

# Scope of Work

## Traditional Cultural Properties (TCP) Survey and Budget

### Ross in situ leach Uranium Recovery (ISR) Project

#### Oshoto, Wyoming

November 14, 2011



#### Introduction

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Peninsula Energy Limited (Peninsula) is an emerging ASX listed Uranium producer with assets in the USA and South Africa (ASX Code: PEN). Its primary focus is advancing the Lance ISR Projects, located in the Powder River Basin, Wyoming USA, through to production, and to take the Karoo Projects in South Africa further up the development curve. The Company is targeting production of 1.5mlbs of uranium per annum from Wyoming, commencing in 2012 with a planned additional target of 3mlbs of Uranium from South African commencing in 2016/17.

The Company has a strong management team which has significant experience in exploration and mine development in both the USA and Africa. The Company has a healthy treasury with \$25m in cash, a \$100m equity line with its major shareholder and no debt. Peninsula is also well supported by its shareholders that include large institutional investors in both Europe and Australia.

Peninsula Energy (ASX: PEN) has updated the market on the company's operations at the Lance Project in Wyoming, U.S.

Peninsula said that the positive preliminary results at Ross are being expanded to economic assessment of the entire Lance Project.

Results from a full Definitive Feasibility Study (DFS) are pending to be published, following completion of the owners review, optimization work and an expanded economic assessment.

The initial DFS was focused exclusively on the Ross Project Area (Ross Permit Area and Ross Amendment Area), using the JORC Measured and Indicated resources of 8.95 million pounds of U308 delineated to date within that area.

Peninsula has now announced that the preliminary results of the Initial DFS are positive, which is particularly encouraging as the Ross Project Area covers only a small area and resource base of the larger Lance project.

### **Next step for Peninsula**

Peninsula has now decided to expand the Initial DFS to cover the full Lance project area (Expanded DFS), including the JORC Resources of 41.4 million pounds and a proportion of the additional mineralized potential that has been modeled but is unclassified at this time.

The company expects that this will maximize the operational capacity and life of the project, and also present a more relevant assessment of the full economic value of the entire project.

At the same time as completing the Expanded DFS, Peninsula will conduct its owner's review of the work performed to date, including a rigorous review of the major cost areas and well field design optimization.

Given that the longest lead time in the Lance development is the permitting process, Peninsula enjoys the scope for this expansion and optimization work without causing delay to the overall project's timing.

Peninsula will release results for the Expanded DFS as soon as completed.

### **The Lance drilling program**

The Lance drilling program continues to identify high grade mineralization.

Significant Intercepts include:

- 11.8 meters at 436ppm U<sub>3</sub>O<sub>8</sub>, including 2.9 meters at 890 ppm U<sub>3</sub>O<sub>8</sub> from 197 meters;
- 7 meters at 390ppm U<sub>3</sub>O<sub>8</sub> from 131 meters;
- 5 meters at 382ppm U<sub>3</sub>O<sub>8</sub> from 147 meters; and
- 1.7 meters at 1,080ppm U<sub>3</sub>O<sub>8</sub> from 77 meters.

Peninsula said that exploration drilling north of the Ross Permit Area extends roll front mineralization, with results showing thick intervals of uranium mineralization.

## **Drilling continues to add to resource the inventory**

Ross ISL uranium project receives Air Quality Permit: On Sep. 28, 2011, Peninsula Energy Limited announced that the Division of Air Quality of the Wyoming Department of Environmental Quality (WDEQ/AQD) has completed final review of Strata Energy Inc's application to construct the Ross ISR Project. Approval to construct the Ross ISR Project as described in the application has now been granted.

The Bureau of Land Management (BLM) Newcastle Field Office announces the availability of a Plan of Operations review on the proposed Ross uranium in situ recovery (ISR) mining project approximately 20 miles north of Moorcroft, Wyo. The 30-day public review and comment period runs through August 30, 2011.

On June 30, 2011, NRC announced the availability of the license application for the Ross uranium recovery project. Requests for a hearing or leave to intervene must be filed by September 12, 2011.

Federal Register: July 13, 2011 (Volume 76, Number 134) p. 41308-41312

On April 14, 2011, Peninsula Energy Limited announced approval from the Wyoming Department of Environmental Quality (WDEQ) for the construction and testing of Underground Injection Control (UIC) Class 1 wells at the Lance In-Situ Recovery (ISR) Uranium Project, Wyoming, USA.

The UIC permit, which was issued to Peninsula's wholly owned subsidiary, Strata Energy Inc (Strata) on 13 April 2011, is the first of the three main licenses the Company requires to be granted for it to commence mining operations at Lance. This deep disposal well (DDW) license allows Strata to construct and test five such wells in the Ross Permit area. The DDWs will be used to inject low-level wastes into an isolated rock formation at a depth in excess of 8,000 feet [2,438 m] below the surface.

On January 13, 2011, Peninsula Energy Ltd submitted to the Land Quality Division of the Wyoming Department of Environmental Quality an application for a permit to mine.

On January 4, 2011, Peninsula Energy Ltd submitted to NRC an application requesting authorization to construct and operate an in-situ uranium recovery (ISR) facility at its Ross ISR Project, located near Oshoto, in northeastern Wyoming. The proposed facility would consist of wellfields, pipelines and a central plant to process extracted uranium into yellowcake. Peninsula is targeting commencement of uranium mining at the Ross Project in 2012. (Peninsula Jan. 4, 2011)

On June 28, 2011, NRC staff notified Peninsula that it has now completed the acceptance review and found the application sufficient for a detailed technical and environmental review.

The Bureau of Land Management (BLM) Newcastle Field Office has announced the availability of a Plan of Operations review on the proposed Ross uranium in situ recovery (ISR) mining project approximately 20 miles north of Moorcroft, Wyo.

Strata Energy proposes to conduct uranium exploration drilling, ISR mining and reclamation operations on 40 acres of public lands, with the proposed total surface disturbance of less than five acres. In 1978, a small scale pilot ISR mining project was conducted by Nu-Beth JV within the proposed Ross Project boundary, the pilot project operated for approximately two years.

The Strata Energy Plan of Operations was submitted to the BLM on Jan. 20, 2011 and deemed complete as per the content requirements of 43 CFR 3809.401 on April 15, 2011. The Plan of Operations mining and reclamation plan is available for review at the BLM-Newcastle Field Office, 1101 Washington Boulevard, Newcastle, Wyo.

The 30-day public review and comment period, as afforded per 43 CFR 3809.411(c), ran from Aug. 1 through Aug. 30, 2011. Comments were addressed to Rick Miller - Field Manager, BLM - Newcastle Field Office, 1101 Washington Boulevard, Newcastle, WY, 82701.

