

## **ATTACHMENT 15**

Revised Draft Scope of Work  
Crow Butte, North Trend, Marsland and Three Crow - August 7, 2012

### **Draft Scope of Work Identification of Properties of Religious and Cultural Significance Cameco Resources Crow Butte License Renewal and North Trend, Marsland and Three Crow Amendment Areas**

#### **Background**

The purpose of the activities described in this scope of work is to assist the U.S. Nuclear Regulatory Commission (NRC) in meeting its obligations under Section 106 of the National Historic Preservation Act and the implementing regulation 36 CFR part 800. NRC is required to take into account the effects of projects that it licenses or authorizes on historic properties, including properties of religious and cultural significance to federally recognized Indian tribes.

The regulation describes a process through which the federal agency, in consultation with federally recognized Indian tribes and other consulting parties, identifies historic properties and evaluates their potential for eligibility to the National Register of Historic Places (NRHP), then determines whether the proposed federal undertaking will have an effect on the historical integrity of any eligible historic properties. If the effects of the undertaking would diminish the historical integrity of eligible historic properties, the agency must identify measures that it will take to resolve those effects through avoidance, minimization, or mitigation. Although the federal agency seeks and considers the views of other parties during the Section 106 process, the agency has the final authority to make all decisions called for under the implementing regulation.

NRC, as the lead federal agency for Section 106 compliance, has requested that Cameco Resources provide the agency with information about properties of religious and cultural significance to Indian tribes that may be affected by the company's existing Crow Butte in situ uranium recovery project and the North Trend, Marsland and Three Crow license amendment areas.

Figure 1-1 shows the general locations of the four project areas. This scope of work is proposed as constituting a "reasonable and good faith effort" to identify potentially affected historic properties of religious and cultural significance that may be located in these four project areas, as required by 36 CFR 800.4(b)(1).

#### **Description of Project Areas**

##### *Crow Butte License Renewal Area*

Crow Butte is an existing in situ uranium recovery facility that has been in operation under its current license since December of 1989. The proposed federal undertaking is an NRC license renewal for this facility; very little additional ground disturbance is anticipated during the 23 years that the facility will continue to operate. Figure 1 shows the Crow Butte License Renewal area and the maximum potential area of ground disturbance. The license boundary encompasses 2848 acres; of that area, 1199 acres have been or will be subject to ground disturbance.

### *North Trend License Amendment Area*

North Trend is a proposed new in situ uranium recovery facility. The proposed federal undertaking is an NRC license for this facility. The overall area within the license boundary for North Trend is 2098 acres. Planning for this project is still in a preliminary stage, but the expected total maximum area of ground disturbance will ultimately be approximately 1177 acres, as shown by the dotted line in Figure 2. Due to access considerations, at the present time, this scope of work covers only the hatchured parcels shown on Figure 2, approximately 380 acres.

### *Marsland License Amendment Area*

Marsland is a proposed new in situ uranium recovery facility. The proposed federal undertaking is an NRC license for this facility. The overall area within the license boundary for Marsland is 4621 acres. The total expected maximum area of ground disturbance will be approximately 1747 acres. Figure 3 shows the Marsland license boundary and the maximum area of ground disturbance.

### *Three Crow License Amendment Area*

Three Crow is a proposed new in situ uranium recovery facility. The proposed federal undertaking is an NRC license for this facility. The overall area within the license boundary for Three Crow is 1643 acres. The expected maximum total area of ground disturbance will be approximately 984 acres. Figure 4 shows the Three Crow license boundary and the maximum area of ground disturbance.

## **Description of Project Effects**

### *Direct Effects*

Very little additional ground disturbance is anticipated during years that the Crow Butte facility will continue to operate. At the completion of operations, activities will include removal of existing equipment and facilities and reclamation and restoration of the property.

Ground disturbance at the three new in situ uranium recovery facilities, North Trend, Marsland, and Three Crow, would include processing plants, well fields, impoundments, and roads. Utility lines are expected to be constructed within the maximum disturbance area boundaries. If, in the future, additional utility work (e.g. power lines) are required in areas not currently slated for disturbance, additional identification of historic properties will be carried out under a separate scope of work and contracting process. Most of the land in the North Trend and Three Crow project areas is plowed and under cultivation. Several homesteads/farmsteads are located on the Marsland project area as well.

In addition to the maximum disturbed area, Figure 1 also depicts the land use prior to construction and operation of the Crow Butte facilities. Similarly, Figures 2-4 depict the current land use within each of the three proposed project areas.

