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	NRM2006941316
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co	OGRID: 778	INITIAL
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # *(assigned by OCD)*	
Contact mailing address: 1199 Main St., Suite 101, Durango CO, 81301		

Location of Release Source

Latitude: 36.73612° Longitude: -108.04797°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Cornell C 001	Site Type: P&A Natural Gas Production Well Pad
Date Release Discovered: February 20, 2020	API#: 30-045-08476

Unit Letter	Section	Township	Range	County
O	12	T29N	R12W	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):	Volume Recovered (bbls):
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): Uknown - Historic	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:
Release of condensate and produced water caused from a storage tank integrity failure.

BP discovered impacts during closure of a below grade tank on 2/19/2020, with lab results confirming on 2/20/2020. A dig and haul is planned for the week of 3/9/2020, approximately 400 yards will be removed for offsite disposal.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2006941316
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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 to Cory Smith (cell phone – Voicemail) on October 14, 2019 at 2:00 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 Coordinator

Signature:  Date: 3/5/2020

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

OCD Only

Received by: Ramona Marcus Date: 03/09/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2006941316
District RP	
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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?	>100 (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	NRM2006941316
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: Steve Moskal Title: Environmental Coordinator

Signature:  Date: 3/5/2020

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

OCD Only

Received by: Ramona Marcus Date: 03/09/2020

Incident ID	NRM2006941316
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
☒ Estimated volume of material to be remediated – 400 cubic yards
☒ 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: 3/5/2020

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

OCD Only

Received by: Ramona Marcus Date: 3/9/2020

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

Signature: Date:

Incident ID	NRM2006941316
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

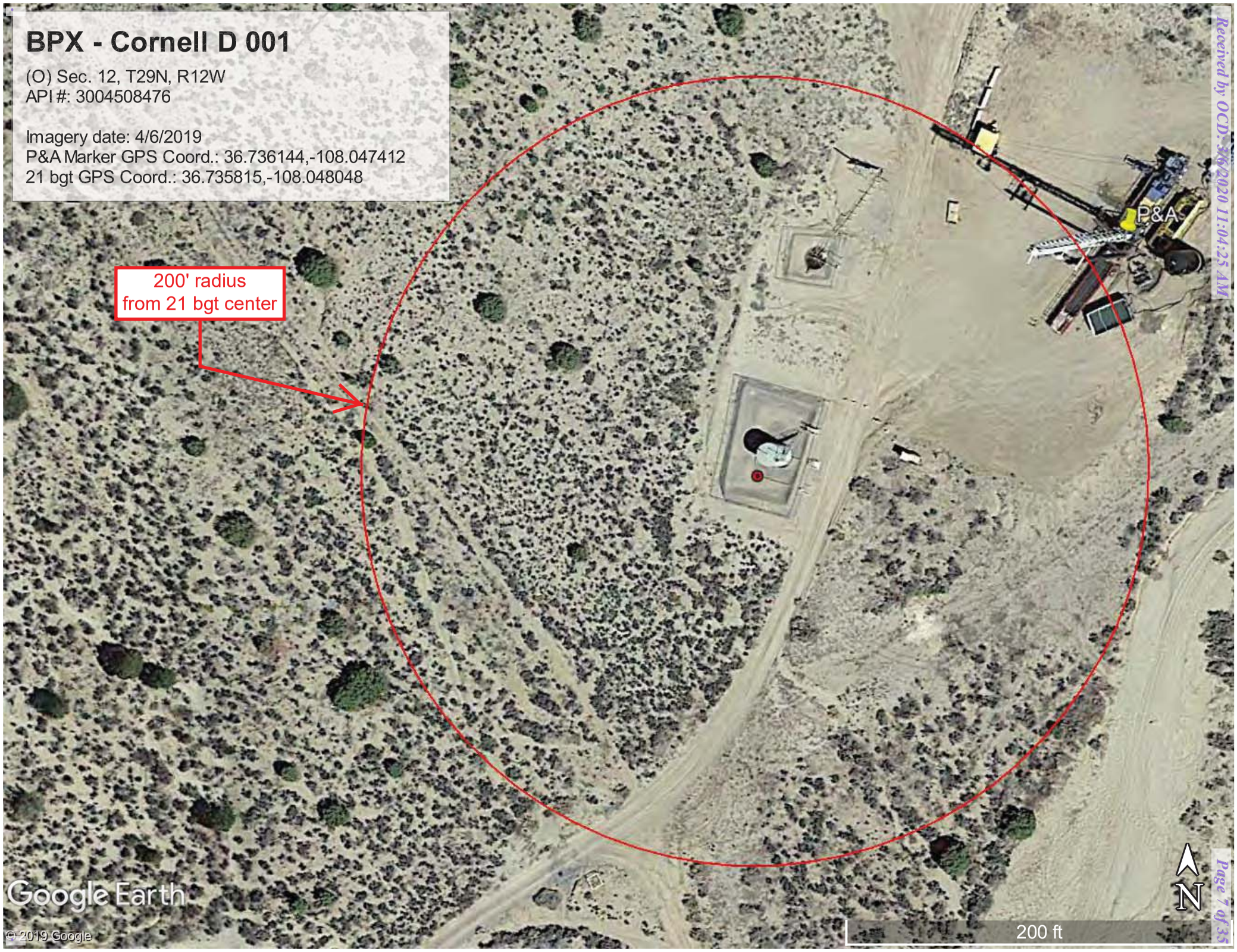
OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



CLIENT: BPX

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

API #: 30045 08476
TANK ID (if applicble): A

FIELD REPORT:

(circle one): BGT CONFIRMATION / RELEASE INVESTIGATION / OTHER:

PAGE #: 1 of

SITE INFORMATION:

SITE NAME: CORNELL D #1
DATE STARTED: 02/19/20
DATE FINISHED:
QUAD/UNIT: O SEC: 12 TWP: 29 N RNG: 12 W PM: NM CNTY: SJ ST: NM
1/4 -1/4/FOOTAGE: 1136'S / 1625'E SW/SE LEASE TYPE: FEDERAL / STATE / FEE / INDIAN
LEASE #: SF065557 PROD. FORMATION: DK CONTRACTOR: KELLEY O.F.S. CONTACT: BPX - J. BEEBE
ENVIRONMENTAL SPECIALIST(S): NJV / JCB

REFERENCE POINT:

WELL HEAD (W.H.) GPS COORD.: 36.736144 x 10 GL ELEV.: 5,669'

1) 95 BGT (DW/DB) GPS COORD.: 36.73612 x 108.04797 DISTANCE/BEARING FROM W.H.: 157.5', 586.5W
2) 21 BGT (SW/DB) GPS COORD.: 36.735815 x 108.048048 DISTANCE/BEARING FROM W.H.: 221', 557W
3) GPS COORD.: DISTANCE/BEARING FROM W.H.:
4) GPS COORD.: DISTANCE/BEARING FROM W.H.:

SAMPLING DATA:

CHAIN OF CUSTODY RECORD(S) # OR LAB USED: HALL

	SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:	OVM READING (ppm)
1)	SPC-TB @ 5' (95)-A	02/19/20	0912	8015B/8021B/300.0 (Cl)	8.3
2)	SPC-TB @ 6' (21)-B	02/19/20	0938	" / " / "	0.0
3)	GRAB @ 5.5 (95)-A	02/19/20	0943	" / " / "	81.7
4)					
5)					

SOIL DESCRIPTION:

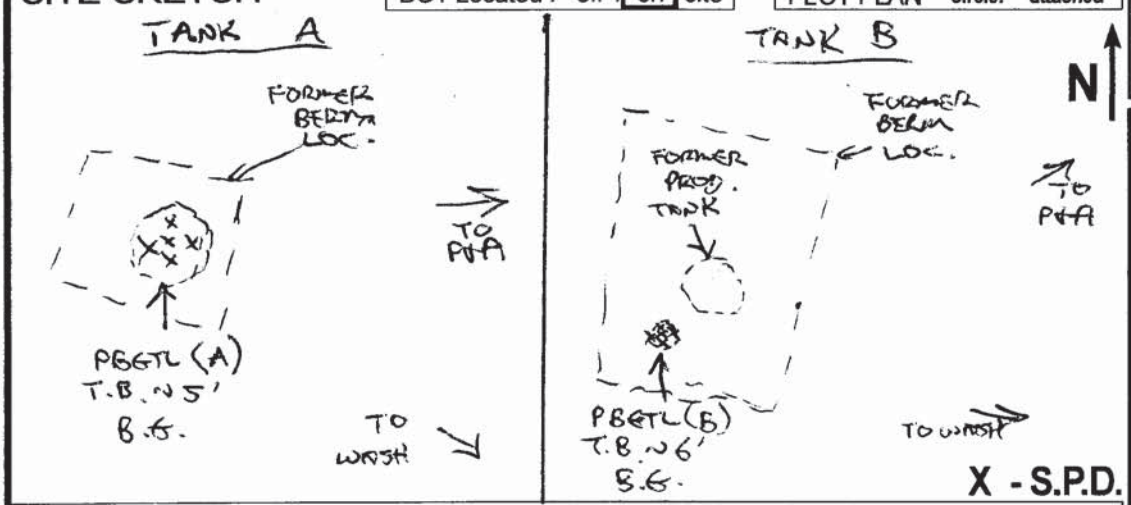
SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: MOSTLY OLO
COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
SAMPLE TYPE: GRAB / COMPOSITE # OF PTS. 5
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - MED. GRAY ON SOUTH PERIMETER OF 95 BGT ONLY.
PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
HC ODOR DETECTED: YES / NO EXPLANATION - HC STAINED SOILS ONLY AT 95 BGT. ~~only~~ (MINOR).
ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION -

SITE OBSERVATIONS:

LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION -
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: YES / NO EXPLANATION: STAINED SOILS AT 95 BGT ONLY (SEE NOTES ABOVE).
EQUIPMENT SET OVER RECLAIMED AREA: YES / NO EXPLANATION -
OTHER: NMOCD / BLM REP(S) PRESENT / NOT PRESENT TO WITNESS CONFIRMATION SAMPLING. GAS WELL HAS BEEN PLUGGED & ABANDONED (P&A). 01/25/19 - CTV19235588Z
EXCAVATION DIMENSION ESTIMATION: ____ ft. X ____ ft. X ____ ft. EXCAVATION ESTIMATION (Cubic Yards): ____
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: <300' NMOCD TPH CLOSURE STD: 100 ppm

SITE SKETCH

BGT Located: off / on site PLOT PLAN circle: attached



OVM CALIB. READ. = 100.4 ppm RF = 1.00
OVM CALIB. GAS = 100 ppm
TIME: 7:30 am/pm DATE: 2/19/20

MISCELL. NOTES

PO: 430115.884
AFE #: X7-007HK-E:REST
SIO #: 19004000767Z
GL #: 710005
Permit date(s): A 06/14/10 B 01/21/20
OCD Appr. date(s): A 05/08/17 B 02/14/20

Tank ID	OVM = Organic Vapor Meter ppm = parts per million
A	BGT Sidewalls Visible: Y / N
B	BGT Sidewalls Visible: Y / N
	BGT Sidewalls Visible: Y / N

Magnetic declination: 10° E

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA - NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.

NOTES: GOOGLE EARTH IMAGERY DATE: 4/6/2019 . ONSITE: 02/ /20

Analytical Report
Lab Order **2002822**
Date Reported: **2/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Cornell D 1
Lab ID: 2002822-001 **Matrix:** SOIL

Client Sample ID: 5PC TB @ 5' (95)-A
Collection Date: 2/19/2020 9:12:00 AM
Received Date: 2/20/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	2/20/2020 11:15:42 AM	50555
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	2/20/2020 12:29:28 PM	50546
Surr: BFB	92.9	70-130		%Rec	1	2/20/2020 12:29:28 PM	50546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/20/2020 9:44:12 AM	50550
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/20/2020 9:44:12 AM	50550
Surr: DNOP	98.8	55.1-146		%Rec	1	2/20/2020 9:44:12 AM	50550
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.020		mg/Kg	1	2/20/2020 12:29:28 PM	50546
Toluene	ND	0.040		mg/Kg	1	2/20/2020 12:29:28 PM	50546
Ethylbenzene	ND	0.040		mg/Kg	1	2/20/2020 12:29:28 PM	50546
Xylenes, Total	ND	0.081		mg/Kg	1	2/20/2020 12:29:28 PM	50546
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%Rec	1	2/20/2020 12:29:28 PM	50546
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	2/20/2020 12:29:28 PM	50546
Surr: Dibromofluoromethane	94.5	70-130		%Rec	1	2/20/2020 12:29:28 PM	50546
Surr: Toluene-d8	100	70-130		%Rec	1	2/20/2020 12:29:28 PM	50546

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2002822**
Date Reported: **2/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Cornell D 1
Lab ID: 2002822-002 **Matrix:** SOIL

Client Sample ID: 5PC TB @ 6' (21)-B
Collection Date: 2/19/2020 9:38:00 AM
Received Date: 2/20/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	2/20/2020 11:52:43 AM	50555
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/20/2020 12:58:01 PM	50546
Surr: BFB	92.0	70-130		%Rec	1	2/20/2020 12:58:01 PM	50546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/20/2020 10:06:08 AM	50550
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/20/2020 10:06:08 AM	50550
Surr: DNOP	100	55.1-146		%Rec	1	2/20/2020 10:06:08 AM	50550
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.024		mg/Kg	1	2/20/2020 12:58:01 PM	50546
Toluene	ND	0.048		mg/Kg	1	2/20/2020 12:58:01 PM	50546
Ethylbenzene	ND	0.048		mg/Kg	1	2/20/2020 12:58:01 PM	50546
Xylenes, Total	ND	0.095		mg/Kg	1	2/20/2020 12:58:01 PM	50546
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%Rec	1	2/20/2020 12:58:01 PM	50546
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	2/20/2020 12:58:01 PM	50546
Surr: Dibromofluoromethane	93.8	70-130		%Rec	1	2/20/2020 12:58:01 PM	50546
Surr: Toluene-d8	98.6	70-130		%Rec	1	2/20/2020 12:58:01 PM	50546

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2002823**
Date Reported: **2/21/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Cornell D 1
Lab ID: 2002823-001 **Matrix:** SOIL

Client Sample ID: Grab @ 5.5 (95) - A
Collection Date: 2/19/2020 9:16:00 AM
Received Date: 2/20/2020 8:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	2/20/2020 12:05:04 PM	50555
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **JMR**	
Gasoline Range Organics (GRO)	16	3.3		mg/Kg	1	2/20/2020 1:26:40 PM	50546
Surr: BFB	99.3	70-130		%Rec	1	2/20/2020 1:26:40 PM	50546
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	470	8.9		mg/Kg	1	2/20/2020 10:28:10 AM	50550
Motor Oil Range Organics (MRO)	140	44		mg/Kg	1	2/20/2020 10:28:10 AM	50550
Surr: DNOP	102	55.1-146		%Rec	1	2/20/2020 10:28:10 AM	50550
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **JMR**	
Benzene	ND	0.017		mg/Kg	1	2/20/2020 1:26:40 PM	50546
Toluene	ND	0.033		mg/Kg	1	2/20/2020 1:26:40 PM	50546
Ethylbenzene	ND	0.033		mg/Kg	1	2/20/2020 1:26:40 PM	50546
Xylenes, Total	ND	0.066		mg/Kg	1	2/20/2020 1:26:40 PM	50546
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%Rec	1	2/20/2020 1:26:40 PM	50546
Surr: 4-Bromofluorobenzene	9.72	70-130	S	%Rec	1	2/20/2020 1:26:40 PM	50546
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	2/20/2020 1:26:40 PM	50546
Surr: Toluene-d8	99.6	70-130		%Rec	1	2/20/2020 1:26:40 PM	50546

Total TPH = 626 mg/Kg

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2002908**
Date Reported: **2/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Cornell D 1
Lab ID: 2002908-001 **Matrix:** MEOH (SOIL)