### **United States Nuclear Regulatory Commission**

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The designated lead federal agency for the Ross project is the U.S. Nuclear Regulatory Commission (NRC), the NRC was created as an independent agency by Congress in 1974 to enable the nation to safely use radioactive materials for beneficial civilian purposes while ensuring that people and the environment are protected. The NRC regulates commercial nuclear power plants and other uses of nuclear materials, such as in nuclear medicine, through licensing, inspection and enforcement of its requirements.

The NRC is headed by five Commissioners appointed by the President and confirmed by the Senate for five-year terms. One of them is designated by the President to be the Chairman and official spokesperson of the Commission.

The NRC is headed by a five-member Commission. The President designates one member to serve as Chairman and official spokesperson. The Commission as a whole formulates policies and regulations governing nuclear reactor and materials safety, issues orders to licensees, and adjudicates legal matters brought before it. The

Executive Director for Operations (EDO) carries out the policies and decisions of the Commission and directs the activities of the program offices.

The offices reporting to the EDO ensure that the commercial use of nuclear materials in the United States is safely conducted. As part of the regulatory process, the four regional offices conduct inspection, enforcement, and emergency response programs for licensees within their borders.

The NRC has an annual budget of about \$1billion and employs about 4,000 people located in five primary locations in the United States.

As outlined in 36 CFR 800.8, "Coordination with the National Environmental Policy Act," the NRC plans to coordinate compliance with Section 106 of the National Historic Preservation Act (NHPA) in meeting the requirements of the National Environmental Policy Act of 1969 (NEPA). Pursuant to 36 CFR 800.8(c), the NRC intends to use its process and documentation for the preparation of the EIS on the proposed action to comply with Section 106 of the NHPA in lieu of the procedures set forth at 36 CFR 800.3 through 800.6.

### **Bureau of Land Management Program Objectives**

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The BLM has developed a cultural resources program designed to inventory, evaluate, and manage cultural resources on BLM-administered public land and in areas of BLM responsibility. The BLM management of cultural resources (archaeological, historic, and socio-cultural properties) is in accordance with the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, and other applicable legislation.

### **Identification of Cultural Resources**

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The BLM requires cultural resource inventories for actions with federal responsibility that include surface disturbance as a part of the action. The purpose of inventories is to identify cultural resources prior to any ground disturbing activity. This way, sites can be protected through project redesign or other mitigation measures prior to any threat of disturbance. Numerous laws and regulations mandate this policy.

Three classes of cultural resource inventory have been established; Class III is the most intensive.

- ✦ Class I inventories are completed with the use of existing data from cultural resource inventory files maintained by both the BLM and the Wyoming SHPO. Class I inventories are conducted at two different levels: at the planning stage of an EIS to produce a regional overview; and at the site-specific level for individual

proposed projects to determine if previous cultural resource inventories have been conducted within the area of potential effect (APE). The purpose of Class I inventories are to provide cultural resource specialists and managers with an informed basis for understanding the nature of the archaeological record within the area in question.

- ✦ Class II inventories are statistically based sample surveys designed to aid in characterizing the probable density, diversity, and distribution of cultural properties in the area, to develop and test predictive models, and to answer appropriate research questions. Within individual sample units, survey aims, methods, and intensity are the same as those applied in Class III survey. Class II survey may be conducted in several phases, using different sample designs, to improve statistical reliability.
- ✦ Class III intensive field surveys are conducted by professionals through pedestrian survey of an entire target area. The intent of a Class III inventory is to locate and record all historic properties and is consistent with standards in the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register [FR] 44716). Class III inventories conform to the prevailing professional survey standards for the region involved, provided that the regional standards meet or exceed the Secretary's Standards and Guidelines. Because Class III survey is designed to produce a total inventory of the cultural properties observable within the target area, once it has been completed no further survey work should be needed in the target area as long as the current standards are met. Areas with a high probability of containing buried cultural materials or known cultural materials may require additional work of professional monitoring and/or data recovery excavations. Areas that require additional work are analyzed on a case-by-case basis, depending on the proposed action and the types of cultural resources present in the project area.

### **BLM Jurisdiction on Privately Owned and/or Split Estate Lands (including the checkerboard land pattern) – Survey**

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The BLM frequently authorizes permits and ROWs, or provides approvals for actions on federal lands in which portions of the overall project may take place on nonfederal lands or the federal action may have contingent or cumulative effects on nonfederal lands. Before the BLM can authorize (through permit, license, etc.) any project which may adversely affect significant cultural resources (i.e., historic properties), the BLM has the legal responsibility to take into account the effects of its actions on these resources. In order for the BLM to fully consider the effects of its actions, it also has the responsibility to gather the information necessary to know what cultural resources may be affected,

evaluate the resources for eligibility for inclusion in the National Register of Historic Places (NRHP), and mitigate adverse affects to historic properties where possible.

If a project requires the use of federally owned surface lands as well as privately owned surface lands, there are two authorities that require federal agencies to apply the same NHPA Section 106 compliance standards to private lands as they do to federal lands. The regulations at 36 CFR, Part 800.4(b) require the federal agency to "take the steps necessary to identify historic properties within the area of potential effect." That this includes both federal and nonfederal lands is implicit throughout the statute and the regulations, since the regulatory definition of "area of potential effect" is "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties" [36 CFR, Part 800.16(d)]. It makes no distinction between federal and nonfederal lands. More explicit, however, is EO No. 11593, entitled "Protection and Enhancement of the Cultural Environment." Under the EO, Section 1(3) it states that all Federal agencies: "...in consultation with the ACHP, institute procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures and objects of historical, architectural, or archaeological significance." The BLM's responsibility for inventory, evaluation, and protection of cultural properties on lands outside the BLM administrative jurisdiction is limited according to the degree to which the Field Manager's decisions determine or control the location of surface-disturbing activities on those lands.

The BLM educates this policy to project proponents, who in turn are responsible for providing all of the information the BLM requires for making informed decisions. If cultural resource data is lacking from private lands so that the BLM authorized officer cannot make an informed decision, the BLM cannot allow the undertaking to proceed. Thus, it is the responsibility of the project proponent to acquire the appropriate information.

Site Management As stated above, the BLM has multiple authorities for requiring cultural resource inventories on private lands. This jurisdiction only holds forth with federal undertakings. Cultural resources that are located on private lands are recorded for the permanent record and appropriate mitigation measures are applied, in consultation with the private landowner. This jurisdiction comes from the requirement that the federal agency must take into account its effects on all historic properties. Once the federal undertaking has been fully processed, the federal responsibility for an historic property is completed. The historic property remains under the ownership of the landowner, thus the BLM has no control over the historic property outside of the venue of a federal undertaking.

