

SITE INFORMATION

Report Type: Closure Report

General Site Information:				
Site:	Choctaw 3" Water Line			
Company:	COG Operating LLC			
Section, Township, and Range:	16	17S	31E	
Lease Number:	Unknown			
County:	Eddy County, NM			
GPS:	N 32.82895		W 103.87411	
Surface Owner:	State			
Mineral Owner:				
Directions:	In Maljamar from the intersection of Lea County Rd. 126 and Hwy 82, go west on Hwy 82 for 7.2 miles to Eddy County Rd. 223 (Sweet Gum Rd.), turn right on 223 and go north 1.2 miles to location on right (COG, Willow State #9). Leak area is 100' south of location			

Release Data:		
Date Released:	6/29/2012	
Type of Release:	Produced water with skim oil	<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 150px;"> RECEIVED APR 05 2013 NMOCD ARTESIA </div>
Source of Contamination:	3" poly water line	
Fluid Released:	80 bbls	
Fluids Recovered:	75 bbls	

Official Communication:		
Name:	Pat Ellis	Cliff Brunson
Company:	COG Operating LLC	BBC International, Inc.
Address:	550 W. Texas Ave., Ste. 1300	1324 W. Marland
PO Box:		PO Box 805
City, State, Zip Code:	Midland, TX 79701	Hobbs, NM 88241
Phone Number:	(432) 686-3023	(575) 397-6388
Fax:	(432) 684-7137	(575) 397-0397
Email:	pellis@conchoresources.com	cbrunson@bbcinternational.com

Ranking Criteria:		
Depth to Groundwater:	Ranking Score	Site Data
<50 ft.	20	
50-99 ft.	10	
>100 ft.	0	0

Well Head Protection:		
Water Source	Ranking Score	Site Data
Water Source <1,000 ft., Private <200	20	
Water Source >1,000 ft., Private >200	0	0

Surface Body of Water:		
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	
200 ft. - 1,000 ft.	10	
>1,000 ft.	0	0

Total Ranking Score:	0
-----------------------------	---

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	5000



COG Operating LLC

Choctaw 3" Water Line

(06/29/2012)

**Unit O, Section 16, Township 17 South, Range 31 East
Eddy County, New Mexico**

GPS: N 32.82895° W 103.87411°

ENVIRONMENTAL SITE INVESTIGATION

CLOSURE REPORT

PERFORMED BY:

BBC INTERNATIONAL, INC.
WORLD-WIDE ENVIRONMENTAL SPECIALISTS
1324 W. MARLAND BLVD.
P. O. BOX 805
HOBBS, NEW MEXICO 88240
(575) 397-6388 • FAX (575) 397-0397

April 4, 2013

PREPARED FOR:

**MR. PAT ELLIS
MANAGER, HSE
COG OPERATING LLC
FASKEN CENTER TOWER II
550 WEST TEXAS AVENUE, SUITE 100
MIDLAND, TEXAS 79701**

Mr. Mike Bratcher
Compliance Officer
Oil Conservation Division, District 2
811 South First
Artesia, NM 88210

Re: Closure Plan for COG Operating LLC, Choctaw 3" Water Line,
Unit O, Section 16, Township 17 South, Range 31 East, Eddy County, NM

1.0 SITE CHARACTERIZATION

The subject site is located West of Maljamar, in Section 16, Township 17 South, and Range 31 East, Eddy County, New Mexico. The GPS coordinates are: N 32.82895° W 103.87411°. The site consists of undeveloped rangeland and petroleum production facilities. On June 29, 2012, a leak occurred in a 3" poly water line. The spill measured roughly 80' x 15' and is located approximately 100' south of the Willow State #9 location. Approximately 80 bbls of produced water and skim oil were released with approximately 75 bbls being recovered by a vacuum truck.

A diagram of the location including the sample points can be reviewed in Appendix I of this report. The surface soil is tan to brown fine sand and sandy caliche. There is no water source within 1,000 feet of this site. Based on the data from the Eddy County Groundwater Trend Map, the depth to groundwater in Section 16, Township 17 South, and Range 31 East is greater than 300'. The initial C-141 for the leak is at the end of this report in Appendix III.

2.0 SITE INVESTIGATION ACTIVITIES

On July 31, 2012, BBC personnel conducted a delineation of the site. The site delineation occurred after initial spill response activities had been conducted by COG. Two sample points were taken in the leak area to a depth of 2 feet for SP1 and a depth of 5 feet for SP2. Three samples were taken from SP1 at the surface, at 1 foot, and at 2 feet. Six samples were taken from SP2 at the surface, at 1 foot, at 2 feet, at 3 feet, at 4 feet, and at 5 feet. The samples were taken to Cardinal Laboratories for chloride, TPH, and BTEX analysis. Laboratory analysis results for SP1 were below reporting limits for BTEX on both the surface and 1 foot sample. The chloride results for SP1 are 1280 mg/kg at the surface, 80 mg/kg at 1 foot, and 16 mg/kg at 2 feet. The TPH results were below reporting limits for GRO C6-C10 for both SP1 at surface and at 1 foot. The DRO >C10-C28 for SP1 at the surface was 121 mg/kg and 13.8 mg/kg at 1 foot. BTEX results were below reporting limit for SP2 at surface and 1 foot. The chloride results for SP2 were 384 mg/kg at surface, 400 mg/kg at 1 foot, 160 mg/kg at 2 feet, 272 mg/kg at 3 feet, 288 mg/kg at 4 feet, and 80 mg/kg at 5 feet. TPH analysis was performed on SP2 at surface and 1 foot and the results were below reporting limits for GRO C6-C10 on both. The DRO >C10-C28 for SP2 at

surface was 32.8 mg/kg and below reporting limits for SP2 at 1 foot. The results of the analysis are located in Appendix II of this report. The sample point locations can be viewed on the site diagram in Appendix I of this report.

3.0 CONCLUSION AND RECOMMENDATION

On September 11, 2012, BBC personnel sent a proposed remediation plan to Mike Bratcher of NMOCD. Mike Bratcher approved the plan on November 16, 2012. Remediation plan correspondence is located in Appendix V of this report.

In accordance with the approved remediation plan, excavation of approximately 1 foot across the entire leak site was completed. Then, the site was backfilled with clean soil.

Upon completion of the approved remediation plan, BBC requested closure of the site and submitted a final C-141 to NMOCD. Photos of the remediation activities are located in Appendix IV of this report.

The final C-141 is located in Appendix III of this report.

APPENDIX I

Site Diagram
August 2012

Choctaw 3" Water Line (06/29/2012)

Unit J, Section 16, Township 17 South, Range 31 East
Eddy County, NM
GPS: N 32.82895° W 103.87411°

