



PHONE (575) 397-6388 • FAX (575) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805  
E-MAIL: cbrunson@bbcinternational.com

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## **DELINEATION WORKPLAN**

### **COG – MAGNUM PRONTO STATE COM #004H (Leak Date: 7/2/18)**

#### **RP # 1RP-5117**

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This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-5117.

The following information includes:

1. Appropriate completed and signed C-141 pages.
2. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
3. GPS information for sample points and sample methodology.
4. Depth to groundwater information (i.e., pdf of OSE search results, USGS search results, and/or copy of Chevron groundwater trend map).
5. Watercourse/features map within 1000 feet.
6. BLM Cave Karst map.
7. FEMA National Flood map.
8. Laboratory analysis results summary table and original laboratory analysis reports.
9. Potentially other pertinent information as necessary for site specific purposes.

***Based on the information included in this package and the NMOCD rules, the following remediation is proposed:***

***COG proposes zero remediation is required on this site.***

***A closure page of the C-141 is included in this packet.***

Form C-141

State of New Mexico  
Oil Conservation Division

Page 3

Incident ID	
District RP	1RP-5117
Facility ID	
Application ID	

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

What is the shallowest depth to groundwater beneath the area affected by the release?	450 (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 not 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.

Form C-141

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-5117
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: Rebecca HaskellTitle: Senior HSE CoordinatorSignature: Date: 11/8/18email: rhaskell@concho.comTelephone: (432) 683-7443**OCD Only**

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

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

Form C-141

State of New Mexico  
Oil Conservation Division

Page 5

Incident ID	
District RP	1RP-5117
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
- ☐ 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: **Rebecca Haskell**Title: **Senior HSE Coordinator**Signature: Rebecca HaskellDate: 11/8/18email: rhaskell@concho.comTelephone: (432) 683-7443**OCD Only**

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

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

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

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

Form C-141

Page 6

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	1RP-5117
Facility ID	
Application ID	

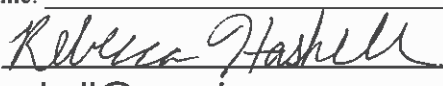
## Closure

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: Rebecca Haskell Title: Senior HSE Coordinator  
Signature:  Date: 11/8/18  
email: rhaskell@concho.com Telephone: (432) 683-7443

**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: 11/9/2022  
Printed Name: Brittany Hall Title: Environmental Specialist



