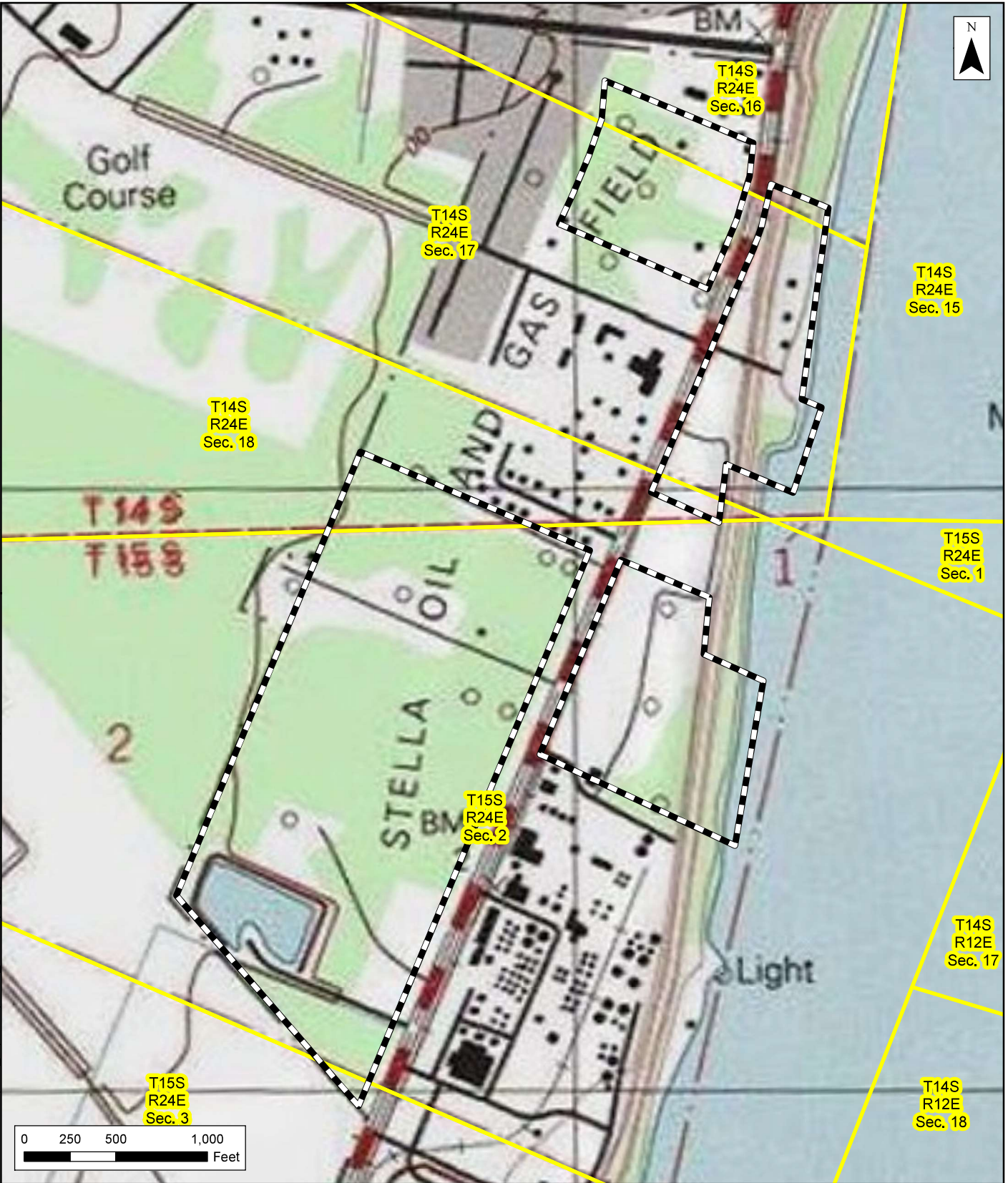


- Property
- Parish Boundaries

Notes:
 Imagery Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 1
Site Location
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana
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-  Property
-  Public Land Survey Sections

Notes:
 USGS Topographic Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 2
 USGS Topographic Map & Public Land Survey Sections
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc. et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



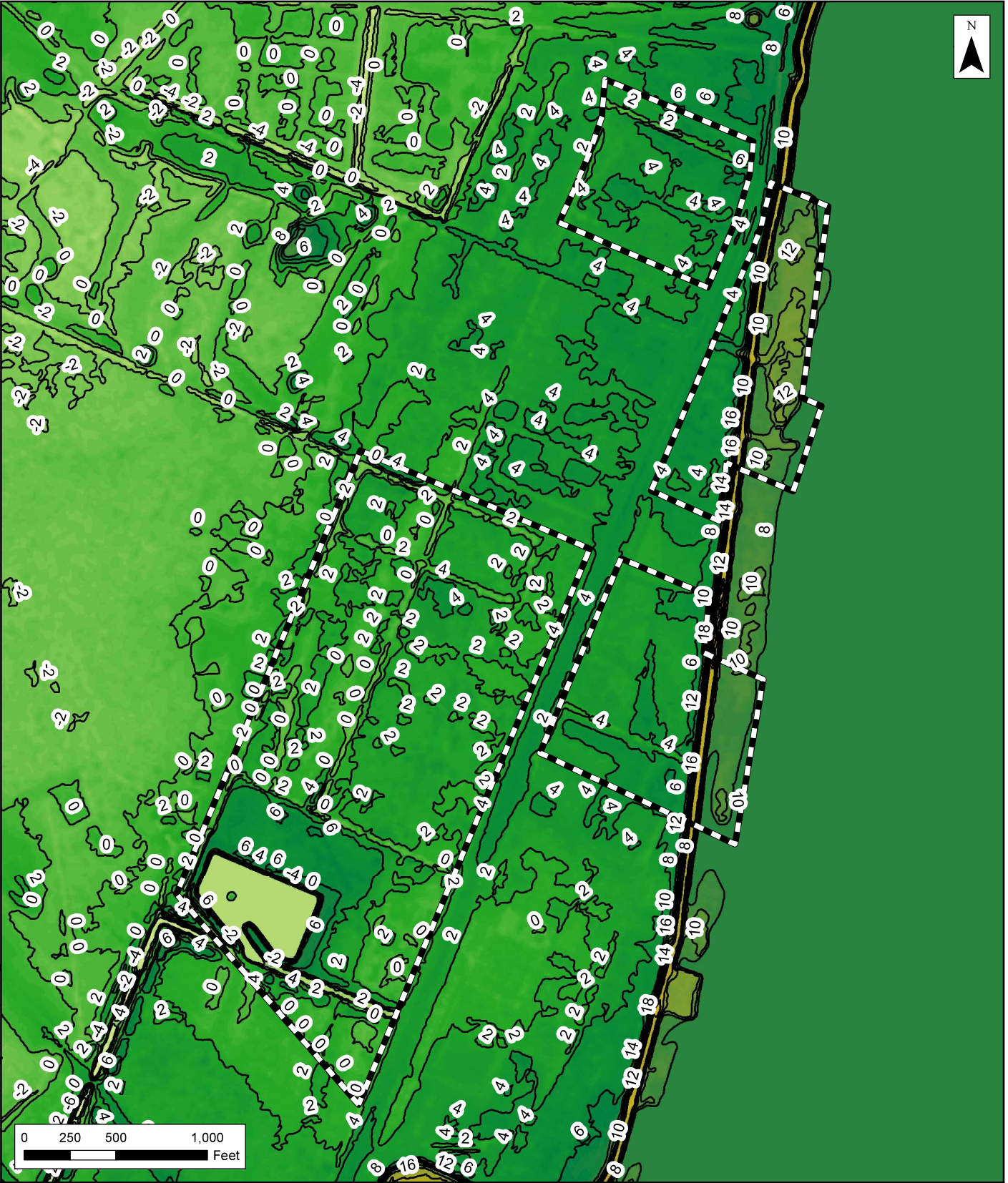
-  Property
-  C-2: General Commercial
-  I-2: Light Industrial
-  I-3: Heavy Industrial

Notes:
 Zoning determination confirmed with Plaquemines Parish Planning and Zoning Superintendent.
 ERM correspondence provided in Appendix E.
 Imagery Basemap via ArcGIS Online.

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

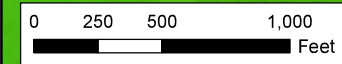
Figure 3
Zoning Map
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana








Notes:
 Elevation model based on LiDAR data from LSU Atlas.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 4
LiDAR Elevation Model
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana







-  Property
-  Annual 1% Flood Chance (100-year Floodplain)
-  Annual 0.2% Flood Chance (500-year Floodplain)

Notes:
 Flood zone data provided by FEMA
 (<https://www.fema.gov>).
 Imagery Basemap via ArcGIS Online.