Client Sample ID: Grab @ 7' (95) - A
Collection Date: 2/19/2020 9:20:00 AM
Received Date: 2/21/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	2/21/2020 12:05:54 PM	50585
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	850	9.4		mg/Kg	1	2/21/2020 9:55:15 AM	50580
Motor Oil Range Organics (MRO)	400	47		mg/Kg	1	2/21/2020 9:55:15 AM	50580
Surr: DNOP	108	55.1-146		%Rec	1	2/21/2020 9:55:15 AM	50580
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	2/21/2020 9:49:44 AM	G66724
Surr: BFB	78.6	66.6-105		%Rec	1	2/21/2020 9:49:44 AM	G66724
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	2/21/2020 9:49:44 AM	B66724
Toluene	ND	0.037		mg/Kg	1	2/21/2020 9:49:44 AM	B66724
Ethylbenzene	ND	0.037		mg/Kg	1	2/21/2020 9:49:44 AM	B66724
Xylenes, Total	ND	0.073		mg/Kg	1	2/21/2020 9:49:44 AM	B66724
Surr: 4-Bromofluorobenzene	87.3	80-120		%Rec	1	2/21/2020 9:49:44 AM	B66724

Total TPH = 1,250 mg/Kg

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2002978**
Date Reported: **2/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: Cornell D 1
Lab ID: 2002978-001 **Matrix:** SOIL

Client Sample ID: GRAB @ 8.5' (95)-A
Collection Date: 2/19/2020 10:15:00 AM
Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CJS**
Chloride	ND	60		mg/Kg	20	2/24/2020 11:50:18 AM	50612
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	720	48		mg/Kg	5	2/24/2020 9:59:53 AM	50607
Motor Oil Range Organics (MRO)	470	240		mg/Kg	5	2/24/2020 9:59:53 AM	50607
Surr: DNOP	90.6	55.1-146		%Rec	5	2/24/2020 9:59:53 AM	50607
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	2/24/2020 9:29:13 AM	A66747
Surr: BFB	84.4	66.6-105		%Rec	5	2/24/2020 9:29:13 AM	A66747
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.088		mg/Kg	5	2/24/2020 9:29:13 AM	C66747
Toluene	ND	0.18		mg/Kg	5	2/24/2020 9:29:13 AM	C66747
Ethylbenzene	ND	0.18		mg/Kg	5	2/24/2020 9:29:13 AM	C66747
Xylenes, Total	ND	0.35		mg/Kg	5	2/24/2020 9:29:13 AM	C66747
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	5	2/24/2020 9:29:13 AM	C66747

Total TPH = 1,190 mg/Kg

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2002A31**
Date Reported: **2/27/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: Grab @ 10' 95-A
Project: Cornell D 1
Collection Date: 2/19/2020 11:05:00 AM
Lab ID: 2002A31-001
Matrix: MEOH (SOIL)
Received Date: 2/25/2020 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	2/25/2020 12:13:24 PM	50651
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/25/2020 10:30:47 AM	50646
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/25/2020 10:30:47 AM	50646
Surr: DNOP	104	55.1-146		%Rec	1	2/25/2020 10:30:47 AM	50646
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.4		mg/Kg	1	2/25/2020 9:23:41 AM	50588
Surr: BFB	83.9	66.6-105		%Rec	1	2/25/2020 9:23:41 AM	50588
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.027		mg/Kg	1	2/25/2020 9:23:41 AM	50588
Toluene	ND	0.054		mg/Kg	1	2/25/2020 9:23:41 AM	50588
Ethylbenzene	ND	0.054		mg/Kg	1	2/25/2020 9:23:41 AM	50588
Xylenes, Total	ND	0.11		mg/Kg	1	2/25/2020 9:23:41 AM	50588
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	2/25/2020 9:23:41 AM	50588

Total TPH = ND

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Chain-of-Custody Record

Client: BLAGG ENGR. / BPX ENERGY

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush SAME DAY

Project Name:
CORNELL D #1

Project #:

Project Manager:
SABRE BEEBE

Sampler: NELSON VELEZ

On Ice: ☑ Yes ☐ No 9V

Sample Temperature: 2.3+0.1 = 2.4°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2002822	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (5emi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
2/19/20	0912	SOIL	5PC - TB @ 5' (95) - A	4 oz. - 1	Cool	-001	✓		✓									✓			✓	
2/19/20	0938	SOIL	5PC - TB @ 6' (21) - B	4 oz. - 1	Cool	-002	✓		✓									✓			✓	

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/19/20	1557			2/19/20	1557
2/19/20	1827		Courier	2/20/20	8:20

Remarks: **BILL DIRECTLY TO BPX USING THE CONTACT(S) BELOW.**

CONTACT: **SABRE BEEBE / ERIN DUNMAN**
PO #: 4301158226

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: BLAGG ENGR. / BPX ENERGY

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush SAME DAY

Project Name:
CORNELL D #1

Project #:

Project Manager:
SABRE BEEBE

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3 + 0.1 = 2.4°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2002823	BTEX + ~~MTBE~~ + ~~TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
2/19/20	0916	SOIL	GRAB @ 5.5' (95) - A	4 oz. - 1	Cool	-001	√		√									√		√		

Date: 2/19/20 Time: 1557 Relinquished by: [signature]
Received by: [signature] Date: 2/19/20 Time: 1557

Date: 2/19/20 Time: 1827 Relinquished by: Christen Walters
Received by: Courier Date: 2/20/20 Time: 8:20

Remarks: BILL DIRECTLY TO BPX USING THE CONTACT(S) BELOW.

CONTACT: SABRE BEEBE / ERIN DUNMAN
PO #: 4301158226

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Chain-of-Custody Record

Client: BLAGG ENGR. / BPX ENERGY

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush SAME DAY

Project Name: CORNELL D #1

Project #:

Project Manager: SABRE BEEBE

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No NV

Sample Temperature: 3.3 +0.0 = 3.3°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2002908	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
2/19/20	0920	SOIL	GRAB @ 7' (95) - A	4 oz. - 1	Cool	-001	✓		✓									✓		✓		

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/20/20	1644			2/20/20	1644
2/20/20	1754		courier	2/21/20	8:00

Remarks: BILL DIRECTLY TO BPX USING THE CONTACT(S) BELOW.

CONTACT: SABRE BEEBE / ERIN DUNMAN
PO #: 4301158226

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: BLAGG ENGR. / BPX ENERGY

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush SAME DAY

Project Name: CORNELL D #1

Project #:

Project Manager: SABRE BEEBE

Sampler: NELSON VELEZ

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.3 (D) - 3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2002978	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
2/19/20	1015	SOIL	GRAB @ 8.5' (95) - A	4 oz. - 1	Cool	-001	✓		✓									✓		✓		

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/21/20	1709		Christine Walters	2/21/20	1709
Date:	Time:	Relinquished by:	Received by:	Date	Time
2/21/20	1818	Christine Walters	Courier	2/22/20	0905

Remarks: BILL DIRECTLY TO BPX USING THE CONTACT(S) BELOW.

CONTACT: SABRE BEEBE / ERIN DUNMAN
PO #: 4301158226

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Chain-of-Custody Record

Turn-Around Time: ☐ Standard ☑ Rush SAME DAY

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:	BLAGG ENGR. / BPX ENERGY
Mailing Address:	P.O. BOX 87
	BLOOMFIELD, NM 87413
Phone #:	(505) 632-1199
Email or Fax#:	
QA/QC Package:	☐ Standard ☐ Level 4 (Full Validation)
Accreditation:	NELAP ☐ Other
EDD (Type)	
Project Name:	CORNELL D #1
Project #:	
Project Manager:	SABRE BEEBE
Sampler:	NELSON VELEZ
On Ice:	☑ Yes ☐ No NV
Sample Temperature:	-0.9-1 = -0.1.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	JSR 2/25/20 HEAL No.	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
Analysis Request																						
2/19/20	1105	SOIL	GRAB @ 10' (95) - A	4 oz. - 1	Cool	-001	√		√									√		√		

Date	Time	Relinquished by:	Received by:	Date	Time
2/24/20	1656		Christin Waters	2/24/20	1656
2/24/20	1810	Christin Waters		2/25/20	8:05

Remarks: **BILL DIRECTLY TO BPX USING THE CONTACT(S) BELOW.**

CONTACT: **SABRE BEEBE / ERIN DUNMAN**

PO #: 4301158226

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

NRM2006941316

SITING AND HYDRO-GEOLOGICAL REPORT FOR CORNELL D 001

Siting Criteria 19.15.17.10 NMAC

Depth to groundwater at the site is estimated to be above 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). Local topography and proximity to adjacent water features is also considered. A topographic map of the site is provided as Figure 2 and demonstrates that the below grade tank (BGT) 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 BGT 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 BGT. Figure 5 demonstrates that the BGT is not within a municipal boundary or a defined municipal freshwater well field. Figure 6 demonstrates that the BGT is not within 500 feet of a wetland. Figure 7 demonstrates that the BGT is not in an area overlying a subsurface mine. The BGT is not located in an unstable area. Figure 8 demonstrates that the BGT is not within the mapped FEMA 100-year floodplain.

