

US EPA ARCHIVE DOCUMENT

Cultural Resources Assessment of Linear Features

Addendum

Ascend Performance Materials

Chocolate Bayou Plant

C3 Petrochemicals LLC

PDH Project Brazoria County, Texas

Prepared for:



Prepared by:



TRC Environmental Corporation

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Acronyms

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
Ascend	Ascend Performance Materials Texas, Inc.
Atlas	Texas Archeological Sites atlas
C3 Petrochemicals	C3 Petrochemicals, LLC
CAA	Clean Air Act
Facility	Chocolate Bayou Chemical Manufacturing Complex
FM	Farm to Market Road
GHG	Greenhouse Gas
PDH Unit	Propane Dehydrogenation Manufacturing Unit
PSD	Prevention of Significant Deterioration
ROW	Right of way
TRC	TRC Environmental Corporation
TSHPO	Texas State Historic Preservation Officer
USEPA	United States Environmental Protection Agency
USFWS	United States Army Corps of Engineers
WOUS	Waters of the United States

Introduction

C3 Petrochemicals, LLC (C3 Petrochemicals) is planning to build a new propane dehydrogenation manufacturing (PDH) unit (Project) near the city of Alvin, Brazoria County, Texas. The C3 Petrochemicals PDH unit will be located on land owned by and leased from Ascend at its existing Chocolate Bayou chemical manufacturing complex (Facility). The Ascend Facility is located on Farm-to-Market road (FM) 2917, approximately eight miles south of the intersection of Highway 35 and FM 2917.

This new PDH unit will use propane as its raw material, which will be dehydrogenated to produce polymer-grade and chemical grade propylene. This propylene product will be sold and used in existing processes at the adjacent Ascend Facility and distributed to additional customers via pipeline. The Project's air emission sources will primarily consist of a series of heaters and boilers, and a flare. Pursuant to the federal Clean Air Act (CAA), C3 Petrochemicals is seeking a permit under the U.S. Environmental Protection Agency's (USEPA) Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) Program to authorize construction of the Project. As part of the PSD permitting process the USEPA has requested that the applicant include a review of linear features associated with the Project. For the purpose of this review linear features are defined as pipelines and electrical transmission lines that will be constructed for the sole purpose of supplying raw material or power to the Project, or for receiving product from the Project (figure 1).

The linear features were evaluated for their impact on Waters of the United States (WOUS), federally listed Threatened or Endangered species, and essential fish habitat under separate cover. This report will focus on the potential impacts to Cultural Resources. The pipelines that will be built for this Project will have to go through the NEPA permitting/evaluation through (at a minimum) the U.S. Army Corps of Engineers (USACE) and USEPA. During this process the USACE and USEPA will review impacts to WOUS as well as conduct an agency review and obtain approval from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Historic Preservation Office, and the General Land Office of Texas and possibly other agencies. Any impacts to protected resources will be mitigated through the USACE/USEPA permitting process.

Cultural Resources

An archeological site file search was performed by TRC archeologists on February 6, 2014 using the Texas Archeological Sites Atlas (atlas) maintained by the Texas Historical Commission. The file search looked for known Cultural Resources (archeological sites, cemeteries, historical landmarks, National Register of Historic Places, structures, historic districts) previously documented along the linear feature routes or within a one-mile search radius. A windshield survey of the Propane 1 pipeline was conducted on March 21, 2014.

Linear Features

Propane #1 Pipeline

Raw material propane pipeline #1 will be a new pipeline, approximately 36 miles in length, installed on private property outside the PDH Project area (figure 2, 3, and 4). Approximately 70% of the pipeline will be installed in existing pipeline corridors, while approximately 30% of the pipeline will be installed in new corridors. This pipeline will be installed, owned and operated by a third party pipeline company. It will terminate in existing propane storage tanks owned and operated by C3 Petrochemicals on the PDH Project site.

This pipeline will go through federal permitting through (at a minimum) the U. S. Army Corp of Engineers (USACE). This permitting process will include associated environmental and cultural assessments. During this process USACE will review impacts to WOUS as well as conduct an agency review and obtain approval from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Historic Preservation Office, and the General Land Office of Texas. This process will also include the opportunity for public review and comment.

Cultural Resources

Approximately 70% of the pipeline route is within existing, previously disturbed, pipeline ROW. Previous Cultural Resources studies have been conducted as part of the Corps of Engineers permitting process for Clean Water Act permitting for pipeline installation in WOUS. These previously conducted cultural studies found no cultural sites that are eligible for listing on the National Register of Historic Places.

Eight previously conducted projects were identified either along portions of the proposed pipeline or within a 1-mile radius. Table 1 lists the eight projects.

Table 1. Results of Previous Cultural Resource Investigations within a 1-mile Radius of the Propane 1 Pipeline Route.

ID	Date	Agency	By	Comments	Impact by Project
1	December 1997	Private	Unknown	41BO41: Shell Midden, excavated May 12, 1972, Not Eligible; .44 miles west of pipeline.	None, outside of construction ROW
2	Nov 2010	Unknown	HRA Gray & Pape	THC concurred January 10, 2011	None, outside of construction ROW
3	June 1975	USACE, Galveston	Unknown	Starts at Road 208, follows Road 559 and	None, outside of

				north side of Peltier Rd. Negative.	construction ROW
4	June 2005	FERC	R. C. Goodwin & Associates	ENSR International Houston, project planner	None, outside of construction ROW
5	Unknown	Unknown	Unknown	South of Hwy 35 Bypass. No other data.	None, outside of construction ROW
6	March 1, 2004	TxDOT	Mooney	TAC 3347; crosses Road 332.	None, outside of construction ROW
7	June 15, 2007	TX Dept. Criminal Justice	Unknown	TAC 4560; outside and NW; no other data.	None, outside of construction ROW
8	March 2013	USACE, Galveston	SWCA	Seaway Loop; TAC #6308, Enterprise Crude Pipeline	None, outside of construction ROW

A windshield survey was conducted along this pipeline route because approximately 30% of the route is not within an existing maintained pipeline ROW. While approximately 10 miles of the proposed pipeline route (representing four sections, see Table 2) is not within existing ROW, the route will not take the pipeline through undisturbed land. The new ROW will be in areas used for row crops agriculture, hay production, cattle grazing or within the ROW for existing roads. These areas have had disturbance to the surface soils in the past. Representative photographs of these areas are attached (figure 8). Upon securing access rights, the applicant will survey these four new ROW sections for cultural resources prior to construction, in a manner consistent with the standards and guidelines of the Secretary of the Interior, to further verify that historic properties will not be adversely affected by the undertaking (figure 2). The pre-construction cultural resource survey will be conducted in accordance with the terms of a Programmatic Agreement between the applicant, the USEPA, and the Texas State Historic Preservation Officer (TSHPO), with appropriate tribal and Advisory Council on Historic Preservation (ACHP) involvement in the process.

Table 2. Description of the Propane 1 pipeline route that is not within an existing pipeline ROW.

Section	Approximate Length (miles)	General Location	Southern End Coordinates	Northern End Coordinates
1	2.5	2.3 miles east of Brazoria	29 ⁰ 00' 59.42"N, -95 ⁰ 31' 51.53"W	29 ⁰ 02' 18.17"N, -95 ⁰ 31' 40.07"W
2	4.5	3 miles NW of Lake Jackson	29 ⁰ 04' 7.64"N, -95 ⁰ 30' 29.51"W	29 ⁰ 07' 56.79"N, -95 ⁰ 30' 34.76"W
3	2	0.8 mile West of Bailey's Prairie	29 ⁰ 08' 53.43"N, -95 ⁰ 30' 30.97"W	29 ⁰ 10' 33.37"N, -95 ⁰ 30' 18.65"W
4	1	2 miles SW of Holiday Lakes	29 ⁰ 11' 36.29"N, -95 ⁰ 28' 51.57"W	29 ⁰ 12' 08.26"N, -95 ⁰ 28' 28.00"W

Effects Determination

The Project will have no effect on known listed or potentially eligible Cultural Resources for the pipeline sections that are within existing ROW. Prior to construction of the sections of pipeline that will not be within existing ROW, a cultural resource survey will be conducted (figure 2). For the purpose of the Propane 1 Pipeline the Area of Potential Effect (APE) will be a 200 foot wide (100 feet each side of centerline) search area. This equates to an APE of 873 acres. The cultural research methodologies are detailed in the Programmatic Agreement, to which the USEPA, C3P and the State Historic Preservation Office are party. This agreement provides for field surveys, reporting of potential effects, and mitigation if sites eligible for listing are discovered.

Propane #2 Pipeline

Raw material propane pipeline #2 will be a short connecting pipeline to an existing trunk line outside of the Chocolate Bayou site (figure 7). The connecting pipeline will be installed, owned and operated by C3 Petrochemicals. The connecting pipeline will be installed in an existing pipeline corridor partly on Chocolate Bayou site property. The pipeline will terminate at a metering station inside the Chocolate Bayou facility and run above ground via existing pipe racks to existing propane storage tanks owned and operated by C3 Petrochemicals on the PDH Project site.

The propane #2 pipeline will be a short connecting pipeline that will be fully within the currently operating facility and therefore the Project will have no effect on listed or potentially eligible Cultural Resources.

Propane #3 Pipeline

Raw material propane pipeline #3 will be an existing pipeline owned and operated by another company. The pipeline will terminate at a metering station inside the Chocolate Bayou facility and run above ground via existing pipe racks to existing propane storage tanks owned and operated by C3 Petrochemicals on the PDH Project site.

The propane #3 is an existing pipeline and therefore the Project will have no effect on listed or potentially eligible Cultural Resources.

Propylene Pipeline

Product propylene pipeline will be an existing pipeline owned and operated by another company. The pipeline will terminate at a metering station inside the Chocolate Bayou facility and run above ground via existing pipe racks to existing propylene storage tanks owned and operated by C3 Petrochemicals on the PDH Project site.

The propylene pipeline is an existing pipeline and therefore the Project will have no effect on listed or potentially eligible Cultural Resources.

Ethylene Pipeline

Product ethylene pipeline will be an existing pipeline owned and operated by another company. The pipeline will terminate at a metering station inside the Chocolate Bayou facility and run below ground to storage tanks owned and operated by C3 Petrochemicals on the PDH Project site. A short section of the connecting line will be replaced as part of this Project.

The ethylene is an existing pipeline and therefore the Project will have no effect on listed or potentially eligible Cultural Resources.

Hydrogen Pipeline

Product hydrogen pipeline will be a new pipeline to an existing trunk line outside of the Chocolate Bayou site (figure 5 and 6). The connecting pipeline will be installed, owned and operated by a third party. The connecting pipeline will be installed in an existing, previously disturbed pipeline corridor. The pipeline will terminate at a metering station inside the Chocolate Bayou facility and run above ground via existing pipe racks to a pressure swing absorption unit being constructed as part of this Project.

Cultural Resources

No previously recorded Cultural Resources were located along the proposed pipeline route. Three previously conducted cultural resource studies were conducted within the 1-mile search radius.

1. Survey conducted January 1979; no additional information
2. Survey (2004-09-01); TAC #3458; Jameson & Porter are the authors; TxDOT is agency, conducted by PBS&J; THC reviewed 2005-03-10
3. Survey conducted in 1976, considered an "old" project; the agency was USACE; no other information available
4. Survey conducted in 1972; Agency was USACE; considered an "old" project; no other information available.

The pipeline will be 100% located within an existing previously disturbed and maintained ROW. Any buried Cultural Resources, if they were ever present, would have been previously disturbed by past pipeline installations.

Effect Determination

The Project will have no effect on listed or potentially eligible Cultural Resources.

138KV Power Line

An existing 138KV power line which runs across the middle of the PDH construction area will need to be rerouted (figure 7). This route will begin at the existing electrical substation and follow the border of the Chocolate Bayou facility north for approximately 0.61 miles, and then turn southeast into the site for approximately 0.39 miles. This will be constructed in the already developed portion of the Chocolate Bayou site.

The 138KV power line will be a one mile re-route of an existing power line that will be fully within the currently operating facility and therefore the Project will have no effect on listed or potentially eligible Cultural Resources.

Conclusion

Based on the results of Atlas search, desktop review of the route, and field reconnaissance it is TRC's opinion that no impacts to known Cultural Resources will occur. A full NEPA evaluation will be conducted through the USACE/USEPA WOUS permitting process for the Propane 1 and Hydrogen pipelines before they are constructed. The Hydrogen pipeline will be located 100% within an existing previously disturbed pipeline corridor so no Cultural Resources are anticipated to be found. The Propane 1 pipeline is located approximately 70% within an existing previously disturbed pipeline corridor. The remaining approximately 30% of the pipeline that will not be located within a pipeline corridor will be located in previously disturbed areas, such as, row crop agriculture fields, hay fields, cattle pasture, or existing road ROW, and will be surveyed for cultural resources prior to construction in accordance with the previously referenced Programmatic Agreement between the applicant, USEPA and TSHPO. Before construction, an 'unexpected finds' plan will be developed documenting the protocol to be followed should unexpected Cultural Resources be found during construction of the pipelines, and to ensure compliance with the Programmatic Agreement. As previously set forth in this report and the other studies performed to date, the other linear features associated with this Project will not impact cultural resources either, because they are already existing pipelines and/or rights-of-way, or they will be short lines constructed within maintained areas of the operating facility, and therefore no further analysis for these features is warranted.

Principle Investigator:

Elia Perez, M.A.

ELIA PEREZ, M.A.

EDUCATION

M.A., History, University of Texas at El Paso, December 1999

B.A., Anthropology, University of Texas at El Paso, December, 1991 (Minor: History)

PROFESSIONAL REGISTRATION/CERTIFICATIONS

Ms. Perez is currently permitted to perform cultural resource investigations by the Bureau of Land Management, U.S. Forest Service, and/or State in the following states: New Mexico, Texas, Arizona, Kansas, and North Dakota. She has EOD Safety training to work on Fort Bliss, January 2006.

AREAS OF EXPERTISE

Ms. Perez has 15 years of professional experience in:

- Cultural Resource Management: Anthropology (163), Archaeology (164)
- Data Recovery Excavations
- Archaeological Test Excavations
- Site Inventory
- Archaeological Collections Research

REPRESENTATIVE EXPERIENCE

Ms. Perez has over 15 years of experience and progressive responsibility in cultural resource management. She currently serves in the capacity of Office Manager. Additionally, she is a Project Manager for numerous projects associated with the U.S. Army-Directorate of Environment-Conservation Division contract, Fort Bliss, Texas, as well as Texas DOT and the El Paso Water Utilities. Her responsibilities include but are not limited to project management, quality, financial, administrative operations, and staff performance and scheduling.

Cultural Resources Management

Ms. Perez has served as a field technician, field supervisor, field director, and project manager for numerous excavations, test excavations, and survey projects. Her 15 years of professional experience has involved work for federal and state agencies, and private cultural resource management firms in the southwest and northern portions of the United States.

Data Recovery Excavations

Ms. Perez has participated in several data recovery projects as a field technician, field supervisor, and/or Project Manager. These have included numerous individual sites to large multiple site investigations. These have ranged from the prehistoric to historic and into the "Cold War" era. Prehistoric components include Paleoindian, all Archaic Period sequences, and all Formative Period

sequences. Additional experience in data recovery excavation includes southern portions of Arizona, and areas of western Texas, and southwestern New Mexico.

Texas DOT: Archaeological Monitoring of US 85 (Paisano Drive) from 0.065 miles West of Santa Fe Street to 0.144 Miles East of Florence Street – El Paso County, El Paso, TX (Project Archaeologist: 2005)

Ms. Perez served as project archaeologist and assisted in the monitoring of the project. A limited number of historic artifacts were recovered during the project. Archival research was conducted in order to correlate the artifacts recovered to the late 19th and early 20th century period for Downtown El Paso. Ms. Perez co-authored the report and is waiting approval from the Texas Department of Transportation and the Texas Historic Commission.

Texas Department of Transportation: Burned Rock Mound Feature Excavations, Hackberry Creek, 41ED28 – Edwards County, TX (Field Director: 2002)

As a field director/crew chief Ms. Perez and crew conducted the preliminary test excavations to determine the extent of cultural deposits at the prehistoric site.

Data Recovery Plan for Hueco Mountains Archaeological Project (HMAP) UTM 8428, 8429, and 8529 Mitigation, Delivery Order 29 – Fort Bliss, TX (Field Director: 2005)

Ms. Perez served as co-field director for the data recovery and mitigation of several sites located in the Nations East Well Training Area within Fort Bliss military installation. The project focused on spatial patterns in order to expose settlement patterns. A variety of analysis of artifacts was used to determine chronology, cultural affiliation, paleobotanical identification, among others. The sites were a small representation of prehistoric sites recorded within the Nations East Well Training area.

Texas Department of Transportation, Site 41EP4439 Eligibility Testing – El Paso County (Field Director: 2002)

Ms. Perez assisted the project geomorphologist in determining locations for mechanical excavation. She also managed the logistical aspects of the project. The project entailed the testing and mitigation of a prehistoric site. Archival research of maps and previous investigations of the area were also conducted.

Lower Valley Water District Authority and Texas Water Development Board: Archaeological Data Recovery and Monitoring Phase III D-S Sewer Project, El Paso County – San Elizario, TX (Field Director: 2000-2002)

Ms. Perez served as a field director for the monitoring and data recovery excavation of a multiple of sites located within the archaeologically sensitive zone within the San Elizario Historic District. The sites contain prehistoric, pre-presidio, presidio, and Euroamerican cultural affiliations. Ms. Perez also assisted in coordination of scheduling with various contractors.

Randolph Macon's Woman College: Bir Ftouha Field School - Carthage, Tunisia (Field Technician: 1997)

Ms. Perez participated in the Bir Ftouha Field School in Carthage, Tunisia. Extensive trench and stratigraphic excavations on a 4-5th Century A. D. Basilica which yielded multicomponent information. Punic to Byzantine coins, ceramics, and mosaics were collected, and analyzed. Other information conducted included trench profiling and ITS mapping.

University of North Dakota at Grand Forks, The Lake Ilo Project – Killdeer, ND (Field Supervisor 1993, 1994)

Ms. Perez served as a field supervisor in the data recovery excavation of a large Paleo-Indian (Folsom) site. The repairs done to the man-made dams that controlled the water levels of Lake Ilo exposed the site. The site became one of the most important of the region due to the high number of Paleoindian artifacts recovered and analyzed. Ms. Perez also participated in the training of field school students for this project.