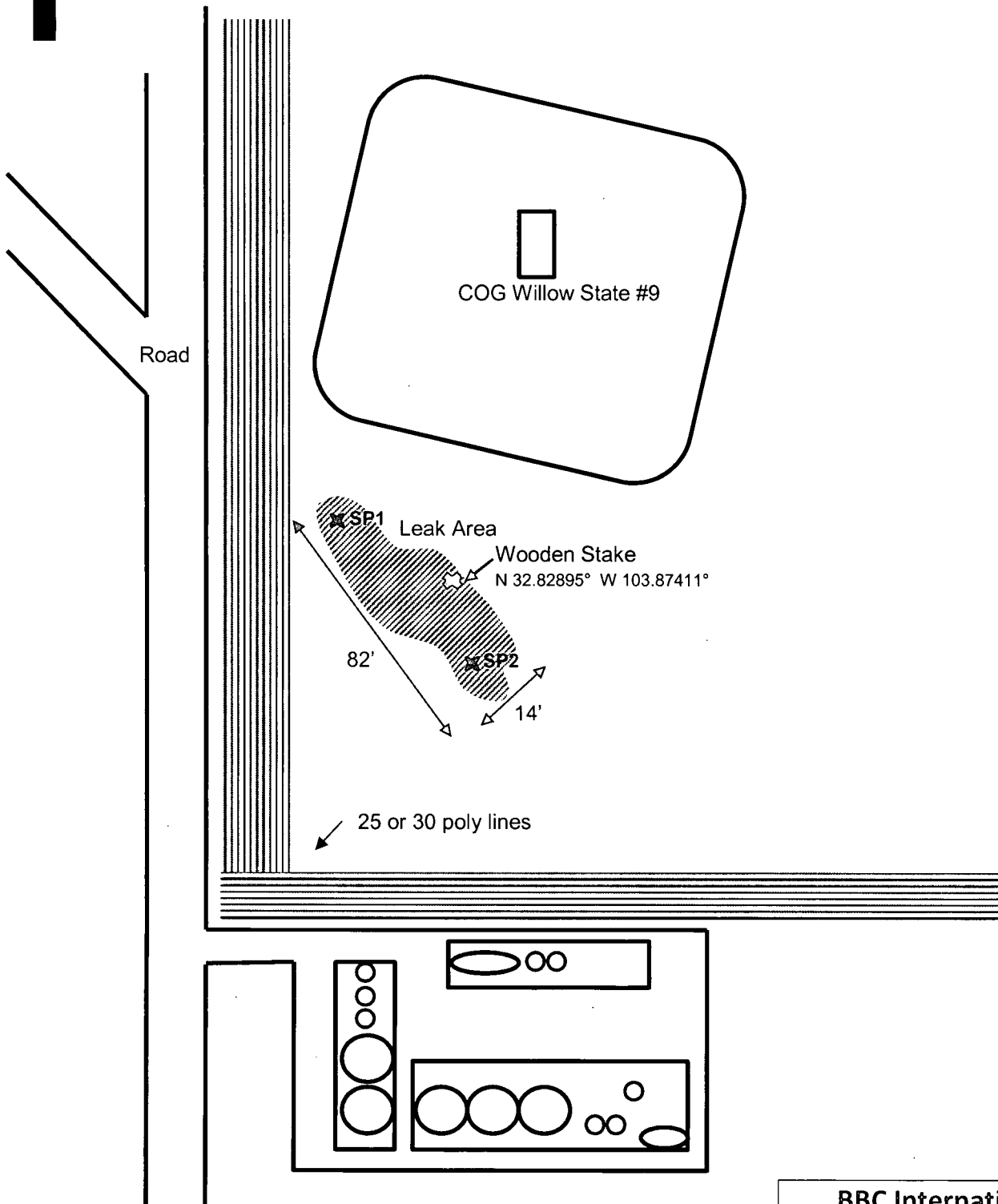
Prepared for:
COG Operating LLC
Midland, Texas

Prepared by:
BBC International, Inc.



COG

Choctaw 3' Water Line



Nearest Location:
COG Willow State #9
Unit O, Section 16, T17S, R31E
740'FSL and 2350'FEL
Eddy County, NM

BBC International, Inc.

COG

Choctaw 3" Water Line

Date: 08/01/2012

DRWG by: K. Purvis

NOT TO SCALE

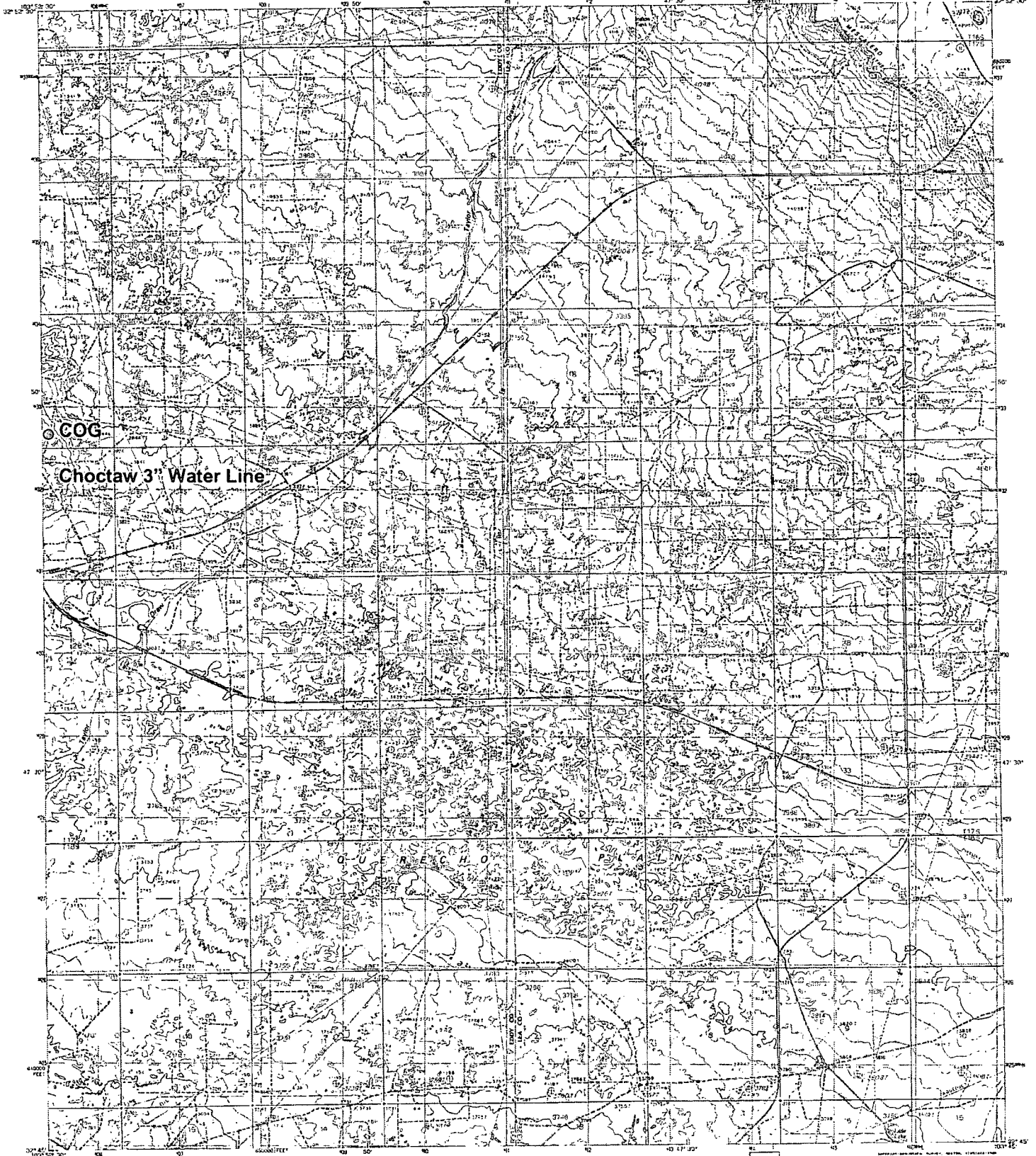
File: COG 2012

COG

Choctaw 3" Water Line

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MAJAMAR QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN IN 1954
FIELD DATA 1954-1955
PRODUCTION 1956
THIS MAP IS A REPRODUCTION OF THE ORIGINAL
AND IS NOT A SUBSTITUTE FOR THE ORIGINAL
THE ORIGINAL MAP IS AVAILABLE FOR SALE
AT THE FOLLOWING PRICE: \$1.00 PER COPY
IN ADDITION TO THE ABOVE, THERE IS A FEE
FOR THE POSTAGE AND HANDLING CHARGE
OF \$0.50 PER COPY
TOTAL \$1.50 PER COPY
THE MAP IS AVAILABLE FOR SALE
AT THE FOLLOWING PRICE: \$1.00 PER COPY
IN ADDITION TO THE ABOVE, THERE IS A FEE
FOR THE POSTAGE AND HANDLING CHARGE
OF \$0.50 PER COPY
TOTAL \$1.50 PER COPY

PROVISIONAL MAP
Produced from original
manuscript drawings. Infor-
mation shown as of date of
field check.