### *Indirect Effects*

In addition to considering the direct, physical effects, such as ground disturbance, on historic properties, 36 CFR 800.5(a)(1) requires that federal agencies also consider indirect effects such as visual or auditory intrusions. The visual and audible effects of construction and well-drilling for the four projects will be brief and temporary. Operation of the projects will not result in substantial noise effects. Currently, the audible effects of the nearby railroad operations dominate the areas. Given the nature of in situ recovery operations, the visual effects from operations will be largely limited to those caused by the processing structures. As has already been done at the Crow Butte facility, these structures will be painted to blend with the landscape. These structures and other facilities and equipment will be removed entirely at the end of the approximately 20 to 30-year life of each operation.

Given the limited and transitory nature of the visual and auditory effects from these projects, it is not anticipated that they will cause visual or audible effects sufficient to diminish the integrity of historic properties outside the areas of maximum ground disturbance.

### **Approach to Identification of Properties of Religious and Cultural Significance**

The federally recognized Indian tribes that have participated in consultations with the NRC and BLM about this project (interested tribes) have indicated that the appropriate method for identifying places of religious and cultural significance to them is through an examination of the ground surface by knowledgeable representatives from the interested tribes. Cameco Resources proposes a program of identification that utilizes on-the-ground examination of all areas of maximum potential ground disturbance for Crow Butte, Marsland, and Three Crow and for the 380 acres of North Trend for which access is currently available. The total acreage addressed in this scope of work is, therefore, 4,310 acres.

If Cameco Resources acquires additional lease lands in the license amendment areas that will be disturbed by the projects in the future, there will be an additional scope of work and contracting process for identification within these areas. This type of phased approach to identification of historic properties is consistent with the Section 106 regulation (36 CFR 800.4(b)(2)).

Any future uranium recovery development in areas *outside* of the maximum disturbed area boundaries shown on Figures 1-4 would require compliance with Section 106, including additional efforts to identify properties of religious and cultural significance that could potentially be affected by the new undertaking.

### ***Assumptions***

- The interested tribes have indicated that the 30-meter interval survey transects generally used by archaeologists in this region are too widely spaced to reliably encounter the kinds of cultural features that the tribes propose to identify. At 30-meter intervals, archaeological surveyors in this part of Nebraska have covered between 36 and 50 acres per person-day, depending on the terrain, ground cover, and number of archaeological sites encountered (site

recording to meet state and federal standards can be quite time consuming). Given the requested closer interval between tribal field personnel, the level-of-effort calculations in this scope of work assume a coverage rate of 24 acres per person-day.

- The level-of-effort calculations in this scope of work assume
  - two crews of five persons each with one person in each crew serving as crew leader and receiving a higher pay rate.
  - 10-day work sessions with 4-day breaks between them. The first and last days of each session are assumed to be travel days.
  - services of two traditional cultural experts to advise the crew leaders in evaluating the features identified by the field crews
- Government Services Administration rates will be used to calculate lodging, meals and incidental expenses, and mileage reimbursement.
- In order for NRC to meet its obligation to consider the effects of these undertakings on historic properties, it is essential that identification efforts for places of religious and cultural significance to federally recognized Indian tribes be focused on those areas within which such properties may be affected. These areas are identified as areas of maximum disturbance on Figures 1-4. Some portions of those areas have already experienced substantial ground disturbance, however, as a result of historical activities. If the tribal representatives determine that portions of the maximum disturbance areas do not warrant examination of the ground surface owing to the extent of previous disturbance, they may, at their discretion, use up to 25 percent of the allocated number of fieldwork days to examine other areas of their choosing within the license application boundaries in order to determine the extent and context of cultural features identified within the areas of maximum potential ground disturbance as identified on Figures 1-4.
- The information resulting from identification efforts carried out under this scope of work will be culturally sensitive and confidential. Only the minimum amount of information needed for consultations and determinations of eligibility and effect will be disclosed to the federal agency; only the minimum amount of information needed to ensure that eligible properties are protected and preserved to the extent feasible will be disclosed to Cameco Resources. It is therefore not anticipated that substantial time will be required for preparing reports. The needed work products are described in a later section of this scope of work.

