



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

John Corra, Director

May 30, 2012

Mr. Josh Leftwich  
Cameco Resources, Inc.  
550 North Poplar Street, Suite 100  
Casper, WY 82601

**RE: North Butte ISL Operation, Permit No. 632, 2012 Annual Inspection Report**

Dear Mr. Leftwich:

Enclosed is a copy of the report on my 2012 Annual Inspection of the North Butte Project. This inspection was conducted April 27, 2012, in the presence of John McCarthy, Ken Garoutte, Amy Henderson and Jeanie Wolford, all of Cameco Resources, Inc.

A copy of the Report will be placed in the permanent inspection file for Permit No. 632, along with any written comments you may have.

The cooperation and assistance of Mr. McCarthy and company are greatly appreciated.

Please feel free to call if you have any questions.

Sincerely,

Glenn Mooney  
Senior Geologist

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Attachment

cc: Cheyenne File w/attach.  
US Nuclear Regulatory Commission, Mail Stop T-7J8, Washington, DC 20555-0001 w/attach.

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WRC  
5/30/12

## 2012 ANNUAL INSPECTION REPORT

**SUBJECT:** Cameco Resources' North Butte Project

**PERMIT NO.:** 632

**INSPECTOR:**  Glenn Mooney, Land Quality Division

**PERSON CONTACTED:** John McCarthy, Ken Garoutte, Amy Henderson and Jeanie Wolford, Cameco Resources, Inc.

**DATE OF INSPECTION:** April 27, 2012

### Introduction

Cameco Resources' (aka PRI) North Butte Project lies on the southern slopes of the North Pumpkin Butte in far west-central Campbell County.

PRI purchased the North Butte property from Pathfinder Mines Corporation in 2001 and Permit No. 632 was transferred to PRI on November 29, 2001. On November 26, 2008, the permit and license were transferred into the name of Power Resources Inc. d/b/a Cameco Resources.

### Exploration Camp

The old Cleveland-Cliffs exploration camp on the west side of the permit area is nearly gone. Only an old mobile home remains. An existing water well and small water storage lagoon are being used to produce and store water for drilling programs. Some large steel tanks have been added for additional water storage.

A high quality road has been built to connect the water supply area with the eastern portion of the permit area (Photo No. 1). This new road, surfaced with crushed limestone, runs eastward past the pad under construction for the satellite plant building, the southern side of Mine Units 2 and 1, the new deep disposal well and terminates for now at the eastern permit boundary.

As required by the surface owner, T-Chair Land Company, and written into the mine plan, topsoil from the roadway was salvaged and then reapplied to the roadside slopes and ditches.

### Satellite Plant

The pad for the satellite plant building has been partially constructed (Photo No. 2). More work on the pad area by the dirt work contractor, Oftedal Construction, is planned.

A staging area has been built next to the plant pad and enclosed with a chain link fence. Topsoil from the pad and staging area has been salvaged and placed in a stockpile equipped with an identification sign.

Cameco plans to let the bids for the plant construction within a couple of weeks of the inspection with work beginning in mid-May.

*Handwritten:* Mark 5/3/12



A drilling rig just east of the plant and staging area was engaged in casing a water supply well for the plant. According to Mr. McCarthy, the well is 1400 feet deep and is completed in the Fort Union Formation.

### Well Field

Delineation drilling was continuing in Mine Unit 2, near its upper, northern end. McCarthy said Cameco was taking care to keep all disturbances in this area below the 5280-foot elevation line on the slopes of North Pumpkin Butte. Lands above this elevation lie in a Traditional Cultural Property and are not to be disturbed.

As seen below in Photo No. 4, one of the drill holes recently completed was observed being abandoned and sealed by pouring 3/8" bentonite chips down hole from bags. It was earlier filled with abandonment mud which was allowed to



**Photo No. 4** Drill hole being abandoned by filling with 3/8" bentonite chips.

settle overnight. The chips are then used to fill the hole to the surface.





**Photo No. 5** "Mudding up" – Abandonment mud is being added to mudpit as part of drill hole abandonment

As seen above, another hole was being abandoned by "mudding-up" with "Plug-Gel." Following filling a drill hole with abandonment mud, it is left overnight and then filled to the surface using 3/8" bentonite chips as seen in Photo No. 5 above.

