Smith Ranch-Highland/Reynolds Ranch In-Situ Uranium Recovery Project

2013 Wildlife Survey Report

Cameco

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INTRODUCTION

Cameco Resources' (Cameco) Smith Ranch-Highland/Reynolds Ranch In-Situ Recovery Project is an in-situ uranium extraction operation in Converse County, Wyoming. The project consists of areas covered by Wyoming Department of Environmental Quality-Land Quality Division (WDEQ-LQD) Permits #603 and #633. The #633 Permit is currently being amended to include the area covered by Permit #603 and the addition of Reynold's Ranch. Surveys conducted in 2013 were for the whole area encompassed by the proposed Combined Permit boundary. In order to comply with federal and state regulations, prior to continued development, the United States Fish and Wildlife Service (USFWS) and Wyoming Game and Fish Department (WGFD) have requested that the following wildlife surveys be conducted: One ground bald eagle (*Haliaeetus leucocephalus*) winter roost survey; Three ground count surveys of greater sage-grouse (*Centrocerus urophasianus*) on the known leks and any new leks discovered; One aerial survey to search for new sage-grouse leks once every three years; Three ground surveys for raptor nests within one mile of the project area; Two spotlight surveys for swift fox (*Vulpes velox*) in proposed disturbance areas and black-tailed prairie dog (*Cynomys ludovicianus*) presence/activity surveys and mapping. In addition to these surveys, monthly wetland/pond monitoring will be conducted to monitor presence and use of waste water disposal areas by wildlife, especially associated waterfowl and shorebirds. In addition to these surveys, Cameco will document any opportunistic observations of animals occurring on the following lists.

1) Species designated as Threatened or Endangered, Proposed Species, Candidate Species, or Wyoming Species of Concern by the USFWS (USFWS 2011, USFWS); and

2) Species designated as Species of Greatest Conservation Need (SGCN) by the WGFD (WGFD 2010).

PROJECT AREA

The 39,870-acre Smith Ranch Highland/Reynolds Permit Area is located in the Highland Flats area of the southern Powder River Basin in Converse County, Wyoming. The combined Permit Area is located approximately 25 miles north-northwest of Douglas and 22 miles northeast of Glenrock, Wyoming (T37N:R74W, Sections 25, 26, 35, 36; T37N:R73W, Sections 30-32; T36N:R74W, Sections 1, 2, 11-14, 22-27, 33-36; T36N:R73W, Sections 5-7, 10-31, 34-36; T36N:R72W, Sections 7, 16-22, 29, 30; T35N:R75W, Sections 13, 24; T35N:R74W, Sections 2-5, 8-11, 14-19, 21). Elevation across the combined Permit Area ranges from approximately 5,000 to 5,800 feet and is gently sloping sagebrush and grassland range with shallow drainages and rolling hills. This area has characteristically cold winters and correspondingly hot summers. Average annual precipitation is about 12 inches per year, with most of that coming in late spring to early summer. The combined Permit Area is located primarily on private land holdings, but

the area is a combination of federal, private, and state lands with federal and state lands occupying less than 10 percent of the total acreage.

This area is a part of the Northwestern Great Plains and is classified as a mixed-grass prairie with a mix of species from both the short and tall grass prairies, additionally influenced by the northern desert shrub system. The dominant vegetation types in the combined Permit Area are mixed sagebrush/grassland and grassland, with disturbed land, hay meadows, impoundments, cottonwood/willow stands, playas, shelterbelts and reclaimed lands.

SURVEY METHODS

Wildlife data collected by Grouse Mountain Environmental Consulting (GMEC) and Hayden-wing Associates (HWA) along with WGFD database records were used to help perform surveys. Wildlife surveys were conducted following USFWS, BLM and WGFD survey protocols (BLM 2011, and WGFD 2007). Surveys were performed from 4x4 truck, ATV, or foot, depending on the species monitored. Data was collected using a handheld Trimble Juno SB GPS facilitated with ArcPad GIS software. Binoculars, spotting scope, topographic maps and varied field guides assisted in the observation and identification of wildlife in the area.

BALD EAGLE

Methods

In order to locate bald eagle winter roosts, surveys are to be conducted from December 1 to February 28 in accordance with methodology recommended by the USFWS. Ground surveys for winter roost sites were conducted within the project area and extended to a 1-mile buffer around the project area. The surveys were conducted on February 19 and 20, 2013, in suitable habitat, more specifically cottonwood stands. Surveys were conducted from1 hour before sunrise or sunset to 1 hour after sunrise or sunset. All winter roost site observations will be recorded and will include counts of adults and juveniles.

Results

No bald eagle winter roost locations were observed or recorded during surveys. According to the available information there are no known winter roost locations that occur within the Permit Area and associated 1-mile buffer. During the 2011-2012 Bald Eagle Winter Roost Surveys GMEC did not locate any previously undocumented roost locations. In addition to no roost locations GMEC noted very little suitable roosting habitat to exist within the Permit Area and associated survey buffer. Deciduous forest habitat only contains less than 0.01% of the permit areas total vegetation type.

GREATER SAGE-GROUSE

Methods

Ground surveys were conducted on the five documented leks that occur within the two mile buffer of the Permit Area. Three ground count surveys were conducted at each of the lek locations to determine the maximum number of birds using the leks. Surveys were conducted between 0600 and 0800 hours on April 1, 2, 8, 15, 19 and 23, 2013. Leks were observed with binoculars or spotting scopes from a truck for approximately 15 minutes. Data collected during surveys at each lek location included maximum number of birds, activity, and sex of observed birds. Leks were classified as "active" if strutting males or sign (feathers, scat, or prints) were observed during any of the surveys.

Results

Four of the five leks were determined to be active; Sand Creek 2, North 95, Highland and Suicide Hill. The Sand Creek 2 and Suicide Hill leks were confirmed to be active during the 2013 ground surveys as sage-grouse were observed strutting during all three surveys. The Highland and North 95 leks was confirmed active during the 2013 ground surveys as sage-grouse were observed strutting during two of the three surveys. During the second survey of the North 95 lek no birds were observed at the lek and a golden eagle was seen perched approximately 100 yards from the lek. The North 95 East lek was determined to be inactive during the 2013 season as no strutting birds or sign was observed during all three surveys. Survey results for ground surveys are listed in Table 3.

RAPTORS

Methods

Three ground surveys for raptors were conducted in and within one mile of the Permit Area. A ground survey was conducted April 29, 30 and May 6, 2013 to determine the productivity of early nesting raptors and to determine the activity of all nests. A second ground survey was conducted June 3, 4 and 5, 2013 to determine the productivity of documented active nests and to determine activity of late nesting raptor species. A third ground survey was conducted July 3, 2013 to determine the productivity of late nesting raptor species. The locations of raptor nests were recorded and located using a handheld Trimble Juno SB facilitated with ArcPad GIS software. The nest status, condition, substrate, and species of raptor using the nest were documented.

Nests were observed from a distance, using binoculars or spotting scopes to avoid disturbing nesting birds. Surveys determined whether or not an adult bird was on or in the vicinity of the nest. If an adult was present, the biologist remained at a distance and attempted to determine the

age and number of young in the nest. If it was determined that no adult birds were present, the areas under, around, and if possible in, the nests were searched for signs of recent activity (fresh mute, regurgitated pellets, eggs, eggshell fragments, prey remains, etc.).

Results

There are 73 raptor nest sites documented in and within one mile of the Smith Ranch-Highland/Reynolds Ranch Permit Area (Table 2, Map 1). These included nine red-tailed hawk (*Buteo jamaicensis*) nests, one golden eagle (*Aquila chrysaetos*) nest, 32 ferruginous hawk (*Buteo regalis*) nests, 12 Swainson's hawk (*Buteo swainsoni*) nests, four great horned owl (*Bubo virginianus*) nests, one American kestrel (*Falco sparverius*) nest and 10 nests of unknown raptor species. Four of these nests had deteriorated beyond use and were confirmed gone during 2013 surveys; nest 10, 14, 62 and 66.

Of the 69 nests present within the one mile buffer of the permit area, seven nests were found to be active and 62 nests were inactive. Three of the identified active nests produced young (1, 17 and 54). The productivity of nest 5, 7, 32 and 70 was unknown. Results for the 2013 raptor survey are described below and can also be found in Table 2.

Nest #1 was observed to be active during all nest surveys. Courtship behavior by two adult red-tailed hawks was observed within close proximity of the nest during the first survey. The second held true with an active nest as an adult bird was seen incubating/brooding. The final production survey revealed 1 class I chick.

Nest #17 was not classified as active until the second survey. One class I chick was seen in the nest. The production survey revealed 1 class II chick.

Nest #54 was not classified as active until the second survey when two adult ferruginous hawks were observed demonstrating nest defense behavior. While returning to the area to determine the productivity of the nest a juvenile ferruginous hawk was flushed from the ground near the nest.

Nest #5 was inactive during the first two surveys. The nest was verified as active on the July 3, 2013 follow up survey when an adult was observed tending the nest. The production of the nest is unknown.

