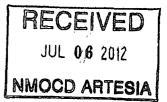
### SITE INFORMATION Report Type: Closure Report

General Site Information: Site:	Cedar Lake	8" Main Li	 1e	<u></u>			
Company:	COG Operating LLC						
Section, Township, and Range:	20 17S 31E						
Lease Number:	NMLC-029395B						
County:	Eddy County		<u> </u>	· · · · · · · · · · · · · · · · · · ·			
GPS:	N 32 49.495		W 103 53	.344			
Surface Owner:	Federal						
Mineral Owner:				<u></u>			
Directions:	From the inte	ersection of	Hwy 529 ai	nd Hwy 82, travel West on Hwy 82 for			
	1.0 mile, turr	n Right onto	lease road	and travel 0.5 mile to leak site.			
Release Data:				· · · · · · · · · · · · · · · · · · ·			
Date Released:	8/11/2011						
Type of Release:	Produced w	ater					
Source of Contamination:	8" Main line	rupture					
Fluid Released:	100 bbls						
Fluids Recovered:	80 bbls						
Official Communication:			· · · · · · · · · · · · · · · · · · ·				
Name:	Pat Ellis			Cliff Brunson			
Company:	COG Operat	ing LLC		BBC International, Inc.			
Address:	550 W. Texa	s Ave., Ste	. 1300	1324 W. Marland			
PO Box:				PO Box 805			
City, State, Zip Code:	Midland, TX	79701		Hobbs, NM 88241			
Phone Number:	(432) 686-30	)23	<u></u>	(575) 397-6388			
Fax:	(432) 684-72			(575) 397-0397			
Email:	pellis@conc	horesourc	es.com	cbrunson@bbcinternational.com			
Ranking Criteria:			· · · · · · · · · · · · · · · · · · ·				
Depth to Groundwater:	Ra	nking Sco	re	Site Data			
<50 ft		20	·				
50-99 ft		10	<u> </u>				
>100 ft		0		0			
Well Head Protection:		nking Sco	re	Site Data			
Water Source <1,000 ft., Private <200		20					
Water Source >1,000 ft., Private >200	<u> </u>	0		0			
Surface Body of Water:	Rai	nking Sco	re	Site Data			
<200 ft.		20					
200 ft 1,000 ft.		10					
>1,000 ft		0		0			
Total Ranking Score:	· · · · · · · · · · · · · · · · · · ·	0		7			

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





# **COG Operating LLC**

Cedar Lake 8" Main Line

(Release Date 8/11/11)

Unit B, Section 20, Township 17 South, Range 31 East Eddy County, New Mexico GPS: N 32 49.495 W 103 53.344

**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

December 19, 2011

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 James Amos Supervisory Petro Eng. Tech. Bureau of Land Management 620 East Greene Street Carlsbad, NM 88220

Re: Closure plan for the COG Operating LLC, Cedar Lake 8" Main Line, Unit B, Section 20, Township 17 South, Range 31 East, Eddy County, NM

#### 1.0 SITE CHARACTERIZATION

The subject site is located east of Loco Hills, in Unit B,Section 20, Township 17 South, and Range 31 East, Eddy County, New Mexico. The GPS coordinates are: N 32 49.495 W 103 53.344. The site consists of undeveloped rangeland and petroleum production facilities. On August 11, 2011, a crew was installing a "T" in the main line the poly line pressured up causing it to rupture. The spray area measured 30 feet on the ROW in the pasture adjacent to the valve box. Approximately 100 bbls of water was released with approximately 80 bbls of water being recovered by a vacuum truck which was on standby at the location.

A diagram of the leak area including the sample points can be reviewed in Appendix I of this report. The surface soil is red sand. There is no water source within 1,000 feet of the site. There is no surface water within 1,000 feet of the site. Based on data from the Eddy County Groundwater Trend Map, the depth to groundwater in Section 20, Township 17 South, and Range 31 East is 350'. The initial C-141 is at the end of this report in Appendix III.