Northland Research, Inc., The Heritage Square Historic/Prehistoric Project – Phoenix, AZ (Field Technician: 1994)

Ms. Perez participated in the test excavation, trench profiling, feature mapping and excavation, as well as leading bilingual public awareness tours for the project. The site included important, prehistoric and historic data within the southwest portion of the United States. The historic data yielded remains from the first township of Phoenix, as well as prehistoric information related to the Archaic and Formative Periods.

Northland Research, Inc., The McDowell to Shea Project – Mesa, AZ (Field Technician: 1993)

Ms. Perez participated in the test excavation, trench profiling, feature mapping and excavation of a Hohokam Compound. Investigations conducted yielded information about the geographical area, sedentary as well as seasonal occupation, and burial customs. Ms. Perez participated in the burial excavations and led bilingual public awareness tours for the project.

Fort Bliss military installation, The Eighth Cavalry Stables Historical Project – El Paso, TX (Field Technician: 1993)

Ms. Perez participated in the survey, test excavation, artifact analysis, and research of the area. Information from this project yielded military historical remains of the First Cavalry stationed on Fort Bliss during the early 20th century.

Fort Bliss military installation, The Nations East/Hueco Mountain Project – El Paso, TX (Field Technician: 1992 – 1993)

Ms. Perez served as a field technician in the testing of prehistoric and historic sites, within a 14.0-km² area in the southern portion of the Hueco Bolson, into the Hueco Mountains. This testing resulted in the mitigation of numerous sites. The investigations included controlled surface collections, manual excavations, and

backhoe trenching. Ms. Perez participated in the testing and mitigation of hearth type features and artifact analysis for this project. The sites included important prehistoric and historic data within the Jornada Mogollon.

Fort Bliss Military Installation, The Tobin Well Project – El Paso, TX (Field Technician: 1992)

Ms. Perez served as a field technician and conducted survey, testing, and mitigation of numerous prehistoric sites within the Jornada Mogollon. Test information yielded remains from the Early Archaic Periods, as well as, pit-houses from the Late Archaic to the El Paso Phase. The investigations included controlled surface collections, manual excavations, and defining and mapping site boundaries. Ms. Perez conducted analysis of all collected cultural materials including lithics, ceramics, bone, and flotation analysis. The sites included important prehistoric data within the Jornada Mogollon.

Archaeological Test Excavations

Ms. Perez has conducted numerous test excavations in projects within the New Mexico, Arizona, North Dakota, and Texas areas. The test excavations assisted in determining the eligibility status of numerous prehistoric to historic sites relative to the National Register of Historic Places. These include all of the above mentioned projects and other examples listed below.

Fort Bliss military installation, Testing of Nine Sites on Doña Ana Ranges 48, 49, and 50 – El Paso, TX (Field Director: 2006)

Ms. Perez serves as the field director for the test excavation of nine sites located on Doña Ana Range. Archival research of maps and databases as well as excavations on the nine sites was conducted. Time periods range from the late Archaic to Formative.

Fort Bliss military installation, The Public Outreach Archaeological Field School – El Paso, TX (Field Director: 2001)

Ms. Perez was a co-field director for the project. Ms. Perez assisted in the management, organization, and scheduling of the program. The program was geared towards military families wanting to gain knowledge and experience in an archaeological dig. Students were introduced to basic excavation, laboratory, and mapping methodology. A prehistoric site was the focus of the field school.

Fort Bliss Military Installation, Archaeological Investigations of Seven Historical Sites Within Fort Bliss – El Paso, TX (Field Director: 2001)

Ms. Perez served as field director for the test excavation of seven historic sites located within the cantonment of Fort Bliss Military Reservation. Archival research of maps and buildings was conducted as well as excavations on the seven sites. The time periods ranged from late 19th century to mid 20th century military and ranching activities.

Archaeology Site Inventory

Ms. Perez has participated in several cultural resource inventories in the southwest and northern portions of the United States. These projects consist of the comprehensive inventory of cultural resources, including standing structures; the thorough documentation of such properties on forms and maps; recommendations of National Register of Historic Places eligibility; and completion of summary reports. The inventories varied from large complex surveys of 180 square miles to small undertakings, such as small business developments. Clients include federal, state, and city governments, and private companies. The projects listed below, and those already mentioned, are an example of the several inventories Ms. Perez has participated in as a field technician, field supervisor, and Project Manager.

Brown & Caldwell, Cultural Resource Survey of the Eastside Wastewater Interceptors 4A and 4B – El Paso, TX (Field Supervisor: 2005)

Ms. Perez was a field supervisor in the archaeological survey of two proposed interceptor sewer lines. The survey yielded two prehistoric sites and three isolated prehistoric manifestations. Ms. Perez authored the report.

Kinder-Morgan, El Paso, Texas: Cultural Resource Survey of a 35-acre Parcel for the Proposed Kinder-Morgan East Line Pipeline Looping Project, Segment 1 – El Paso County, TX (Field Supervisor: 2004)

Ms. Perez served as field supervisor and assisted in the survey of the parcel. Isolated prehistoric manifestations were recorded. Modern building debris was also recorded.

TC&B, Cultural Resource Survey for the Loop 375, I-10 to Franklin Mountain State Park Roadway Widening Project – El Paso, TX (Field Supervisor: October 2004)

Ms. Perez served as field supervisor and assisted in the survey of the liner project. Prehistoric isolated manifestations were recorded and one historic bottle fragment was recorded.

BLM, Two APEs on BLM Cross Bar Lands – Amarillo, TX (Field Supervisor: September – October 2004)

Ms. Perez served as field supervisor and assisted in the survey of two parcels located within the Cross Bar Lands on BLM property. No prehistoric or historic cultural material was located. Ms. Perez authored the BLM Negative Report to comply with BLM and Texas Historic Commission regulations.

Brown & Caldwell, Cultural Resource Survey of the Mesa Drain Valley Wastewater Interceptor System – El Paso, TX (Field Supervisor: September 2004)

Ms. Perez was a field supervisor in the archaeological survey of two proposed interceptor sewer lines. The survey did not yield prehistoric or historic cultural deposits.

Doña Ana County, Cultural Resource Survey for Roadway Improvements in Doña Ana County – Rodey, NM (Field Supervisor: June 2004)

Ms. Perez served as field supervisor and assisted in the survey of approximately 80-acres within, and extending beyond, the south half of Rodey, NM. Two sites were recommended for avoidance but road improvements were recommended to continue as these would not affect the site. Ms. Perez authored the short report required by the New Mexico historic preservation office.

Fort Bliss Military Installation, El Paso, Texas: Survey and Testing for NHRP Evaluations of 3 Parcels in the Hellfire Missile Impact Area, McGregor Guided Missile Range – Fort Bliss, TX (Field Director: June 2004)

Ms. Perez served as field director and assisted in the survey and testing of 3 parcels within the McGregor Range, Fort Bliss, Texas. Two prehistoric sites were recorded. Ms. Perez also authored the report.

Cultural Resource Survey of Keystone Business Park Subdivision (16.5 acres) – El Paso County, TX (Field Supervisor: May 2004)

Ms. Perez served as field supervisor and assisted in the survey of the 16.5 acres of the Keystone Business Park Subdivision. The cultural resource investigations did not yield prehistoric or historic deposits. Ms. Perez also authored the short report required by the Texas Historic Commission.

BLM, 2001 Cross Bar Ranch Survey – Amarillo, TX (Field Supervisor: September 2001)

Ms. Perez served as a field supervisor. Duties included survey, site location, recording and mapping of archaeological resources, documentation of subsurface shovel testing, and time sheets for several crewmembers.

Brown & Caldwell, El Paso, Texas: Mesa Drain Valley Interceptors Archaeological Survey – El Paso County, TX (Field Supervisor: 2001)

Ms. Perez was a field supervisor in the archaeological survey of two proposed interceptor sewer lines. The survey yielded only nine isolated prehistoric artifacts.

Carter and Burgess, Inc., El Paso, Texas: Archaeological Survey for a Portion of Interstate Highway 10 North of the Loop 375-I-10 Interchange – El Paso County, TX (Field Supervisor: July 2001)

Ms. Perez assisted in the archaeological survey at the proposed location of highway construction along a portion of Interstate Highway 10 in El Paso County,

Texas. A historic trash deposit was recorded. A mid 20th century time period was assigned to the trash deposit.

Fort Riley, Survey and Shovel Testing of Burn 1, 4, 8, 10-13 – KS (Field Supervisor: March – May 2000)

As a field supervisor with a crew of four, Ms. Perez conducted survey and shovel testing of incidental burn areas within Ft. Riley, Kansas. Ms. Perez also helped to write site descriptions and other general information pertaining to recorded sites within the burn areas.

Fort Bliss military installation, El Paso, Texas: The Doña Ana Range Survey and Site Evaluations in Limited Use Areas A Through N, Fort Bliss – Doña Ana and Otero Counties, NM, Delivery Orders 9 and 17 (Field Technician/Field Supervisor: 1998 – 1999)

Ms. Perez has served as field technician/field supervisor within the Limited Use Areas on the Dona Ana Range. The survey located over 220 sites dating from Paleoindian to the Cold War era.

University of Texas at El Paso, McGregor Range 180 km² Survey, McGregor Range – Fort Bliss, NM (Field Supervisor: 1996 – 1997)

Ms. Perez served as a field supervisor and assisted in the survey of several km² areas within the McGregor Range area. Numerous prehistoric and historic sites were located and plotted on topographic and blue line maps. These sites ranged from the Archaic and Formative Periods to late 19th and 20th century military historic features. Ms. Perez also assisted with the writing of the summary reports and LA forms.

Relaciones, Inc., Mushroom Basin Timber Sale Project – El Paso, Texas (Field Technician: 1994)

As a crew member, participated in the survey of over a 1,000 acres in the Jemez District of the Santa Fe National Forest, Sandoval County, New Mexico. Recorded several prehistoric and historic cultural resource sites and numerous isolated finds.

Volunteer, The Northeast Franklin Mountain Survey – El Paso, Texas (Field Technician: 1993)

Ms. Perez assisted in a volunteer project that recorded site inventories and conducted site descriptions.

Archaeological Collections Research

Ms. Perez has conducted archival research for several projects already mentioned. Historical and prehistorical information has been researched for specific projects and for her graduate ethno-historical investigations that pertained to her Master's thesis. An example of such analysis is presented below and some is listed before under data and test excavations.

Fort Bliss military installation, Evaluation of 27 Homesteads/Ranch Sites Identified in the Tularosa Basin and Hueco Bolson within the Fort Bliss Military Installation – El Paso, Texas (Field Supervisor: 2005)

Ms. Perez assisted in the assessment of 27 homesteads/ranch sites identified as “high impact” areas likely to be affected by future training activities at the installation. Twenty sites were accessed, six sites were inaccessible, and one site could not be located using the available data. The 27 sites are located throughout El Paso County, Texas and Doña Ana and Otero Counties in New Mexico. Ms. Perez co-authored and organized the report.

Texas Department of Transportation, El Paso, Texas: Archeological Assessment and Intensive Field Survey of 7 Proposed Storm Water Detention Basins for the State Highway 20 (Alameda Ave) Rehabilitation Project, From Boone Street to Loop 375 (Americas Ave) TxDOT – El Paso District: CSJ 0002-01-055 (Project Manager: 2005 – 2006)

Ms. Perez served as Principal Investigator and assisted in the archeological survey with shovel testing and backhoe trenching of the proposed detention basins. Only two artifacts were collected and associated with mid-twentieth century American culture. A brief section describing historical events is presented in the report. Ms. Perez co-authored and prepared the report.

Historic Property Survey Report: Proposed Street Widening and Improvement Project, Pershing Avenue and Harding Way, Project No. 01-39, Federal Project No. STPLH 5008 (0058) – City of Stockton, San Joaquin County, California City (Assistant: 2003)

Ms. Perez assisted in the writing of the report. Duties included the update of historic properties forms.

Chronometric and Relative Chronology Project – Fort Bliss, Texas (Research: 1993)

Ms. Perez collected research information on C-14 dates, obsidian hydration dates, as well as the measurements of over 600 projectile points of different prehistoric phases. The purpose of the resultant information was to improve chronological control over archaeological materials. The data also included 1400 radiocarbon dates and 2300 obsidian hydration dates.

Ethno-Historical Research

Ms. Perez focused on the Yaqui Indians of the Sonoran region. The thesis was a discourse analysis between Mexican and American media, and officials in relation to the Yaqui Indians and their contribution to the Mexican Revolution (1910-1920). Research included newspapers from Mexico, United States, and England. Also, the American National Archives were researched for documentation on the Mexican and American officials, and their relations and views towards the Yaqui Indians.

SPECIALIZED TRAINING/QUALIFICATIONS/LANGUAGE

Major environmental regulations with which Ms. Perez has experience include the following:

- National Environmental Policy Act of 1969 (NEPA), as amended (42 USC 4321 et seq.)
- Antiquities Act of 1906, as amended (16 USC 431 et seq.)
- Archaeological and Historic Preservation Act (AHPA) of 1974, as amended (16 USC 469-469c-2)
- Archeological Resources Protection Act (ARPA) of 1979, as amended (16 USC 470aa et. seq.)
- Historic Sites Act of 1935, as amended (16 USC 461 et seq.)
- National Historic Preservation Act (NHPA) 1966, as amended (16 USC 470 et seq.)
- Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, as amended (16 USC 469-469c-2).
- Executive Order 11593 of May 13, 1971, Protection and Enhancement of the Cultural Environment (NEPA)

Ms. Perez has the attribute of being bilingual: Spanish and English.
 Archeological Resources Protection Act (ARPA) Training: June 2006.

SELECTED PUBLICATIONS

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 2002 *The Doña Ana Range Survey and Site Evaluations in Limited Use Areas A Through N, Fort Bliss, Doña Ana and Otero Counties, New Mexico.* TRC Mariah Associates Inc., El Paso, Texas.

Graves, T.B., S. Sitton, E. Perez, G. Smith, V. Provencio, N. Trieweller, T.G. Baugh, B. Boeke, and C. Browning
 2003 *An Archaeological and Geomorphological Assessment of 106 Sites in Limited Use Areas on Maneuver Areas 1 and 2, Otero and El Paso County, Fort Bliss, Texas.* TRC Mariah Associates, Inc., El Paso, Texas.

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Perez, E.

2002 *Phase III D-S Subdivision Collectors, Area T Project in San Elizario, El Paso County, Texas*. TRC, Albuquerque, NM.

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2001 *Archaeological Data Recovery and Monitoring Phase III D-S Sewer Project, El Paso County, Texas*. TRC Mariah Associates, Inc. El Paso, Texas.

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2003. *Archaeological Investigations of Seven Historical Sites within Fort Bliss, Texas*. TRC Environmental, El Paso, Texas.

Perez, E., C. Mercado-McKamy, and S. Yarbrough

2006 *Archeological Assessment and Intensive Field Survey of 7 Proposed Storm Water Detention Basins for the State Highway 20 (Alameda Ave) Rehabilitation Project, From Boone Street to Loop 375 (Americas Ave) TxDOT, El Paso District: CSJ 0002-01-055*. TRC Environmental, El Paso, Texas.

Sitton, S., E. Perez, and B. Boeke

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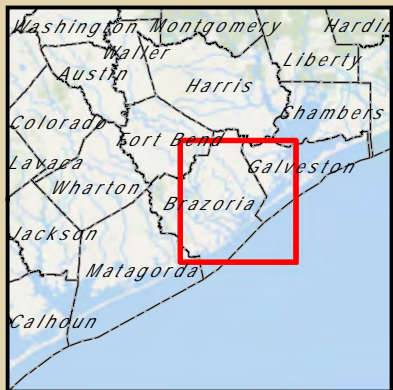
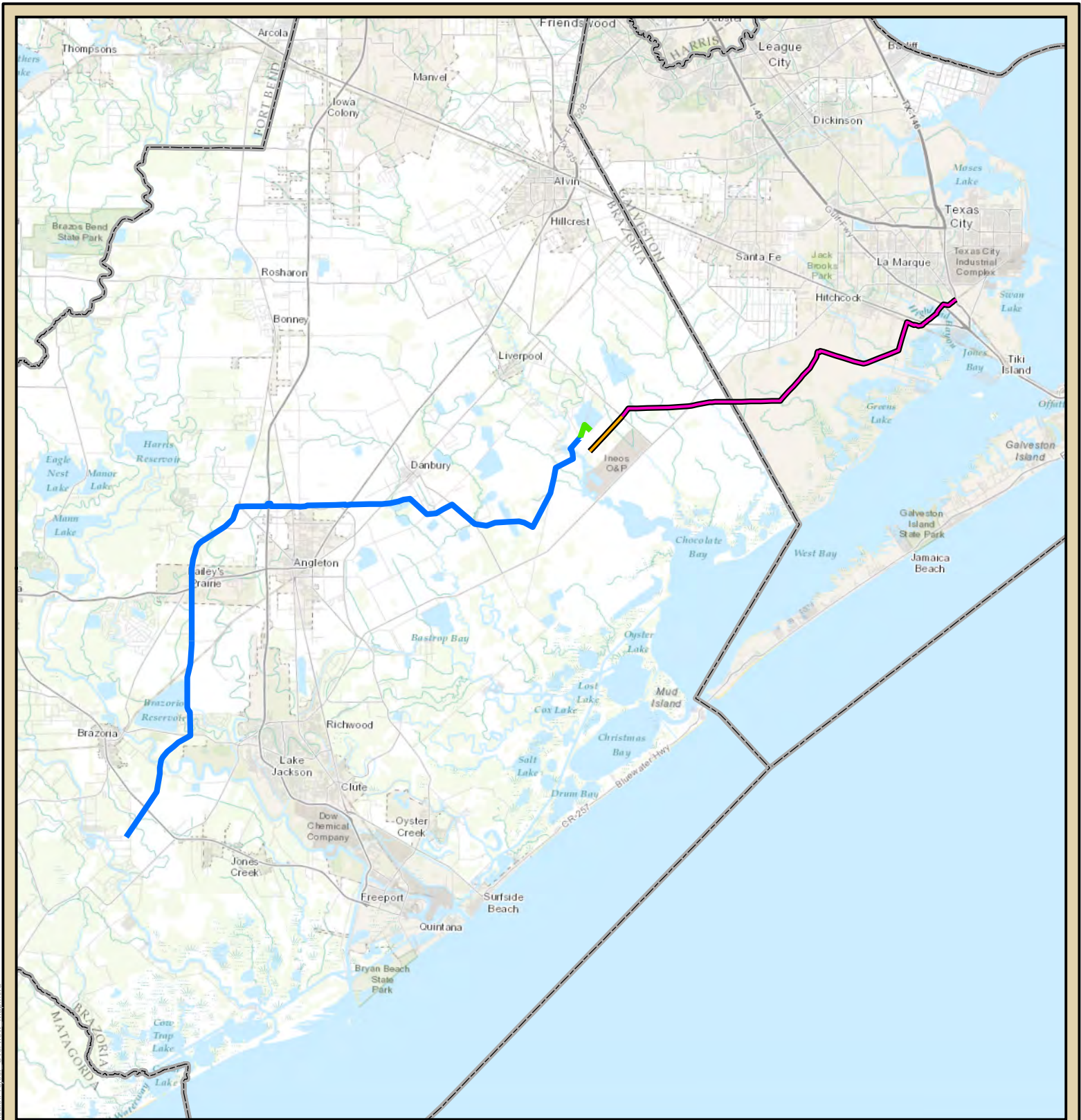
2003 *Historic Property Survey Report: Proposed Street Widening and Improvement Project, Pershing Avenue and Harding Way, City of Stockton, San Joaquin County, California City Project No. 01-39, Federal Project No. STPLH 5008 (0058)*. TRC Environmental, Albuquerque, NM.

