

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	NRM2008341796
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: BP America Production Co	OGRID: 778	Initial & Final Spill Report
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: 36.929881° Longitude: -107.711256°  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: JACQUEZ #002	Site Type: Natural Gas Production Well Pad
Date Release Discovered: March 4, 2020	API#: 30-045-27522

Unit Letter	Section	Township	Range	County
H	06	T31N	R08W	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): <b>11</b>	Volume Recovered (bbls): <b>5</b>
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls):	Volume Recovered (bbls):
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:  
Release of produced water caused from cracked gas eliminator on water transfer line.

State of New Mexico  
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> 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: <u>Steve Moskal</u> Title: <u>Environmental Coordinator</u>
Signature:  Date: <u>March 12, 2020</u>
email: <u>steven.moskal@bpx.com</u> Telephone: <u>(505) 330-9179</u>
<b><u>OCD Only</u></b> Received by: <u>Ramona Marcus</u> Date: <u>03/23/2020</u>

Incident ID	NRM2008341796
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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?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

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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: \_\_\_\_\_

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

**OCD Only**

Received by: Ramona Marcus Date: 3/23/2020

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## 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
- 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: \_\_\_\_\_

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

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

- Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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## 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: Steve Moskal Title: Environmental Coordinator

Signature:  Date: March 12, 2020

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

**OCD Only**

Received by: Ramona Marcus Date: 3/23/2020

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.

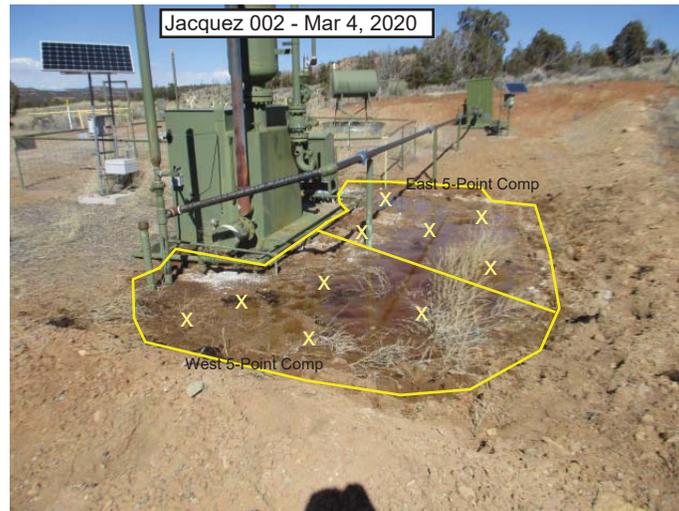
Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Based on lab results and site ranking criteria, no remedial action is required. The area will be amended with hydrocarbon enzymes and raked in place.

CLIENT: <u>BPX</u>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <u>30-045-27522</u> TANK ID (if applicable): <u>1</u>
<b>FIELD REPORT:</b> (circle one): <u>BGT CONFIRMATION</u> <u>RELEASE INVESTIGATION</u> OTHER: <u>PRODUCED WATER</u>		PAGE #: <u>1</u> of <u>1</u>
<b>SITE INFORMATION:</b> SITE NAME: <u>JACQUEZ 002</u> QUAD/UNIT: <u>H SEC: 6 TWP: 31N RING: 8W PM: NM CNTY: SJ ST: NM</u> 1/4 -1/4 FOOTAGE: <u>1370 FNL X 1295 FEL</u> LEASE TYPE: <u>FEDERAL</u> / STATE / FEE / INDIAN LEASE #: <u>NMSF 078510</u> PROD. FORMATION: <u>FC</u> CONTRACTOR: <u>-</u>		DATE STARTED: <u>3/4/2020</u> DATE FINISHED: <u>3/4/2020</u> ENVIRONMENTAL SPECIALIST(S): <u>JCB</u>
<b>REFERENCE POINT:</b> WELL HEAD (W.H.) GPS COORD.: <u>36.93009 x 107.71169</u> GLE ELEV.: <u>6548</u>		
1) <u>RELEASE CENTER</u> GPS COORD.: <u>36.92987 x 107.71126</u> DISTANCE BEARING FROM WH: <u>133' S 55E</u>		
2) _____ GPS COORD.: _____ DISTANCE BEARING FROM WH: _____		
3) _____ GPS COORD.: _____ DISTANCE BEARING FROM WH: _____		
4) _____ GPS COORD.: _____ DISTANCE BEARING FROM WH: _____		
<b>SAMPLING DATA:</b> CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <u>ENVIROTECH</u>		OVM READING (ppm)
1) SAMPLE ID: <u>WEST 5-POINT Comp</u> SAMPLE DATE: <u>3/4/2020</u> SAMPLE TIME: <u>1435</u> LAB ANALYSIS: <u>TPH/BTEX/CL</u>		<u>ND</u>
2) SAMPLE ID: <u>EAST 5-POINT Comp</u> SAMPLE DATE: <u>"</u> SAMPLE TIME: <u>1440</u> LAB ANALYSIS: <u>"</u>		<u>ND</u>
3) SAMPLE ID: _____ SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____		
4) SAMPLE ID: _____ SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____		
<b>SOIL DESCRIPTION:</b> SOIL TYPE: <u>SAND</u> / <u>SILTY SAND</u> / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER _____ SOIL COLOR: <u>TAN</u> PLASTICITY (CLAYS): <u>NON PLASTIC</u> / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC COHESION (ALL OTHERS): <u>NON COHESIVE</u> / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE DENSITY (COHESIVE CLAYS & SILTS): <u>SOFT</u> / FIRM / STIFF / VERY STIFF / HARD CONSISTENCY (NON COHESIVE SOILS): <u>LOOSE</u> / FIRM / DENSE / VERY DENSE HC ODOR DETECTED: <u>YES</u> / NO EXPLANATION: _____ MOISTURE: <u>DRY</u> / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED SAMPLE TYPE: <u>GRAB</u> / <u>COMPOSITE</u> - # OF PTS. <u>5</u> ANY AREAS DISPLAYING WETNESS: <u>YES</u> / NO EXPLANATION: <u>From Water Release</u> DISCOLORATION/STAINING OBSERVED: <u>YES</u> / NO EXPLANATION: _____		
<b>SITE OBSERVATIONS:</b> LOST INTEGRITY OF EQUIPMENT: <u>YES</u> / NO EXPLANATION: <u>VALVE</u> APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: <u>YES</u> / NO EXPLANATION: <u>Water</u> EQUIPMENT SET OVER RECLAIMED AREA: <u>YES</u> / NO EXPLANATION: <u>SEPARATOR</u> OTHER: _____		
SOIL IMPACT DIMENSION ESTIMATION: <u>34</u> ft X <u>11</u> ft X <u>2.5"</u> EXCAVATION ESTIMATION (Cubic Yards): _____ DEPTH TO GROUNDWATER: <u>&gt;100</u> NEAREST WATER SOURCE: <u>&gt;1000</u> NEAREST SURFACE WATER: <u>&gt;1000</u> NMOCED TPH CLOSURE STD: <u>1000/250</u> ppm		
<b>SITE SKETCH</b>	BGT Located: <u>off</u> / on site	PLOT PLAN circle: <u>attached</u>
		OVM CALIB. READ. = _____ ppm RF=0.52 OVM CALIB. GAS = _____ ppm TIME: _____ am/pm DATE: _____
<b>MISCELL. NOTES</b> WO: _____ PO #: _____ PK: _____ PJ #: _____ Permit date(s): _____ OCD Appr. date(s): _____ Tank ID: _____ OVM = Organic Vapor Meter ppm = parts per million BGT Sidewalls Visible: <u>Y / N</u> BGT Sidewalls Visible: <u>Y / N</u> BGT Sidewalls Visible: <u>Y / N</u> Magnetic declination: <u>10° E</u>		
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: _____		ONSITE: <u>3/4/2020</u>