Local Geology and Hydrology

This particular site is located on Nacimiento Formation outcrops forming Crouch Mesa between the Animas and San Juan rivers. The site is located on a gentle slope draining to an arroyo. The arroyo extends to the San Juan River hundreds of feet away and approximately 200 feet lower in elevation.

Regional Geology and Hydrology

The San Juan Basin is situated in the Navajo section of the Colorado Plateau and is characterized by broad open valleys, mesas, buttes and hogbacks. Away from major valleys and canyons topographic relief is generally low. Native vegetation is sparse and shrubby. Drainage is mainly by the San Juan River, the only permanent stream in the Navajo Section of the Colorado Plateau. The San Juan River is a tributary of the Colorado River. Major tributaries include the Animas, Chaco and La Plata Rivers. Flow of the San Juan River across the basin is regulated by the Navajo Dam, located about 30 miles northeast of Farmington, New Mexico. The climate is arid to semiarid with an average annual precipitation of 8 to 10 inches. Soils within the basin consist of weathered parent rock derived from predominantly physical means mostly from eolian depositional system with fluvial having a lesser impact.

Cretaceous and Tertiary sandstones, as well as Quaternary Alluvial deposits, serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). In most of the proposed area, the Nacimiento Formation lies at the surface and grades into the Animas Formation to the west. The lower part of the Nacimiento Formation is composed of interbedded black, carbonaceous mudstones and white coarse-grained sandstones. The upper part is comprised of mudstone and sandstone. It is generally slope-forming, even within the sandstone units. Thickness of the Nacimiento ranges

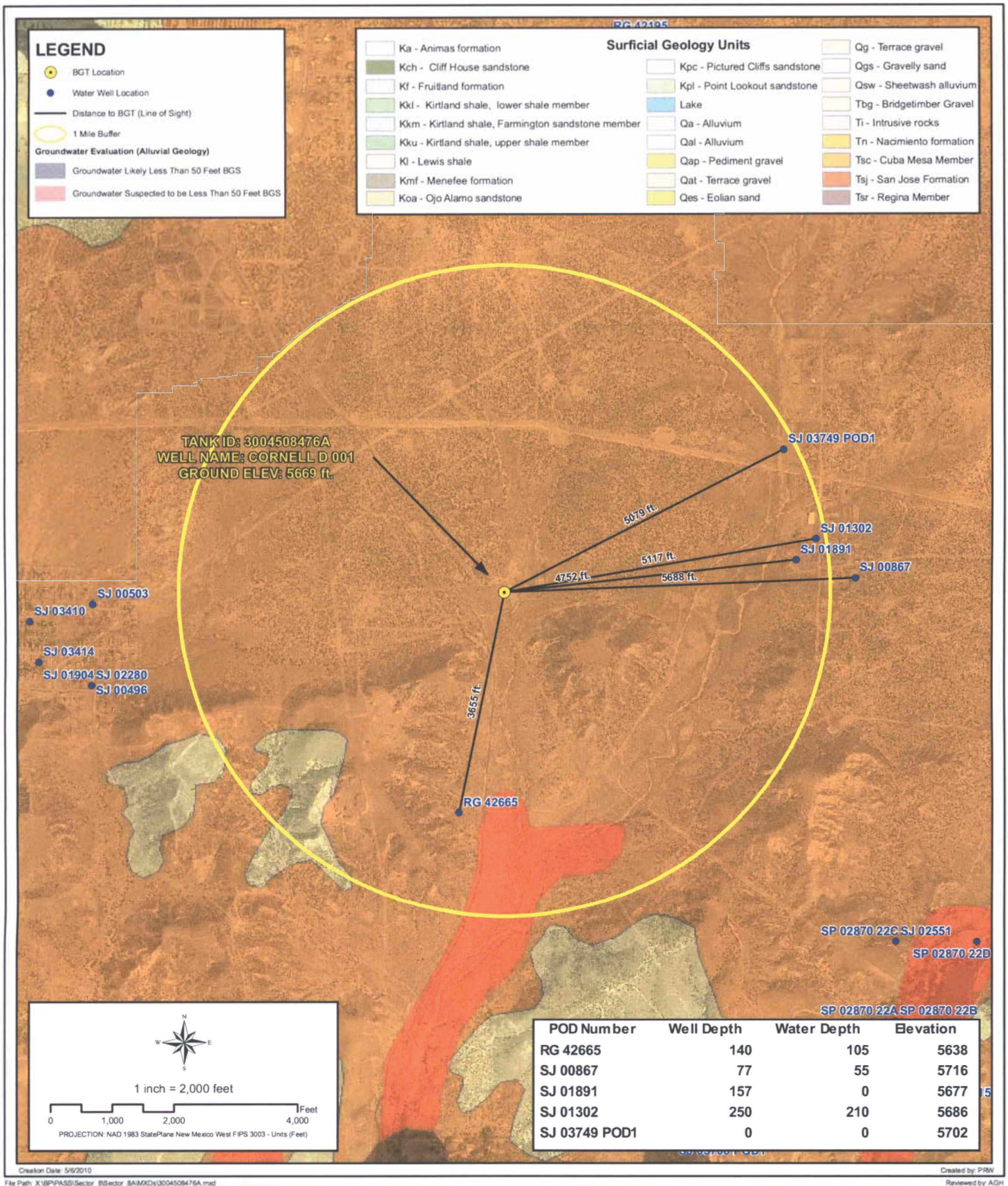
NRM2006941316

from 418 to 2232 feet (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1000 feet deep in this section of the basin. Wells within these bodies flow from 16 to 100 gallons per minute (gpm), and transmissivities are expected to be 100 ft^2/d (Stone et al,1983). Groundwater within these aquifers flows toward the San Juan River.

References

Circular 154—Guidebook to coal geology of northwest New Mexico By E. C. Beaumont, J. W. Shomaker, W. J. Stone, and others, 1976

Stone, et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico, Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p



POD Number	Well Depth	Water Depth	Elevation
RG 42665	140	105	5638
SJ 00867	77	55	5716
SJ 01891	157	0	5677
SJ 01302	250	210	5686
SJ 03749 POD1	0	0	5702

Creation Date: 5/6/2010
Created by: PRW
File Path: X:\BP\PASS\Sector_BS\ector_BA\MXDs\3004508476A.mxd
Reviewed by: AGH

GROUNDWATER LESS THAN 50 FT.

WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 1

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

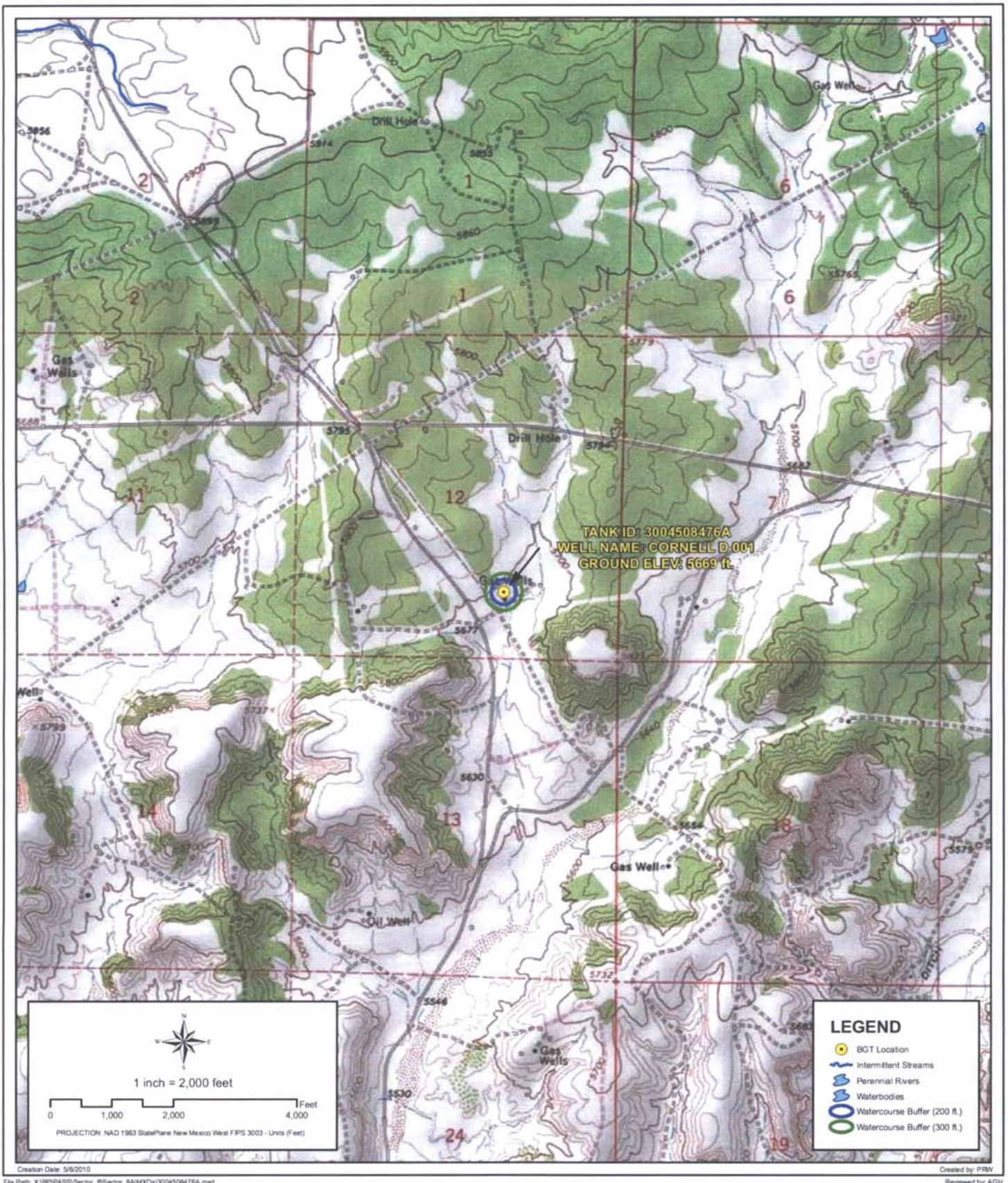
Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	SJ 00867			4	07	29N	11W	229570	4069949*

Driller License:	666	**Driller Company:**	GILBERT, JOHN G.		
Driller Name:	JOHN GILBERT				
Drill Start Date:	01/26/1979	**Drill Finish Date:**	01/31/1979	**Plug Date:**	
Log File Date:	02/06/1979	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	5 GPM
Casing Size:		**Depth Well:**	77 feet	**Depth Water:**	55 feet

Water Bearing Stratifications:	Top	Bottom	Description
	55	65	Sandstone/Gravel/Conglomerate