### **Statement of Work for the Crow Butte License Renewal Area and North Trend, Marsland, and Three Crow License Amendment Areas**

#### ***Level of Effort***

- Field identification time: 50 person-days for Crow Butte; 16 person-days for North Trend; 74 person-days for Marsland; and 40 person-days for Three Crow (total of two 10-day sessions for two crews plus one 6-day session for one crew)

- Services of traditional-culture experts: 8 person-days for the experts (one day per person for each of the four areas); 4 person-days for one crew leader to work with the experts
- Travel time: total 56 travel days (6 travel days for one crew, 4 travel days for second crew; 2 travel days each for two traditional cultural experts and second crew leader)
- Report preparation:
  - Work product 1 – 50 hours plus 10 hours for GIS specialist/cartographer
  - Work product 2 – 80 hours plus 40 hours for GIS specialist/cartographer
  - Work product 3 – 20 hours plus 8 hours for GIS specialist/cartographer

### ***Compensation***

#### Field work

- \$40/hour for field identification – crew member
- \$45/hour for field identification – crew leader
- \$50/hour for field evaluation – traditional-culture expert
- \$20/hour for travel time, all personnel, actual hours from home base to Crawford, Nebraska, at the beginning and end of each field session
- \$77 lodging, \$46 meals & incidental expenses for all personnel for fieldwork days and one travel day for each field session; \$34.50 meals & incidental expenses for the second travel day of each field session
- 55¢ per mile reimbursement for use of personal or tribal vehicles, actual mileage
- GPS rental \$150/week x 2 units
- \$300 fieldwork supplies and expendables

#### Report preparation

- \$45/hour for all work products
- \$35/hour for GSI specialist/cartographer
- \$400 report-preparation supplies and expendables

### ***Work Products***

1. Within 20 working days after completion of field work, the point(s) of contact for the interested tribes will provide brief (10 pages or less) ***non-confidential*** written summaries of the fieldwork completed and the number of properties identified to NRC and Cameco Resources. This summary will include 7.5 minute USGS maps showing specific areas where ground examination took place but should ***not*** indicate the locations of any identified properties of religious and cultural significance. Because this information will be disclosed to the public through NRC's NEPA compliance process, it is essential that the document contain only information that does not need to be protected from disclosure.
2. Within 40 working days after completion of field work, the point(s) of contact for the interested tribes will to provide to NRC sufficient information about any identified properties of religious and cultural significance to permit the agency to consult with the Nebraska State

Historic Preservation Officer (SHPO) and the interested tribes about NRHP eligibility of these properties. This information should include the following:

- a. An identifying label for the property
- b. Location and boundaries, either as digital data or plotted on 7.5 minute USGS quad maps
- c. A brief description of the physical appearance of the property
- d. An assessment of the integrity of the property
- e. A brief statement concerning the historical significance of the property

The significance assessment should focus on the potential for the property to meet one or more of the criteria of eligibility to the NRHP established in 36 CFR 60.4 and elaborated in National Register Bulletin 15 *How to Apply the National Register Criteria for Evaluation* and National Register Bulletin 38 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. While Bulletin 38 is a comprehensive document, it does not include identification parameters for those properties pertinent and significant to Northern Plains culturally distinctive and unique characteristics. The integrity assessment may follow the guidance in National Register Bulletin 38 or that in National Register Bulletin 15. The interested tribes need not disclose specific information about the religious significance or meaning of any properties identified under this scope of work. The Section 106 process requires only information about the historical significance of these properties as expressed by knowledgeable Native persons.

This work product should also include any recommendations that the interested tribes wish to provide concerning the potential NRHP eligibility under criteria other than criterion D for the four previously identified Native American archaeological sites within or partially within the ground disturbance area for Crow Butte license renewal and North Trend license amendment areas. No Native American archaeological sites have been recorded within the Marsland or Three Crow license amendment areas.

The information provided in this work product will be subject to protection from disclosure under the provisions of Section 304 of the National Historic Preservation Act.

3. Once NRC and the SHPO, in consultation with the interested tribes, have completed determinations of NRHP eligibility for any identified properties of religious and cultural significance to the interested tribes, the point(s) of contact for the interested tribes will provide Cameco Resources with the information described in 2.a-c above. Cameco Resources will sign a confidentiality agreement limiting use of this information to appropriate company personnel involved in project design or operation.