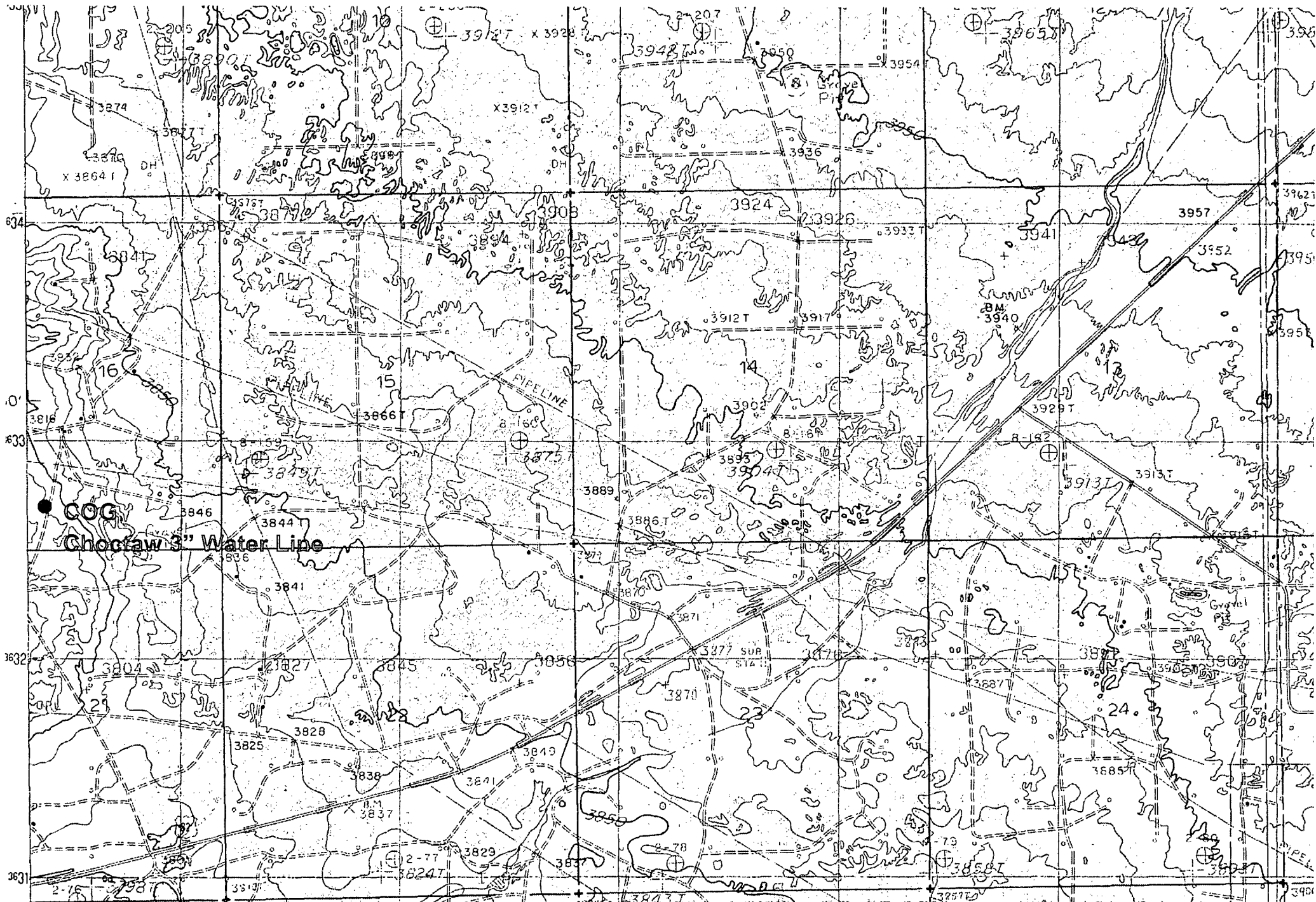
THIS MAP COMPILED WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225
ON REVISION, VIRGINIA 22061

ROAD LEGEND
1. Improved Road
2. Unimproved Road
3. Trail
4. Interstate Route
5. U.S. Route
6. State Route

MAJAMAR, NEW MEXICO
PROVISIONAL EDITION 1955

325372-13-52a

COG
Choctaw 3" Water Line





Groundwater Plot

COG Choctaw 3" Water Line

County
Eddy

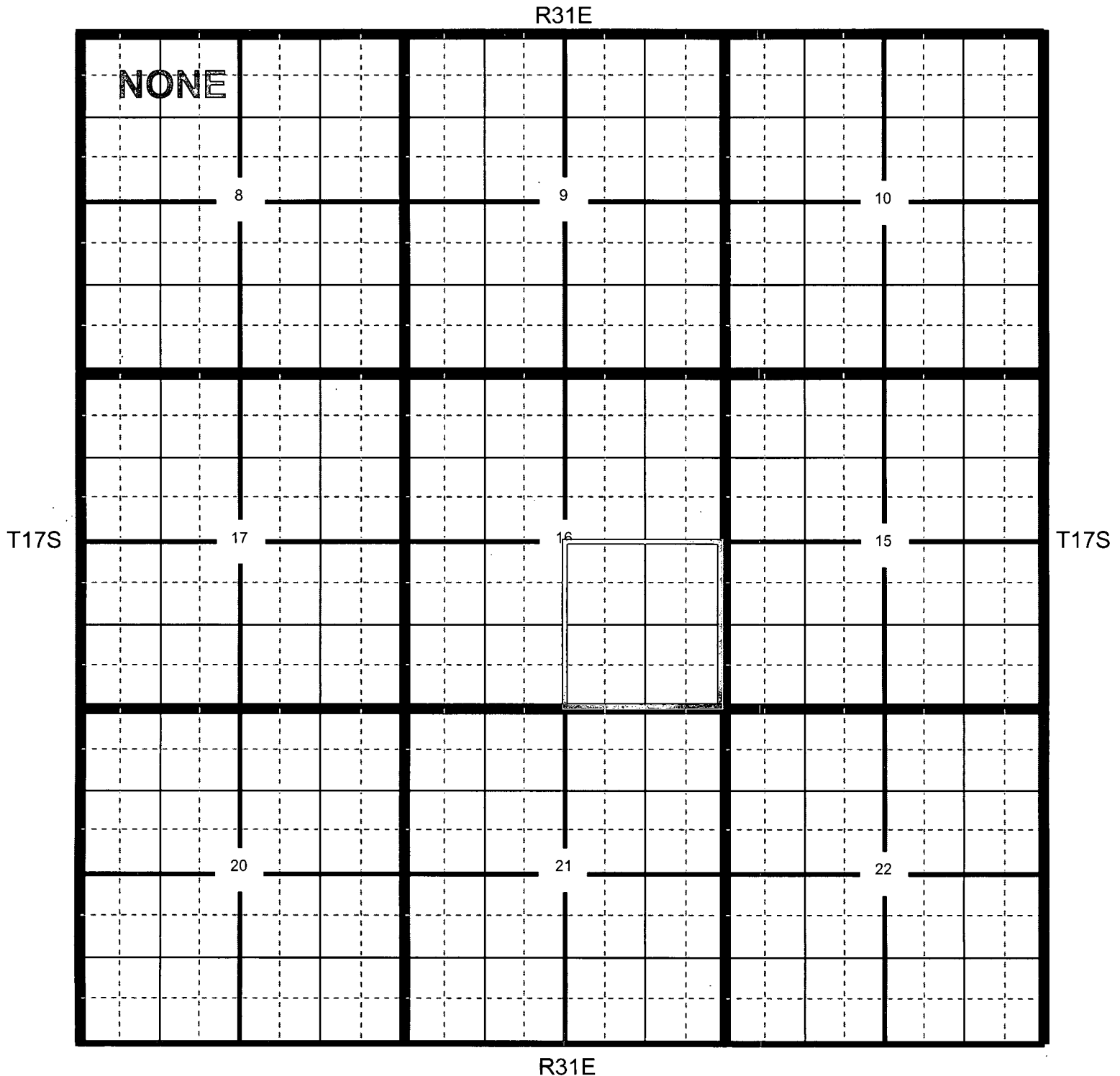
Unit Letter
SE ¼

Section
16

Township
T17S

Range
R31E

Trend Map >300'



Location

OCD

USGS

SEO

All Databases

COG Choctaw 3" Water Line

County Eddy Unit Letter SE ¼ Section 16 Township 17S Range 31E

Trend Map >300'

1

2

NW/NW NONE Unit Letter D	NE/NW Unit Letter C	NW/NE Unit Letter B	NE/NE Unit Letter A
SW/NW Unit Letter E	SE/NW Unit Letter F	SW/NE Unit Letter G	SE/NE Unit Letter H
NW/SW Unit Letter L	NE/SW Unit Letter K	NW/SE Unit Letter J	NE/SE Unit Letter I
SW/SW Unit Letter M	SE/SW Unit Letter N	SW/SE Unit Letter O	SE/SE Unit Letter P

3

4

APPENDIX II

Laboratory Analytical Results *July 2012*

Choctaw 3" Water Line (06/29/2012)

Unit J, Section 16, Township 17 South, Range 31 East
Eddy County, NM
GPS: N 32.82895° W 103.87411°

Prepared for:
COG Operating LLC
Midland, Texas

Prepared by:
BBC International, Inc.