Nest #7 was found to be active during the second survey. A breeding pair of Swainson's hawks was seen perched on the tree where the nest is located. Nest building and incubating was also observed during the second survey. During the third survey an adult bird was still incubating/brooding resulting in unknown production.

Nest #32 was discovered to be active on the third survey after several active nest signs were seen; including, incubating/brooding, downey on edges of the nest and nest defense. The productivity of the nest is unknown.

The productivity of nest #70 was never determined. The nest was located in a tree cavity that was occupied by an American kestrel and due to the type and location of the nest, the activity and production of the nest was difficult to determine. The nest was active on the second survey on June 3, 2013 as two adults were exhibiting nest defense. On the follow up survey July 3, 2013 it was discovered that an adult bird was incubating/brooding as the bird exited the tree cavity. It is unknown if the nest produced any fledglings.

BLACK-TAILED PRAIRIE DOG

Methods

Previous wildlife survey reports and WGFD database inquiries were made in order to determine locations of black-tailed prairie dog colonies within the Permit Area. Prairie dog colonies were opportunistically searched for while performing other wildlife surveys. Also if landowner contacts were made, prairie dog colony presence and locations were discussed.

Results

No black-tailed prairie dog colonies were determined to be present in the Permit Area through a review of previous wildlife reports and WGFD records. Landowner contacts and opportunistic observations also determined there is no black-tailed prairie dog colonies present in the Permit Area.

SWIFT FOX

Methods

The WGFD does not have a standard survey protocol for locating den sites, however, WGFD Non-game biologist Laurie Van Fleet recommended conducting a minimum of two spotlight surveys on consecutive nights before September 15th as the pups begin to disperse from the den sites around this time (personal communication). Due to the foxes mostly nocturnal behavior spotlight surveys were conducted one half hour after sunset until 3:00 A.M. Two consecutive spotlight surveys were conducted on the nights of August 14 and 15, 2013. The surveys were conducted in proposed mine units to concentrate searches for den sites within proposed future development areas. Surveys were conducted by slowly driving improved and two-track roads while shining a 3,000,000 candle power spotlight in order to locate eye shine of any foxes present. If swift foxes are detected during spotlight surveys a ground survey would be conducted during daylight hours to locate the swift fox den site.

Results

Five proposed Mine Units (#7, #8, #23, #24 and Mine Unit F-extension) and one deep disposal well were surveyed as they are located in potential and or suitable swift fox habitat. No swift foxes were observed during the first spotlight survey. During the second survey one swift fox was observed about 190 yards to the east off of Ross Road in Mine Unit #7. Follow up den site surveys during the day proved to be negative as no active den was located in the surrounding area. In 2012 an active den was discovered in MU #7 approximately 360 yards to the northwest of the first swift fox sighting. Further investigation revealed the den was no longer active. While surveying the Mine Unit F-extension one adult swift fox was seen crossing an access road in the central portion of the Mine Unit F-extension. The fox was followed to the northeast approximately one mile where potential den sites were discovered. Follow up day searches did not find a den in the proposed development area, although there was suitable den habitat north of the proposed development area with several positive indicators for den sites. Due to recent rain it was difficult to determine if the den was active. Additionally, no swift foxes were observed at or near Mine Units #23 and #24 during the two spotlight surveys. Locations of sightings and dens can be found in Table 4 and Map 1.

WETLAND/POND MONITORING

Methods

The USFWS expressed concerns regarding selenium concentrations in wastewater produced during the in-situ uranium mining process. Mitigation efforts were set to monitor wildlife use of wastewater storage and disposal sites, more specifically waterfowl and shore bird use. A purge storage reservoir, pivot irrigation field and settling ponds were monitored for wildlife use. Wildlife observations were conducted monthly during daylight hours using binoculars and a spotting scope. Observation points were chosen based on access and visibility. Each location was systematically scanned until the entire visible area was thoroughly searched and all wildlife observations were documented. If necessary, multiple observation points were used to ensure that the entire location was scanned. The amount of time spent at each location varied and was dictated by the size of the location and the number of species present.

Results

Three different locations within the Permit Area were monitored monthly; Purge storage reservoir 2 (PSR-2), PSR-2 pivot irrigation field and two lined settling ponds. Locations of these sites can be found in Figure 1. A total of 25 aquatic bird species, 18 other avian species and two

mammalian species were observed during surveys. Wildlife observed during wetland/pond monitoring surveys is listed in Table 3.

PSR-2 is approximately 20 acres in size and was the only site where waterfowl and shore birds were observed. Waterfowl and shore birds were observed feeding on or near the bank and shallower portions of the reservoir. Although not a waterfowl or shorebird species, red-winged blackbirds (*Agelaius phoeniceus*) were observed frequently feeding and showing courtship displays during surveys. Other avian species were observed with little activity and quick intermittent visits. During several months mule deer (*Odocoileus hemionus*) were observed feeding and bedding within the reservoir barbed wire fence enclosure. During January and February surveys no wildlife was observed, mainly due to the time of year and the reservoir being frozen.

PSR-2 Irrigation Field is approximately 124 acres. No waterfowl or shorebird species were observed at this site during any of the monthly surveys. Other avian species were observed feeding and most likely nesting. A northern harrier (*Circus cyaneus*) was observed flying low and hunting over the field during the June survey. A red-tailed hawk was observed hunting over the area during the September survey. Mule deer were observed feeding and bedded during seven surveys. No wildlife was observed during the January, February, November and December surveys.

The two settling ponds are approximately 0.8 acres and are fenced to prevent the use of wildlife. No waterfowl or shorebird species were observed at this site. It is unlikely that these ponds are used by waterfowl or shore birds due to the small size, lack of aquatic vegetation and pond lining. Other avian species were observed feeding on insects around the edges and berms of the two ponds. No wildlife was observed in January, February, March, April, June, October, November and December surveys. No observations were made during the June survey due to the construction of re-lining the west pond. The east pond was frozen during the January, February, March and December surveys.

OPPORTUNISTIC OBSERVATIONS

During the course of surveys conducted within and around the Smith Ranch-Highland/Reynolds Permit Area in 2013, one species occurring on the WGFD SGCN list was observed and documented. The one opportunistic sighting was of a greater short-horned lizard (*Phrynosoma hernandesi*) occurred on June 3, 2013. The following is a legal description and UTM coordinates of where the lizard was seen. Legal location; QQ: NWNE, Sec 6, T35N R74W. UTM coordinates; 436390 4765567 UTM Z13 N.

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Table 1. Sage-grouse lek surveys conducted within 2 miles of the Smith Ranch-Highland/Reynolds Ranch Permit Area.

Highland

Lek Status	Survey Date	Survey Method	Time	Males	Females	QQ	Sec.	Twn	Rng	Easting	Northing
Active	4/1/2013	Ground	0715	4	3	SWSW	28	36	73	448445	4767532
	4/8/2013	Ground	0700	3	0						
	4/19/2013	Ground	0645	0	0						

North 95

Lek Status	Survey Date	Survey Method	Time	Males	Females	QQ	Sec.	Twn	Rng	Easting	Northing
Active	4/2/2013	Ground	0730	4	9	SESW	28	35	74	439119	4757724
	4/15/2013	Ground	0710	0	0						
	4/23/2013	Ground	0700	4	0						

North 95 East

Lek Status	Survey Date	Survey Method	Time	Males	Females	QQ	Sec.	Twn	Rng	Easting	Northing
Inactive	4/2/2013	Ground	0715	0	0	NWNW	34	35	74	440565	4757474
	4/15/2013	Ground	0710	0	0						
	4/23/2013	Ground	0720	0	0						

Sand Creek 2

Lek Status	Survey Date	Survey Method	Time	Males	Females	QQ	Sec.	Twn	Rng	Easting	Northing
Active	4/2/2013	Ground	0625	6	12	SWSE	15	35	75	431649	4761132
	4/15/2013	Ground	0605	4	7						
	4/23/2013	Ground	0555	5	3						

Suicide Hill

Lek Status	Survey Date	Survey Method	Time	Males	Females	QQ	Sec.	Twn	Rng	Easting	Northing
Active	4/1/2013	Ground	0640	4	7	SWSE	24	37	74	444360	4779440
	4/8/2013	Ground	0620	5	7						
	4/19/2013	Ground	0605	5	3						

Table 2. Raptor nest surveys conducted within one mile of the Smith Ranch-Highland/Reynolds Ranch Permit Area.