**Schedule** (Note: these dates will be determined as part of the final scope of work)

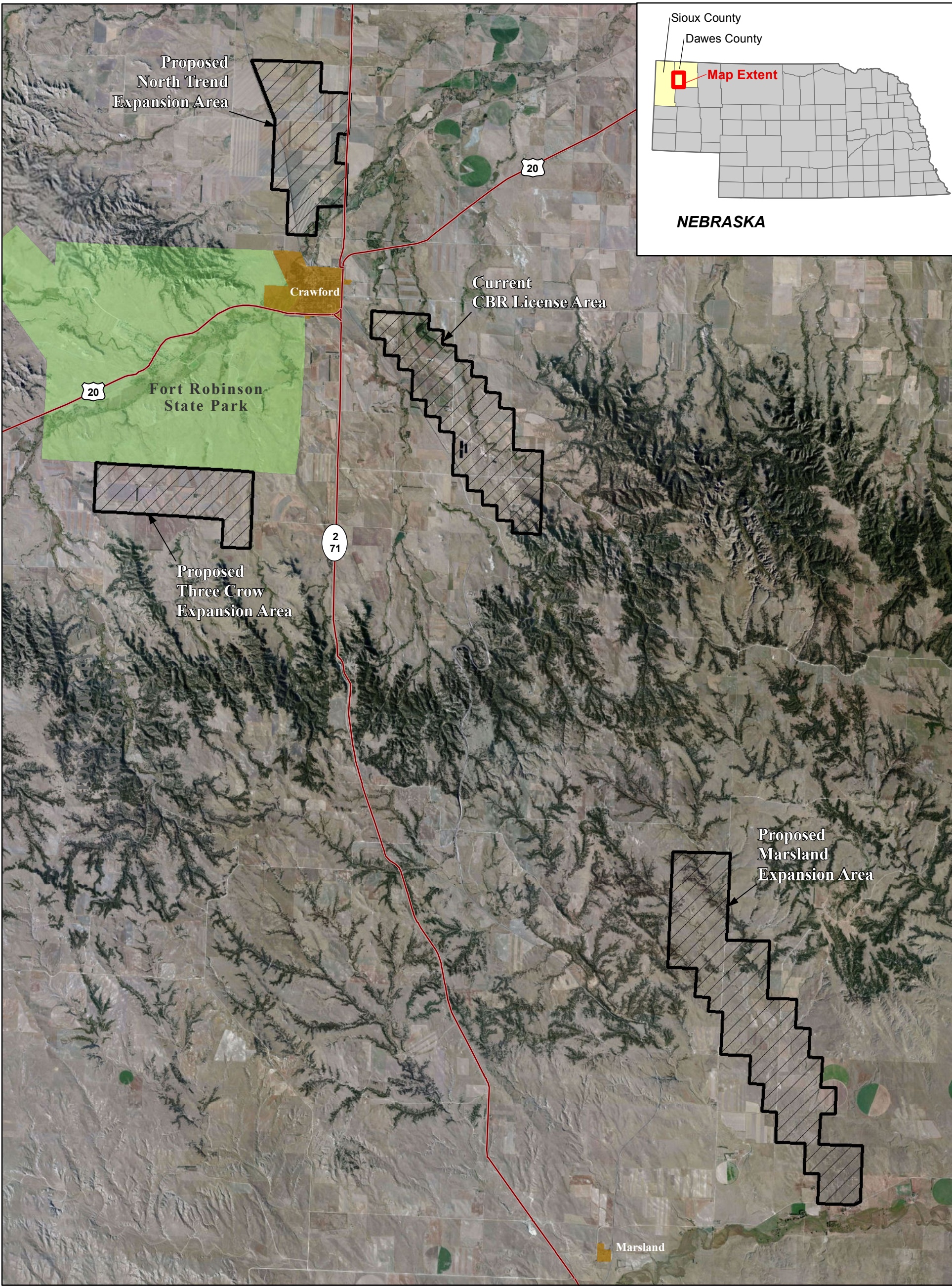
- Fieldwork to be completed by DATE
- Summary information to be completed by DATE
- Eligibility information for NRC to be completed by DATE

### **Access and Safety**

On the opening day of field work Cameco Resources will provide safety training at the Crow Butte facility outside Crawford, Nebraska. Cameco Resources will provide the safety equipment that will be required during operations. Cameco Resources will provide access to the properties and a representative of Cameco Resources will coordinate with the crew leaders in terms of access to the land. The Cameco Resources representative will utilize a GPS survey unit to identify all map locations within the four project areas selected by the tribal representatives for ground examination and will guide the tribal cultural personnel to the locations they select in the field. The Cameco Resources representative will also serve as liaison with the local landowners.

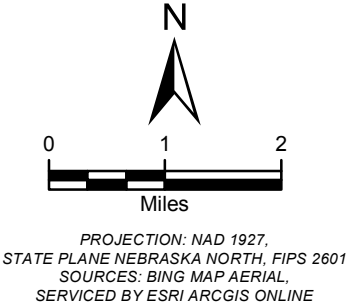
All tribal representatives will operate as independent contractors for the duration of the study.

Cameco Resources will provide two portable toilets to be located at the assembly point for each of the four project locations during the periods that the tribal representatives are working in each of those areas.