## **Evaluation of Cultural Resource Sites Criterion for Eligibility**

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The NRC must evaluate the significance of cultural resources identified during inventory in consultation with the Wyoming SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resource properties may be considered eligible for inclusion in the National Register if they meet one or more of the following criteria identified in 36 CFR 60.4:

- ✦ Criterion A: An historic property is associated with an event or events that have made a significant contribution to the broad patterns of America's history.
- ✦ Criterion B: An historic property is associated with the lives of persons significant to our past.
- ✦ Criterion C: An historic property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic value or represents a significant and distinguishable entity whose components may lack individual distinction.
- ✦ Criterion D: An historic property has yielded or may be likely to yield information important in prehistory or history.

To facilitate evaluation of cultural resource values in Wyoming, the BLM has devised guidelines for determining the eligibility of archaeological and historical sites and historic trails (BLM Manual 8110.32). The guidelines supplement the National Register criteria for evaluation (36 CFR 60.4) and provide consistency across all BLM jurisdictions. Application of the guidelines ensures that significant cultural resources are recognized and managed accordingly.

## **Aspects of Integrity**

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Integrity is the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the National Register criteria, but it also must have integrity. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance.

Historic properties either retain integrity (this is, convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity.

To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to



convey its significance. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant.

- ✦ Location: The place where the historic property was constructed or the place where the historic event occurred.
- ✦ Design: The combination of elements that create the form, plan, space, structure, and style of a property.
- ✦ Setting: The physical environment of an historic property.
- ✦ Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form an historic property.
- ✦ Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- ✦ Feeling: The property's expression of the aesthetic or historic sense of a particular period of time.
- ✦ Association: The direct link between an important historic event or person and an historic property.

### **Contributing/Non-contributing to National Register of Historic Places' Eligibility**

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Properties that encompass large areas can be deemed to have contributing and non-contributing portions. Contributing portions are seen to retain integrity of the values for which the property is considered eligible for the NRHP. Non-contributing portions are identified portions of the property which are not deemed to retain the integrity of values which would render the property eligible for the NRHP. The determination of contributing versus non-contributing portions of an eligible property can be made at any time after adequate evaluation has been conducted.

### **BLM Use Allocations**

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After determination of eligibility, significant cultural resource properties are further evaluated for assignment to one or more use categories. The BLM has established six use categories as follows:

1. Scientific Use. This category applies to any cultural property determined to be available for scientific or historical study using currently available research techniques, including methods that would result in the property's physical alteration or destruction. Recommendations to allocate individual properties to this use must be based on documentation of the kinds of data the property is

thought to contain and the data's importance for pursuing specified research topics.

2. Conservation for Future Use. A cultural property included in this category is deemed worthy of segregation from all other land or resource uses, including cultural resource uses, which threaten the maintenance of its present condition or setting, and will remain in this use category until specified provisions are met in the future.
3. Traditional Use. This category is to be applied to any cultural resource known to be perceived by a specified social and/or cultural group as important in maintaining the cultural identity, heritage, or well being of the group. Cultural properties assigned to this category are to be managed in ways that recognize the importance ascribed to them and seek to accommodate their continuing traditional use.
4. Public Use. This category may be applied to a cultural property found to be appropriate for use as an interpretive exhibit in place, or for related educational and recreational uses by members of the general public.
5. Experimental Use. This category may be applied to a cultural property judged well-suited for controlled experimental study, to be conducted by the BLM or others, concerned with the techniques of managing cultural properties, which would result in the property's alteration, possibly including loss of integrity and destruction of physical elements. It should not be applied to cultural properties with strong research potential, traditional cultural importance, or good public use potential, if it would significantly diminish those uses.
6. Discharged from Management. This category is assigned to cultural properties that have no remaining, identifiable use. Most often these are prehistoric and historic archaeological properties, such as small surface scatters of artifacts or debris, whose limited research potential is effectively exhausted as soon as they have been documented. Properties discharged from management remain in the inventory, but they are removed from further management attention and do not constrain other land uses.

When a cultural resource property is assigned to one or more use categories, a decision is made pertaining to the management of that property. The criteria and guidelines for the evaluation of cultural resources and the assignment of significant cultural resource properties to specific use categories would remain unchanged under all the alternatives addressed in this plan.

## **Determinations of Effect.**

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Once the eligibility of an historic property has been determined, the NRC must then determine the effects a proposed undertaking may have on a cultural resource. Standard measures for reducing effects are to be considered part of the project design. Determination of effect must be made after standard treatment measures and best management practices have been integrated into the project design. The final project design must incorporate all agreed upon treatment measures and be included in the Conditions of Approval or components of the Surface Use Plan, Plan of Operations, or Plan of Development.

- A. No Historic Properties Affected If no cultural resource sites eligible for inclusion in the NRHP are present in the proposed project area, there are historic properties present but the undertaking will have no effect upon them, or a proposed project will not be visible from an historic property or there is no contrast between the project and the setting, the NRC will find that the undertaking has no potential to affect historic properties.
- B. No Historic Properties Adversely Affected If a proposed project will cause effects to an historic property, but the effects will not diminish the aspects of integrity nor the characteristics that make the property eligible for inclusion in the NRHP, only non-contributing portions of historic properties will be affected, or if setting is an important aspect of integrity for an historic property and the project will cause a weak contrast, the NRC will find that the undertaking has no potential to adversely affect historic properties.
- C. Historic Properties Adversely Affected An adverse effect is found when an undertaking may alter, directly, or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects cause by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

## **Consultation.**

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SHPO Consultation according to ACHP Guidelines and the NRC, the NRC is required to consult with the Wyoming SHPO on eligibility and effects to each cultural property. In an existing relationship, the Wyoming BLM and Wyoming SHPO have developed a Protocol for consultation that serves to streamline the process and reduce consultation

time frames from the guidelines set forth in the 36 CFR 800 regulations. Under the Protocol between the Wyoming BLM and the Wyoming SHPO, those sites recommended as eligible for listing under Criteria A, B, or C or the setting is an important aspect of integrity requires case-by-case consultation with the Wyoming SHPO. Additionally, the BLM has implied concurrence for determining eligibility and effects for sites eligible for listing under Criterion D of the NHPA. Determination of effects to sites follows the criteria outlined in 36 CFR 800.5.