Laboratory Analytical Results Summary
COG, Choctaw 3" Water Line

		Sample	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'
Analyte	Method	Date	7/31/12	7/31/12	7/31/12
			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
Chloride	SM4500Cl-B		1280	80	16
GRO	TPH 8015M		<10.0	<10.0	N/A
DRO	TPH 8015M		121	13.8	N/A

		Sample	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'	SP2 @ 5'
Analyte	Method	Date	7/31/12	7/31/12	7/31/12	7/31/12	7/31/12	7/31/12
			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
Toluene	BTEX 8021B		<0.050	<0.050	N/A	N/A	N/A	N/A
Ethylbenzene	BTEX 8021B		<0.050	<0.050	N/A	N/A	N/A	N/A
Total Xylenes	BTEX 8021B		<0.150	<0.150	N/A	N/A	N/A	N/A
Chloride	SM4500Cl-B		384	400	160	272	288	80
GRO	TPH 8015M		<10.0	<10.0	N/A	N/A	N/A	N/A
DRO	TPH 8015M		32.8	<10.0	N/A	N/A	N/A	N/A



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

August 07, 2012

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CHOCTAW 3" WATER LINE

Enclosed are the results of analyses for samples received by the laboratory on 07/31/12 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

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 "Coley D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (505) 397-0397

 Received: 07/31/2012
 Reported: 08/07/2012
 Project Name: CHOCTAW 3" WATER LINE
 Project Number: NONE GIVEN
 Project Location: LOCO HILLS, NM

 Sampling Date: 07/31/2012
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 1 @ SURFACE (H201781-01)

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/06/2012	ND	1.71	85.7	2.00	7.69		
Toluene*	<0.050	0.050	08/06/2012	ND	1.82	91.0	2.00	6.67		
Ethylbenzene*	<0.050	0.050	08/06/2012	ND	1.85	92.6	2.00	6.57		
Total Xylenes*	<0.150	0.150	08/06/2012	ND	5.58	93.0	6.00	5.76		

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1280	16.0	08/02/2012	ND	432	108	400	7.69		

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	08/01/2012	ND	191	95.3	200	2.55	
DRO >C10-C28	121	10.0	08/01/2012	ND	201	100	200	4.35	


Surrogate: 1-Chlorooctane 72.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 77.3 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (505) 397-0397

Received:	07/31/2012	Sampling Date:	07/31/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	CHOCTAW 3" WATER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS, NM		

Sample ID: SP 1 @ 1 FT (H201781-02)

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/06/2012	ND	1.71	85.7	2.00	7.69		
Toluene*	<0.050	0.050	08/06/2012	ND	1.82	91.0	2.00	6.67		
Ethylbenzene*	<0.050	0.050	08/06/2012	ND	1.85	92.6	2.00	6.57		
Total Xylenes*	<0.150	0.150	08/06/2012	ND	5.58	93.0	6.00	5.76		

Surrogate: 4-Bromofluorobenzene (PIL) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	08/02/2012	ND	432	108	400	7.69		

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	08/01/2012	ND	191	95.3	200	2.55		
DRO >C10-C28	13.8	10.0	08/01/2012	ND	201	100	200	4.35		

Surrogate: 1-Chlorooctane 95.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.1 % 63.6-154

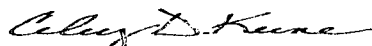
Sample ID: SP 1 @ 2 FT (H201781-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/02/2012	ND	432	108	400	7.69		

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (505) 397-0397

Received:	07/31/2012	Sampling Date:	07/31/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	CHOCTAW 3" WATER LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS, NM		

Sample ID: SP 2 @ SURFACE (H201781-04)

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/06/2012	ND	1.71	85.7	2.00	7.69		
Toluene*	<0.050	0.050	08/06/2012	ND	1.82	91.0	2.00	6.67		
Ethylbenzene*	<0.050	0.050	08/06/2012	ND	1.85	92.6	2.00	6.57		
Total Xylenes*	<0.150	0.150	08/06/2012	ND	5.58	93.0	6.00	5.76		

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	08/02/2012	ND	432	108	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						

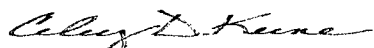
Surrogate: 1-Chlorooctane 95.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (505) 397-0397

Received: 07/31/2012
Reported: 08/07/2012
Project Name: CHOCTAW 3" WATER LINE
Project Number: NONE GIVEN
Project Location: LOCO HILLS, NM

Sampling Date: 07/31/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 1 FT (H201781-05)

BTX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/06/2012	ND	1.71	85.7	2.00	7.69		
Toluene*	<0.050	0.050	08/06/2012	ND	1.82	91.0	2.00	6.67		
Ethylbenzene*	<0.050	0.050	08/06/2012	ND	1.85	92.6	2.00	6.57		
Total Xylenes*	<0.150	0.150	08/06/2012	ND	5.58	93.0	6.00	5.76		

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/02/2012	ND	432	108	400	7.69	
TPH 8015M		mg/kg		Analyzed By: MS					

Surrogate: 1-Chlorooctane 93.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.1 % 63.6-154

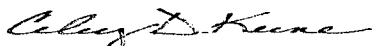
Sample ID: SP 2 @ 2 FT (H201781-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/02/2012	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (505) 397-0397

Received: 07/31/2012
Reported: 08/07/2012
Project Name: CHOCTAW 3" WATER LINE
Project Number: NONE GIVEN
Project Location: LOCO HILLS, NM

Sampling Date: 07/31/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 3 FT (H201781-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/02/2012	ND	400	100	400	3.92	

Sample ID: SP 2 @ 4 FT (H201781-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/02/2012	ND	400	100	400	3.92	

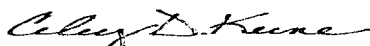
Sample ID: SP 2 @ 5 FT (H201781-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	08/02/2012	ND	400	100	400	3.92		

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

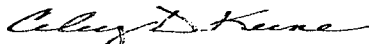
Notes and Definitions

QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>BBC</u>		BILL TO		ANALYSIS REQUEST															
Project Manager: <u>Gary Ray</u>		P.O. #:																	
Address: <u>1324 W Marland</u>		Company:																	
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Attn:																	
Phone #: <u>397-6888</u> Fax #:		Address:																	
Project #:		City:																	
Project Name: <u>Charlton 3" water line</u>		State:																	
Project Location: <u>Loco Hills</u>		Zip:																	
Sampler Name: <u>Gary Ray</u>		Phone #:																	
Fax #:																			
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	MATRIX	PRESERV	SAMPLING														
			GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE ICE / COOL OTHER	DATE	TIME	CL	TPH	B-TEX										
	1	SP 1 @ Surface	X	X	7-31-12	9:35 AM	X	X	X										
	2	SP 2 @ 1ft	X	X	7-31-12	9:35 AM	X	X	X										
	3	SP 1 @ 2ft	X	X	7-31-12	9:45 AM	X												
	4	SP 2 @ Surface	X	X	7-31-12	10:45 AM	X	X	X										
	5	SP 2 @ 2ft	X	X	7-31-12	11:15 AM	X	X	X										
	6	SP 2 @ 2ft	X	X	7-31-12	11:30 AM	X												
	7	SP 2 @ 3ft	X	X	7-31-12	11:30 AM	X												
	8	SP 2 @ 4ft	X	X	7-31-12	11:49 AM	X												
	9	SP 2 @ 5ft	X	X	7-31-12	12:15 PM	X												

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>[Signature]</u>	Date: <u>7-31-12</u>	Received By: <u>[Signature]</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:			REMARKS:	
Sample Condition Cool/Intact Yes/No			CHECKED BY: <u>[Signature]</u>	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

APPENDIX III

C-141

July 2012 and April 2013

Choctaw 3" Water Line (06/29/2012)

