

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

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

RECEIVED

FEB 25 2015

NMOCD

DISTRICT III

Form C-141  
Revised August 8, 2011

Submit Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: BP	Contact: Jeff Peace	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9479	
Facility Name: Gallegos Canyon Unit 36	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3004507330

LOCATION OF RELEASE

Unit Letter H	Section 19	Township 28N	Range 12W	Feet from the 1,758	North/South Line North	Feet from the 1,013	East/West Line East	County: San Juan
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Latitude 36.65001 Longitude 108.14754

NATURE OF RELEASE



Type of Release: unknown, possibly produced water	Volume of Release: unknown	Volume Recovered: none
Source of Release: below grade tank - 95 bbl	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: November 9, 2010; 3:33 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Sampling of the soil beneath the BGT during removal showed chloride concentrations of 1,700 ppm, which is above the standard of 250 ppm. Analysis results are attached.

Describe Area Affected and Cleanup Action Taken.\* Sampling results showed the soil exceeded the standard for chloride. The BGT sampling field report showed a dense, very hard sandstone bedrock directly beneath the BGT. The BGT permit application indicates depth to groundwater is greater than 100 feet, and the distance to a flowing watercourse is greater than 300 feet. There are no freshwater wells or springs within 1000 feet. Based on the depth to groundwater and distance to freshwater sources BP is requesting NMOCD approved a risk-based closure approval for this site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Jeff Peace	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: 4/13/15	Expiration Date:
E-mail Address: peace.jeffrey@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: February 25, 2015	Phone: 505-326-9479	

\* Attach Additional Sheets If Necessary

#NCS 1510352309

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**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Dec-10

**CLIENT:** Blagg Engineering  
**Lab Order:** 1011530  
**Project:** GCU #36  
**Lab ID:** 1011530-01

**Client Sample ID:** 5 PC-TB@6' 95 BBL BET  
**Collection Date:** 11/9/2010 3:33:00 PM  
**Date Received:** 11/12/2010  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/14/2010 12:26:29 AM
Surr: DNOP	93.4	61.7-135		%REC	1	11/14/2010 12:26:29 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/16/2010 10:27:33 PM
Surr: BFB	104	89.7-125		%REC	1	11/16/2010 10:27:33 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SRM
Chloride	1700	75		mg/Kg	50	11/30/2010 11:40:24 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: MMS
Benzene	ND	0.050		mg/Kg	1	11/17/2010 3:15:00 PM
Toluene	ND	0.050		mg/Kg	1	11/17/2010 3:15:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2010 3:15:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/17/2010 3:15:00 PM
Surr: 4-Bromofluorobenzene	94.6	82.2-105		%REC	1	11/17/2010 3:15:00 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: LRW
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	11/16/2010

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
NC Non-Chlorinated  
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

CLIENT: <b>BP</b>	<b>BLAGG ENGINEERING, INC.</b> <b>P.O. BOX 87, BLOOMFIELD, NM 87413</b> <b>(505) 632-1199</b>	API #: <b>3004507330</b>
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<b>FIELD REPORT:</b>	<input checked="" type="checkbox"/> BGT CONFIRMATION   TEMP. PIT CLOSURE / RELEASE INVESTIGATION (other) _____	PAGE No: <b>1</b> of <b>1</b>
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SITE INFORMATION:	SITE NAME: <b>GCU # 36</b>	DATE STARTED: <b>11/09/10</b>
QUAD/UNIT: <b>H SEC: 19 TWP: 28N RNG: 12W PM: NM CNTY: SJ ST: NM</b>		DATE FINISHED: _____
QTR-QTR/FOOTAGE: <b>SE/NE 1,758'N/1,013'E</b>	LEASE TYPE: <input checked="" type="checkbox"/> FEDERAL / STATE / FEE / INDIAN	ENVIRONMENTAL SPECIALIST: <b>NJV</b>
LEASE #: <b>SF079244A</b>	PROD. FORMATION: <b>FT</b> CONTRACTOR: <b>ELKHORN MBF - J. WILBORN</b>	

REFERENCE POINT:	WELL HEAD (W.H.) GPS COORD.: <b>36.65018 X 108.14758</b>	GL ELEV.: <b>5,683'</b>
1) <b>95 BBL BGT</b>	GPS COORD.: <b>36.65001 X 108.14754</b>	DISTANCE/BEARING FROM W.H.: <b>68', S10.5E</b>
2) _____	GPS COORD.: _____	DISTANCE/BEARING FROM W.H.: _____
3) _____	GPS COORD.: _____	DISTANCE/BEARING FROM W.H.: _____
4) _____	GPS COORD.: _____	DISTANCE/BEARING FROM W.H.: _____

