

**CAMECO RESOURCES  
CROW BUTTE OPERATION**



**86 Crow Butte Road  
P.O. Box 169  
Crawford, Nebraska 69339-0169**

**(308) 665-2215  
(308) 665-2341 – FAX**

September 12, 2012

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Michael Linder, Director  
Nebraska Department of  
Environmental Quality  
P. O. Box 98922  
Lincoln, Nebraska 68509-8922

Dear Mr. Linder:

On August 20, 2012, during routine 5-year Mechanical Integrity Testing (MIT), well number I-5128 in Mine Unit 11, Wellhouse 61 failed the MIT criteria at the Crow Butte Resources (CBR) mine site. Isolation procedures indicated that the failure was the casing joint at the 220-foot level. Dave Miesbach, Underground Injection Control Program Manager, at Nebraska Department of Environmental Quality (NDEQ), Lindsay Phillips, of the NDEQ Chadron field office, and Ron Burrows, NRC Project Manager, were notified concerning this well on August 20, 2012.

Based upon a review of the geophysical and lithology logs for I-5128, the failed casing joint was located in a sandy zone at the base of the Brule Formation. Because I-5128 had been operated as an injection well, the opportunity existed for this casing failure to impact the Brule Aquifer. This well had been in operation since January 26, 2011.

Upon review of the data with Dave Miesbach it was requested that CBR install at least one shallow monitor well to sample the water quality in proximity to I-5128. This well (5128a) was drilled approximately 30 feet downstream (northwest), using surface casing to a depth of 180 followed by air drilling to a total depth of 230 feet. Three different water samples were collected to determine if contamination had occurred. The results of the samples are as follows:

<u>Date</u>	<u>Time</u>	<u>Conductivity</u>	<u>Chloride</u>
8/27/12	12:00 p.m.	311 $\mu$ ohms	2.1 ppm
8/28/12	8:00 a.m.	302 $\mu$ ohms	1.4 ppm
8/29/12	9:00 a.m.	339 $\mu$ ohms	2.8 ppm
Chadron Formation Water Quality (ave)		1900 $\mu$ ohms	186 ppm
Brule Formation Water Quality (ave)		350 $\mu$ ohms	5.0 ppm
Mining Solution (ave)		5000 $\mu$ ohms	600 ppm

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The test results were reviewed with Dave Miesbach and he was of the opinion that no contamination had occurred and that the test well could be plugged and abandoned.

Crow Butte repaired I-5128 by installing a sleeve at 215 feet to cover the failed joint. During the installation of the 215 foot sleeve, the well was damaged at the 40 and 80 foot joints. Sleeves were installed at 35 and 75 feet to repair the damaged joints. After the repairs, the well successfully passed the MIT criteria and was returned to service. Attached is a copy of the successful test.

If you have any questions or concerns on this matter, please do not hesitate to call me at 308-665-2215 ext. 111.

Sincerely,

A handwritten signature in cursive script that reads "Larry Teahon". The letters are fluid and connected, with a prominent "L" and "T".

Larry Teahon  
Manager of Safety, Health, Environment and Quality

**Attachment**

cc: Lindsey Phillips – NDEQ  
Ron Burrows - NRC  
CBO - File  
ec: CR – Cheyenne



# Nebraska Department of Environmental Quality

## Casing Integrity Test Report

Company:	Crow Butte	Permit No:	NE0122611
Project:	Crow Butte	Well No:	5128
Casing Type:	Certa-Lok	Diameter:	4.5 in.
Hole Depth:	800 ft.	Casing Depth:	789 ft.
Screened Interval 1 Top:	746 ft.	Screened Interval 2 Top:	ft.
Screened Interval 1 Bottom:	773 ft.	Screened Interval 2 Bottom:	ft.
Screened Interval 3 Top:	ft.	Screened Interval 4 Top:	ft.
Screened Interval 3 Bottom:	ft.	Screened Interval 4 Bottom:	ft.
Depth to K-Packer:	735 ft.	Depth to Test Packer(s) Top:	ground level ft.
		Bottom:	723 ft.

Comments:

5 yr Retest - sleeved

Time	Elapsed Time (Min)	Pressure (PSIG)
850	0	125
855	5	122
900	10	120
905	15	118
910	20	116

Well Tag ID Number: 5128

Test Performed By: Justin Dicker

Date: 9-10-12

Calibration Performed By: JD

Date: 9-10-12

### CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on inquiry of those individuals immediately responsible for obtaining information, I believe that the information is true, accurate, and complete. Further, I certify awareness that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

By: Steven Boeschlager

PRINTED NAME OF PERSON SIGNING

Restoration Supervisor

TITLE

By: *Steven Boeschlager*

SIGNATURE

9-12-12

DATE