Unit J, Section 16, Township 17 South, Range 31 East
Eddy County, NM
GPS: N 32.82895° W 103.87411°

Prepared for:
COG Operating LLC
Midland, Texas

Prepared by:
BBC International, Inc.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Choctaw 3" Water Line	Facility Type	3" Water Line

Surface Owner	State	Mineral Owner	Lease No. (API#) 30-015-36351 Closest well location
---------------	-------	---------------	--

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	16	17S	31E					Eddy

Latitude 32 49.742 Longitude 103 52.417

NATURE OF RELEASE

Type of Release	Produced water / Skim oil	Volume of Release	80bbls	Volume Recovered	75bbls
Source of Release	3" poly water line	Date and Hour of Occurrence	06/29/2012	Date and Hour of Discovery	06/29/2012 7:00 p.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher-OCD		
By Whom?	Michelle Mullins	Date and Hour	06/30/2012 6:50 a.m.		
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.*

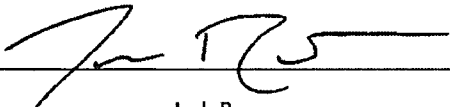
Describe Cause of Problem and Remedial Action Taken.*

A new 3" poly water line was accidentally left un-fused to the existing water line while replacing poly that had been burned by a fire earlier in the month. The un-fused poly line released fluid onto the previously burned area in the pasture north of the Yucca/Willow Tank Battery. We have fused the poly lines together and returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 80bbls were released from the 3" poly line and we were able to recover 75bbls with a vacuum truck. The release occurred north of the Yucca/Willow Tank Battery in the pasture measuring approximately 3' x 100'. All free fluid has been recovered. BBC International will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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: Josh Russo		Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 07/05/2012	Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	COG Operating LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Choctaw 3" Water Line	Facility Type	3" Water Line
Surface Owner	State	Mineral Owner	
		Lease No.	(API# 30-015-36351) Closest well location

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	16	17S	31E					Eddy

Latitude N 32 49.742 Longitude W 103 52.417

NATURE OF RELEASE

Type of Release	Produced water / Skim oil	Volume of Release	80 bbls	Volume Recovered	75 bbls
Source of Release	3" poly water line	Date and Hour of Occurrence	06/29/2012	Date and Hour of Discovery	06/29/2012 @ 7:00 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher- OCD		
By Whom?	Michelle Mullins	Date and Hour	06/30/2012 @ 6:50 am		
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.*~~

A new 3" poly water line was accidentally left un-fused to the existing water line while replacing poly that had been burned by a fire earlier in the month. The un-fused poly line released fluid onto the previously burned area in the pasture north of the Yucca/Willow Tank Battery. We have fused the poly lines together and returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 80 bbls were released from the 3" poly line and we were able to recover 75 bbls with a vacuum truck. The release occurred north of the Yucca/Willow Tank Battery in the pasture measuring approximately 3' x 100". All free fluid has been recovered. BBC International completed remediation of the facility in accordance with the remediation plan approved by NMOCD on 11/16/2012 via email from Mike Bratcher.

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: Josh Russo	Approved by District Supervisor:		
Title: HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 04/04/2013	Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

