District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NVF1825340581
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co.	OGRID: 778
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179
Contact email: steven.moskal@bpx.com	Incident # *(assigned by OCD)*
Contact mailing address: 380 Airport Road, Durango CO, 81303	

Location of Release Source

Latitude: 36.795137 Longitude: -107.907089
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gage Com 001M	Site Type: Natural Gas Production Well Pad
Date Release Discovered: August 24, 2018	API#: 30-045-32075

Unit Letter	Section	Township	Range	County
J	20	30N	10W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 2.5 bbls	Volume Recovered (bbls): 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): 7.9 bbls	Volume Recovered (bbls): 0 bbls
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Corrosion of man-way flange on aboveground storage tank.

NMOCD
SEP 07 2018
DISTRICT III

28

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Steve Moskal notified Vanessa Fields via phone on 8/24/18 at approximately 3:00 PM	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Steve Moskal Title: Environmental Coordiantor

Signature: Date: September 7, 2018

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: Date: 9/10/2018

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	79' (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points X Delineation has not occured
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Steve Moskal Title: Environmental Coordinator

Signature: Date: September 7, 2018

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: Vanessa Fields Date: 9/10/2018

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date: 9/10/2018

Provide District III Environmental Staff Two business days prior to Sampling.

BP Remediation Plan

To: Cory Smith, Vanessa Fields(NMOCD), Emmanuel Adeloye (BLM)
From: Steve Moskal (BP)
CC: Jeff Blagg (Blagg Engineering)
Date: 9/7/2018
Re: Gage Com 001M - Ex-situ Soil Remediation – Soil Shredding
(J) S-20, T30N, R10W; API #30-045-32075; Federal Serial #NMNM-03563

Dear Mr. Smith, Mrs. Fields and Mr. Adeloye,

The Gage Com 001M site is an active natural gas production well location within the San Juan Basin Gas Field in San Juan County, New Mexico. The site is located on land managed by the Bureau of Reclamation and Land Management Farmington Field Office (BLM-FFO) and is in an area primarily used for oil and gas production with surrounding rural residences. The production well was drilled in December of 2004.

Background

An integrity failure of an aboveground production storage tank resulted in the release of approximately 2.5 bbls of produced water and 7.9 bbls of natural gas condensate. This data was obtained from recent tank gauging information collected the day prior to the release discovery. Initial site investigation determined additional delineation and remediation is required to define the extents of impacts. Vertical and lateral delineation of the site has not yet been performed. The well site is operated by BP Production.

Site Ranking

Depth to groundwater at the release site is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others (1983), and depth to groundwater data obtained from water wells permitted by the New- Mexico State Engineer's Office (OSE, Figure 1). Based on a known depth to groundwater at the nearby water well SJ 01362, and considering a surface elevation difference of 190 feet, depth to water at the release site is estimated to be 79' from ground surface.

Local topography and proximity to adjacent water features are also considered. A topographic map of the site is provided as Figure 2 and demonstrates that the release site is not within 300 feet of any continuously flowing watercourse or within 200 feet of any other significant watercourse, lakebed, sinkhole or playa lake as measured from the ordinary high water mark. Figure 3 demonstrates that the release is not within 300 feet of a permanent residence, school, hospital, institution or church. Figure 4 demonstrates, based on a search of the OSE database and USGS topographic maps, that there are no freshwater wells or springs within 1000 feet of the release. Figure 5 demonstrates that the release site is not within a municipal boundary or a defined municipal freshwater well field. Figure 6 demonstrates that the release site is not within 500 feet of a wetland. Figure 7 demonstrates that the release site is not in an area overlying a subsurface mine. The release is not located in an unstable area. Figure 8 demonstrates that the release is not within the mapped FEMA 100-year floodplain.

Based on the siting criteria, the remediation site closure standards will be 2,500 ppm TPH, 1,000 ppm GRO+DRO, 50 ppm BTEX, 10 ppm benzene and 10,000 ppm chlorides.

Proposed Remediation – Soil Shredding

Based on recent success of soil shredding technologies performed on BP remediation sites, BP proposes to use this technology at the subject site. To date, BP has successfully contracted soil shredding of nearly 150,000 cubic yards of soil to meet site closure standards.

Soil shredding involves the excavation of the impacted soil which is then placed in processing equipment, such as a hammer mill or pug mill, to mechanically process and break-up the soil. The soil becomes more uniform and is aerated during the mechanical processing. The soil is then ejected from the processing equipment and a chemical oxidizer is applied, in this case, a 35% solution of hydrogen peroxide and water. The applied concentration of hydrogen peroxide typically ranges from 3-8%. The hydrogen peroxide quickly oxidizes the hydrocarbon impacts (reagents), resulting in soil, water and carbon dioxide (products). Once the soil is processed, it is stockpiled and allowed to sit for approximately 2-5 days of residence time. A composite soil sample is collected from each segregated stockpile and submitted for laboratory analysis to determine the effectiveness of the ex-situ remediation process. If the laboratory results are of acceptable levels, the soil will be used as backfill to the excavation; if results are unsatisfactory, the soil is passed through the process once more and a subsequent laboratory sample will be collected for laboratory confirmation as described before. Typically, 24 hours of notice is provided to the regulatory agencies for the opportunity to observe and witness the stockpile sampling.

BP proposes to excavate and implement a pilot test for soil shredding to remediate approximately 1,000 cubic yards of hydrocarbon impacted soil. BP will perform shredding on approximately 300 cubic yards to determine the effectiveness of the technology. If successful, soil shredding will continue. BP proposes to treat the impacted soil and segregate windrow stockpiles broken into 100 cubic yard increments. A single, five-point composite, soil sample will be collected to represent each 100 cubic yard stockpile. If necessary, once a baseline of approximately 1,000 cubic yards of soil is consistently and successfully treated, BP will propose to decrease the sampling frequency to 500 cubic yard stockpile segments. The 500 cubic yard sampling modification will be discussed with the NMOCD and BLM for approval and input prior to implementation. BP would expect to have a sampling modification approval from the agencies within 48 working hours from the time of request. The remediation will then continue until complete and sampling will be based on the regulatory agencies approved sampling plan.

Excavation sampling will be in accordance with a typical dig and haul. The sidewalls and base of the excavation will be sampled in a frequency based on the size and progress of the excavation. Agency notification of excavation sampling will also be issued in advanced, 24 hours if possible. The composite sampling area of the sidewalls and base will be determined based on the size and available area of the excavation at the time of each sampling event. This information will be communicated to each regulatory agency and agreed upon prior to sample submission.