#### 2.0 SITE INVESTIGATION ACTIVITIES

On August 18, 2011, BBC personnel conducted a delineation of the site. Two sample points were advanced in the leak area using hand auger to a total depth of 2 feet. Three samples were taken from SP1 one at surface, one at one foot, and one at 2 feet. Two samples were taken from SP2 one at surface, and one at one foot. The samples were taken to Cardinal Laboratories for chloride analysis. Laboratory analysis for SP1 @ surface is 32 ppm chloride. Laboratory analysis for SP1 @ 1' is 32 ppm chloride. Laboratory analysis for SP2 @ 1' is 48 ppm chloride. 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

The laboratory data for this site indicates that the chloride contamination is below 250 ppm in the leak area. The depth to groundwater is approximately 350 feet. Therefore, it was recommended to the NMOCD that no further action was necessary. Mike Bratcher of the NMOCD agreed and the site was approved for closure. The final C-141 is at the end of this report in Appendix III.

# **APPENDIX I**

# Site Diagram

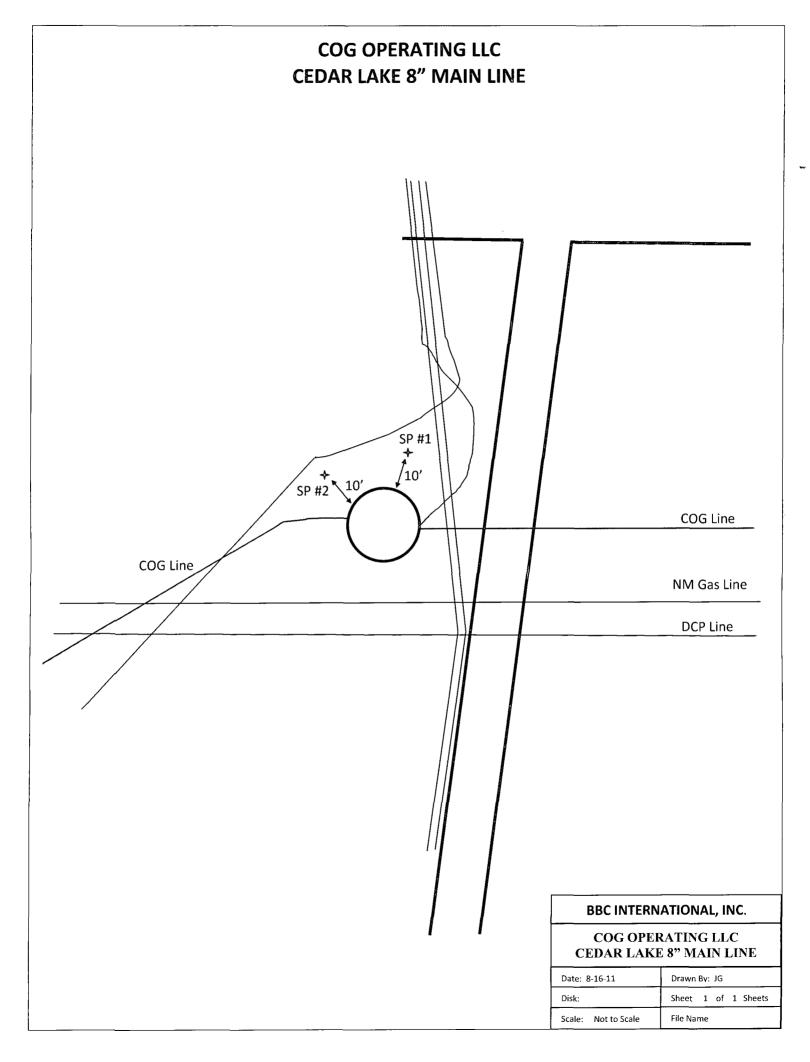
August 2011

# Cedar Lake 8" Main Line (8/11/11)

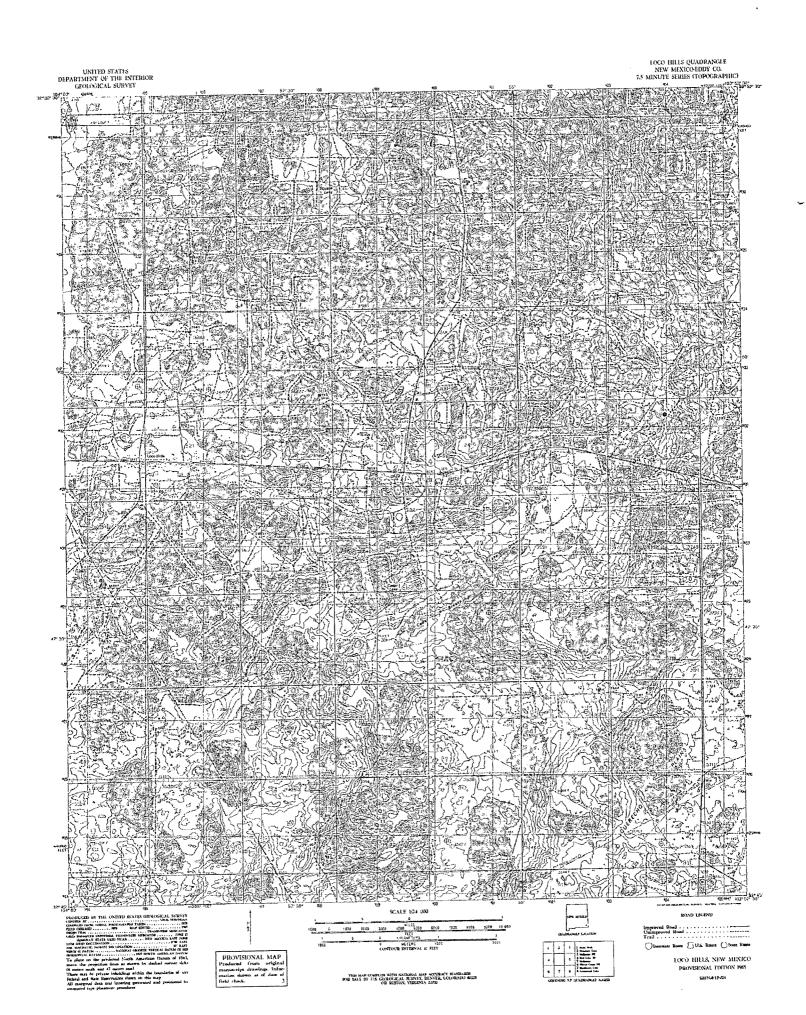
Unit B, Section 20, Township 17 South, Range 31 East Eddy County, NM GPS: N 32 49.495 W 103 53.344

> Prepared for: COG Operating LLC Midland, Texas

Prepared by: BBC International, Inc.