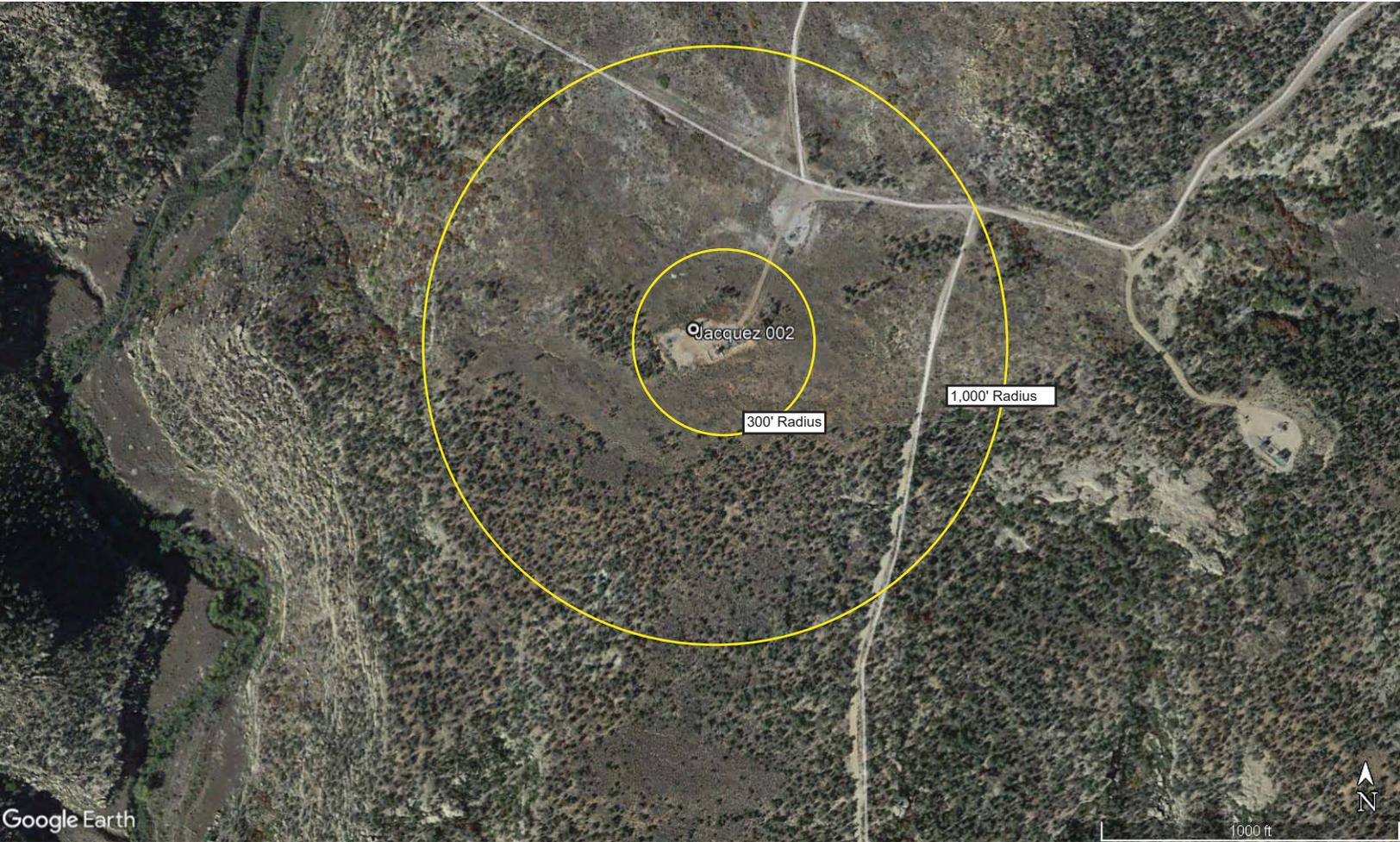
NRM2008341796

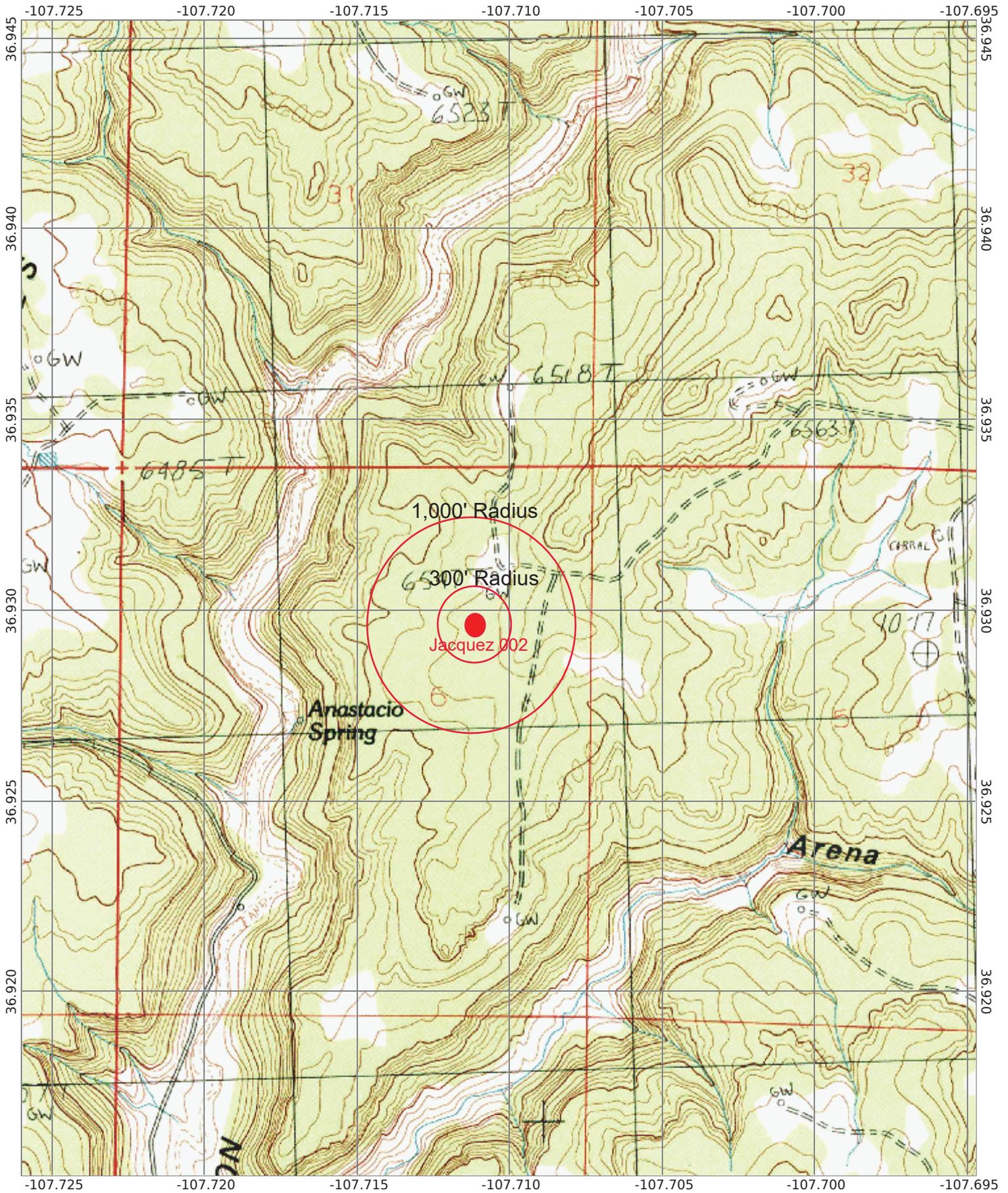


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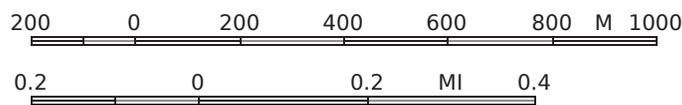