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 5
FEMA Flood Zones
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



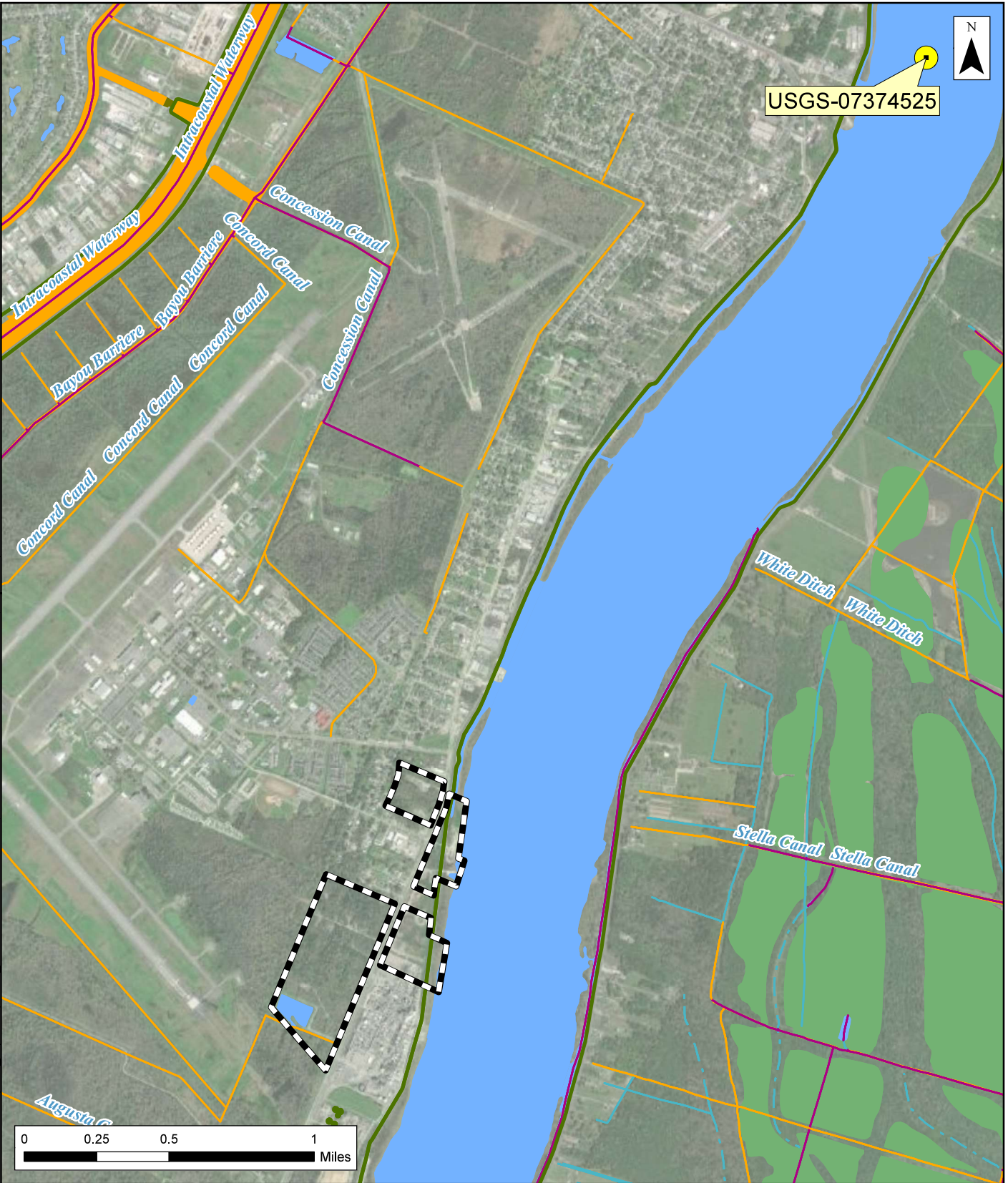
-  Property
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Riverine

Notes:
 National Wetlands Inventory data
 provided by U.S. Fish & Wildlife Service.
 Imagery Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 6
USFWS National Wetlands Inventory
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

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- | | | | |
|--|--------------|--|-----------------------------|
| | Property | | USGS Monitoring Site |
| | Canal/Ditch | | Line |
| | Dam/Weir | | Canal/Ditch |
| | Stream/River | | Artificial Path |
| | Lake/Pond | | Stream/River - Perennial |
| | Reservoir | | Stream/River - Intermittent |
| | Swamp/Marsh | | |

Notes:
 Hydrography data from the USGS National Map Viewer.
 USGS monitoring site from National Water Quality Monitoring Council Water Quality Portal (<http://waterqualitydata.us>).
 Imagery Basemap via ArcGIS Online.

Figure 7
Surface Water Features
 Hero Lands Company, L.L.C. vs. Chevron U.S.A. Inc., et al. Stella Oil & Gas Field Plaquemines Parish, Louisiana



LDEQ Drainage Basin Subsegment #020601
 Intracoastal Waterway - From Bayou Villars to Mississippi River (Estuarine)

Designated Uses
 A - Primary Contact Recreation
 B - Secondary Contact Recreation
 C - Fish and Wildlife Propagation

Selected Numerical Criteria
 Chloride - N/A
 TDS - N/A

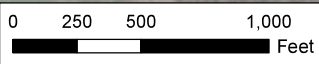
020601



070301

LDEQ Drainage Basin Subsegment #070301
 Mississippi River - From Monte Sano Bayou to Head of Passes

Designated Uses
 A - Primary Contact Recreation
 B - Secondary Contact Recreation
 C - Fish and Wildlife Propagation
 D - Drinking Water Supply

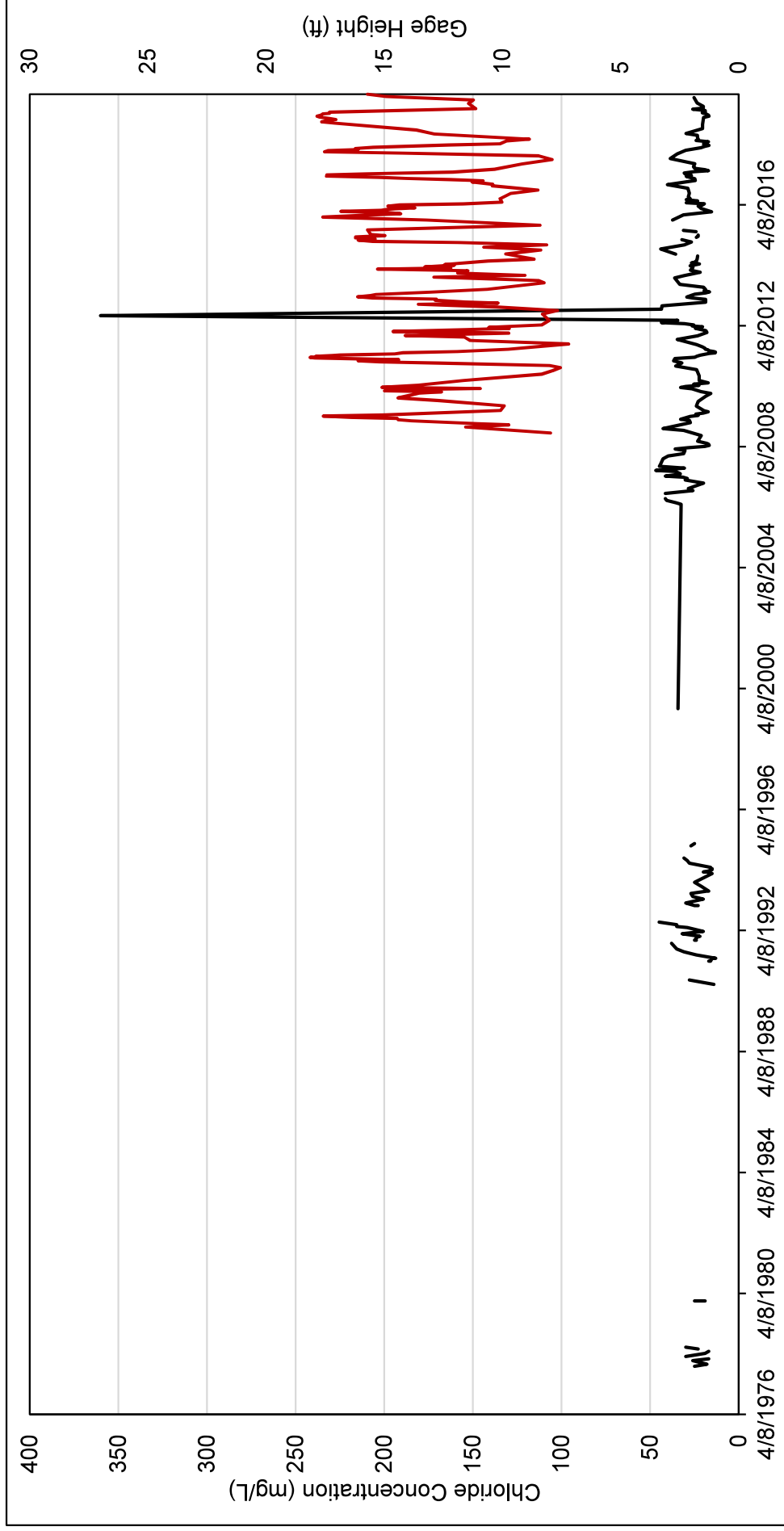
Selected Numerical Criteria
 Chloride - 75 mg/L
 TDS - 400 mg/L



-  Property
-  LDEQ Drainage Basin Subsegment

Notes:
 Subsegment data from LDEQ
 (<http://www.deq.louisiana.gov/portal>).
 Imagery Basemap via ArcGIS Online.