APPENDIX IV

Pictures of Remediation Activities

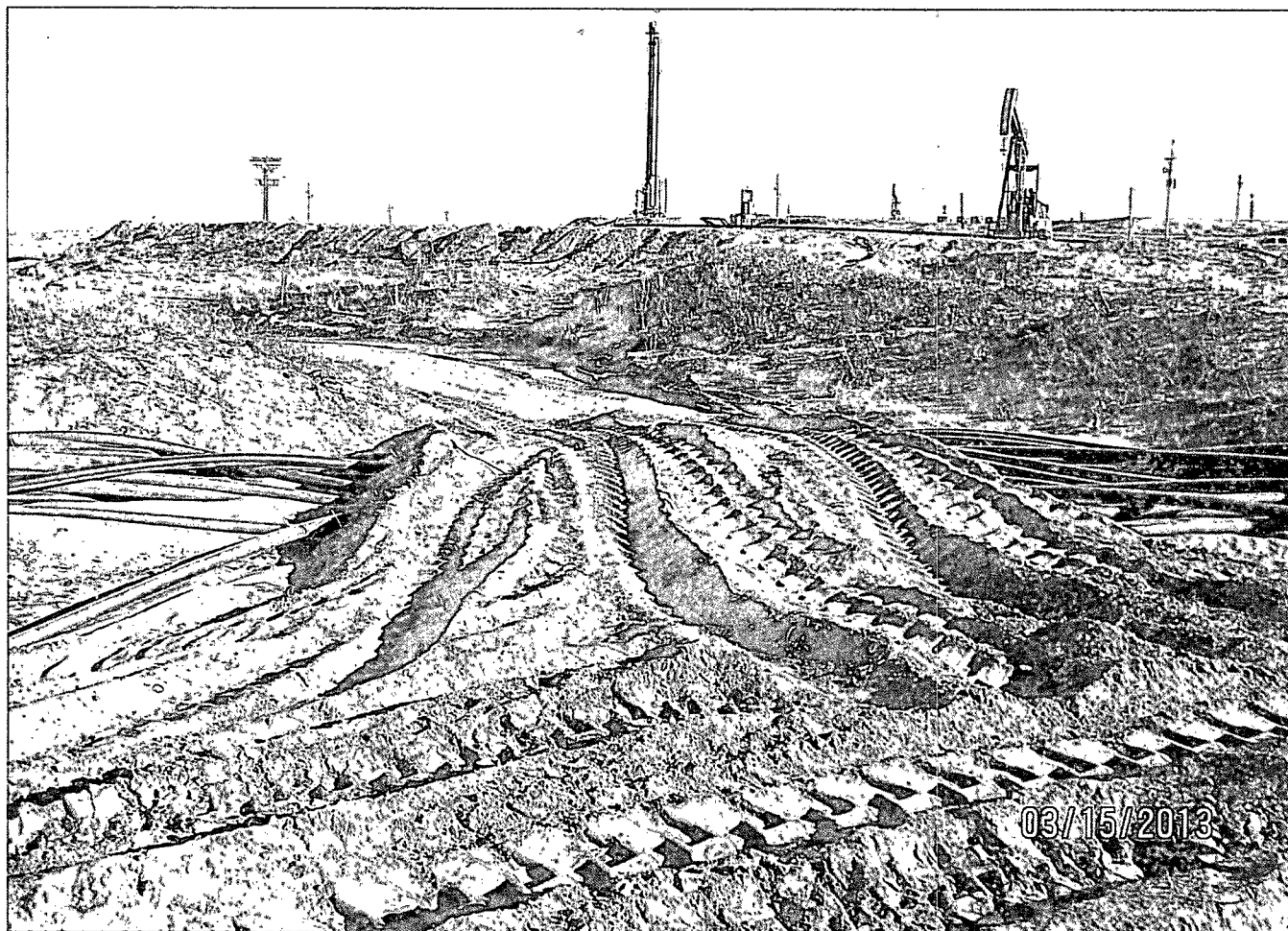
March 2013

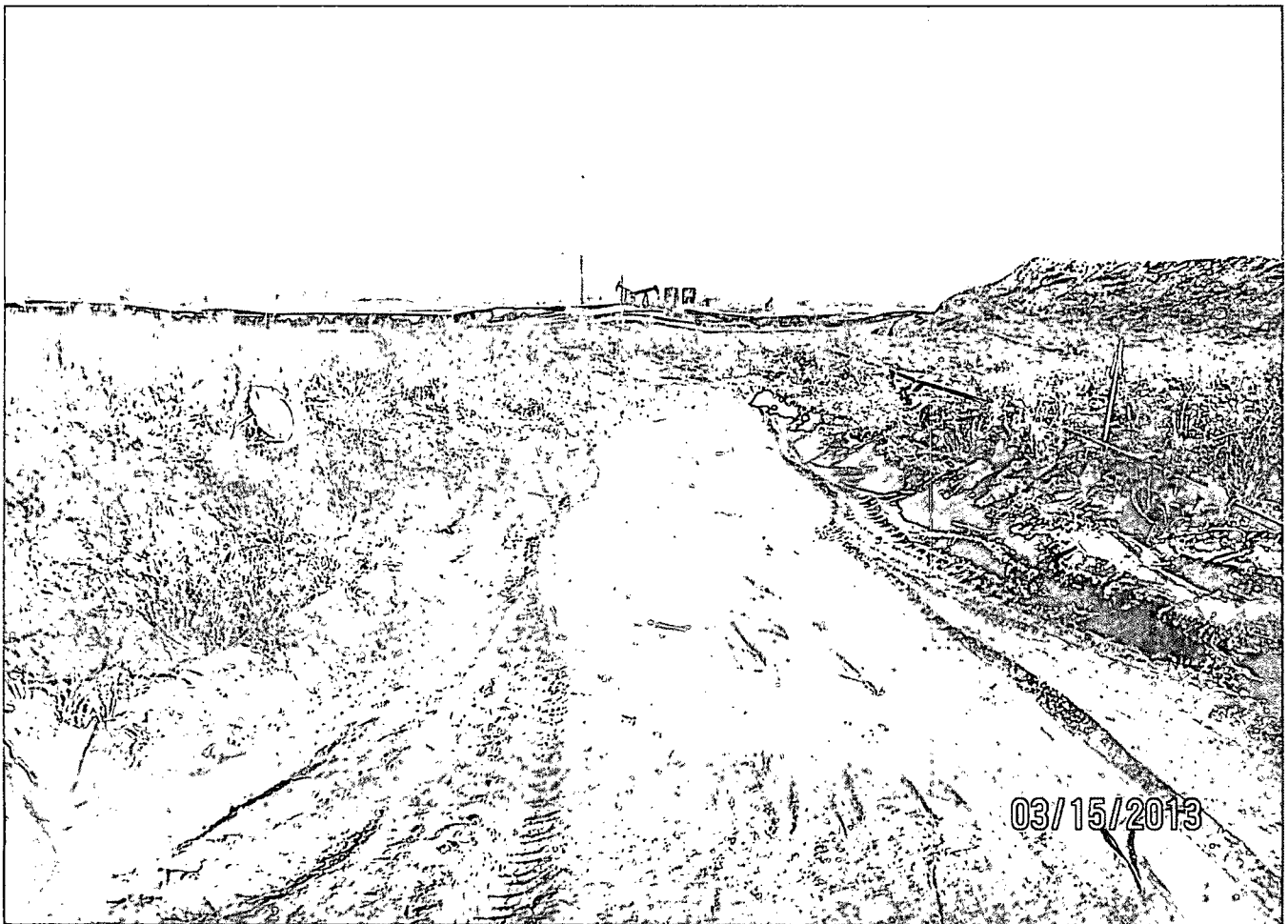
Choctaw 3" Water Line (06/29/2012)

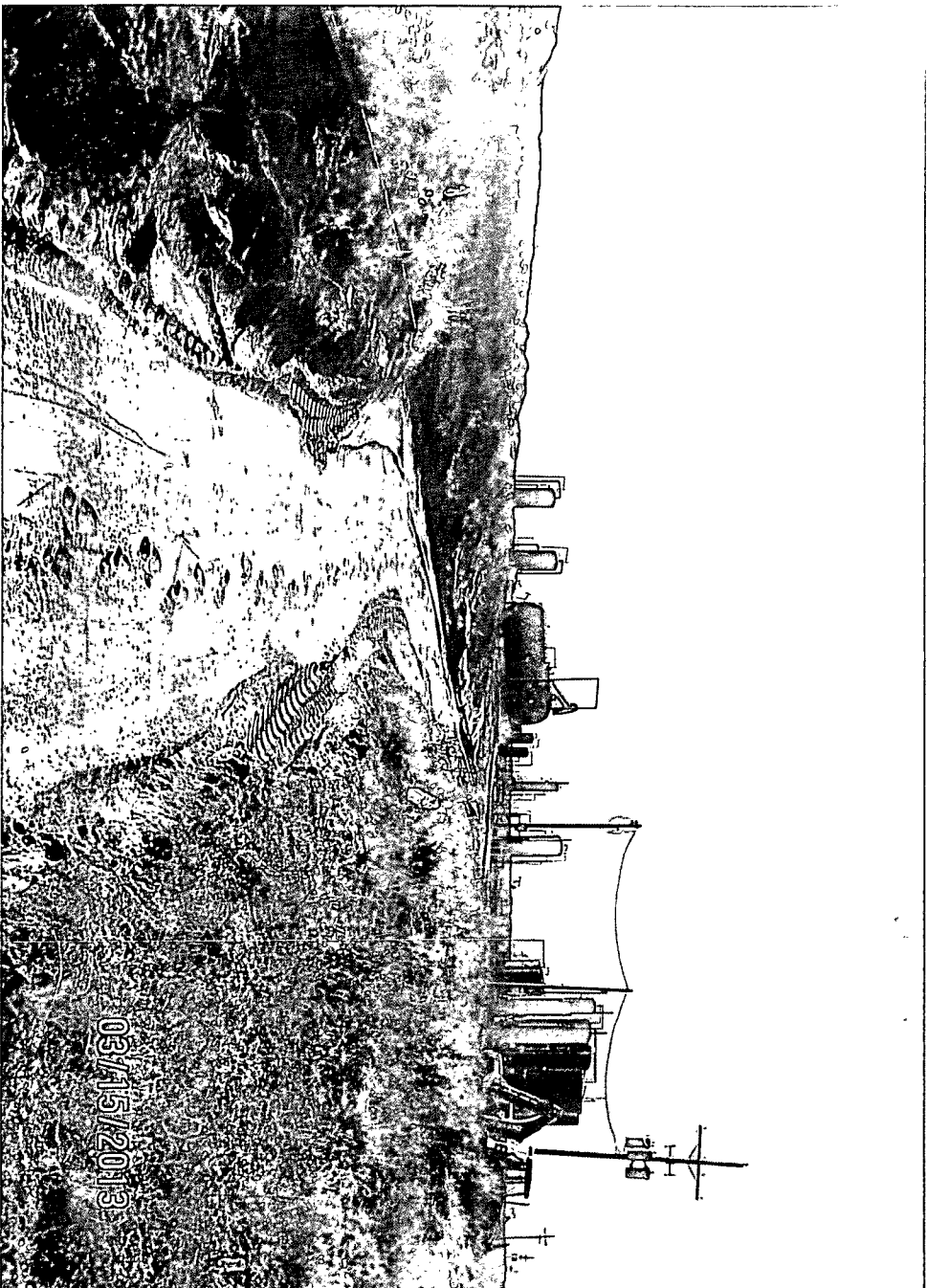
Unit J, Section 16, Township 17 South, Range 31 East
Eddy County, NM
GPS: N 32.82895° W 103.87411°