NRM2008341796





★  
8.9°E  
3/12/20



Scale 1:14433 Datum WGS84



NRM2008341796

## **SITING AND HYDRO-GEOLOGICAL REPORT FOR JACQUEZ 002**

### **SITING CRITERIA 19.15.17.10 NMAC**

Depth to groundwater at the site is estimated to be greater than 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 a mesa top between Arena Canyon and Rattlesnake Canyon which are both tributaries of Pump Canyon. Regional topography of Pump Canyon is composed of mesas dissected by deep, narrow canyons and arroyos. The more resistant cliff-forming sandstones of the San Jose Formation cap the interbedded siltstones, shales and sandstones of the Nacimiento Formation. Accumulations of talus and eroded sands at the base of canyon walls form steep to gentle slopes that transition into flat-bottomed arroyos within the canyons. Deposits of Quaternary alluvial and eolian sands occur prominently near the surface of Pump Canyon, especially near streams and washes.

### **Regional Geology and Hydrology**

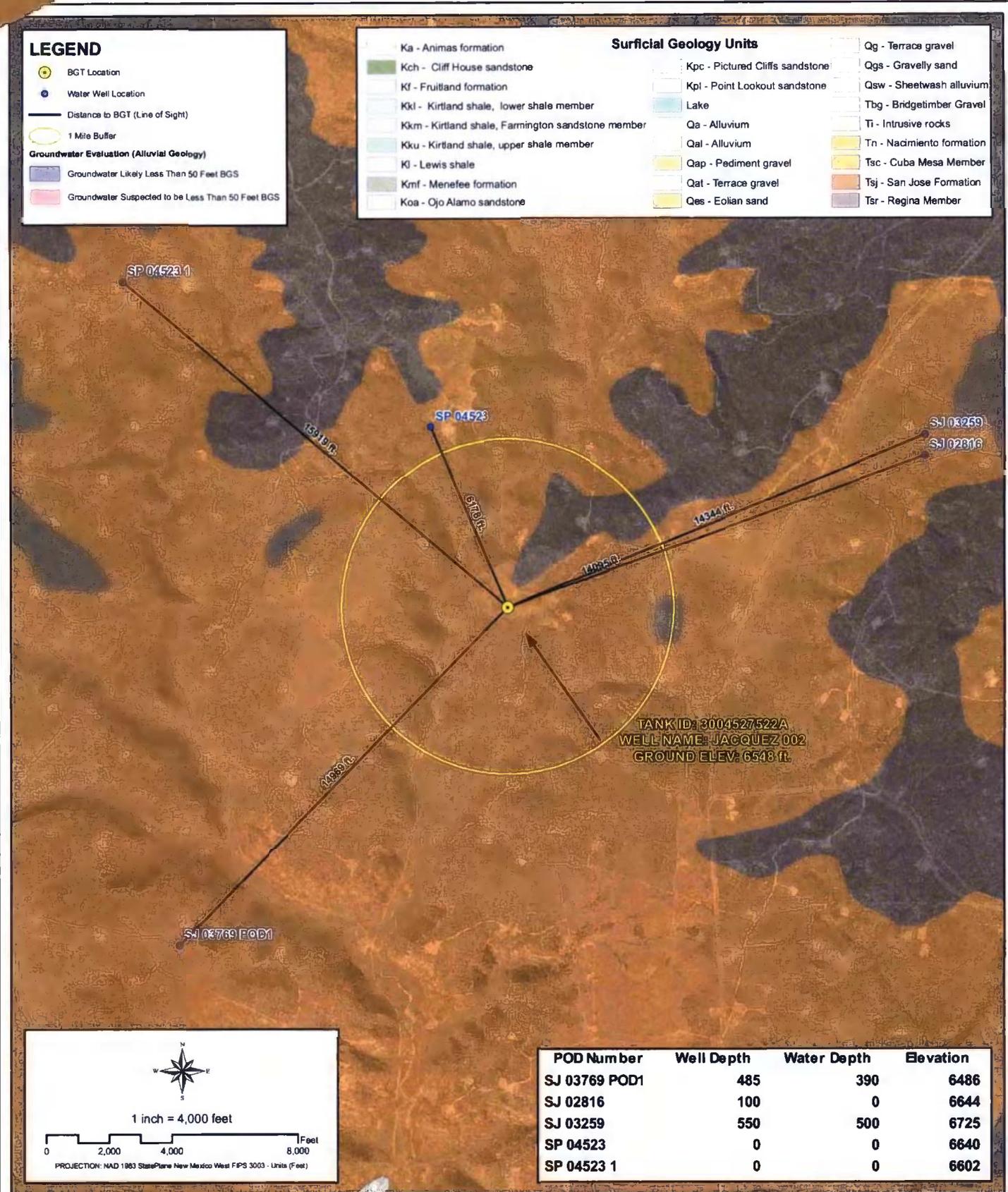
The San Juan Basin is situated in the Navajo section of the Colorado Plateau and is characterized by broad open valleys, mesas, buttes and hogbacks. Away from major valleys and canyons topographic relief is generally low. Native vegetation is sparse and shrubby. Drainage is mainly by the San Juan River, 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). The San Jose Formation of Eocene age occurs in both New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico border and overlies the Animas Formation in the general area north of the State Line. The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and shale. Thickness of the San Jose Formation increases from west to east. Groundwater is associated with alluvial and fluvial sandstone aquifers. The occurrence of groundwater is mainly controlled by distribution of sandstone in the formation. The reported or measured discharge from numerous water wells completed in the formation range from 0.15 to 61 gallons per minute (gpm) and with a median of 5 gpm. Most of the wells provide water for livestock and domestic purposes. The formation is suitable for recharge from precipitation due to overlying soils being sandy, highly permeable and absorbent. Low annual precipitation, relatively high transpiration and evaporation rates and deep dissection of the formation by the San Juan River and its main tributaries all tend to reduce the effective recharge to the formation. Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation of Paleocene age are between 0 and 1000 feet deep in the majority of the basin as well (Stone et al., 1983).

### **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



**LEGEND**

- BGT Location
- Water Well Location
- Distance to BGT (Line of Sight)
- 1 Mile Buffer
- Groundwater Evaluation (Alluvial Geology)**
  - Groundwater Likely Less Than 50 Feet BGS
  - Groundwater Suspected to be Less Than 50 Feet BGS

**Surficial Geology Units**

- Ka - Animas formation
- Kch - Cliff House sandstone
- Kf - Fruitland formation
- Kkl - Kirtland shale, lower shale member
- Kkm - Kirtland shale, Farmington sandstone member
- Kku - Kirtland shale, upper shale member
- Kl - Lewis shale
- Kmf - Menefee formation
- Koa - Ojo Alamo sandstone
- Kpc - Pictured Cliffs sandstone
- Kpl - Point Lookout sandstone
- Lake
- Qa - Alluvium
- Qal - Alluvium
- Qap - Pediment gravel
- Qat - Terrace gravel
- Qes - Eolian sand
- Qg - Terrace gravel
- Qgs - Gravelly sand
- Qsw - Sheetwash alluvium
- Tbg - Bridgetimber Gravel
- Ti - Intrusive rocks
- Tn - Nacimiento formation
- Tsc - Cuba Mesa Member
- Tsj - San Jose Formation
- Tsr - Regina Member

TANK ID: 3004527522A  
 WELL NAME: JACQUEZ 002  
 GROUND ELEV: 6548 ft.