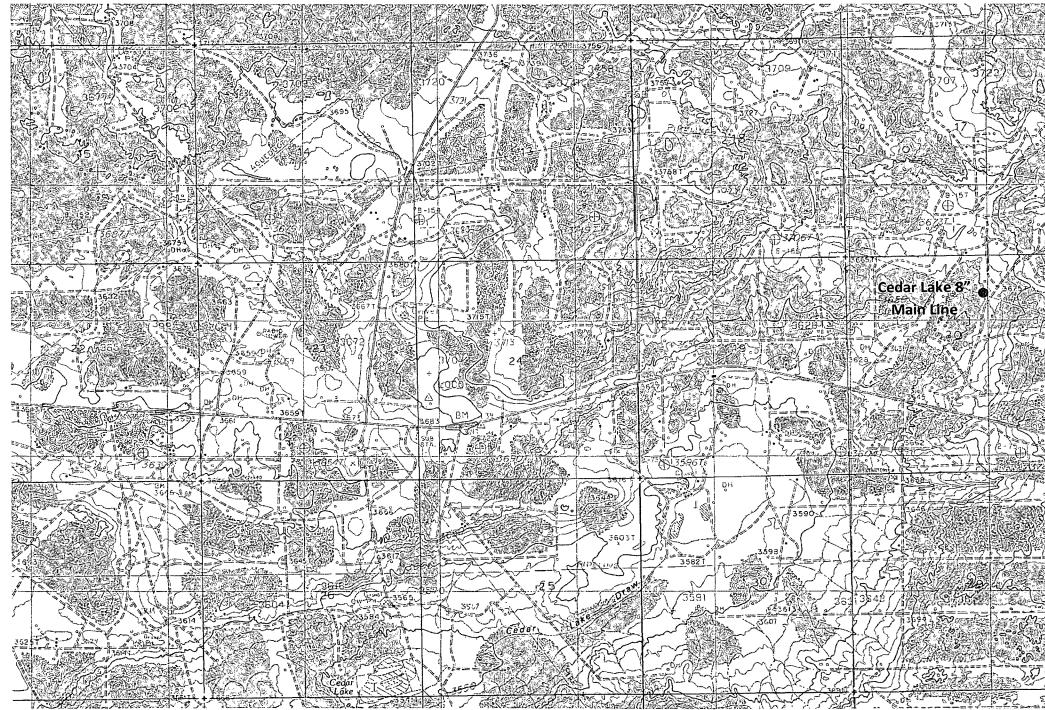


COG, Cedar Lake 8" Main Line



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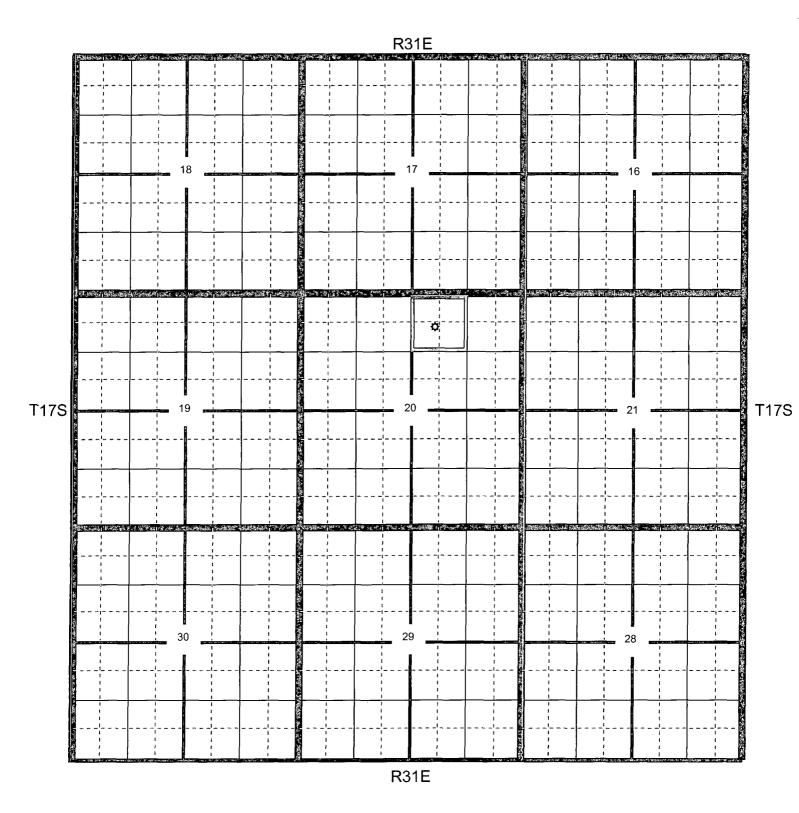
Cedar Lake 8" Main Line





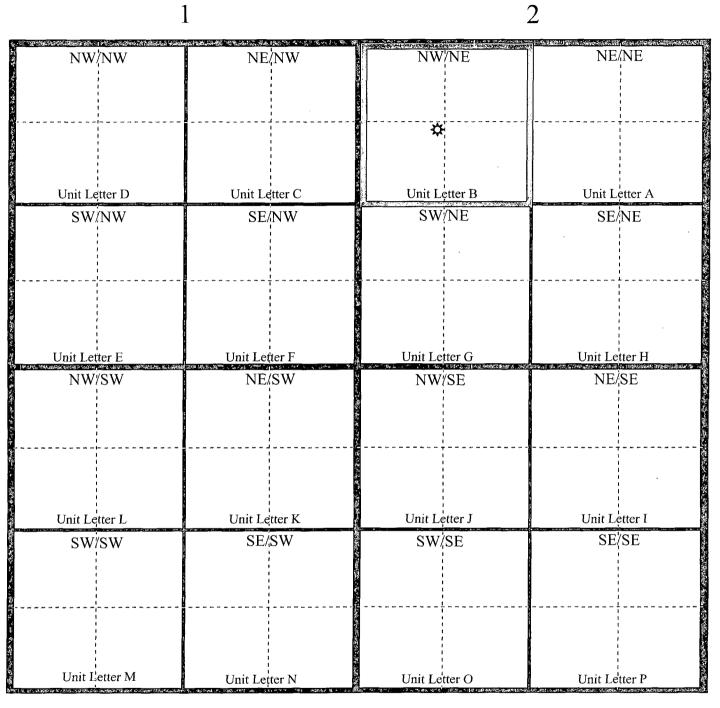
# **Groundwater Plot**

Oil/Gas Well Name: Cedar Lake 8" Main Line County: Eddy UL B, Sec 20, T17S, R31E Trend Map: 350'



