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Water-Data Report 2007

261030080083301 Local number G 2897. USGS Observation Well near Oakland Park, FL.

Biscayne aquifer
Biscayne Limestone Aquifer

Broward County, FL

LOCATION.--Lat 26°10'31.9", long 80°08'33.0" referenced to North American Datum of 1983, in SW ¼ SE ¼ NE ¼ sec.22, T.49 S., R.42 E., Broward County, FL, Hydrologic Unit 03090202, 16 ft from edge of NE 3rd Avenue parking lot at Collins Community Center, about 250 ft south of NE 40th Street.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 135.5 ft. Upper casing diameter 2 in, top of first opening 125.5 ft, bottom of last opening 135.5 ft.

DATUM.--Land-surface datum is 6.4 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 6.42 ft above National Geodetic Vertical Datum of 1929, Feb. 28, 2001, to present. Prior to February 2001, measuring point was 6.31 ft above NGVD. See REMARKS.

PERIOD OF RECORD.--April 2000 to current year. See REMARKS.

INSTRUMENTATION.--Quarterly measurements with electronic tape. Annual profile by induction logger. See REMARKS.

REMARKS.--Well is also used for salinity monitoring, including an annual induction log. Induction logging began in April 2000. Quarterly water-level measurements began in October, 2000. Continuous water-level and conductivity data were collected from March, 2001 through June 2002, as part of an investigative project. Induction logs are used to assess the movement of the fresh-water/salt-water interface in ground water. See RECORDS OF BULK CONDUCTIVITY. A calibration error was found to have affected some of the historical bulk conductivity logs collected by an induction logger. Bulk conductivity logs prior to the 2002 water year had been calibrated to a standard of 1,301 mS/m. For these calibrations an internal setting limited the probe response to 1,000 mS/m. Data for the affected years was corrected by applying a 0.7686 multiplier. Station was reconstructed in February 2001, for a salt water intrusion modeling project. Data are available in the files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 3.81 ft NGVD, Sept. 14, 2001; lowest, 0.53 ft NGVD, May 6-11, 2002.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Date	Time	Elevation, feet above NGVD (72020)	Specific conductance, wat unf, µS/cm 25 degC (00095)	Chloride, water, fltrd, mg/L (00940)
Nov				
06...	1039	1.86	10,000	3,300
Jan				
10...	1255	1.06	10,100	3,100
Apr				
04...	1140	.96	10,500	3,400
May				
01...	1234	.80	10,600	3,200
Jun				
20...	1317	2.17	10,200	3,200
Aug				
02...	1020	1.94	10,100	3,200

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Lithologic log, USGS 261030080083301. Local Number G -2897

Depth interval (ft below land surface)	Lithologic description
0 - 10	Quartz sand, black to tan, fine to very fine grained, grains are clear and sub-angular to sub-rounded, organic matter coating grains; organic matter
10 - 15	Quartz sand, tan, fine to very fine grained, grains are clear to frosted and sub-angular to sub-rounded
15 - 20	Quartz sand, tan to gray, well sorted, fine to very fine grained, grains are clear to frosted, with heavy minerals
20 - 25	Quartz sand, brown to white, well sorted, fine to very fine grained, grains are clear to frosted and sub-angular to sub-rounded, with shell fragments
25 - 30	Quartz sand, tan to yellowish, well sorted, very fine grained, grains are frosted and sub-rounded, with silt and organic material
30 - 35	Sandy fossiliferous limestone, calcite cement, with concretions, quartz sand is tan, moderately sorted, and fine grained
35 - 45	Sandy fossiliferous limestone, white to yellow, calcite cement, with concretions; carbonate sand, grains are sub-angular to sub-rounded, with heavy minerals
45 - 50	Sandy limestone, white to tan, well cemented with calcite cement; Concretions
50 - 55	Sandstone, white to gray, calcite cement, heavy minerals; Concretions
55 - 60	Sandy fossiliferous limestone, grey, cemented with calcite, with shell fragments; Concretions
60 - 65	Quartz sand, tan to gray, very fine grained, grains are sub-angular, with heavy minerals, shell fragments, and concretions
65 - 75	Quartz sand, white to gray, coarse to very fine grained, grains are sub-angular, with heavy minerals, shell fragments, and concretions
75 - 85	Quartz sand, white to gray, well sorted, fine to very fine grained, grains are sub-angular to sub-rounded, with heavy minerals and some encrusting carbonate
85 - 100	Quartz sand, white to gray, well sorted, fine to very fine grained, grains are sub-angular to sub-rounded, with heavy minerals, shell fragments, and some encrusting carbonate
100 - 105	Quartz sand concretions and quartz sand, sand is white to gray, moderate to well sorted, fine to very fine grained, grains are sub-angular to sub-rounded, with shell fragments
105 - 115	Quartz sand, white to gray, moderate to well sorted, fine to very fine grained, grains are clear and sub-angular, with heavy minerals, shell fragments, and concretions
115 - 120	Quartz sand, white to gray, well sorted, fine to very fine grained, grains are angular to sub-rounded, with heavy minerals; sandy limestone, fossiliferous, cemented with calcite
120 - 125	Quartz sand, white to gray, very-well sorted, fine to very fine grained, with heavy minerals and shell fragments
125 - 135	Quartz sand, white to gray, well sorted, fine to very fine grained, grains are angular to sub-rounded with heavy minerals and shell fragments; sandy fossiliferous limestone concretions with heavy minerals