### **Native American Consultation.**

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In addition to consultation with the Wyoming SHPO office, the NRC has conducted Native American Consultation in compliance with Section 106 of the NHPA, the American Indian Religious Freedom Act of 1978, and EO No. 13007. The BLM has also created a process for conducting Native American consultation for federal undertakings, as described in BLM Manual 8120 and BLM Manual H-8120-1. The BLM has worked extensively with tribes who have traditional ties to the region to establish a protocol for consultation. Consultation with Native American tribes occurs during the planning process of environmental impact statements and when individual projects are proposed that may impact properties that have traditional use (i.e., Traditional Cultural Properties [TCPs]) or are sacred to Native American cultures. When one of these site types are identified within proximity to a proposed undertaking, the project proponent and tribal governments are notified. Determinations of eligibility and effects the project may have on the site are determined in consultation with tribal representatives. The BLM does not authorize any undertaking that has the potential to affect TCPs or Native American Sacred Sites without first consulting with tribes. The likelihood of inadvertently affecting a TCP or sacred site is low because of the established protocols the BLM has developed with tribal representatives. NRC may or may not use BLM's protocols.

### **Interested Parties.**

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The NRC will solicit such input through the public participation opportunities afforded by the NRC's land use planning and environmental review processes established under the NEPA and the Federal Land Policy and Management Act (FLPMA) of 1976, and in accordance with regulations at 43 CFR Part 1610.3. Interested parties shall be invited to participate in the Section 106 consultation process if they have a demonstrated interest in a NRC undertaking or action on historic properties. Such interested parties may include, but are not limited to, local governments, grantees, permittees, owners of affected lands or land surfaces, Indian tribes, and other interested parties determined jointly by the NRC and SHPO.

In making determinations of effect, the NRC may request comments of interested parties. When the NRC makes a determination of adverse effect, they will request comments of interested parties. The NRC will maintain lists of interested parties based on their identified interests.

The NRC and SHPO will consult to identify invited concurring parties based on their demonstrated interest and level of participation. Invited concurring parties will be provided the opportunity to sign a Memorandum of Agreement or Programmatic Agreement. Refusal by an invited concurring party to sign an agreement will not invalidate the agreement.

### **Management of Cultural Resources.**

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Management objectives for significant cultural resource values provide a direct link between the assignment of properties to use categories and the achievement of the cultural resource program objectives. The basic management objectives for significant cultural resource values would remain unchanged under all of the alternatives addressed in this plan.

### **Standard Protective Measures.**

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Within the framework described above, the NRC has developed protective measures to minimize adverse effects (as defined in 36 CFR 800.5[1]) on significant cultural resource values. Protective measures are used in response to the proposed actions of NRC programs involving surface disturbance. These measures include cultural resource inventories, evaluation of cultural resources located during inventory, setting assessments where applicable, Best Management Practices and mitigation of potential adverse impacts on significant cultural resources.

A setting assessment is used to determine what physical features of a proposed undertaking will be visible from a historic property for which setting is an important aspect of integrity. Visibility of undertakings will vary. The scale of visual analysis should be commensurate with the scale of the undertaking. In the majority of cases, undertakings will not be seen beyond 3 miles; pipelines, fiber-optic and other ground level disturbance will not likely be seen beyond 1 mile. In rare cases, undertakings may be seen beyond 5 miles if they are unusually large or are skylined on the horizon, such as communication towers.

A setting assessment can also be used to determine whether a proposed undertaking will introduce audible elements to the historic property where setting is an important aspect of integrity. These proposed undertakings may include compressor stations, pumping stations, etc. An assessment of the existing audible elements will be

documented and then the contract archaeologist will work with the project proponent to ensure new audible elements do not result in an adverse effect. Best management practices and mitigation measures will be utilized to achieve this goal.

### **Best Management Practices.**

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In situations where a proposed undertaking has the potential to affect the physical integrity of an historic property, there are numerous measures that can be applied to reduce or eliminate the effects. NRC archaeologists work with the contracting archaeologist and the project proponent to determine which practice would best suit the needs of all parties. Application of BMPs is dependent upon the nature of the undertaking, and the nature of the historic property.

- A. Avoidance. Avoidance through modification of the proposed undertaking is the primary and preferred measure used to protect cultural resources. This can be accomplished at the project planning stage.
- B. Monitoring. In situations where avoidance of adverse affects is not feasible, or there is a determination of no adverse effects, but the potential remains for there to be adverse effects through inadvertent discovery, a NRC permitted archaeologist and tribes will monitor construction activities. The presence of a tribal monitor is to ensure that buried cultural materials are immediately identified and that construction activities in that area are halted to avoid further impacts to the site. Prior to NRC authorization of the project, the project proponent submits a discovery plan to the NRC for review which outlines the way in which cultural resources will be treated and the responsibilities of the project proponent. This plan is reviewed by NRC archaeologists and submitted to SHPO for concurrence. In the case where monitoring results in a discovery situation, the discovery plan is enacted. Depending on the nature of the discovery the project may be allowed to proceed, redesigned, or data recovery may be required.

### **Standard Measures to Reduce Visual Contrast.**

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When a proposed project is found to be within the contributing setting of an historic property, an assessment of potential impacts is conducted through viewshed analyses, on-site inspection, and photo inspection. For historic trails, protection measures would be carried out similarly to other historic properties if any project were found to be located within 0.25 mile of a contributing portion of the historic trail. When a proposed project is outside of the 0.25 mile buffer of the trail, but found to be within the viewshed that contributes to NRHP eligibility, analyses of potential impacts to the integrity of the setting would be carried out in the same way as other properties where setting is an aspect of integrity.

For the proposed project, best management practices and applicant-committed measures used to ensure that the contributing viewshed of historic properties are not adversely affected include:

- ✦ Preserving vegetation to the greatest extent possible;
- ✦ Utilizing undulating surface disturbance edges;
- ✦ Contoured grading;
- ✦ Controlling erosion;
- ✦ Restoring exposed soils as closely as possible to their original contour and vegetation;
- ✦ Operators would monitor and maintain visual mitigation measures for the approved project in accordance with a visual monitoring and compliance plan;
- ✦ The operator would maintain revegetated surfaces until a self-sustaining stand of vegetation is re-established and visually adapted to the undisturbed surrounding vegetation; and
- ✦ No surface disturbing activities would occur within either 0.25 mile or the visual horizon (whichever is closer) of a cultural property/historic trail.

Proposed mitigation measures to reduce visual impacts associated with the proposed project, if adopted, these measures also would reduce adverse effects to historic properties where setting is an important aspect of integrity.