Location

Section Quarters



3

4

### Cedar Lake 8" Main Line

		UL B
☆	Location	Sec 20
0	OCD	T 17 S
0	USGS	R 31 E
0	SEO	

All

# **APPENDIX II**

# Laboratory Analytical Results

August 2011

## Cedar Lake 8" Main Line (8/11/11)

Unit B, Section 20, Township 17 South, Range 31 East Eddy County, NM GPS: N 32 49.495 W 103 53.344

> Prepared for: COG Operating LLC Midland, Texas

Prepared by: BBC International, Inc.

### **COG OPERATING LLC CEDAR LAKE 8" MAIN LINE**

Sample Point	Chloride
	mg/Kg
SP1 @ Surface	32.0
SP1 @ 1'	32.0
SP1 @ 2'	32.0
SP2 @ Surface	320
SP2 @ 1'	48.0

- Over 5,000 ppm
- Over 1,000 ppm

...

- Over 500 ppm
- 251 thru 499 ppm
- 250 ppm or below
  100 ppm or below



August 22, 2011

Cliff Brunson BBC International, Inc. P.O. Box 805 Hobbs, NM 88241

RE: CEDAR LAKE MAIN LINE

Enclosed are the results of analyses for samples received by the laboratory on 08/18/11 17:01.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated 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 (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,

Celez D. Keine

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:	08/18/2011	Sampling Date:	08/18/2011
Reported:	08/22/2011	Sampling Type:	Soil
Project Name:	CEDAR LAKE MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS		

#### Sample ID: SP 1 @ SURFACE (H101754-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM		- <u></u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/19/2011	ND	448	112	400	11.3	

#### Sample ID: SP 1 @ 1 FT (H101754-02)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM			<u> </u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/19/2011	ND	416	104	400	7.41	

#### Sample ID: SP 1 @ 2 FT (H101754-03)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/19/2011	ND	416	104	400	7.41	

#### Sample ID: SP 2 @ SURFACE (H101754-04)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	08/19/2011	ND	416	104	400	7.41	

#### Cardinal Laboratories

#### \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and chert'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 whetspever 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 claims based to now stated reasons or otherwise. Results relate only to the samples identified above. This reproduced except in full with written approval of Cardinal Laboratores.

Celey & Keine

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:	08/18/2011	Sampling Date:	08/18/2011
Reported:	08/22/2011	Sampling Type:	Soil
Project Name:	CEDAR LAKE MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS		

#### Sample ID: SP 2 @ 1 FT. (H101754-05)

Chloride, SM4500Cl-B	e, SM4500CI-B mg/kg		Analyzed By: HM			·			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/19/2011	ND	416	104	400	7.41	

#### Cardinal Laboratories

#### \*=Accredited Analyte

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Celey Di Kune

Celey D. Keene, Lab Director/Quality Manager



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#### **Notes and Definitions**

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 SM4S00CI-B does not require samples be received at or below $6^{\circ}\text{C}$
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

#### \*=Accredited Analyte

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Celey & Kene

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5



**ARDINAL LABORATORIES** 

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

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

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Company Name	mpany Name: BBC International, Inc.					BILL TO ANALYSIS REQUEST													
					Р.	0. #:											1		
Address: P.O. Box 805				C	ompany:											1			
					At	:tn:													
					A	ddress:													
ب هلام ود.					Сі	ty:													
Project Name: CEDAR LAKE MAIN LINE					St	ate:													
Project Location	· COCO HILLS	-1			PI	hone #:													
Sampler Name:		= in	/		Fa	ax #:													
FOR LAB USE ONLY				MATRIX		PRESERV. SAMPLING													
Lab I.D. H 101754	Sample I.D.	(G)RAB OR (C)OMF # CONTAINERS	GROUNDWATER WASTEWATER	OIL	SLUDGE OTHER :	ACID/BASE: ICE / COOL		FIME	$\mathcal{C}(-$										
1	SPI SURFACE	91		X		X	310	8-14-1	X										
2	SPICIA	31	<b></b>	X			Bill	8-18-4	X					]	L				 
3_	SPIEZFY	91		<u> </u> <u>&gt;</u>			324	3-13-1	X								L		 
<u> </u>	STP 2 60 SURFACE	91		<u>k</u>			0,00	4-1B-11	LÈ										 
	SPZ@144	91		X	]	-X	909	8-18-11	$ \Delta $		ļ				ļ				 
		<b> </b>		ļ					<b> </b>										 
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	anan Mana muur ka kaka pooreen ka					.													 