Prepared for:
COG Operating LLC
Midland, Texas

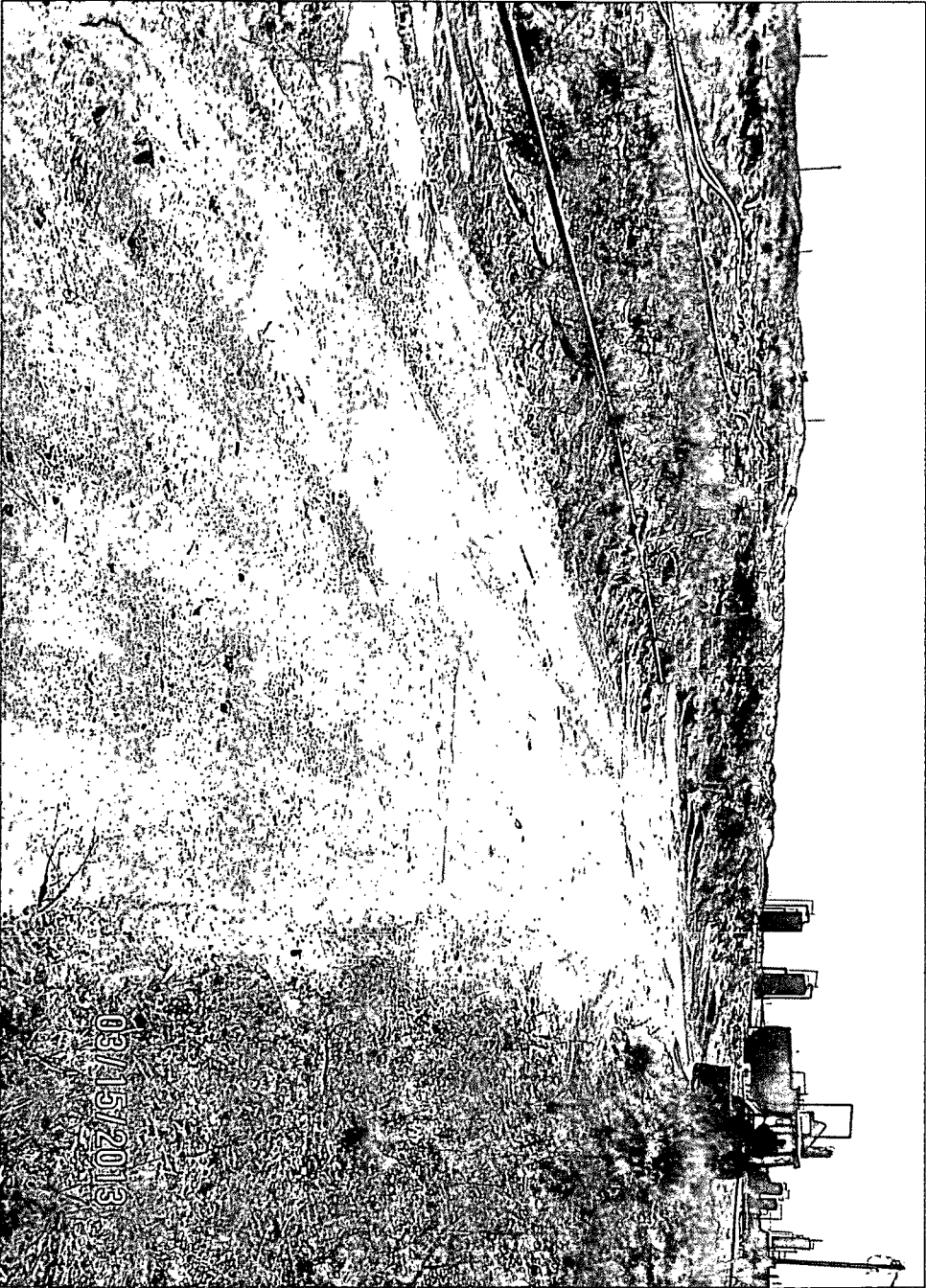
Prepared by:
BBC International, Inc.