***UTM location was derived from PLSS - see Help**

NRM2006941316



bp

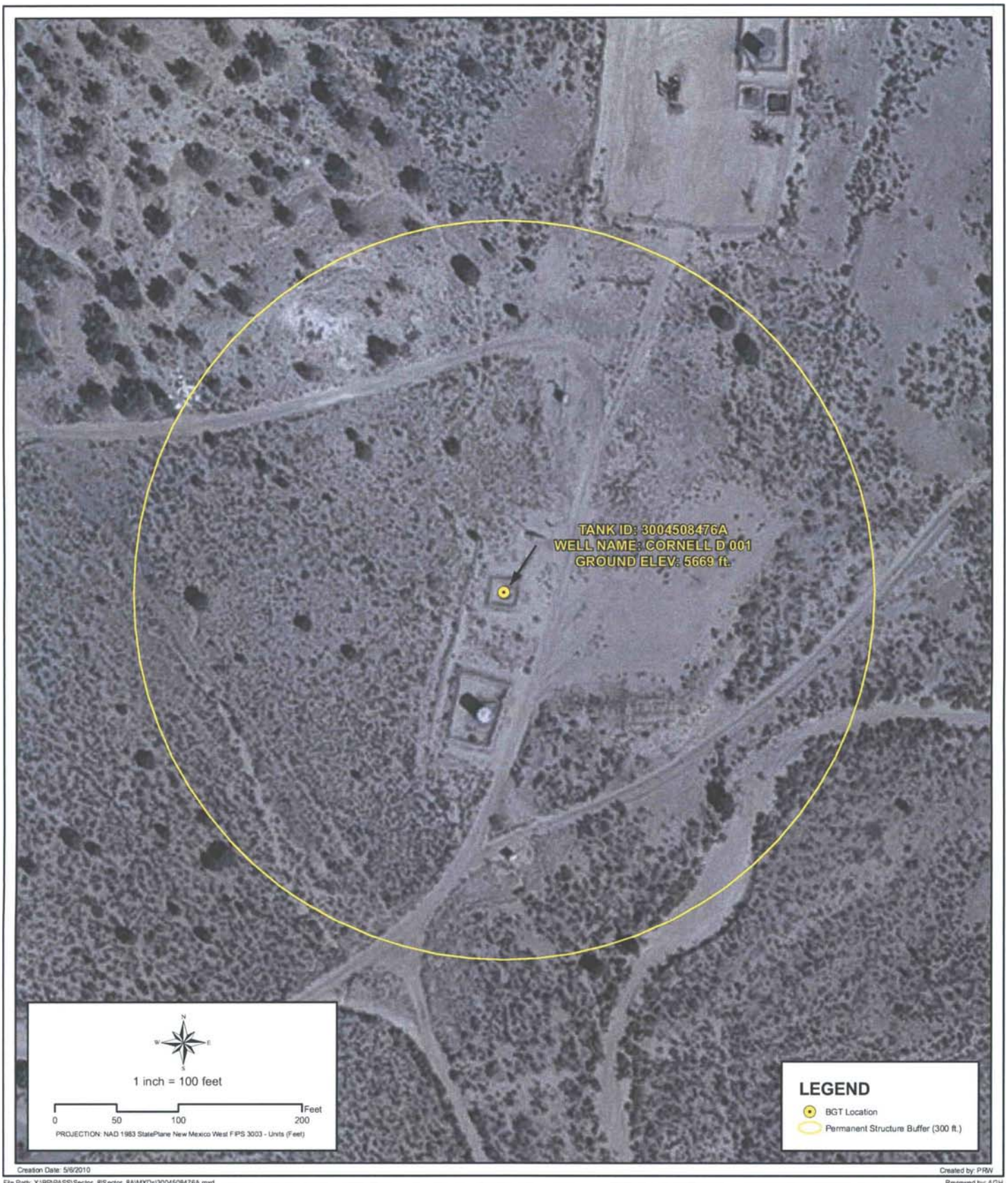
PROXIMITY TO WATERCOURSES

WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 2



bp

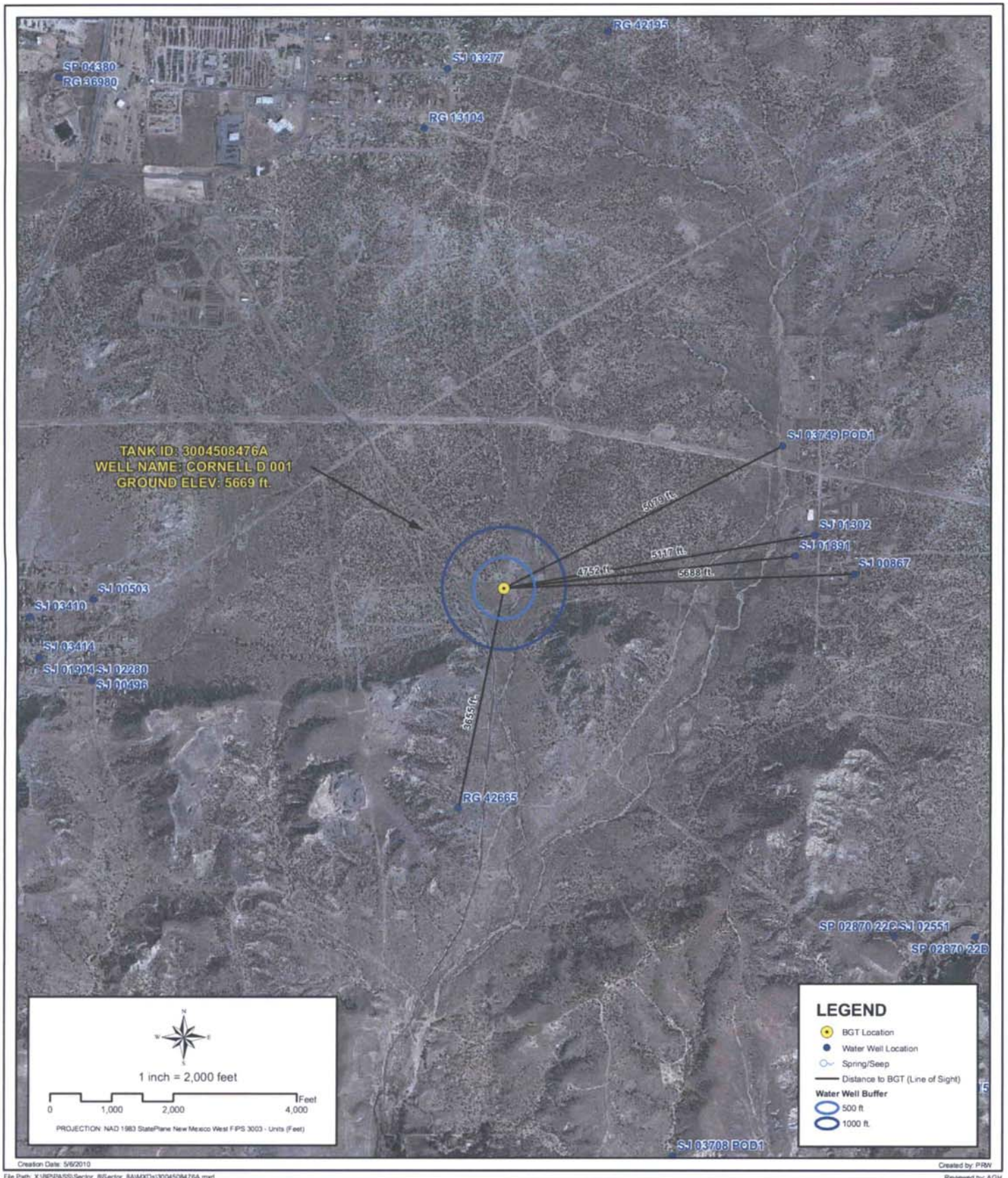
PROXIMITY TO PERMANENT STRUCTURE

WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 3



bp

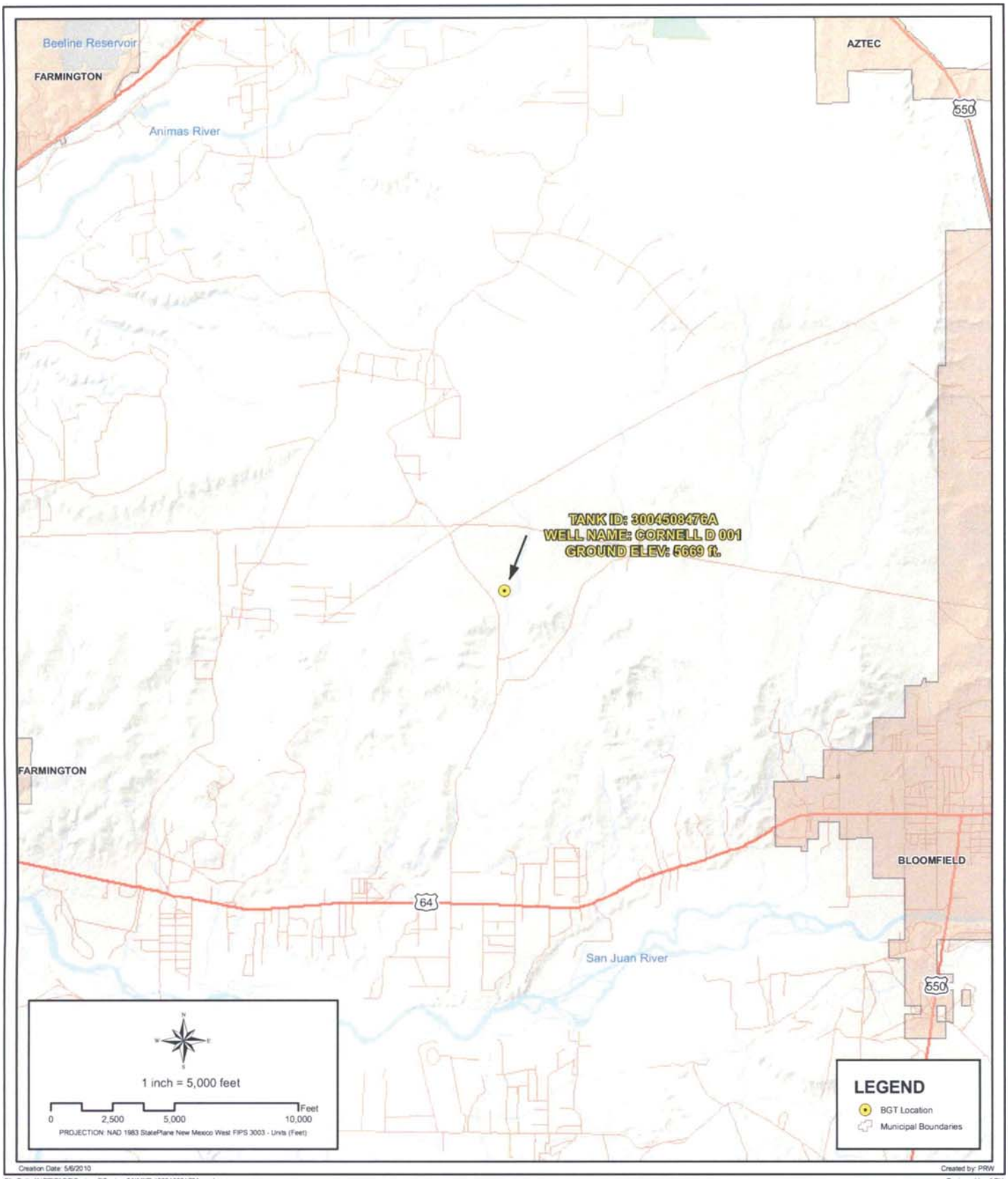
PROXIMITY TO WATER WELLS

WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 4



