

**FINDING OF NO SIGNIFICANT IMPACT and
DECISION RECORD for
Veritas DGC Land, Inc.
Pacific Creek 3D Geophysical Project
WY-040-EA05-171**

BLM

Wyoming State Office — Rock Springs Field Office



September 2005

MISSION STATEMENT

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/WY/PL-05/022+1320

WY-040-EA05-171



**FINDING OF NO SIGNIFICANT IMPACT
AND
DECISION RECORD

FOR

VERITAS DGC LAND, INC.

PACIFIC CREEK 3D GEOPHYSICAL PROJECT**

Prepared for

**Bureau of Land Management
Rock Springs Field Office
Rock Springs, Wyoming**

WY-040-EA05-171

September 2005

This side left blank

TABLE OF CONTENTS

1.0	INTRODUCTION, PURPOSE AND NEED	1
1.1	INTRODUCTION	1
1.2	PURPOSE AND NEED FOR THE PROPOSED ACTION.....	3
2.0	DESCRIPTION OF THE PROPOSED ACTION AND	7
2.1	PROPOSED ACTION ALTERNATIVE	7
2.2	NO ACTION ALTERNATIVE.....	9
2.3	ELIMINATE ACTIVITY WITHIN THE SOUTH PASS HISTORIC LANDSCAPE ACEC ALTERNATIVE	9
2.4	ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY ...	10
3.0	AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES.....	11
3.1	LOCATION AND GENERAL SETTING	11
3.2	CRITICAL ELEMENTS	11
3.3	CUMULATIVE IMPACTS.....	39
3.4	RESIDUAL IMPACTS	40
4.0	CONDITIONS OF APPROVAL	41
4.1	FLUID MINERALS: OIL & GAS	41
4.2	PALEONTOLOGICAL RESOURCES.....	41
4.3	SOILS	41
4.4	WATER RESOURCES	42
4.5	VEGETATION.....	42
4.6	SPECIAL STATUS PLANTS	42
4.7	INVASIVE SPECIES	42
4.8	LIVESTOCK/RANGE	42
4.9	WILDLIFE and SPECIAL STATUS ANIMAL SPECIES	43

4.10	VISUAL RESOURCES	44
4.11	RECREATION	44
4.12	CULTURAL/HISTORICAL RESOURCES/HISTORIC TRAIL	44
4.13	NATIVE AMERICAN RELIGIOUS CONCERNS	45
4.14	SOUTH PASS HISTORICAL LANDSCAPE ACEC	46
4.15	NOISE, WASTE, and SAFETY	47
5.0	CONSULTATION AND COORDINATION	49
5.1	PUBLIC INVOLVEMENT PROCESS	49
5.2	LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS CONTACTED	49
5.3	LIST OF PREPARERS	49
APPENDIX A	51

Veritas DGC Land, INC.
PACIFIC CREEK 3-D VIBROSEIS PROJECT
ENVIRONMENTAL ASSESSMENT
WY-040-EA05-171

1.0 INTRODUCTION, PURPOSE AND NEED

1.1 INTRODUCTION

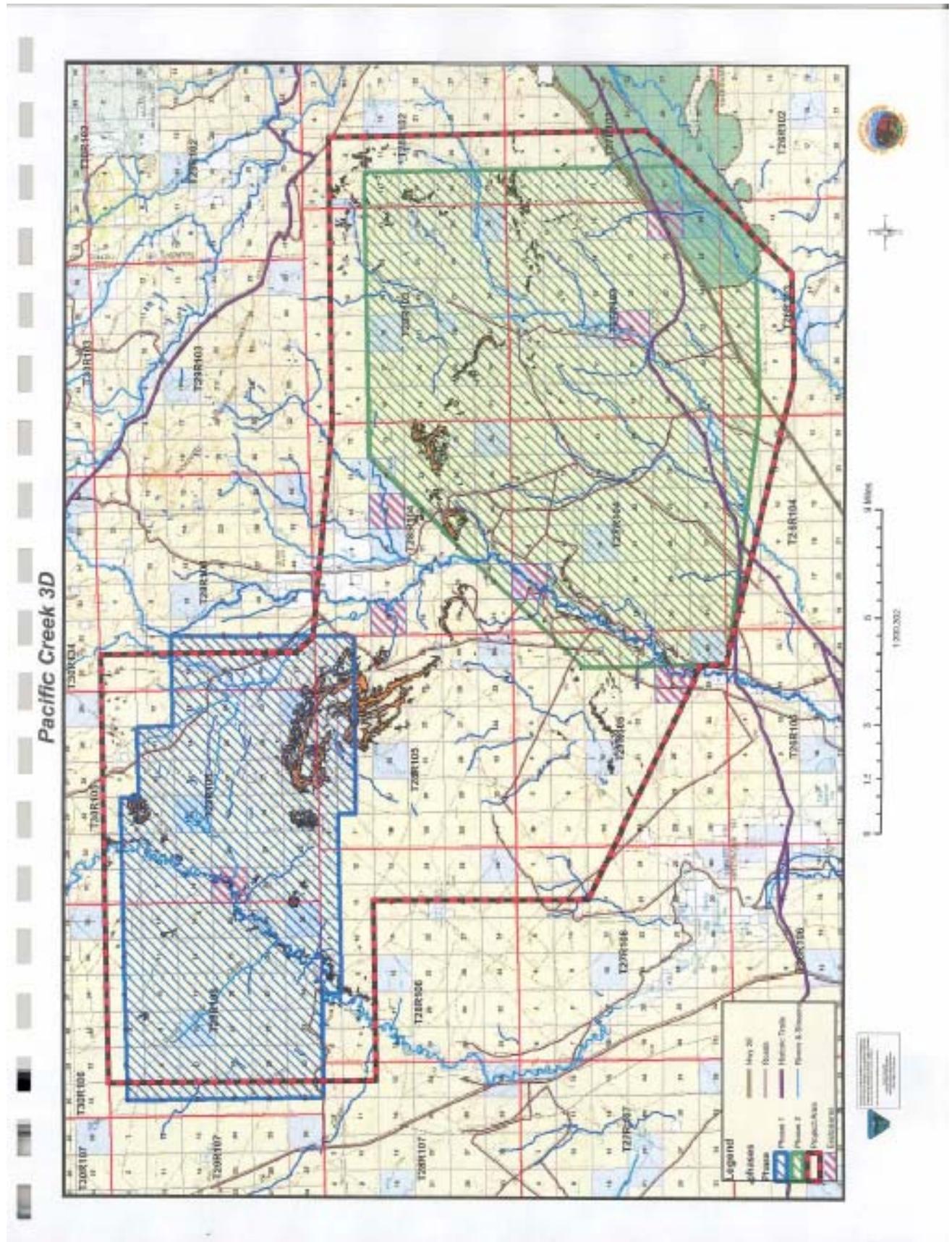
On April 28, 2005, Veritas DGC Land, Inc. (Veritas) filed a Notice of Intent (NOI), assigned serial number WY-040-OG05-02, with the Bureau of Land Management (BLM) Rock Springs Field Office (RSFO) to conduct a vibroseis 3-D geophysical project, known as the Pacific Creek 3-D Vibroseis Project, covering an average of 325 square miles in Sweetwater, Sublette, and Fremont Counties, Wyoming. Veritas’ NOI and their Plan of Operation contain a complete description of the geophysical project. The NOI and Plan of Operation are considered an integral part of this Environmental Assessment (EA) and are incorporated by reference. These documents are filed with this EA.

The Pacific Creek project area (Fig. 1.1 Project Map) would encompass approximately 186,240 acres of public land managed by the BLM, about 11,840 acres of state lands managed by the State of Wyoming, and 6,720 acres of private lands. The project legal descriptions are listed below in Table 1. The proposed project is located approximately 40 miles northeast of Rock Springs, east of U.S. Highway 191 and principally north of State Highway 28, in the South Pass Historic Landscape ACEC and Wind River Front Special Recreation Management Area. Those portions of the project occurring on private and state lands are not subject to BLM authorization and would be permitted separately by Veritas.