#### **New Access Road and Incidental Boundary Revision**

Cameco plans to construct a new access road on the east side of the permit area that will lead to an existing oilfield road located a few hundred feet to the east of the permit area. As noted above, the new access road that has been recently completed across the permit area has been built up to the eastern permit boundary (Photo No. 6).

The location of the new access road extension was viewed and photographed. The centerline of the future road was marked with survey stakes as were the edges of the corridor (Photos 7 and 8 below).





**Photo No. 7** Looking west at area where eastern extension of new access road will be constructed following future approval of an Incidental Boundary Revision. A survey stake marking the centerline of the future road is seen at front-center. This portion of the road corridor is located on the permit area.



**Photo No. 8** Looking west along centerline of proposed new access road with a survey stake visible at center.

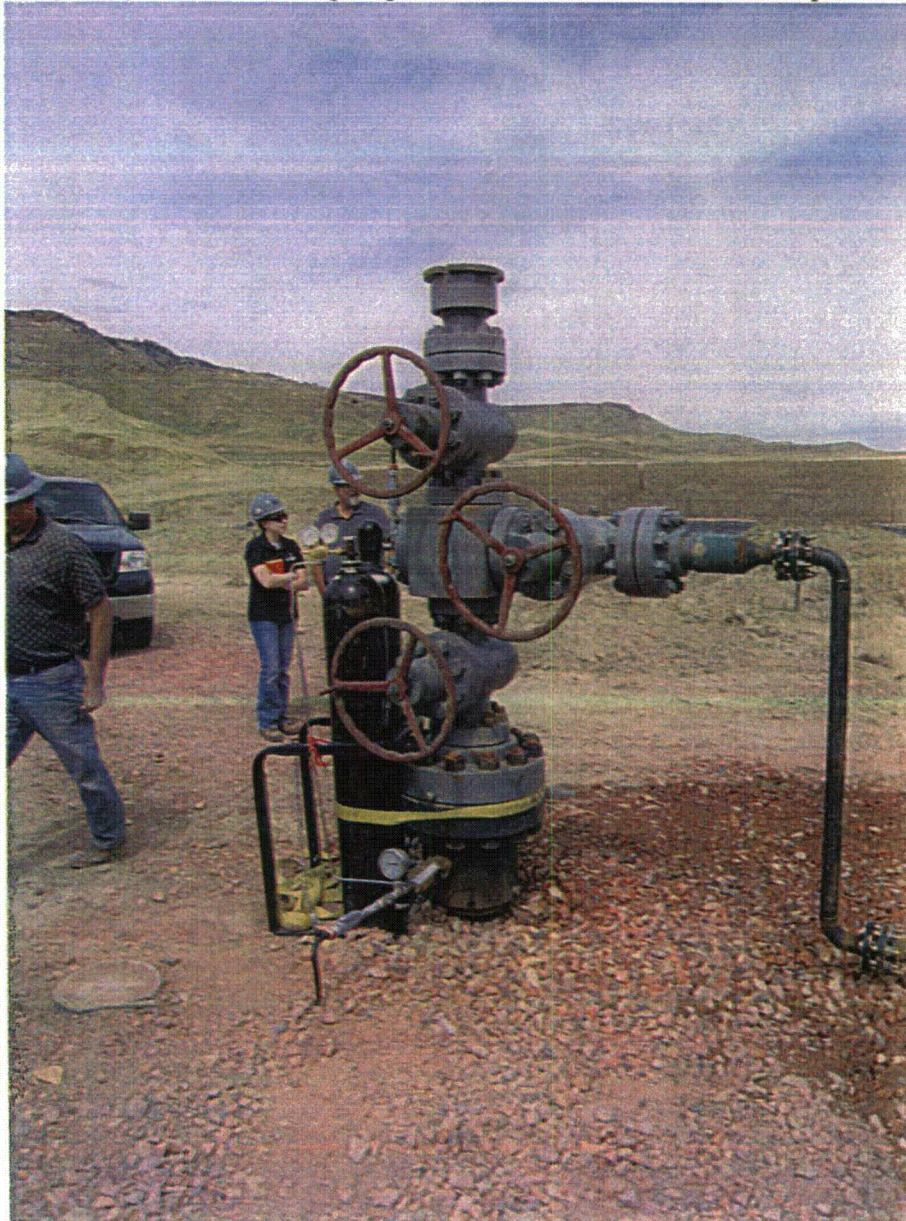


Following the approval of the Chapter 11 Update Package (TFN 5 3/399) in the near future, Cameco will add additional lands will be added to the permit area via an Incidental Boundary Revision (IBR) to allow construction of the access road from the eastern permit boundary to the oil field road to the east.

