AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pGRL0902035612

1RP - 2053

CML EXPLORATION, LLC

7/26/2016

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

December 16, 2009

Larry Johnson
Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240
Via Email and FedEx

RE: CML Exploration, Paddy 19 State #3, Unit F, Section 19, T17S, R33E
API #:30-025-38591

Dear Larry,

We installed the remedy described in the July 20, 2009 Corrective Action Plan. The excavation was closed according to the plan described, including liners on the north side and a monitoring well installed to the south of the excavation (on July 30). Ground water was encountered approximately 77 feet below ground surface and our tests indicate the well is capable of producing about 1.5 gallons per minute. The table below presents results of ground water sampling and analysis at the site.

Table 1. Results of Ground Water Sampling at MW-1 at Paddy 19 #3

Date Sampled	Chloride	TDS
	(mg/L)	
8/5/2009	1,160	2,490
8/27/2009	1,500	2,560
11/2/2009	3,680	7,600

In the coming weeks, we plan to extract water from the well for a dual purpose:

1. Remove salt mass from the aquifer – at approximately 2,000 gallons per day over the course of 20 days we will pump out 40,000 gallons of water.
2. Use extracted water for use in drilling a new well.

We estimate this program will remove a little over 1,200 lbs. of chloride from the aquifer, based on the water quality observed in the November 2nd sampling event. We will contact the office of the state engineer regarding this planned extraction and make sure we're copasetic with their requirements.

In addition, we plan to monitor this well 1-2 additional quarters to confirm ground water quality data while considering the best response to observed impact. Perhaps the combined effect of chloride extraction through pumping and dilution and dispersion will resolve ground water quality impact in a few months time. The well log and laboratory sheets are attached.

If you have questions, please contact me at 505-266-5004 or Mr. Nolan von Roeder of CML Exploration, LLC.

Sincerely,
R.T. Hicks Consultants, Ltd.

Katie Lee

Katie Lee
Project Scientist

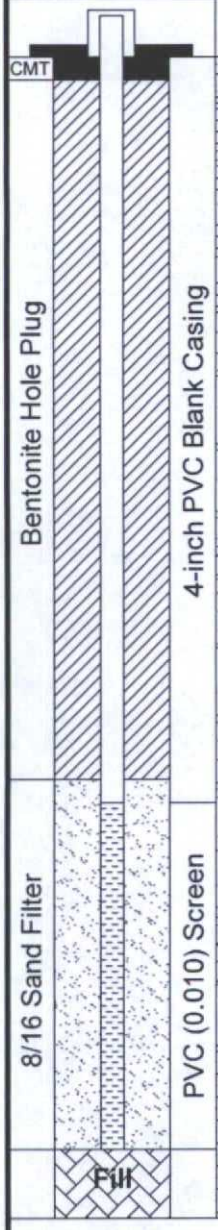
Copy: CML Exploration, Nolan von Roeder
NMOCD Santa Fe, Edward J. Hansen

RT Hicks Consultants Ltd

P O Box 7624
Midland, Texas 79708
(432) 528-3878
(432) 689-4578 (fax)

LITHOLOGIC LOG (Monitoring Well)

SOIL BORING NO.:	MW-1	TOTAL DEPTH:	100 Feet
SITE ID:	Paddy 19 State #3	CLIENT:	CML Exploration
SURFACE ELEVATION:	4,091 (USGS)	COUNTY:	Lea County
CONTRACTOR:	Harrison Cooper	STATE:	New Mexico
DRILLING METHOD:	Air-Rotary	LOCATION:	T17-S R33-E Sec 19
INSTALLATION DATE:	7/30/09	FIELD REP:	D. Littlejohn
WELL PLACEMENT:	30' South of Res. Pit	FILE NAME:	\CML\Paddy 19
BORING LAT /LONG:	Lat. 32° 49' 16.9" North, Long. 103° 42' 20.2"		



Sample Data				Depth (feet)	Lithologic Description: LITHOLOGY, Color, grain size, sorting, rounding, special features
Type	Photo	Cl (mg/kg)	PID (ppm)		
					SILTY SAND Reddish brown with some caliche from pad.
Cutting		52	--	5–10	CALICHE AND SAND Light brown to light reddish brown, solid caliche layers at 4 to 6 feet and 18 to 20 feet, fine grain well sorted angular sand.
Cutting		53	--	15–20	
Cutting		142	--	25–30	SAND Reddish brown, with some caliche, fine to medium grain, poorly sorted, sub-angular sand.
Cutting		92	--	35–40	
Cutting		50	--	45–50	SAND Reddish brown, with some caliche, fine to medium grain, well sorted, sub-angular sand.
Cutting		54	--	55–60	SAND Reddish brown, medium grain, well sorted, sub-rounded.
Cutting		71	--	65–70	
Cutting		76	--	75–80	Saturated Formation from approximately 75 to 80 feet
Cutting		78	--	85–90	SILTY CLAY Dark purple, dry (red beds).
Cutting		108	--	95–100	

TD = 100 Feet

Laboratory Results for Soil (8-11-09)		
Depth (feet)	Chloride (mg/kg)	TDS (mg/kg)
30	106	--
80	<5.27	--