Table 1: Project Legal Description

Township and Range	Sections
T.26N, R.103W	Sec. 1-12
T.26N, R.104W	Sec. 1-6, 9-12
T.26N, R.105W	Sec. 1, 2
T.27N, R.102W	Sec. 5-8, 17-20, 29-32
T.27N, R.103W	Sec. 1-15, 17-35
T.27N, R.104W	Sec. 1-15, 17-35
T.27N, R.105W	Sec. 1-15, 17-28, 35
T.27N, R106W	Sec. 1,2,11-14
T.28N, R.102W	Sec. 5-8, 17-20, 29-32
T.28N, R.103W	Sec. 1-15, 17-35
T.28N. R104W	Sec. 1-4, 5-7, 9-15, 17-35
T.28N, R.105W	Sec. 1-15, 17-35
T.28N, R.106W	Sec. 1-14, 23-26, 35
T.28N, R106W	Sec. 1,12
T.19N, R104W	Sec. 6, 7, 18, 19, 30, 31, 32
T.29N, R.105W	Sec. 1-15, 17-35
T.29N, R.106W	Sec. 1-5, 8-15, 17, 20-29, 32-36

Figure 1.1 Project Location Map



1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The proposed action is needed to acquire and evaluate subsurface geological data for possible exploration and/or development of oil and gas reserves. Geophysical exploration utilizing 3D techniques is an intensive data acquisition and computer synthesis system used to analyze and three dimensionally depict subsurface geologic stratigraphy. The technique is capable of locating and displaying unknown subsurface pools or pockets that potentially contain producible hydrocarbons. A majority of federal minerals within the proposal area have been leased for oil and gas development or are available for lease. Well drilling is occurring and Applications for Permits to Drill (APDs) have been submitted in portions of the proposed project area. This exploratory drilling is scheduled to continue in the foreseeable future. The proposed project should enable wells to be drilled with a much greater probability of locating producible hydrocarbons than is normally attainable by utilizing previous methods such as two dimensional (2D) seismic data and wildcat wells. Completion of the project should result in fewer non-productive wells, or dry holes, being drilled in an area, and therefore, overall less surface disturbance from access roads, pipelines, and drill sites.

1.3 NATIONAL ENVIRONMENTAL POLICY

The proposed project has been analyzed in accordance with the requirements of the National Environmental Policy Act (NEPA). To comply with NEPA and Council on Environmental Quality (CEQ) regulations, which implement NEPA, the BLM is required to prepare an environmental analysis. This environmental assessment (EA) serves several purposes.

- Provides the public and government agencies with information about the potential environmental consequences of the project and alternatives;
- Identifies all practicable means to avoid or minimize environmental harm from the project and alternative;
- Provides the responsible official with information upon which to make an informed decision regarding the project.

NEPA requires Federal agencies to use a systematic, interdisciplinary approach to ensure the integrated use of natural and social sciences in planning and decision making. Factors considered during the environmental analysis process regarding the Pacific Creek 3D project include the following:

- A determination of whether the proposal and alternatives are in conformance with BLM policies, regulations, and approved resource management plan direction.
- A determination of whether the proposal and alternatives are in conformance with policies and regulations of other agencies likely associated with the project.

This EA is not a decision document. This EA documents the process used to analyze the potential impacts of the proposed action and alternatives. The BLM would document whether or not significant impacts would occur with implementation of any of the alternatives and the responsible official (Field Manager, Bureau of Land Management, Rock Springs Field Office) would document the final decision regarding the selected alternative. If the BLM determines that no significant impacts would occur, a Finding of No Significant Impact (FONSI) Decision

Record would be issued. If significant impacts are identified, the BLM decision would be to complete an Environmental Impact Statement (EIS), with subsequent public input and additional analysis of the alternatives.

1.4 CONFORMANCE WITH APPLICABLE LAND USE PLANS

The Proposed Action is subject to the Green River Resource Management Plan (GRRMP) Record of Decision (ROD) approved August 8, 1997. The RSFO, as required by 43 CFR 1610.5, has determined that the Proposed Action is in conformance with the decisions, guidelines, terms and conditions of the Green River RMP. Management objectives and actions for geophysical exploration can be found on page 15 of the Green River RMP ROD, Geophysical Exploration. In part, the Green River RMP ROD states, “Most of the planning area is open to consideration of geophysical activities except where off-road vehicle use or explosive charges would cause unacceptable impacts . . . Geophysical activities would generally be required to conform to the off-road vehicle (ORV) designations and ORV management prescriptions . . . However, geophysical exploration has been and would continue to be routinely granted site specific authorization for off-road vehicle use subject to appropriate limitations to protect various resources identified during analysis of Proposed Actions.” This environmental assessment was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) as amended, the National Historic Preservation Act of 1966 as amended, the National Antiquities Act of 1906, Historic Sites Act of 1935 as amended, the Archeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the American Indian Religious Freedom Act of 1993. Authority for the Proposed Action and alternatives is contained in the Mineral Leasing Act of 1920 as amended, and in the Code of Federal Regulations at 43 CFR 3150.

A portion of the project area affects public lands in the South Pass Historic Landscape ACEC. Management objectives for the South Pass Historic Landscape ACEC area are to provide protection of wildlife, geologic, cultural, watershed, and scientific values. The area is open for consideration for mineral leasing, exploration, and development provided mitigation can be applied to retain the resource values (pg. 33 GRRMP). Federal lands within that portion of the ACEC area that overlap the project area contains valid, existing oil and gas leases. Off-road vehicle use is limited to designated roads and trails within the area. However, implementation of this designation has not been completed; therefore, vehicle travel is limited to existing roads and trails as described in the Wyoming Off-Road Vehicle Policy.

The management objectives for the Wind River Front Special Recreation Management Area (SRMA) – West is to provide protection and enhancement of the recreation opportunities, activities and settings, maintain high visual values, protect air quality, prevent fragmentation of grasslands, and maintain crucial big game habitats (pg. 17 GRRMP). Activities in this area would conform with requirements of Class III and Class IV visual resource management classification. Off-road vehicle use in the unit is limited to designated roads and trails.

A portion of this project falls within the Jack Morrow Hills Coordinated Activity Plan planning area. Projects that fall within this area are reviewed with interim criteria that were established in the Record of Decision for the Green River RMP. These criteria were developed to avoid premature commitments that could occur by allowing development or disturbance within highly sensitive areas for wildlife and/or areas that are sensitive for soils, vegetation, visual intrusion, etc., and to determine whether or not any management options would be prejudiced or foregone before completion of the CAP. This guidance is followed when reviewing proposed activities in

the Jack Morrow Hills CAP planning area while the CAP is being prepared. The Pacific Creek 3D Geophysical Project proposal was carefully reviewed with that criteria and determined not to cause a premature commitment. The activity will be temporary in nature and will not occur during crucial wildlife periods. No disturbance will occur to lands within the Jack Morrow Hills Planning Area and no long term or irreversible affects to resources such as vegetation, visual resources or wildlife habitats are anticipated. There is existing access and no new roads will be built.

Management actions for geophysical exploration allow for site-specific authorizations for off-road vehicle use subject to appropriate limitations to protect various resources identified during analysis of Proposed Actions (pg. 15. GRRMP). The development of this project would not affect the achievement of the Wyoming Standards for Healthy Rangelands (August 1997).

This side left blank

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION ALTERNATIVE

Surveying and staking of the seismic project has been completed (this activity is considered a casual use, though the operator would typically consult with the BLM prior to surveying and staking). The survey and staking was completed with GPS units, and resulted in the placement of line of sight lath, flagging, and pin flags. During this pre-inventory planning activity, the operator seeks to avoid steep slopes, wetlands and riparian areas, existing rangeland and oil & gas infrastructures, and other hazards that may be present. The operator would be required to avoid stay at least 500 feet from riparian areas. Subsequent to the surveying and staking, a Class III cultural resources inventory would be conducted along the proposed routes for motorized equipment (vibroseis buggy paths along source lines, access within the project area, etc.). For this project, the archeologists would depend mainly on the use of GPS units, which are programmed with a map of the receiver lines. As the inventory is conducted, the archaeologists would record the live time data onto the GPS unit to reroute the vehicles for avoidance of cultural resources. They would also map any sites found by the traditional method. The Class III cultural resources inventory is summarized in a report, which is submitted to the BLM for review and consideration. This review ensures compliance with the various BLM policies, the programmatic agreement between the State Historic Preservation Office (SHPO) and the BLM, the laws, rules and regulations regarding the protection of cultural resources. The surveyor would coordinate with the archeologists to ensure that successful avoidance of identified cultural resources is incorporated into the proposed action. If at any time the archeologists should lose GPS correction (necessary accuracy), they would rely on the line of sight stakes to ensure the lines are being inventoried accurately.