LEGEND

- Permit Boundary
- Fort Robinson State Park
- City/Town
- Highway



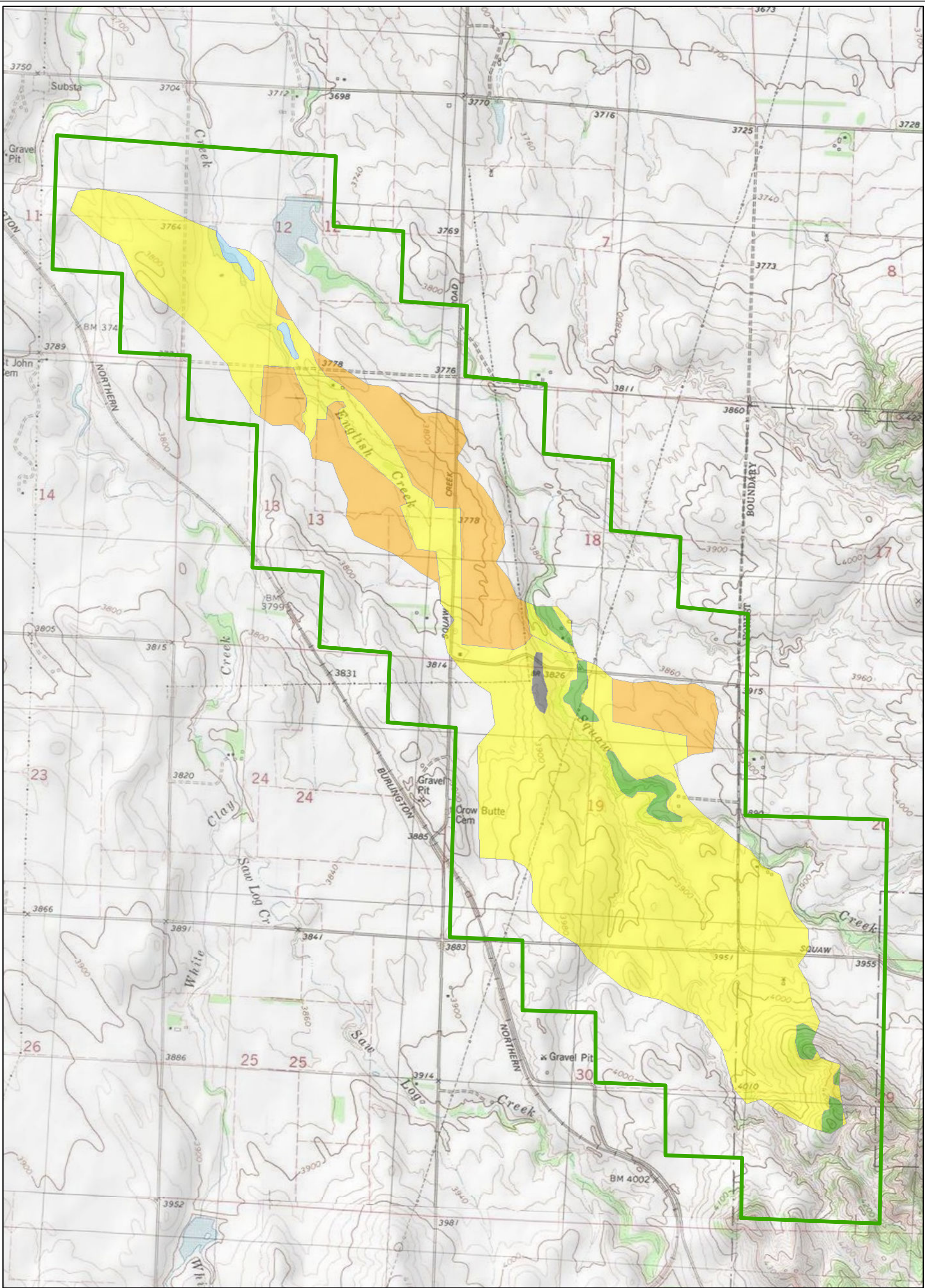
CROW BUTTE  
RESOURCES, INC.

