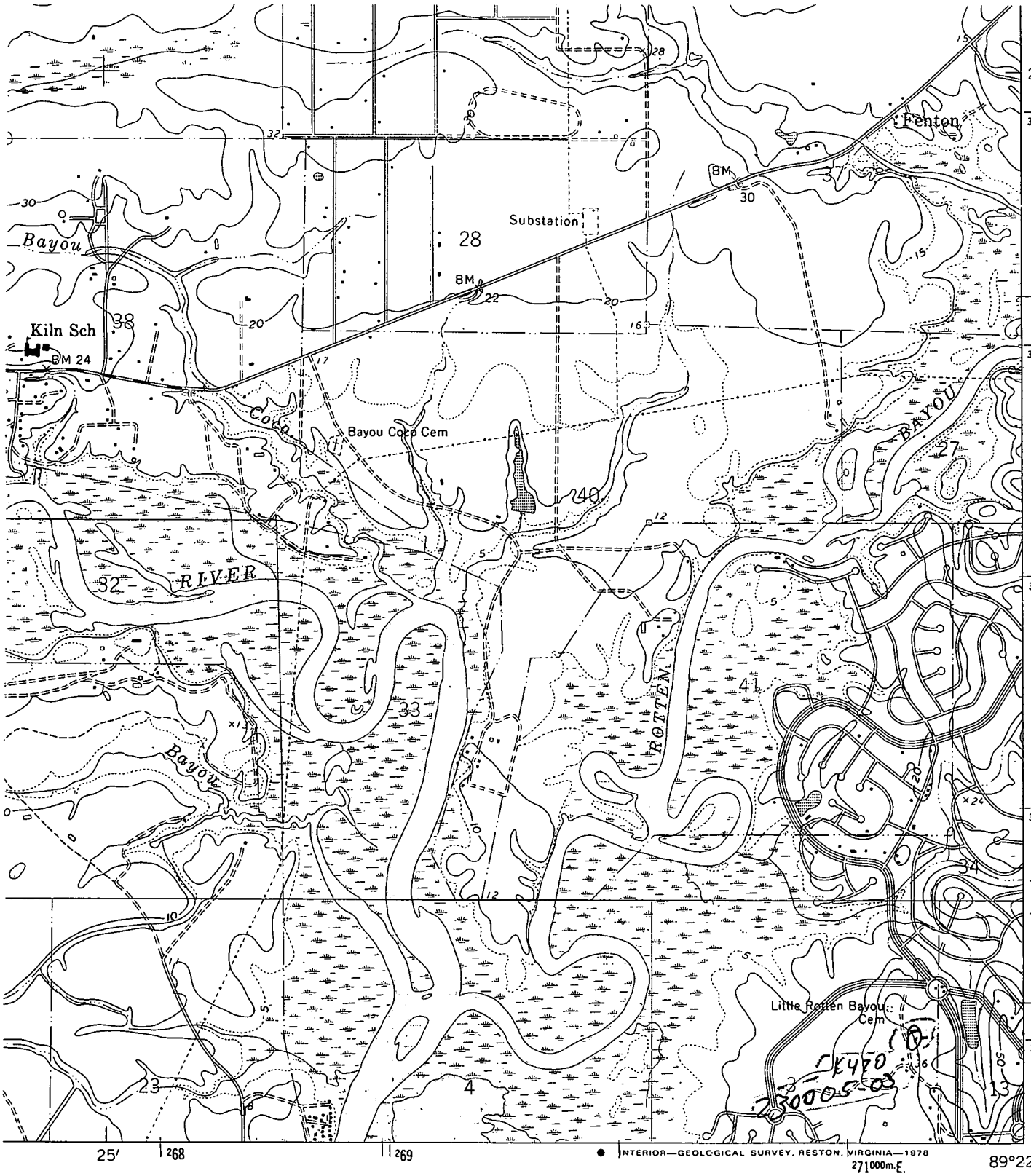
GPS CORRECTED LOCATION: LAT. 30.379390 LONG. 89.380196

REMARKS: Kiln Quad

_____

_____

_____



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1978

1 MILE

ROAD CLASSIFICATION

Medium-duty ——— Light-duty ———

Unimproved dirt - - - - - -

State Route

(BAY ST. LOUIS) 3144 IV SE

QUADRANGLE LOCATION

KILN, MISS.

N3022.5—W8922.5/7.5

1959

PHOTOREVISED 1970 AND 1976

AMS 3144 IV NW—SERIES V843