Figure 8
LDEQ Drainage Basin Subsegments
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

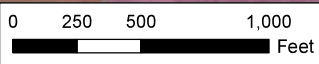


— Chloride
 — Gage Height

Figure 9
Mississippi River Gage Height and Chloride
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

Notes:
 Data from <https://waterdata.usgs.gov/nwis>
 Site: USGS 07374525 Mississippi River at Belle Chasse, LA

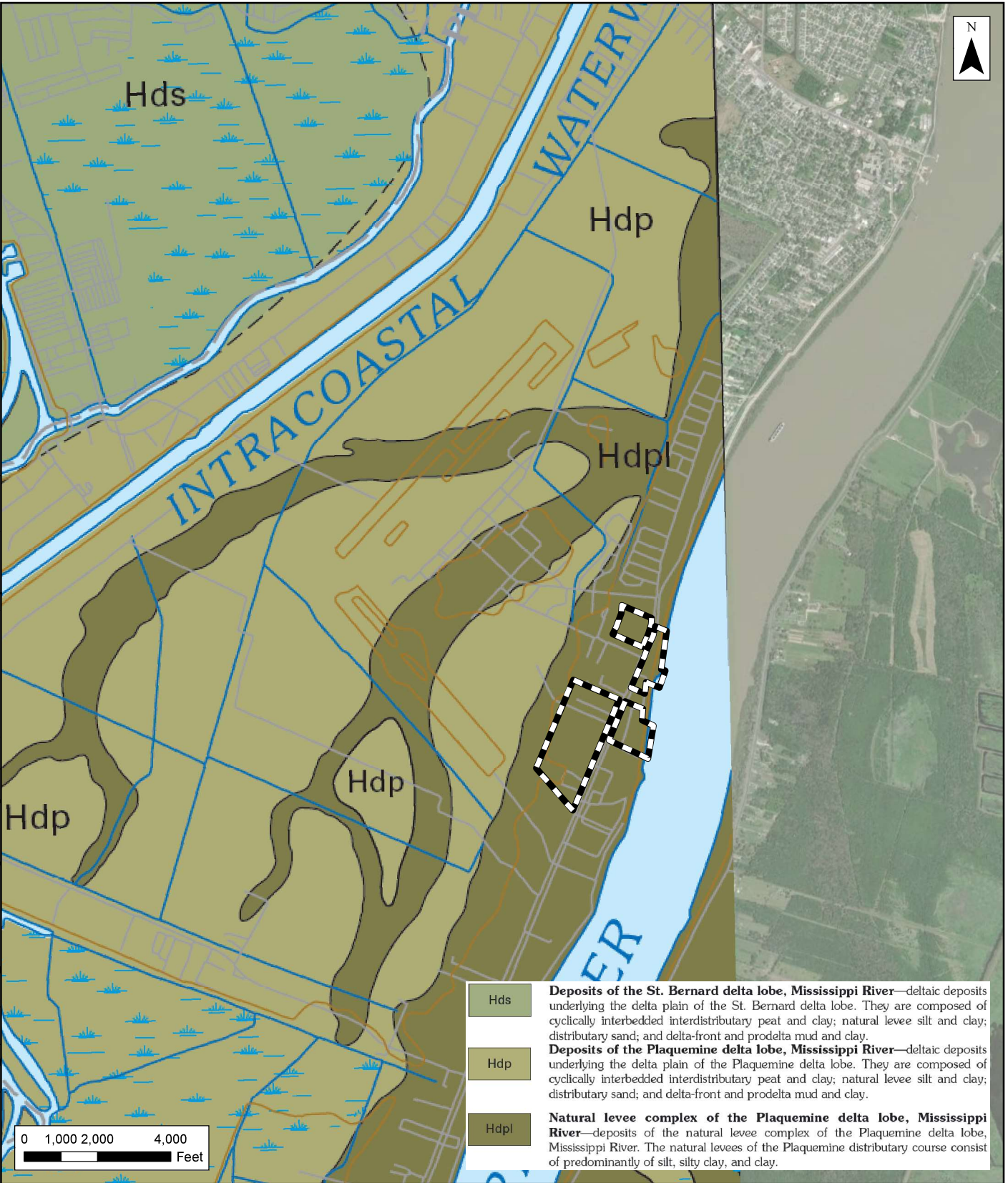




- Property
- CV - Carville, Cancienne, & Schriever soils
- Cm - Cancienne silt loam
- Ra - Rita mucky clay
- Sh - Schriever silty clay loam
- Sk - Schriever clay
- Ub - Urban land
- Va - Vacherie silt loam
- W - Water

Notes:
 Soil data from USDA Soil Data Mart
 (<http://soildatamart.nrcs.usda.gov>).
 Imagery Basemap via ArcGIS Online.

Figure 10
USDA Surface Soil Types
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

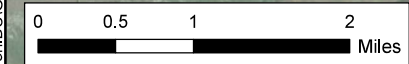
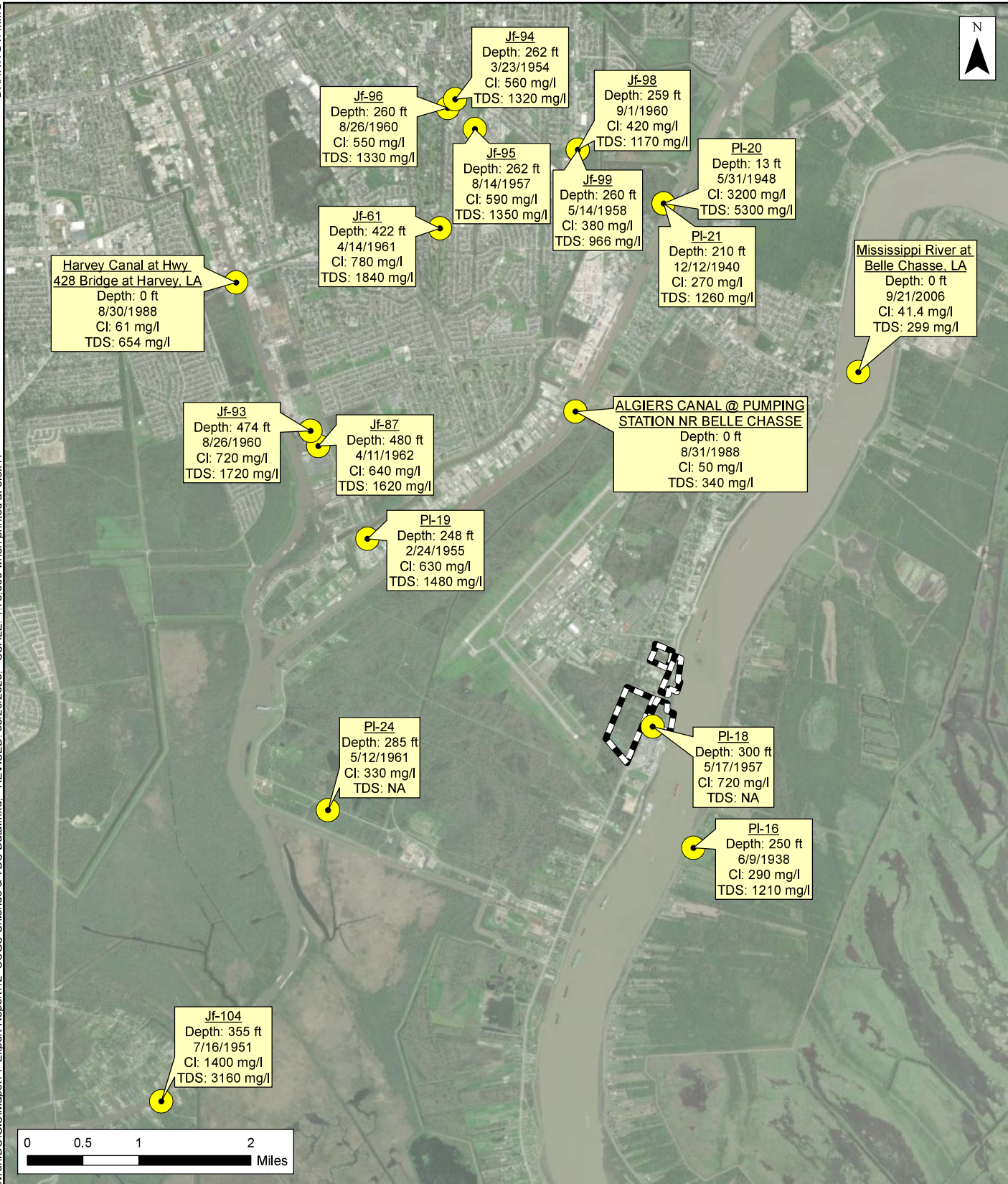


Hds	Deposits of the St. Bernard delta lobe, Mississippi River —deltaic deposits underlying the delta plain of the St. Bernard delta lobe. They are composed of cyclically interbedded interdistributary peat and clay; natural levee silt and clay; distributary sand; and delta-front and prodelta mud and clay.
Hdp	Deposits of the Plaquemine delta lobe, Mississippi River —deltaic deposits underlying the delta plain of the Plaquemine delta lobe. They are composed of cyclically interbedded interdistributary peat and clay; natural levee silt and clay; distributary sand; and delta-front and prodelta mud and clay.
Hdpl	Natural levee complex of the Plaquemine delta lobe, Mississippi River —deposits of the natural levee complex of the Plaquemine delta lobe, Mississippi River. The natural levees of the Plaquemine distributary course consist of predominantly of silt, silty clay, and clay.