FIGURE 1-1  
CROW BUTTE RESOURCES INC.  
CURRENT LICENSE AREA  
AND PROPOSED EXPANSION AREAS


PROJECT: CO001636      MAPPED BY: JC      CHECKED BY: J. CEARLEY



630 Plaza Drive, Ste. 100  
Highlands Ranch, CO 80129  
P: 720-344-3500 F: 720-344-3535  
www.arcadis-us.com

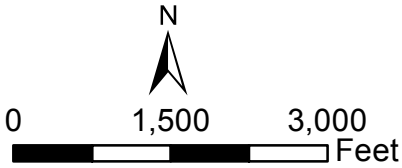


**Legend**

 Crow Butte License Boundary - 2,848 Acres

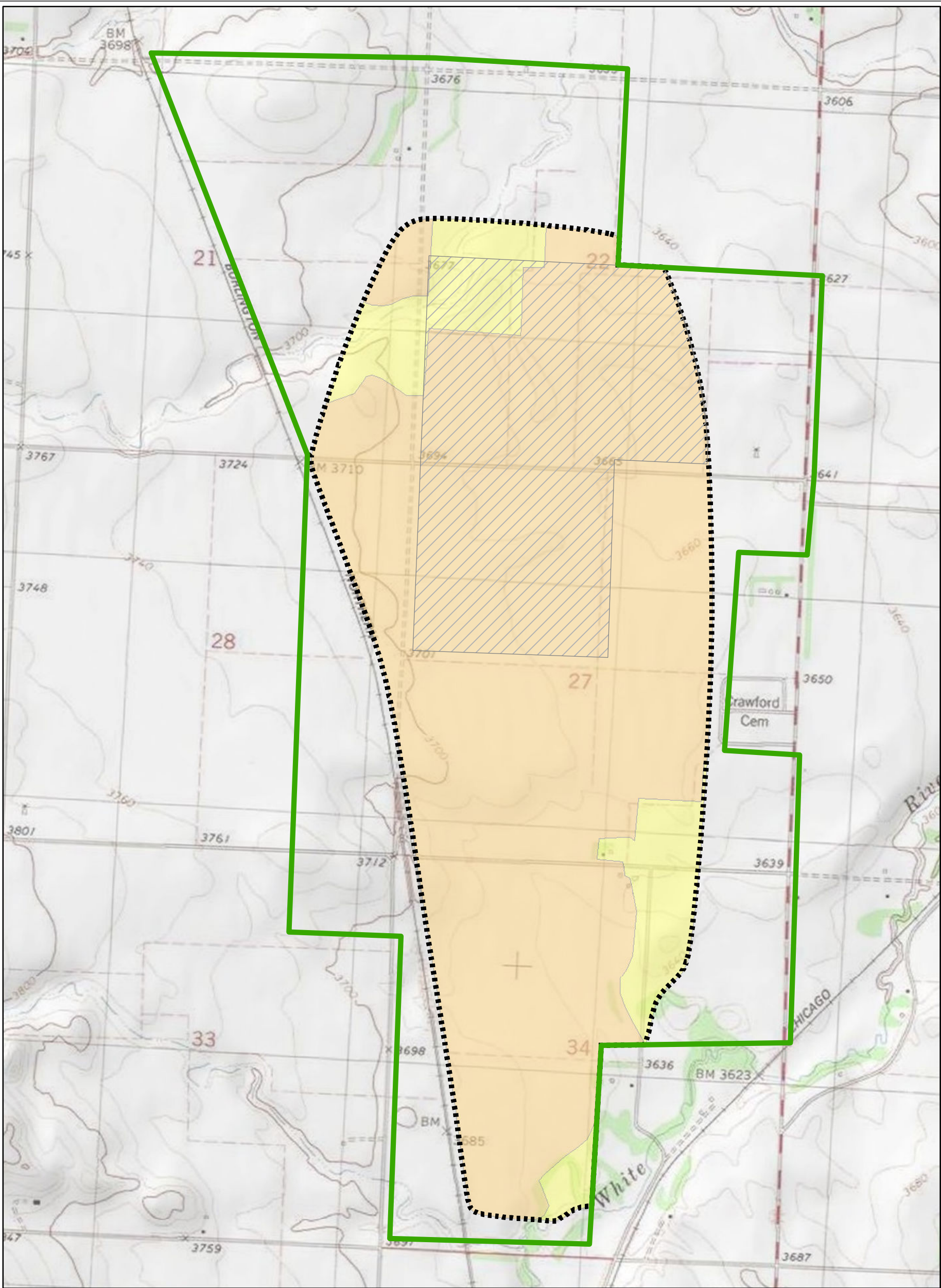
**Maximum Disturbed Area - 1,199 Acres**

-  Cropland - 252 Acres
-  Forested - 36 Acres
-  Mine/Quarry - 5 Acres
-  Pastureland - 899 Acres
-  Water - 7 Acres