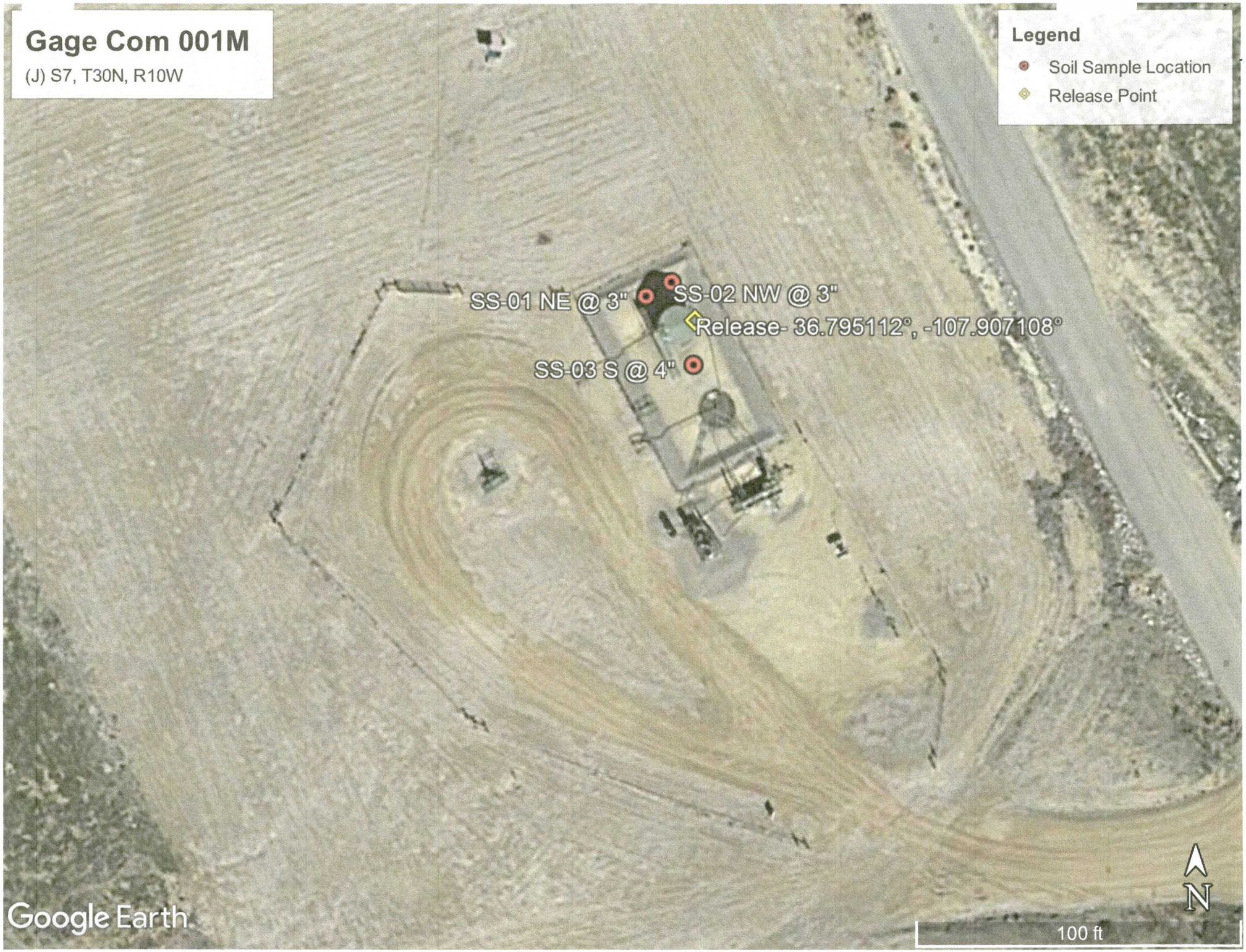
BP is currently anticipates mobilizing to the location once this plan and the BLM Sundry is approved. BP plans to shut the well in and remove all necessary surface equipment. BP requests that the BLM provides a 50' buffer from the pad disturbance in anticipation of any offsite activities, should it be necessary.

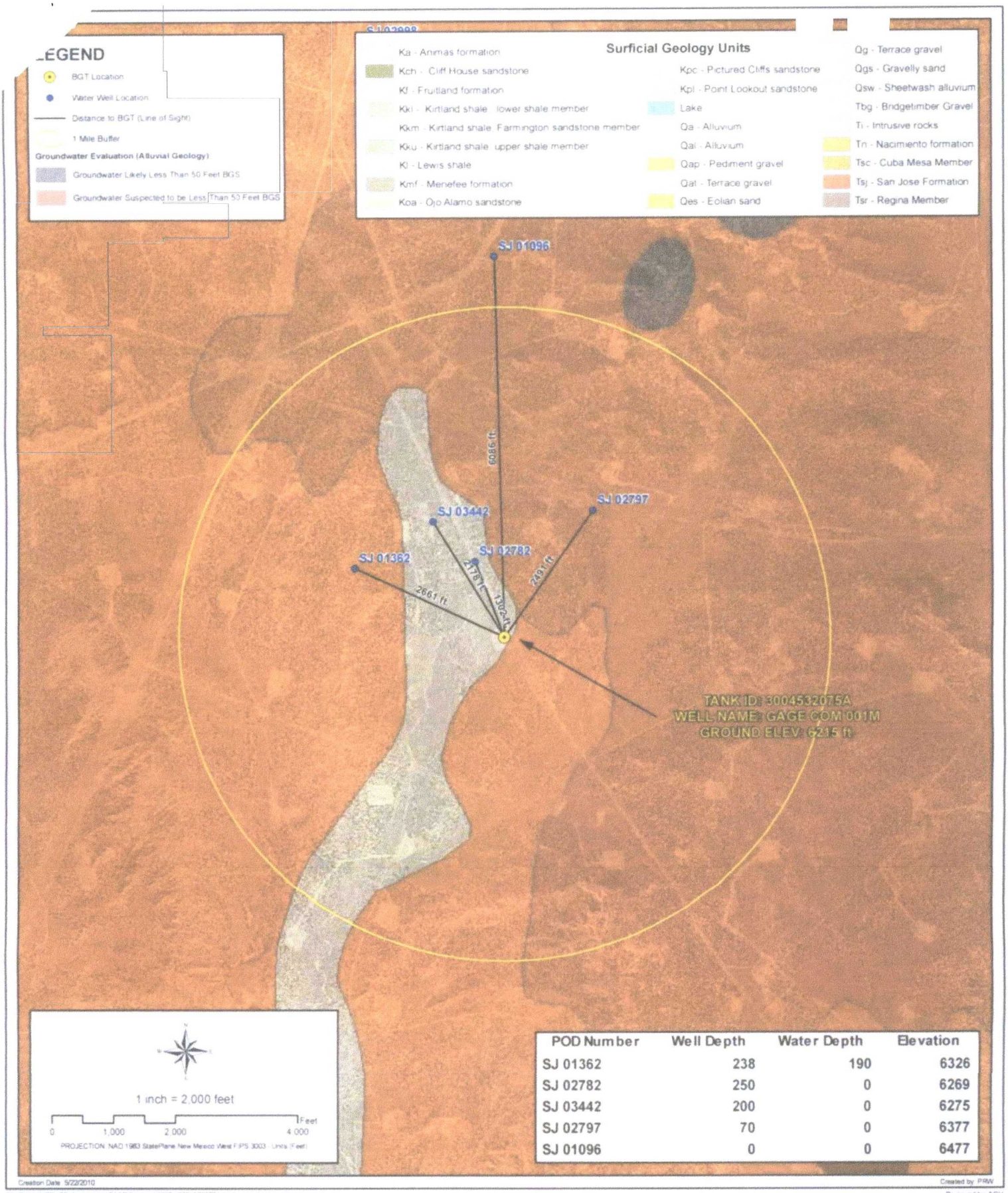
It is understood, that if soil remediation is not successful via the soil shredding, an alternative method such as a dig and haul or soil vapor extraction will be necessary. If soil shredding is not effective, BP will elect to perform an alternative type of remediation such as dig and haul, soil vapor extraction or other approved methods. BP will be in close communications with the agencies in the event an alternative remediation method is required.