Veritas estimates that eighty (80) receiver lines would be aligned in an north/south direction across the project area, spaced 1,800 feet apart. Along these lines, receiver/geophone points would be present every 200 feet.

It is estimated that eighty (80) source lines would be aligned generally in a northwest-southeast direction across the project area. Source lines would be spaced 1,200 feet apart. Along these lines, source points would be stationed every 200 feet. Occasional source points would be staked in offset positions to avoid rough terrain, existing facilities, or other areas of concern such as steep slopes and archaeological sites. Any change in direction of the drive path along source lines would be marked by orange flagged lath. All laths would be marked with reflective tape for improved visibility during nighttime operations.

During the data acquisition phase of the project, 3D geophysical data would be recorded with specialized equipment including cables, geophones, one truck-mounted recording or transcribing unit (the recorder or transcriber), and buggy-mounted vibroseis vehicles (buggy vibes).

A helicopter would be used to transport receiver equipment along receiver lines. Caches of cables, data collectors, batteries, and geophones would be placed along receiver lines, normally at six geophone station intervals (every 1,400 feet) or closer when necessary. Equipment unpacking and layout, geophone placement and cable connection work, and equipment bundling for helicopter pick-up would be accomplished by crews of pedestrian workers who would alternately layout and pick-up as needed. Cable deployment and other field operations generally would be performed during daylight hours.

Veritas would place staging areas and the helicopter landing zone on federal surface estate. One of the staging areas would be located on a previously disturbed site in T 29N. R 106W. Sec 33, the other staging site is not yet known but would be placed on private lands.

Four vibroseis vehicles would be used to create an energy source at each source point. Any source line would be traversed only once by the buggy vibs. In working their way through the project area, the vehicles would proceed side-by-side along source lines. Two buggy vibs would be located on each side of the flagged centerline. The units would create an energy source (vibe) of six sweeps at each source point. The Pacific Creek 3D project includes an estimated total of 46,850 source points. Buggy vibs would follow GPS and flagged travel routes to move from one source line to another. Recording activities would be performed 24 hours per day, except in areas of rough terrain where work would be limited to daylight hours for safety reasons.

The vibroseis vehicles are 12-feet 6-inches high, 35-feet 6-inches long, and 11-feet 6-inches wide. They weigh 65,000 pounds each and are equipped with 48-inch (3.6 feet) wide, low-pressure tires which give them a ground pressure of nine PSI. This configuration provides for optimum traction (minimal spinning) while minimizing soil compaction, resulting in reduced potential for two-track roads being formed. Vibrator pads measuring 4.5 feet x 7.5 feet are centered under the vehicle. Refueling of buggy vibs would be at existing roads and trails only, and away from any live water areas.

Receiver lines would be repaired or troubleshot as needed via use of ATVs. The ATVs are typical one-passenger four-wheelers with 9-inch (0.7 foot) wide tires. ATV travel would be along existing roads and trails to the extent practical.

The project clean-up phase would proceed concurrently with the recording phase. Pin flags, lath, ribbon flagging and trash would be collected daily as the recording crew works through the project area. These materials would be deposited at a Wyoming Department of Environmental Quality approved disposal site.

Survey/staking of the proposed project began on May 18, 2005 for Phase II and June 18, 2005 for Phase I. Archeological inventory of BLM portions of the project would follow the surveyors. Geophysical activity is scheduled to commence September 1, 2005 (tentative), and should be complete by approximately November 15, 2005, dependent upon limitations of activity in winter range. Recording operations are anticipated to start in the southwest phase of the project and proceed to the northwest phase of the project area.

Applicable permits would be acquired from the BLM, State of Wyoming Oil & Gas Conservation Commission and Sweetwater, Sublette, and Fremont Counties, and appropriate surface owners.

2.1.1 Buggy-Mounted Shot-Hole Method

Shot holes would be required within the Elk Mountain area due to the rough terrain. It is estimated that 325 shotholes would be used within this area. The shothole method utilizes holes drilled in a variable spacing pattern by a truck or ATV (large-wheeled buggies) mounted drill rigs. Truck-mounted drill rigs would be limited to those areas where terrain is easily accessible. Buggy-mounted drills would be used in sand dunes and rougher terrain. In those areas inaccessible by vehicles or buggies due to steep slopes or highly erosive soils, portable drills

would be used and transported by a helicopter.

Shotholes would be placed 311 feet apart (unless offset due to cultural, paleontological or terrain concerns), and drilled 60-80 feet deep with a diameter of 3.5 to 4.5 inches. The hole is then loaded with 15 pounds of explosive material and then backfilled with the drill cuttings in accordance with the Wyoming Oil and Gas Conservation Commission guidelines and any BLM requirements (avoid sites with resource concerns on public land). Any holes drilled through water bearing zones would be filled with bentonite to a point above the water zone. Any cuttings not used in backfilling would be scattered about the immediate area.

The source (shothole) lines would lay NE-SW direction between the receiver (survey) lines which would lay N-S direction continuously across the prospect area. Geophone cables would be hand-laid along the receiver lines with support from a helicopter and crews on foot. These geophones are used to record the sound waves produced by detonating the explosive charges.

Truck or buggy-mounted drills associated with the operations would be conducted by using an offset or staggered vehicle pattern to reduce the crushing effects to vegetation, to minimize soil compaction, and to prevent creating new two-track trails.

The mitigation measures identified in the Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration (BLM Form 3150-4a) and the Special Terms and Conditions are hereby made part of the Proposed Action. Other measures are identified in the approval conditions to be applied.

2.2 NO ACTION ALTERNATIVE

Under the No Action alternative, the vibroseis project would not be authorized on BLM-administered lands. Operations could still occur on state and private lands. Considering that BLM-administered lands comprise 93.5% of the Pacific Creek 3D project area, adoption of this alternative would effectively result in cancellation of the project. Existing land and resource use activities within the project area would continue generally as is. The Affected Environment descriptions presented in this EA also constitute the effects of the No Action alternative unless otherwise noted.

2.3 ELIMINATE ACTIVITY WITHIN THE SOUTH PASS HISTORIC LANDSCAPE ACEC ALTERNATIVE

Under this alternative 2.6 percent of the South Pass Historic Landscape (SPHL) ACEC would be excluded from the project boundary for activity. The ACEC boundary encompasses 57,954 acres including 49,266 acres of public lands managed by the BLM, 3,531 acres owned by the State of Wyoming, and 5,157 acres under private ownership. Any ACEC designations apply only to BLM-administered public land surface (pg 25 GRRMP). South Pass is located on the northwest edge of the Wyoming Basin – a desert-like geographical feature which extends south for 150 miles and forms a complete break in the Rocky Mountain chain. The pass was the site where emigrant travelers traversed the Continental Divide, and thus it roughly marks the halfway point in the epic westward journey. The scenic vista of South Pass is among the most important historic landscapes because South Pass served as the primary mountain gateway to the West along the Oregon, Mormon Pioneer, Pony Express, and California National Historic Trails. This setting includes the top rim of Pacific Butte on the south and the divide between waters flowing east and west. The Shoshonean peoples who dominated much of the country west of the Rockies

had used this natural corridor long before the American traders in 1812.

The project area lies in the south-western portion of the SPHL ACEC (BLM 2004) overlapping the area by 5,416 acres. The SPHL ACEC was designated in 1997 and includes portions of the Oregon, Mormon Pioneer, Pony Express and California National Historic Trails where emigrant travelers and the mail crossed the Continental Divide. South Pass National Historic Landmark (NHL) was designated by the Secretary of the Interior in 1961 although the boundary of the NHL was not specifically defined at the time. National Historic Landmarks are the most important category of cultural resources recognized by the federal government.

This alternative is the same as the proposed action except it would exclude activity within the SPHL ACEC area. The Affected Environment descriptions presented in this EA also constitute the effects of the No Action alternative unless otherwise noted.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

No unresolved resource conflicts were identified that necessitated development of additional alternatives, although three alternatives were considered, but eliminated from further consideration:

2.4.1 Exploratory Drilling Alternative – This alternative was considered but dropped from detailed study since it is recognized that wildcat exploratory drilling would be a consequence of the No Action alternative. This alternative would create more surface disturbance due to road and well construction.