POD Number	Well Depth	Water Depth	Elevation
SJ 03769 POD1	485	390	6486
SJ 02816	100	0	6644
SJ 03259	550	500	6725
SP 04523	0	0	6640
SP 04523 1	0	0	6602

Creation Date: 4/27/2010  
 File Path: X:\BP\FAS9\Sector\_58\Sector\_58\MXD\3004527522A.mxd  
 Created by: PRV  
 Reviewed by: AGH

# GROUNDWATER LESS THAN 50 FT.

**WELL NAME: JACQUEZ 002**

API NUMBER: 3004527522 TANK ID: 3004527522A

SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

# FIGURE 1

NRM2008341796



## New Mexico Office of the State Engineer Point of Diversion Summary

		<small>(quarters are 1=NW 2=NE 3=SW 4=SE)</small>		<small>(NAD83 UTM in meters)</small>
<b>Well Tag</b>	<b>POD Number</b>	<small>(quarters are smallest to largest)</small>		
		<b>Q64 Q16 Q4 Sec Tws Rng</b>	<b>X Y</b>	
	SJ 03769 POD1	2 3 2 14 31N 09W	255236 4087366	

<b>Driller License:</b> 717	<b>Driller Company:</b> WESTERN WATER WELLS	
<b>Driller Name:</b> HOOD, TERRY		
<b>Drill Start Date:</b> 11/25/2006	<b>Drill Finish Date:</b> 11/28/2006	<b>Plug Date:</b>
<b>Log File Date:</b> 11/30/2006	<b>PCW Rev Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b> 3 GPM
<b>Casing Size:</b> 4.50	<b>Depth Well:</b> 485 feet	<b>Depth Water:</b> 390 feet

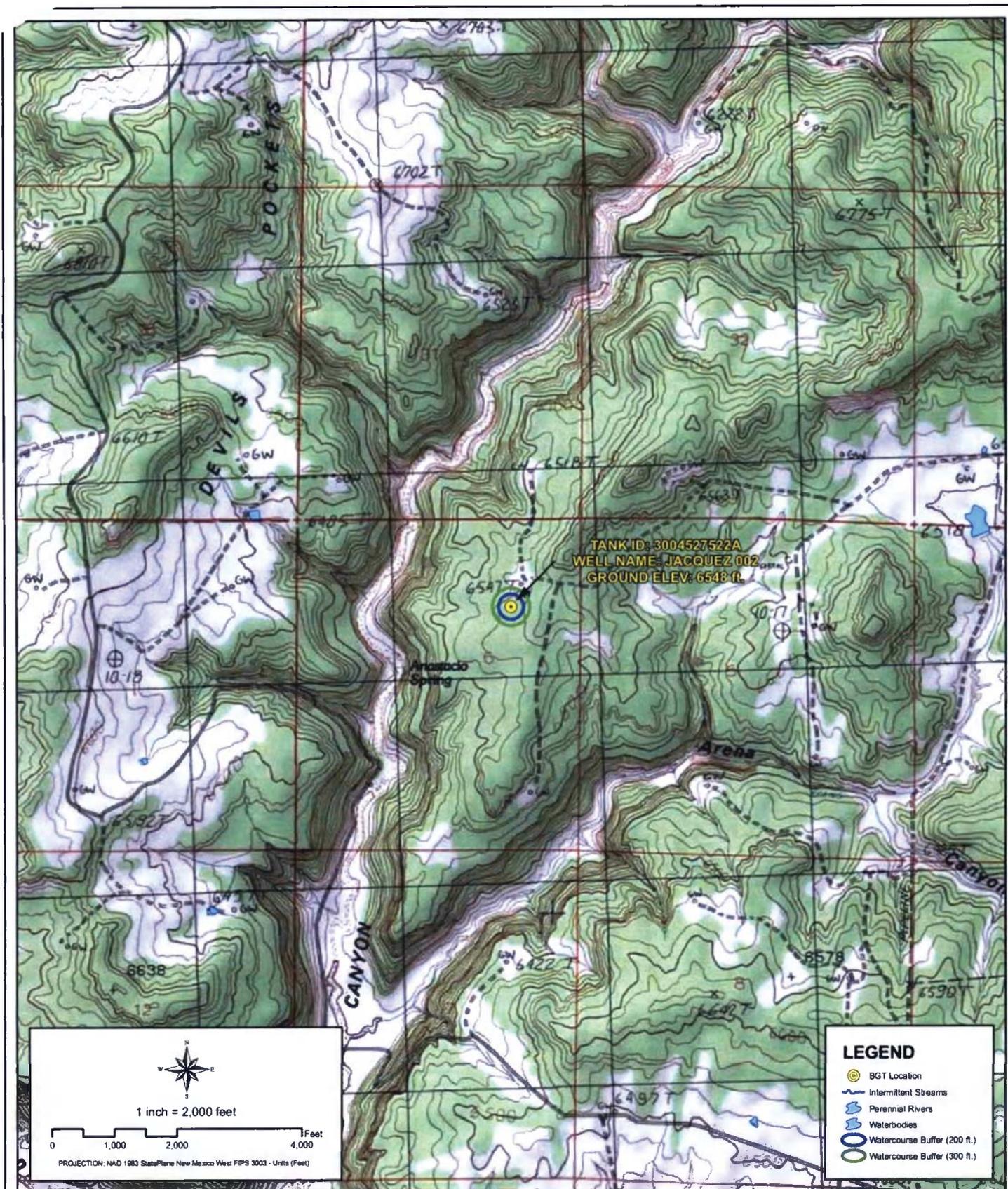
<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	395	455	Sandstone/Gravel/Conglomerate