TEACHING POSITIONS

University of Texas at El Paso, Peer Assistant, Undergraduate University Seminar, Department of Undergraduate Studies, 1 semester.

University of Texas at El Paso, Teacher's Assistant, U.S. History to present (undergraduate), Department of History, 8 semesters.

Figures



Legend

- 138kV Powerline
- Propane 1 Pipeline
- Propane 2 Pipeline
- Hydrogen Pipeline
- County Boundary

Sources: BING, ESRI



Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS

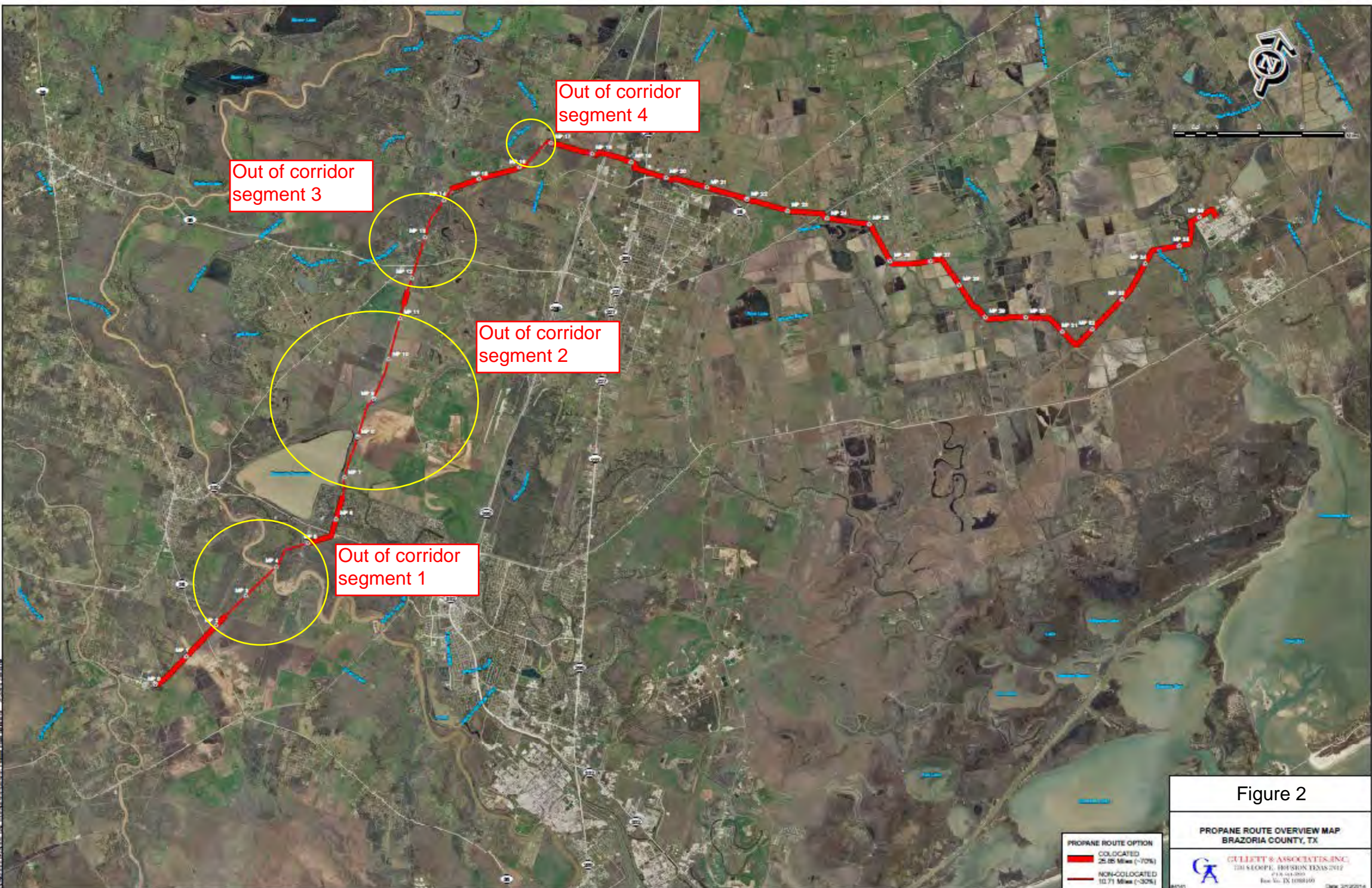
Figure 1
Project Overview Map

Created: 3/27/2014



14 Gabriel Drive
Augusta, ME 04330

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Out of corridor
segment 3

Out of corridor
segment 4

Out of corridor
segment 2

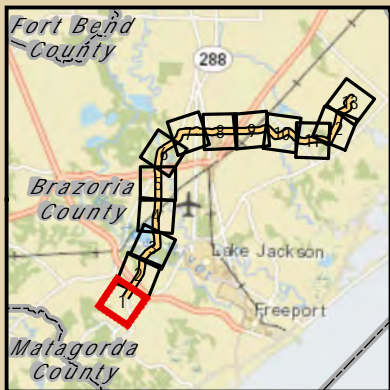
Out of corridor
segment 1

Figure 2

PROPANE ROUTE OVERVIEW MAP
BRAZORIA COUNTY, TX

PROPANE ROUTE OPTION
 COLOCATED
 25.05 Miles (~70%)
 NON-COLOCATED
 10.71 Miles (~30%)

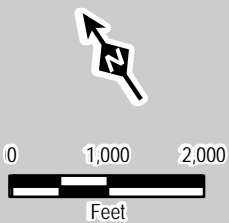
GULLETT & ASSOCIATES, INC.
 130 SCORPE, HOUSTON, TEXAS 77017
 P.O. Box 1000
 Houston, TX 77001-0001
 Date: 2/12/2014



Legend

- Propane 1 Pipeline
- - - County Boundary

Sources: BING, ESRI, Map Coordinate System: NAD 1983 UTM Zone 15N



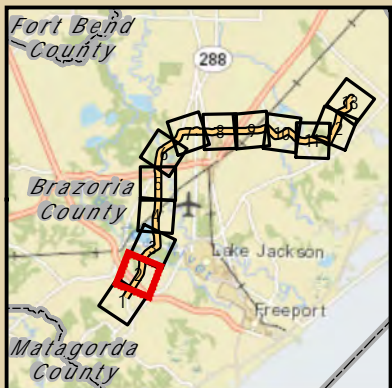
**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

**Figure 3
USGS Map**

Map 1 of 13

Created: 3/27/2014 **TRC** 14 Gabriel Drive
Augusta, ME 04330

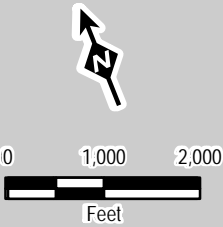
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Legend

- Propane 1 Pipeline
- ▭ County Boundary

Sources: BING, ESRI, Map Coordinate System: NAD 1983 UTM Zone 15N



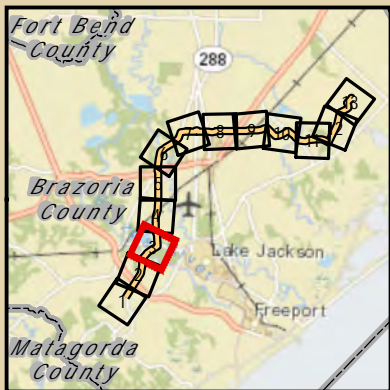
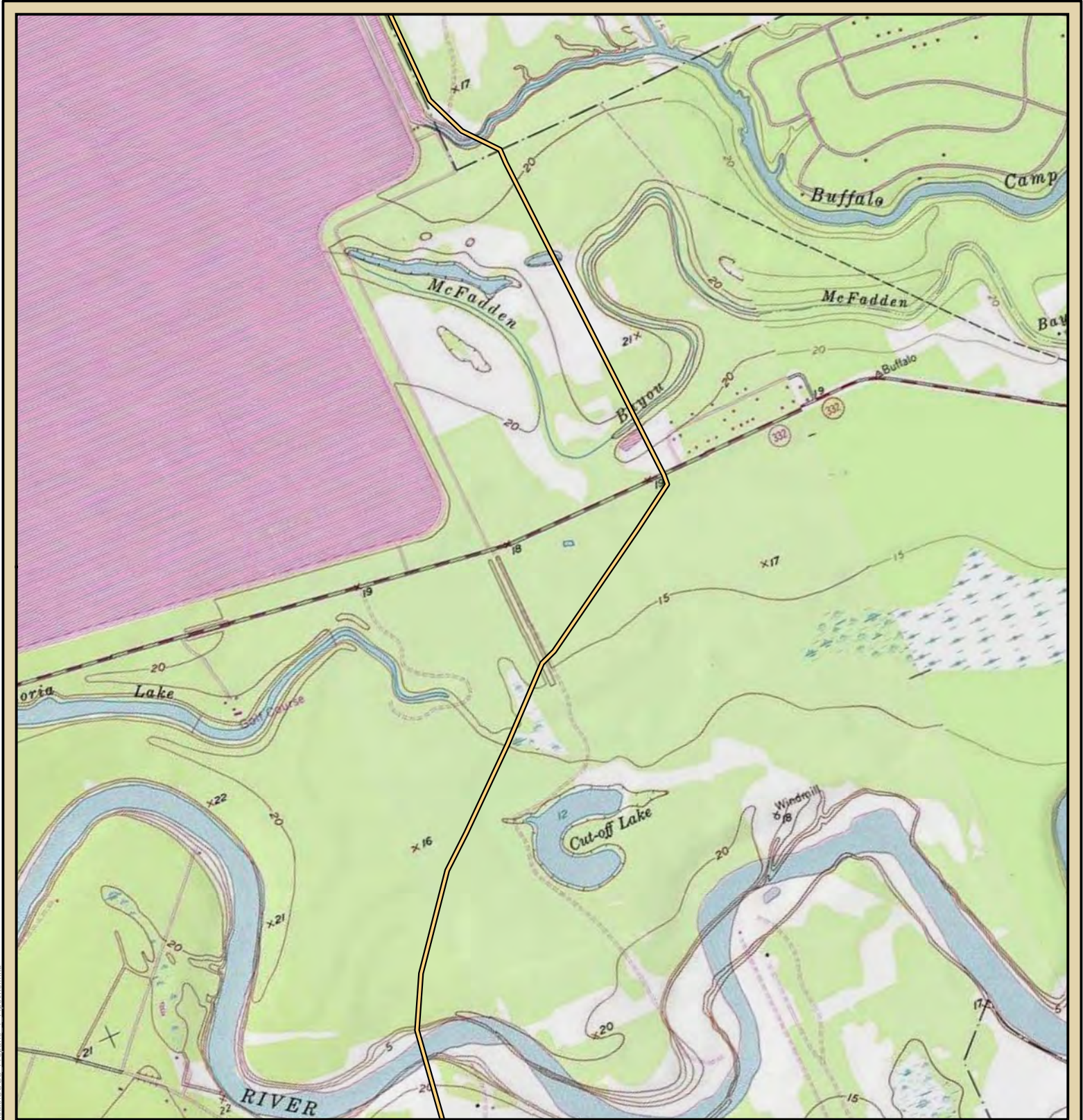
**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

**Figure 3
USGS Map**



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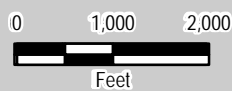
Created: 3/27/2014 14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

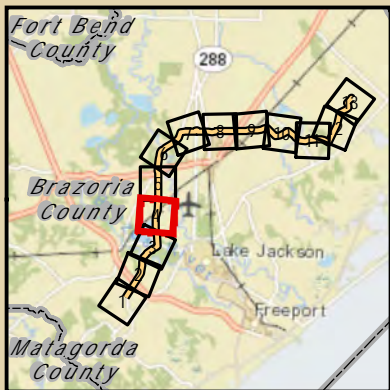
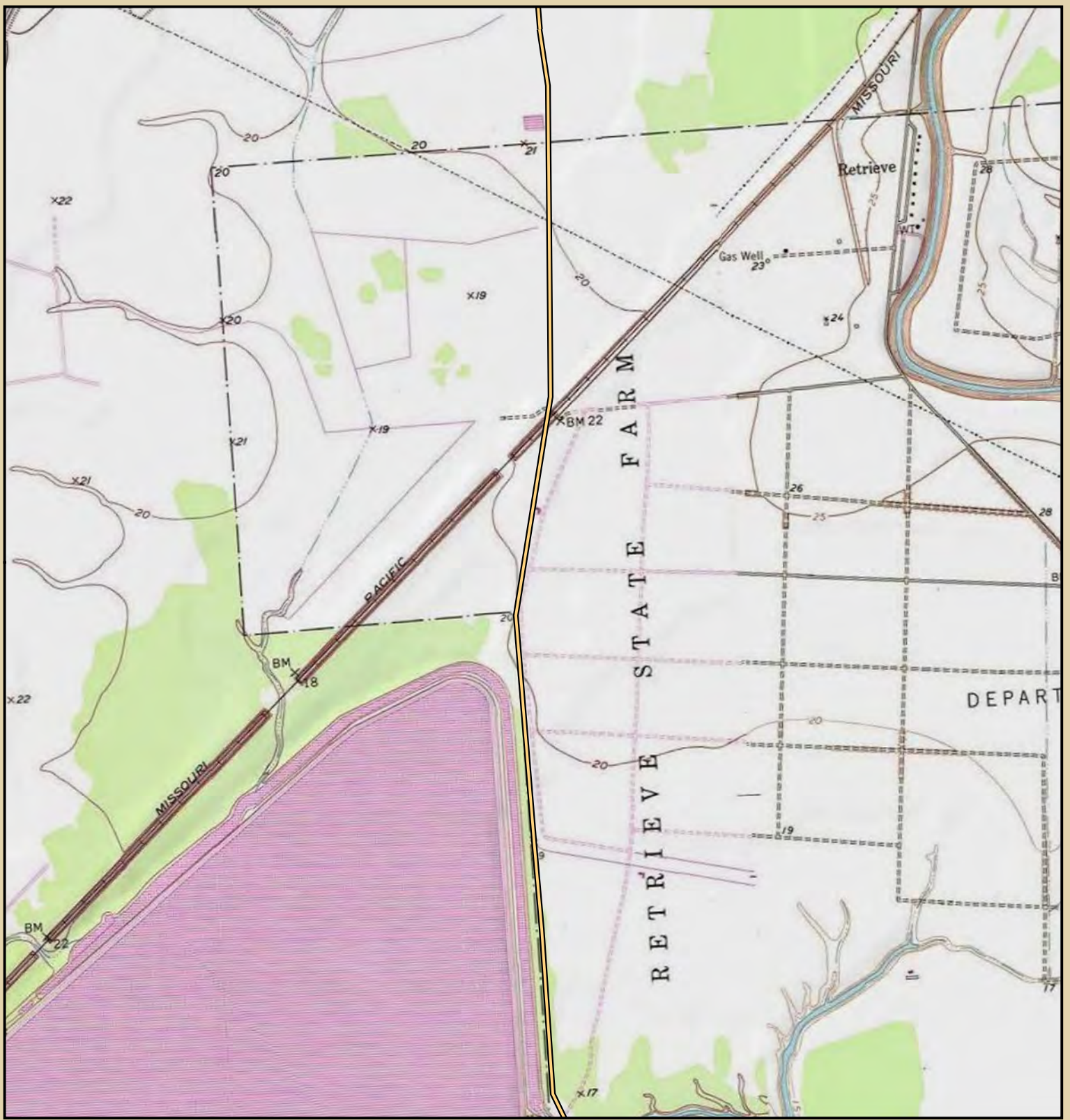
Map 3 of 13

Created:
3/27/2014





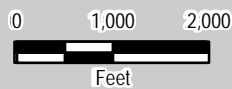
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