2.4.2 Buggy- Mounted Shot- Hole Method- Under this alternative, drills mounted on buggies would traverse the entire project area to drill shot holes for seismic exploration. Two buggies (one with the drill and one to hold drilling water) would traverse routes along source lines. Multiple passes over routes would be necessary for the transport of water. Soil and vegetation impacts along survey routes would be more apparent from the buggy traffic. The cost of this alternative method would be approximately 50% greater than the proposed action alternative.

2.4.3 The Use of Heli-portable Receiver and Source Stations Only – This alternative would be more costly and not as effective in identifying subsurface geologic stratigraphy. Twenty-five to thirty helicopters would be required to do a job of this capacity and with the rising cost of fuel this would not be feasible. Veritas would also have to do more drilling to compensate. With the proposed action one helicopter is being utilized and the receivers are being dropped with personnel walking in receiver lines and using ATVs to carry line. Less drilling is also required reducing the noise capacity.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The following discussion includes a description of the affected environment and environmental consequences to the private and state lands as well as those anticipated for the public lands. Because the BLM has no jurisdiction over geophysical operations on state or private lands, any mitigation developed through the analysis would apply only to the public lands administered by BLM.

3.1 LOCATION AND GENERAL SETTING

The geographic area affected by the Proposed Action is delineated in the project location description and map (Fig. 1.1).

Critical elements and other resources potentially affected by the Proposed Action are described in this portion of the EA. This section also provides an analysis of impacts/potential environmental consequences resulting from project implementation, and presents the expected impacts/ environmental consequences of the Proposed Action Alternative.

Critical elements of the human environment (identified by the BLM NEPA Handbook H-1790-1 and subsequent Executive Orders), their status in the project area, and whether they would be affected by the proposed project are listed on Table 2.

Other resource values potentially affected by the Proposed Action include the following resources: minerals, paleontology, soils, vegetation, livestock grazing, visual resources, recreation, socio-economics, noise and safety.

3.2 CRITICAL ELEMENTS

TABLE 2 - Critical Elements of the Human Environment

Element	Status on the PACIFIC CREEK 3D	Addressed in EA
Air quality	Not affected	No
Area of Critical Environmental Concern	Potentially Affected	Yes
Cultural resources	Potentially affected	Yes
Environmental justice	Not affected	No
Farmlands, prime or unique	None present	No
Floodplains	Potentially Affected	Yes
Native American religious concerns	Potentially Affected	Yes
Noxious/invasive plants	Potentially Affected	Yes
Special Status Species	Potentially Affected	Yes

Element	Status on the PACIFIC CREEK 3D	Addressed in EA
Threatened and endangered species	Potentially Affected	Yes
Wastes (hazardous or solid)	Potentially Affected	Yes
Water quality (surface and ground water)	Potentially Affected	Yes
Wetlands/riparian zones	Potentially affected	Yes
Wild and scenic rivers	None present	No
Wilderness	None present	No
Wildlife	Potentially Affected	Yes

3.2.1 FLUID MINERALS: OIL & GAS

Affected Environment

Oil and gas exploration and production is in a discovery mode within the Pacific Creek 3D project area. Very little drilling is occurring in the area. A total of thirteen (13) wells (plugged and abandoned) are present within the project boundary with one (1) active gas well (Fig. 3.1 Oil and Gas Wells Map) (Wyoming Oil & Gas Conservation Commission records available via the internet at <http://wogcc.state.wy.us>). Vibroseis projects do not affect reservoir production/drainage.

Environmental Consequences of the Proposed Action

Adoption of the Proposed Action would allow project participants to obtain and utilize 3D geophysical data, resulting in the greater likelihood of drilling producing wells, more efficient field development, and would be consistent with the National Energy Policy.

Exploratory drilling for fluid minerals is not dependent upon geophysical operations. However, such operations can indicate areas where to concentrate future exploratory drilling as well as where not to, and would likely eliminate surface disturbance for non-productive wildcat wells. Public lands in the project area are leased for oil and gas and it is expected that some exploratory drilling would occur on all lands. Should exploratory drilling result in commercial quantities of hydrocarbons being found, development wells could occur. The extent of future development is unknown at this point. Any future proposals for individual exploratory wells and/or development wells would be analyzed at that time.

Vibroseis operations near existing oil/gas wells, buried pipelines, buried telephone cables, or overhead power lines could cause transmission interference. With implementation of the safe distance prescriptions below, no significant impact to oil and gas related facilities is foreseen.

Should unanticipated damage to existing facilities occur, Veritas would be required to repair any damage (also see approval conditions for other resources).