Also with approval of the Chapter 11 Update, 25.71 acres will be dropped from the North Butte permit area because lands that were to include an access road corridor running off to the southeast are being dropped from the permit area at the request of the surface owner. As confirmed in my inspection report of 8-31-11, these lands were never affected so no bond release is necessary.

### Deep Disposal Well

Early this year a Class I deep disposal well was drilled in the eastern portion of Mine Unit 1 (below).

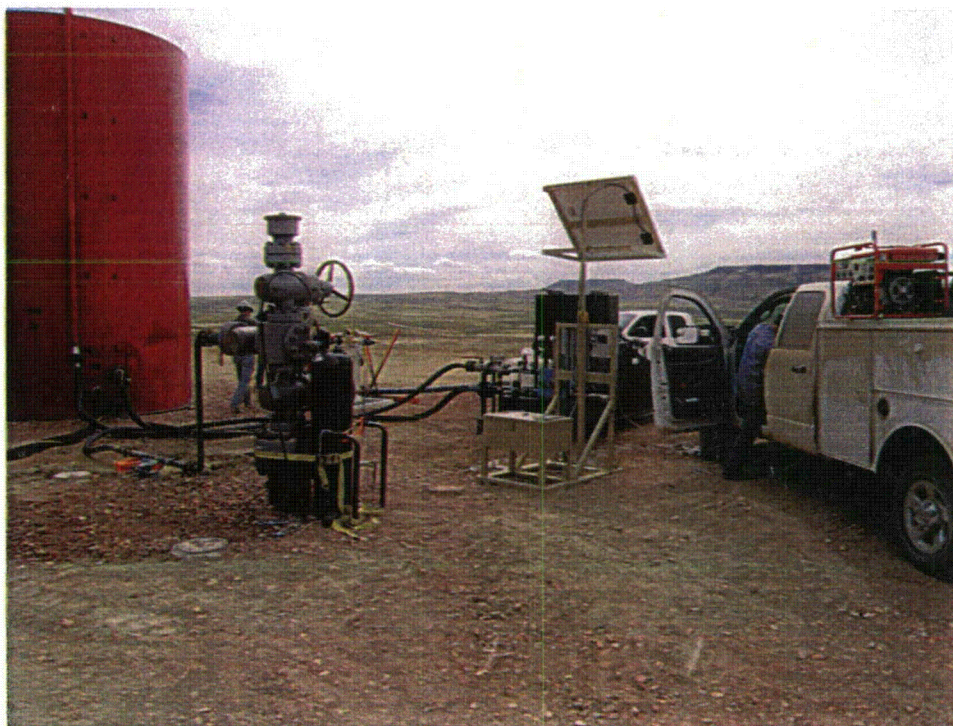


#### Photo No. 9

Close-up view of the Class I disposal well drilled this winter in the eastern part of Mine Unit 2. The well has been undergoing testing.

A portion of the stockpile of topsoil salvaged from the well pad can be seen behind wellhead. The sign on the topsoil stockpile is also visible.





**Photo No. 10** Another view of the Class I disposal well along with a temporary tank used during the testing process. The black nitrogen tanks are used to pressurize the well annulus to about 300 psi.

A sizeable pad was constructed for the disposal well. Topsoil and subsoil stripped from the pad area was placed in two separate stockpiles located to the north.

As shown below in Photo No. 11, the pad is also being used to store well casing and sacks of drilling mud, abandonment mud and lost circulation material.



**Photo No. 11**  
Looking southwest across deep disposal pad at stacks of SDR-17 PVC well casing and pallets of drilling and abandonment mud and other drilling supplies.



### Mechanical Integrity Testing



**Photo No. 12** MIT in Mine Unit 1

As seen above, a monitor well in the eastern end of Mine Unit 1 was undergoing Mechanical Integrity Testing (MIT). The well passed.

### Reclamation

A seeding crew was due on-site the first week in May to seed the roadsides and completed topsoil stockpiles. Both drill seeding and hydroseeding are planned.

### Miscellaneous

Cameco has installed five air quality monitoring stations in and around the permit area. A met station has also been installed a short distance northwest of the plant area.

### Signs

The permit identification sign remains in place along the access road that enters the permit area from the southwest. It contained the necessary information.