# COG, Magnum Pronto State Com #004H

Leak date: 7/2/18  
Lea County, NM  
AP# 30-025-39951  
1RP-5117

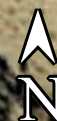
## Legend

-  Leak area, NO REMEDIATION NECESSARY
-  Sample points

Google Earth

© 2018 Google

100 ft





COG, Magnum Pronto State Com #004H

Sample points

SP1, N 32.61077 W-103.78046

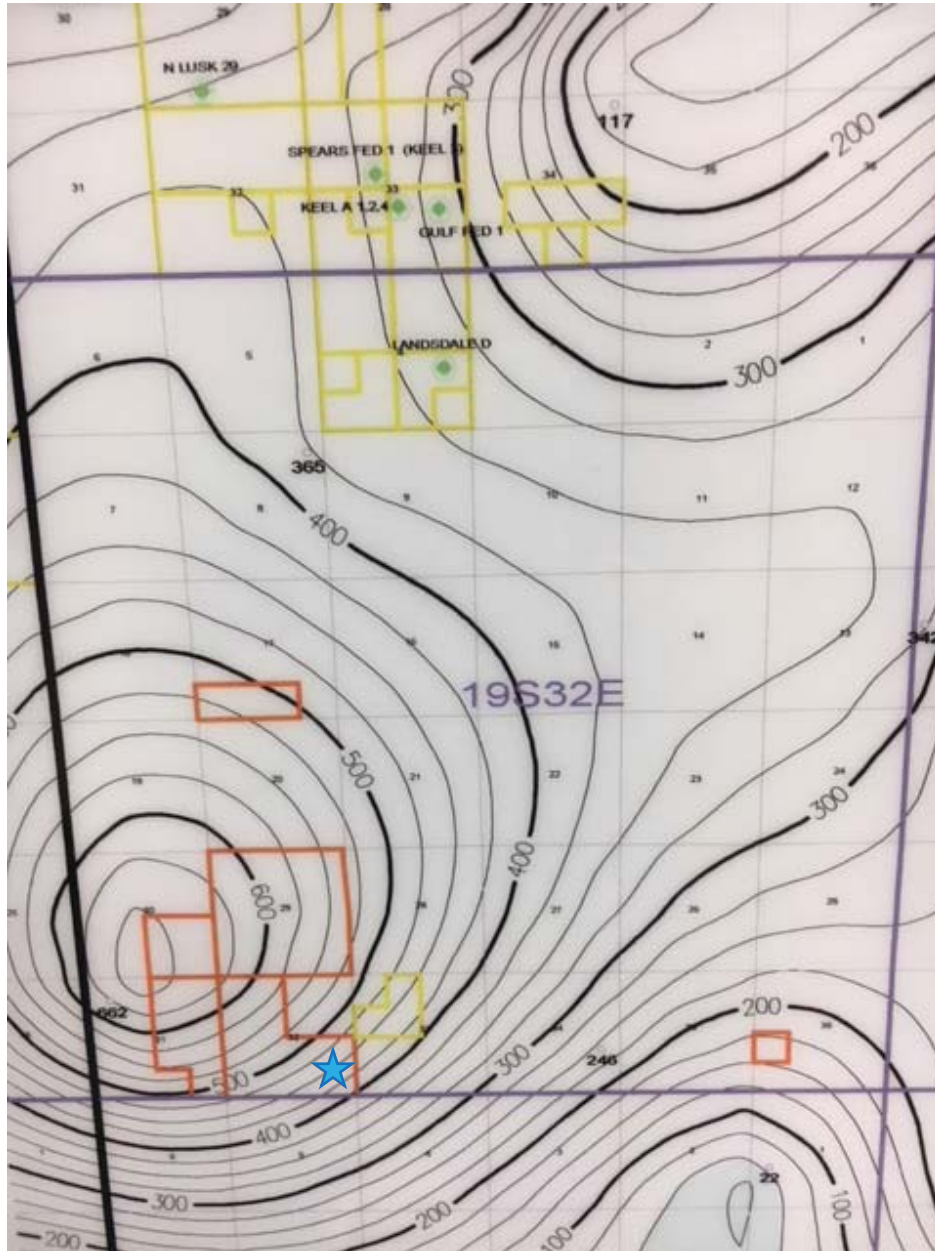
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SP3, N 32.61085 W-103.78054

SP4, N 32.61080 W-103.78053

SP5, N 32.61089 W-103.78051

**COG, Magnum Pronto St Com #004H**  
**U/L P, Section 32, T19S, R32E**  
**Groundwater: 450'**







# New Mexico Office of the State Engineer Water Column/Average Depth to Water

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No records found.

## UTMNAD83 Radius Search (in meters):

**Easting (X):** 614282

**Northing (Y):** 3608864

**Radius:** 1700

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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.

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7/12/18 11:05 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

 USGS Water Resources	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
National Water Information System: Web Interface										
Data Category: <input type="text" value="Groundwater"/> Geographic Area: <input type="text" value="New Mexico"/> <input type="button" value="GO"/>										

Click to hide News Bulletins

- [Please see news on new formats](#)
- UPDATE, 10/31: The USGS continues to make progress on restoring all of the gages. As of noon Wednesday, October 31, approximately 6 percent of USGS streamgages are still not transmitting due to an issue with the telemetry system that records and transmits streamgage data. Read [more](#)**
- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

## Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 323712103491001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

## USGS 323712103491001 19S.32E.31.114

Lea County, New Mexico

Latitude 32°37'12", Longitude 103°49'10" NAD27

Land-surface elevation 3,497 feet above NAVD88

### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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1967-07			M	505.13			2		U	
1967-09			M	509.01			2		U	
1967-11			M	512.48			2		U	
1968-01			M	515.69			2		U	
1968-03			M	518.52			2		U	
1968-05			M	522.00			2		U	
1968-07			M	526.58			2		U	
1968-09			M	530.39			2		U	
1968-11			M	533.84			2		U	
1969-01			M	537.05			2		U	
1969-03			M	541.13			2		U	
1969-05			M	544.58			2		U	
1969-07			M	548.44			2		U	
1969-09			M	552.13			2		U	
1969-11			M	554.67			2		U	
1970-01			M	557.43			2		U	

Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Water level, feet referenced below datum and surface	Water level accuracy	Water level, feet above specific vertical datum	Status	Referenced vertical datum	Water-level accuracy measuring agency	Source of measurement
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1970-11			M	574.17			2			U	
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1971-11			M	596.95			2			U	
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Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Water level, feet referenced below datum and surface	Water level accuracy	Water level, feet above specific vertical datum	Status	Referenced vertical datum	Water-level accuracy measuring agency	Source of measurement
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Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Water level, feet referenced below datum and surface	Water level accuracy	Water level, feet above specific vertical datum	Status	Referenced vertical datum	Method of measurement	Measuring agency	Water-level accuracy	Source of measurement
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1975-06-11			D	659.50			2				U		
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## Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	M	Date is accurate to the Month
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

<a href="#">Questions about sites/data?</a> <a href="#">Feedback on this web site</a> <a href="#">Automated retrievals</a> <a href="#">Help</a> <a href="#">Data Tips</a> <a href="#">Explanation of terms</a> <a href="#">Subscribe for system changes</a> <a href="#">News</a>		?	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	?	Water-level accuracy	?
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[Accessibility](#)   [Plug-Ins](#)   [FOIA](#)   [Privacy](#)   [Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title:** Groundwater for New Mexico: Water Levels

**URL:** <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



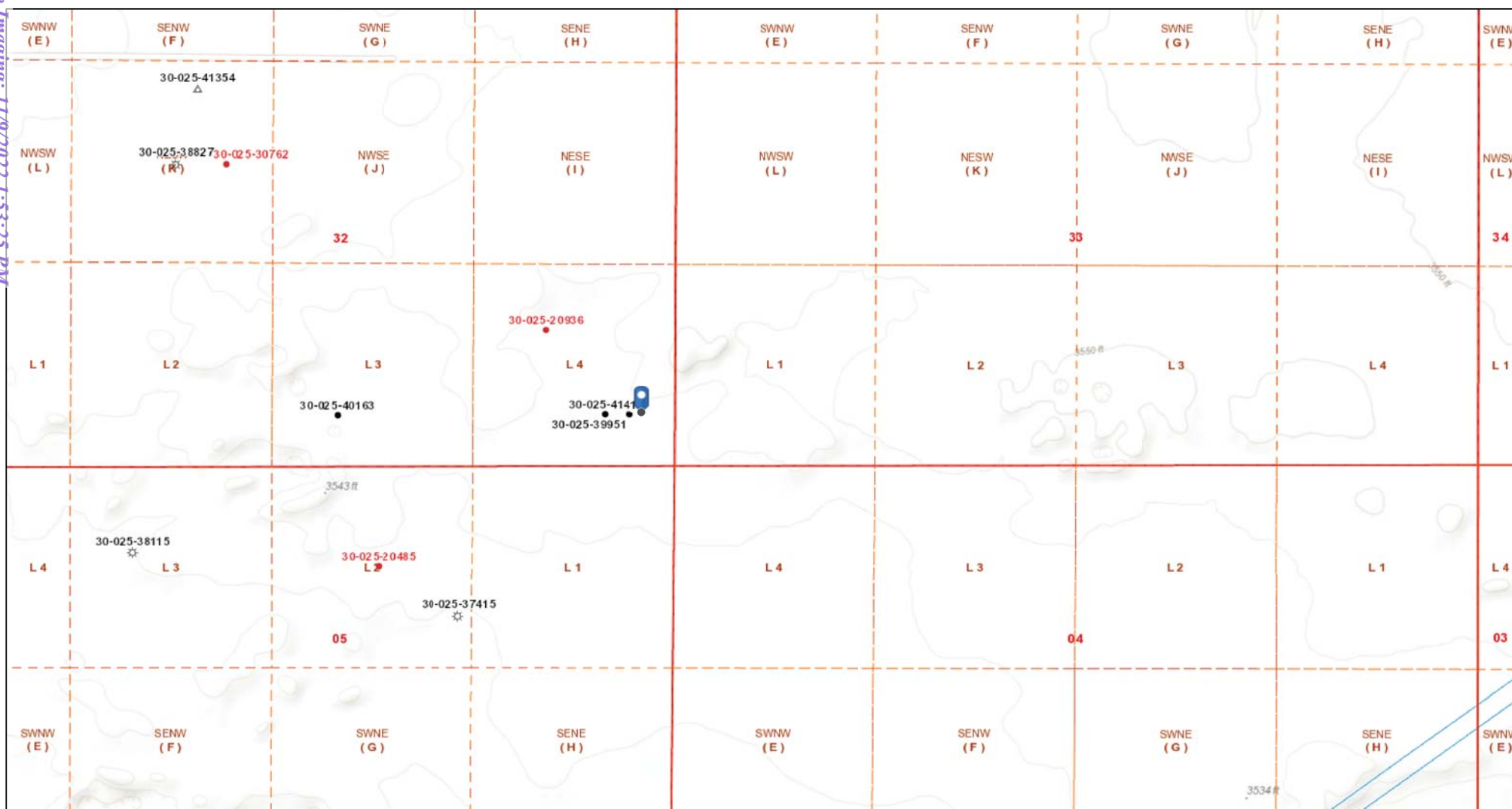
Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2018-11-02 13:52:45 EDT