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>	
	385	485	

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

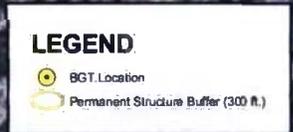
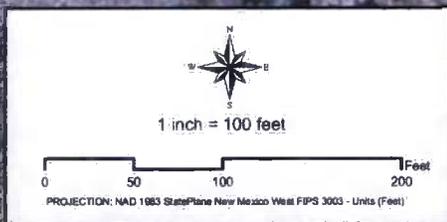
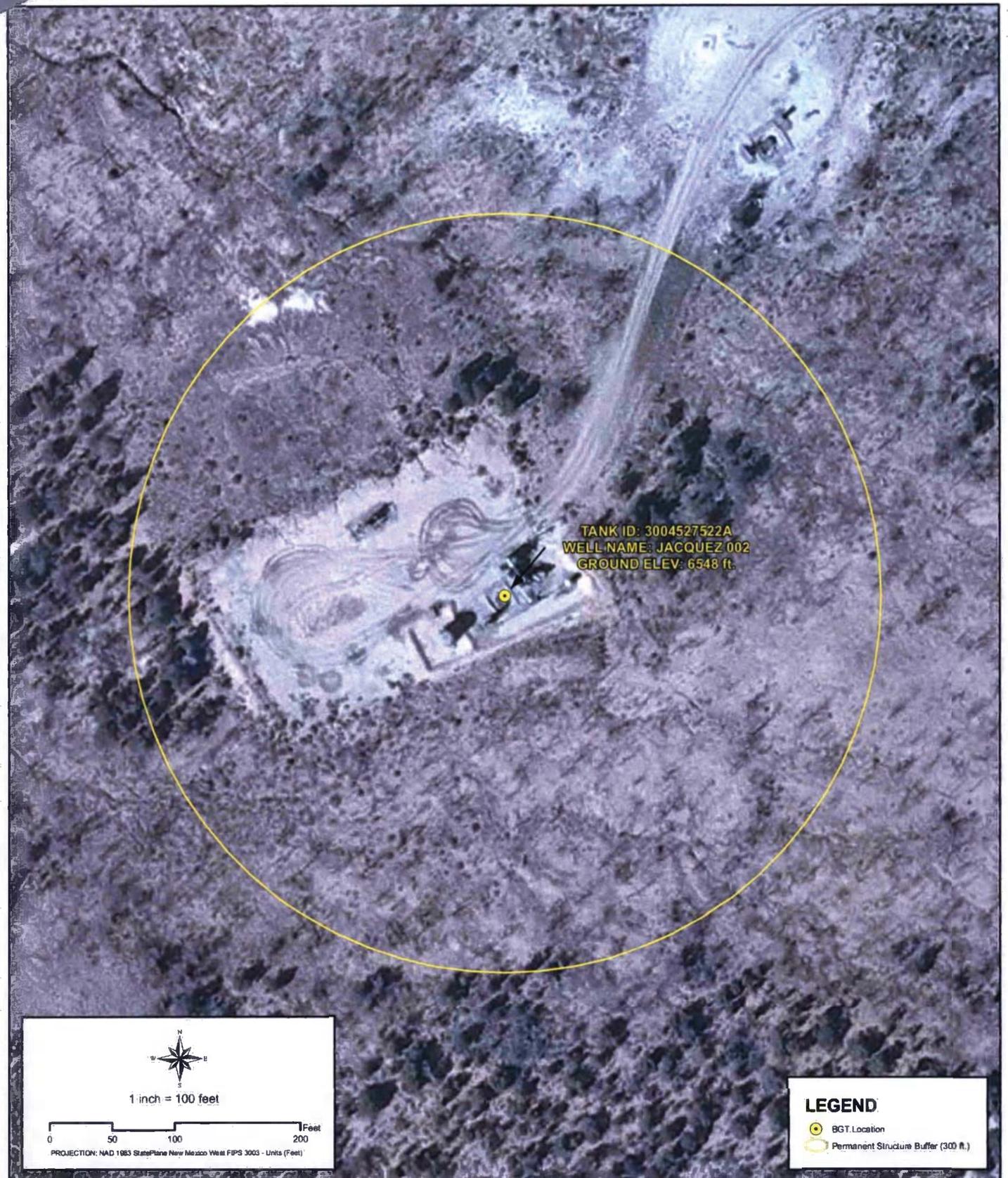
3/12/20 12:12 PM

POINT OF DIVERSION SUMMARY



Creation Date: 4/27/2010  
File Path: X:\BP\PASS\Sector\_56\Sector\_5D\MXD\3004527522A.mxd  
Created by: PRW  
Reviewed by: AGH

	<p align="center"><b>PROXIMITY TO WATERCOURSES</b></p> <p align="center"><b>WELL NAME: JACQUEZ 002</b></p> <p align="center">API NUMBER: 3004527522 TANK ID: 3004527522A</p> <p align="center">SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23</p>	<p align="center"><b>FIGURE</b></p> <p align="center"><b>2</b></p>
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Creation Date: 4/27/2010

File Path: X:\BP\PASS\Sector\_9\Sector\_5D\MXD\3004527522A.mxd

Created by: PRW

Reviewed by: AGH



# PROXIMITY TO PERMANENT STRUCTURE

**WELL NAME: JACQUEZ 002**

API NUMBER: 3004527522 TANK ID: 3004527522A  
SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

FIGURE

3



Creation Date: 4/27/2010  
 File Path: X:\BP\PASS\Sector\_5B\sector\_5D\NO2\3004527522A.mxd

PROJECTION: NAD 1983 StatePlane New Mexico West FIPS 3003 - Units (Feet)

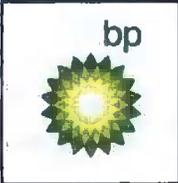
1 inch = 4,000 feet

0 2,000 4,000 8,000 Feet

**LEGEND**

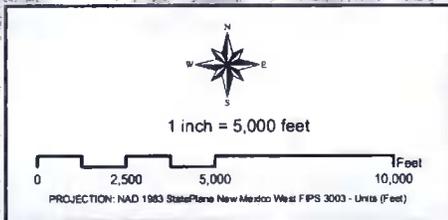
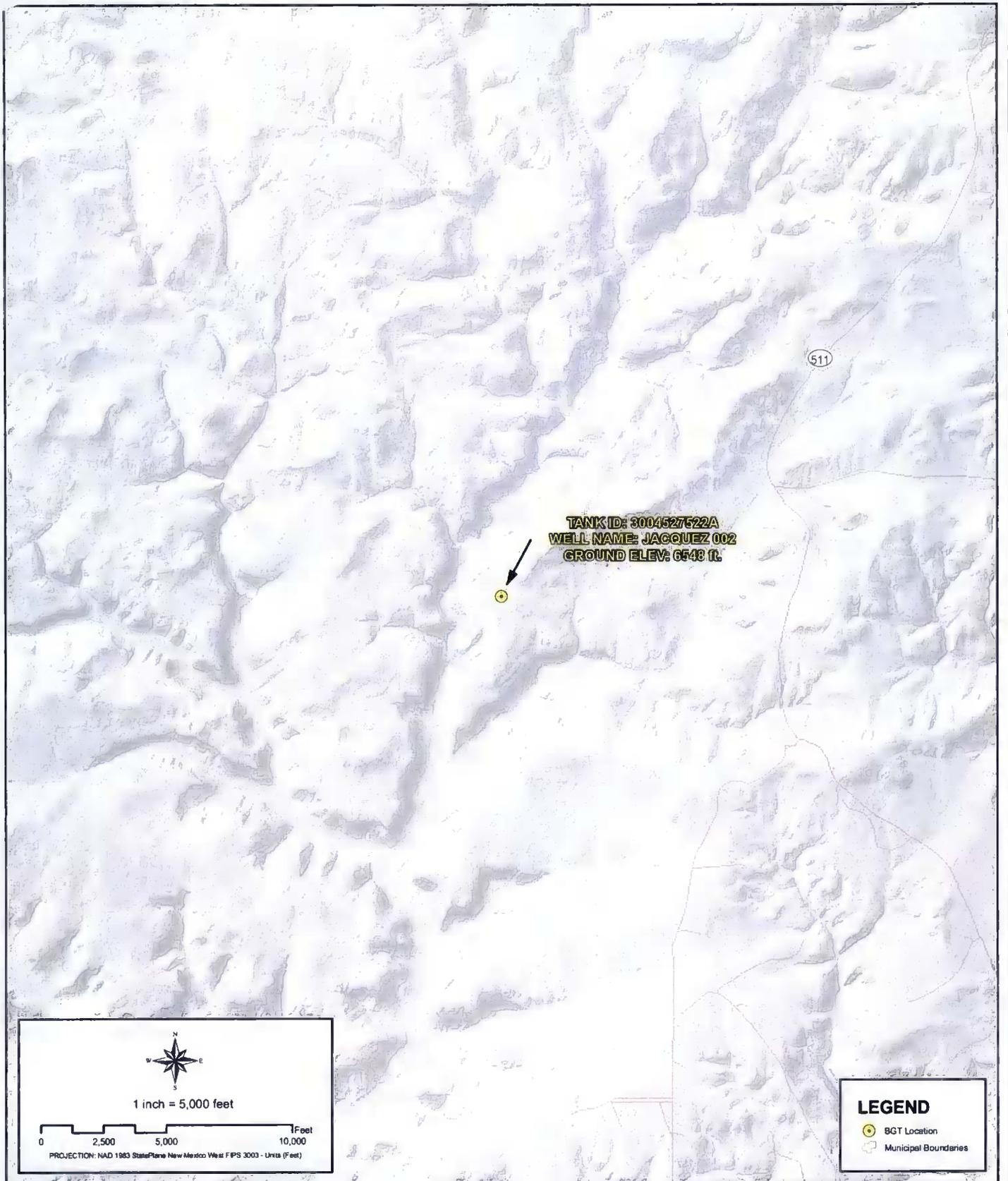
- BGT Location
- Water Well Location
- Spring/Seep
- Distance to BGT (Line of Sight)
- Water Well Buffer**
- 500 ft.
- 1000 ft.