Nest Number	2013	Species	Nest	Nest	Nest	Coordinates		Legal Location			
(Cameco ID)	Nest Status[1]	Code[2]	Structure[3]	Condition	Productivity[4]	UTM E	UTM N	QQ	S	T	R
1	Active	RETA	CTL	GOOD	1 Class I Young	440870	4763204	NWSW	10	35	74
2	Inactive	SWHA	BOX	POOR		443982	4766958	NENW	36	36	74
3	Inactive	SWHA	ELM	GOOD		446519	4768488	NENE	30	36	73
4	Inactive	UNRA	ELM	FAIR		446589	4768510	NENE	30	36	73
5	Active	SWHA	CTL	GOOD	Unknown	449530	4769996	SWNE	21	36	73
6	Inactive	UNRA	ELM	FAIR		452964	4770612	SESE	14	36	73
7	Active	SWHA	ELM	GOOD	Unknown	452984	4770658	SESE	14	36	73
8	Inactive	UNRA	CTL	POOR		455777	4770085	NENW	19	36	72
9	Inactive	RETA	CTL	POOR		456413	4768616	NENE	30	36	72
10		UNRA	WIL	GONE		439613	4765853	SWSE	33	36	74
11	Inactive	SWHA	WIL	FAIR		440796	4759986	SENW	22	35	74
12	Inactive	RETA	CTL	POOR		435893	4764673	NWSW	6	35	74
13	Inactive	RETA	CTL	POOR		445148	4776529	NENW	31	37	73
14		SWHA	WIL	GONE		442042	4779441	SENW	23	37	74
15	Inactive	SWHA	WIL	FAIR		441479	4777794	SENE	27	37	74
16	Inactive	FEHA	ROK	GOOD		443766	4776325	SENW	36	37	74
17	Active	FEHA	ROP	FAIR	1 Class II Young	443811	4775904	NESW	36	37	74
18	Inactive	GRHO	CTL	EXCELLENT		451649	4773623	NWNW	11	36	73
19	Inactive	FEHA	ROP	EXCELLENT		445671	4773067	SENW	7	36	73
20	Inactive	FEHA	ROP	FAIR		448672	4772082	SWSW	9	36	73
21	Inactive	SWHA	ELM	REMNANTS		446935	4771658	NWNW	17	36	73
22	Inactive	FEHA	GHS	POOR		445510	4770105	NWNW	19	36	73
25	Inactive	FEHA	ROK	REMNANTS		440987	4773027	SENW	10	36	74
27	Inactive	SWHA	CHC	POOR		440692	4768407	SWNW	27	36	74
28	Inactive	FEHA	GHS	POOR		444250	4770425	NENW	24	36	74
29	Inactive	GOEA	CTL	EXCELLENT		451829	4772928	SWNW	11	36	73
31	Inactive	RETA	CTL	EXCELLENT		442819	4763569	NENW	11	35	74
32	Active	SWHA	WIL	GOOD	Unknown	441927	4764542	NESE	3	35	74
33	Inactive	UNRA	BOX	POOR		448256	4770779	SESE	17	36	73

Table 2. Continued.

Nest Number (Cameco ID)	2013 Nest Status[1]	Species Code[2]	Nest Structure[3]	Nest Condition	Nest Productivity[4]	Coordinates		Legal Location			
						UTM E	UTM N	QQ	S	T	R
34	Inactive	UNRA	BOX	REMNANTS		448243	4770778	SESE	17	36	73
35	Inactive	RETA	BOX	REMNANTS		448256	4770797	SESE	17	36	73
36	Inactive	UNRA	BOX	REMNANTS		448350	4770840	NESE	17	36	73
37	Inactive	UNRA	BOX	POOR		448415	4770843	NWSW	16	36	73
38	Inactive	FEHA	GHS	GOOD		448411	4773051	SWNW	9	36	73
39	Inactive	FEHA	GHS	FAIR		445751	4772411	SESW	7	36	73
40	Inactive	FEHA	GHS	FAIR		445454	4771807	NWNW	18	36	73
41	Inactive	FEHA	GHS	REMNANTS		444833	4773505	NENE	12	36	74
42	Inactive	FEHA	GHS	POOR		443610	4773869	SWSW	1	36	74
43	Inactive	GRHO	CTL	GOOD		442955	4774033	SWSE	2	36	74
44	Inactive	FEHA	GHS	GOOD		445950	4776680	NENE	31	37	73
45	Inactive	RETA	CTL	FAIR		445615	4778584	SWSE	19	37	73
46	Inactive	UNRA	CTL	GOOD		459583	4769566	NESE	21	36	72
47	Inactive	UNRA	BOX	REMNANTS		460523	4770905	NESW	15	36	72
48	Inactive	FEHA	GHS	GOOD		441360	4768831	NWNE	27	36	74
49	Inactive	FEHA	GHS	GOOD		441273	4768847	SWSE	22	36	74
50	Inactive	FEHA	GHS	POOR		441403	4768712	NWNE	27	36	74
51	Inactive	FEHA	GHS	GOOD		441367	4768579	NWNE	27	36	74
52	Inactive	SWHA	WIL	GOOD		450253	4769875	SWNW	22	36	73
53	Inactive	GRHO	CTL	GOOD		440842	4763216	SENW	10	35	74
54	Active	FEHA	JUN	GOOD	1 Class IV Young	436015	4765685	SESW	31	36	74
55	Inactive	FEHA	GHS	REMNANTS		441643	4768070	SENE	27	36	74
56	Inactive	FEHA	GHS	REMNANTS		441599	4768084	SENE	27	36	74
57	Inactive	FEHA	GHS	GOOD		442181	4768133	SWNW	26	36	74
58	Inactive	FEHA	GHS	REMNANTS		441629	4768259	SENE	27	36	74
59	Inactive	SWHA	CHC	FAIR		440712	4768405	SWNW	27	36	74
60	Inactive	FEHA	ROK	GOOD		442847	4768882	SWSE	23	36	74
61	Inactive	FEHA	ROK	POOR		439684	4769481	NWSE	21	36	74
62		GRHO	WIL	GONE		438922	4770401	NWNW	21	36	74

Table 2. Continued.

Nest Number (Cameco ID)	2013 Nest Status[1]	Species Code[2]	Nest Structure[3]	Nest Condition	Nest Productivity[4]	Coordinates		Legal location			
						UTM E	UTM N	QQ	S	T	R
63	Inactive	RETA	CTL	FAIR		461256	4771391	SENE	15	36	72
64	Inactive	FEHA	GHS	FAIR		441839	4776604	NWNW	35	37	74
65	Inactive	FEHA	GHS	POOR		445076	4779538	SWNW	19	37	73
66		FEHA	GHS	GONE		445506	4780003	NENW	19	37	73
67	Inactive	FEHA	GHS	GOOD		444709	4778657	SESE	24	37	74
68	Inactive	UNRA	ELM	POOR		459596	4772384	SESE	9	36	72
69	Inactive	GRHO	WIL	GOOD		438730	4766120	NWSW	33	36	74
70	Active	AMKE	CTL	UNKN	Bird Incubating	436192	4764646	NESW	6	35	74
71	Inactive	FEHA	GHS	GOOD		456971	4769699	SENW	20	36	72
New 1	Inactive	FEHA	ROK	REMNANTS		440682	4760599	NWNW	22	35	74
New 2	Inactive	FEHA	GHS	REMNANTS		442959	4768106	SWNE	26	36	74
New 3	Inactive	FEHA	ROK	FAIR		439174	4760930	SESW	16	35	74
New 4	Inactive	FEHA	GHS	POOR		445980	4773047	SWNE	7	36	73
New 5	Inactive	RETA	CTL	POOR		451547	4771947	NENE	15	36	73
New 6	Inactive	SWHA	WIL	POOR		450682	4771642	SENW	15	36	73

[1] ACTI = Active; INAC = Inactive; ACTF = Active nest failed to produce young to fledgling age

[2] FEHA = Ferruginous Hawk; GOEA = Golden Eagle; RETA = Red-tailed Hawk; SWHA = Swainson's Hawk; UNRA = Unknown Raptor; GRHO = Great Horned Owl; AMKE = American Kestrel

[3] WIL = Willow; CTL = Cottonwood-Live; ELM = Elm; ROK = Rock Outcrop; ROP= Rock Pillar; GHS = Ground/Hill Side; CHC = Choke Cherry; BOX = Boxelder; JUN = Juniper

[4] Class I = All downy/no feathers; Class II = Feathers visible/downy patches on body or head; Class III = Completely feathered; Class IV =Fledged

Table 3. List of species observed during wetland/pond surveys within the Smith Ranch-Highland/Reynolds Ranch Permit Area.