### **Mitigation.**

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Mitigation measures are determined by the types of proposed actions, the nature of the potential effect and the qualities of the historic property that render it eligible for NRHP listing. Mitigation measures are applied when best management practices will not reduce or minimize adverse effects. Mitigation may include data recovery, Historic American Buildings Survey/Historic American Engineering Report (HABS/HAER) documentation, or other agreed upon measures. Consultation with the Wyoming SHPO and the ACHP is required when proposed actions are expected to adversely affect properties eligible for the National Register and mitigation is determined to be the best course of action.

**Data Recovery.** There are two times during a project that data recovery may be implemented. The first is when it is determined prior to project construction that there will be an adverse effect to an NRHP-eligible property. The project proponent, the NRC, and the SHPO work together to develop a data recovery plan which will mitigate the adverse effects. The second is after a discovery situation when it is determined that the

project has already adversely impacted an historic property. Again, the project proponent, NRC authorized officer, and SHPO work to develop a plan that mitigates all effects of the construction. Data recovery in itself is a destructive process, thus it must be carried out in a way to successfully retrieve all pertinent information from the site.

**HABS/HAER.** HABS/HAER documentation as a mitigation measure may be implemented if no other mitigation measure would adequately minimize the adverse effect. This documentation includes large format photography, drawings, and research of the property to document all aspects of the property prior to adverse effects.

**Agreement Documents.** In situations where data recovery or HABS/HAER documentation is not appropriate to mitigate adverse effects or multiple historic properties will be affected by a single undertaking, the NRC will work with the SHPO and the project proponent to develop an agreement document. Depending on the nature of the undertaking, this may result in a Memorandum of Agreement (MOA) or a Programmatic Agreement (PA). The agreement document will outline the manner in which adverse effects will be mitigated, and the roles and responsibilities of each signatory. The agreement document stays in effect until all measures have been completed to the satisfaction of all parties.

### **Modification.**

Under certain circumstances, the protective measures described are modified to take into account emergency situations and the surface management regulations for leasable and locatable minerals.

### **Cultural Resource Laws and Regulations**

American Antiquities Act of 1906—provides for permits to authorize scholarly use of properties, for misdemeanor-level penalties to control unauthorized use, and for presidential designation of outstanding properties as national monuments for long-term preservation.

#### **NHPA:**

- ✦ Section 106 directs all federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for inclusion in the NRHP.
- ✦ Section 110 sets inventory, nomination, protection, and preservation responsibilities for federally owned cultural properties. Section 110(c) requires each federal agency to designate a Preservation Officer to coordinate activities under the act.



- ✦ American Indian Religious Freedom Act of 1978 – establishes the policy of the U.S. to protect and preserve for the American Indian, Eskimo, Aleut, and Native Hawaiian the inherent right of freedom to believe, express, and exercise their traditional religions. Federal agencies are directed to evaluate their policies and procedures to determine if changes are needed to ensure that such rights and freedoms are not disrupted by agency practices.
- ✦ Archaeological Resources Protection Act of 1979 – provides felony-level penalties for the unauthorized excavation, removal, damage, alteration, defacement, or the attempted unauthorized removal, damage, alteration, or defacement of any archaeological resource, more than 100 years of age, found on public lands or Indian lands. The act also prohibits the sale, purchase, exchange, transportation, receipt, or offering of any archaeological resource obtained from public lands or Indian lands.
- ✦ Native American Graves Protection and Repatriation Act of 1990 – requires Native American consultation for the excavation and/or removal of “cultural items” including human remains, funerary objects, sacred objects, and objects of cultural patrimony. Consultation is also required if “cultural items” are discovered during land use activities.
- ✦ EO No. 13007: Indian Sacred Sites – establishes access to and ceremonial use of Indian sacred sites by Indian religious practitioners on federal lands. The federal agencies shall avoid adversely affecting the physical integrity of such sacred sites and maintain confidentiality of said sites.

### **Traditional Cultural Property Assessment – Scope of Work.**

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The proposed Ross in situ leach Uranium Recovery (ISR) Project site to be located near Oshoto in the State of Wyoming is a federal undertaking and the Project will comply with the National Historic Preservation Act (NHPA) of 1966 (as amended). In compliance with the NHPA, NRC has initiated consultation with federally recognized tribes.

### **Traditional Cultural Properties.**

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According to Bulletin #38 of the National Register, sites of traditional cultural significance refer to “beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices.” Critical issues related to TCPs as cultural sites include continuity over time, community identity, and traditional use. Citing from the Bulletin:

1. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
2. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
3. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice;
4. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historical identity.

Put into perspective, a TCP can be defined generally as a place “that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history and (b) are important in maintaining the continuing cultural identity of the community.” Because of the diverse nature of exploration and settlement in southern Wyoming, possible TCPs on public land would include sites significant to a variety of Native American tribes such as the Pueblos, Ute, Navajo, Apache, Crow, Chippewa/Cree, Salish/Kootenai, Comanche, Dakota, Lakota, Nakota, Nakoda, Cheyenne, Arapaho, Shoshone, Winnebago, Pawnee and Osage. Because sites may be significant if they represent locations where “a community has traditionally carried out economic or other cultural practices important in maintaining its historical identity,” then sites related to both mining and ranching traditions may qualify, though to date no such sites have been listed on the National Register.

### **Methodology: Criteria to Identify Traditional Cultural Places.**

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The National Register Bulletin #38 provides a definition and discussion of Traditional Cultural Places (TCPs). The Bulletin provides the following criteria, which were considered in this project.

- A TCP is a permanent location; not an object or a moved item.
- A TCP is rooted in community history and important to maintaining cultural identity in the community.
- The integrity of the location remains--the landscape has not changed so significantly that the practice or belief no longer applies or makes sense.
- Universally applied assumptions for this project include:
- Prehistoric sites should be considered potential TCPs unless consultation with appropriate descendent native tribes determines otherwise.
- Temporary sites such as arborglyghs or vegetation affected by a cultural activity may be potential TCPs.

- Some TCPs will have multiple cultural and temporal affiliations.
- The site should be greater than 50 years old to meet the National Register significance criteria.

Of the total federally recognized tribes invited to participate in the consultation process (hereafter “Invited Tribes”), to date all have requested a Traditional Cultural Properties (TCP) investigation for the Project prior to construction. The purpose of the TCP survey is to afford those Invited Tribes that have a cultural interest in the Project’s Area of Potential Effect (APE) an opportunity to identify sites of religious and cultural significance to them that may be present in the APE. Invited Tribes that have identified that they may have a cultural interest in the Project’s APE and have requested and/or are involved with the TCP survey in consultation with BLM are hereafter called “Participating Tribes.”