Property

Notes:
 New Orleans, Louisiana 30 x 60 Minute Geologic Quadrangle Map (2011) from LSU.
 Imagery Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 11
New Orleans Geologic Quadrangle Map
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

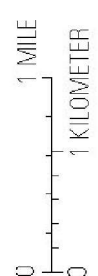
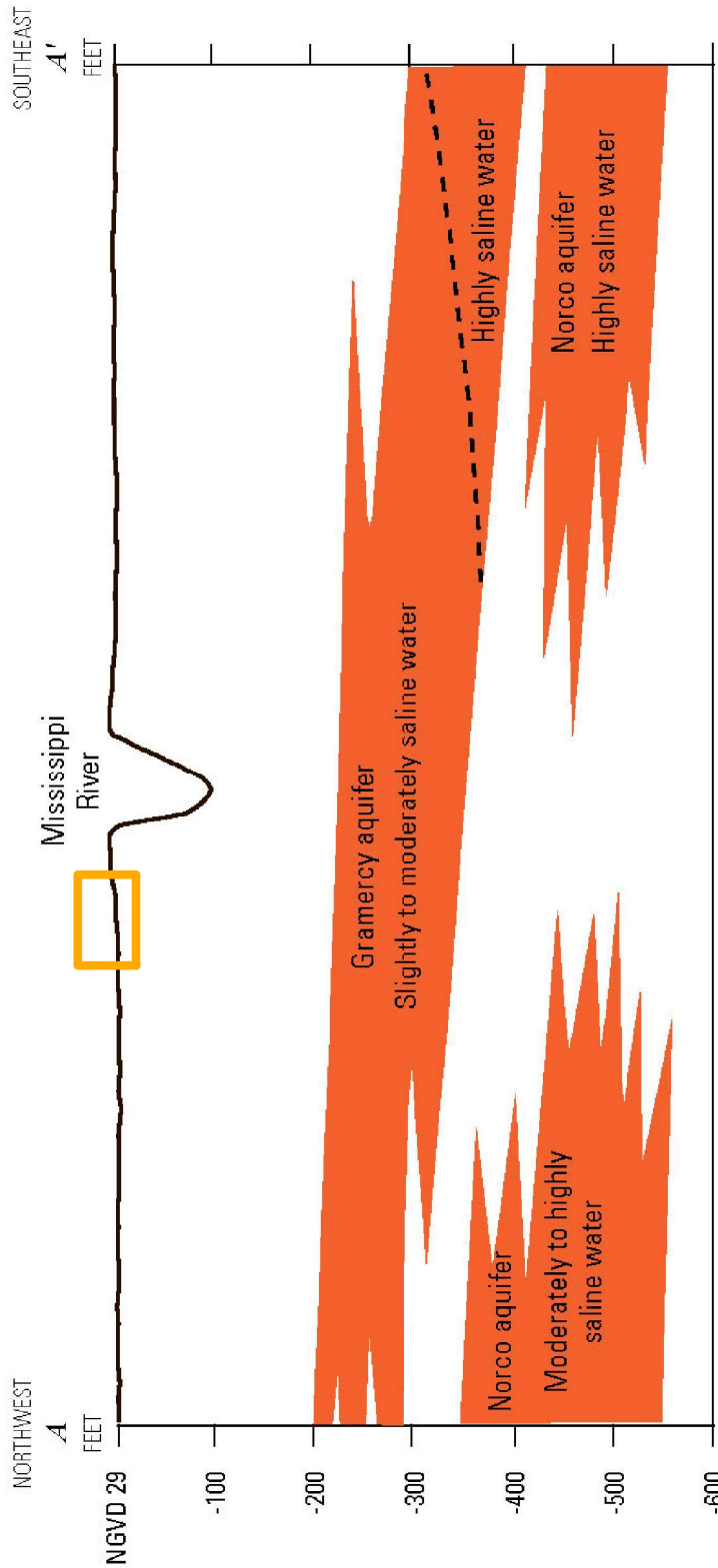


- Property
- USGS Water Quality Sample Location

Notes:
 USGS water quality data from National Water Quality Monitoring
 Council Water Quality Portal (<http://waterqualitydata.us>).
 Imagery Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 12
USGS Chloride & TDS Data
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

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EXPLANATION	
	Mostly clay and silt
	Saltwater in sand

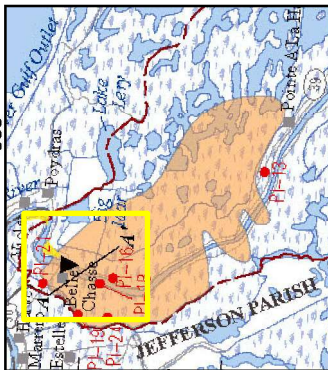


Figure 13
Generalized Aquifer Cross Section
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc. et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

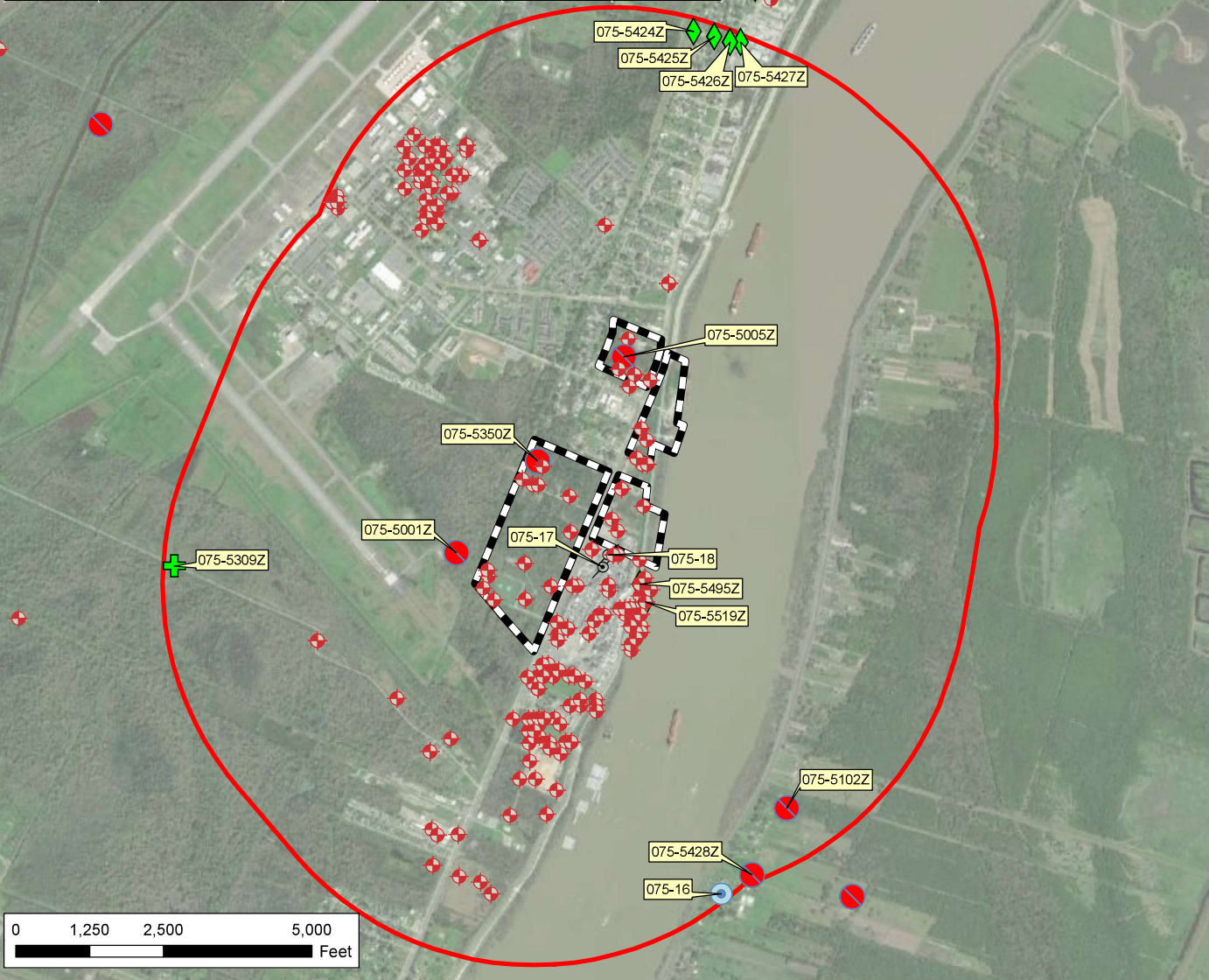
Approximate Surface Extent of Hero Lands Property

Note:
 Generalized northwest-to-southeast aquifer cross section in northern Plaquemines Parish, Louisiana. Vertical datum is National Geodetic Vertical datum of 1929 (NGVD 29). Vertical scale greatly exaggerated. (modified from Rollo, 1962).
 Inset: A-A' Marks location of Generalized Geologic Cross Section.
 Base modified from U.S. Geological Survey digital data.