Purge Storage Reservior-2

Survey Date	Species Observed
1/25/2013	No Observations
2/25/2013	No Observations
3/25/2013	Canada Goose (33), Redhead (1-male, 1-female), Mule Deer (4-female)
4/23/2013	Eared Grebe (12), Northern Shoveler (3-male, 1-female), Canada Goose (4), Green-winged Teal (7-male, 8-female), Northern Pintail (4-male, 6-female), Mallard (9-male, 7-female), American Coot (45), Redhead (15-male, 15-female), Ring-necked Duck (16-male, 19-female), Canvasback (1-male), Common Goldeneye (1-male, 1-female), American Wigeon (1-male), Ruddy Duck (1-male, 1-female) Northern Harrier (1-male, 1-female), Osprey (1),
5/22/2013	Eared Grebe (13), Ruddy Duck (6-male, 10-female), American Coot (4), Common Merganser (1-male), Red-winged Blackbirds, Cliff Swallows, Western Meadowlarks, Ring-billed Gull (2), Killdeer, Yellow-headed Blackbirds, Northern Shoveler (1-male, 1-female), Green-winged Teal (1-male), Gadwall (2-male, 4-female), Canvasback (1-male, 1-female), Blue-winged Teal (2-male, 4-female), Wilson's Phalarope (1-male), American Wigeon (3-male, 3-female), Lark Buntings,
6/26/2013	American Avocet (1-female), Mourning Dove (1), Lark Buntings, Brewers Blackbirds, Red-winged Blackbirds, Western Grebe (3), Horned Grebe (3), Vesper Sparrows, Western Meadowlarks, Killdeer, Pied-billed Grebe, American Coot (3), Horned Larks, Wood Duck (1-male), Wilson’s Phalarope (3-male, 3-female), Yellow-headed Blackbirds, Brewer's Sparrows.
7/18/2013	Canada Goose (4-adults, 10-juveniles), Horned Larks, Mourning Doves, Red-winged Blackbirds, Killdeer, Lark Buntings, Cliff Swallows, Mallards (3-male, 3-female), Blue-winged Teal (4-males, 2-females), Eared Grebe (3), Western Grebe (1), American Coot (1), Mule Deer (2-male), Brewer's Sparrows, American Wigeon (1-male), Common Nighthawks, Vesper Sparrows, Eastern Kingbird (2), Barn Swallows
8/20/2013	Killdeer, Mallards (2-female), American Wigeon (2-female), Blue-winged Teal (2-male, 2-female), American Coot (2), Red-winged Blackbirds, Cliff Swallows, Western Meadowlarks, Mourning Doves, Mule Deer (1-female, 1-juvenile), Barn Swallows, Lark Buntings
9/17/2013	Mule Deer (4-male, 3-female), Mallard (4-female), Killdeer, Pied-billed Grebe, Western Meadowlark, Northern Harrier (1-male), Barn Swallows, Brewer's Sparrows, Lesser Yellowlegs (1)
10/24/2013	American Coot (13), Mule Deer (2-male, 4-female, 6-juvenile), Ruddy Duck (1-male, 1-female), Eared Grebe (4), Red-winged Blackbirds
11/20/2013	Pied-billed Grebe (1), Redhead (1-male, 1-female), Lesser Scaup (1-male, 1-female), Common Goldeneye (1-male, 2-female)
12/27/2013	Common Goldeneye (3-male, 2-female)

Table 3. Continued.

Purge Storage Reservoir-2 Irrigation Field

Survey Date	Species Observed
1/25/2013	No Observations
2/25/2013	No Observations
3/25/2013	Mule Deer (2-female)
4/23/2013	Horned Larks
5/22/2013	Western Meadowlarks, Mule Deer (8-male, 5-female), Cliff Swallows, Lark Buntings, Vesper Sparrows
6/26/2013	Mule Deer (4-female, 4-juvenile), Western Meadowlarks, Horned Larks, Lark Buntings, Vesper Sparrows, Northern Harrier (1-male)
7/18/2013	Cliff Swallows, Mule Deer (1-male, 4-female, 3-juvenile), Red-winged Blackbirds, Lark Buntings, Brewer's Sparrows, Barn Swallows, Mourning Doves
8/20/2013	Mule Deer (2-male, 4-female, 3-juvenile), Loggerhead Shrike, Mourning Doves, Barn Swallows, Brewer's Sparrows, Horned Larks, Western Meadowlarks,
9/17/2013	Mule Deer (8-female), Western Meadowlarks, Horned Larks, Brewer's Sparrow, Barn Swallow, Red-tailed Hawk
10/24/2013	Mule Deer (1-male, 5-female, 1-juvenile)
11/20/2013	No Observations
12/27/2013	No Observations

Table 3. Continued.

Settling Ponds

Survey Date	Species Observed
1/25/2013	No Observations
2/25/2013	No Observations
3/25/2013	No Observations
4/23/2013	No Observations
5/22/2013	Say's Phoebe
6/26/2013	No Observations
7/18/2013	Barn Swallows, Brewer's Blackbirds, Brewer's Sparrows, Lark Buntings
8/20/2013	Barn Swallows
9/17/2013	Barn Swallows, Brewer's Blackbirds, Feral Cat
10/24/2013	No Observations
11/20/2013	No Observations
12/27/2013	No Observations

Table 4. Swift fox surveys conducted in and around Cameco Resources' Smith Ranch-Highland/Reynolds Ranch Permit Area during 2013.

				Coordinates		Legal Location			
Sighting	Date	Adult	Juvenile	UTM E	UTM N	S	QQ	T	R
1	8/15/2013	1	0	441629	4767438	27	SESE	36	74
2	8/15/2013	1	0	447172	4768774	29	NENW	36	73
Potential Den	8/20/2013	0	0	448032	4770216	20	NENE	36	73
Old Den	8/20/2013	0	0	441854	4767689	27	NESE	36	74

APPENDIX A

2013 Wildlife Assessment Smith Ranch-Highland/Reynolds Ranch 80 Acre Amendment

CAMECO RESOURCES

2013 WILDLIFE ASSESSMENT

SMITH RANCH – HIGHLAND/REYNOLDS RANCH 80 ACRE AMENDMENT

TABLE OF CONTENTS

GENERAL 1
PREVIOUS WILDLIFE INVENTORIES 1
METHODS 2
RESULTS 2
CONCLUSIONS 3

GENERAL

Power Resources, Incorporated (d.b.a. Cameco Resources (Cameco)) is proposing to amend an addition of 80 acres to the Smith Ranch-Highland/Reynolds Ranch (SR-H/REY) In-Situ Uranium Recovery Project in Converse County, Wyoming. The permit boundary consists of areas covered by Wyoming Department of Environmental Quality-Land Quality Division (WDEQ-LQD) permits 603 and 633. The proposed 80 acre amendment is two separate 40 acre parcels that are adjacent to the current WDEQ-LQD Permit 633. 40 acres are located in the SE ¼ of the SE ¼ of Section 7, Township 35 North, Range 74 West, and 40 acres are located in the NE ¼ of the NW ¼ of Section 19, Township 35 North, Range 74 West. The purpose of this assessment is to document any target wildlife species present within the SR-H/REY amendment area and appropriate buffers.

PREVIOUS WILDLIFE INVENTORIES

Multiple baseline wildlife studies have been conducted within the permit areas between 1976 and 2012; as well as annual wildlife monitoring for both the 603 and 633 permits. During 2011 and 2012 additional wildlife studies were conducted within the SR-H/REY permit area as part of a WDEQ-LQD permit renewal process for combining the existing Highland Uranium Permit Area (Permit 603), the Smith Ranch permit area (Permit 633), and the Reynolds Ranch addition. Wildlife surveys conducted included; aerial searches for greater sage-grouse leks, greater sage-grouse lek counts, bald eagle winter roost surveys, aerial and ground raptor nest surveys, mountain plover breeding/nesting habitat surveys, breeding bird count surveys, swift fox spotlight surveys, black-tailed prairie dog surveys, wetland/pond monitoring for wildlife use and opportunistic wildlife observations.

METHODS

Past wildlife survey reports and Wyoming Game and Fish Department (WGFD) records and databases were reviewed to determine if the target wildlife species are present in the 80 acre amendment area. Species surveyed and survey protocol was the same as what is currently being used for annual wildlife monitoring.

RESULTS

After examining WGFD sage-grouse data and the 2011 and 2012 aerial sage-grouse lek search survey, there are no sage-grouse leks within the proposed 80 acre amendment area or two mile buffer. The two mile sage-grouse survey buffer for the 80 acre amendment area is entirely encompassed by the two mile sage-grouse buffer for the 633 Permit Area.

Based on the mountain plover habitat requirements and review of previous presence/absence surveys and suitable habitat surveys, there is no suitable habitat in the proposed 80 acre amendment area and 0.25 mile buffer.

Based on the habitat type and review of previous swift fox suitable habitat surveys, there is no suitable habitat in the proposed 80 acre amendment area and 0.25 mile buffer.

No bald eagle winter roost habitat exists within the 80 acre amendment area and one mile buffer.

The current one mile raptor survey buffer for the 633 permit completely encompasses the two 40 acre parcels and almost completely encompasses the 1 mile survey buffer of the parcels. There is approximately 1.2 acres that is not overlapped by the SR-H/REY permit area one mile raptor survey buffer. A ground survey of the 1.2 acre area verified that no raptor nests were present.

CONCLUSIONS

No specific sage-grouse surveys were conducted for the 80 acre amendment area due to the fact that no new leks were discovered in the past two years of surveys and no leks were present after searching WGFD records. In addition, the combined permit wildlife monitoring plan requires aerial sage grouse surveys to be conducted every three years for the combined permit area and two mile buffer. No unusual or unique habitat communities occur within the SR-H/REY amendment area. The lack of diverse habitat and the small amount of land that is being proposed to be amended will not include any new passerine bird species. The 80 acre amendment area will be rolled into the SR-H/REY annual wildlife monitoring plan and will be included in the 2013 surveys.

Due to the lack of suitable mountain plover habitat, swift fox habitat and bald eagle winter roost habitat, no specific surveys were warranted for these species in the 80 acre amendment area and applicable buffers.