Site Closure and Reporting

Once the soil shredding process is complete, the excavated area will be fully backfilled and compacted, and surface equipment will be re-set. Any necessary interim reclamation will be performed. Final reclamation of the well pad will occur at a later date, once the natural gas production well is plugged and abandoned.

A final remediation report will be delivered to NMOCD and BLM for approval of final site closure regarding the excavation and soil shredding activities within 60 days of the end of remediation.


Gage Com 001M
(J) S7, T30N, R10W
Legend
Soil Sample Location
Release Point
SS-01 NE @ 3"
SS-02 NW @ 3"
Release- 36.795112°, -107.907108°
SS-03 S @ 4"
N
100 ft
Google Earth



POD Number	Well Depth	Water Depth	Elevation
SJ 01362	238	190	6326
SJ 02782	250	0	6269
SJ 03442	200	0	6275
SJ 02797	70	0	6377
SJ 01096	0	0	6477

Creation Date: 5/22/2010
Created by: PRW
File Path: X:\BPLTE_Inspections\PASS\Sector 4\MXDs\3004532075A.mxd
Reviewed by: AGH

bp

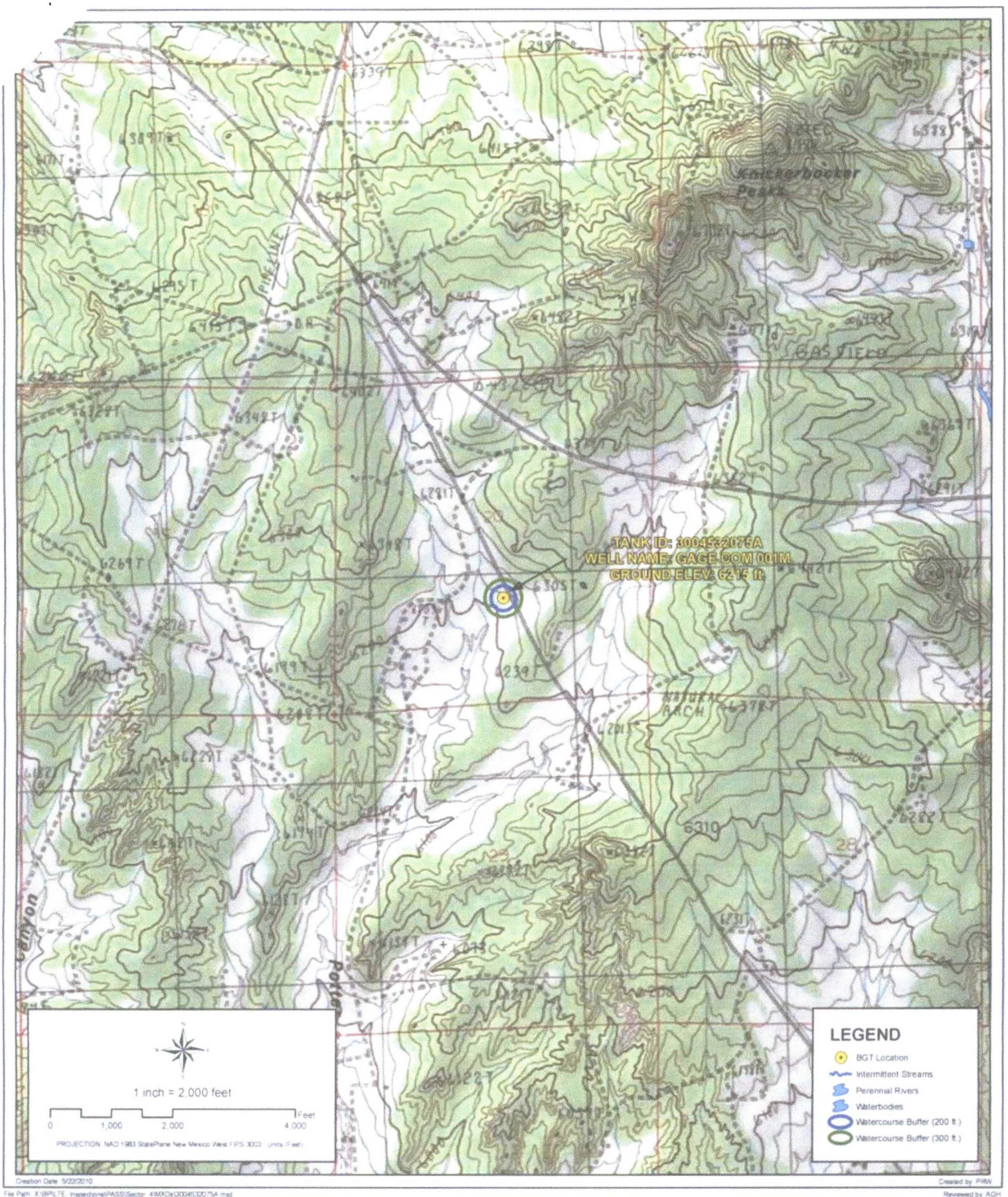
GROUNDWATER LESS THAN 50 FT.