0.53 0.44 nadww01



# Magnum Pronto State Com #004H, TOPO map w/ water features



11/2/2018 11:54:45 AM

Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2 Plugged
- CO2 Temporarily Abandoned

Gas Active

- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active

Injection, Cancelled

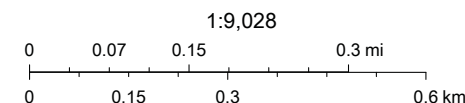
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled

Oil, New

- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New

Salt Water Injection, Plugged

- Salt Water Injection Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged





Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, OCD, BLM

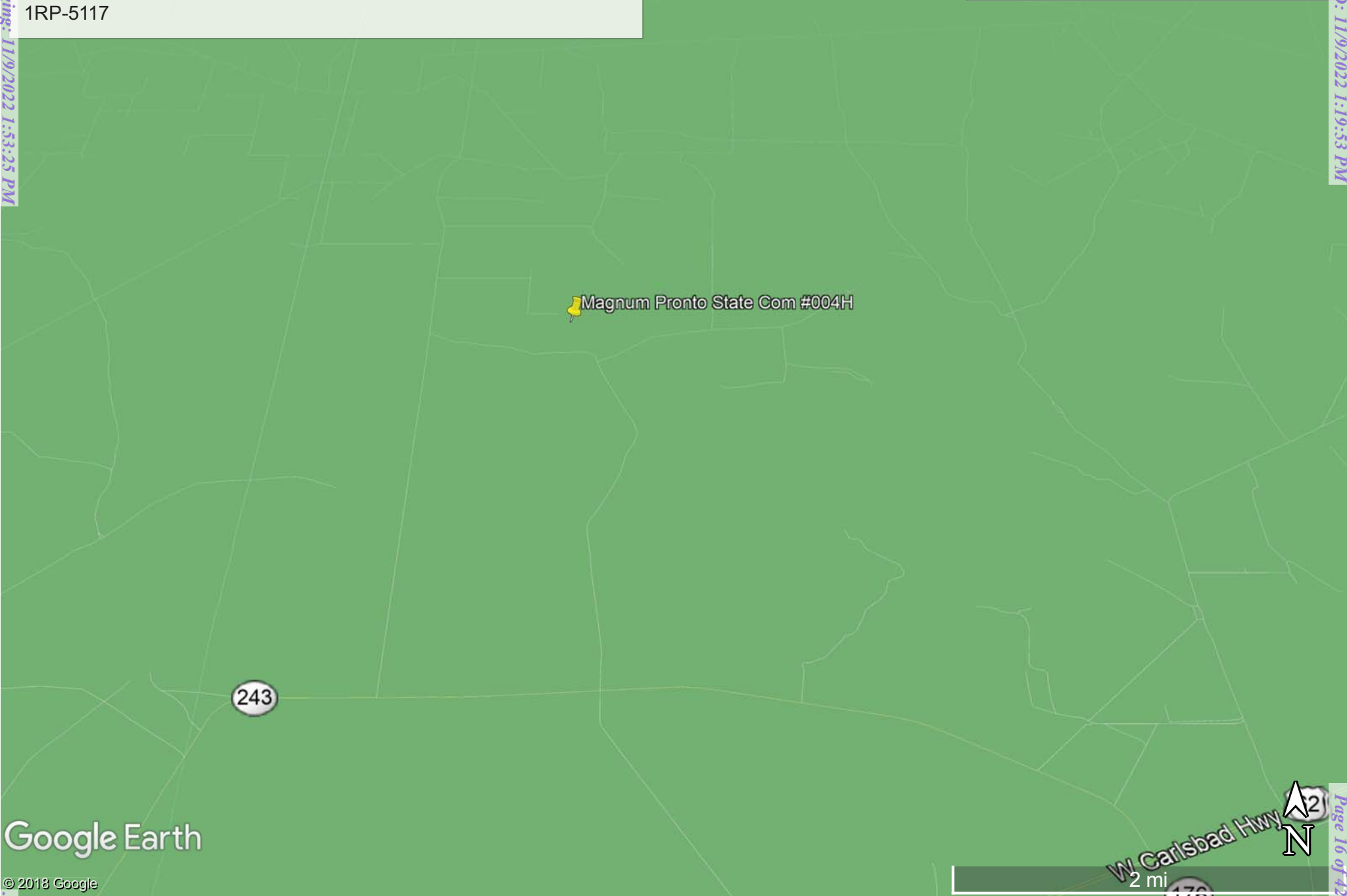
# COG, Magnum Pronto State Com #004H

Leak date: 7/2/18  
Lea County, NM  
AP# 30-025-39951  
1RP-5117

## BLM CAVE KARST MAP

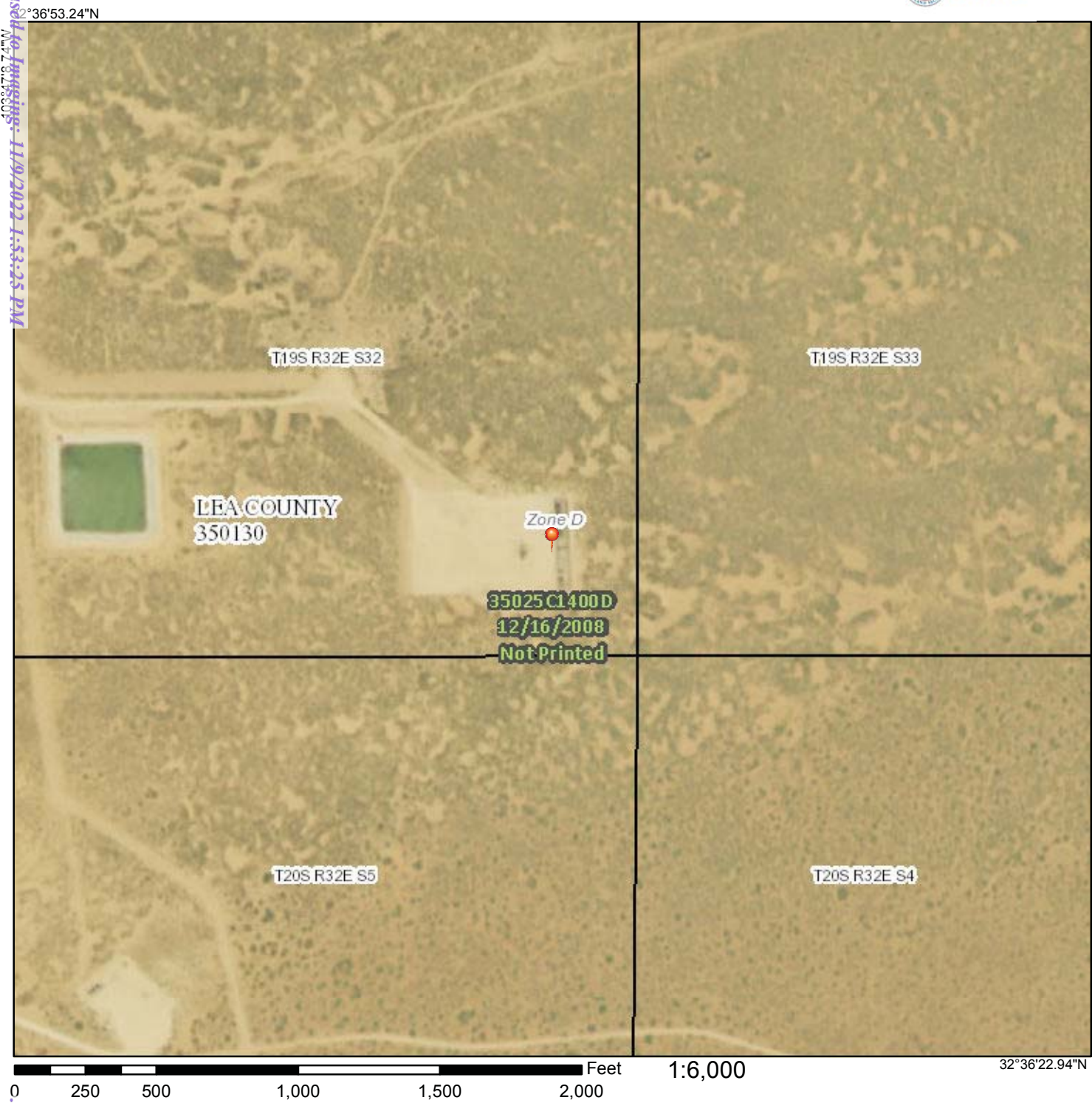
### Legend

-  LOW potential
-  Magnum Pronto State Com #004H



Google Earth

# National Flood Hazard Layer FIRMMette



### Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone X
		Area of Minimal Flood Hazard Zone X
OTHER AREAS		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/2/2018 at 1:56:19 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Received by Imaging: 11/9/2022 1:53:25 PM  
WV 2 8:27:30 PM

Received by OCD: 11/9/2022 1:19:53 PM

Page 17 of 42



Laboratory Analytical Results Summary  
Magnum Pronto State Com 4H (7/2/18)