R 75 W | R 74 W | R 73 W | R 72 W

T 37 N | T 36 N | T 35 N

Suicide Hill | Flowing Well | Spring | Suicide Hill | Creek | Dry Fork | Gulch | North Fork | Pine Creek | Springs | Red Hill | Skunk Creek | Patsy Draw | Dry Creek | Flowing Well | Brush Creek | Dry Creek | Fork | Well | Spring | Creek | Springs | Dry Creek | Creek | Dry Draw | Creek | Dry Creek | Fork | Creek | Dry Creek | Fork | Creek | Dry Creek | Fork

PERMIT 633 BOUNDARY

SATELLITE #2
SELENIUM PLANT

SATELLITE #3

SR1 SATELLITE

SR2 SATELLITE

HIGHLAND PROCESSING PLANT & OFFICES

SMITH RANCH CENTRAL PLANT AND OFFICES

K-NORTH

3-EXT.

ROSS ROAD

WASTE DISPOSAL WELL SRHUP #9

WASTE DISPOSAL WELL SRHUP #10

WASTE DISPOSAL WELL SRHUP #11

WASTE DISPOSAL WELL SR#2

WASTE DISPOSAL WELL MORTON #20

PROPOSED WASTE DISPOSAL WELL SRHUP #12

GW-1 (Windmill-Livestock)
GW-2 (Water Well-Livestock)
GW-3 (Windmill-Livestock)
GW-4 (Windmill-Livestock)
GW-5 (Windmill-Livestock)
GW-8 (Windmill-Livestock)
GW-9 (Windmill-Livestock)
GW-10 (Waterwell-Livestock)
GW-11 (Waterwell-Livestock)
GW-12 (Waterwell-Livestock)
GW-20 (Water Well-Domestic)

AS-1 AS-2 AS-3 AS-4 AS-5 AS-6

SW-1 SW-2 SW-3 SW-4 SW-5 SW-6 SW-7 SW-8 SW-9 SW-10

ANNUAL REPORT
MAY 1, 2013– APRIL 30, 2014

2014–2015 PROPOSED AREAS OF DEVELOPMENT
2013–2014 NEW DISTURBANCE AREAS
EROSION CONTROL
AIR SAMPLING STATION
GROUND WATER SAMPLING LOCATION
SURFACE WATER SAMPLING STATION
PERMIT 633 BOUNDARY
PIPELINE / TRUNKLINE
POWERLINES
FENCE
EXISTING TOPSOIL
NEW OR ADDED TOPSOIL
EXISTING CULVERT
NEW CULVERT
STREAM CHANNEL
RESTORATION COMPLETE – AWAITING DECOMMISSIONING
RESTORATION IN PROCESS
RESTORATION PENDING 2014–2015
ACTIVE – PRODUCTION
PROPOSED PRODUCTION
PAVED ROAD
GRAVEL ROAD
TWO TRACK

NOTES:
PLATES 1–1 – 1–15 ARE REFERENCE MAPS SHOWING ENLARGED AREAS OF PLATE 1

CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

SCALE IN FEET
0 1000 2000 4000

PLATE 1

REVISIONS

CAMECO
Cameco Resources
SMITH RANCH – HIGHLAND OPERATION

SMITH RANCH – HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

FIGURE NO. SRAMR-2014 — CURRENT REV. 0

R–74W R–73W R–72W

17

16

20

21

T-36N

T-35N

R-72W

ABANDONDONED
EXXON UNDERGROUND
MINE WORKINGS

A MONITOR
WELL RING

B MONITOR
WELL RING

SATELLITE #1
(CONSTRUCTED 1988)

IRRIGATION
AREA 1

PURGE STORAGE AREA 1

SATELLITE #1
RESERVOIR
(CONSTRUCTED 1998)

INTERCEPTOR
TRENCH

SATELLITE #1

SLUDGE & LINER
REMOVED 2004

EXXON
R&D SITE

A

B

HEADER HOUSE B-4
HEADER HOUSE B-1
HEADER HOUSE B-18
HEADER HOUSE B-2
HEADER HOUSE A-1
HEADER HOUSE B-3
HEADER HOUSE B-20
HEADER HOUSE A-2
HEADER HOUSE B-15
HEADER HOUSE B-16
HEADER HOUSE B-6
HEADER HOUSE B-9
HEADER HOUSE B-10
HEADER HOUSE B-7
HEADER HOUSE B-11
HEADER HOUSE B-12

SATELLITE NO. 2 TO SATELLITE NO. 1 WASTEWATER PIPELINE 25' CORRIDOR

SATELLITE NO. 1 TO RADIUM POND PIPELINE

SATELLITE NO. 1 RADIUM PONDS

IRRIGATION PIPELINE

R.C. UNIT
R.C. ROAD

TOPSOIL PILE NO. 1

TOPSOIL PILE NO. 2

TOPSOIL PILE NO. 3

TOPSOIL PILE NO. 4

TOPSOIL PILE NO. 5

TOPSOIL PILE NO. 6

TOPSOIL PILE NO. 7

TOPSOIL PILE NO. 8

TOPSOIL PILE NO. 9

TOPSOIL PILE NO. 13 SEEDED 1987

2014-2015 PROPOSED AREAS OF DEVELOPMENT

2013-2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

MU or MD-? UNDERLYING MONITOR WELL

MO or MS-? OVERLYING MONITOR WELL

MP-? PRODUCTION MONITOR WELL

XT-? WELL FIELD TREND WELL

XR-? WELL FIELD RESTORATION WELL

OWD OR OWS - ? OLD PUMP TEST WELLS FOR UNDERGROUND WORKINGS

AS-? AIR SAMPLING STATION

GW-? GROUND WATER SAMPLING LOCATION

SW-? SURFACE WATER SAMPLING STATION

PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

EXISTING CULVERT

NEW CULVERT

STREAM CHANNEL

RESTORATION COMPLETE - AWAITING DECOMMISIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014-2015

ACTIVE - PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

INDEX MAP

SCALE IN FEET
0 125 250 500

PLATE 1-1

REVISIONS

NO.	DATE	BY
0	06/27/14	MRH

CAMECO
Cameco Resources
SMITH RANCH - HIGHLAND OPERATION
P.O. Box 1210, Glenrock, Wyoming 82637 Telephone: (307) 358-6541

SMITH RANCH - HIGHLAND
URANIUM PROJECT
PERMIT TO MINE 633

FROM NO: DWG NO: SRHAR-2014 CURRENT REV: 0

PATH NOD: AMEC EXPANS E CALSS II 44.00 HUM83

PM: M. MRH DES: MRH

G:\SURFX_REPORTS_PRT\2014_05\2ED\2ED_FIGURE-PLATE_MAPS2014.DWG

PERMIT 633 B

(Waterwell–Livestock)

SW–9

SW–8

ABANDONDONED
EXXON UNDERGROUND
MINE WORKINGS

18

17

HEADER HOUSE H-5

HEADER HOUSE H-9

HEADER HOUSE H-11

HEADER HOUSE H-12

HEADER HOUSE H-13

HEADER HOUSE H-14

HEADER HOUSE H-15

HEADER HOUSE H-16

H

EXISTING MORTON #1–20 WASTE DISPOSAL WELL

SATELLITE #1 ROAD

H WELLFIELD RESTORATION BYPASS PIPELINE (3" HDPE) (SEEDED 2013)

SATELLITE NO. 2 WASTEWATER PIPELINE

T–36N

T–35N

R–72W

2014–2015 PROPOSED AREAS OF DEVELOPMENT

2013–2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

SPILLS

MU or MD–? UNDERLYING MONITOR WELL

MO or MS–? OVERLYING MONITOR WELL

MP–? PRODUCTION MONITOR WELL

XT–? WELL FIELD TREND WELL

XR–? WELL FIELD RESTORATION WELL

OWD OR OWS – ? OLD PUMP TEST WELLS FOR UNDERGROUND WORKINGS

AS–? AIR SAMPLING STATION

GW–? GROUND WATER SAMPLING LOCATION

SW–? SURFACE WATER SAMPLING STATION

PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

EXISTING CULVERT

NEW CULVERT

STREAM CHANNEL

RESTORATION COMPLETE – AWAITING DECOMMISSIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014–2015

ACTIVE – PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
MAY 1, 2013– APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

INDEX MAP

SCALE IN FEET
0 125 250 500

PLATE 1-2

REVISIONS

CAMECO

Cameco Resources
SMITH RANCH – HIGHLAND
OPERATION
P.O. Box 1210
Glenrock, WY 82637 Telephone: (307) 436-8451

SMITH RANCH – HIGHLAND
URANIUM PROJECT
PERMIT TO MINE 633

DWG NO. SRHAR-2014

CURRENT REV 0

PATH: S:\ENV_REPORTS_PRP\2014_2013\02 FIGS+PLATE MAPS\2014MO

SATELLITE #2
(CONSTRUCTED 1995)

LYSIMETER NEST #2

IRRIGATION

AREA 2

12

LYSIMETER NEST #1

GW-11
(Waterwell-Livestock)

MW-2S

ROCK RIPRAP
ADDED NOV./DEC. 1999

PSR2-EAST

TOPSOIL PILE NO. 57

EAST DIKE
REINFORCED
NOV./DEC. 1999

PURGE STORAGE
RESERVOIR #2
(CONSTRUCTED 1994-1995)