The Participating Tribes requested technical support from Strata Energy Inc's environmental consultant; David Ferguson (GCM Services, Inc.) from Butte, MT. to work in tandem with the Participating Tribe’s representatives in the field. Support tasks would include:

1. Provide training to 10 Tribal representatives on use of Global Positioning System (GPS) technology, to be used in mapping observed TCPs in the field; and,
2. Provide training on how to upload GPS data gathered in the field to laptop computer systems for field post-processing of data.

To meet this request, David Ferguson will accompany the Participating Tribes during the TCP field effort. David Ferguson will serve as representatives of Strata Energy Inc in the field to assure that survey activities are confined to within the agreed-upon survey area (APE), to assist with logistics of setting up equipment on a daily basis for the day’s field activities, to serve as guides in the field to access each respective day’s field study area. The David Ferguson will be able to provide the Participating Tribes’ representatives in the field with some fieldwork efficiencies due to familiarity with the APE and Project topography. David Ferguson can also offer information based on the Class I and Class III cultural and archeological resource investigations previously completed for the Project.

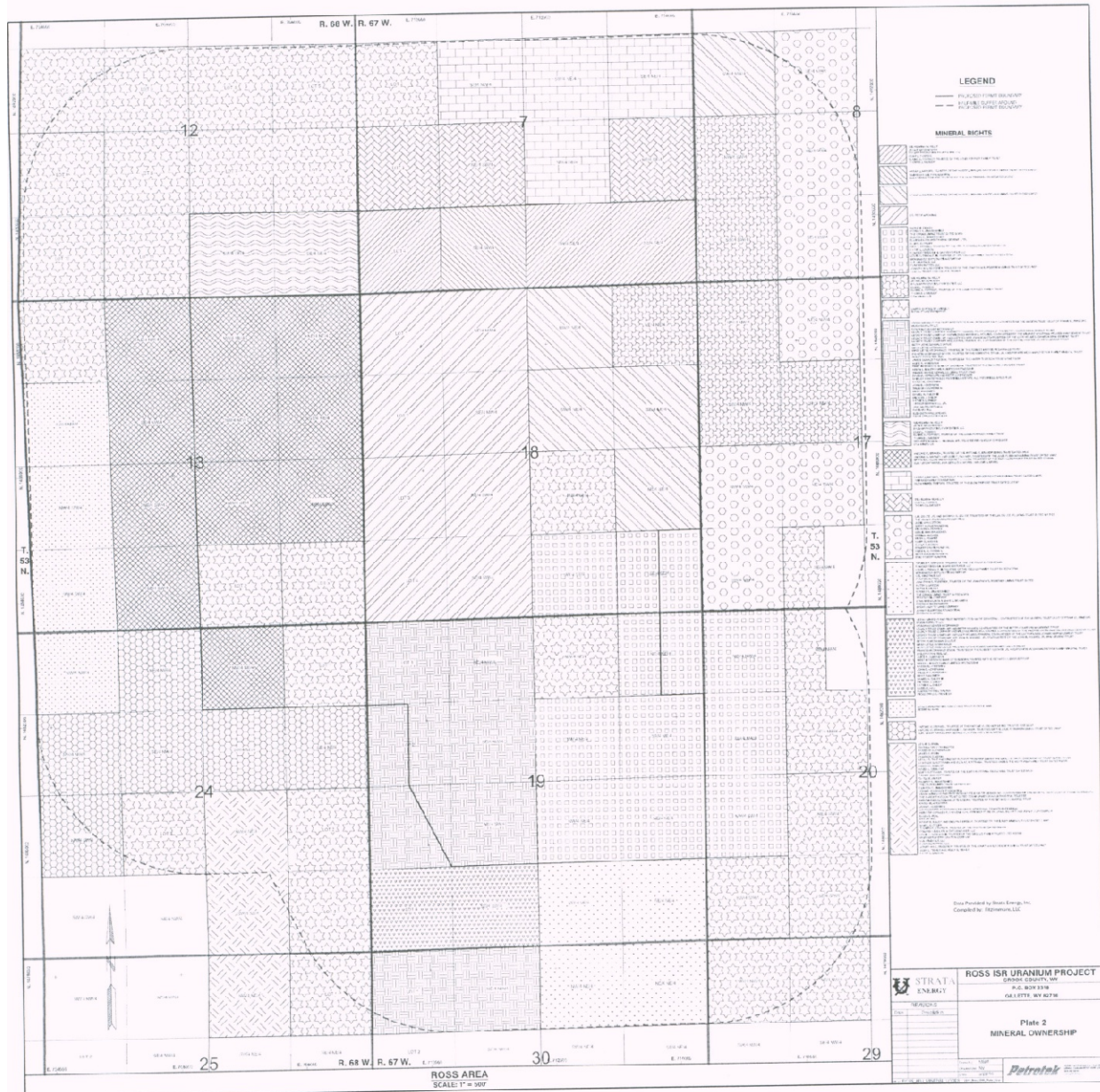
### **Scope of Work**

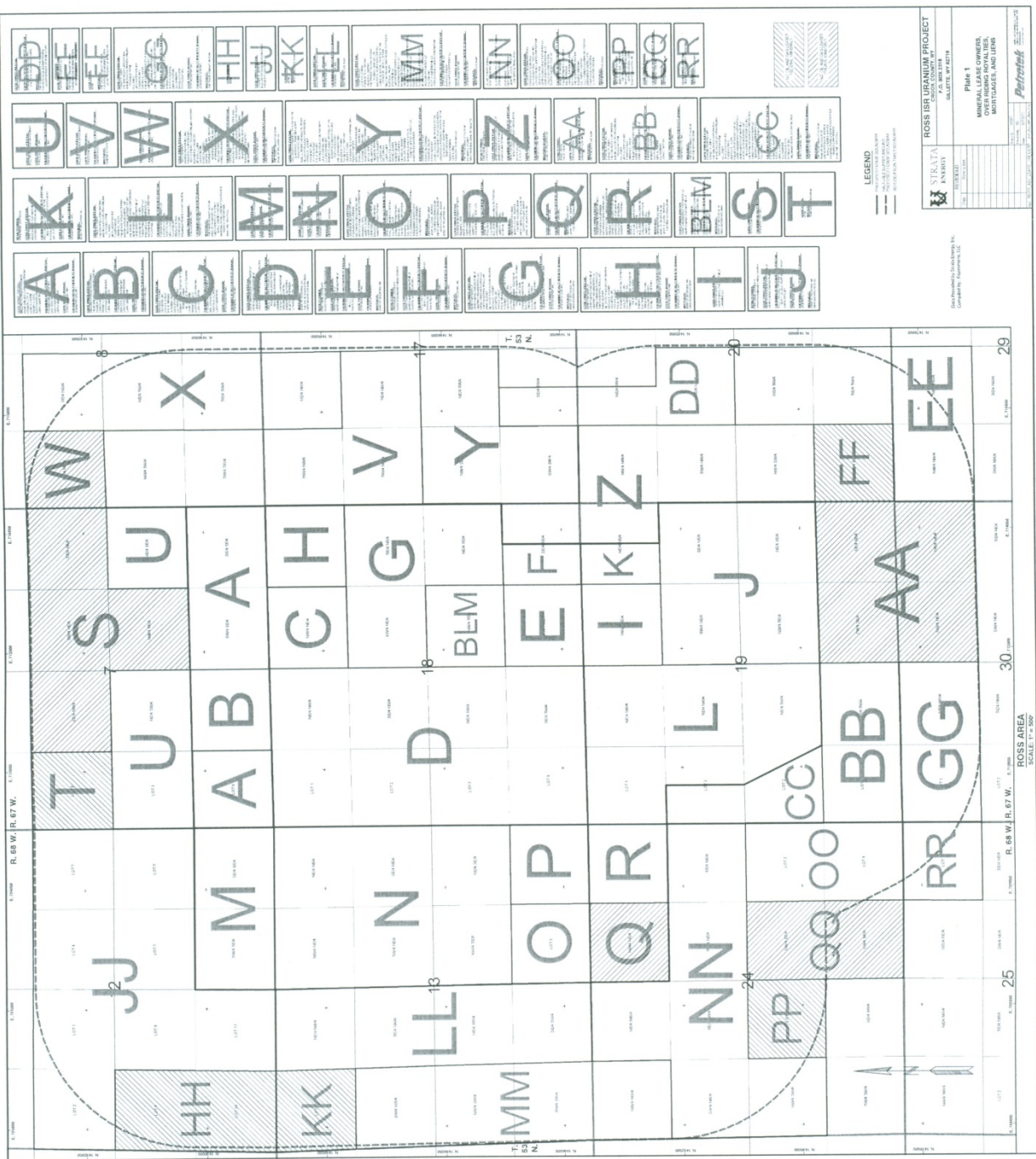
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The TCP survey will be conducted within the Ross APE, which represents the areas of possible ground disturbance during Project construction, operation, and decommissioning plus an additional buffer around the construction areas as agreed by

Tribes and NRC. The APE for TCP investigations totals 40 acres (see attached figure), including:

- The Ross project will blanket some 40 acres.
- Impacts of increased traffic and associated effects upon county, state, and BLM roads and highways.
- Cumulative effects of the wind development activities when combined with other ongoing and proposed developments on lands in jurisdiction of the BLM Newcastle Field Office.
- Potential impacts to cultural and historical resources
- Potential effects upon wildlife and their habitats
- Potential impacts to sensitive soils
- Potential impacts to ground water resources
- Potential visual impacts and conformance with existing VRM classes
- Potential impacts from emissions and dust resulting from construction activities
- Reclamation of disturbed areas and control of nonnative plants





Due to overlap that occurs when buffering each of the Project components discussed above, the total acreage of the APE is less than the sum of the parts. The APE is equal to 40 acres. The TCP survey will also be conducted at archeological Sites that were previously identified by David Ferguson during Class III archeological investigations in the past. The Participating Tribes requested that all identified sites be included in the TCP survey.

TCP field investigations include mobilization/demobilization a pedestrian survey by the Participating Tribes. Mobilization will include preparation by David Ferguson of GPS units for training and for the field investigation.