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 1



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Created by: PRW

File Path: X:\BP\LTE_Inspections\PASS\Sector_4\MXDs\3004532075A.mxd

Reviewed by: AGH

bp

PROXIMITY TO WATERCOURSES

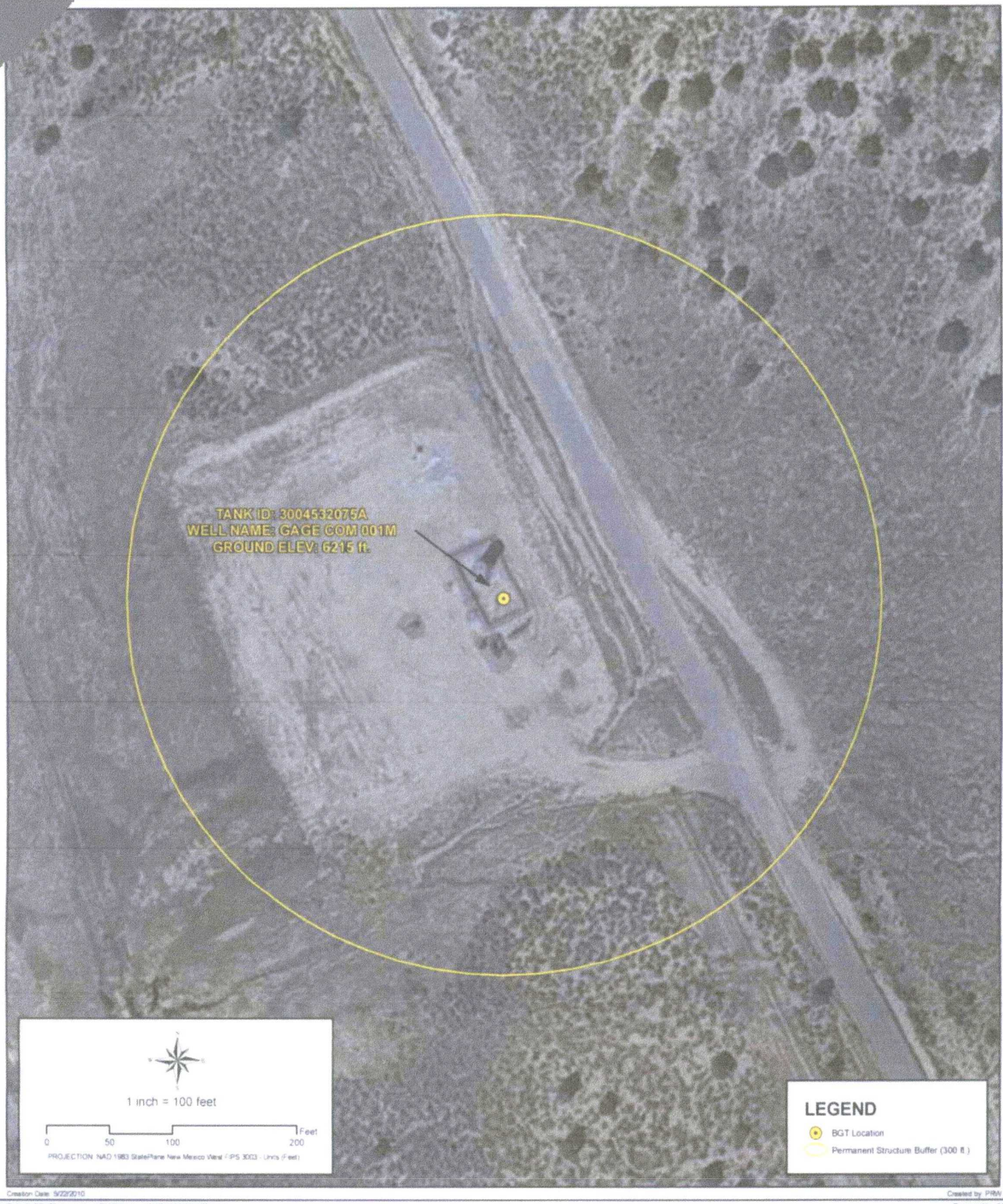
WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE

2



Creation Date: 9/22/2010
Created by: PRW
File Path: X:\BPLTE_Inspections\PASS\Sector 4\MXDs\3004532075A.mxd
Reviewed by: ADH