MW-1S

MW-4S

PSR2-SOUTH

MW-3S

ABANDONDONED
EXXON
UNDERGROUND
MINE WORKINGS

GW-

T-36N

H

SW-9

HEADER HOUSE C-3
HEADER HOUSE C-1
HEADER HOUSE C-2
HEADER HOUSE C-4
HEADER HOUSE C-5
HEADER HOUSE C-8
HEADER HOUSE C-6
HEADER HOUSE C-12
HEADER HOUSE C-10
HEADER HOUSE C-9
HEADER HOUSE C-11
HEADER HOUSE C-14
HEADER HOUSE C-16
HEADER HOUSE C-13
HEADER HOUSE C-18
HEADER HOUSE C-20
HEADER HOUSE C-15
HEADER HOUSE C-17

TOPSOIL PILE #15
TOPSOIL PILE #14 (SEEDED 1997)
TOPSOIL PILE #7 (SEEDED 1997)
TOPSOIL PILE #6 (SEEDED 1989)
TOPSOIL PILE #16 (SEEDED 1997)
TOPSOIL PILE #17 (ORIGINALLY #18 SO SOIL TYPES (SEEDED 2000))
TOPSOIL PILE #20 (2004)
TOPSOIL PILE #21 (SEEDED 1997)
TOPSOIL PILE #19 (SEEDED 1997)
TOPSOIL PILE #22 (SEEDED 1997)

H WELLFIELD PRODUCTION PIPELINE

GW-10
(Waterwell-Livestock)

H MONITOR
WELL RING

BONER BUILDING

SATELLITE #2
SELENIUM PLANT

SATELLITE NO. 2 TO SATELLITE NO. 1 WASTEWATER PIPELINE 15' CORRIDOR

13

C WELLFIELD
PRODUCTION
PIPELINES

C

RD #32

HEADER HOUSE H-1
HEADER HOUSE H-3
HEADER HOUSE H-4
HEADER HOUSE H-5
HEADER HOUSE H-9

PUMP #1

TOPSOIL PILE NO. 77
TOPSOIL PILE NO. 76
TOPSOIL PILE NO. 75
TOPSOIL PILE NO. 74
TOPSOIL PILE NO. 67
TOPSOIL PILE NO. 73 (SEEDED 2000)
TOPSOIL PILE NO. 69
TOPSOIL PILE NO. 68
TOPSOIL PILE NO. 53

HM-1 HM-2 HM-3 HM-4 HM-5 HM-6 HM-7 HM-8 HM-9 HM-10 HM-11 HM-35 HM-36 HM-37 HM-38 HM-39 HM-40 HM-41 HM-42 HM-43 HM-44 HM-45

HMP-3 HMO-3 HMI-3
HMP-2 HMO-2 HMI-2
HMP-1 HMO-1 HMI-1
HMO-4 HMU-4 HMP-4
HMP-5 HMO-5
HMP-6 HMO-6
HMP-7 HMO-7 HMU-7

2014-2015 PROPOSED AREAS OF DEVELOPMENT
2013-2014 NEW DISTURBANCE AREAS
EROSION CONTROLS
MU or MD-? UNDERLYING MONITOR WELL
MO or MS-? OVERLYING MONITOR WELL
MP-? PRODUCTION MONITOR WELL
XT-? WELL FIELD TREND WELL
XR-? WELL FIELD RESTORATION WELL
OWD OR OWS - ? OLD PUMP TEST WELLS FOR UNDERGROUND WORKINGS
AS-? AIR SAMPLING STATION
GW-? GROUND WATER SAMPLING LOCATION
SW-? SURFACE WATER SAMPLING STATION
PERMIT 633 BOUNDARY
PIPELINE/TRUNKLINE
POWERLINES
FENCE
EXISTING TOPSOIL
NEW OR ADDED TOPSOIL
EXISTING CULVERT
NEW CULVERT
STREAM CHANNEL
RESTORATION COMPLETE - AWAITING DECOMISSIONING
RESTORATION IN PROGRESS
RESTORATION PENDING 2014-2015
ACTIVE - PRODUCTION
PROPOSED PRODUCTION
PAVED ROAD
GRAVEL ROAD
TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

INDEX MAP

SCALE IN FEET
0 125 250 500

PLATE 1-3

REVISIONS

CAMECO
Cameco Resources
UNITED STATES - WILLARD OPERATION
Willard, NM 87063 Telephone: (505) 854-2551

HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

FSOM NO: DWG NO: 10668-2014 CURRENT REV: 0
PAPER SIZE: ANSI EXPAND E (34.00 X 44.00 INCHES)
G:\CAD_REPORTS_PRP\2014_2015\2D\ FIGURE - PLATE 1&2\PRP2014.DWG

R-73W

R-72W

T-35N

ABANDONDONED
EXXON UNDERGROUND
MINE WORKINGS

COUNTY ROAD #33

WASTE DISPOSAL
WELL SRHUR#9

SATELLITE #2
SELENIUM PLANT

C WELLFIELD
PRODUCTION
PIPELINES

C

HEADER HOUSE C-16
HEADER HOUSE C-13
HEADER HOUSE C-18
HEADER HOUSE C-20
HEADER HOUSE C-15
HEADER HOUSE C-22
HEADER HOUSE C-24
HEADER HOUSE C-17
HEADER HOUSE C-19

HEADER HOUSE E-1
HEADER HOUSE E-3
HEADER HOUSE E-4
HEADER HOUSE E-5
HEADER HOUSE E-6
HEADER HOUSE E-7
HEADER HOUSE E-8
HEADER HOUSE E-9
HEADER HOUSE E-10
HEADER HOUSE E-13
HEADER HOUSE E-14
HEADER HOUSE E-15
HEADER HOUSE E-16
HEADER HOUSE E-17
HEADER HOUSE E-18

E

D

E

D EXT.

HEADER HOUSE D-1
HEADER HOUSE D-2,3,E-12
HEADER HOUSE D-4
HEADER HOUSE D-5
HEADER HOUSE D-6
HEADER HOUSE D-7
HEADER HOUSE D-8

HEADER HOUSE F-1
HEADER HOUSE F-2
HEADER HOUSE F-43
HEADER HOUSE F-11

SW—7
SW—6
GW—8
(Windmill—Livestock)
GW—9
(Windmill—Livestock)

SAT #2 ROAD

HIGHLAND LOOP ROAD

23

T—36N
T—35N
R—73W

HDPE CULVERT
18" CMP CULVERT
TOPSOIL PILE #33 (SEEDED 1998)
TOPSOIL PILE #34 (SEEDED 1998)
TOPSOIL PILE #35 (SEEDED 1998)
TOPSOIL PILE #36 (SEEDED 1998)
TOPSOIL PILE #37 (SEEDED 1997)
TOPSOIL PILE #38 (SEEDED 1997)
TOPSOIL PILE #39 (SEEDED 1997)
TOPSOIL PILE #40 (SEEDED 1997)
TOPSOIL PILE #41 (SEEDED 1997)
TOPSOIL PILE #42 (SEEDED 1997)
TOPSOIL PILE #43 (SEEDED 1997)
TOPSOIL PILE #44 (SEEDED 1997)
TOPSOIL PILE #45 (SEEDED 1997)
TOPSOIL PILE #46 (SEEDED 1997)
TOPSOIL PILE #47 (SEEDED 1997)
TOPSOIL PILE #48 (SEEDED 1997)
TOPSOIL PILE #49 (SEEDED 1997)
TOPSOIL PILE #50 (SEEDED 1997)
TOPSOIL PILE #51 (SEEDED 1997)
TOPSOIL PILE #52 (SEEDED 1997)
TOPSOIL PILE #53 (SEEDED 1997)
TOPSOIL PILE #54 (SEEDED 1997)
TOPSOIL PILE #55 (SEEDED 1997)
TOPSOIL PILE #56 (SEEDED 1997)
TOPSOIL PILE #57 (SEEDED 1997)
TOPSOIL PILE #58 (SEEDED 1997)
TOPSOIL PILE #59 (SEEDED 1997)
TOPSOIL PILE #60 (SEEDED 1997)
TOPSOIL PILE #61 (SEEDED 1997)
TOPSOIL PILE #62 (SEEDED 1997)
TOPSOIL PILE #63 (SEEDED 1997)
TOPSOIL PILE #64 (SEEDED 1997)
TOPSOIL PILE #65 (SEEDED 1997)
TOPSOIL PILE #66 (SEEDED 1997)
TOPSOIL PILE #67 (SEEDED 1997)
TOPSOIL PILE #68 (SEEDED 1997)
TOPSOIL PILE #69 (SEEDED 1997)
TOPSOIL PILE #70 (SEEDED 1997)
TOPSOIL PILE #71 (SEEDED 1997)
TOPSOIL PILE #72 (SEEDED 1997)
TOPSOIL PILE #73 (SEEDED 1997)
TOPSOIL PILE #74 (SEEDED 1997)
TOPSOIL PILE #75 (SEEDED 1997)
TOPSOIL PILE #76 (SEEDED 1997)
TOPSOIL PILE #77 (SEEDED 1997)
TOPSOIL PILE #78 (SEEDED 1997)
TOPSOIL PILE #79 (SEEDED 1997)
TOPSOIL PILE #80 (SEEDED 1997)
TOPSOIL PILE #81 (SEEDED 1997)
TOPSOIL PILE #82 (SEEDED 1997)
TOPSOIL PILE #83 (SEEDED 1997)
TOPSOIL PILE #84 (SEEDED 1997)
TOPSOIL PILE #85 (SEEDED 1997)
TOPSOIL PILE #86 (SEEDED 1997)
TOPSOIL PILE #87 (SEEDED 1997)
TOPSOIL PILE #88 (SEEDED 1997)
TOPSOIL PILE #89 (SEEDED 1997)
TOPSOIL PILE #90 (SEEDED 1997)
TOPSOIL PILE #91 (SEEDED 1997)
TOPSOIL PILE #92 (SEEDED 1997)
TOPSOIL PILE #93 (ORIGINALLY #18 SEE SDR-1 YEAR UNKNOWN) (RELOCATED 2008)
TOPSOIL PILE #94 (SEEDED 1997)
TOPSOIL PILE #95 (SEEDED 1997)
TOPSOIL PILE #96 (SEEDED 1997)
TOPSOIL PILE #97 (SEEDED 1997)
TOPSOIL PILE #98 (SEEDED 1997)
TOPSOIL PILE #99 (SEEDED 1997)
TOPSOIL PILE #100 (SEEDED 1997)
TOPSOIL PILE #101 (SEEDED 1997)
TOPSOIL PILE