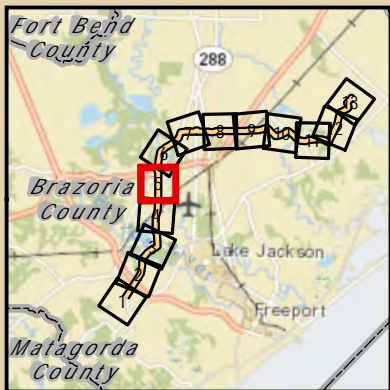
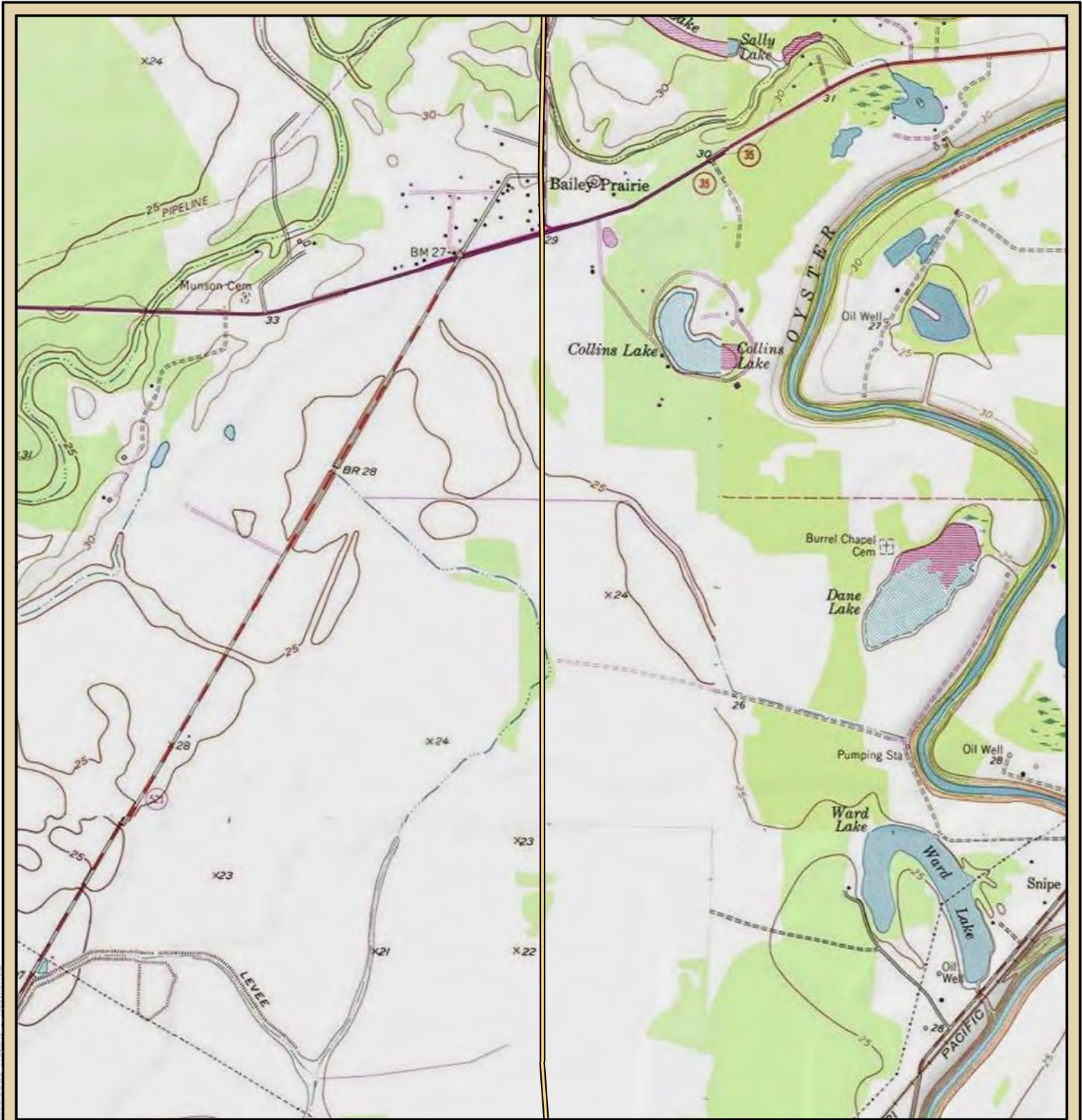
Map 4 of 13

Created:
3/27/2014





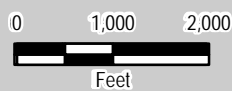
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

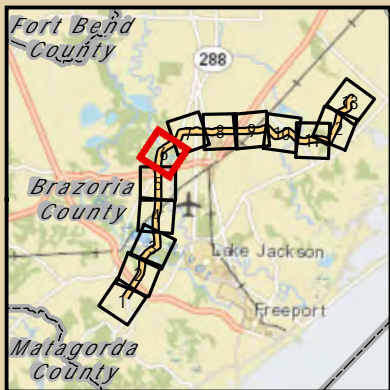
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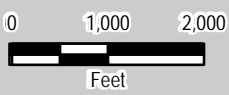
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

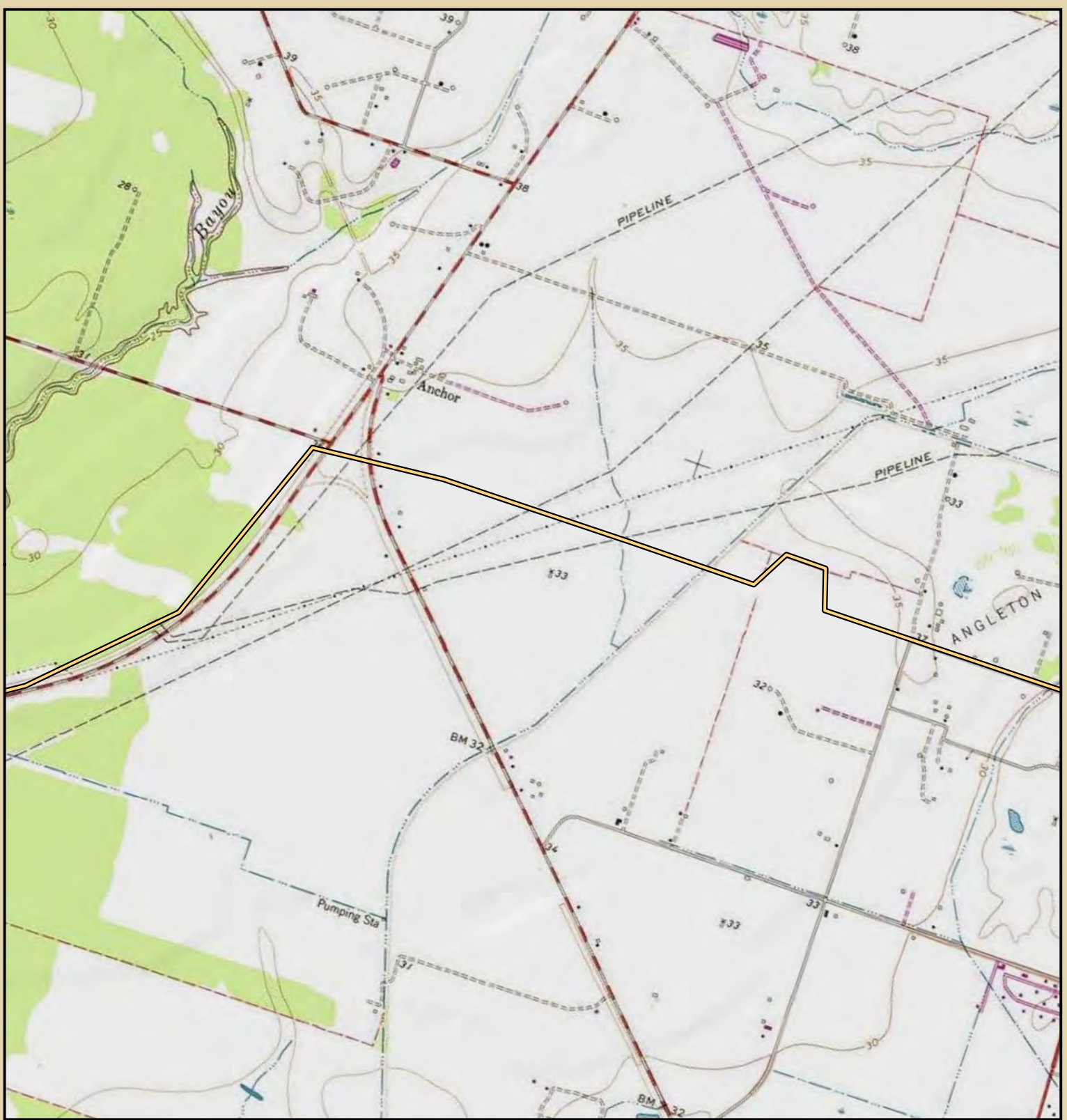
Map 6 of 13

Created:
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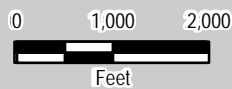
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

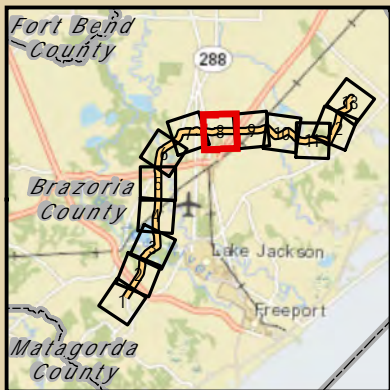
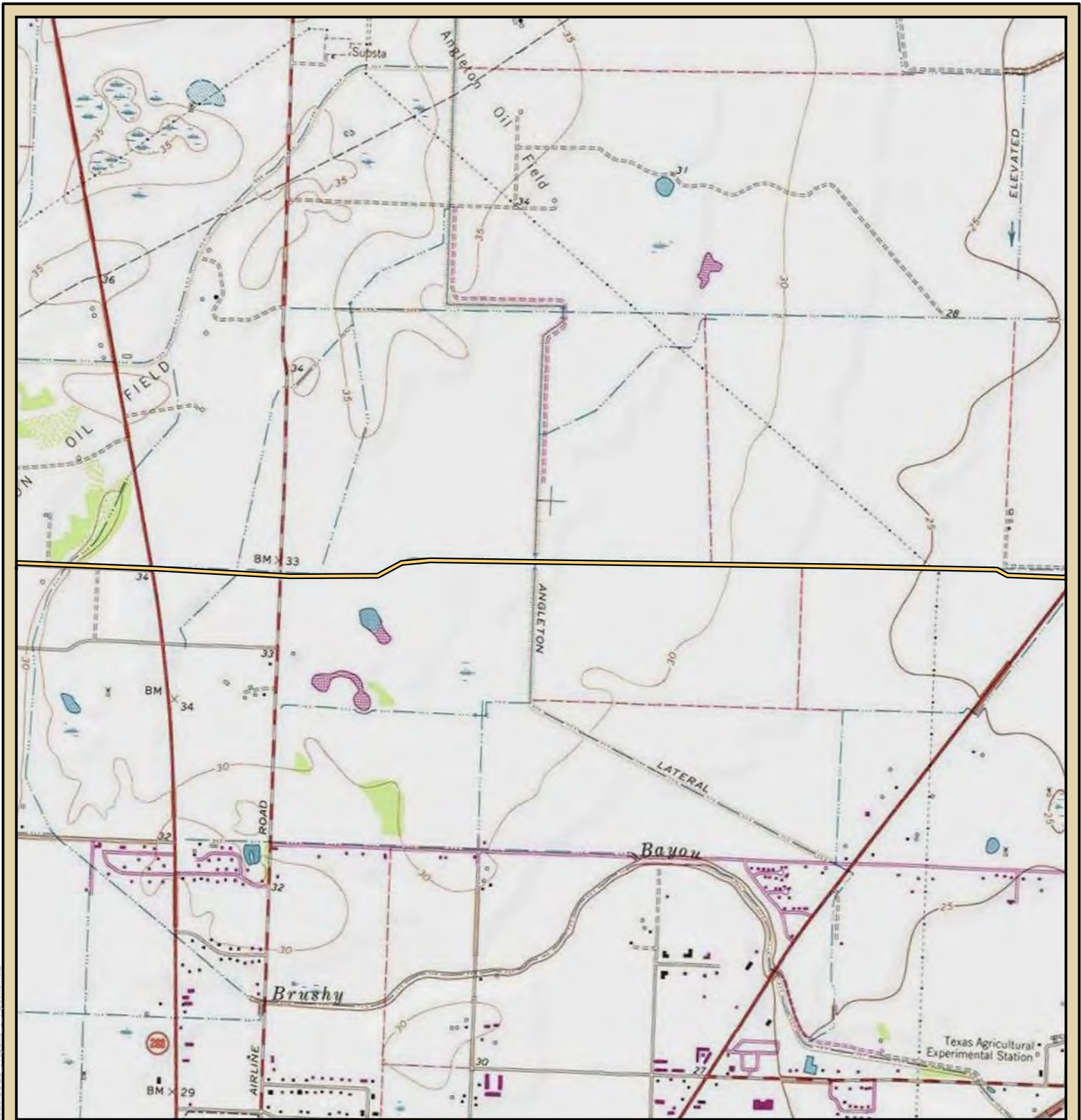
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Created:
3/27/2014





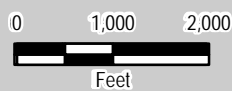
14 Gabriel Drive
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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

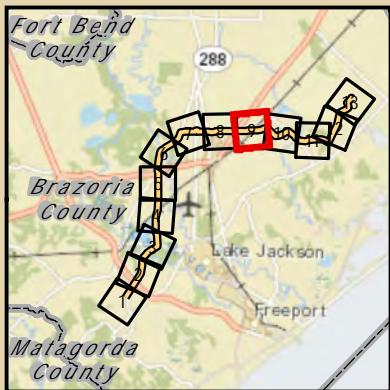
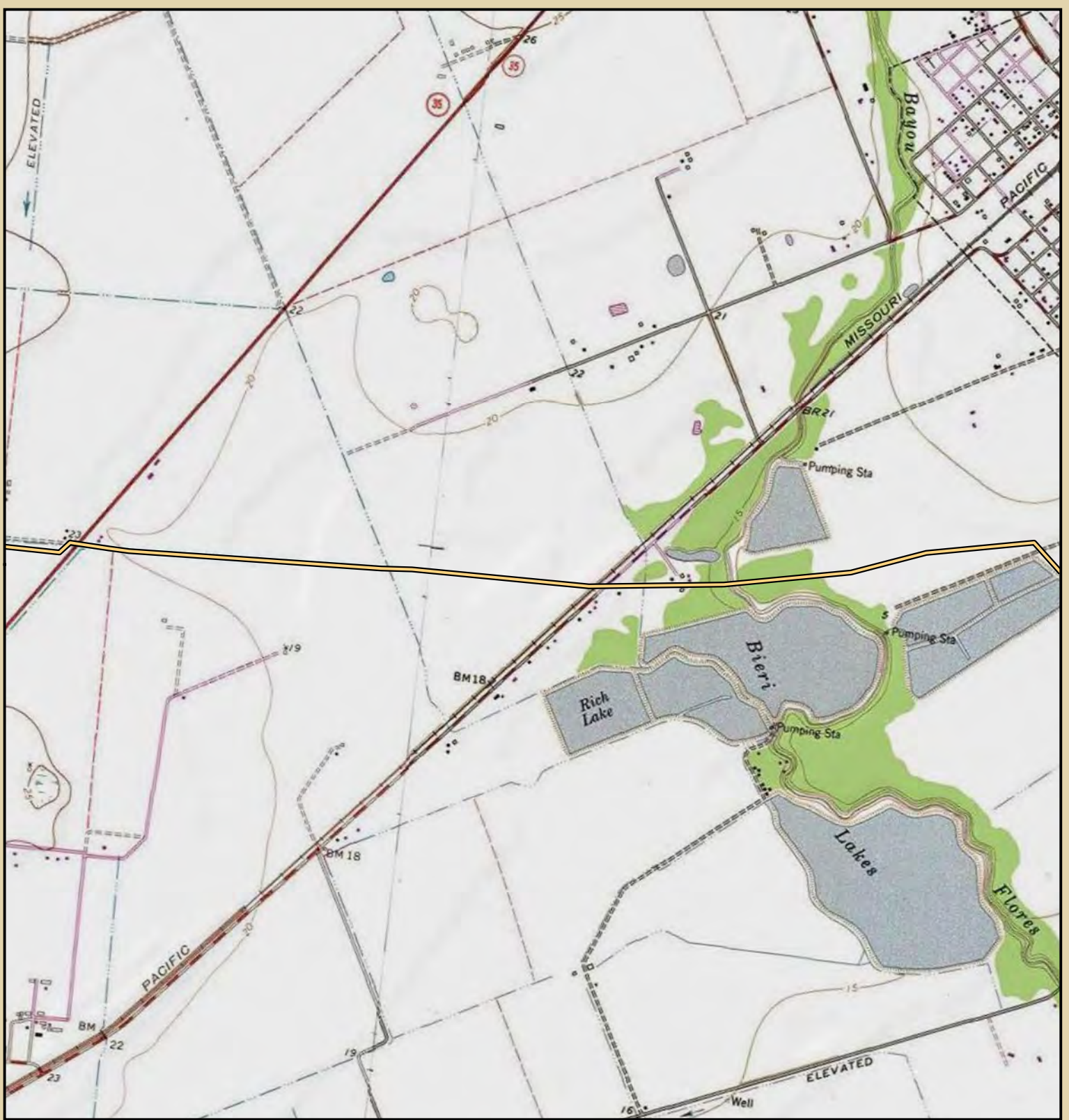
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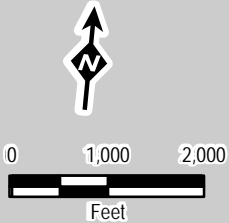
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

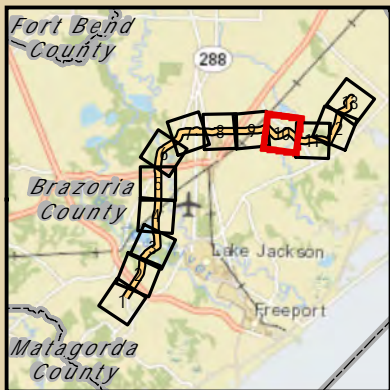
Map 9 of 13

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3/27/2014



14 Gabriel Drive
Augusta, ME 04330

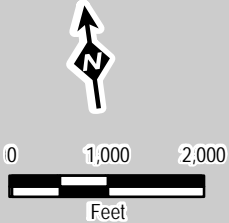
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Legend

- Propane 1 Pipeline
- County Boundary

Sources: BING, ESRI, Map Coordinate System: NAD 1983 UTM Zone 15N



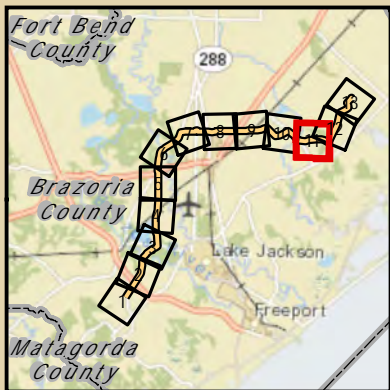
**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

**Figure 3
USGS Map**



Map 10 of 13

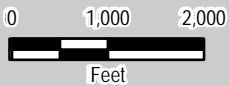
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Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

**Figure 3
USGS Map**

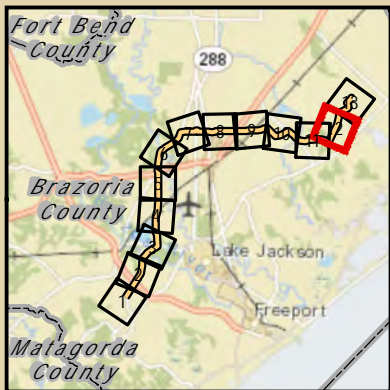
Map 11 of 13

Created:
3/27/2014





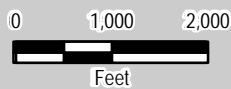
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Augusta, ME 04330