Fig. 3.1(a) Oil and Gas Wells Map

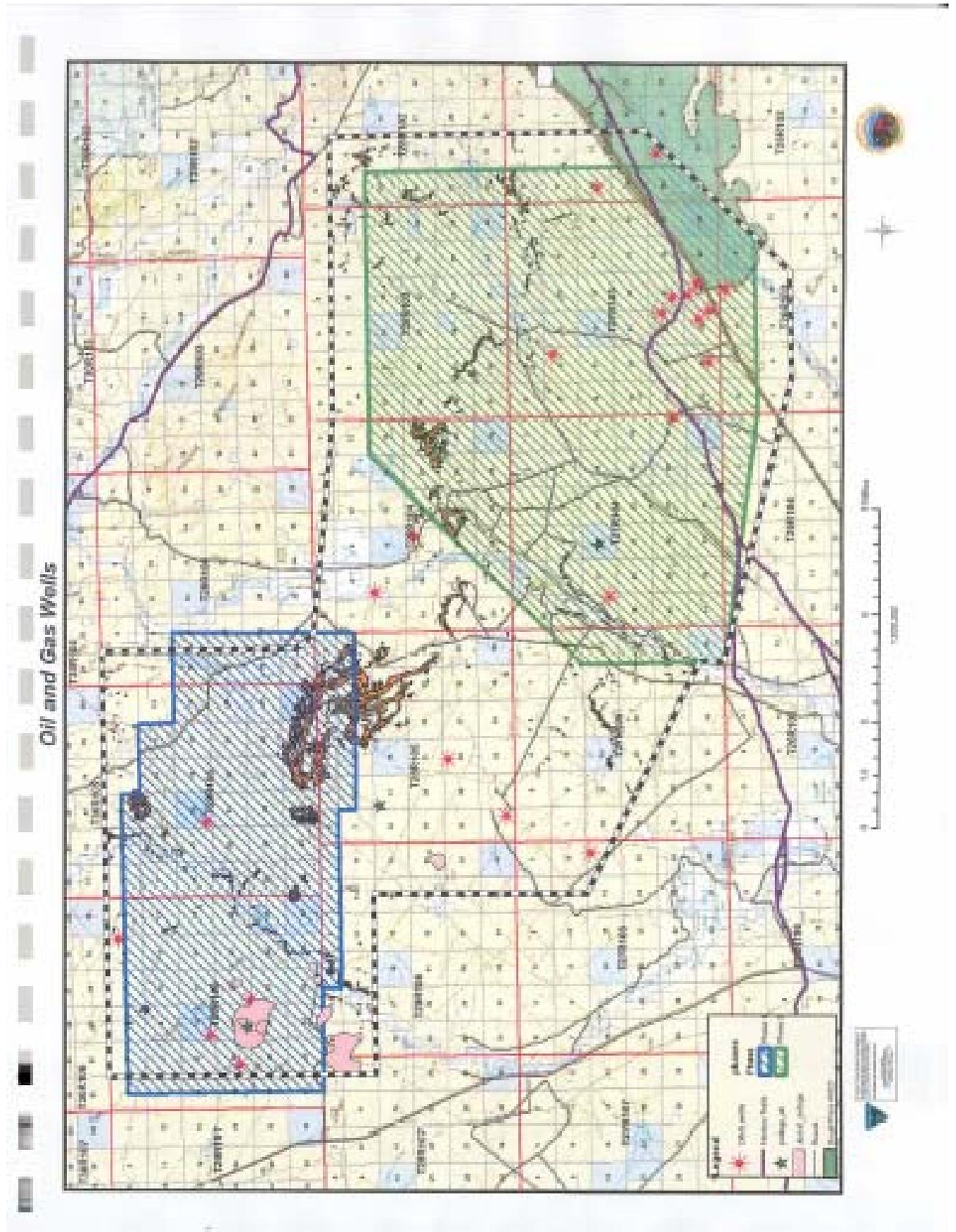
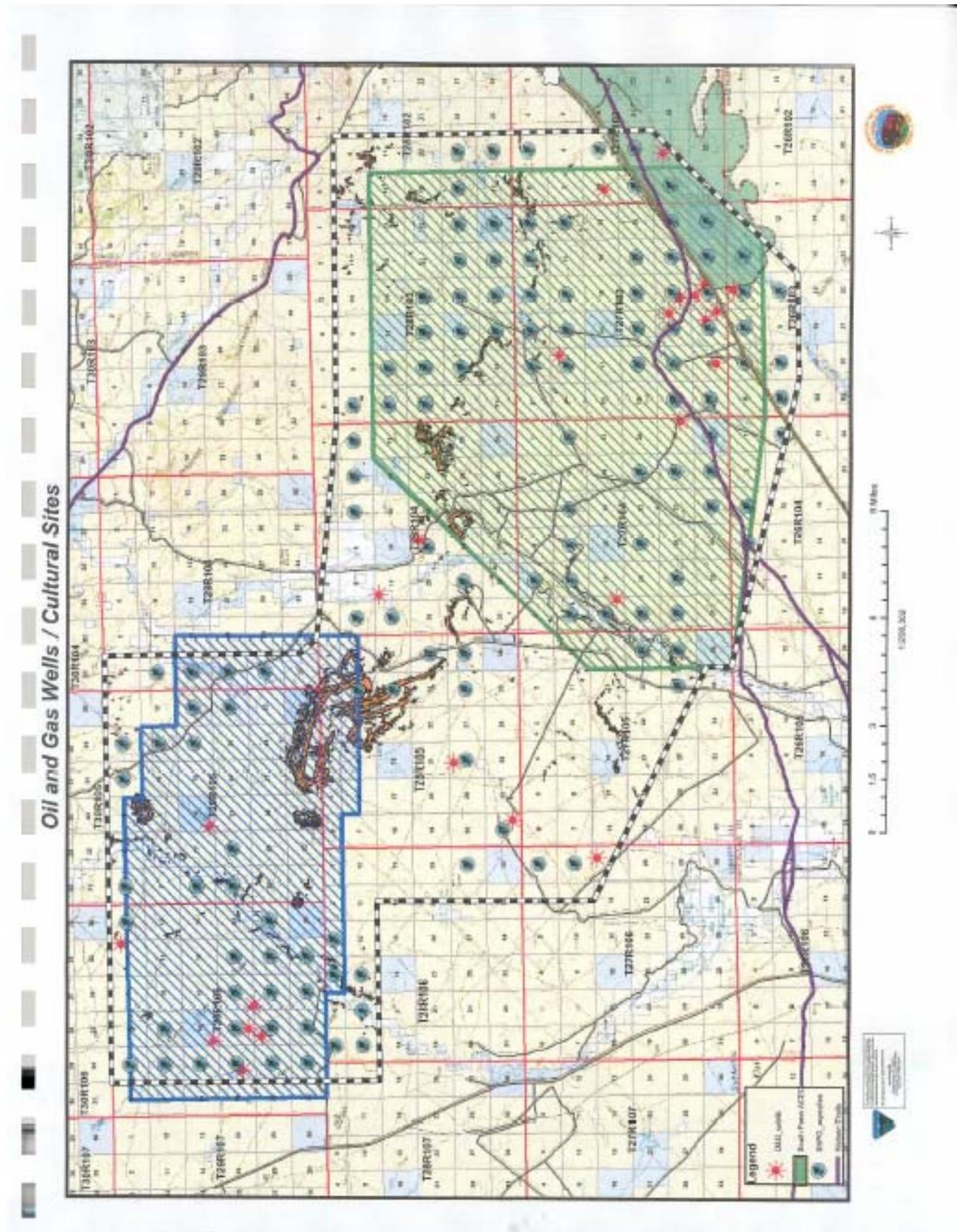


Fig. 3.1(b) Oil and Gas Wells (with Cultural Sites) Map



Environmental Consequences of No Action

Adoption of the No Action alternative is likely to result in the drilling of more wildcat exploratory wells and possibly 'dry holes' than would occur following completion of the proposed geophysical project. Dry holes, in addition to being a financial loss, would result in greater surface disturbance caused by construction of well pads and roads.

3.2.2 PALEONTOLOGICAL RESOURCES

Affected Environment/No Action Alternative

The Laney Member of the (Eocene age) Green River Formation, the Wasatch Formation Main body, the Fowkes Formations and Miocene age rocks are the geological surface exposure in the Pacific Creek 3D project area. The Wasatch Formation is an important paleontological resource and many important fossils have been found in this formation. Petrified wood fragments may be anticipated on the ground surface and fish fossils (*Knightsia*) are found at several localities from the Laney Member. The potential for fossils of scientific interest on the ground surface is relatively low except for the areas in T.27 N, R.105W & 106W. A BLM database search for known paleontological sites was performed for the Pacific Creek 3D project area with two sites identified site # 82143 and site # 51010.

Environmental Consequences of the Proposed Action

The proposed project would have no effect on the paleontological values in the area due to depth of burial, limited outcrop exposure, and vegetative cover. This assessment is made based upon knowledge from numerous visits to the site (Shelly Devoss, BLM-RSFO Natural Resources Specialist and Kirk N. Rentmeister, BLM-RSFO Geologist, personal communication) and constitutes a site-specific analysis for this project.

Yet-unidentified fossils of scientific interest exposed on sensitive surfaces could be destroyed or damaged by vehicle traffic. With the implementation of the dispersed vehicle pattern (see approval conditions for visual resources) and the slope restrictions (see approval conditions for soils), impacts to paleontological resources are anticipated to be negligible. The standard discovery stipulation would apply (Fig 3.2 SHPO-Cultural Sites Map).

There are no known fossil localities within the South Pass ACEC that would be affected by the proposed action.

3.2.3 SOILS

Affected Environment/No Action Alternative

Overall, soils in the Pacific Creek 3D are generally stable and no areas of hydrologic concern have been identified in the analysis area (pg. 583 GRRMP). For more information, see soils maps and technical data covering the entire project area in varying levels of detail are available on BLM GIS files and survey data on file with the Natural Resources Conservation Service Offices located in Fremont, Sublette and Sweetwater Counties.

Environmental Consequences of the Proposed Action

Impacts to soils in the form of compaction and subsequent erosion could be created, principally by the proposed off-road vehicle traffic. Compaction reduces capacity for soils to absorb water, and results in increased runoff. Off-road vehicle operations would crush, and to a lesser extent break off, much of the above-ground vegetation, but root masses of grass and forbs remain alive and intact and continue to hold soil in place, reducing or avoiding erosion. Soil impacts from this project would be generally similar to, but less than, disturbance associated with block area chemical vegetative treatment projects. By offsetting individual vehicle drive paths (see approval conditions for visual resources), soil compaction and erosion as well as vegetation damage would be minimized. Consequently, compaction and soil erosion on level and gently sloping surfaces is anticipated to be negligible.

Soil loss would generally be higher on sparsely vegetated slopes over 25 percent. To protect soils, existing BLM standards limit surface disturbance on slopes greater than 25%. With implementation of the slope restriction prescribed below, the project should result in minimal impacts.

Impacts to soils may also occur as a result of surface rutting caused by vehicle operations on wet soils. Existing BLM standards call for closure during such conditions. With implementation of the saturated soil restriction prescribed below, the project should not result in significant impacts to wet soils.

3.2.4 WATER RESOURCES

Affected Environment/No Action Alternative

The Pacific Creek 3D Geophysical Project is located in the upstream watershed for the Eden and Big Sandy Reservoirs. The Big Sandy River and its tributaries the Little and Dry Sandy Creeks are the main channels that flow through the project area. These channels are characterized by vegetation controlled fine sediment systems with occasional rock outcrop. There are multiple wetlands associated with these and other secondary channels that contain perennial, intermittent, and ephemeral flows. Portions of these channels with perennial flows have been homesteaded in the past and are contained within comparatively thin strips of private land. As with all wetlands under federal jurisdiction, there are multiple regulations associated with water body and wetland management, including, Section 404 of the Clean Water Act and Executive Orders 11990 (wetland protection) and 11988 (floodplain management).