J MONITOR WELL RING

F MONITOR WELL RING

PROPOSED AREA OF DEVELOPMENT

J-EXT

D-EXTENSION PRODUCTION AREA

D

F

SATELLITE #3

SAT NO. 3 ACCESS ROAD

TOPSOIL 99 (2012)

F-46E

F-15 Culvert

F-13 Culvert

F-12 Culvert

EXISTING PIPELINE

SW-5

SW-6

GW-6 (Windmill-Livestock)

(Water

(Livestock)

HEADER HOUSE J-2

HEADER HOUSE E-9

HEADER HOUSE E-10

HEADER HOUSE F-1

HEADER HOUSE F-2

HEADER HOUSE F-3

HEADER HOUSE F-4

HEADER HOUSE F-5

HEADER HOUSE F-6

HEADER HOUSE F-7

HEADER HOUSE F-8

HEADER HOUSE F-9

HEADER HOUSE F-40

HEADER HOUSE F-41

HEADER HOUSE F-42

HEADER HOUSE F-43

HEADER HOUSE F-47

HEADER HOUSE F-38

HEADER HOUSE F-33

HEADER HOUSE F-32

HEADER HOUSE F-31

HEADER HOUSE F-29

HEADER HOUSE F-30

HEADER HOUSE F-28

HEADER HOUSE F-34

HEADER HOUSE F-27

HEADER HOUSE F-26

HEADER HOUSE F-25

HEADER HOUSE F-24

HEADER HOUSE F-23

HEADER HOUSE F-19

HEADER HOUSE F-22

HEADER HOUSE F-21

HEADER HOUSE F-20

HEADER HOUSE F-18

HEADER HOUSE F-46

HEADER HOUSE F-36

HEADER HOUSE F-35

HEADER HOUSE F-37

HEADER HOUSE F-44

HEADER HOUSE F-16

HEADER HOUSE F-14

HEADER HOUSE F-13

HEADER HOUSE F-15

HEADER HOUSE F-12

HEADER HOUSE F-11

TOPSOIL PILE #37 (SEEDED 1997)

TOPSOIL PILE #38 (SEEDED 1997)

TOPSOIL PILE #34 (SEEDED 1998)

TOPSOIL PILE #35 (SEEDED 1998)

TOPSOIL PILE #36 (SEEDED 1998)

TOPSOIL PILE #39 (SEEDED 1999)

TOPSOIL PILE #40 (SEEDED 1999)

TOPSOIL PILE #56 (SEEDED 1999)

TOPSOIL PILE #57 (SEEDED 1999)

TOPSOIL PILE #58 (SEEDED 1999)

TOPSOIL PILE #59 (SEEDED 1999)

TOPSOIL PILE #60 (SEEDED 1999)

TOPSOIL PILE #61 (SEEDED 1999)

TOPSOIL PILE #70 (SEEDED 1999)

TOPSOIL PILE #42 (SEEDED 1997)

TOPSOIL PILE #41 (SEEDED 1997)

TOPSOIL PILE #43 (SEEDED 1997)

TOPSOIL PILE #44 (SEEDED 1997)

TOPSOIL PILE #46 (SEEDED 1997)

TOPSOIL PILE #46A (SEEDED 1997)

TOPSOIL PILE #47 (SEEDED 1997)

TOPSOIL PILE #48 (SEEDED 1997)

TOPSOIL PILE #49 (SEEDED 1996)

TOPSOIL PILE #50 (SEEDED 1996)

TOPSOIL PILE #51 (SEEDED 1996)

TOPSOIL PILE #52 (SEEDED 1996)

TOPSOIL PILE #53 (SEEDED 1996)

TOPSOIL PILE #54 (SEEDED 1996)

TOPSOIL PILE #55 (SEEDED 1996)

TOPSOIL PILE #86 (SEEDED 2003)

TOPSOIL PILE NO. 91 (SEEDED 2006)

PAD (SEEDED 2006)

FENCED TOPSOIL PILE #39 (SEEDED 1997)

FENCED TOPSOIL PILE #40 (SEEDED 1997)

FENCED TOPSOIL PILE #52 (SEEDED 1996)

FENCED TOPSOIL PILE #53 (SEEDED 1996)

VEGETATED TOPSOIL PILE

MP-1526

MO-1526

MU-1526

2014-2015 PROPOSED AREAS OF DEVELOPMENT

2013-2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

SPILLS

MU or MD-? UNDERLYING MONITOR WELL

MO or MS-? OVERLYING MONITOR WELL

MP-? PRODUCTION MONITOR WELL

XT-? WELL FIELD TREND WELL

XR-? WELL FIELD RESTORATION WELL

OWD OR OWS - ? OLD PUMP TEST WELLS FOR UNDERGROUND WORKINGS

AS-? AIR SAMPLING STATION

GW-? GROUND WATER SAMPLING LOCATION

SW-? SURFACE WATER SAMPLING STATION

PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

STREAM CHANNEL

RESTORATION COMPLETE - AWAITING DECOMISSIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014-2015

ACTIVE - PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

INDEX MAP

SCALE IN FEET
0 125 250 500

PLATE 1-5

REVISIONS

CAMECO

SMITH RANCH - HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

DWG. NO. SRHR-2014

CURRENT REV. 0

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T-36N

T-35N

R-73W

GW-9
(Windmill-Livestock)

SAT #2
ROAD

ROAD

BOOSTER STATION

HEADER HOUSE D-4

HEADER HOUSE D-2,3,E-12

HEADER HOUSE D-1

HEADER HOUSE E-13

TOPSOIL PILE #23 (SEEDED 1997)

TOPSOIL PILE #24 (SEEDED 1997)

TOPSOIL PILE #25 (ADDED 2010)

MINE UNIT D/E STAGING AREA (2010)

GW-8
(Windmill-Livestock)

HEADER HOUSE E-15

TOPSOIL PILE #26 (SEEDED 1997)

TOPSOIL PILE #27 (SEEDED 1997)

23

HIGHLAND LOOP ROAD

WELLFIELD PIPELINE CORRIDOR (SEEDED 2004)

WATER WELL

TOPSOIL PILE NO. 87 (SEEDED 2004)

I

HEADER HOUSE I-1

HEADER HOUSE I-2

HEADER HOUSE I-3

HEADER HOUSE I-4

HEADER HOUSE I-5

HEADER HOUSE I-6

TOPSOIL PILE NO. 88 (SEEDED 2005)

TOPSOIL PILE NO. 89 (SEEDED 2005)

PRIVATE HUP ACCESS ROAD

WATER WELL

24

25

26

27

T-36N

T-35N

R-73W

R-72W

VOLLMAN DISPOSAL WELL DETAIL

SECTION 27, TOWNSHIP 36N, RANGE 73W
SCALE: NTS

AS-3

GW-20
(Water Well-Domestic)

STATE HWY. #93

WASTE DISPOSAL WELL VOLLMAN 33-27

2014-2015 PROPOSED AREAS OF DEVELOPMENT

2013-2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

SPILLS

MU or MD-? UNDERLYING MONITOR WELL

MO or MS-? OVERLYING MONITOR WELL

MP-? PRODUCTION MONITOR WELL

XT-? WELL FIELD TREND WELL

XR-? WELL FIELD RESTORATION WELL

OWD OR OWS - ? OLD PUMP TEST WELLS FOR UNDERGROUND WORKINGS

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PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