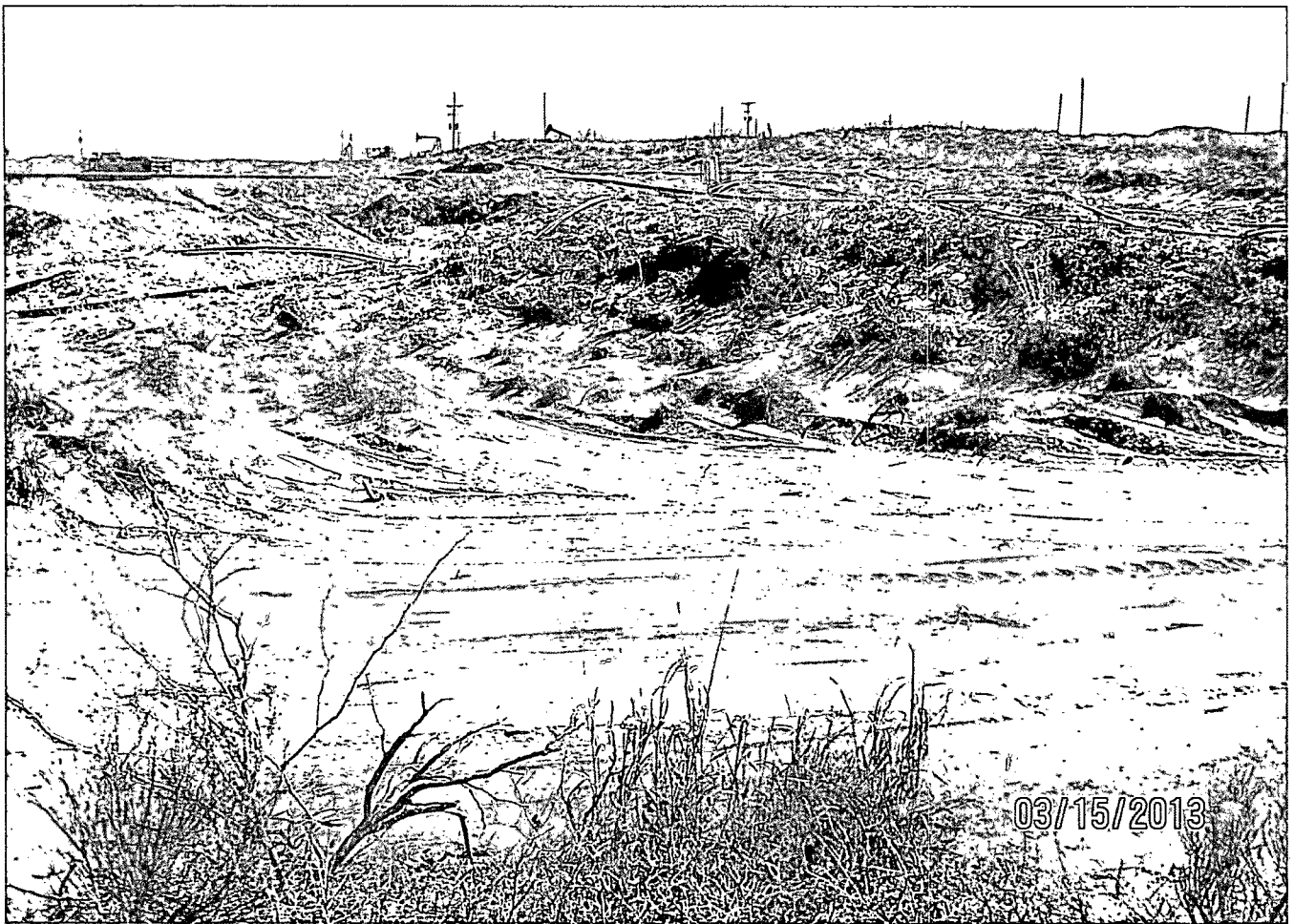


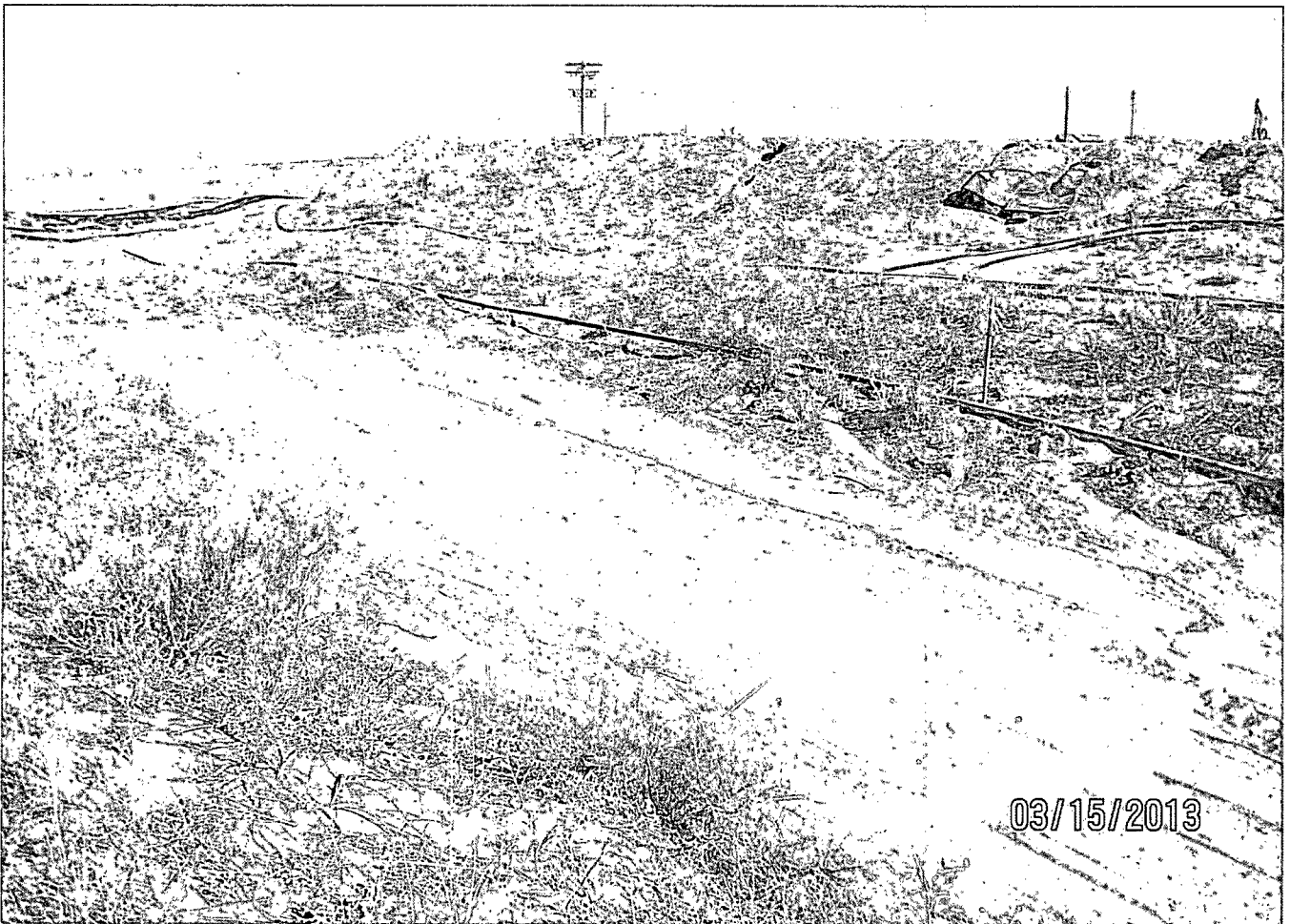
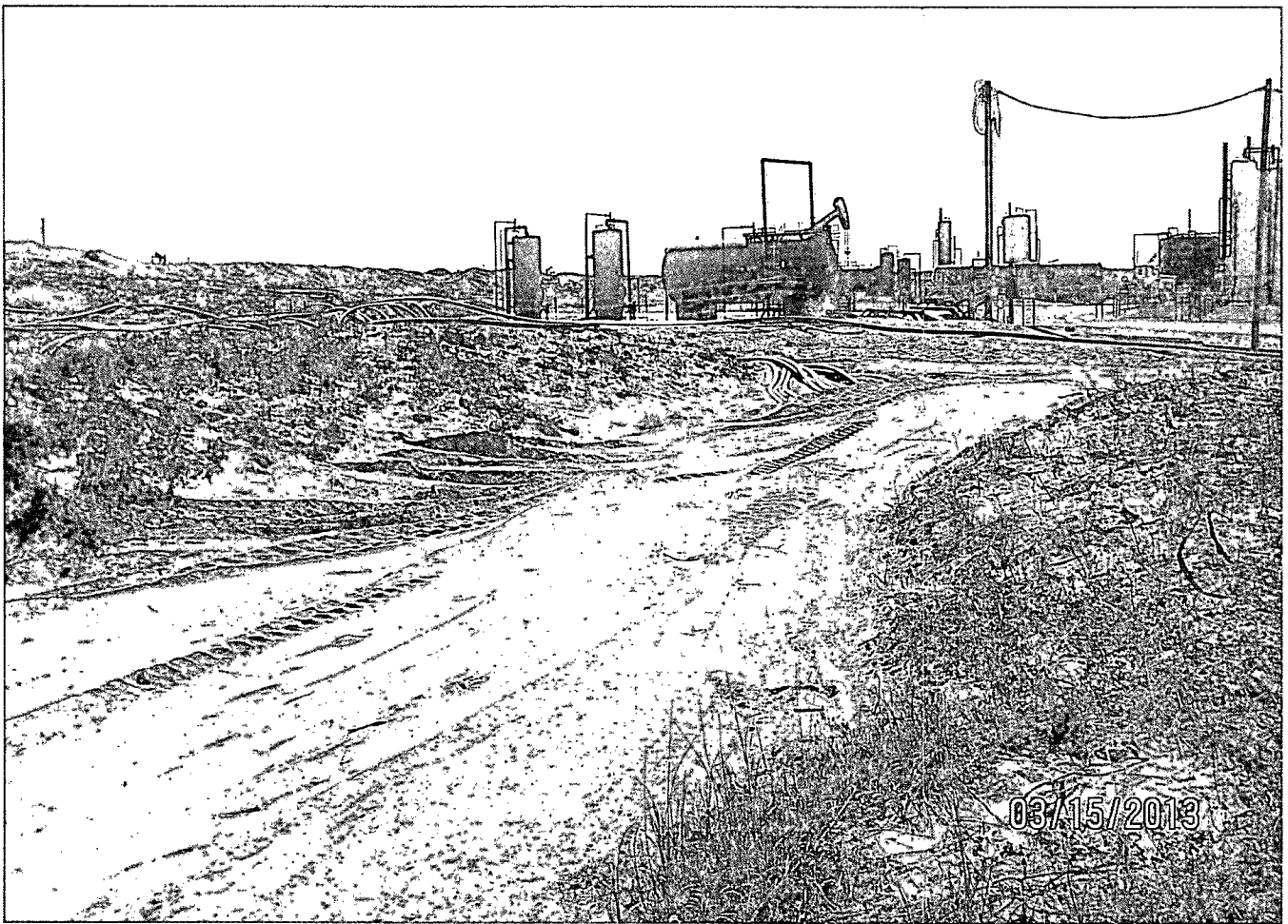












APPENDIX V

Correspondence

September 2012

Choctaw 3" Water Line (06/29/2012)

Unit J, Section 16, Township 17 South, Range 31 East
Eddy County, NM
GPS: N 32.82895° W 103.87411°

Prepared for:
COG Operating LLC
Midland, Texas

Prepared by:
BBC International, Inc.

Kathy Purvis

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Sent: Friday, November 16, 2012 8:12 AM
To: Cliff P. Brunson
Cc: Josh Russo; Ken Swinney; Kathy Purvis; Jennifer Gilkey
Subject: RE: COG Operating - Choctaw 3" Water Line

Reference: COG Operating * Choctaw 3" Water Line (aka Willow St. 9 well) * 30-015-36351 * O-16-17s-31e *
Eddy County, New Mexico

OCD Tracking Number: 2RP-1220 * Date of release: 6/29/12

Cliff,

Your proposal for remediation of the above referenced release is approved with the following conditions/stipulations:

- Notify OCD 48 hours prior to commencement of remedial operations.
- Notify OCD 48 hours prior to obtaining samples where the analyses will be submitted to OCD.
- Obtain representative confirmation samples of bottom and sidewalls of excavation.
- Obtain approval prior to backfilling any excavation.
- Submit a closure report and Form C-141 marked Final Report upon satisfactory completion of project.
- Approval by any other regulatory authority as may be applicable.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notifications, please contact me.

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Cliff P. Brunson [<mailto:cbrunson@bbcinternational.com>]
Sent: Tuesday, September 11, 2012 8:32 PM
To: Bratcher, Mike, EMNRD
Cc: Josh Russo; Ken Swinney; Kathy Purvis; Jennifer Gilkey
Subject: COG Operating - Choctaw 3" Water Line

Mike,

This e-mail is to confirm our discussion on September 5, 2012 concerning the remediation plan for the release that occurred at the GOG Operating Choctaw 3' Water Line release site. As agreed, COG will excavate 1 foot across the spill site as depicted on the attached site diagram. The excavation will then be backfilled with clean soil. The depth to groundwater in this area is approximately 300 feet.

I have attached the site drawing and the summary of the laboratory data we reviewed during our discussion for your files. If you would please reply back via e-mail with your concurrence of this remediation plan, it would be greatly appreciated.

Oxy and I thank you for your assistance in handling this matter.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com

Confidentiality Notice: This electronic transmission (and any attached documents) is intended only for the person(s) to whom it is addressed and may contain information that is privileged, confidential, or otherwise protected from disclosure. If you have received this transmission in error, please immediately notify the sender by e-mail or by telephone call to (575) 397-6388 for handling instructions. Any disclosure or distribution of the contents of this transmission by anyone other than the named recipient(s) is strictly prohibited.