bp

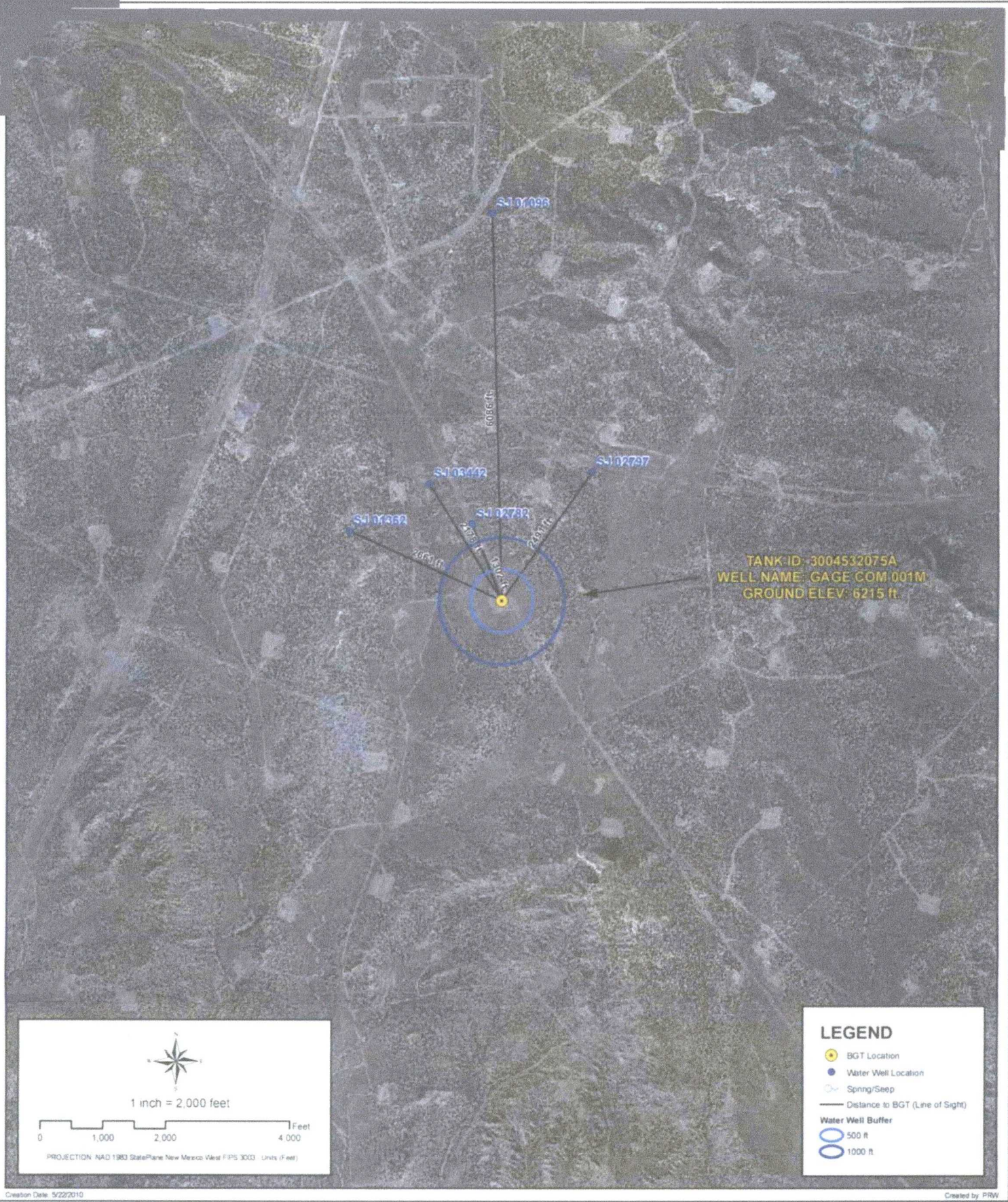
PROXIMITY TO PERMANENT STRUCTURE

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 3



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Created by: PRW

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Reviewed by: AGH

bp

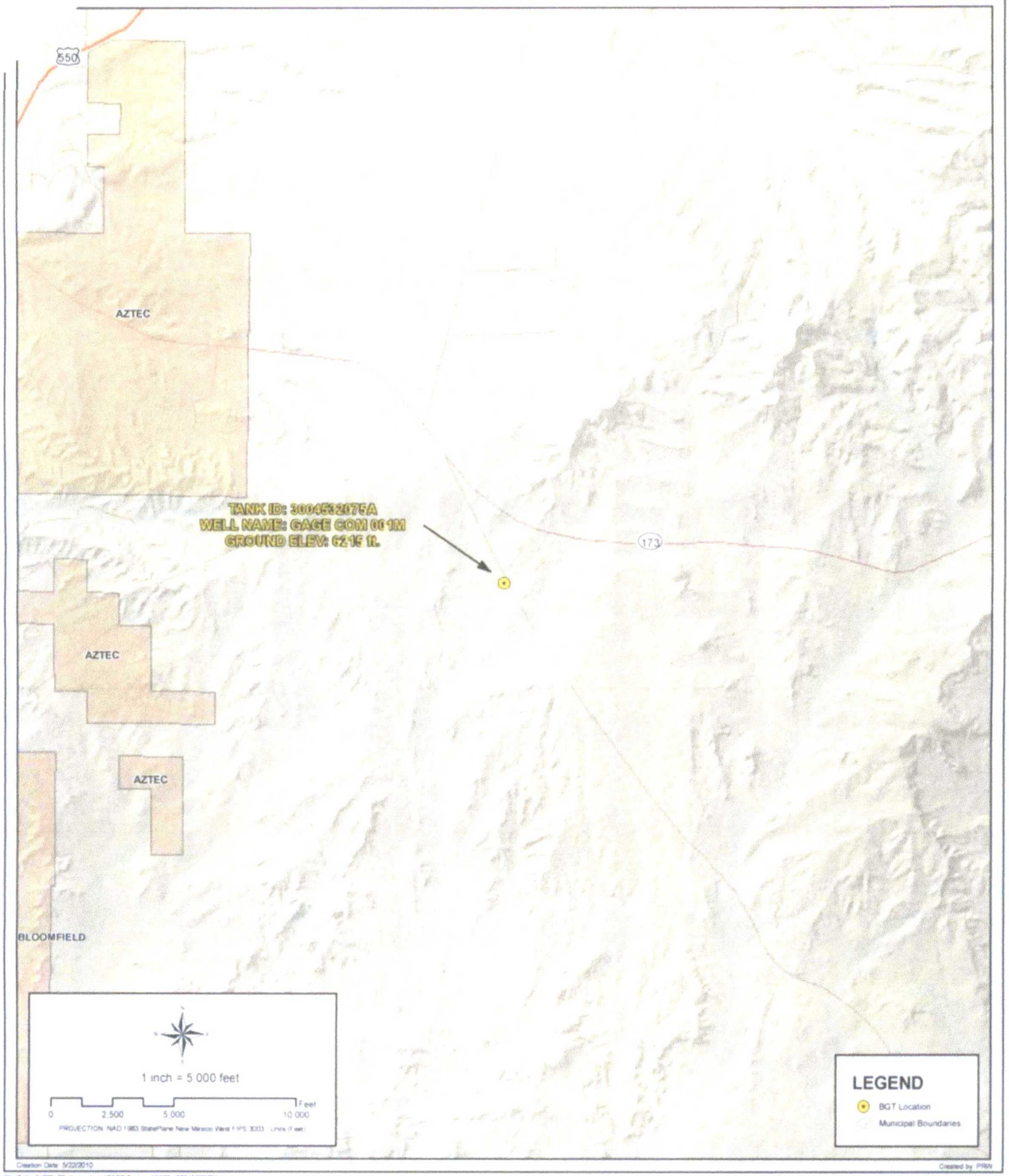
PROXIMITY TO WATER WELLS

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 4



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Reviewed by: AGH

bp

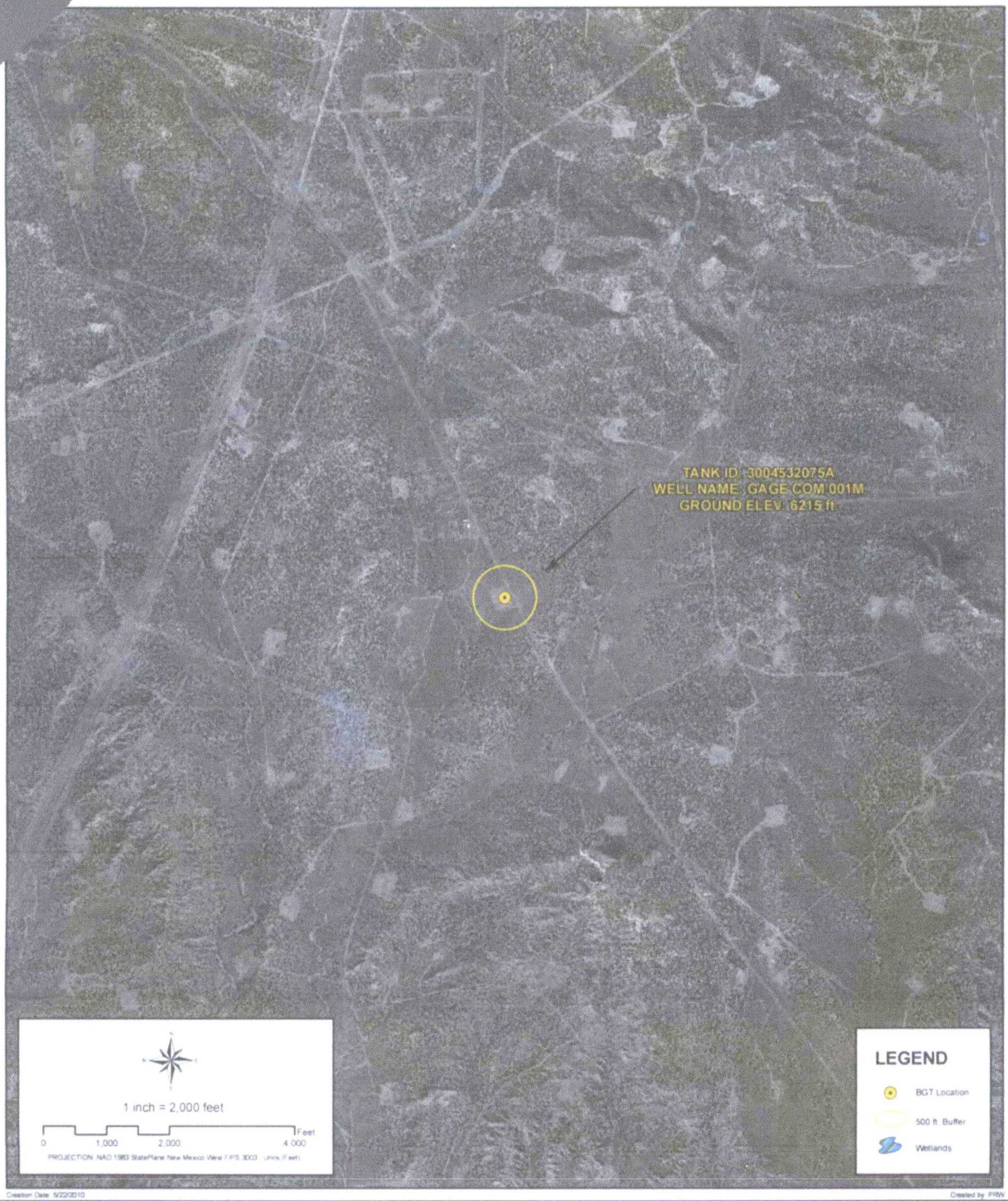
PROXIMITY TO MUNICIPAL BOUNDARY

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 5



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bp

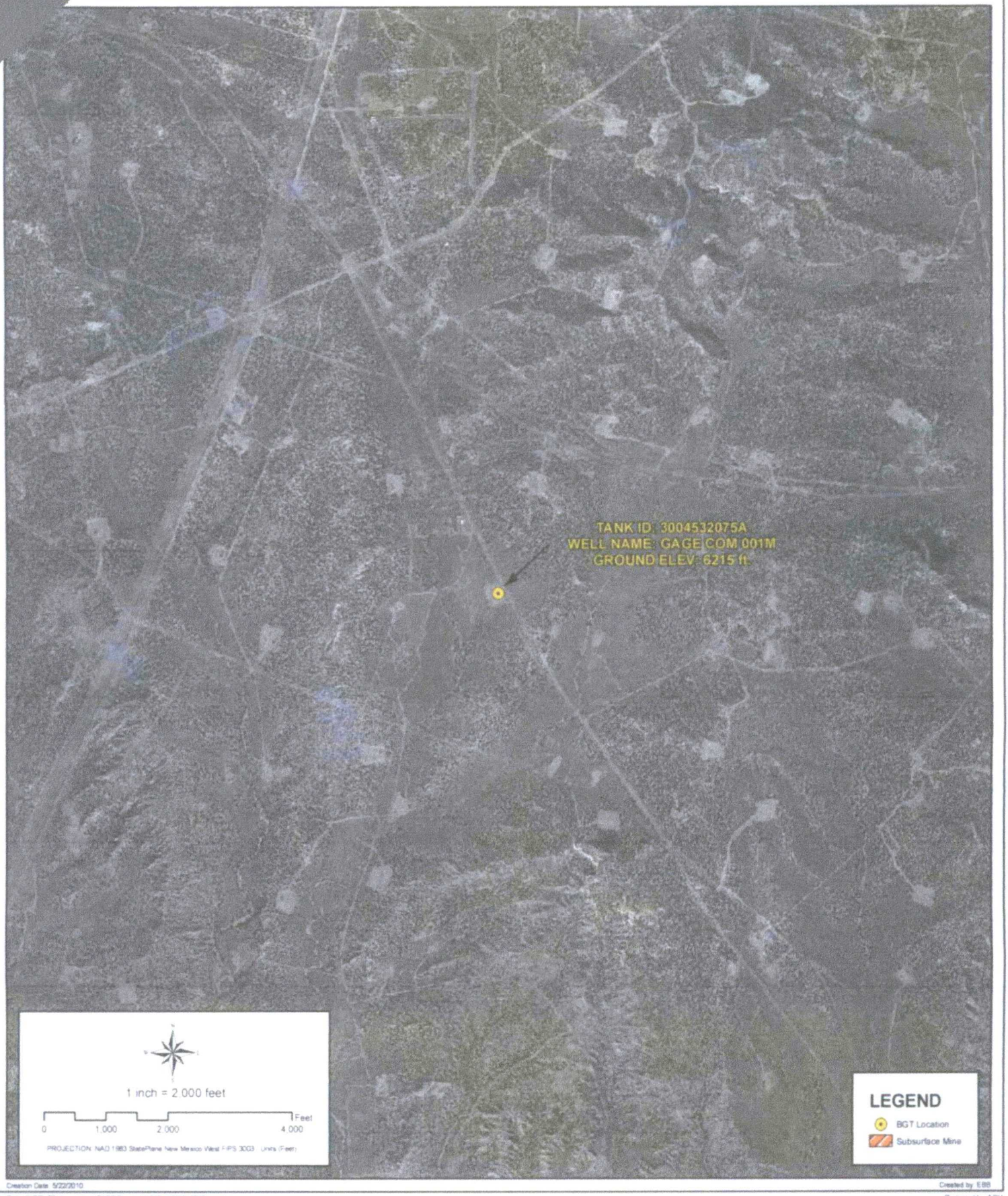
PROXIMITY TO WETLANDS

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 6



Creation Date: 5/22/2010

Created by: EBB

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Reviewed by: AGH

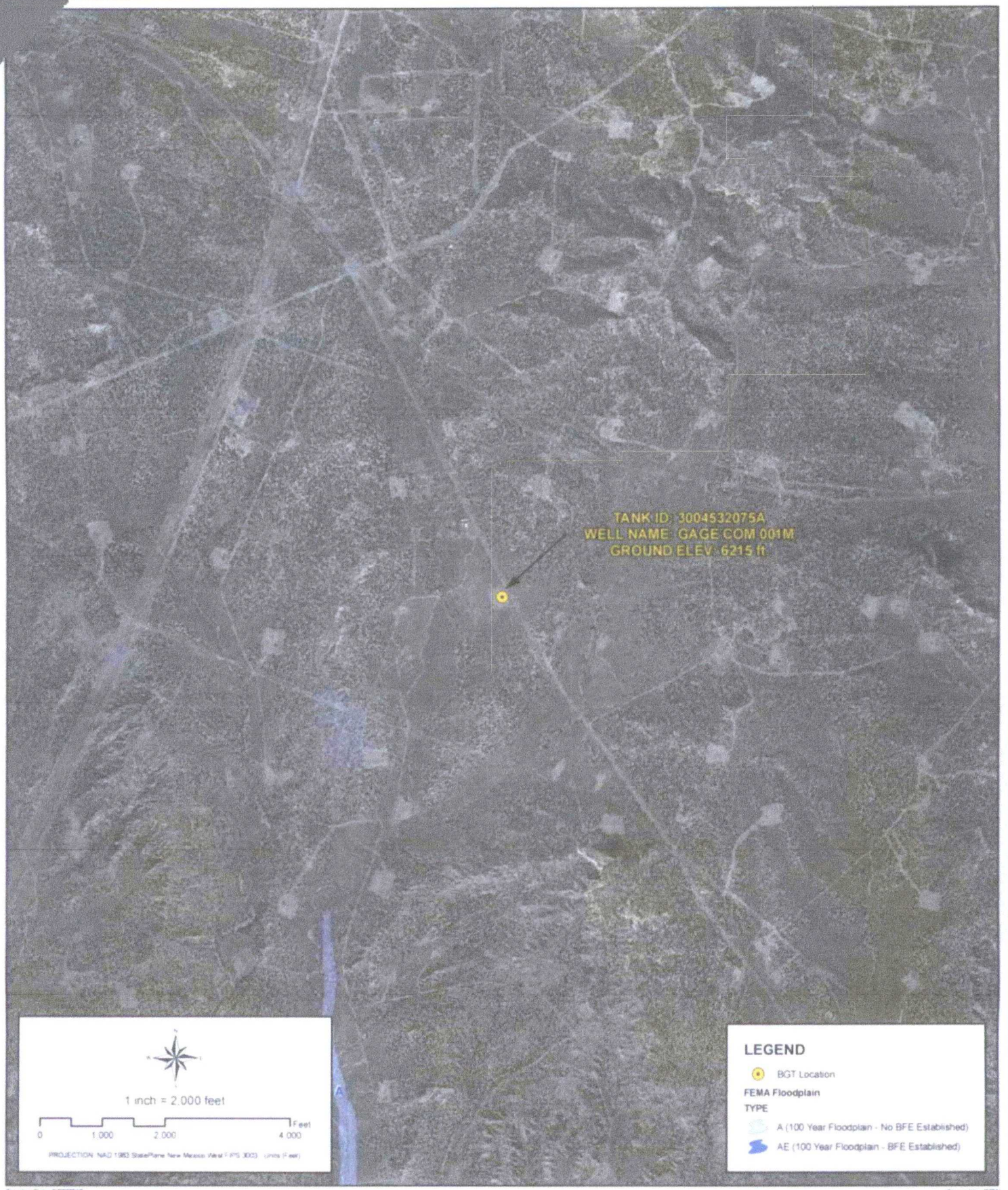
PROXIMITY TO SUBSURFACE MINES

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M.NM23

FIGURE 7



Creation Date: 5/22/2010 Created by: PRW

File Path: X:\BP\LTE_Inspections\PIASS\Sector 4\MXCs\3004532075A.mxd Reviewed by: AGH

bp

PROXIMITY TO FLOODPLAIN

WELL NAME: GAGE COM 001M

API NUMBER: 3004532075 TANK ID: 3004532075A

SECTION 20, TOWNSHIP 30.0N, RANGE 10W, P.M. NM23

FIGURE 8

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.

Chain Of Custody Number:

Samples Received: 8/27/2018 4:20:00PM

Job Number: 03143-0424

Work Order: P808046

Project Name/Location: Gage Com 1M

Report Reviewed By: _____ Date: 9/4/18

Walter Hinchman, Laboratory Director

_____ Date: 9/4/18

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SS-01 NE @3"	P808046-01A	Soil	08/27/18	08/27/18	Glass Jar, 4 oz.
SS-02 NW @3"	P808046-02A	Soil	08/27/18	08/27/18	Glass Jar, 4 oz.
SS-03 S @4"	P808046-03A	Soil	08/27/18	08/27/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

SS-01 NE @3"