Creation Date: 4/27/2010  
 File Path: X:\BP\PASS\Sector\_5B\sector\_5D\NO2\3004527522A.mxd  
 Created by: PRW  
 Reviewed by: AGH



**PROXIMITY TO WATER WELLS**  
**WELL NAME: JACQUEZ 002**  
 API NUMBER: 3004527522 TANK ID: 3004527522A  
 SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

**FIGURE**  
**4**



Creation Date: 4/27/2010

Created by: PRW

File Path: X:\BP\PASS\Sector\_5\Sector\_5D\WXD\3004527522A.mxd

Reviewed by: AGH



**PROXIMITY TO MUNICIPAL BOUNDARY**

**WELL NAME: JACQUEZ 002**

API NUMBER: 3004527522 TANK ID: 3004527522A

SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

**FIGURE**

**5**



File Path: X:\BP\BAS\Sector\_5\Sector\_5DMXD\3004527522A.mxd



**PROXIMITY TO WETLANDS**

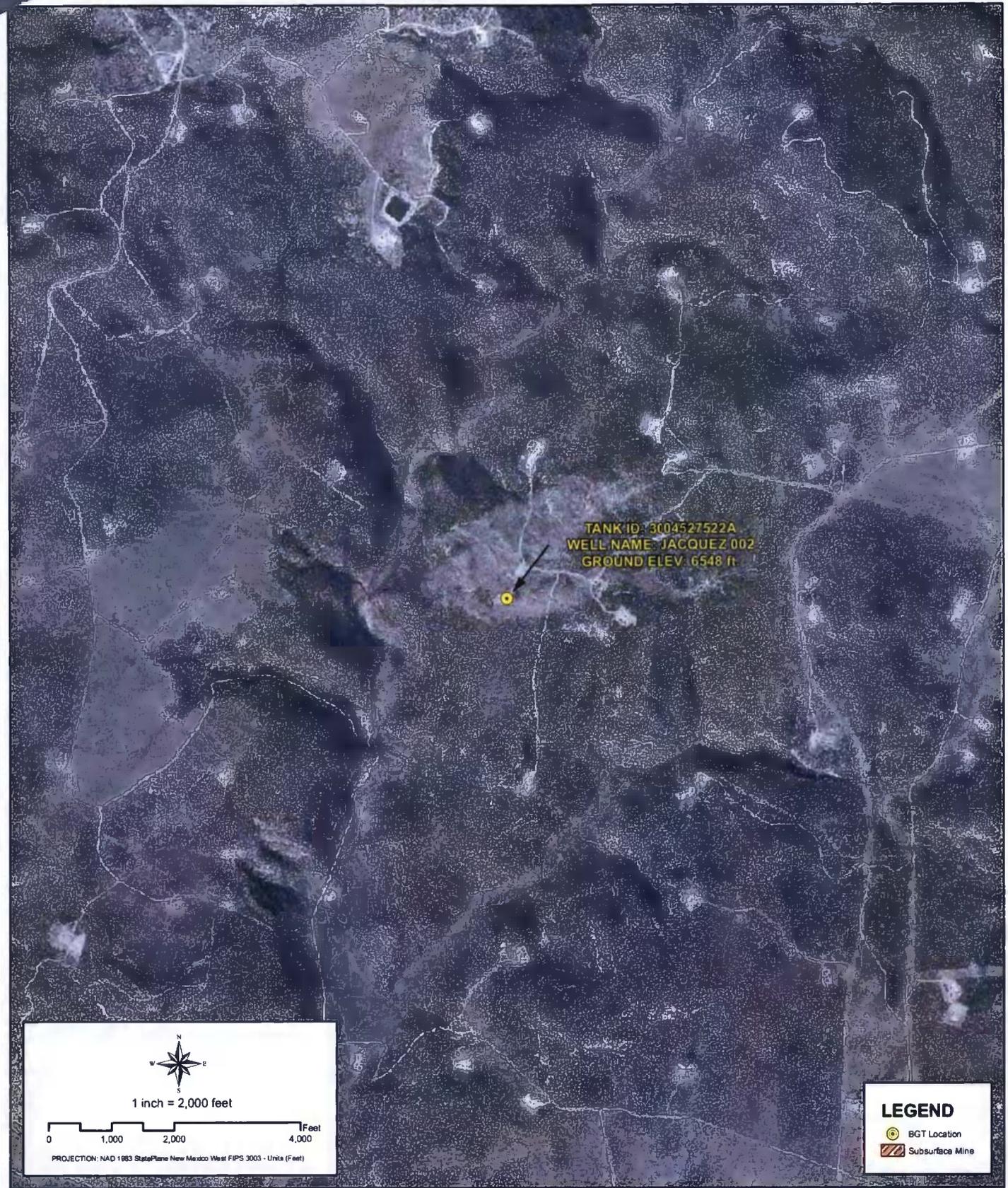
**WELL NAME: JACQUEZ 002**

API NUMBER: 3004527522 TANK ID: 3004527522A

SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

**FIGURE**

**6**



Creation Date: 4/27/2010

File Path: X:\BP\PASS\Sector\_9S\sector\_5D\ND\3004527522A.mxd

Created by: EBB

Reviewed by: AGH

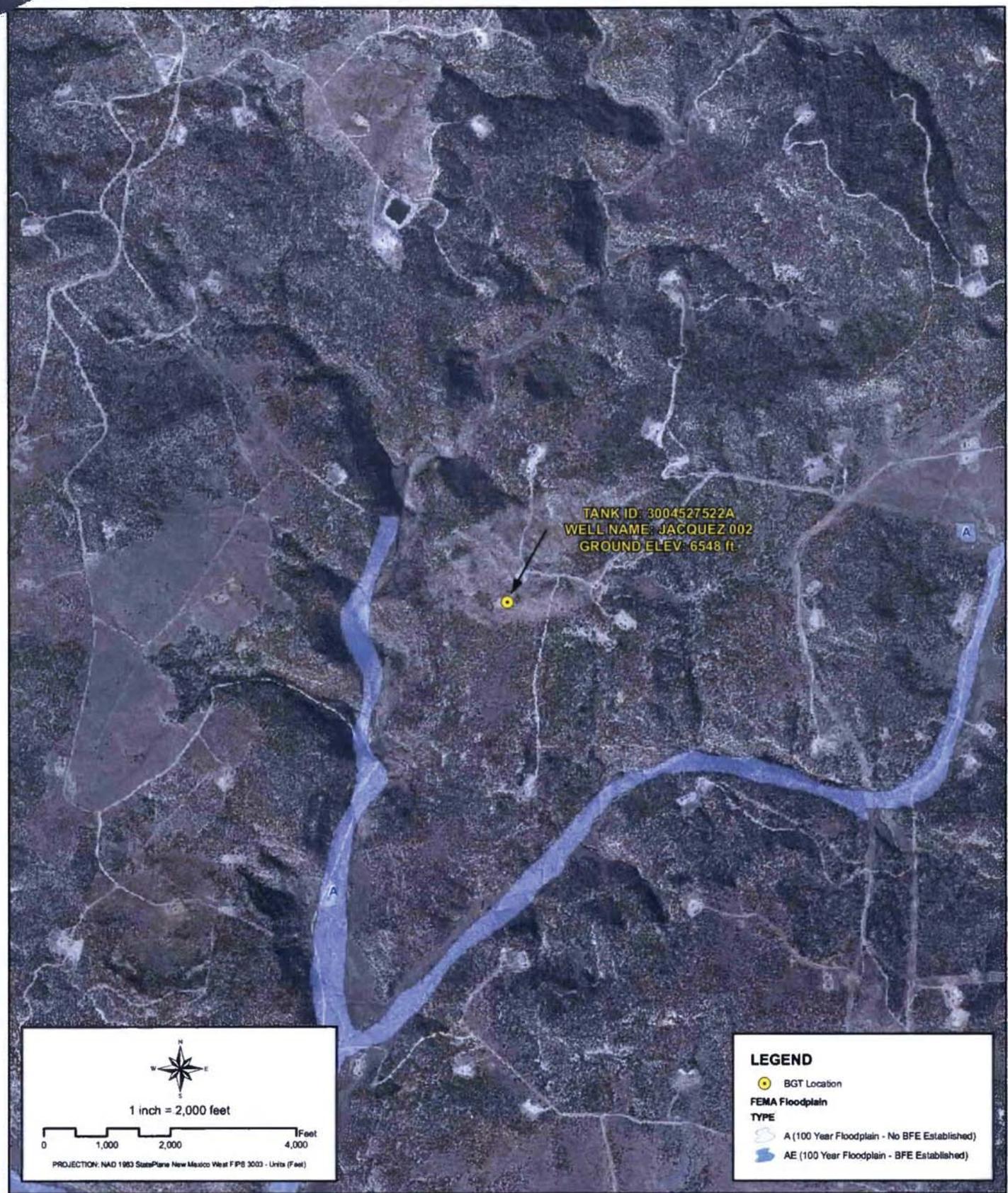


# PROXIMITY TO SUBSURFACE MINES

**WELL NAME: JACQUEZ 002**

API NUMBER: 3004527522 TANK ID: 3004527522A  
SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M.NM23

# FIGURE 7



Creation Date: 4/27/2010

File Path: X:\BP\FASB\Sector\_08\Sector\_08\MXD\3004527522A.mxd

Created by: PRV

Reviewed by: AGH



# PROXIMITY TO FLOODPLAIN

WELL NAME: JACQUEZ 002

API NUMBER: 3004527522 TANK ID: 3004527522A

SECTION 6, TOWNSHIP 31.0N, RANGE 08W, P.M. NM23

# FIGURE 8

NRM2008341796

**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](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 Arizona.* 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.

**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.

**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](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).

**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.

**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.

NRM2008341796

## Steven Moskal

---

**From:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>  
**Sent:** Thursday, March 5, 2020 7:26 AM  
**To:** Steven Moskal  
**Cc:** Blagg, Jefferey  
**Subject:** RE: Jacquez 002S and Jacquez 002 Spill Sampling

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Steve,

OCD approves the sampling. Please include this approval in your final reports.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

---

**From:** Steven Moskal <Steven.Moskal@BPX.COM>  
**Sent:** Wednesday, March 4, 2020 2:10 PM  
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>  
**Cc:** Blagg, Jefferey <jeffcblagg@aol.com>  
**Subject:** [EXT] Jacquez 002S and Jacquez 002 Spill Sampling

Cory,

I had called earlier to discuss sampling the spills for potential closure.

The produced water release at the Jacquez 002S was discovered yesterday and measures approximately 35'x6'x2" deep with 1-2" of standing water, totaling 6.7 bbls. All water remained in pad. Approximately 4.5 bbls of water was recovered. API 03-045-31905. I propose to collect 2-5 point samples from this area at 0-3" depths to assess the impacts and for potential closure.