PROXIMITY TO MUNICIPAL BOUNDARY

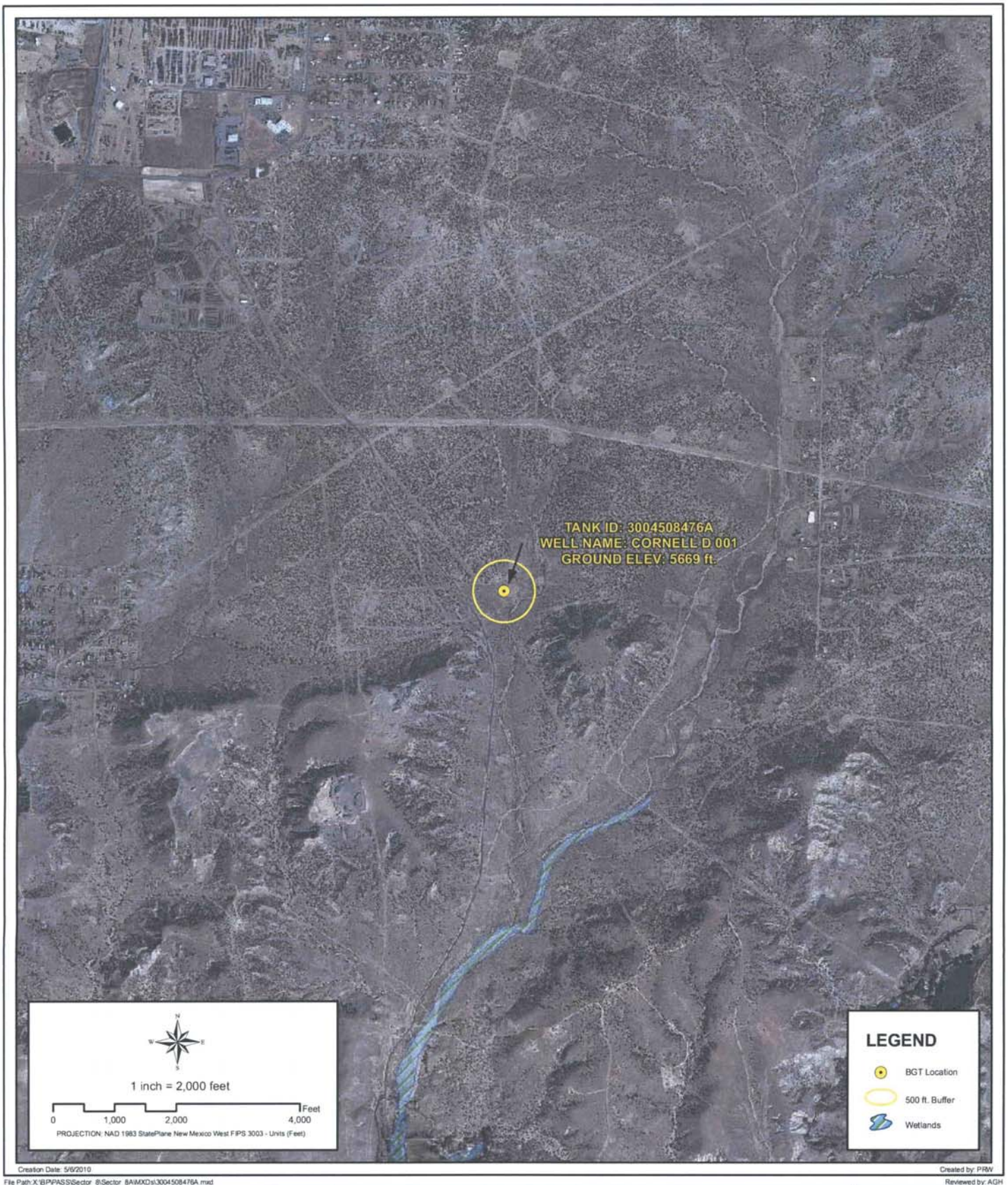
WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 5

NRM2006941316



bp

PROXIMITY TO WETLANDS

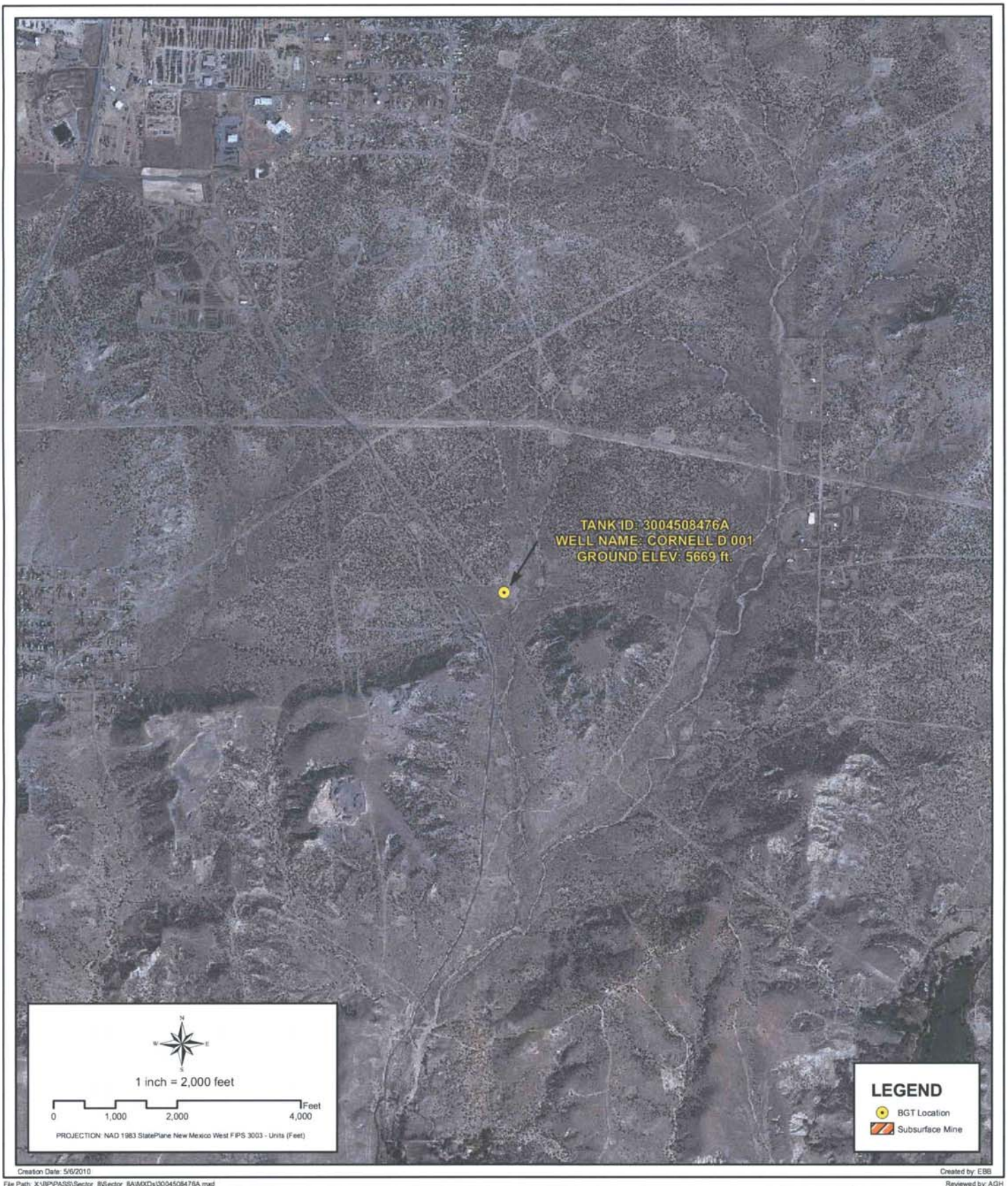
WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 6

NRM2006941316



bp

PROXIMITY TO SUBSURFACE MINES

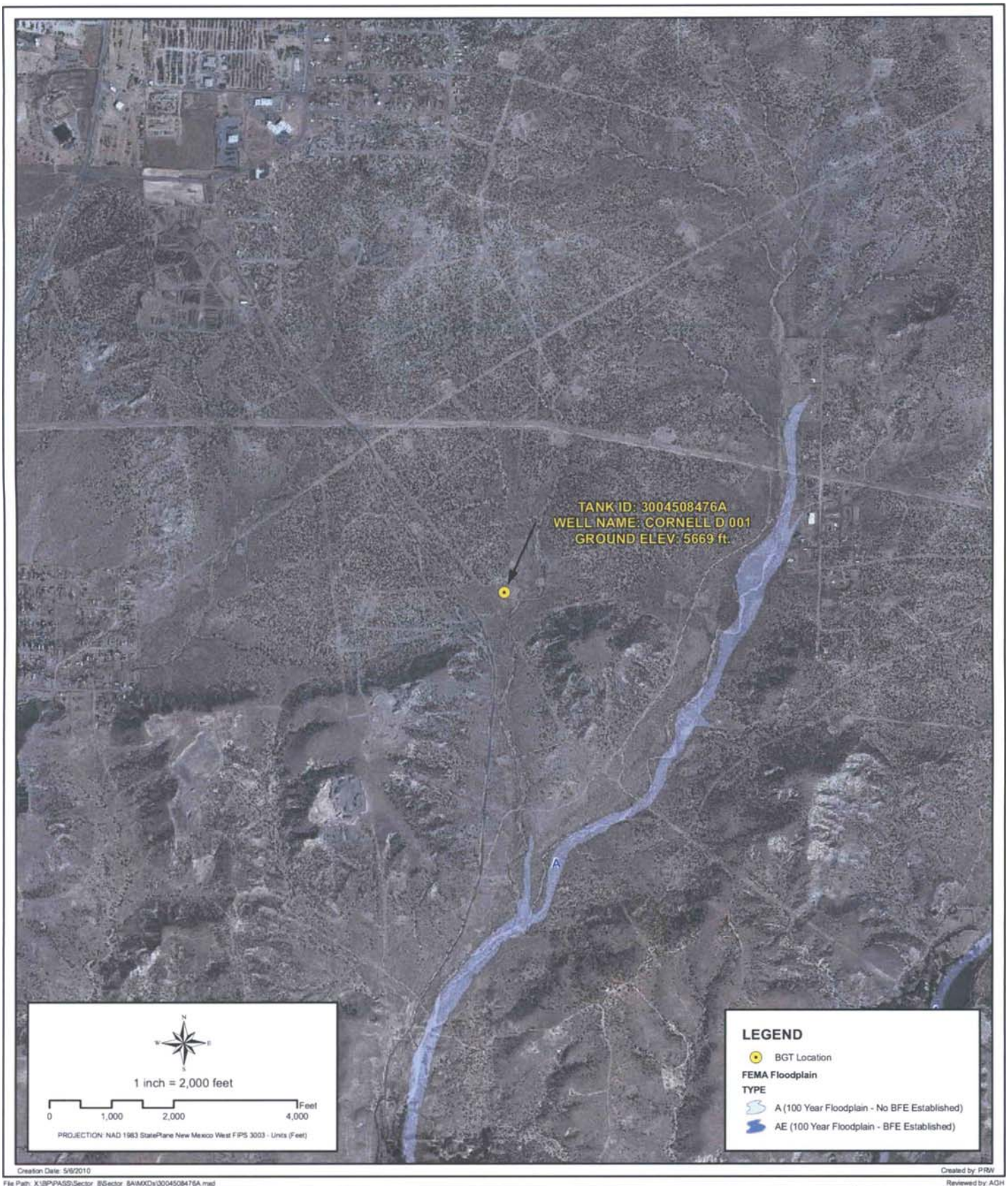
WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M.NM23