DRAWN BY: MMG

P:\Projects\0494255 Hero Lands v. Chevron.DU\GIS\Maps\14 Expert Report\14 LDNR Registered Water Wells.mxd, REVISED: 09/02/2020, SCALE: 1:34,000 when printed at 8.5x11

Well No.	Owner	Depth (ft)	Geologic Unit	Well Type	Status
075-16	PEREZ, LEANDER	250	112GRMC	Domestic	Abandoned
075-17	CALIFORNIA CHEM	798	11200NWM	Test Hole	P&A
075-18	CALIFORNIA CHEM	300	112GRMC	Test Hole	P&A
075-5001Z	GRAHAM EXPLOR	320	112GRMC	Rig Supply	P&A
075-5005Z	GRAHAM EXPLOR	345	112GRMC	Rig Supply	P&A
075-5102Z	NOEX	370	112GRMC	Rig Supply	Active
075-5309Z	TOUPS, IRBY	320	0	Irrigation	Active
075-5350Z	STELLA O & G	260	11111111	Rig Supply	P&A
075-5424Z	PL PUBLIC WORKS	15	111NORLC	Piezometer	Active
075-5425Z	PL PUBLIC WORKS	15	111NORLC	Piezometer	Active
075-5426Z	PL PUBLIC WORKS	15	111NORLC	Piezometer	Active
075-5427Z	PL PUBLIC WORKS	15	111NORLC	Piezometer	Active
075-5428Z	SANDALWOOD EXPL	300	112GRMC	Rig Supply	P&A
075-5495Z	CHEVRON ORONITE	18	0	Piezometer	P&A
075-5519Z	CHEVRON ORONITE	15	0	Piezometer	Active



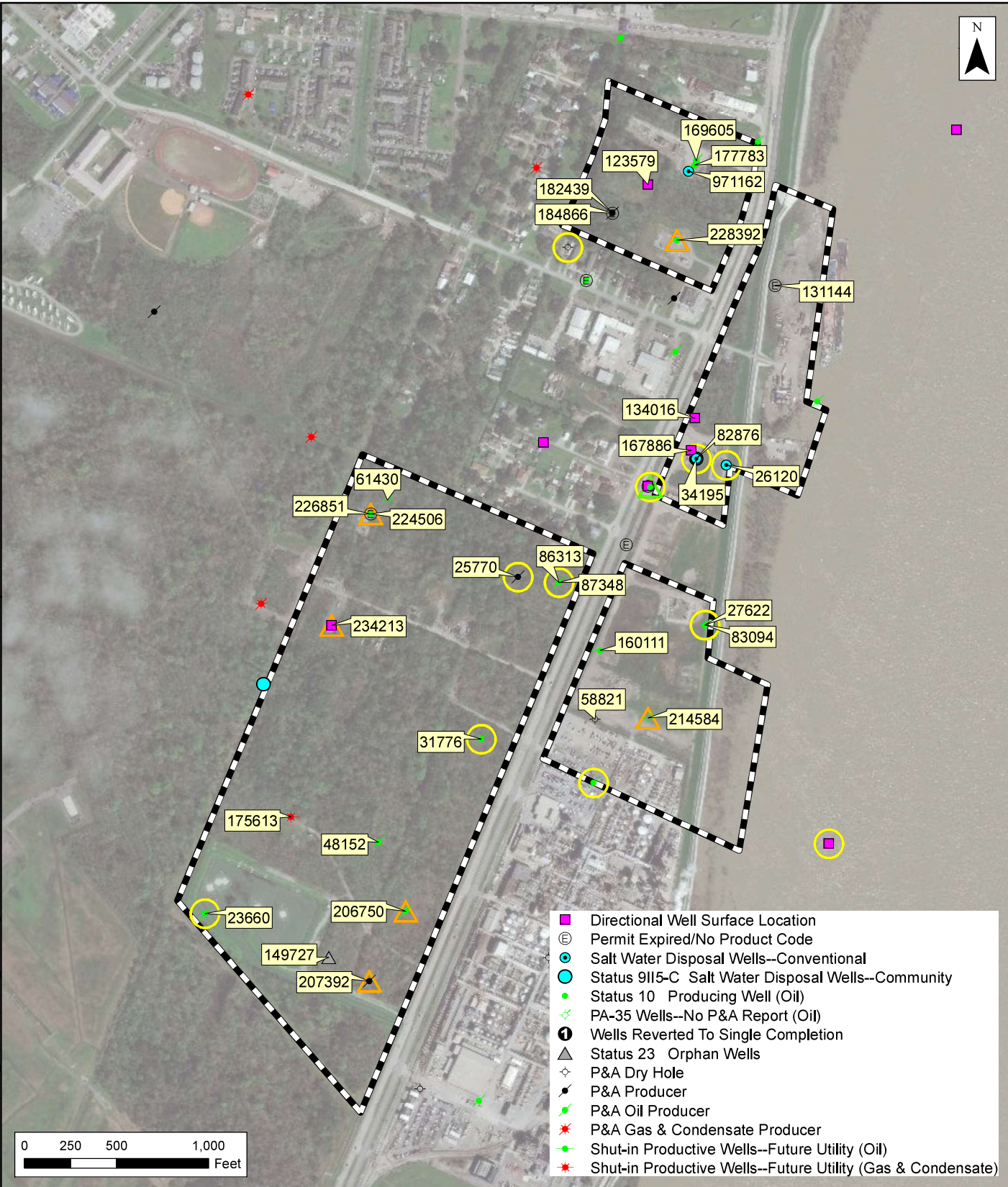
- Property
- 1 Mile Radius
- Bore hole/Test Hole
- Domestic
- Industrial
- Irrigation/Aquaculture/Livestock
- Monitor/Observation
- Piezometer
- Rig Supply
- Heat Pump

Notes:
 Water well data from sonris (<http://sonris.com>).
 Monitoring wells displayed on map, but not labeled on listed on the table.
 Imagery Basemap via ArcGIS Online.

Figure 14
LDNR Registered Water Wells
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc. et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana

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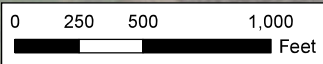
Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N





- Property
- Reserve Pit
- Test Pit
- Wells Operated by Unocal and/or Chevron

Notes:
 Well data from sonris (<http://sonris.com>).
 Imagery Basemap via ArcGIS Online.
 Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 15
LDNR Registered Oil & Gas Wells & Pit Locations
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc. et al.
 Stella Oil and Gas Field
 Plaquemines Parish, Louisiana



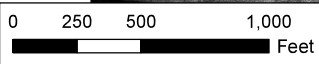
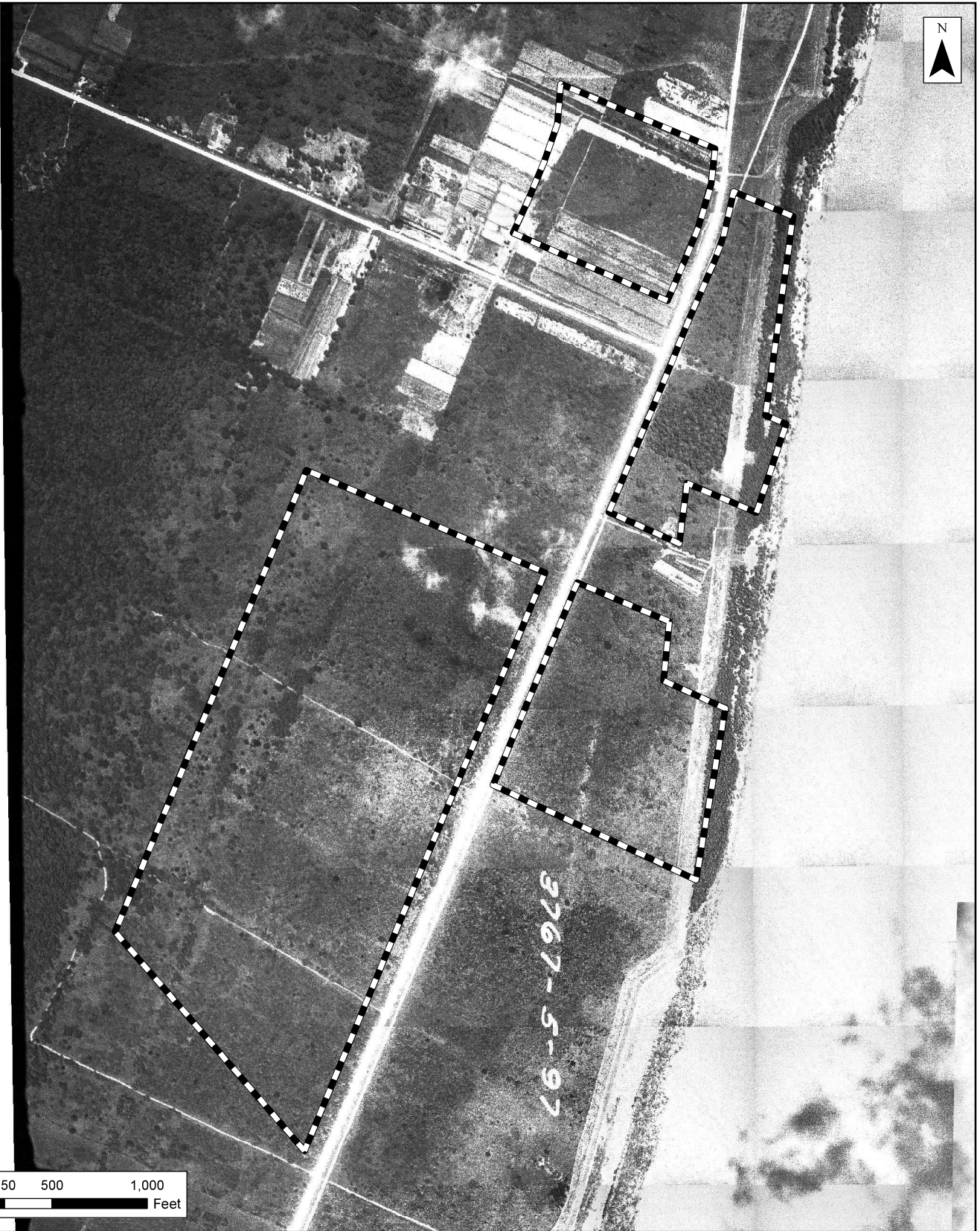
-  Property
-  Natural Gas Pipeline