**CAMECO RESOURCES**

**FIGURE 1**  
**CROW BUTTE PRE-OPERATIONAL**  
**LAND USE WITHIN THE MAXIMUM**  
**DISTURBED AREA**



**Legend**

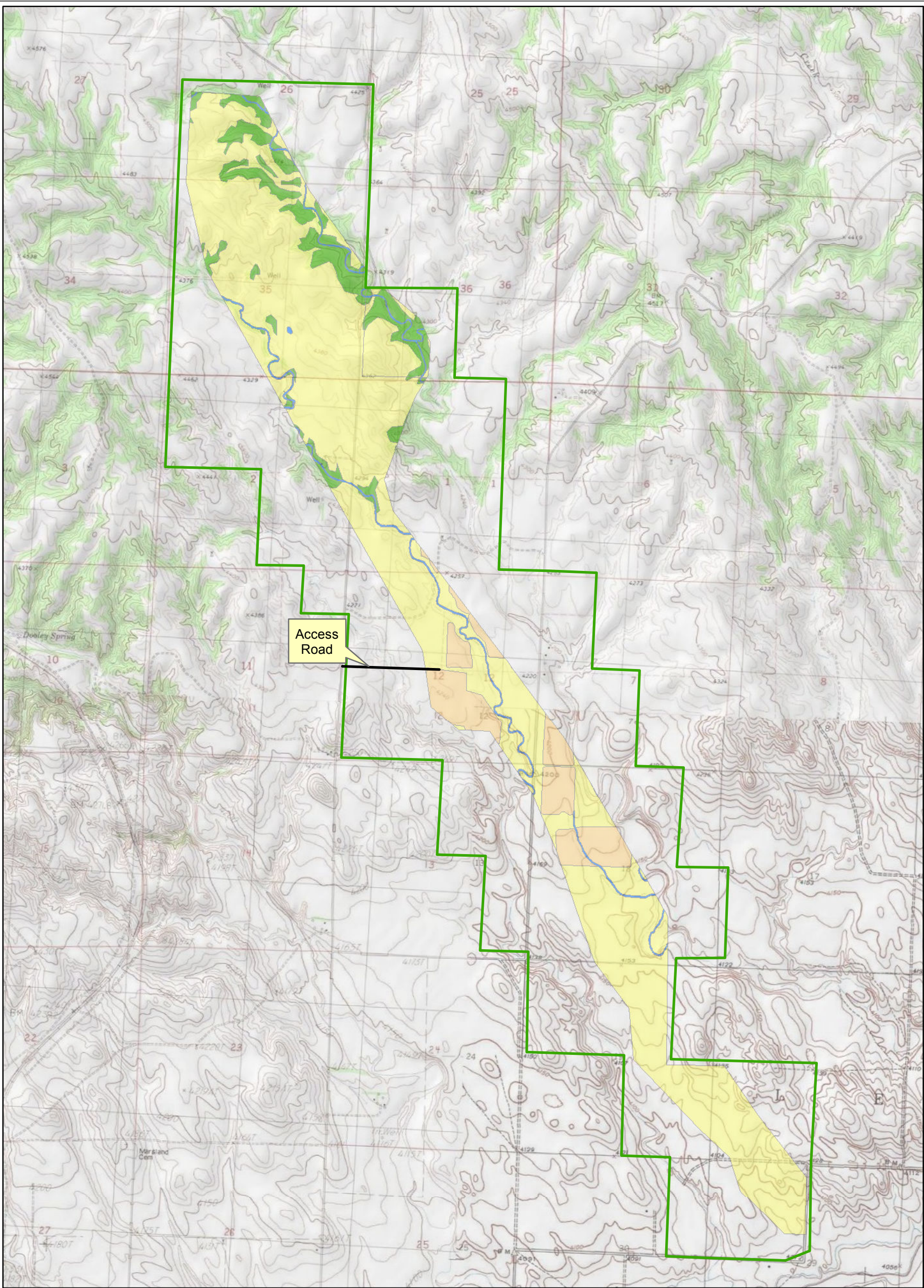
- North Trend License Boundary - 2,098 Acres
- Disturbed Area for Start of Operations - 380 Acres
- Cropland - 350 Acres
- Rangeland - 30 Acres
- Maximum Disturbed Area - 1,177 Acres
- Cropland - 1,028 Acres
- Rangeland - 149 Acres