		Sample ID	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'
Analyte	Method	Date	10/24/18	10/24/18	10/24/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a
Chloride	SM4500Cl-B		400	304	160
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'
Analyte	Method	Date	10/24/18	10/24/18	10/24/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a
Chloride	SM4500Cl-B		80	160	240
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		950	<10.0	n/a
EXT DRO	TPH 8015M		372	<10.0	n/a

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 4'
Analyte	Method	Date	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		1380	304	656	208	176
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		372	<10.0	n/a	n/a	n/a
EXT DRO	TPH 8015M		146	<10.0	n/a	n/a	n/a

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'	SP4 @ 5'	SP4 @ 6'	SP4 @ 7'
Analyte	Method	Date	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		80	320	2000	2960	992	400	64	48
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a

Laboratory Analytical Results Summary  
Magnum Pronto State Com 4H (7/2/18)

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'	SP5 @ 4'	SP5 @ 5'	SP5 @ 6'	SP5 @ 7'
Analyte	Method	Date	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18	10/24/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		464	2960	2360	1680	1460	224	208	160
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a	n/a



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October 31, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MAGNUM PRONTO STATE COM 4H

Enclosed are the results of analyses for samples received by the laboratory on 10/26/18 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 1 @ SURFACE (H803077-01)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	1.99	99.4	2.00	0.623		
Toluene*	<0.050	0.050	10/30/2018	ND	1.89	94.3	2.00	0.898		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.87	93.6	2.00	0.863		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.59	93.1	6.00	0.625		
Total BTEX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	10/31/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	205	102	200	11.3	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	213	106	200	5.97	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 1 @ 1' (H803077-02)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.6 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	10/31/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 1 @ 2' (H803077-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/31/2018	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 2 @ SURFACE (H803077-04)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2018	ND	206	103	200	0.651	
DRO >C10-C28*	950	10.0	10/31/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	372	10.0	10/31/2018	ND					