Notes:
 Pipeline data provided by REXTAG.
 Imagery Basemap via ArcGIS Online.

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 16
Underground Pipelines
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



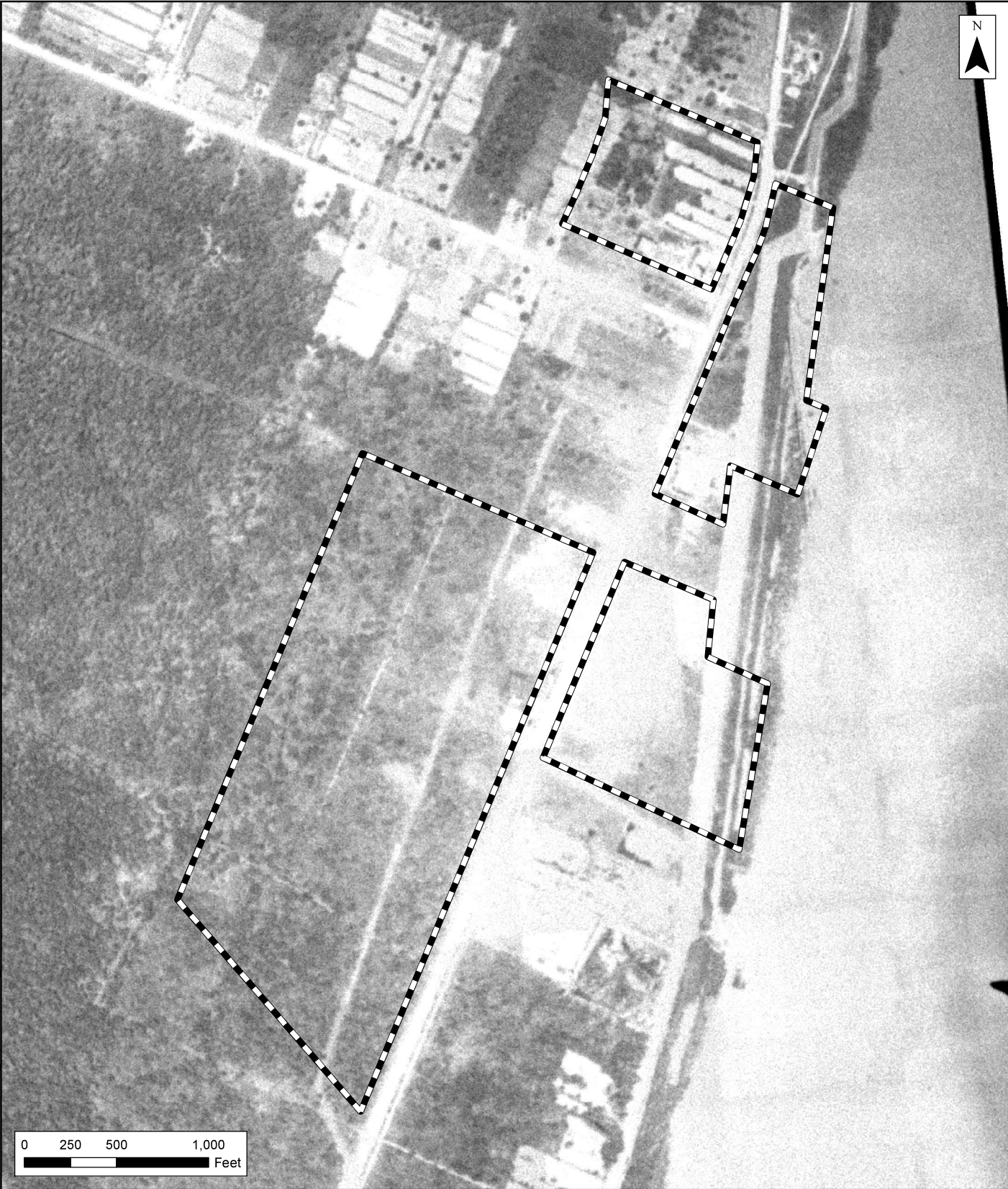


 Property

Figure 17
1936 Aerial

Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
Plaquemines Parish, Louisiana

Notes:
August 1, 1939 aerial photo from P2ES.
Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



 Property

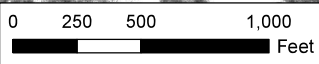
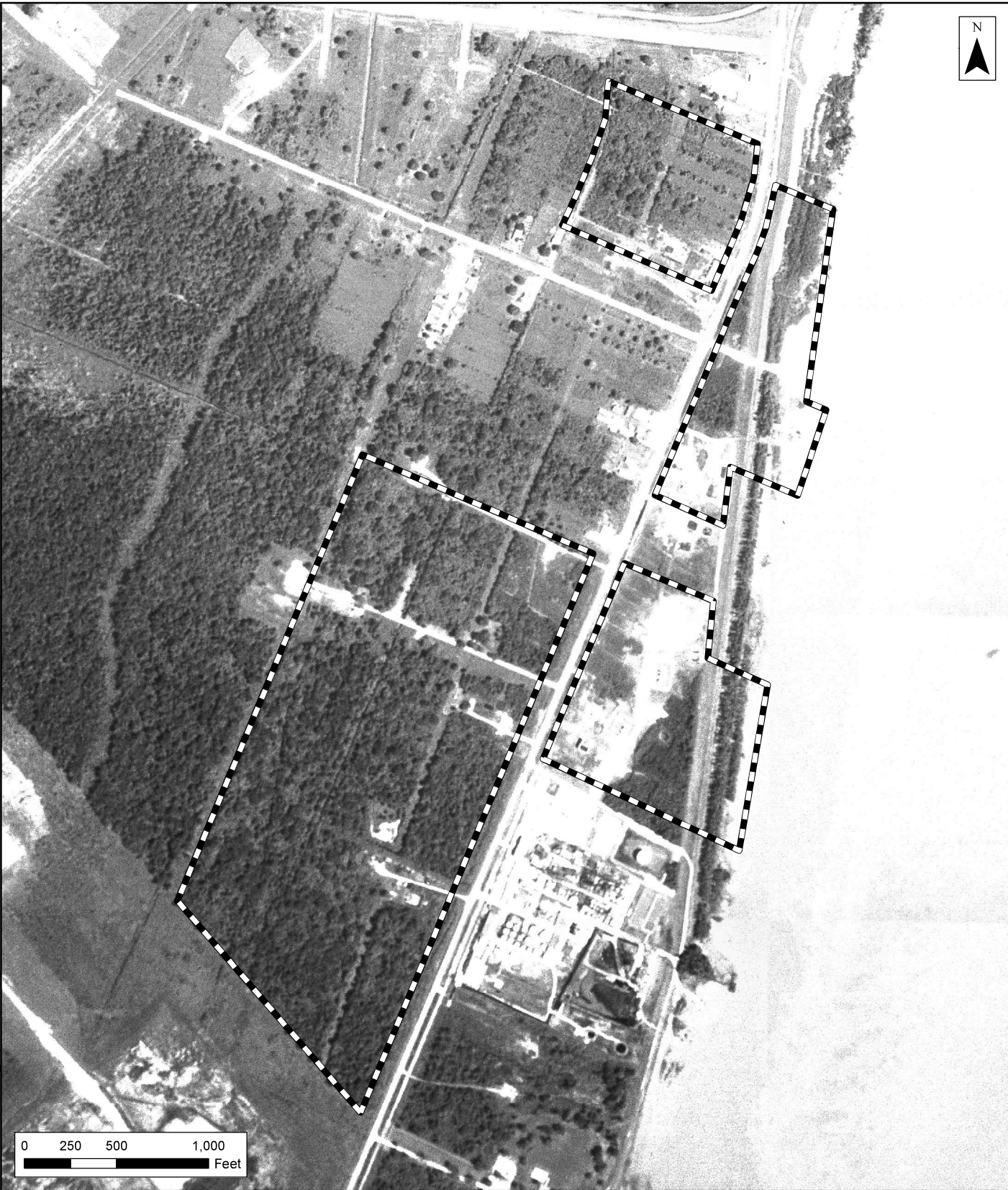
Figure 18
1951 Aerial

Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
Plaquemines Parish, Louisiana

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Notes:
May 3, 1951 aerial photo from P2ES.