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Legend

-  Propane 1 Pipeline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

Figure 3
USGS Map

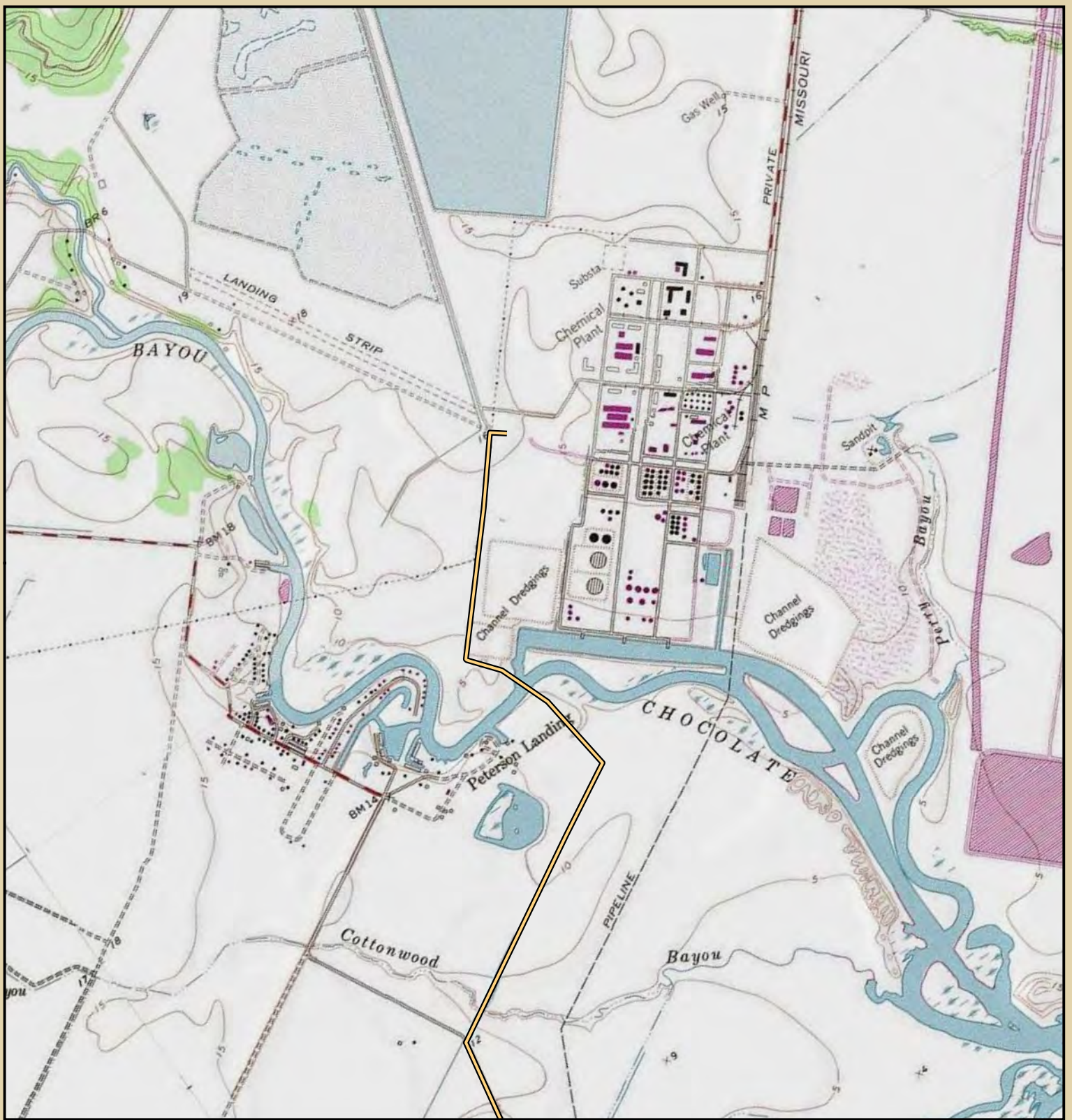
Map 12 of 13

Created:
3/27/2014



14 Gabriel Drive
Augusta, ME 04330

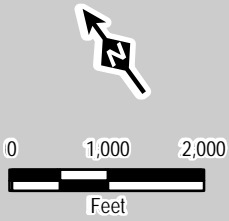
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Legend

- Propane 1 Pipeline
- - - County Boundary

Sources: BING, ESRI, Map Coordinate System: NAD 1983 UTM Zone 15N



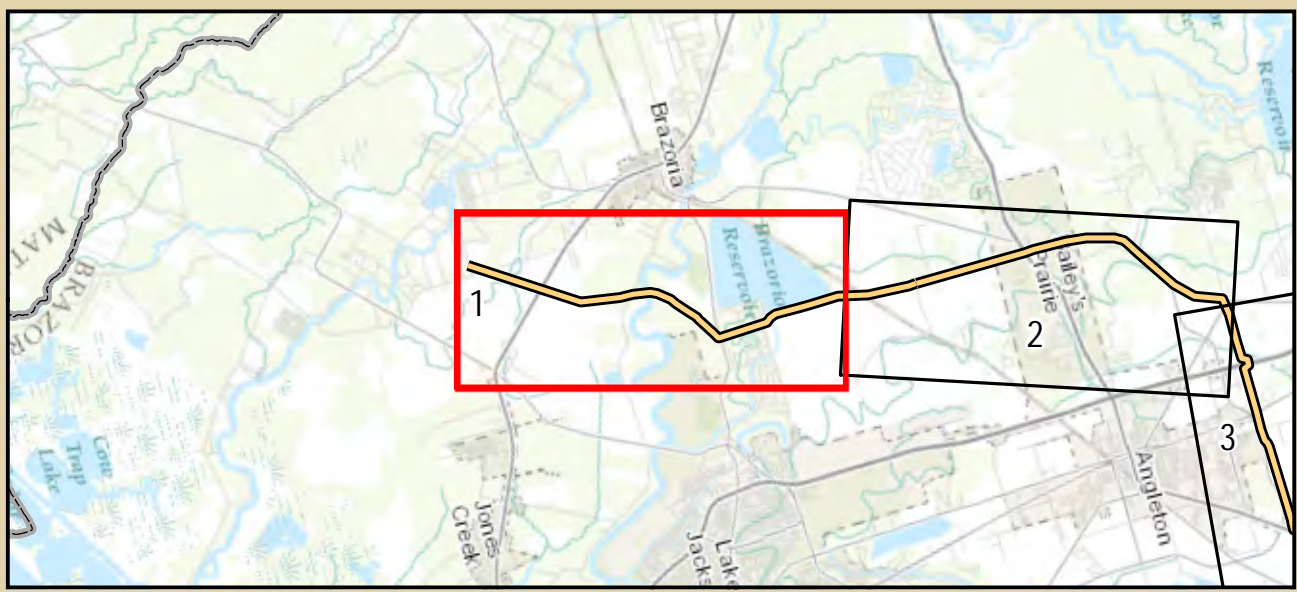
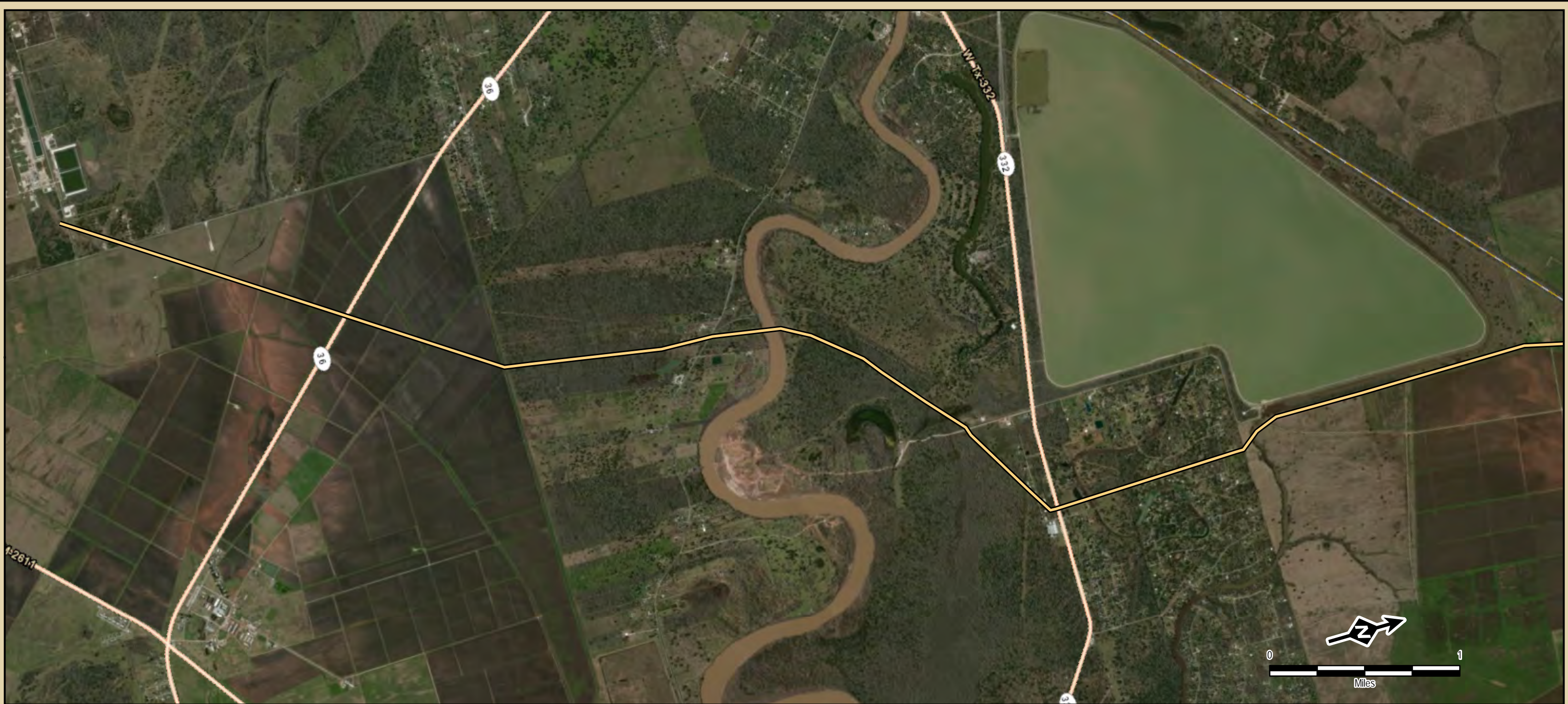
**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

**Figure 3
USGS Map**

Map 13 of 13

Created: 3/27/2014 **TRC** 14 Gabriel Drive
Augusta, ME 04330

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Legend


- Propane 1 Pipeline
- - - County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

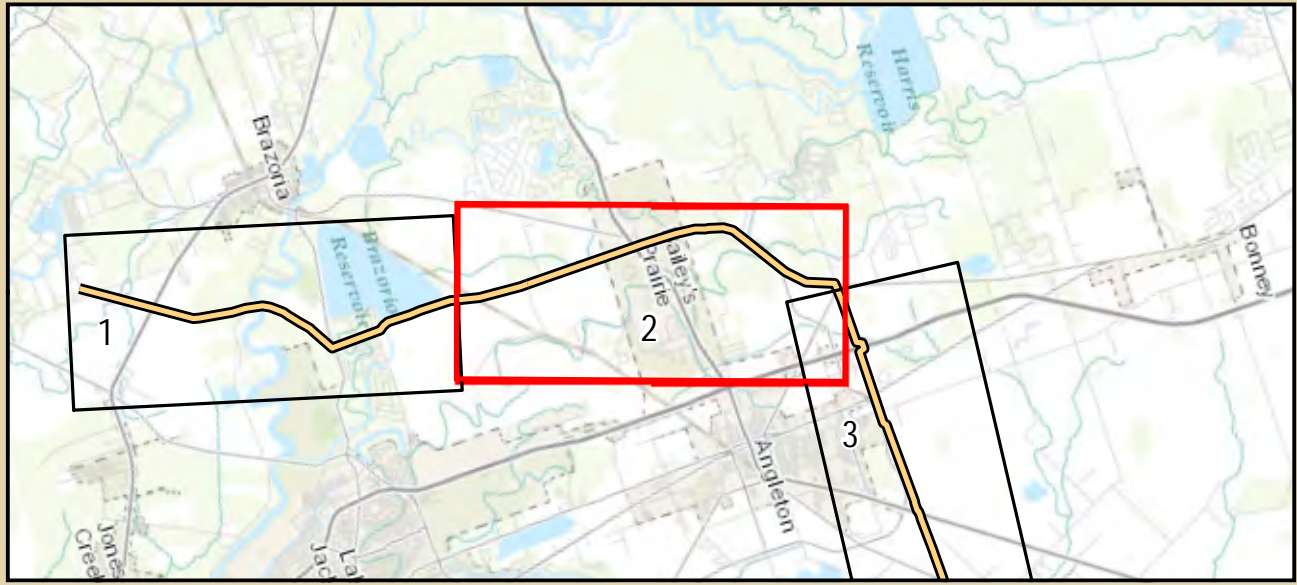
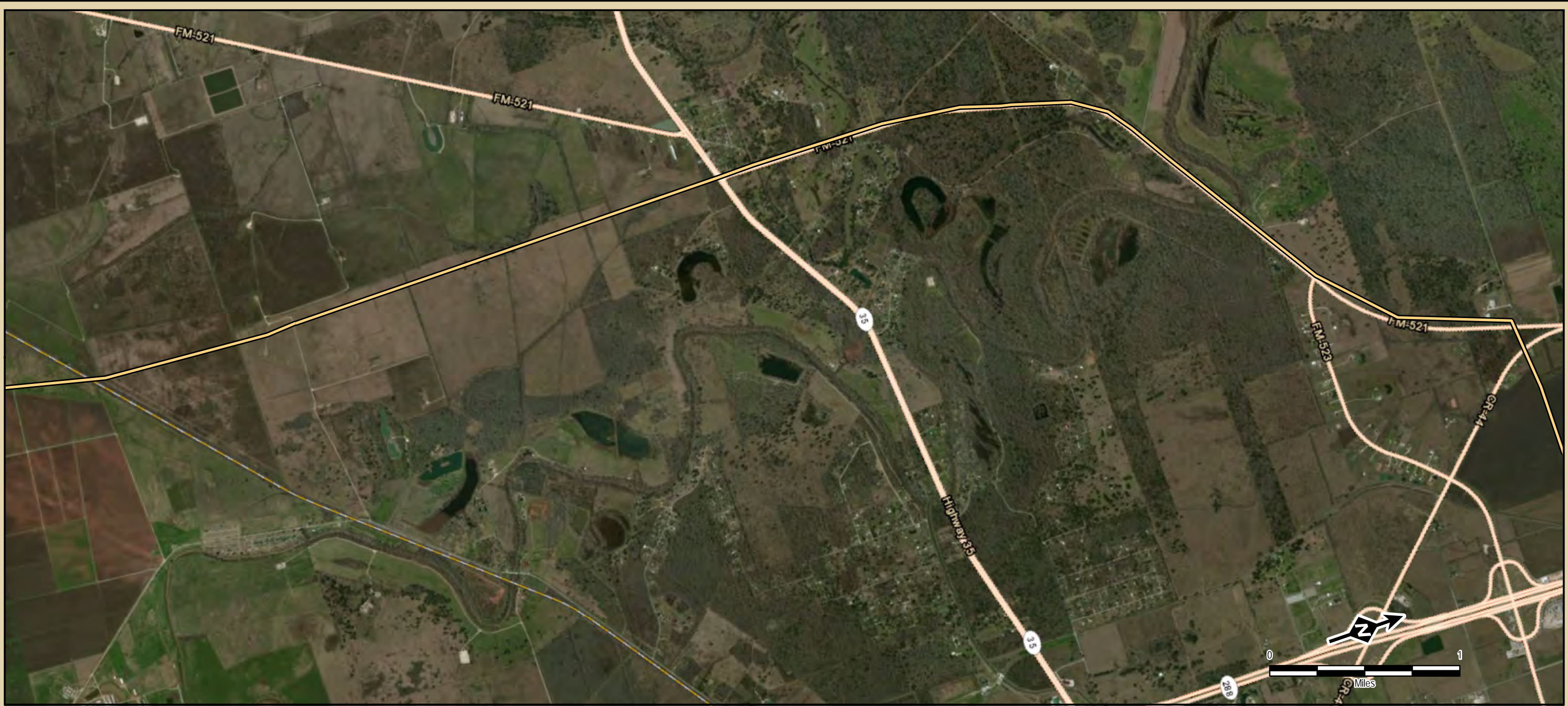
**Figure 4
Aerial Map**

Map 1 of 4



14 Gabriel Drive
Augusta, ME 04330

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Legend


- Propane 1 Pipeline
- County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