The Participating Tribes anticipate the TCP survey will be conducted by 10 individuals, including: 10 Tribal experienced monitors. The Participating Tribes and David Ferguson will conduct the TCP survey. At least one staff person from GCM Services, Inc will accompany Tribal monitors. GCM Services, Inc's role will be to assist with mapping TCP features and boundaries as identified by the Participating Tribes. To this end, GCM Services, Inc will 1) provide trouble-shooting and technical support to the newly trained Tribal representatives on the use of GPS technology in the field; and 2) independently record the same data points that will serve as a back-up to ensure proper documentation as a result of the survey efforts. It is assumed that the entire APE can be investigated by pedestrian survey. If potential TCPs are identified by the Participating Tribes' representatives, TCP locations and suggested boundaries around them will be recorded by the Participating Tribes and by GCM Services, Inc with hand-held GPS units. The accuracy of GPS is intended to be sub-meter.

On a daily basis, captured data will be transferred from each GPS unit to a laptop computer using Trimble hardware. The captured data will then be relayed to GCM Services, Inc GIS Analyst who will post-process the data with Office GPS software. Once post-processed, the data will be exported to a file compatible with ESRI's ArcGIS 9.x for development of digital maps, which is compatible with other Project mapping created by GCM Services, Inc to date. Digital maps may be reviewed by the Participating Tribal representatives and GCM Services, Inc field staff, viewed locally on laptop computers equipped with the appropriate software. It is anticipated that turn-around for viewing mapping information may be up to 24 hours from when data is relayed to GCM Services, Inc GIS Analyst. Printed maps will only be produced for quality assurance and quality control purposes upon request and would be reviewed only by the Participating Tribes and the GCM Services, Inc field staff. Printed maps, if requested, would be produced in GCM Services, Inc home office and would be delivered to the field team via overnight mail, approximately 48 hours after data is relayed. It will be the responsibility of the Participating Tribes to document descriptions

of observed TCPs in field notes, photographs, and/or sketches or by other means selected by the Participating Tribes; GCM Services, Inc will not document descriptions of the TCPs, only their locations, as this information has been deemed proprietary to the Participating Tribes.

The Participating Tribes' designated lead monitors will serve as the points of contact between the Participating Tribes and GCM Services, Inc. The Participating Tribes' monitors will inform GCM Services, Inc field staff if a TCP is identified. The GCM Services, Inc staff will discuss the find with Strata, Inc, who will evaluate possible ways the TCP could be avoided through micro-sitting of the Project layout. If Strata, Inc identifies an alternate layout that will avoid a TCP, the new APE will be surveyed for TCPs by the Participating Tribes' representatives with GCM Services, Inc support as part of the TCP survey.

At the completion of the fieldwork, GCM Services, Inc will prepare CDs or DVDs (depending upon the size of the Project files) that will contain digital mapping information (GIS shapefiles) for all TCPs and buffers recorded as a result of the field survey. This digital documentation will be provided solely to the Participating Tribes for their records and will not be provided to NRC, BLM or SHPO. The location of TCPs and their buffers will need to be shared with Strata, Inc, NRC and GCM Services, Inc only to support micro-sitting efforts in an attempt to avoid these sites.