P808046-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	**2560**	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Toluene	**117000**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Ethylbenzene	**33700**	250	ug/kg	10	1835002	08/27/18	08/28/18	EPA 8260B	
p,m-Xylene	**545000**	5000	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
o-Xylene	**128000**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Total Xylenes	**673000**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*107 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Surrogate: Toluene-d8		*165 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	*Surr1*
Surrogate: Bromofluorobenzene		*73.9 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**4030**	200	mg/kg	10	1835002	08/27/18	08/28/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**14800**	2500	mg/kg	100	1835004	08/28/18	08/29/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**2050**	50.0	mg/kg	1	1835004	08/28/18	08/28/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*111 %*		*50-150*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8015D*	
Surrogate: n-Nonane		*2760 %*		*50-200*	*1835004*	*08/28/18*	*08/29/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	**531**	20.0	mg/kg	1	1835003	08/28/18	08/28/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

SS-02 NW @3"
P808046-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	**2180**	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Toluene	**83800**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Ethylbenzene	**34500**	250	ug/kg	10	1835002	08/27/18	08/28/18	EPA 8260B	
p,m-Xylene	**408000**	5000	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
o-Xylene	**93600**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Total Xylenes	**502000**	2500	ug/kg	100	1835002	08/27/18	08/29/18	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*105 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Surrogate: Toluene-d8		*162 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	*Surr1*
