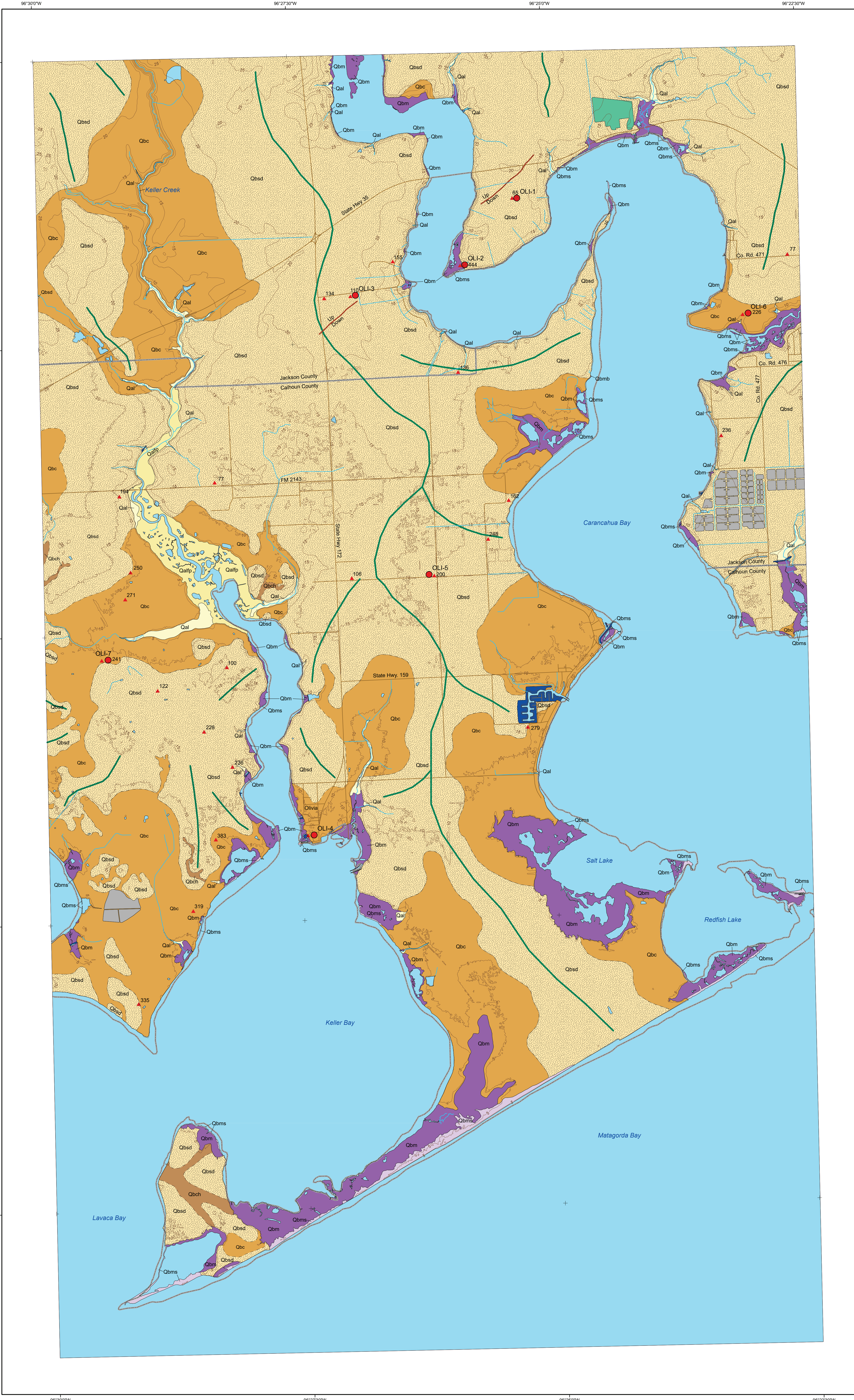




Explanation

Qal

Alluvium—Sand, silt and clay.

Qalp

Flood-plain deposits—Clay, silt, and sand. Includes some undifferentiated minor fluvial levees, crevasse splays, and active and abandoned stream channels.

Qbm

Bay-margin deposits—Mud and sand.

Qbmb

Bay-margin beach deposits—Sand and shell.

Qbms

Bay-margin spit deposits—Sand, shell, and mud.

Pleistocene

Qbc

Beaumont Formation clay facies—Clay, silt, and minor sand in a fluvial-deltaic, interdistributary, and distributary setting. Contacts with Beaumont Formation sandy facies. Qbcd, are gradational.

Qbsd

Beaumont Formation sandy facies—Sandy clay, silt, and minor sand in a fluvial-deltaic, interdistributary, and distributary setting. Contacts with Beaumont Formation clay facies. Qbc, are gradational.

Qbch

Beaumont Formation channel facies—Sandy clay to clayey sand-channel facies mapped on basis of topographic expression.