Analytical Report 350774

for

R.T. Hicks Consultants, LTD

Project Manager: Dale Littlejohn

CML Exploration: Paddy-19 State # 3

L-157-1109

09-NOV-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

09-NOV-09

Project Manager: **Dale Littlejohn**
R.T. Hicks Consultants, LTD
901 Rio Grande Blvd. NW, Suite F-142
Albuquerque, NM 87104

Reference: XENCO Report No: **350774**
CML Exploration: Paddy-19 State # 3
Project Address: Lea County, NM

Dale Littlejohn:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 350774. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 350774 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 350774

R.T. Hicks Consultants, LTD, Albuquerque, NM

CML Exploration: Paddy-19 State # 3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Nov-02-09 12:10		350774-001

CASE NARRATIVE

XENCO Laboratories

Client Name: R.T. Hicks Consultants, LTD
Project Name: CML Exploration: Paddy-19 State # 3

Project ID: *L-157-1109* | *Report Date:* *09-NOV-09*
Work Order Number: *350774* | *Date Received:* *11/03/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-780328 Inorganic Anions by EPA 300
None

Batch: LBA-780417 TDS by SM2540C
None

Certificate of Analysis Summary 350774

R.T. Hicks Consultants, LTD, Albuquerque, NM

Project Name: CML Exploration: Paddy-19 State # 3

Project Id: L-157-1109
Contact: Dale Littlejohn
Project Location: Lea County, NM

Date Received in Lab: Tue Nov-03-09 04:03 pm
Report Date: 09-NOV-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	350774-001					
	Field Id:	MW-1					
	Depth:						
	Matrix:	WATER					
	Sampled:	Nov-02-09 12:10					
Anions by E300	***Extracted:***						
	Analyzed:	Nov-04-09 22:36					
	Units/RL:	mg/L	RL				
Chloride		3680	50.0				
TDS by SM2540C	***Extracted:***						
	Analyzed:	Nov-04-09 15:42					
	Units/RL:	mg/L	RL				
Total dissolved solids		7600	5.00				

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Blank Spike Recovery

Project Name: CML Exploration: Paddy-19 State # 3

Work Order #: 350774 **Project ID:** L-157-1109

Lab Batch #: 780328 **Sample:** 780328-1-BKS **Matrix:** Water

Date Analyzed: 11/04/2009 **Date Prepared:** 11/04/2009 **Analyst:** LATCOR

Reporting Units: mg/L **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by E300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	10.5	105	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

XENCO Laboratories

BS / BSD Recoveries

Project Name: CML Exploration: Paddy-19 State # 3

Work Order #: 350774
Analyst: WRU
Lab Batch ID: 780417
Sample: 780417-1-BKS
Units: mg/L

Date Prepared: 11/04/2009
Batch #: 1

Project ID: L-157-1109
Date Analyzed: 11/04/2009
Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total dissolved solids	ND	1000	900	90	1000	914	91	2	80-120	30	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: CML Exploration: Paddy-19 State # 3

Work Order #: 350774
Lab Batch #: 780328
Project ID: L-157-1109
Date Analyzed: 11/04/2009
Date Prepared: 11/04/2009
Analyst: LATCOR
QC- Sample ID: 350773-001 S
Batch #: 1
Matrix: Water
Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	82.5	100	183	101	90-110	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: CML Exploration: Paddy-19 State # 3

Work Order #: 350774

Lab Batch #: 780328 **Project ID:** L-157-1109
Date Analyzed: 11/04/2009 **Date Prepared:** 11/04/2009 **Analyst:** LATCOR
QC- Sample ID: 350773-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	82.5	75.7	9	20	

Lab Batch #: 780417
Date Analyzed: 11/04/2009 **Date Prepared:** 11/04/2009 **Analyst:** WRU
QC- Sample ID: 350773-001 D **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

TDS by SM2540C Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	540	584	8	30	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Dale Littlejohn
Company Name: RT Hicks Consultants Ltd
Company Address: P O Box 7624
City/State/Zip: Midland, Texas 79708
Telephone No: (432) 528-3878
Fax No: (432) 689-4578 (Fax)
Sampler Signature: Dale T. Littlejohn

Project Name: CML Exploration: Paddy-19 State #3
Project #: L-157-1109
Project Loc: Lea County, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Preservative: H_2SO_4	Preservative: None	Preservative: Other (Specify)	Matrix: Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify)	Analyze For: TCLP: TPH: (TX-1005 Ext. to 35)	TOTAL: Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX (EPA 8021B)	RCI	N.O.R.M.	Chloride (EPA 300.1)	TPH (EPA 8015M GRO-DRO-MRO)	Total Dissolved Solids		RUSH TAT (Pre-Schedule)	Standard TAT
01	MW-1	11/2/09	1210	1	X							X														X		X			X

Special Instructions: Send Invoice to RT Hicks Consult. 901 Rio Grande Blvd. NW, Suite F-142, Albuquerque, NM 87104; Send results to Dale Littlejohn at dale@rthicksconsult.com

Sample Containers Intact? (Y) N
Temperature Upon Receipt: .1
Laboratory Comments: w/labels noseals

Relinquished by:	Date	Time	Received by:	Date	Time
Dale T Littlejohn	11/3/09	1603			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Leon	11-3-09	16:03

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: R.T. Hicks

Date/ Time: 11.3.09 16:03

Lab ID # : 350774

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	Yes	No	(Not Applicable)	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event