Today, at the Jacquez 002, a similar produced water spill was discovered measuring 11'x34'x2.5" deep and 2" of standing water. The release is estimated to be 11 bbls total. I propose the same 2-5 point composite samples with 0-3" depths to determine the impacts and for potential closure. API 30-045-27522.

I will try your phone once again. Jeff Blagg is currently in the field on site.

Steve Moskal  
Environmental Coordinator  
BP - West Business Unit  
(505) 330-9179



NRM2008341796

## Analytical Report

### Report Summary

Client: BP America Production Co.

Samples Received: 3/4/2020

Job Number: 03143-0424

Work Order: P003022

Project Name/Location: Jacquez 002

Report Reviewed By:

Date: 3/11/20

Walter Hinchman, Laboratory Director



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, holds the Utah TNi certification NM009792018-1 for the data reported.  
Envirotech, Inc, holds the Texas TNi certification T104704557-19-2 for the data reported.



NRM2008341796

BP America Production Co.	Project Name:	Jacquez 002	
PO Box 22024	Project Number:	03143-0424	<b>Reported:</b>
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	03/11/20 11:47

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
West 5-Point Comp.	P003022-01A	Soil	03/04/20	03/04/20	Glass Jar, 4 oz.
East 5-Point Comp.	P003022-02A	Soil	03/04/20	03/04/20	Glass Jar, 4 oz.

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Jacquez 002 Project Number: 03143-0424 Project Manager: Steve Moskal	<b>Reported:</b> 03/11/20 11:47
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**West 5-Point Comp.  
P003022-01 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		107 %		50-150	2010030	03/06/20	03/06/20	EPA 8021B	
<b>Nonhalogenated Organics by 8015 - DRO/ORO</b>									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2011003	03/09/20	03/09/20	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	2011003	03/09/20	03/09/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		84.2 %		50-200	2011003	03/09/20	03/09/20	EPA 8015D	
<b>Nonhalogenated Organics by 8015 - GRO</b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		95.2 %		50-150	2010030	03/06/20	03/06/20	EPA 8015D	
<b>Anions by 300.0/9056A</b>									
Chloride	520	20.0	mg/kg	1	2010036	03/06/20	03/09/20	EPA 300.0/9056A	

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Jacquez 002 Project Number: 03143-0424 Project Manager: Steve Moskal	<b>Reported:</b> 03/11/20 11:47
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**East 5-Point Comp.  
P003022-02 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		<i>106 %</i>		<i>50-150</i>	<i>2010030</i>	<i>03/06/20</i>	<i>03/06/20</i>	<i>EPA 8021B</i>	
<b>Nonhalogenated Organics by 8015 - DRO/ORO</b>									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	2011003	03/09/20	03/09/20	EPA 8015D	
Oil Range Organics (C28-C40)	<b>53.6</b>	50.0	mg/kg	1	2011003	03/09/20	03/09/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		<i>92.1 %</i>		<i>50-200</i>	<i>2011003</i>	<i>03/09/20</i>	<i>03/09/20</i>	<i>EPA 8015D</i>	
<b>Nonhalogenated Organics by 8015 - GRO</b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2010030	03/06/20	03/06/20	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		<i>95.6 %</i>		<i>50-150</i>	<i>2010030</i>	<i>03/06/20</i>	<i>03/06/20</i>	<i>EPA 8015D</i>	
<b>Anions by 300.0/9056A</b>									
Chloride	<b>591</b>	20.0	mg/kg	1	2010036	03/06/20	03/09/20	EPA 300.0/9056A	