PLEASE NOTE: Lincitly and Damages, Caranna's leadily and cluster sectors remedy for any data assing whether based in contract of tool, shall be limited to the amount pain by the client lot the analyses. All claims inclusing those for negligence and any other cause whatsoever shall be desended what available whether and the sector and any other cause whatsoever shall be desended what available unless made in writing and received by Carainal within 30 days after completion of the applicable service. In an event shall Carainable liable or inclustratic consequent a gemages, including whony thistiany, business interruptions, loss of use, or loss of profixs inclusted by clerit, is subviolaires,

alificates or successors avising out of or related to the performance of services hereunder by Cardinal regardless of whether such daim is based upon any of the above stated reasons or otherwise. □ Yes □ No Add'l Phone #: □ Yes □ No Add'l Fax #: Relimquished By: Date 18 Phone Result: Received By: Fax Result: REMARKS: EMAIL ALL Time: Received By: Relinquished By: Date: Time: Delivered By: (Circle One) Sample Condition CHECKED BY: (laitials) Cool Intact 5% Sampler - UPS - Bus - Other: Yes Yes L

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

#26

# **APPENDIX III**

## **C-141** August 2011

# Cedar Lake 8" Main Line (8/11/11)

Unit B, Section 20, Township 17 South, Range 31 East Eddy County, NM GPS: N 32 49.495 W 103 53.344

> Prepared for: COG Operating LLC Midland, Texas

Prepared by: BBC International, Inc.

#### State of New Mexico Energy Minerals and Natural Resources

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

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

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			Rel	ease Notific	eatio	n and Co	orrective A	ction				enerination prove		
						<b>OPERA</b>		$\boxtimes$	Initia	al Report		Final Report		
Name of Co		COG OP		Contact Pat Ellis										
Address		Texas, Suite	Telephone No.         432-230-0077											
Facility Name   8" Main Line						Facility Type         8" Water Line (Cedar Lake)								
Surface Ow	ner Fede	ral	)wner		· · · · · · · · · · · · · · · · · · ·		ease N	lo. NMLC	C-0293	95B				
				LOCA	TIO	ION OF RELEASE								
Unit Letter	Section 20	Township 17S	Range 31E	Feet from the	Nort	h/South Line	Feet from the	East/West	Line	County	Eddy			
		175			Ĺ									
				Latitude 32 4	49.495	Longitu	<b>ide</b> 103 53.344							
				NAT	URE	OF REL	EASE							
Type of Rele	ase Produc	ced water				Volume of		ls Vo	lume R	lecovered	80bbls			
Source of Re	lease 8"	Main Line					lour of Occurrenc			Hour of Dis	covery			
Was Immedia	te Notice (	Tiven?				08/11/2011		08/	11/201	1				
			Yes 🗌	No 🗌 Not Re	equired			Mike Brate		-				
By Whom?	Josh Russ	0				Date and F	lour 08/12/2011	Jim Amo 9:56 a.m.	S-DLIVI					
Was a Water	course Read		Yes 🛛	No		If YES, Volume Impacting the Watercourse.								
16 - 11-1														
If a Watercou	rse was un	pacieu, Descri	ibe runy."											
Describe Cau	se of Proble	em and Remed	dial Action	n Taken.*										
While installi	ng a "T" in	the main line	the poly l	ine pressured up o	ausing	it to rupture.	The spill area me	asured 30'or	the R	OW in the p	asture	adjacent to		
the valve box	The ruptu	red portion of	the line h	as been replaced	and the	e line has been	returned to servic	æ.						
Describe Area	Affected a	and Cleanup A	ction Tak	en.*		,, <u></u> ,								
   Initially 100b	bls was rele	ased from the	nintured	poly line and we	were a	ble to recover 8	Rubbls with a vacu	uum truck 1	The snil	ll area meas	sured 30	)' adjacent		
				ed. BBC will sam										
notify the OC	D/BLM p	rior to any sig	nificant re	mediation work.										
I hereby certif	fy that the i	nformation gi	ven above	is true and compl	ete to	he best of my	knowledge and u	nderstand the	at pursu	uant to NM	OCD ru	les and		
regulations al	operators a	are required to	report an	d/or file certain re	elease i	notifications ar	nd perform correct	tive actions i	for rele	ases which	may en	danger		
				e of a C-141 repo										
or the environ	ment. In ad	dition. NMO	CD accept	investigate and re tance of a C-141 r	eport o	loes not relieve	e the operator of r	esponsibility	for co	mpliance wa	ith any	other		
federal, state,							<u> </u>			• •				
				$\geq$	ĺ		OIL CONS	SERVAT	ION I	DIVISIC	<u>DN</u>			
Signature:			1 /											
Printed Name:		Josh	Russo			Approved by	District Superviso	)r:						
Title:			ordinator			Approval Date: Expiration Date:								
								<u> </u>						
E-mail Addres	is:	jrusso@concl	oresource	es.com		Conditions of Approval:				Attached				
	08/17/2011			32-212-2399				·····		<u> </u>				
Attach Additi	onal Sheet	ts If Necessa	rv											