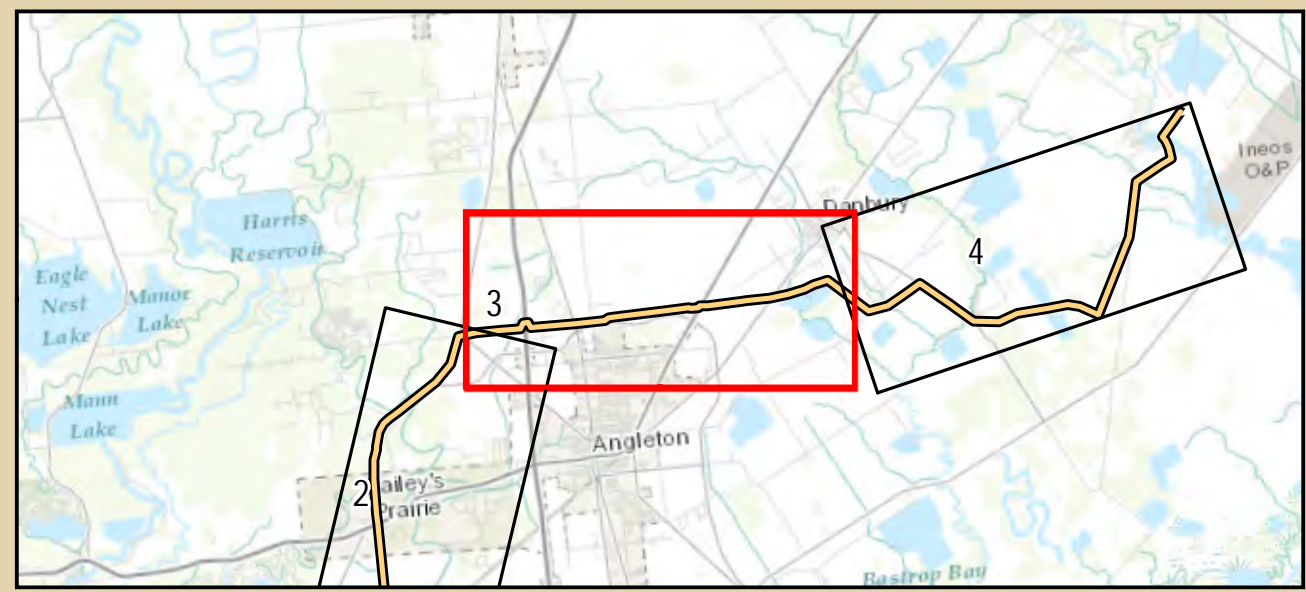
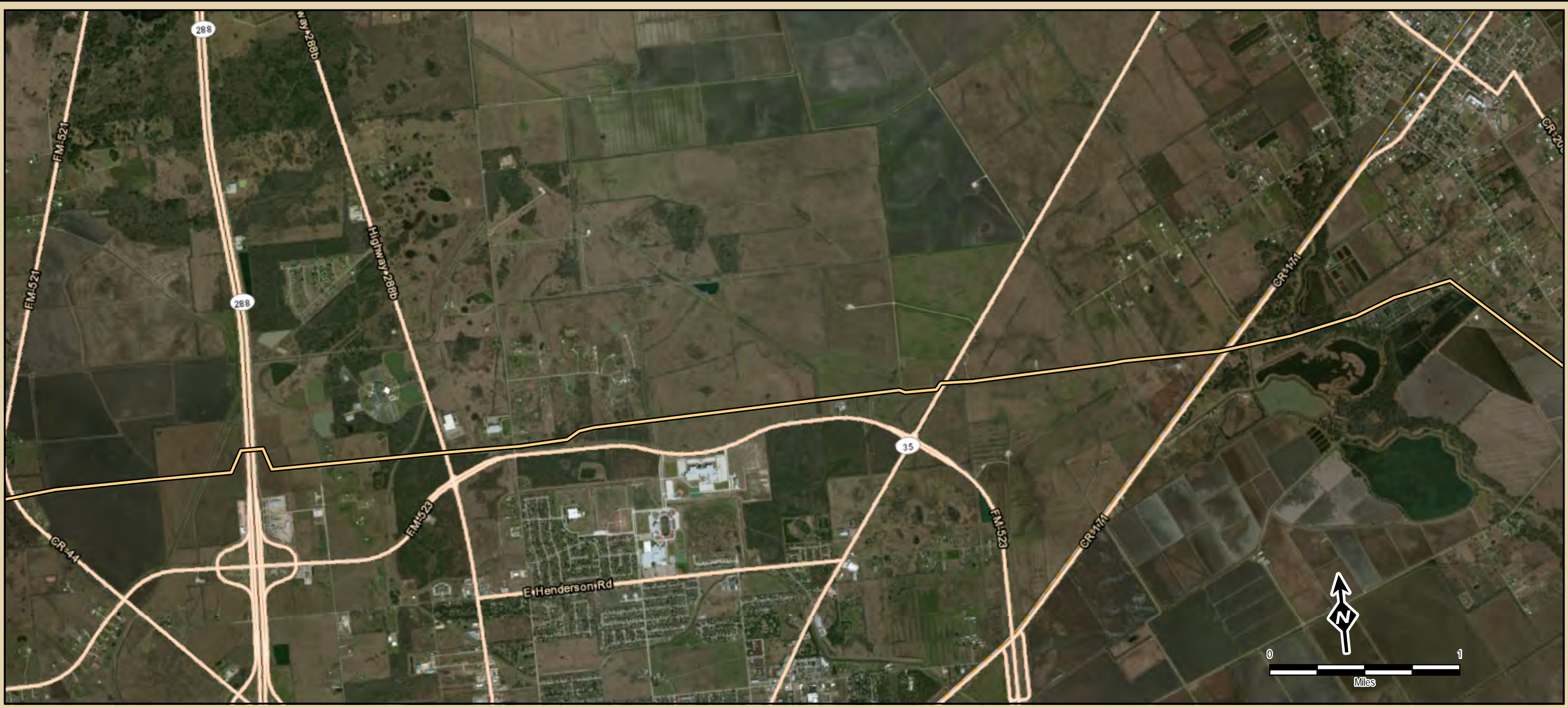
**Figure 4
Aerial Map**

Map 2 of 4





14 Gabriel Drive
Augusta, ME 04330

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Legend


-  Propane 1 Pipeline
-  County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

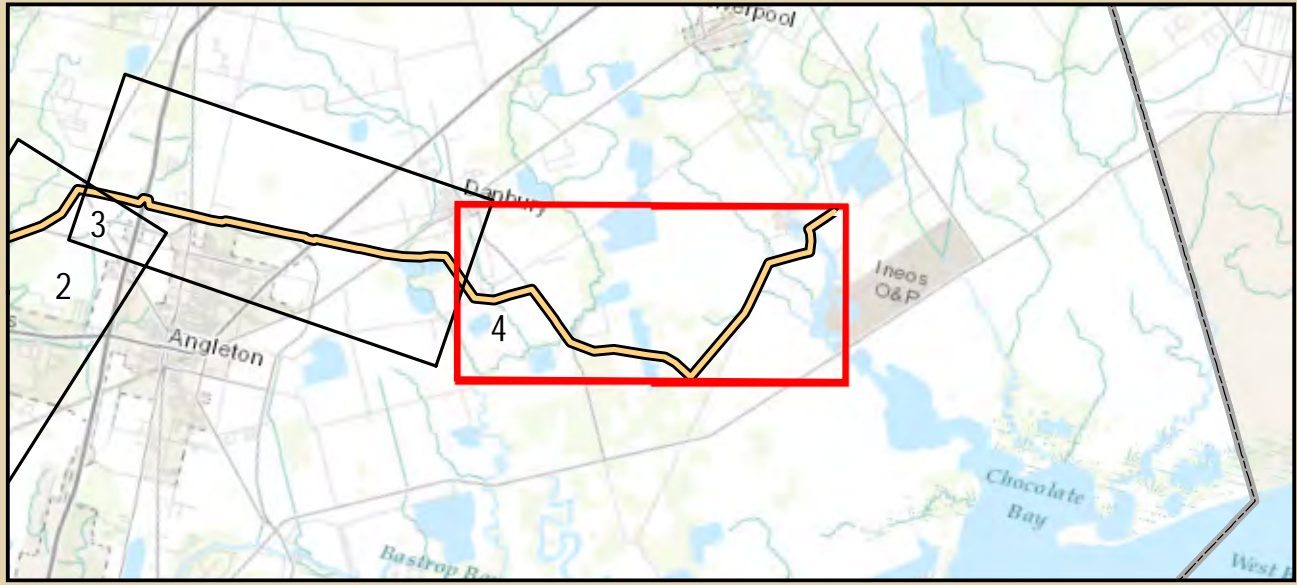
Figure 4
Aerial Map

Map 3 of 4



14 Gabriel Drive
Augusta, ME 04330

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Legend


- Propane 1 Pipeline
- - - County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 1 PIPELINE

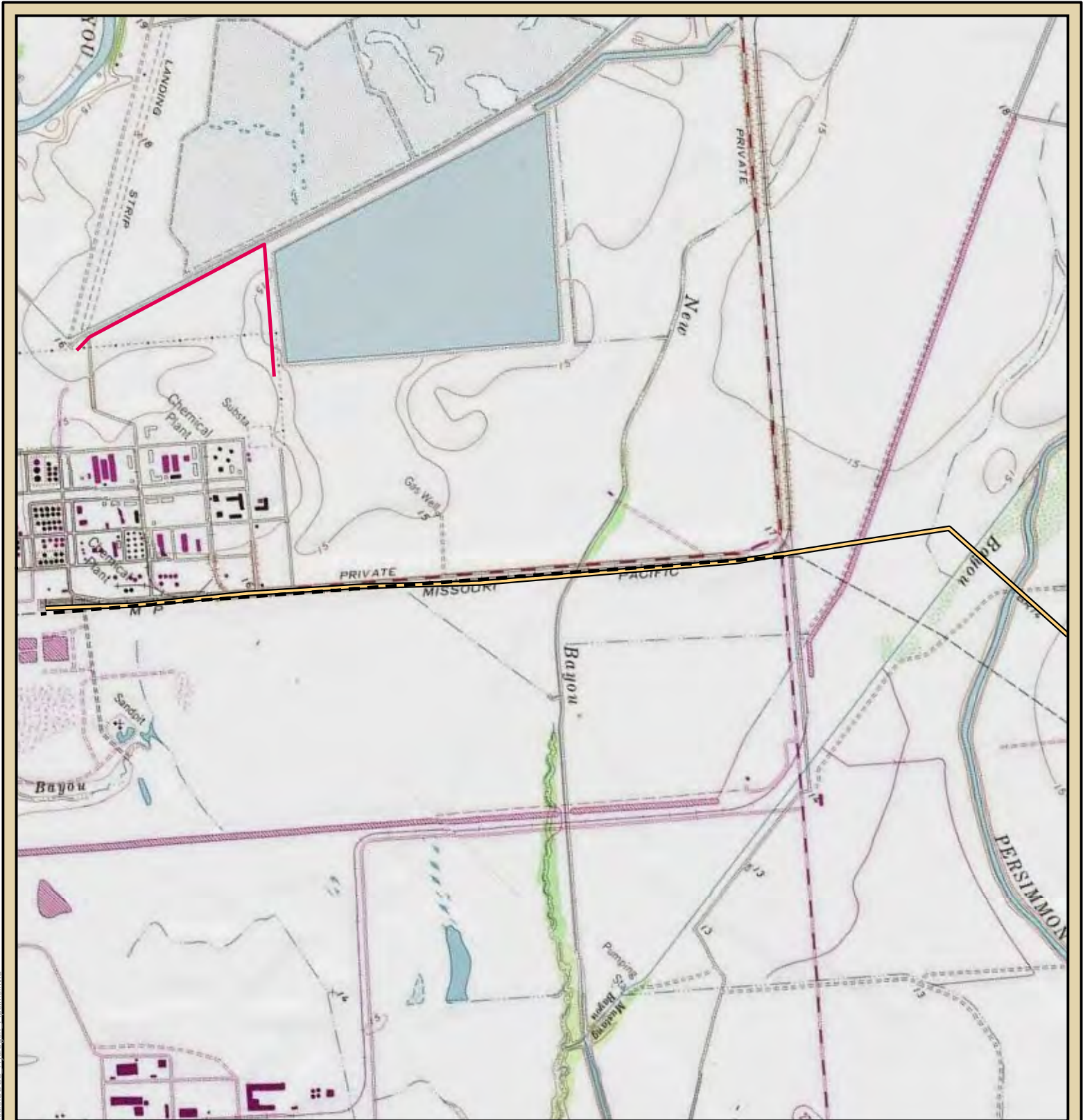
Figure 4
Aerial Map

Map 4 of 4







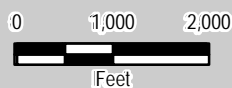
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
HYDROGEN PIPELINE

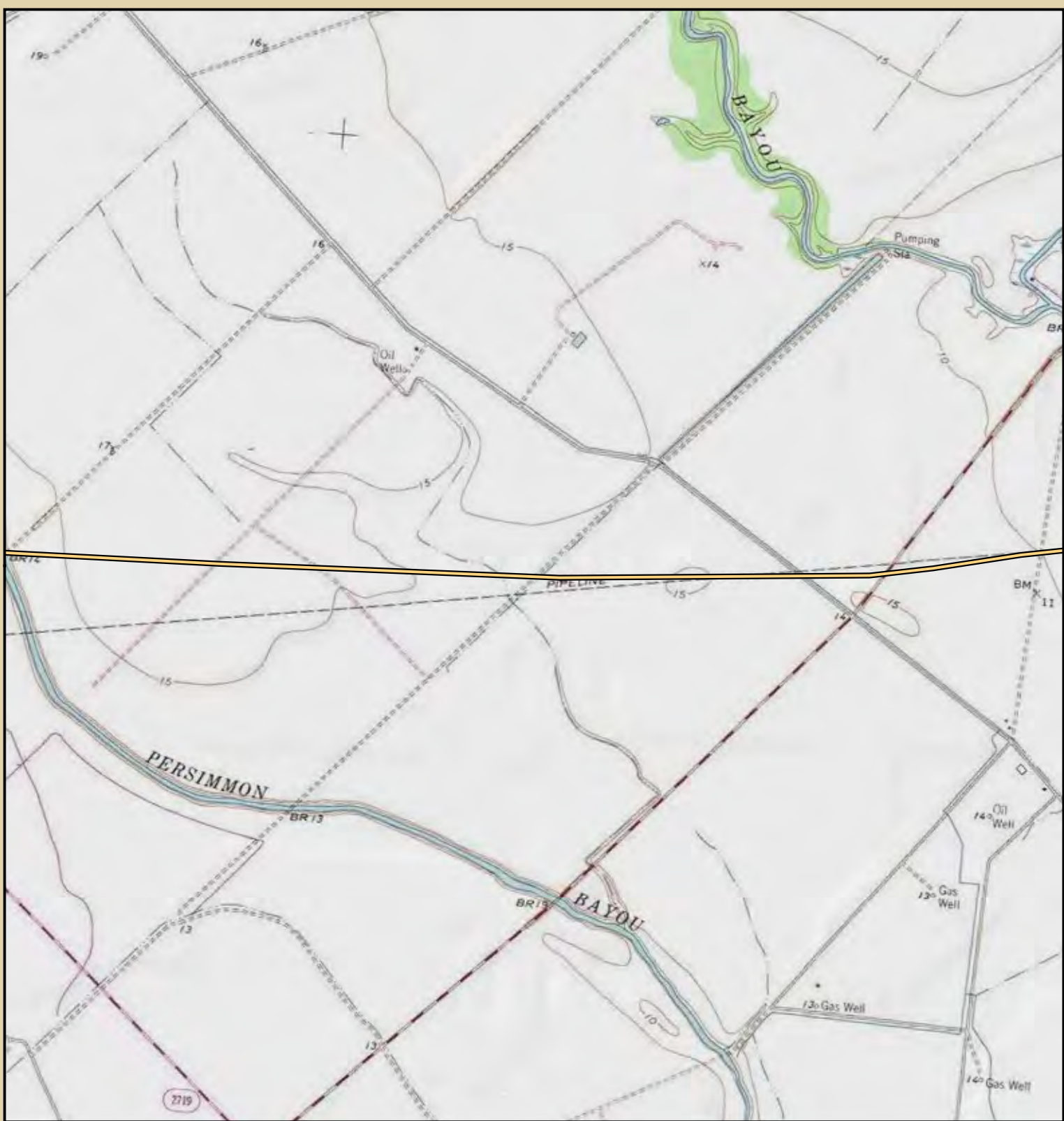
Figure 5
USGS Map

Map 1 of 7





Created:
3/21/2014

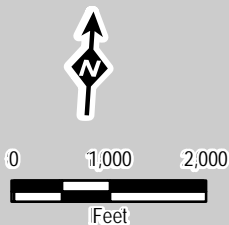


14 Gabriel Drive
Augusta, ME 04330



Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
HYDROGEN PIPELINE**

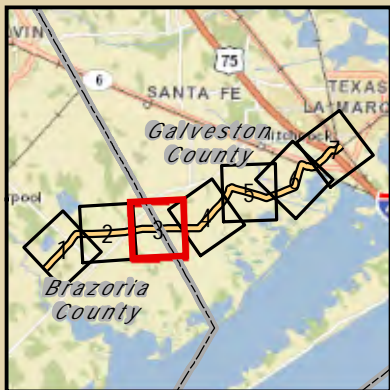
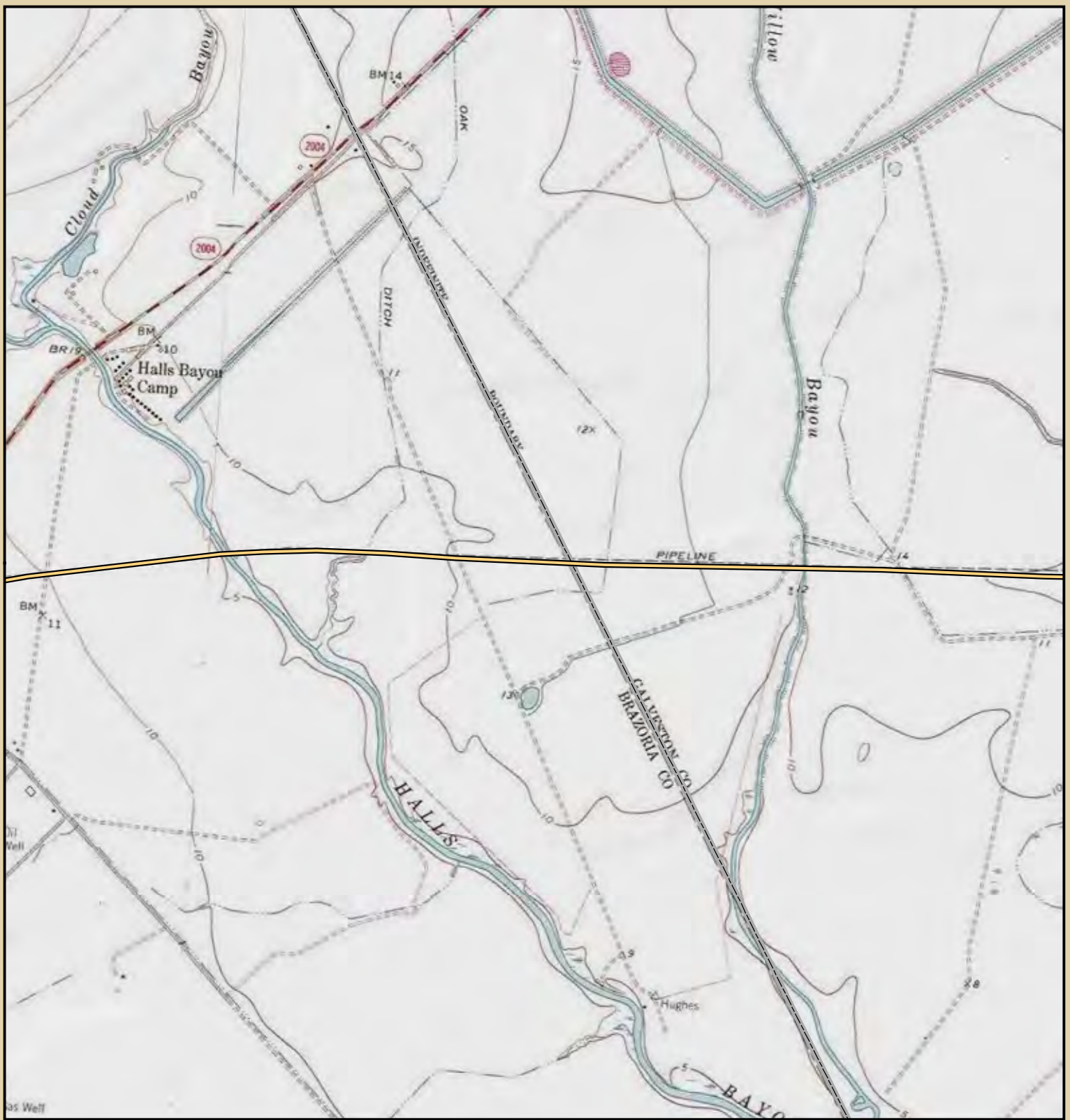
Figure 5
USGS Map