Environmental Consequences of the Proposed Action

Following the above mitigation measures and other Best Management Practices outlined in this and other pertinent documents should minimize environmental damage associated with this project. Some stream banks may be altered and water turbidity increased by the passage of equipment but these effects should be temporary in nature. Leaving the riparian vegetation community intact would help to both minimize the level of disturbance and aid the recovery process. The knowledge gained from the seismic survey should help to reduce the long term level of disturbance in the area as the mineral reserves are developed.

3.2.5 VEGETATION

Affected Environment/No Action Alternative

Vegetation in the project area is dominated by sagebrush with intermingled secondary areas of greasewood, desert-shrub, and mixed-grass prairie communities. The grasses/forbs present in the project area include thickspike wheatgrass, western wheatgrass, Indian ricegrass, Sandberg bluegrass, winterfat, needle-and-thread grass, and fourwing saltbush.

Environmental Consequences of the Proposed Action

The Pacific Creek 3D project would involve direct surface impacts to approximately 2,054 acres of land. It has been observed on previous geophysical projects that woodier plants in the vehicle paths are sometimes impacted but more tender and resilient grasses and forbs survive and continue to occupy the vehicle paths. Brush kill is dependent on multiple factors including brush type, amount of traffic, time of year, and moisture conditions. Geophysical projects conducted under snow and frozen ground conditions typically leave little to no visible trace, killing less than 5% of the brush which is driven on. Based on observation of past summer / fall 3D projects in areas of the relatively tall mountain and basin big sagebrush, however, approximately 60% of the sagebrush driven over is killed, another 20% is partially killed or "pruned," and the remaining 20% is undamaged. In environments where relatively low black and low sage predominates, brush kill by dry season projects is less, with only approximately 40% of low sage in drive paths killed and another 20% partially killed or damaged. Relatively low-growing sage communities predominate in the subject project area with taller sage confined to small areas of deeper soils and greater available moisture such as on floodplains. The proposed period of project field operations during the summer/fall would occur during dry weather conditions.

Vehicle impacts to grasses and forbs are anticipated to be even shorter-term in effect since these species are not killed and would re-sprout from their established root systems. If project operations are conducted during the dry summer and fall seasons, the remaining grass in the vehicle paths may be broken off and re-growth is not anticipated until the spring. Seasonal dry grass and forb loss within the impact area, however, is not expected to be significant. Overall, with side-by-side vehicle travel paths (see approval conditions for visual resources) limited to areas of less than 25% slope (see approval conditions for soils), Pacific Creek 3D vehicle traffic impacts to the general vegetation are expected to be minimal for the following reasons: Impacts are limited to species composition changes (not vegetation removal/dirt work), species composition changes would occur on a maximum of only 4.3% of the project area, species composition shifts would involve only a proportion change among existing native plants (no introduced species), and species composition changes would be short term as new brushy plants begin to reoccupy the vehicle paths within a few years (also see impacts discussion for wildlife and cumulative effects).

3.2.6 SPECIAL STATUS PLANTS

Affected Environment/No Action Alternative

The U.S. Fish and Wildlife Service has identified only one federally designated threatened, endangered, proposed or candidate plant species as potentially present in this region (USFWS project species list of 5/20/02 in reference to South Jonah project). Ute ladies'-tresses (*Spiranthes diluvialis*) is a federally threatened member of the orchid family that grows in moist

soils along riparian edges, gravel bars, old oxbows, and wet meadows at elevations of 4,200 to 7,000 feet. Suitable habitat for this plant is known to occur in the Pacific Creek 3D project area but surveys to this date have not found this species although it may occur (Jim Glennon, RSFO botanist, July 29, 2005).

Fifteen species in the RSFO area have been accorded 'sensitive species' status by BLM Wyoming State Office Instruction Memo WY-2001-040. Refer to the Wyoming Rare Plant Field Guide (Fertig 1994) for plant descriptions and other information. None of these species are known to be present in the project area although habitat is present for Meadow pussytoes (*Antennaria arcuata*), cedar Rim thistle (*Cirsium aridum*) and Large-fruited bladderpod (*Lesquerella macrocarpa*) (Jim Glennon, RSFO botanist, July 29, 2005).

Environmental Consequences of Proposed Action

Disturbance within the riparian areas of streams could affect Ute ladies'-tresses or its habitat. Avoiding these areas would also prevent possible impacts to Meadow pussytoes if found to occur. Disturbance to rocky rims and slopes could affect habitat for Cedar Rim thistle and Large-fruited bladderpod. With existing BLM standards that limit surface disturbance on slopes greater than 25%, potential impact to the habit would be negligible.

3.2.7 INVASIVE SPECIES

Affected Environment/No Action Alternative

A total of 22 noxious weeds including invasive species are of concern in Wyoming and 6 of these may be of concern in the project vicinity. These weeds include Canada thistle, musk thistle, black henbane, halogeton, hoary cress (whitetop) and perennial pepperweed (giant whitetop). Occurrence of these weed species has a much higher probability in areas of past disturbance and varies according to basic vegetative cover type. Because invasive and noxious plants are typically very aggressive, special management is required to prevent existing infestations from spreading (or to eradicate these infestations) and prevent the introduction of noxious weed seed from outside sources.

Environmental Consequences of the Proposed Action

Noxious weeds could be introduced to the area by infested equipment. With implementation of the vehicle washing stipulation, no significant impact with regard to weeds is foreseen.

Weeds could also invade and take hold in areas of surface disturbance caused by project operations. If reclamation and reseeding is undertaken promptly in any areas of unanticipated surface disturbance as prescribed, no significant impact to vegetation or weed occurrence is foreseen.

3.2.8 LIVESTOCK/RANGE

Affected Environment/No Action Alternative

The proposed Pacific Creek 3D project falls in portions of thirteen grazing allotments: Reservoir, Poston, Erramouspe Ranch, Buckskin Sandy, Prospect Mountain, Long Draw, Little Sandy, Little Prospect, Spicer Group, McCann Ranch, White Acorn, Pacific Creek, and Hay Meadow.

Utilized by cattle and sheep, these allotments have grazing permitted in spring, summer, and fall so livestock are anticipated to be present in the area during project operations.

Environmental Consequences of the Proposed Action

Leaving fences down or gates open when livestock are present may result in livestock moving between pastures or allotments, from private or State to public land or vice versa, onto highways, and herd mixing. This could lead to unauthorized grazing, overgrazing, or increased livestock operator cost associated with sorting mixed herds. With implementation of the fence and lessee notification measures prescribed below, the project should result in negligible impacts.

Seismic activities operations in close proximity to water wells and pipelines or water impoundments could result in casing failure or dam fissure and a subsequent loss of livestock water. With implementation of the water restrictions prescribed below, the project should result in no significant impacts. Other types of surface water are addressed under Water in this EA, while pipelines are covered under the Oil & Gas section of this EA.

Heavy vehicle traffic could cause damage to existing cattle guards. With implementation of the facilities repair/replacement responsibility measures prescribed, the project should result in no significant impacts.

The Proposed Action would result in short-term vegetative effects on a small percentage of the project area. This disturbance would consist primarily of conversion of an estimated 60% of the mature shrubs and forbs in the tire paths to grass and also to younger, more succulent shrubs and forbs. While species and age make-up of plants in the tire paths would change, available palatable livestock forage would not be appreciably affected. With side-by-side vehicle travel paths (see approval conditions for visual resources), livestock forage impacts are anticipated to be negligible.

3.2.9 WILDLIFE and SPECIAL STATUS ANIMAL SPECIES

Affected Environment/No Action Alternative

The project area includes sagebrush/saltbush steppe, greasewood and riparian wildlife habitats. Shrubs growing in this area include Gardner saltbush, greasewood, rabbitbrush, black sage, mountain big sage, and some silver sage. Other common plant species include spiny hopsage, needle-and-thread grass, thickspike wheatgrass, and Indian ricegrass.

The most common large game animals found in the Pacific Creek 3-D project area include pronghorn antelope, mule deer, elk, and moose. Other mammals include coyote, fox, skunk, badger, white-tailed prairie dog, white-tailed jackrabbit, and Richardson's ground squirrel. The area also contains habitat for greater sage-grouse strutting (leks) and nesting and early brood-rearing habitat. Raptors species include Ferruginous hawk, golden eagle, prairie falcon, red-tailed hawk, northern harrier, burrowing owl and American kestrel.