Compiled and modified from the original lithologic description by Hydrologic Associates USA Inc., Miami, FL.

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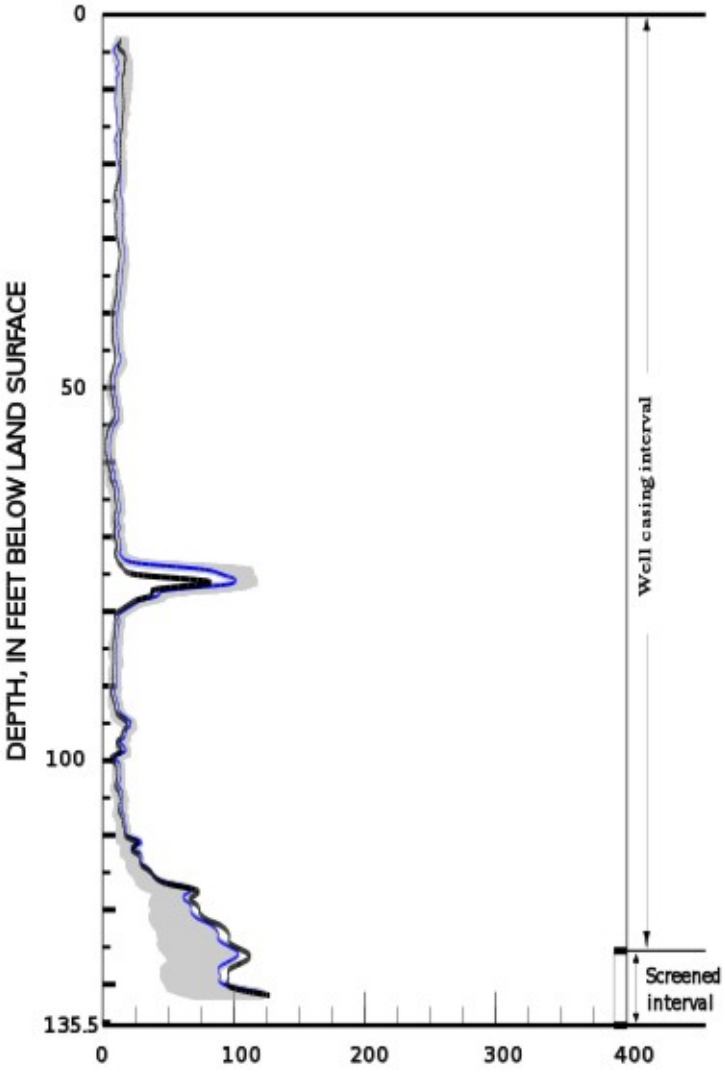
WY 2007 Induction log results
Station: USGS 261030080083301
Local name: G -2897

BULK CONDUCTIVITY



BULK CONDUCTIVITY, IN MILLISIEMENS PER METER

INDUCTION LOG DATES, ASSOCIATED CHLORIDE SAMPLE DATES

Induction log date	Chloride sample date	Dissolved chloride concentration, in mg/L
June 20, 2007	June 20, 2007	3,200
May 3, 2006	May 3, 2006	3,050
May 5, 2005	May 5, 2005	2,950
April 30, 2004	April 30, 2004	2,700
May 9, 2003	May 9, 2003	2,650
May 29, 2002	June 4, 2002	3,400
April 18, 2001	April 18, 2001	2,250
August 29, 2000	Oct. 26, 2000	1,950
April 19, 2000	- no sample -	-----

EXPLANATION

Bulk conductivity, in millisiemens per meter, May 3, 2006, June 20, 2007.

Shaded area represents range in bulk conductivity logs collected from April 19, 2000, through May 3, 2006.

[Delimits the interval for which the well is open to the aquifer