LAB INFORMATION:	CHAIN OF CUSTODY RECORD(S): <b>HALL</b>	OVM READING (ppm) <b>NA</b>
1) SAMPLE ID: <b>5 PC-TB @ 6' 95 BBL BGT</b>	SAMPLE DATE: <b>11/09/10</b> SAMPLE TIME: <b>1533</b> LAB ANALYSIS: <b>418.1/8015/8021/300.0 (CI)</b>	
2) SAMPLE ID: _____	SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____	
3) SAMPLE ID: _____	SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____	
4) SAMPLE ID: _____	SAMPLE DATE: _____ SAMPLE TIME: _____ LAB ANALYSIS: _____	

SOIL DESCRIPTION:	SOIL TYPE: <input checked="" type="checkbox"/> SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER <b>BEDROCK (SANDSTONE)</b>
SOIL COLOR: <b>DARK YELLOWISH ORANGE</b>	
COHESION (ALL OTHERS): <input checked="" type="checkbox"/> NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE	PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
CONSISTENCY (NON COHESIVE SOILS): <input checked="" type="checkbox"/> LOOSE / <input checked="" type="checkbox"/> FIRM / DENSE / VERY DENSE	DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY <input checked="" type="checkbox"/> SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED	HC ODOR DETECTED: YES <input checked="" type="checkbox"/> NO EXPLANATION - _____
SAMPLE TYPE: GRAB <input checked="" type="checkbox"/> COMPOSITE - # OF PTS. <b>5</b>	
DISCOLORATION/STAINING OBSERVED: YES <input checked="" type="checkbox"/> NO EXPLANATION - _____	
ANY AREAS DISPLAYING WETNESS: YES <input checked="" type="checkbox"/> NO EXPLANATION - _____	
ADDITIONAL COMMENTS: <b>BGT BOTTOM ON BEDROCK SURFACE. COLLECTED SAMPLE FROM SOIL &amp; BEDROCK BENEATH BGT. BEDROCK VERY HARD, SLIGHTLY FRIABLE. NO EVIDENCE OF ANY RELEASE FROM BGT OBSERVED.</b>	

EXCAVATION DIMENSIONS (if applicable): <b>NA</b> ft. X <b>NA</b> ft. X <b>NA</b> ft.	cubic yards excavated (if applicable): <b>NA</b>
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<b>SITE SKETCH</b>  <div style="text-align: center;"> </div>	<div style="text-align: center;"> </div> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>OVM CALIB. READ. = <b>NA</b> ppm</td> <td rowspan="2" style="text-align: center; vertical-align: middle;">RF = 0.52</td> </tr> <tr> <td>OVM CALIB. GAS = <b>NA</b> ppm</td> </tr> <tr> <td>TIME: <b>NA</b> am/pm</td> <td>DATE: <b>NA</b></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"><b>MISCELL. NOTES</b></td> </tr> <tr> <td style="width:50%;">BGT - DW/DB</td> <td style="width:50%;">TSB - Y</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">W.O.: <b>N1125958</b></td> </tr> <tr> <td colspan="2">PAYKEY: <b>ZEGJ01RIGS</b></td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">GOOGLE EARTH</td> </tr> <tr> <td colspan="2">W.H. <b>36.650179 / 108.147572</b></td> </tr> <tr> <td colspan="2">BGT <b>36.649997 / 108.147530</b></td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">Magnetic declination: <b>10° E</b></td> </tr> </table>	OVM CALIB. READ. = <b>NA</b> ppm	RF = 0.52	OVM CALIB. GAS = <b>NA</b> ppm	TIME: <b>NA</b> am/pm	DATE: <b>NA</b>	<b>MISCELL. NOTES</b>		BGT - DW/DB	TSB - Y			W.O.: <b>N1125958</b>		PAYKEY: <b>ZEGJ01RIGS</b>				GOOGLE EARTH		W.H. <b>36.650179 / 108.147572</b>		BGT <b>36.649997 / 108.147530</b>				Magnetic declination: <b>10° E</b>	
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TSB - TANK SIDEWALL BURIED	DW/DB - DOUBLE WALL / DOUBLE BOTTOM.	N/A - NOT APPLICABLE OR NOT AVAILABLE.
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW, T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL.		

TRAVEL NOTES:	CALLOUT: <b>11/05/10 - AFTER.</b>	ONSITE: <b>11/09/10 - AFTER. (SCHED.)</b>
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## **SITING AND HYDRO-GEOLOGICAL REPORT FOR GALLEGOS CANYON UNIT 036**

### **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 are 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 slope west of Gallegos Canyon. Broad shaley hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are common. The predominant geologic formation is the Nacimiento Formation of Tertiary age, which underlies surface soils and is often exposed. Deposits of Quaternary alluvial and eolian sands occur prominently near the surface of the area, especially near 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). 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