Reptiles which could occur in the project area include Northern sagebrush lizard, short-horned lizard and wandering garter snake. Leopard frogs and spadefoot toads are also known to occur within the project area. Wildlife discussed in greater detail in this environmental analysis include threatened, endangered, proposed and candidate species, big game species, raptors, and BLM sensitive species.

Information regarding the occurrence of species discussed in this analysis includes the BLM GIS database, Wyoming Game and Fish Department game species reports and the BLM biologist knowledge of the project area.

Environmental Consequences of the Proposed Action

Habitats that support threatened and endangered species, species of special concern, or sensitive species would be maintained or enhanced (Wyoming Standard #4 - Standards for Healthy Rangelands; rangelands are capable of sustaining viable population and a diversity of native plants and animal species appropriate to the habitat. Habitats that support or could support threatened, endangered, candidate, and sensitive species, would be maintained or enhanced). (BLM WY, 1998). Any impact which exceeded this standard would be considered significant.

Disturbance of wildlife and habitat in the project area may reduce habitat availability and effectiveness for a variety of small mammals, birds, reptiles, amphibians and their predators over the short term. Minor surface disturbance from drill buggies and vibroseis vehicles would increase noise levels and may result in some direct mortality to small mammals and birds. Quantification of these losses is not possible due to the relatively high production potential of some of these species and the relatively small amount of habitat disturbed. Common small mammal and songbird populations would quickly return to pre-disturbance levels following completion of the project. No long-term effects on populations of common small mammals and songbirds would be expected.

3.2.9.1 Big Game

Four big game species, mule deer (*Odocoileus hemionus*), antelope (*Antilocapra americana*), elk (*Cervus elaphus*) and moose (*Alces alces*), occur in the project area during all or parts of the year. Crucial winter ranges are typically used eight out of ten winters. Crucial winter range for all four species is found within the project area (Fig. 3.3 Crucial Herd Units Map).

3.2.9.1.1 Mule Deer

The project area includes 87,620 acres of crucial winter mule deer range. This winter range is within the Boulder (#138) and Big Sandy (#130) Hunt Areas. Habitats in the project area range from mountain shrub (on Elk Mountain) to desert scrub and riparian. Mule deer also occupy most of the area yearlong. Refer to the Rock Springs Field Office GIS database for seasonal ranges and boundaries.

3.2.9.1.2 Pronghorn Antelope

Over 21,000 acres of crucial pronghorn winter range is identified within the Pacific Creek 3-D area. Species maps can be found at the Rock Springs Field Office (RSFO) GIS database and WGFD information.

The Pacific Creek 3-D project is within the Sublette antelope herd and includes part of Hunt Areas 90 and 91.

3.2.9.1.3 Elk

The project area contains 13,568 acres of crucial elk winter range.

Crucial Herd Units Areas

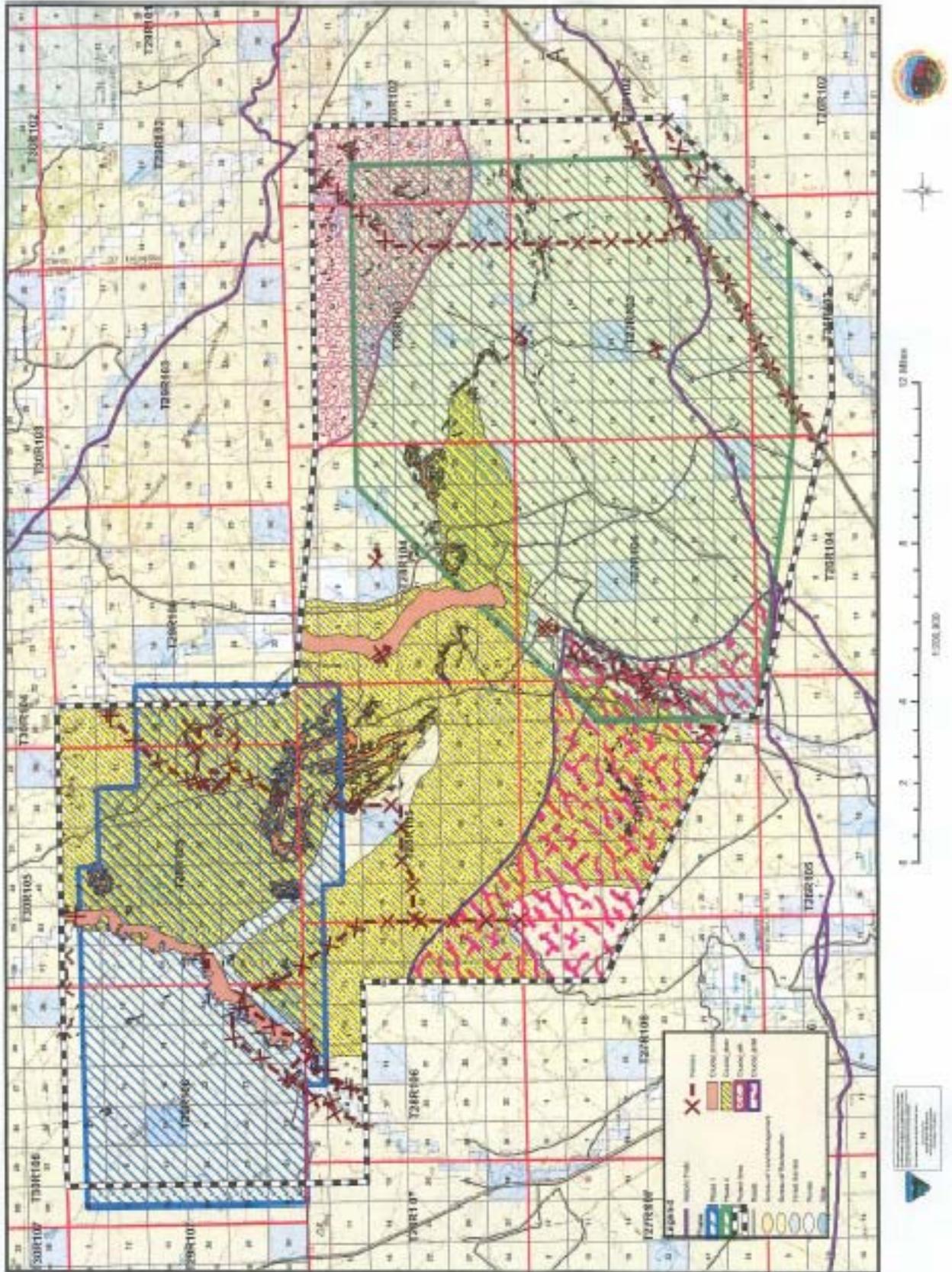


Fig. 3.3 Crucial Herd Units Map

The project area includes the South Wind River Herd Unit, Hunt Area #99 (Big Sandy), and Pinedale #98 (Boulder). Some elk are routinely observed here during all seasons of the year. They may be seen on Elk Mountain.

3.2.9.1.4 Moose

Moose may be found within and just outside the project area yearlong. Except for winter, moose are most associated with riparian areas with willows and some cover. About 5,700 acres of habitat within the project area is identified as crucial winter range for this species. This area is part of the Lander Moose Herd and Hunt Area 30.

Environmental Consequences of the Proposed Action

Effects on big game species would be temporary displacement from project activities. Disturbance of big game species during the parturition period and on winter range can increase stress and may influence species distribution (Hayden-Wing 1980, Morgantini and Hudson 1980). The project is required to complete activities prior to the winter restriction dates for big game (November 15 through April 30).

Effects on big game are expected to be minimal, as the Pacific Creek 3-D project would be conducted during summer and fall. No long-term habitat loss is expected once geophysical recording is complete, as big game species are expected to return to their historic ranges. No cumulative effects are expected.

Veritas may apply for an exception to the crucial winter range restriction to conduct geophysical activities after November 15.

3.2.9.2 Upland Game Birds

3.2.9.2.1 Greater Sage-Grouse

The project area is within greater sage-grouse habitat for breeding, nesting, brood-rearing and winter occupation (Fig. 3.4 Raptors and Greater Sage-grouse Map). According to Wyoming Game and Fish Department (WGFD) data and RSFO records, 31 strutting grounds (leks) are entirely located within the project area. Nine additional leks are known to occur outside the area, within two miles of the project boundary. A sage grouse wintering area has been identified near the center of the Pacific Creek 3-D project.