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division

Submit 2 Copies to appropriate District Office in accordance

1220 C C F F I D C F NIM 97605	cis Dr. 505		with Rule 116 on back side of form						
Release Notifica	nta Fe, NM 87 ation and C		ction						
	OPERA			al Report 🛛 Final Report					
Name of Company COG Operating LLC		Contact Pat Ellis							
Address 550 W. Texas, Suite 100, Midland, TX 79701		No. 432-230-00	77						
Facility Name 8" Main Line	Facility Ty	be 8" Water Lin	ne (Cedar Lake)						
Surface Owner Federal Mineral Ov	wner		Lease M	No. NMLC-029395B					
LOCA	TION OF RE	LEASE							
	North/South Line	Feet from the	East/West Line	County					
B 20 17S 31E				Eddy					
Latitude N 32 49.4	495 Longitud	le_W 103 53.34	4						
NATI	JRE OF REL								
Type of Release Produced water	Volume of		ols Volume F	Recovered 80bbls					
Source of Release 8" Main Line	8/11/11		8/11/11						
		lour of Occurrence	e Date and	Hour of Discovery					
Was Immediate Notice Given?		If YES, To Whom?							
	Mike Bra	Mike Bratcher-OCD; Jim Amos-BLM							
By Whom? Was a Watercourse Reached?		Date and Hour 8/12/11 9:56 a.m. If YES, Volume Impacting the Watercourse.							
Yes X No	11123, 10	nume impacting n	ie watercourse.						
Describe Cause of Problem and Remedial Action Taken.* While installing a "T" in the main line the poly line pressured pasture adjacent to the valve box. The ruptured portion of the									
Describe Area Affected and Cleanup Action Taken.* Initially 100 bbls were released from the ruptured poly line an recovered. BBC sampled the site and the lab results verify that									
I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain relec- public health or the environment. The acceptance of a C-141 report to should their operations have failed to adequately investigate and remo- or the environment. In addition, NMOCD acceptance of a C-141 repo- federal, state, or local laws and/or regulations.	ase notifications ar by the NMOCD ma ediate contamination	d perform correct irked as "Final Rejon that pose a thread	ive actions for rele port" does not relie at to ground water,	ases which may endanger eve the operator of liability surface water, human health					
107		OIL CONS	ERVATION I	DIVISION					
Signature:									
Printed Name: Josh Russo	Approved by I	District Supervisor	: 						
Title: HSE Coordinator	Approval Date	:	Expiration D	ate:					
E-mail Address: jrusso@conchoresources.com	Conditions of	Approval:							
Date: 07/05/20/2 Phone: 432-212-2399				Attached					
Attach Additional Sheets If Necessary	- <u> </u>								