### **Compliance**

There are no outstanding violations at the North Butte Project. No new violations were noted as a result of this inspection.

### **Bond**

The existing bond for Permit No. 632 is Letter of Credit [REDACTED] written by the Royal Bank of Canada in the amount of \$1,745,000.00 and Bond [REDACTED] written by the ScotiaBank of Nova Scotia in the amount of \$6,773,000.00 for a total of \$8,518,000.00.

An increase in the bond to \$10,360,000.00 has been recommended to the Director to cover the increase reclamation costs.

### **Conclusions**

This inspection found that construction of the mine has begun with dirt work on the plant area partly complete and the plant water supply well being drilled. Access road construction has been completed to the extent possible within the current permit area. An application for an Incidental Boundary Revision (IBR) will be made in the near future to allow connection of the new access road to an existing oilfield road located to the east of the permit area.

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Attachments: Photo pages



**Photo No. 1** Looking southeast to south at new access road recently constructed east-west across permit area. The mast of the drilling rig drilling the plant water supply well can be seen at site marked by No. 1. No. 2 points to location of plant pad. Photos for panorama taken from position next to drilling water water supply well and lagoon.





**Photo No. 2** Looking northeast at pad visible in center distance constructed this spring for satellite plant building. The new access road is visible at far left as is the drill rig drilling the plant water supply well. A staging area fenced with chain link fencing is located beyond tanks and trucks in distance. Note the sediment fence at bottom of slope at lower right.





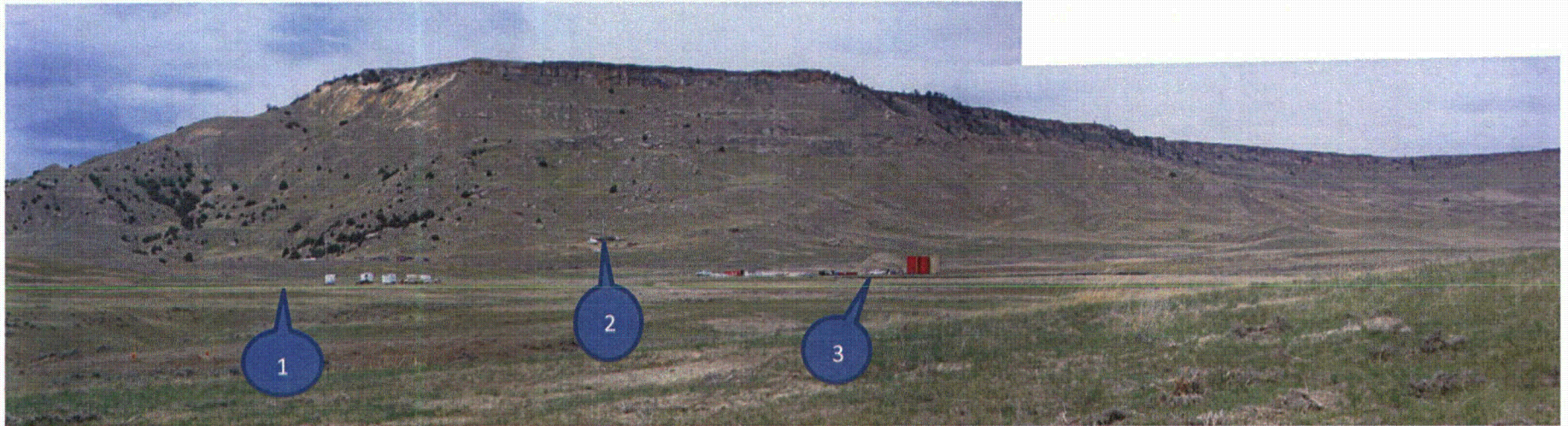
**Photo No. 3** Looking northeast at drilling operations in Mine Unit 2 where delineation drilling was on-going.





**Photo No. 6** Looking east to southeast at Incidental Boundary Revision area at far eastern end of permit area. The main mine access road will be extended through fence (note centerline stake in fence line) to link up with established oilfield road visible in the center distance.





**Photo No. 13** Looking northwest to north at permit area as seen from regional access road to south near Pfister ranchhouse. No. 1 points to location of satellite plant pad, No. 2 points to drilling operations in Mine Unit 2 and No. 3 points to deep disposal well location.

Photos taken April 27, 2012, by Glenn Mooney