Assumptions of the TCP survey are listed below:

- The Participating Tribes will select their TCP survey representatives and monitors.
- Field investigations will be conducted by a (eleven) member team (the team including ten Tribal monitors, at least one GCM Services, Inc staff person, and one rental GPS unit for GCM Services, Inc and Participating Tribes.
- Members of the field team of Participating Tribes' representatives and GCM Services, Inc will stay together during the survey.
- GCM Services, Inc will provide ATV's to assist in survey coverage and in maintaining a field tempo.
- Fieldwork is estimated to be conducted within approximately (4) continuous days.
- The TCP survey can observe the APE through pedestrian survey; no subsurface fieldwork will be conducted.
- Adequate first aid kits will be provided by GCM Services, Inc.
- No alcohol beverages will be consumed by the Tribal monitors or GCM Services, Inc staff during this TCP survey.



- One CD or DVD that will contain shapefiles for all mapped TCPs and buffers will be provided to the Participating Tribes. Shapefiles will be used by Strata, Inc, NRC, and GCM Services, Inc for Project planning purposes only (i.e., to provide a basis for avoiding impacts to TCPs through layout micrositing). These data will not be shared with persons not working on the Project.
- A pre-survey meeting with all field team participants will take place each morning at the Hotel for a health and safety briefing, discussion of cultural sensitivity issues, and to plan the team's strategy for the day prior to surveying the APE.
- The Participating Tribes' Leads (2) will meet with GCM Services, Inc staff at the end of each field day to assist with data transfer from GPS units to Project laptop computers.
- GCM Services, Inc GIS Analyst will post-process data collected within 24 hours of receipt of the digital information.
- Maps showing a day's data points will be available for view on the Project laptop within 48 hours of digital transfer to GCM Services, Inc GIS Analyst.

Deviations from these assumptions could impact the proposed scope of work as well as schedule and will be addressed with participants immediately.

### **Schedule.**

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Field work will commence as early as possible. Mobilization to Oshoto, WY is planned for November 20, 2011. GPS unit training with GCM Services, Inc and the Tribal crew leads will take place the morning of November 21, 2011 at the site location. The fieldwork schedule is presented above and will consist of up to approximately 4 days (November 21 through November 24, 2011) but dependent on variables including inclement weather, site discovery/identification, and site visits by NRC.

GCM Services, Inc will be responsible for producing the final TCP Report within 30 days of field work: (1) complete TCP report for the Participating Tribes; and (1) summary report to NRC.

### **Other Requirements.**

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A typical November field day for the team during the TCP survey will average 7-9 hours (depending on weather and daylight conditions), and the typical routine may entail:

7:00 a.m. Teams meet at vehicles at the Hotel for Health and Safety briefing, TCP survey briefing, mobile telephone and equipment checks, discussion of team plans for the day, then travel to the Project site. Each team member will bring lunch, snacks, and water with them in the vehicles.

Team travel to the Project site to begin TCP surveying as planned. Progress and rests will be determined by team members' needs throughout the day.

Lunch and rest as needed midday. David Ferguson from GCM Services, Inc will call other team to check on progress.

Complete afternoon survey work, return to vehicles, make sure all team members are accounted for before leaving field.

Travel back to Hotel. Subsequently, GCM Services, Inc and the Participating Tribes' leads to download GPS data and check previous day's mapping viewed on a Project laptop screen as a quality assurance/quality control review.

Team members may meet for breakfast prior to departure each day or dinner at night together, as preferred.

Each team member will be personally responsible for bringing: walking boots, long pants, backpack, cold weather and rain gear, insect repellent, sun block, lunch, snacks, water, personal medicines/toiletries, and a mobile telephone. In addition, GCM Services, Inc will provide the following equipment for the TCP survey: 2 sport utility vehicles (SUVs), (2) ATV's, (1) GPS rental units, 2 mobile telephones, 2 first aid kits, aerial photographs/mapping of the Project site, at least one laptop computer.

### **Budget.**

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The draft budget includes personnel costs, logistics (travel/per diem), and equipment.

### **Personnel.**

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| A. (8) Tribal Monitors x \$450.00 per day x 6 days =   | <b>\$21,600</b> |
| B. (2) Tribal Crew Leads x \$500.00 per day x 6 days = | <b>\$6,000</b>  |

In the event of that no field work can be performed due to inclement weather, personnel reimbursement will be as follows: Tribal Monitors and Crew Leads will receive 20% of their daily pay; and the Tribal Elders will receive \$100 for the lost work day.

### **Logistics.**

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| A. Hotel costs will be covered by Strata, Inc        |                |
| 1. Hotel rooms @ \$100 per day X 10 rooms @ 5 days = | <b>\$5,000</b> |

- B. Mileage\* reimbursement will be distributed as follows, and is based on the distance for each of the 10 Tribal representatives from the Participating Tribes to mobilize to Oshoto, WY at the current (GSA) rate of \$0.51 per mile:

### **Monitor's Travel Reimbursement.**

Starting point for each Reservation will vary. Strata, Inc will coordinate with tribes on mileage.

### **Per diem per federal rate.**

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(10) Tribal field crew members at \$46.00 per day x 5 days = **\$2,300.00**

### **Equipment.**

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- A. Rental Items: the following items will be covered by Strata, Inc:

- 1) (2) Four-seated ATV's

**Total Cost: \$137,560**

### **Responsibilities and Duties of Personnel.**

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Crew Leads: Tribal field personnel; will help assist field crews which will include pre-planning, daily briefings, and will compile data from Tribal personnel.

Tribal Monitors: field personnel; will produce daily logs, weekly logs, and sketch maps (for Tribal use) that will be turned in to the Crew Leads. Will ensure that logistics are taken care of for all field personnel. Will be responsible for collecting all notes, field maps/sketches for the final TCP Report.

### **Deliverables to Strata, Inc and NRC.**

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The Participating Tribes will provide Strata, Inc with an estimate of mobilization costs so that Strata, Inc may prepare payment for those overhead costs prior to fieldwork commencing. The mobilization cost estimate from the Participating Tribes will include mileage reimbursement, per diem. Labor will be billed immediately in one invoice to Strata, Inc for reimbursement.

TCP Report: The Tribal THPO's will be responsible for collecting all notes, field maps/sketches and produce final TCP Report within 30 days: (1) for Tribes and (1) summary report to NRC.