Map 2 of 7





Created:
3/21/2014



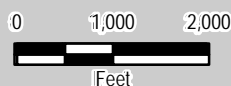
14 Gabriel Drive
Augusta, ME 04330



Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary

Sources: BING, ESRI,



Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
HYDROGEN PIPELINE**

Figure 5
USGS Map

Map 3 of 7

Created:
3/21/2014







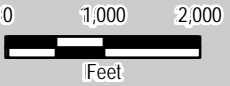
14 Gabriel Drive
Augusta, ME 04330

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Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
HYDROGEN PIPELINE

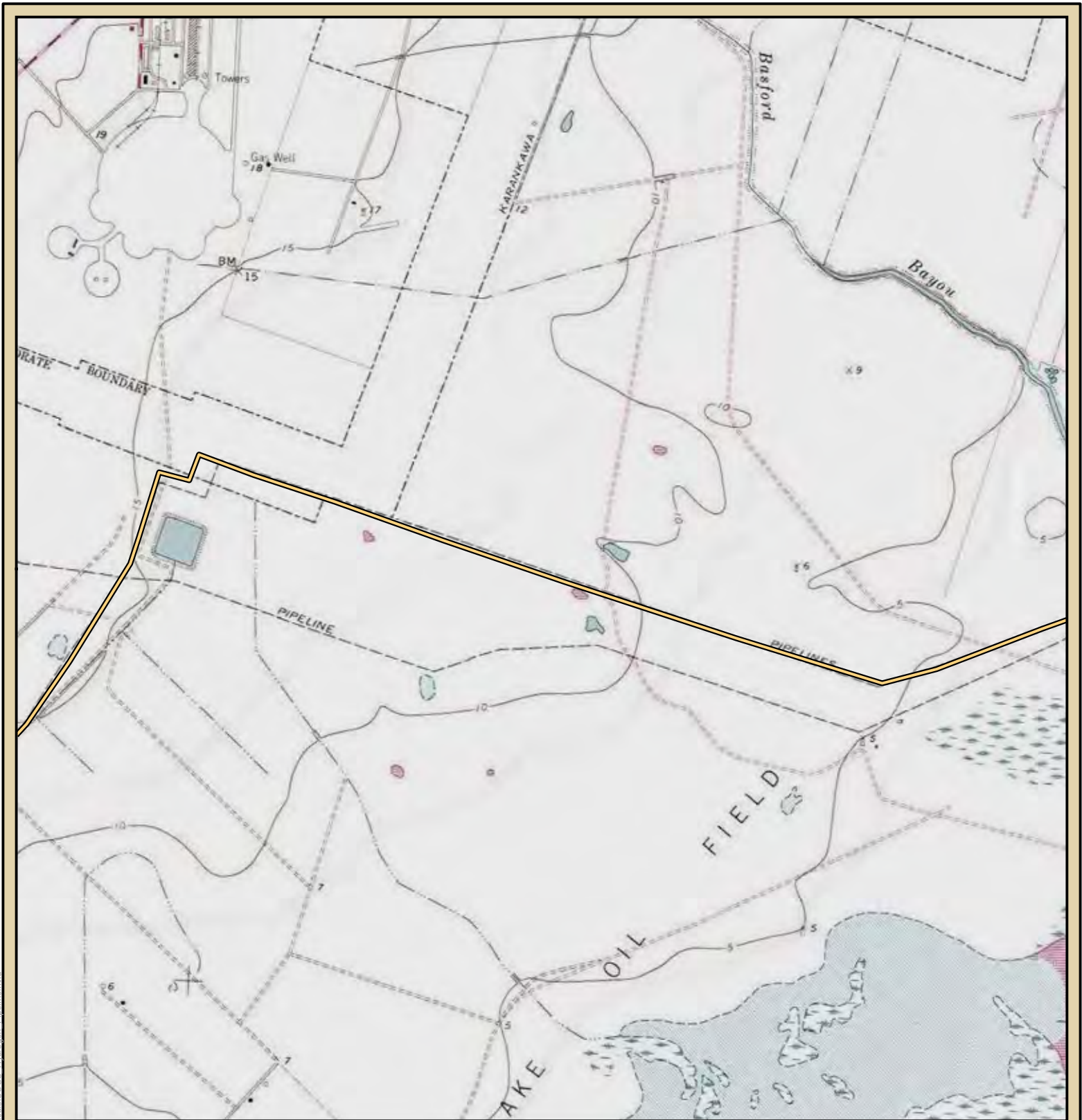
Figure 5
USGS Map

Map 4 of 7





Created:
3/21/2014

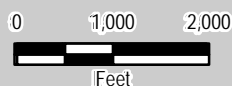


14 Gabriel Drive
Augusta, ME 04330



Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
HYDROGEN PIPELINE

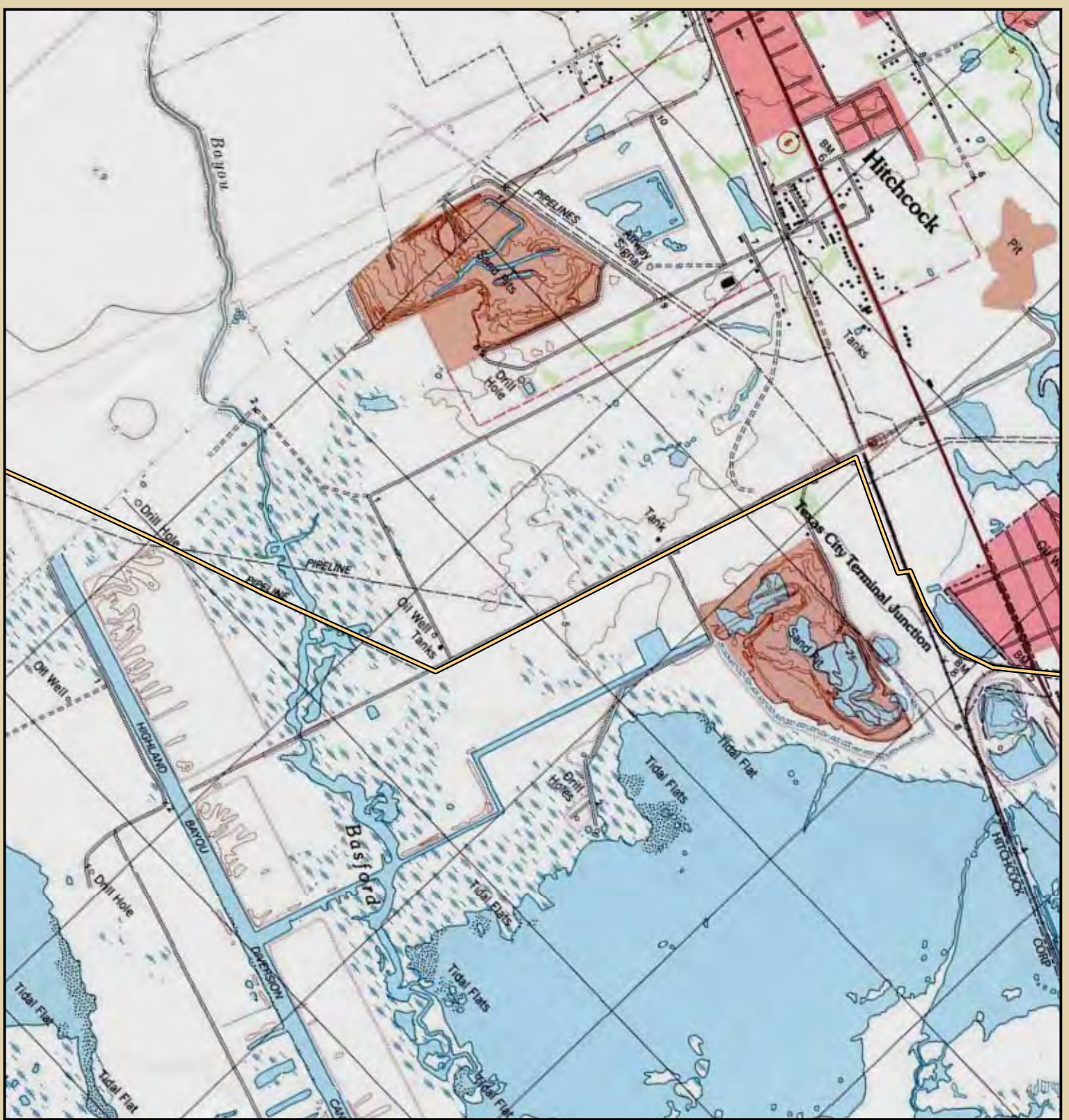
Figure 5
USGS Map

Map 5 of 7





Created:
3/21/2014

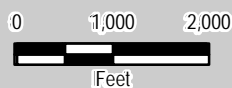


14 Gabriel Drive
Augusta, ME 04330



Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
HYDROGEN PIPELINE

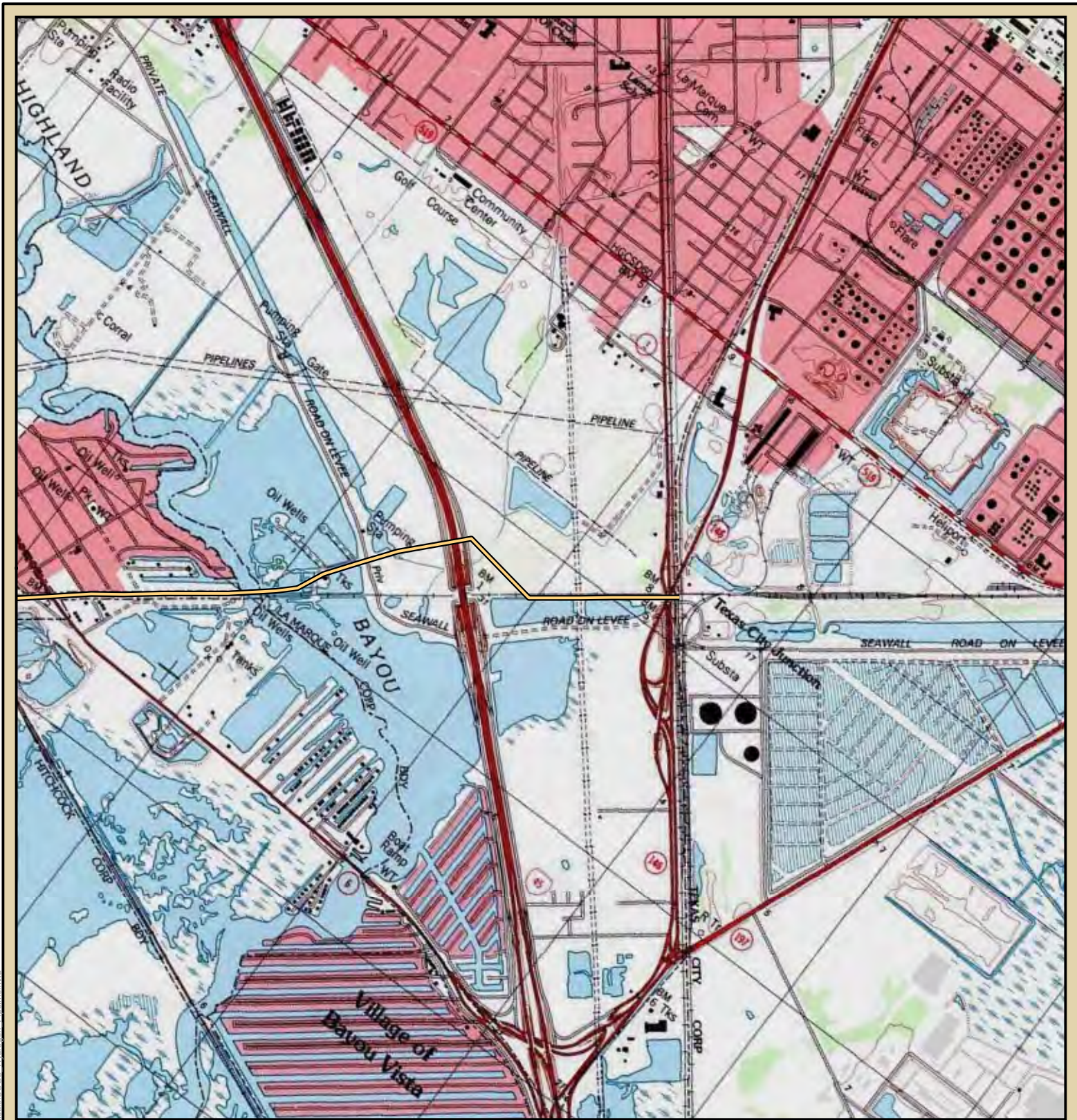
Figure 5
USGS Map

Map 6 of 7





Created:
3/21/2014

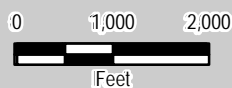


14 Gabriel Drive
Augusta, ME 04330



Legend

-  Hydrogen Pipeline
-  Propane 2 Pipeline
-  138kV Powerline
-  County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
HYDROGEN PIPELINE**

Figure 5
USGS Map

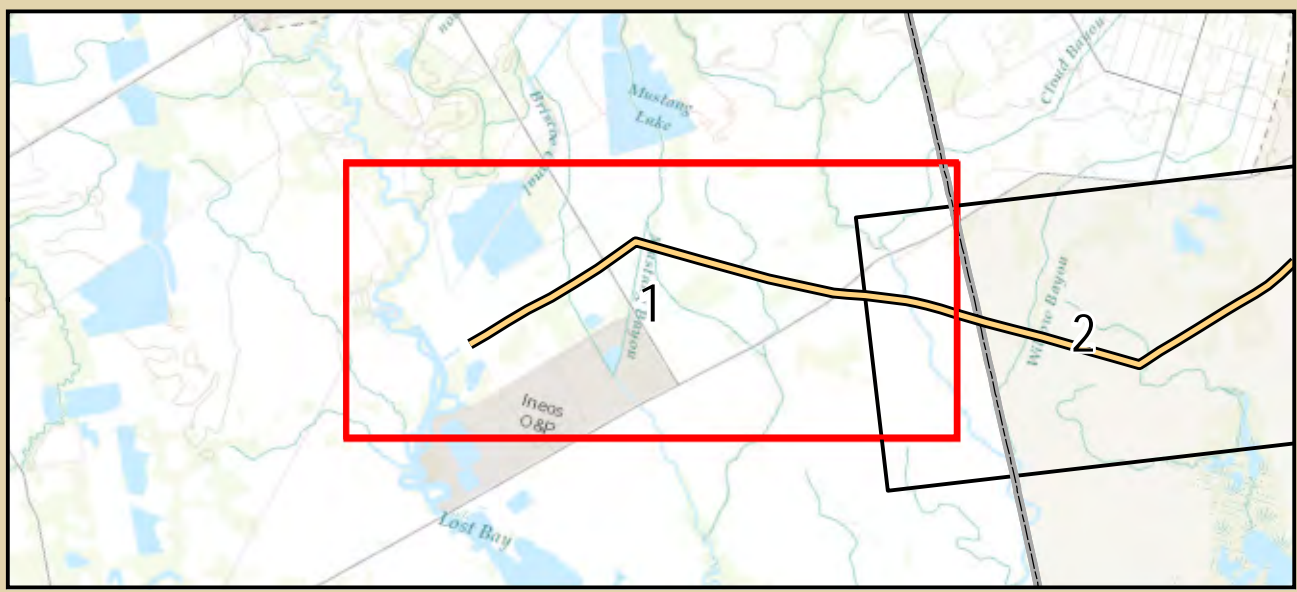
Map 7 of 7

Created:
3/21/2014





14 Gabriel Drive
Augusta, ME 04330

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Legend


-  Hydrogen Pipeline
-  County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
HYDROGEN PIPELINE**

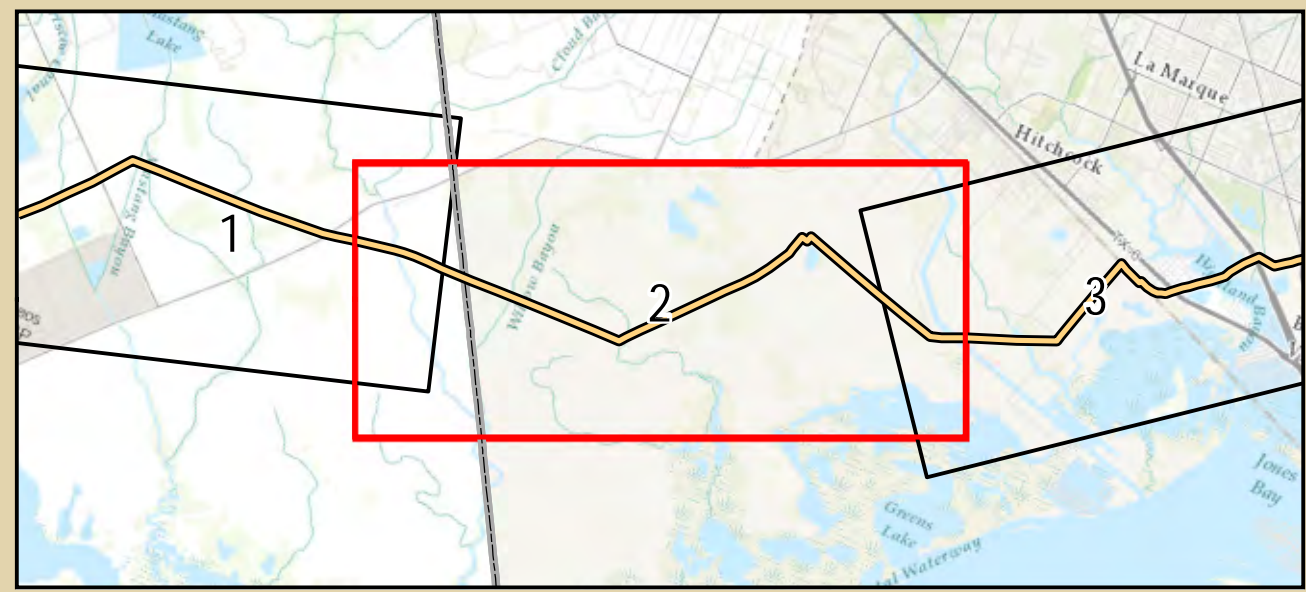
Figure 6
Aerial Map

Map 1 of 3





14 Gabriel Drive
Augusta, ME 04330

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Legend


-  Hydrogen Pipeline
-  County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