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BP America Production Co.	Project Name:	Jacquez 002	<b>Reported:</b> 03/11/20 11:47
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	

### Volatile Organics by EPA 8021 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 2010030 - Purge and Trap EPA 5030A

##### Blank (2010030-BLK1)

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.32		"	8.00		104	50-150			

##### LCS (2010030-BS1)

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Benzene	4.74	0.0250	mg/kg	5.00		94.7	70-130			
Toluene	4.74	0.0250	"	5.00		94.9	70-130			
Ethylbenzene	4.72	0.0250	"	5.00		94.5	70-130			
p,m-Xylene	9.45	0.0500	"	10.0		94.5	70-130			
o-Xylene	4.78	0.0250	"	5.00		95.5	70-130			
Total Xylenes	14.2	0.0250	"	15.0		94.9	0-200			
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.56		"	8.00		107	50-150			

##### Matrix Spike (2010030-MS1)

Source: P003020-01

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Benzene	4.44	0.0250	mg/kg	5.00	0.0901	86.9	54.3-133			
Toluene	5.15	0.0250	"	5.00	0.373	95.4	61.4-130			
Ethylbenzene	6.13	0.0250	"	5.00	1.08	101	61.4-133			
p,m-Xylene	15.9	0.0500	"	10.0	4.96	110	63.3-131			
o-Xylene	7.66	0.0250	"	5.00	1.97	114	63.3-131			
Total Xylenes	23.6	0.0250	"	15.0	6.93	111	0-200			
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	9.53		"	8.00		119	50-150			

##### Matrix Spike Dup (2010030-MSD1)

Source: P003020-01

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Benzene	4.50	0.0250	mg/kg	5.00	0.0901	88.2	54.3-133	1.45	20	
Toluene	5.29	0.0250	"	5.00	0.373	98.4	61.4-130	2.80	20	
Ethylbenzene	6.39	0.0250	"	5.00	1.08	106	61.4-133	4.14	20	
p,m-Xylene	17.0	0.0500	"	10.0	4.96	121	63.3-131	6.65	20	
o-Xylene	8.18	0.0250	"	5.00	1.97	124	63.3-131	6.58	20	
Total Xylenes	25.2	0.0250	"	15.0	6.93	122	0-200	6.63	200	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	9.53		"	8.00		119	50-150			

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Jacquez 002 Project Number: 03143-0424 Project Manager: Steve Moskal	Reported: 03/11/20 11:47
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### Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 2011003 - DRO Extraction EPA 3570

##### Blank (2011003-BLK1)

Prepared &amp; Analyzed: 03/09/20 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	43.8		"	50.0		87.7	50-200			

##### LCS (2011003-BS1)

Prepared &amp; Analyzed: 03/09/20 1

Diesel Range Organics (C10-C28)	413	25.0	mg/kg	500		82.6	38-132			
Surrogate: n-Nonane	44.7		"	50.0		89.4	50-200			

##### Matrix Spike (2011003-MS1)

Source: P003033-01

Prepared &amp; Analyzed: 03/09/20 1

Diesel Range Organics (C10-C28)	848	50.0	mg/kg	500	379	93.8	38-132			
Surrogate: n-Nonane	53.4		"	50.0		107	50-200			

##### Matrix Spike Dup (2011003-MSD1)

Source: P003033-01

Prepared &amp; Analyzed: 03/09/20 1

Diesel Range Organics (C10-C28)	847	50.0	mg/kg	500	379	93.6	38-132	0.130	20	
Surrogate: n-Nonane	55.5		"	50.0		111	50-200			

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### Nonhalogenated Organics by 8015 - GRO - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 2010030 - Purge and Trap EPA 5030A

##### Blank (2010030-BLK1)

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.57		"	8.00		94.6	50-150			

##### LCS (2010030-BS2)

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Gasoline Range Organics (C6-C10)	47.3	20.0	mg/kg	50.0		94.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.58		"	8.00		94.7	50-150			

##### Matrix Spike (2010030-MS2)

Source: P003020-01

Prepared: 03/06/20 0 Analyzed: 03/06/20 1

Gasoline Range Organics (C6-C10)	215	20.0	mg/kg	50.0	121	189	70-130			M2
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.85		"	8.00		111	50-150			

##### Matrix Spike Dup (2010030-MSD2)

Source: P003020-01

Prepared: 03/06/20 0 Analyzed: 03/06/20 2

Gasoline Range Organics (C6-C10)	234	20.0	mg/kg	50.0	121	227	70-130	8.30	20	M2
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.88		"	8.00		111	50-150			

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**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
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**Batch 2010036 - Anion Extraction EPA 300.0/9056A**

**Blank (2010036-BLK1)**

Prepared: 03/06/20 1 Analyzed: 03/09/20 1

Chloride	ND	20.0	mg/kg							
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**LCS (2010036-BS1)**

Prepared: 03/06/20 1 Analyzed: 03/09/20 1

Chloride	251	20.0	mg/kg	250	100	90-110				
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**Matrix Spike (2010036-MS1)**

Source: P003021-01

Prepared: 03/06/20 1 Analyzed: 03/09/20 1

Chloride	609	20.0	mg/kg	250	362	98.6	80-120			
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**Matrix Spike Dup (2010036-MSD1)**

Source: P003021-01

Prepared: 03/06/20 1 Analyzed: 03/09/20 1

Chloride	627	20.0	mg/kg	250	362	106	80-120	2.88	20	
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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BP America Production Co.	Project Name:	Jacquez 002	
PO Box 22024	Project Number:	03143-0424	<b>Reported:</b>
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	03/11/20 11:47

**Notes and Definitions**

M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

\*\* Methods marked with \*\* are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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NRM2008341796

Project Information

Chain of Custody

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Client: <u>BPX ENERGY</u>		Report Attention		Lab Use Only		TAT		EPA Program						
Project: <u>JACQUEZ 002</u>		Report due by: <u>STADACH</u>		Lab WO#		1D 3D		RCRA CWA SDWA						
Project Manager: <u>Steve Moskal</u>		Attention: <u>Steve Moskal / Jeff Bogy</u>		Job Number										
Address:		Address:		<u>P003022</u>		<u>03143-0424</u>								
City, State, Zip		City, State, Zip		Analysis and Method							State			
Phone:		Phone:		DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	6010 Total P	NM	CO	UT	AZ
Email:		Email:									TX	OK		
Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number									Remarks
1435	3/4/2020	SOIL	1	WEST S-POINT COMP	1	X	X	X			X			
1440	"	"	1	EAST S-POINT COMP	2	X	X	X			X			
Additional Instructions: <u>Bill BPX</u> <u>USE IH 2020 SPILL P.O.</u>														
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: <u>Jeff Bogy</u>														
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	Lab Use Only								
<u>Jeff Bogy</u>	<u>3/4/2020</u>	<u>1602</u>	<u>Rain Lopez</u>	<u>3/4/20</u>	<u>16:02</u>	Received on ice: <input checked="" type="radio"/> Y / <input type="radio"/> N								
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 _____ T2 _____ T3 _____								
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	AVG Temp °C <u>4</u>								
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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