Map symbols

Contact (distinct)

Contact (gradational)

Axis of Beaumont Formation channel complex

Inferred fault

Intermittent stream, drainage ditch, or canal

Elevation (ft); contour interval 5 ft

County boundary

Road

●

Time-domain EM sounding for subsurface lithostratigraphic interpretation

▲

Apparent electrical conductivity (in millisiemens per meter, or mS/m) of the ground measured using a Geonics EM31 ground-conductivity meter in the vertical dipole coil orientation. Value shown is bulk conductivity from the surface to depths of 10 to 20 ft (McNeill, 1980a, 1980b).

Water, selected pond water, or canal

Area of industrial development

Fill

Jetty

Pit

Acknowledgments

Photography used in the study was 0.6-m pixel, natural color, National Agriculture Imagery Program digital imagery, photographed in 2018. Photography was obtained from the Texas Natural Resources Information System (TNRIS). Photography was supplemented by a 1-m cell size digital elevation model (DEM) constructed from data acquired during an airborne lidar survey flown by the Bureau of Economic Geology in 2015. Previous regional maps that cover this area include the 1:250,000-scale Geologic Atlas of Texas, Beeville–Bay City Sheet (Aronow and others, 1975; revised 1987), the 1:125,000-scale Environmental Geologic Atlas of Texas, Port Lavaca Sheet (McGowen and others, 1976), and the 1:125,000-scale map of Distribution of Wetlands and Benthic Macroinvertebrates from the Submerged Lands of Texas, Port Lavaca area (White and others, 1989).

The study included field observations of surficial deposits, collection and interpretation of surface and subsurface electrical conductivities measured using ground-based electromagnetic induction conductivity meters (Geonics EM31 and EM38) and a time-domain electromagnetic induction instrument (ABEM WalkTEM). Digital elevation contour files for generalized topography were adapted from the USGS. Digital files of roads were obtained from the Texas Department of Transportation. Streams and drainage ditches were mapped from aerial imagery and the lidar-derived DEM.

Geologic mapping and map production were supported partly by the U.S. Geological Survey National Cooperative Geologic Mapping Program through STATEMAP award G19AC00225, 2019 (Jeffrey G. Paine, Principal Investigator), and partly by Bureau of Economic Geology STARR funds for geologic mapping and geologic hazards. Graphics were by Nancy Cottingham. Editing was by Amanda Masterson. Views and conclusions contained in this map should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government. The authors disclaim any responsibility or liability for interpretations from this map or digital data or decisions based thereon.

Selected References

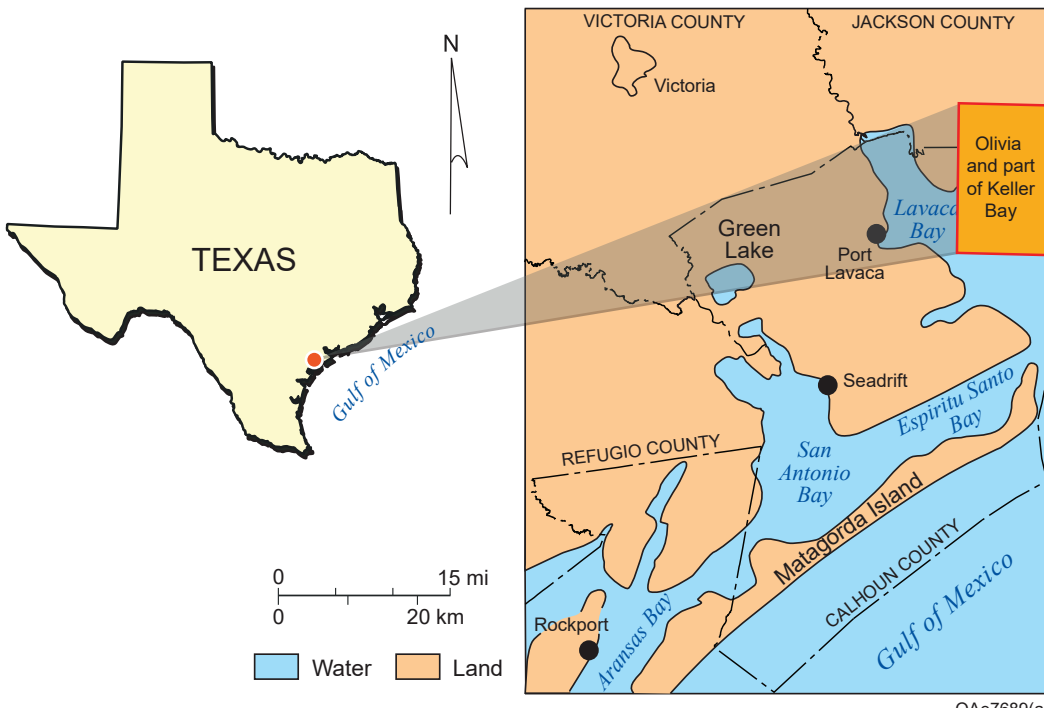
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GEOLOGIC MAP OF THE OLIVIA AND PART OF THE KELLER BAY QUADRANGLES, TEXAS GULF OF MEXICO COAST
Jeffrey G. Paine and Lucie Costard
2020