FIGURE 7

NRM2006941316



PROXIMITY TO FLOODPLAIN

WELL NAME: CORNELL D 001

API NUMBER: 3004508476 TANK ID: 3004508476A

SECTION 12, TOWNSHIP 29.0N, RANGE 12W, P.M. NM23

FIGURE 8

NRM2006941316

SOUTHERN SAN JUAN BASIN (SSJB)

Figure Citation List

March 2010

Figure 1: Groundwater Less Than 50 ft.

Layers:

Water Wells: **iWaters Database: NMOSE/ISC (Dec. 2009)**

New Mexico Office of the State Engineer (OSE) /ISC iWaters database. (Data updated: 12/2009. Data received: 03/09/2010). Data available from: http://www.ose.state.nm.us/waters_db_index.html.

Cathodic Wells: **Tierra Corrosion Control, Inc. (Aug. 2008)**

Tierra Corrosion Control, Inc. 1700 Schofield Ln. Farmington, NM 87401. Driller's Data Log. (Data collected: All data are associated with cathodic protection wells installed at BP facilities between 2008-2009. Data received: 05/06/2010).

Hydrogeological Evaluation: **Wright Water Engineers, Inc. (2008)**

Evaluation completed by Wright Water Engineers, Inc. Durango Office. Data created using digital statewide geology at 1:500,000 from USGS in combination with 10m Digital Elevation Model (DEM) from NRCS. (Data compiled: 2008.)

Results: Spatial Polygons representing "Groundwater likely to be less than 50 ft." and "Groundwater suspected to be less than 50 ft.".

Surficial Geology: **USGS (1963/1987)**

Data digitized and rectified by Geospatial Consultants. (Data digitized: 03/23/ 2010). Original hard copy maps sourced from United States Geological Survey (USGS). Data available from: http://pubs.er.usgs.gov/.

Geology, Structure and Uranium Deposits of the Shiprock Quadrangle, New Mexico and Arizonia. 1:250,000. I - 345. Compiled by Robert B. O'Sullivan and Helen M. Beikman. 1963.

Geologic Map of the Aztec 1 x 2 Quadrangle, Northwestern New Mexico and Southern Colorado. 1:250,000. I - 1730. Compiled by Kim Manley, Glenn R. Scott, and Reinhard A. Wobus. 1987.

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name: NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.

NRM2006941316

Figure 2: Proximity to Watercourses

Layers:

Perennial Streams: **NHD, USGS (2010)**

National Hydrography Dataset (NHD). U.S. Geological Survey. (Data last updated: 02/19/2010. Data received: 03/09/2010). High-resolution: 1:24,000. Digital Representation of USGS 24k Topographic map series with field updates as required. Data available from: http://nhd.usgs.gov/.

Intermittent Streams: **NHD, USGS (2010)**

National Hydrography Dataset (NHD). U.S. Geological Survey. (Data last updated: 02/19/2010. Data received: 03/09/2010). High-resolution: 1:24,000. Digital Representation of USGS 24k Topographic map series with field updates as required. Data available from: http://nhd.usgs.gov/.

Water Bodies: **NHD, USGS (2010)**

National Hydrography Dataset (NHD). U.S. Geological Survey. (Data last updated: 02/19/2010. Data received: 03/09/2010). High-resolution: 1:24,000. Digital representation of USGS 24k Topographic map series with field updates as required. Data available from: http://nhd.usgs.gov/.

USGS Topographic Maps: **USGS (2007)**

USGS 24k Topographic map series. 1:24000. Maps are seamless, scanned images of USGS paper topographic maps. Data available from: http://store.usgs.gov.

Figure 3: Proximity to Permanent Structure

Layers:

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name: NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.

NRM2006941316

Figure 4: Proximity to Water Wells

Layers:

Water Wells: **iWaters Database: NMOSE/ISC (Dec. 2009)**

New Mexico Office of the State Engineer (OSE) /ISC iWaters database. (Data updated: 12/2009. Data received: 03/09/2010). Data available from: http://www.ose.state.nm.us/waters_db_index.html.

Springs/Seeps: **NHD, USGS (2010)**

National Hydrography Dataset (NHD). U.S. Geological Survey. (Data last updated: 02/19/2010. Data received: 03/09/2010). High-resolution: 1:24,000. Digital representation of USGS 24k Topographic map series with field updates as required. Data available from: http://nhd.usgs.gov/.

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name: NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.

Figure 5: Proximity to Municipal Boundary

Layers:

Municipal Boundary: **San Juan County, New Mexico (2010)**

Data provided by San Juan County GIS Division. (Data received: 03/25/2010).

Shaded Relief: **NED, USGS (1999)**

National Elevation Dataset (NED). U.S. Geological Survey, EROS Data Center. (Data created: 1999. Data downloaded: April, 2010). Resolution: 10 meter (1/3 arc-second). Data available from: http://ned.usgs.gov/.

StreetMap North America: **Tele Atlas North America, Inc., ESRI (2008)**

Data derived from Tele Atlas Dynamap/Transportation North America, version 5.2. (Data updated: annually. Data series issue: 2008).

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Figure 6: Proximity to Wetlands

Layers:

Wetlands: **NWI (2010)**

National Wetlands Inventory (NWI). U.S Fish and Wildlife Service. (Data last updated: 09/25/2009. Data received: 03/21/2010). Data available from: http://www.fws.gov/wetlands/.

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name:
NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.

Figure 7: Proximity to Subsurface Mine

Layers:

Subsurface Mine: **NM Mining and Minerals Division (2010)**

New Mexico Mining and Minerals Division. (Data received: 03/12/2010). Contact: Susan Lucas Kamat, Geologist. Provided PLSS NM locations (Sections) for the two subsurface mines located in San Juan and Rio Arriba counties.

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name:
NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.

NRM2006941316

Figure 8: Proximity to FEMA Floodplain

Layers:

FEMA Floodplain: **FEMA (varying years)**

Data digitized and rectified by Wright Water Engineers, Inc. (Data digitized: August 2008). Digitized from hard copy Flood Insurance Rate Maps (FIRMs) (varying years) of San Juan County.

Aerial Imagery: **Conoco (Summer 2009)**

ConocoPhillips Company. (Flown: Summer 2009). 12 in. High Resolution Orthoimagery. Projected coordinate system name:
NAD_1983_StatePlane_New_Mexico_West_FIPS_3003_Feet.

Provided as tiled .tiff images and indexed using polygon index layer.