STREAM CHANNEL

RESTORATION COMPLETE - AWAITING DECOMMISSIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014-2015

ACTIVE - PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
INDEX OF 25 FEET
INTERMEDIATE OF 5 FEET

INDEX MAP

PLATE 1-6

SCALE IN FEET
0 125 250 500

REVISIONS

NO.	DATE	BY

CAMECO
Cameco Resources
SMITH RANCH - HIGHLAND OPERATION
Glenrock, WY 82637 Telephone: (307) 358-6541

SMITH RANCH - HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

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K-NORTH

J

GW-32

GW-19

HEADER HOUSE K-16

HEADER HOUSE K-15

HEADER HOUSE K-14

HEADER HOUSE K-13

HEADER HOUSE K-12

HEADER HOUSE K-11

HEADER HOUSE K-10

HEADER HOUSE K-1

HEADER HOUSE J-1

HEADER HOUSE J-2

HEADER HOUSE J-3

HEADER HOUSE J-4

HEADER HOUSE J-5

HEADER HOUSE J-6

HEADER HOUSE J-7

J MONITOR WELL RING

TOPSOIL 26 (2003)

TOPSOIL 27 (2003)

CONNECTING ROAD (2003)

MU K STAGING AREA (2006)

MU K FENCE

K-1 (12")

K-2 (18")

K-3 (14")

2-1 (2-30")

2-2 (1-18" & 1-12")

OWD-9

T-36N

T-35N

R-74W

R-73W

2014-2015 PROPOSED AREAS OF DEVELOPMENT

2013-2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

MU or MD-? UNDERLYING MONITOR WELL

MO or MS-? OVERLYING MONITOR WELL

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PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

STREAM CHANNEL

RESTORATION COMPLETE - AWAITING DECOMMISSIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014-2015

ACTIVE - PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

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INDEX MAP

SCALE IN FEET
0 125 250 500

PLATE 1-7

REVISIONS

CAMECO

Cameco Resources
SMITH RANCH - HIGHLAND
OPERATION

SMITH RANCH-HIGHLAND
URANIUM PROJECT
PERMIT TO MINE 633

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EXT.

IIT 3-EXT
R HOUSE
S ROAD

TOPSOIL 24 (2003)

TOPSOIL 23 (2003)

25

TOPSOIL 22 (2003)

2-5 (12")

WELLFIELD 2 FENCE

HEADER HOUSE 2-2

HEADER HOUSE 2-4

HEADER HOUSE 2-5

HEADER HOUSE 2-3

HEADER HOUSE 2-1

2

DUAL 4" PIPELINE

OWS-5

OWD-5

2-6 (12")

MINE UNIT 2 STAGING AREA

TOPSOIL 5 (1983 & 2003)

0-12 (18")

OWD-4

OWS-4

0-13 (18")

TRUNKLINE #1

OXYGENLINE

TOPSOIL 8 (1996)

TOPSOIL 19 (2001)

SPOIL (1997)

WW 35-1

DISPOSAL PIPELINE

SAL NO.1

0-12 (12")

0-16 (12")

0-14 (12")

0-15 (12")

0-4 (20")

0-3 (16")

0-2 (16")

TOPSOIL 4 (1968)

OWD-6

OWS-3

OWD-3

TOPSOIL 2 (1968)

TOPSOIL 3 (1968)

IMPOUNDMENT PONDS

GASOLINE (5,000 gal)

DIESEL (5,000 gal)

SULFURIC ACID Tanks (8500 gal, 6630 gal)

CO2 TANK (50 TONS)

HYDROGEN PEROXIDE (7,000)

AMMONIA TANK (18297 gal)

PROPANE TANK

USED OIL STORAGE

WATER TANKS

CONTROLLED AREA

TOPSOIL 17 (2000)

FACILITY FIRE WATER SYSTEM (WEATHER STATION LOCATED ON SOUTH EAST CORNER OF BUILDING)

AS-2 C & D LAND FILL

Bone Yard

S-1 (SOIL SAMPLE)

POWERLINE

ROAD TO WELLFIELD 1

HEADER HOUSE 1-1

HEADER HOUSE 1-2

HEADER HOUSE 1-3

HEADER HOUSE 1-4

1

TOPSOIL 9 (1997)

1-1 (2-24")

HEADER HOUSE 1-5

HEADER HOUSE 1-6

WELLFIELD 1 FENCE

EXISTING RANCH ROAD

WELLFIELD 3 FENCE

36

TOPSOIL 51 (2008)

TOPSOIL 52 (2008)

K-3 (12")

K-4 (12")

K-5 (12")

HEADER HOUSE K-1

HEADER HOUSE K-2

HEADER HOUSE K-3

HEADER HOUSE K-4

HEADER HOUSE K-5

HEADER HOUSE K-6

HEADER HOUSE K-7

HEADER HOUSE K-8

HEADER HOUSE K-9

MU K FENCE

K

30

05/05/2015 EXTENT OF RELEASE EST. AREA=536 SQFT 0.37 ACRES

OWD-2

OWS-1

OWD-1

T-36N

T-35N

R-74W

R-73W

2014-2015 PROPOSED AREAS OF DEVELOPMENT

2013-2014 NEW DISTURBANCE AREAS

EROSION CONTROLS

SPILLS

MU or MD-? UNDERLYING MONITOR WELL

MO or MS-? OVERLYING MONITOR WELL

MP-? PRODUCTION MONITOR WELL

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PERMIT 633 BOUNDARY

PIPELINE/TRUNKLINE

POWERLINES

FENCE

EXISTING TOPSOIL

NEW OR ADDED TOPSOIL

STREAM CHANNEL

RESTORATION COMPLETE - AWAITING DECOMMISSIONING

RESTORATION IN PROGRESS

RESTORATION PENDING 2014-2015

ACTIVE - PRODUCTION

PROPOSED PRODUCTION

PAVED ROAD

GRAVEL ROAD

TWO TRACK

ANNUAL REPORT
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INDEX MAP

PLATE 1-8

SCALE IN FEET
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REVISIONS

CAMECO

Cameco Resources
SMITH RANCH - HIGHLAND OPERATION

SMITH RANCH-HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

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3-EXT.

MINE UNIT 3-EXT
HEADER HOUSE
ACCESS ROAD

GW-4
(Windmill-Livestock)

GW-3
(Windmill-Livestock)

GW-2
(Water Well-Livestock)

SW-3

ROSS ROAD

WASTE DISPOSAL WELL NO.2

WASTE DISPOSAL WELL #2

FENCE

SATELLITE SR1

WATER WELL

BOOSTER STATION

EXISTING RANCH ROAD

WELLFIELD 3 & ACCESS ROAD

WELLFIELD 2 FENCE

DUAL 4" PIPELINE

TRUNKLINE #1

DRILLING MUD STORAGE AREA

WASTE DISPOSAL WELL NO.1

WW 35-1

OWD-8

OWD-5

OWS-5

HEADER HOUSE 3-1
HEADER HOUSE 3-2
HEADER HOUSE 3-3
HEADER HOUSE 3-4
HEADER HOUSE 3-5
HEADER HOUSE 3-6
HEADER HOUSE 3-7
HEADER HOUSE 3-8
HEADER HOUSE 3-9
HEADER HOUSE 3-10
HEADER HOUSE 2-4
HEADER HOUSE 2-5

TOPSOIL 10 (1997)
TOPSOIL 13 (1997)
TOPSOIL 80 (2012)
TOPSOIL 85 (2013)
TOPSOIL 7 (1983)
TOPSOIL 6 (1983 & 1997)
TOPSOIL 5 (1983 & 2003)
TOPSOIL 8 (1996)
TOPSOIL (2001)
SPOIL (1997)
TOPSOIL (2003)

3-9 (18")
3-10 (12")
3-11 (18")
3-8 (18")
3-12 (18")
3-7 (18")
3-4 (24")
3-6 (18")
3-3 (12")
3-1 (12")
0-19 (24")
0-18 (24")
0-17 (12")
0-16 (12")
0-15 (18")
2-5 (12")
2-6 (12")

7
3
2
8

T-36N
T-35N
R-74W

PROPOSED AREA OF DEVELOPMENT

2014-2015 PROPOSED AREAS OF DEVELOPMENT
2013-2014 NEW DISTURBANCE AREAS
EROSION CONTROLS
MU or MD-? UNDERLYING MONITOR WELL
MO or MS-? OVERLYING MONITOR WELL
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AS-? AIR SAMPLING STATION
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PERMIT 633 BOUNDARY
PIPELINE/TRUNKLINE
POWERLINES
FENCE
EXISTING TOPSOIL
NEW OR ADDED TOPSOIL
STREAM CHANNEL
RESTORATION COMPLETE - AWAITING DECOMMISSIONING
RESTORATION IN PROGRESS
RESTORATION PENDING 2014-2015
ACTIVE - PRODUCTION
PROPOSED PRODUCTION
PAVED ROAD
GRAVEL ROAD
TWO TRACK

ANNUAL REPORT
MAY 1, 2013- APRIL 30, 2014

NOTE: CONTOUR INTERVALS:
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SCALE IN FEET
0 125 250 500

PLATE 1-9

CAMECO

SMITH RANCH-HIGHLAND URANIUM PROJECT
PERMIT TO MINE 633

DWG. NO. SRHA-2014
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