**C3 PETROCHEMICALS
HYDROGEN PIPELINE**

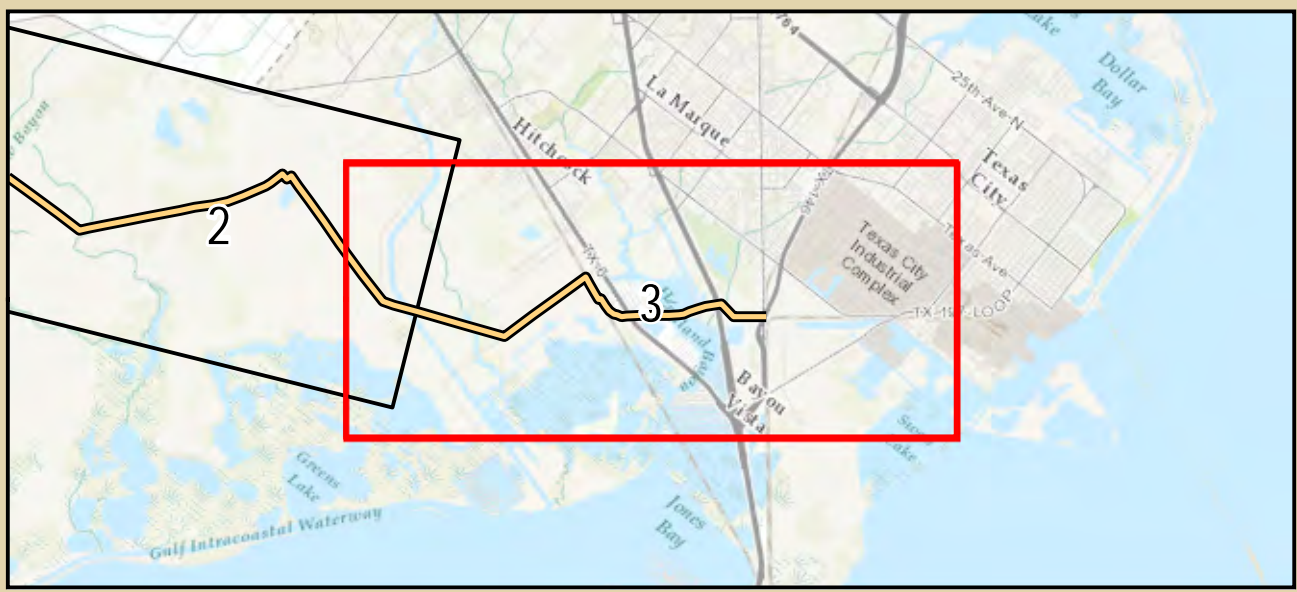
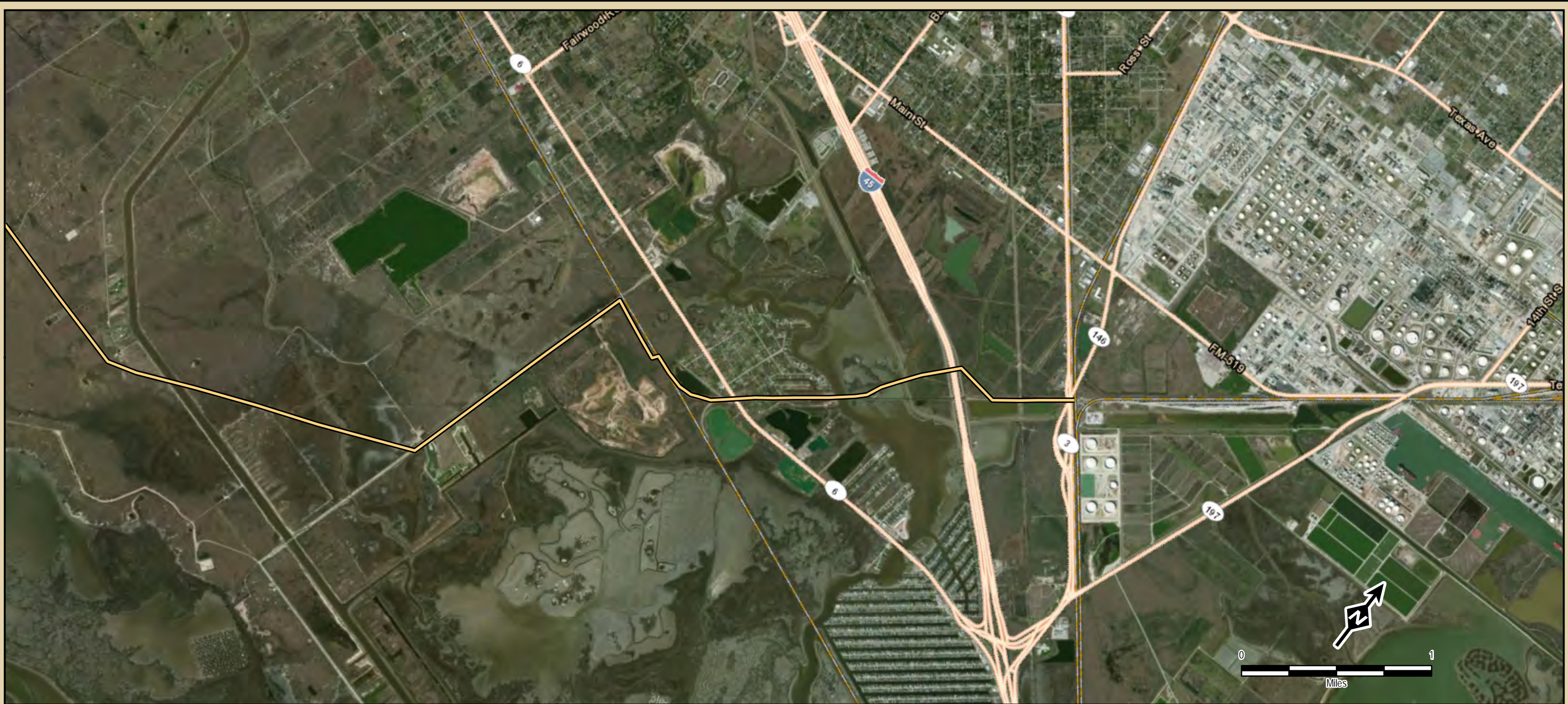
Figure 6
Aerial Map

Map 2 of 3



14 Gabriel Drive
Augusta, ME 04330

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Legend

- Hydrogen Pipeline
- County Boundary

Sources: BING, ESRI, NWI Created: 4/10/2014 Map Coordinate System: NAD 1983 UTM Zone 15N

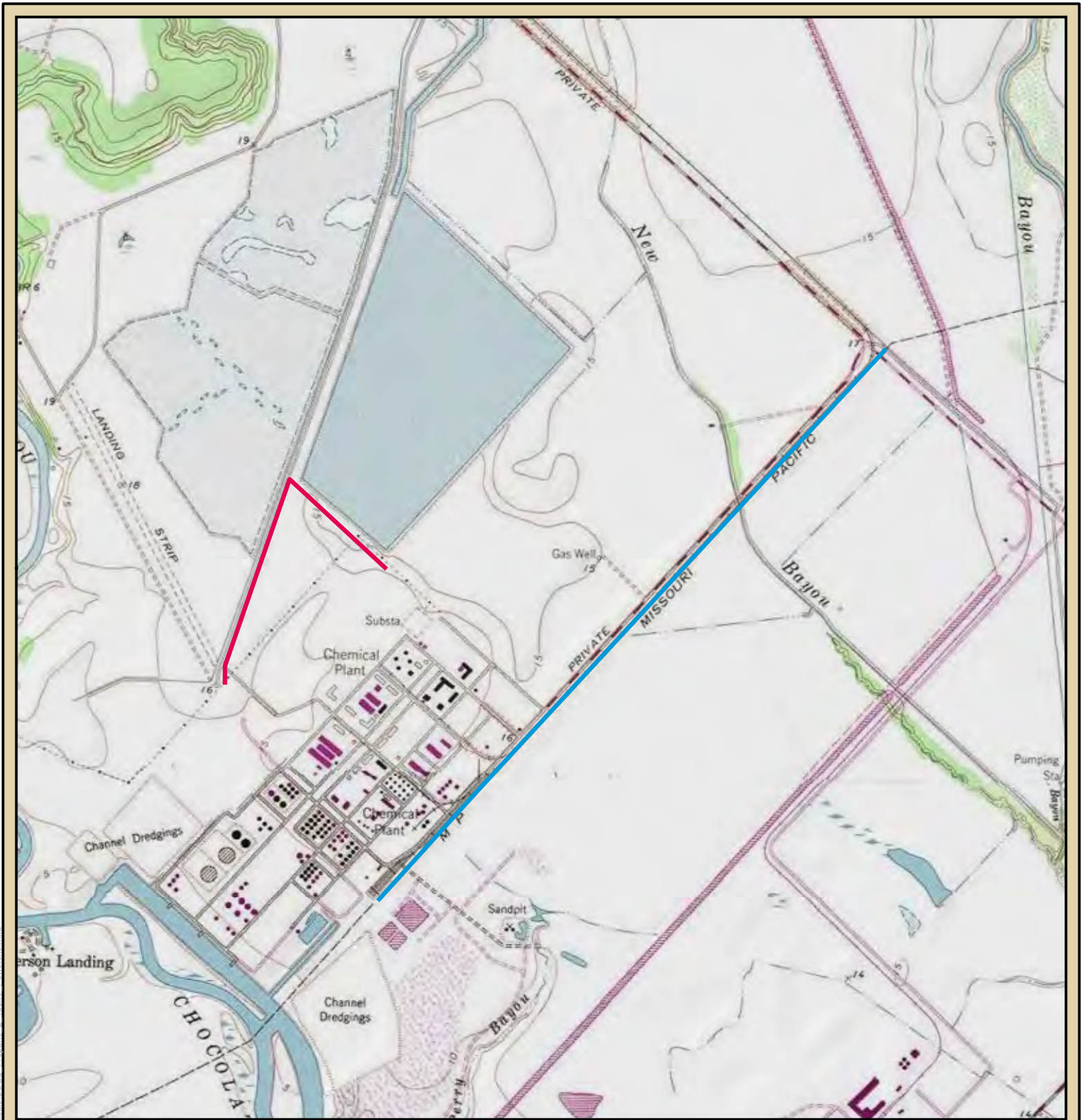
C3 PETROCHEMICALS
HYDROGEN PIPELINE

Figure 6
Aerial Map

Map 3 of 3

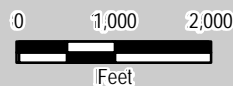
14 Gabriel Drive
Augusta, ME 04330

V:\PROJECTS\AUGUSTASmall_Pipeline\Projects\109212_C3_Petrochemicals\Aerial_Hydrogen_Pipeline_041014.mxd



Legend

- Propane 2 Pipeline
- 138kV Powerline
- County Boundary



Sources: BING, ESRI,

Map Coordinate System: NAD 1983 UTM Zone 15N

C3 PETROCHEMICALS
PROPANE 2 PIPELINE &
138KV POWERLINE

Figure 7
USGS Map

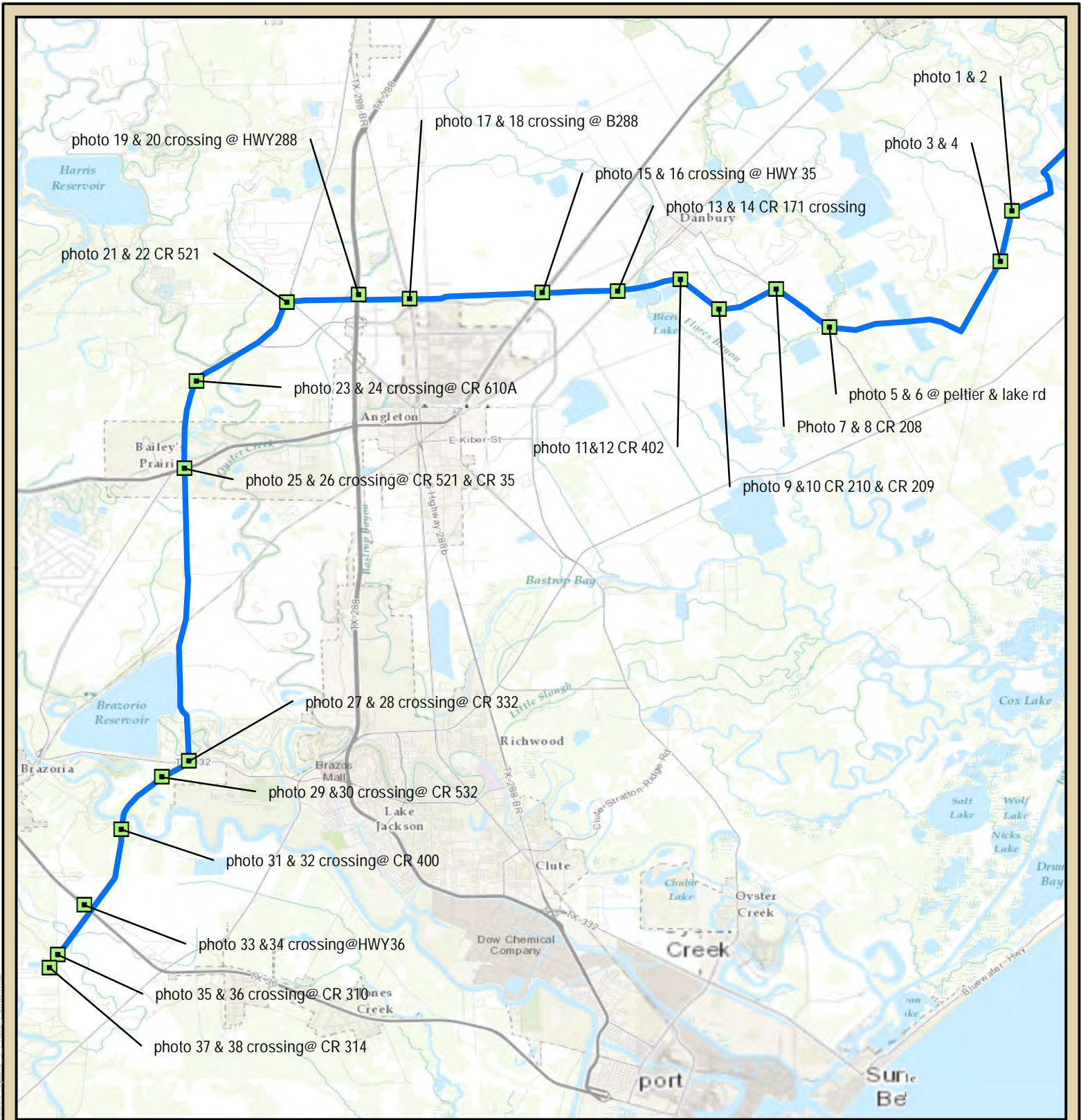
Map 1 of 1

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3/21/2014

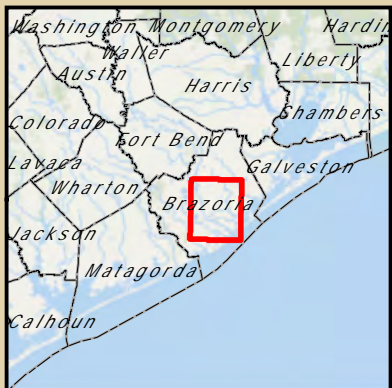


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Legend

- Photo Location
- Propane 1 Pipeline
- County Boundary

Sources: BING, ESRI

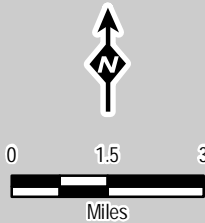
Map Coordinate System: GCS WGS 1984

**C3 PETROCHEMICALS
PROPANE 1 PIPELINE**

Figure 8
**Photo
Locations**

Created:
3/27/2014

14 Gabriel Drive
Augusta, ME 04330



Photographs

Photographs of Windshield Survey



Photograph 1. Agricultural Field



Photograph 2. Agricultural Field



Photograph 3. Cattle Pasture



Photograph 4. Cattle Pasture



Photograph 5. Cattle Pasture



Photograph 6. Cattle Pasture



Photograph 7. Agricultural Field



Photograph 8. Agricultural Field



Photograph 9. Agricultural Field



Photograph 10. Agricultural Field



Photograph 11. Maintained ROW



Photograph 12. Maintained ROW



Photograph 13. Maintained ROW



Photograph 14. Railroad ROW along existing pipeline ROW



Photograph 15. Cattle Pasture



Photograph 16. Existing ROW adjacent to structure



Photograph 17. Maintained ROW



Photograph 18. Maintained ROW



Photograph 19. Maintained ROW



Photograph 20. Maintained ROW



Photograph 21. Maintained ROW



Photograph 22. Maintained ROW



Photograph 23. Roadside ROW where pipe will be placed (new pipeline ROW)



Photograph 24. Roadside ROW where pipe will be placed (new pipeline ROW)



Photograph 25. CR 521&35 (new pipeline ROW)



Photograph 26. Roadside ROW where pipe will be placed (new pipeline ROW)



Photograph 27. Maintained ROW



Photograph 28. Maintained ROW



Photograph 29. Maintained ROW



Photograph 30. Maintained ROW



Photograph 31. Maintain ROW



Photograph 32. Maintained ROW



Photograph 33. ROW through Agricultural Field



Photograph 34. ROW through Agricultural Field



Photograph 35. ROW through Cattle Pasture



Photograph 36. ROW through Cattle Pasture



Photograph 37. ROW through Cattle Pasture



Photograph 38. ROW through Cattle Pasture