0 1,150 2,300 Feet

**CAMECO RESOURCES**

**FIGURE 2**  
**NORTH TREND PRE-OPERATIONAL**  
**LAND USE WITHIN THE MAXIMUM**  
**DISTURBED AREA**


**ARCADIS** Date: 7/31/2012



**Legend**


 Marsland License Boundary - 4,621 Acres

**Maximum Disturbed Area - 1,747 Acres**

 Cropland - 166 Acres

 Drainage/Potential Wetland - 39 Acres

 Forest Land - 155 Acres

 Rangeland - 1,387 Acres



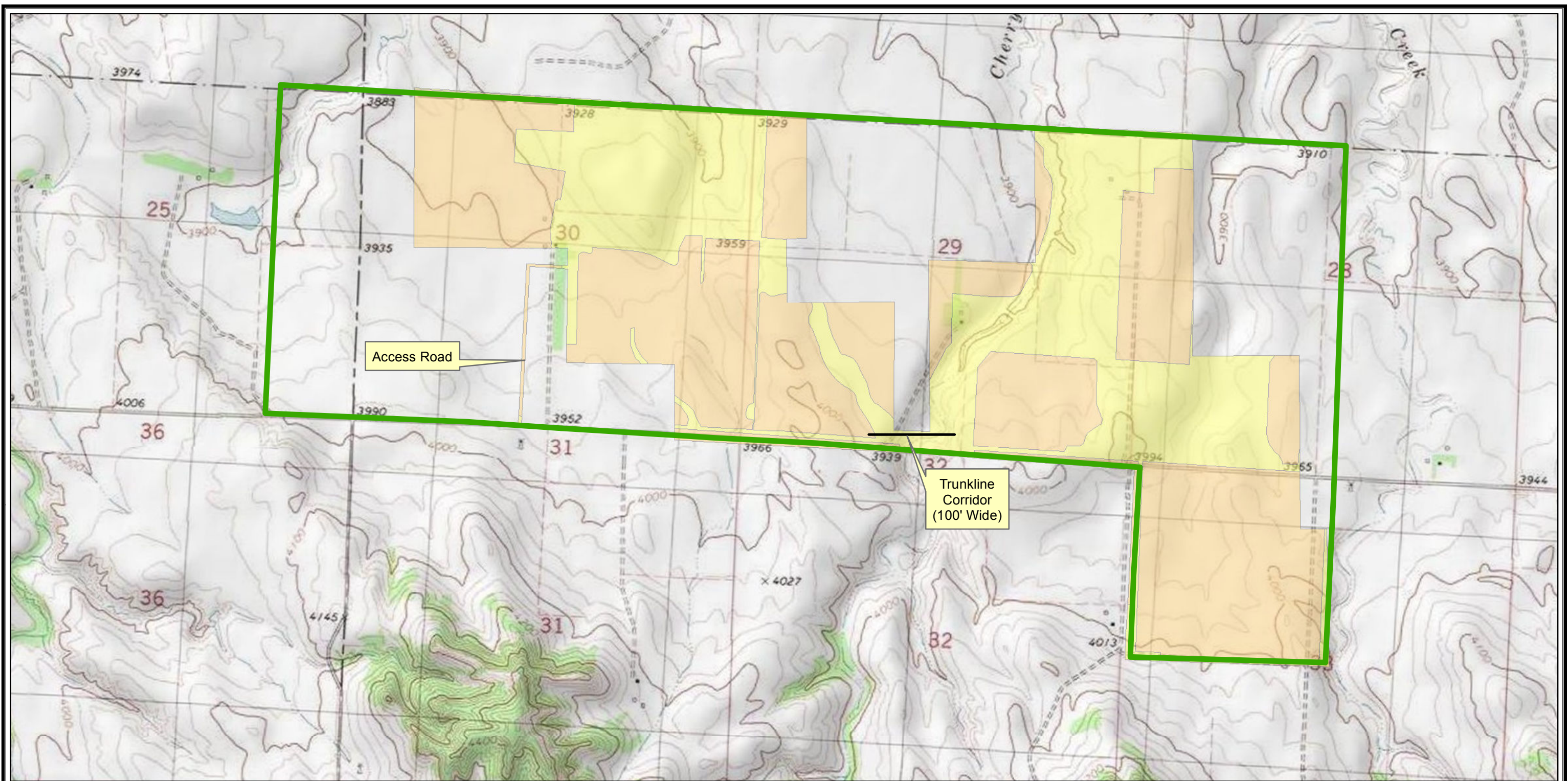
0 2,000 4,000  
Feet

**CAMECO RESOURCES**

**FIGURE 3**  
**MARSLAND PRE-OPERATIONAL**  
**LAND USE WITHIN THE MAXIMUM**  
**DISTURBED AREA**



Date: 7/31/2012



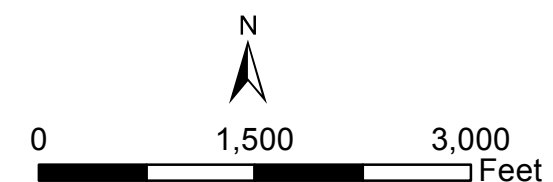
## Legend

Three Crow License Boundary - 1,643 Acres

### Maximum Disturbed Area - 984 Acres

Cropland - 594 Acres

Rangeland - 390 Acres



## CAMECO RESOURCES

**FIGURE 4**  
**THREE CROW PRE-OPERATIONAL**  
**LAND USE WITHIN THE MAXIMUM**  
**DISTURBED AREA**



Date: 7/31/2012