Surrogate: 1-Chlorooctane 98.7 % 41-142

Surrogate: 1-Chlorooctadecane 150 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 2 @ 1' (H803077-05)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 2 @ 2' (H803077-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	10/31/2018	ND	416	104	400	0.00	

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 3 @ SURFACE (H803077-07)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.2 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1380	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	372	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	146	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 96.4 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 3 @ 1' (H803077-08)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74	
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87	
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74	
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67	
Total BTX	<0.300	0.300	10/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 97.1 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 3 @ 2' (H803077-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	10/31/2018	ND	416	104	400	0.00		

**Sample ID: SP 3 @ 3' (H803077-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	10/31/2018	ND	416	104	400	0.00	

**Sample ID: SP 3 @ 4' (H803077-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/31/2018	ND	416	104	400	0.00	

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**Analytical Results For:**

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Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 4 @ SURFACE (H803077-12)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTEx	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 86.2 % 41-142

Surrogate: 1-Chlorooctadecane 85.6 % 37.6-147

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 4 @ 1' (H803077-13)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74	
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87	
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74	
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67	
Total BTX	<0.300	0.300	10/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.7 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.7 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 4 @ 2' (H803077-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	10/31/2018	ND	416	104	400	0.00		

**Sample ID: SP 4 @ 3' (H803077-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2960	16.0	10/31/2018	ND	416	104	400	0.00		

**Sample ID: SP 4 @ 4' (H803077-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	10/31/2018	ND	416	104	400	0.00	

**Sample ID: SP 4 @ 5' (H803077-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	10/31/2018	ND	416	104	400	0.00	

**Sample ID: SP 4 @ 6' (H803077-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/31/2018	ND	416	104	400	0.00	

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**Analytical Results For:**

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 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 4 @ 7' (H803077-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/31/2018	ND	416	104	400	0.00	

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**Analytical Results For:**

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Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 5 @ SURFACE (H803077-20)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.2 % 37.6-147

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**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
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 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 5 @ 1' (H803077-21)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/30/2018	ND	2.03	101	2.00	2.74		
Toluene*	<0.050	0.050	10/30/2018	ND	1.90	95.0	2.00	2.87		
Ethylbenzene*	<0.050	0.050	10/30/2018	ND	1.91	95.3	2.00	2.74		
Total Xylenes*	<0.150	0.150	10/30/2018	ND	5.75	95.8	6.00	2.67		
Total BTX	<0.300	0.300	10/30/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2960	16.0	10/31/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2018	ND	206	103	200	0.651	
DRO >C10-C28*	<10.0	10.0	10/30/2018	ND	200	100	200	0.788	
EXT DRO >C28-C36	<10.0	10.0	10/30/2018	ND					

Surrogate: 1-Chlorooctane 95.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 5 @ 2' (H803077-22)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2360	16.0	10/31/2018	ND	416	104	400	0.00		

**Sample ID: SP 5 @ 3' (H803077-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1680	16.0	10/31/2018	ND	416	104	400	3.77		

**Sample ID: SP 5 @ 4' (H803077-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1460	16.0	10/31/2018	ND	416	104	400	3.77		

**Sample ID: SP 5 @ 5' (H803077-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/31/2018	ND	416	104	400	3.77	

**Sample ID: SP 5 @ 6' (H803077-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	10/31/2018	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

BBC International, Inc.  
 Cliff Brunson  
 P.O. Box 805  
 Hobbs NM, 88241  
 Fax To: (575) 397-0397

Received:	10/26/2018	Sampling Date:	10/24/2018
Reported:	10/31/2018	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE COM 4H	Sampling Condition:	Cool & Intact
Project Number:	(7/2/18)	Sample Received By:	Jodi Henson
Project Location:	COG - LEA CO NM		

**Sample ID: SP 5 @ 7' (H803077-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/31/2018	ND	416	104	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

Z-01	Surrogates not added to this ms/msd.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



## • ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(505) 393-2326 FAX (505) 393-2476

Company Name:		Project Manager:	
Address:		City:	
Phone #:		Fax #:	
Project #:		Project Owner:	
Project Name:		Project Location:	
Sampler Name:			
FOR LAB USE ONLY		Lab I.D.	
Sample I.D.			
G/RAB OR C/JOMP.	# CONTAINERS	MATRIX	PRESERV.
GROUNDWATER	WASTEWATER	SOIL	OIL
SURFACE WATER	SLUDGE	OTHER:	ACID/BASE:
ICE / COOL	OTHER:	DATE	TIME
SP1 @ SURFACE		✓	10/24/18 12:12 PM
SP1 @ 1'		✓	10/24/18 12:19 PM
SP1 @ 2'		✓	10/24/18 12:30 PM
SP2 @ SURFACE		✓	10/24/18 12:33 PM
SP2 @ 1'		✓	10/24/18 12:40 PM
SP2 @ 2'		✓	10/24/18 12:52 PM
SP3 @ SURFACE		✓	10/24/18 12:54 PM
SP3 @ 1'		✓	10/24/18 12:59 PM
SP3 @ 2'		✓	10/24/18 1:10 PM
SP3 @ 3'		✓	10/24/18 1:11 PM
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Delivered By: (Circle One) UPS - Bus - Other: -10.4%/#97		CHECKED BY: (Initials)	
REMARKS:		Add'l Phone #: Add'l Fax #:	

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# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

2083

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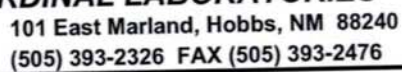
Company Name: BBC International, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																													
Project Manager: Cliff Brunson				P.O. #:																																	
Address: P.O. Box 805				Company: <i>COG</i>																																	
City: Hobbs State: NM Zip: 88241				Attn: <i>Haskell</i>																																	
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																																	
Project #: Project Owner: <i>COG</i>				City:																																	
Project Name: Magnum Pronto State Com 4H (7/2/18)				State: Zip:																																	
Project Location: Lea County, NM				Phone #: Fax #:																																	
Sampler Name: Jeff Ornelas																																					
FOR LAB USE ONLY																																					
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME																							
<i>H803077</i>																																					
<i>11</i>	SP3 @ 4'	<i>G</i>	<i>1</i>			<i>✓</i>					<i>✓</i>		10/24/18	1:18 PM	<i>✓</i>																						
<i>12</i>	SP4 @ SURFACE												10/24/18	1:22 PM	<i>✓</i>	<i>✓</i>	<i>✓</i>																				
<i>13</i>	SP4 @ 1'												10/24/18	1:28 PM	<i>✓</i>	<i>✓</i>	<i>✓</i>																				
<i>14</i>	SP4 @ 2'												10/24/18	1:33 PM	<i>✓</i>																						
<i>15</i>	SP4 @ 3'												10/24/18	1:43 PM	<i>✓</i>																						
<i>16</i>	SP4 @ 4'												10/24/18	1:53 PM	<i>✓</i>																						
<i>17</i>	SP4 @ 5'												10/24/18	2:03 PM	<i>✓</i>																						
<i>18</i>	SP4 @ 6'												10/24/18	2:15 PM	<i>✓</i>																						
<i>19</i>	SP4 @ 7'												10/24/18	2:27 PM	<i>✓</i>																						
<i>20</i>	SP5 @ SURFACE												10/24/18	2:28 PM	<i>✓</i>	<i>✓</i>	<i>✓</i>																				

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Relinquished By: <i>Jeff Ornelas</i>	Date: <i>10/24/18</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: <i>5:30pm</i>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>[Signature]</i>	Date: <i>10/26/18</i>	Received By: <i>Jodi Henson</i>	REMARKS:	
Time: <i>10:40</i>				
Delivered By: (Circle One)	Sample Condition	CHECKED BY: <i>[Signature]</i>		
Sampler - UPS - Bus - Other: <i>- 10.42 / #97</i>	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No			

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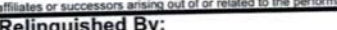








## 3 of 3

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Relinquished By: 				Date: 10/24/18 Time: 5:30pm		Received By: 		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS:	
Relinquished By: 				Date: 10/26/18 Time: 10:40		Received By: 			
Delivered By: (Circle One)				Sample Condition Cool <input type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) 			
Sampler - UPS - Bus - Other: -10.4% #97									

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1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
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Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 157401

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 157401
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	The site must meet the requirements of 19.15.29.13 NMAC when the site is no longer being used for production operations.	11/9/2022