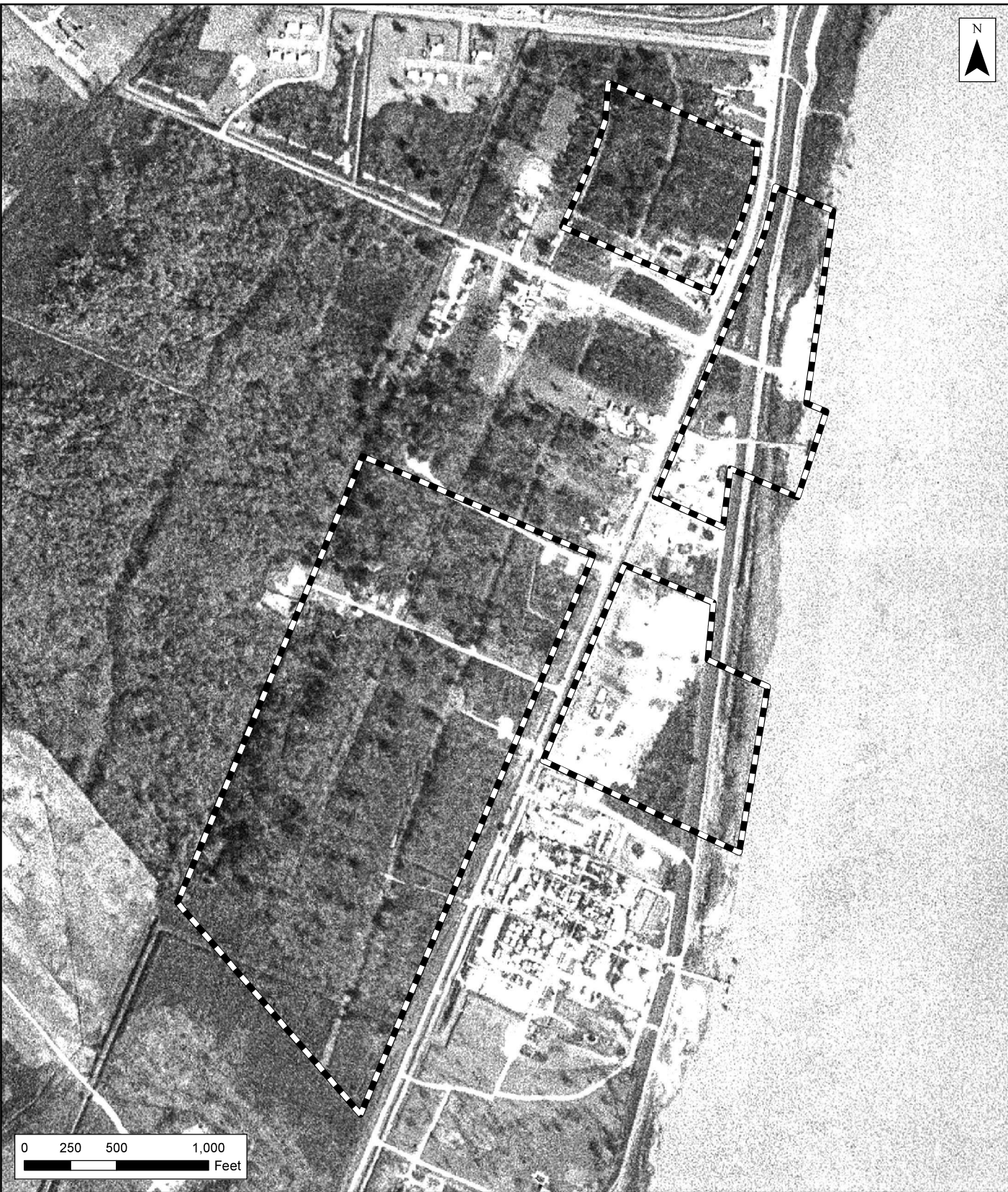
Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



 Property

Figure 19
1958 Aerial

Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
Plaquemines Parish, Louisiana



 Property

Figure 20
1965 Aerial

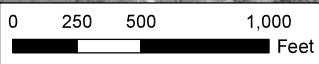
Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
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Plaquemines Parish, Louisiana

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ERM

Notes:
January 19, 1965 aerial photo from P2ES.
Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



 Property

Notes:
 November 8, 1972 aerial from USGS Earth Explorer
 (<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 21
1972 Aerial
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



 Property

Figure 22
1973 Aerial

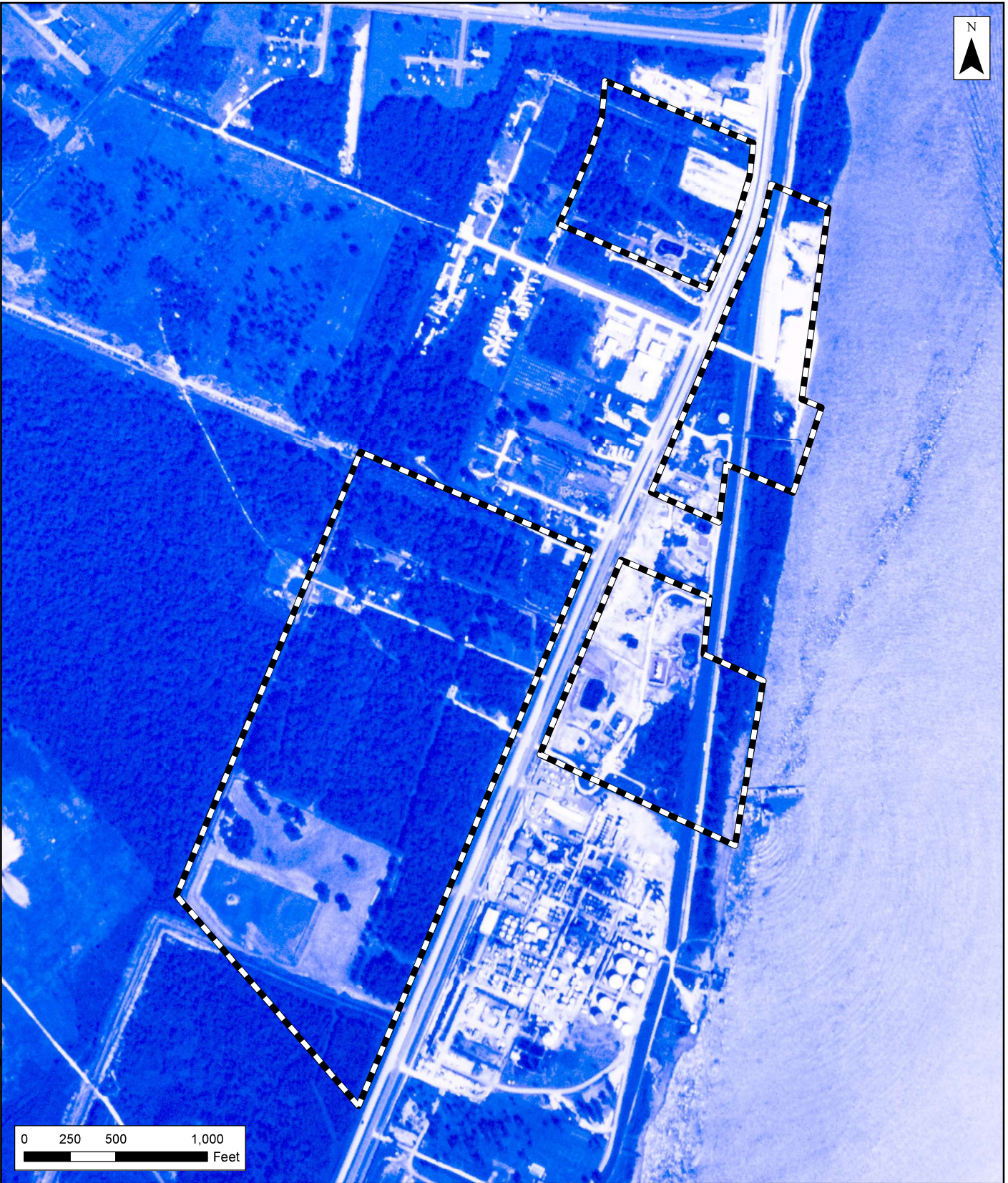
Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
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Notes:
January 15, 1973 aerial from USGS Earth Explorer
(<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