Surrogate: Bromofluorobenzene		*80.3 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**4270**	200	mg/kg	10	1835002	08/27/18	08/28/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**5840**	250	mg/kg	10	1835004	08/28/18	08/29/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**797**	50.0	mg/kg	1	1835004	08/28/18	08/28/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*115 %*		*50-150*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8015D*	
Surrogate: n-Nonane		*1260 %*		*50-200*	*1835004*	*08/28/18*	*08/29/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1835003	08/28/18	08/28/18	EPA 300.0/9056A	

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BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

SS-03 S @4"
P808046-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by 8260									
Benzene	ND	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Toluene	ND	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Ethylbenzene	ND	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
p,m-Xylene	**56.5**	50.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
o-Xylene	ND	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Total Xylenes	ND	25.0	ug/kg	1	1835002	08/27/18	08/28/18	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Surrogate: Toluene-d8		*89.9 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Surrogate: Bromofluorobenzene		*103 %*		*70-130*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8260B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1835002	08/27/18	08/28/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1835004	08/28/18	08/28/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1835004	08/28/18	08/28/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.5 %*		*50-150*	*1835002*	*08/27/18*	*08/28/18*	*EPA 8015D*	
Surrogate: n-Nonane		*103 %*		*50-200*	*1835004*	*08/28/18*	*08/28/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1835003	08/28/18	08/28/18	EPA 300.0/9056A	

BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1835002 - Purge and Trap EPA 5030A										
Blank (1835002-BLK1)				Prepared & Analyzed: 08/27/18 1						
Benzene	ND	25.0	ug/kg							
Toluene	ND	25.0	"							
Ethylbenzene	ND	25.0	"							
p,m-Xylene	ND	50.0	"							
o-Xylene	ND	25.0	"							
Total Xylenes	ND	25.0	"							
Surrogate: 1,2-Dichloroethane-d4	*503*		"	*500*		*101*	*70-130*			
Surrogate: Toluene-d8	*458*		"	*500*		*91.6*	*70-130*			
Surrogate: Bromofluorobenzene	*511*		"	*500*		*102*	*70-130*			
LCS (1835002-BS1)				Prepared & Analyzed: 08/27/18 1						
Benzene	2730	25.0	ug/kg	2500		109	70-130			
Toluene	2320	25.0	"	2500		92.9	70-130			
Ethylbenzene	2370	25.0	"	2500		94.8	70-130			
p,m-Xylene	4780	50.0	"	5000		95.7	70-130			
o-Xylene	2440	25.0	"	2500		97.8	70-130			
Total Xylenes	7230	25.0	"	7500		96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*524*		"	*500*		*105*	*70-130*			
Surrogate: Toluene-d8	*461*		"	*500*		*92.1*	*70-130*			
Surrogate: Bromofluorobenzene	*512*		"	*500*		*102*	*70-130*			
Matrix Spike (1835002-MS1)	**Source: P808043-01**			Prepared: 08/27/18 1 Analyzed: 08/27/18 2						
Benzene	2850	25.0	ug/kg	2500	43.0	112	48-131			
Toluene	3030	25.0	"	2500	355	107	48-130			
Ethylbenzene	2640	25.0	"	2500	103	101	45-135			
p,m-Xylene	7470	50.0	"	5000	1060	128	43-135			
o-Xylene	3200	25.0	"	2500	283	117	43-135			
Total Xylenes	10700	25.0	"	7500	1340	124	43-135			
Surrogate: 1,2-Dichloroethane-d4	*527*		"	*500*		*105*	*70-130*			
Surrogate: Toluene-d8	*482*		"	*500*		*96.3*	*70-130*			
Surrogate: Bromofluorobenzene	*488*		"	*500*		*97.6*	*70-130*			
Matrix Spike Dup (1835002-MSD1)	**Source: P808043-01**			Prepared: 08/27/18 1 Analyzed: 08/27/18 2						
Benzene	2650	25.0	ug/kg	2500	43.0	104	48-131	7.31	23	
Toluene	2440	25.0	"	2500	355	83.4	48-130	21.5	24	
Ethylbenzene	2310	25.0	"	2500	103	88.5	45-135	13.0	27	
p,m-Xylene	5310	50.0	"	5000	1060	85.1	43-135	33.9	27	D1
o-Xylene	2530	25.0	"	2500	283	89.7	43-135	23.4	27	
Total Xylenes	7830	25.0	"	7500	1340	86.6	43-135	30.6	27	D1
Surrogate: 1,2-Dichloroethane-d4	*531*		"	*500*		*106*	*70-130*			
Surrogate: Toluene-d8	*457*		"	*500*		*91.4*	*70-130*			

BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1835002 - Purge and Trap EPA 5030A										
Matrix Spike Dup (1835002-MSD1)	**Source: P808043-01**			Prepared: 08/27/18 1 Analyzed: 08/27/18 2						
Surrogate: Bromofluorobenzene	*495*		*ug/kg*	*500*		*98.9*	*70-130*			

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BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1835002 - Purge and Trap EPA 5030A										
Blank (1835002-BLK2)				Prepared: 08/27/18 1 Analyzed: 08/28/18 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.96*		"	*8.00*		*99.5*	*50-150*			
LCS (1835002-BS2)				Prepared: 08/27/18 1 Analyzed: 08/28/18 1						
Gasoline Range Organics (C6-C10)	48.5	20.0	mg/kg	50.0		97.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.81*		"	*8.00*		*97.7*	*50-150*			
Matrix Spike (1835002-MS2)		**Source: P808043-01**		Prepared: 08/27/18 1 Analyzed: 08/28/18 1						
Gasoline Range Organics (C6-C10)	115	20.0	mg/kg	50.0	23.0	184	70-130			SPK1
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.22*		"	*8.00*		*103*	*50-150*			
Matrix Spike Dup (1835002-MSD2)		**Source: P808043-01**		Prepared: 08/27/18 1 Analyzed: 08/28/18 1						
Gasoline Range Organics (C6-C10)	70.1	20.0	mg/kg	50.0	23.0	94.2	70-130	48.7	20	D1
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.44*		"	*8.00*		*105*	*50-150*			

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BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1835004 - DRO Extraction EPA 3570										
Blank (1835004-BLK1)				Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*54.9*		*"*	*50.0*		*110*	*50-200*			
LCS (1835004-BS1)				Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Diesel Range Organics (C10-C28)	461	25.0	mg/kg	500		92.2	38-132			
Surrogate: n-Nonane	*56.4*		*"*	*50.0*		*113*	*50-200*			
Matrix Spike (1835004-MS1)	**Source: P808045-01**			Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Diesel Range Organics (C10-C28)	730	25.0	mg/kg	500	245	97.0	38-132			
Surrogate: n-Nonane	*57.9*		*"*	*50.0*		*116*	*50-200*			
Matrix Spike Dup (1835004-MSD1)	**Source: P808045-01**			Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Diesel Range Organics (C10-C28)	742	25.0	mg/kg	500	245	99.4	38-132	1.66	20	
Surrogate: n-Nonane	*58.0*		*"*	*50.0*		*116*	*50-200*			

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BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1835003 - Anion Extraction EPA 300.0/9056A										
Blank (1835003-BLK1)				Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Chloride	ND	20.0	mg/kg							
LCS (1835003-BS1)				Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Chloride	255	20.0	mg/kg	250		102	90-110			
Matrix Spike (1835003-MS1)		**Source: P808043-01**		Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Chloride	301	20.0	mg/kg	250	44.4	102	80-120			
Matrix Spike Dup (1835003-MSD1)		**Source: P808043-01**		Prepared: 08/28/18 0 Analyzed: 08/28/18 1						
Chloride	302	20.0	mg/kg	250	44.4	103	80-120	0.494	20	

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BP America Production Co.	Project Name:	Gage Com 1M	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	09/04/18 11:27

Notes and Definitions

Surr2	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
Surr1	Surrogate recovery was outside quality control limits.
SPK1	The spike recovery is outside of quality control limits.
D1	Duplicates or Matrix Spike Duplicates or Laboratory Control Sample Duplicates Relative Percent Difference is outside of control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information | Chain of Custody | Page 1 of 1

Project Information		Report Attention	
Client:	BP America	Report due by:	Standard
Project:	Gage com 1M	Attention:	Steve Mostad
Project Manager:	Steve Mostad	Address:	
Address:	350 Airport Rd	City, State, Zip	
City, State, Zip	Durango CO 81303	Phone:	
Phone:	505 330 9179	Email:	
Email:	Steven.mostad@bp.com		

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA
P808046	03143-0424					

State			
NM	CO	UT	AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
9:05	8/27/18	Soil	1	SS-01 NE @ 3"	1	X		X			X		
9:08	↓	↓	1	SS-02 NW @ 3"	2	X		X			X		
9:10	↓	↓	1	SS-03 S @ 4"	3	X		X			X		

Additional Instructions: PO will be created vis ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Steve Mostad

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/27/18	16:20		8/27/18	1620
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 ____ T2 ____ T3 ____
AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ____

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, **v** - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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