 Property

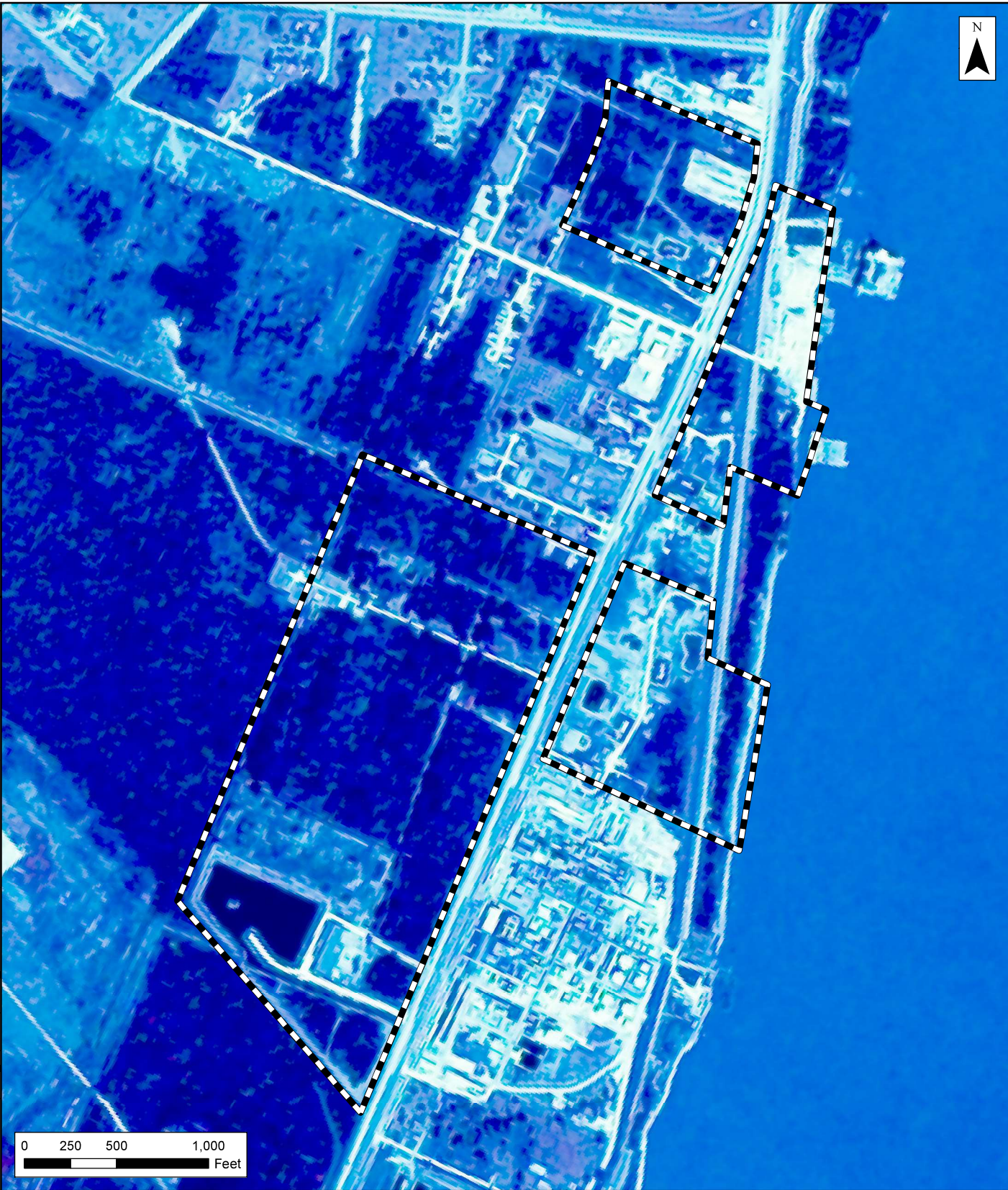
Figure 23
1974 Aerial

Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
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Notes:
October 2, 1974 aerial from USGS Earth Explorer
(<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N



 Property

Figure 24
1975 Aerial

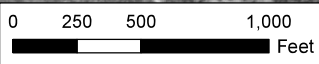
Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
Plaquemines Parish, Louisiana

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Notes:
October 21, 1975 aerial from USGS Earth Explorer
(<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

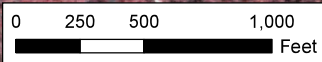


 Property

Notes:
 April 1, 1978 aerial from USGS Earth Explorer
 (<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 25
1978 Aerial
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



 Property

Figure 26
1982 Aerial

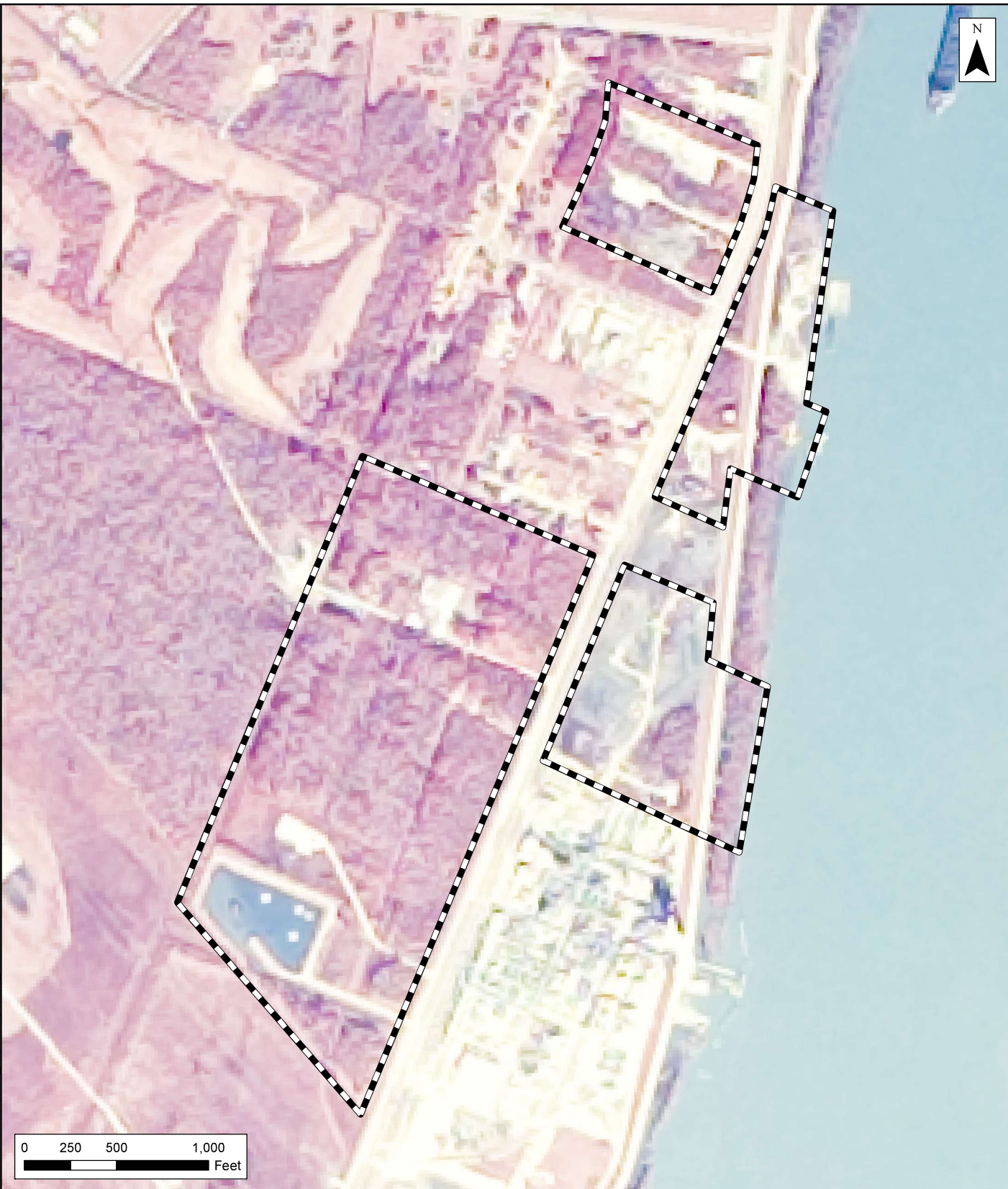
Hero Lands Company, L.L.C. vs.
Chevron U.S.A. Inc., et al.
Stella Oil & Gas Field
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Notes:
November 13, 1982 aerial from USGS Earth Explorer
(<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

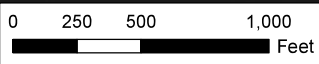


 Property

Notes:
 December 14, 1985 aerial from USGS Earth Explorer
 (<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 27
1985 Aerial
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana



 Property

Notes:
 April 21, 1989 aerial from USGS Earth Explorer
 (<https://earthexplorer.usgs.gov/>)

Source: Esri - ArcGIS Online; NAD 1983 UTM Zone 15N

Figure 28
1989 Aerial
 Hero Lands Company, L.L.C. vs.
 Chevron U.S.A. Inc., et al.
 Stella Oil & Gas Field
 Plaquemines Parish, Louisiana