Environmental Consequences of the Proposed Action

No significant effects on the greater sage-grouse population is expected since authorized activities would occur after nesting is complete and prior to winter. Effects on greater sage-grouse would include minor direct loss of habitat and forage, and temporary disturbance from project activities. Disturbance of greater sage-grouse during the nesting and brood-rearing period and on winter concentration areas can increase stress and may influence species distribution. Some minor displacement of greater sage-grouse is expected from vehicular and human activities associated with geophysical, although long-term adverse effects are anticipated to be negligible.

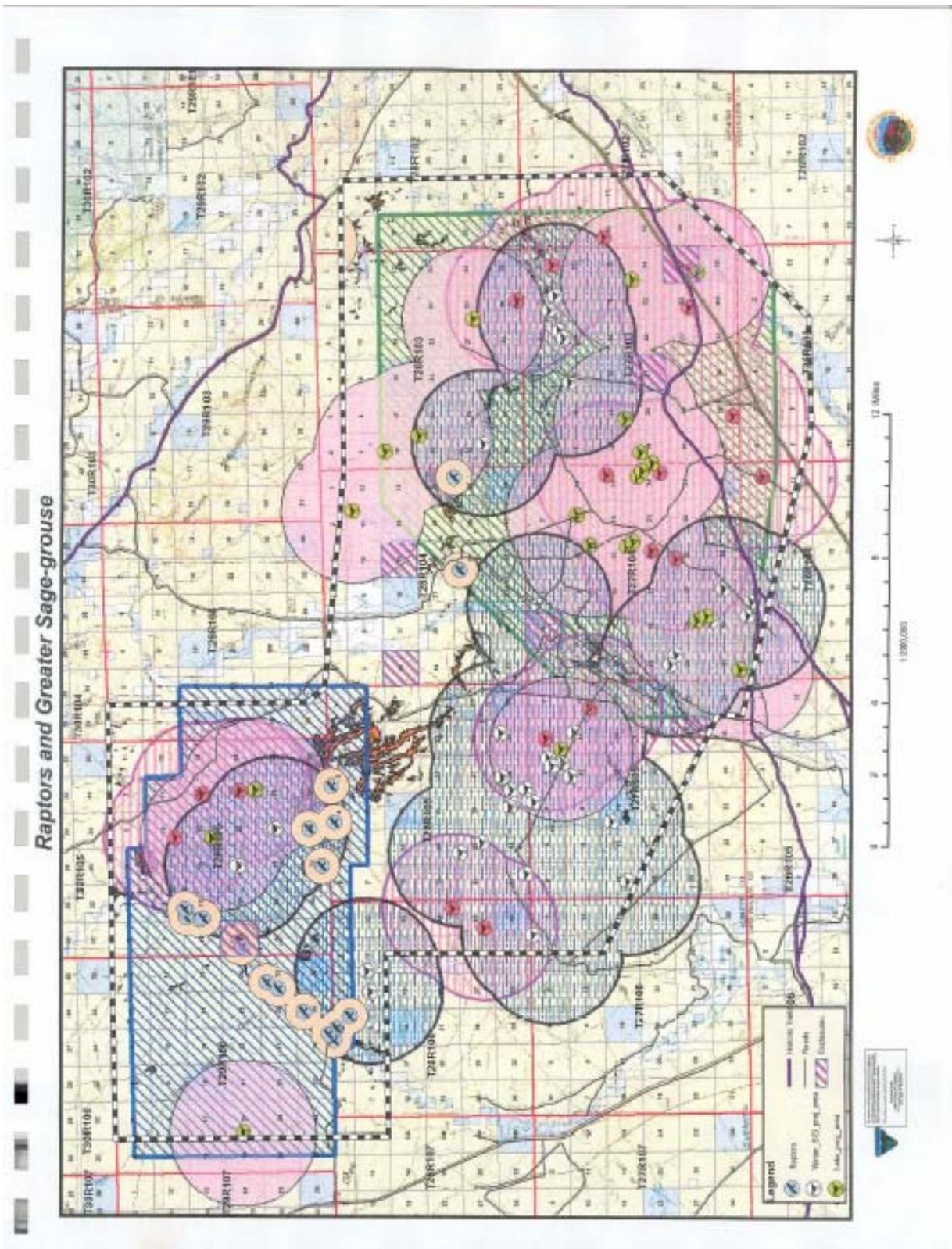


Fig. 3.4 Raptors and Greater Sage-grouse Map

3.2.9.3 Raptors

Several raptor species occur in suitable habitats within the project area. Raptor species include the ferruginous hawk, northern harrier, red-tailed hawk, golden eagle, prairie falcon, American kestrel and burrowing owl. Twenty-two raptor nests have been documented active in the project

area during the period 1992-2001.

Environmental Consequences of the Proposed Action

The principal potential effects of the project on raptor species would be nest abandonment and/or reproductive failure caused by geophysical activities and small, temporary reductions in prey populations for raptors.

There is also potential for no adverse effects to burrowing owls nesting in the area. No effects on other breeding raptors are expected, provided avoidance and mitigation measures are followed. No cumulative effects are expected with the implementation of committed practices and mitigations.

3.2.9.4 Threatened, Endangered and Candidate Species and Special Status Plant Species

There are four threatened, endangered and candidate species that could possibly occur in the proposed project area (Table 3).

TABLE 3 - Federally Threatened, Endangered, Candidate, and Special Status Plants Species

Species	Status	Habitat	Status in Project Area / Comments
Bald eagle	T	Found statewide	No suitable nesting/roosting habitat. No additional information needed.
Black-footed ferret	E	Prairie dog towns	None of sufficient size to support BFF. No inventory required.
Ute Ladies'-tresses	C	Riparian areas near wetland meadows, springs lakes and perennial streams. The elevation range of known occurrences is 4,200 to 7,000 feet	Suitable habitat but no specimen within project area. No additional information needed.
Colorado River and Platte River System	E	Downstream residents of the Green River system	No effect to stream flows. No additional information needed.

T - threatened E - endangered P - proposed for listing X - experimental population

3.2.9.4.1 Black-footed Ferret and Associated White-tailed Prairie Dog Colonies

White-tailed prairie dog (*Cynomys leucurus*) colonies provide habitat for black-footed ferrets (*Mustela nigripes*). One prairie dog colony occupies approximately thirty-five acres on the east side of the Big Sandy River, south of Pencil Point. Several sizeable colonies occur on the west side of the Big Sandy river and comprise a complex sufficiently populated by prairie dogs and of

sufficient acreage to provide suitable habitat for black-footed ferrets.

A black-footed ferret was trapped by Wildlife Services personnel about two miles west of the project boundary and north of Big Sandy reservoir in the late 1960's. Researchers have concluded, through archaeological and historical evidence, that this species has never been abundant.

Environmental Consequences of the Proposed Action

In Wyoming, white-tailed prairie dog colonies provide essential habitat for black-footed ferrets. Ferrets depend almost exclusively on prairie dogs for food, and they depend upon prairie dog burrows for shelter, parturition, and raising young (Hillman and Clark 1980). Prairie dog towns or complexes must be greater than 200 acres and have a burrow density greater than or equal to 8 burrows/acre in order to be considered suitable for black-footed ferrets (Biggins et al. 1989). If suitable habitat is found in the project area, however, the nature of geophysical activity is not anticipated to adversely affect habitat for the black-footed ferret.

3.2.9.4.2 Bald Eagle

Bald eagles casually winter across much of the project area. They arrive in mid-November and may not leave until early March if mild winter conditions exist. There are no known winter roost sites or summer nesting sites within or adjacent to the Pacific Creek 3-D project.

Environmental Consequences of the Proposed Action

Bald eagle nesting or winter roosting habitat does not occur within the project area. The geophysical project would not affect bald eagles. No mitigation is required.

3.2.9.4.3 Ute Ladies'-tresses

Ute Ladies'-tresses (*Spiranthes diluvialis*) is a perennial, terrestrial orchid which is endemic to moist soils near wetland meadows, springs lakes and perennial streams. The elevation range of known occurrences is 4,200 to 7,000 feet in alluvial substrates along riparian edges and wet meadows. The Pacific Creek 3-D project elevation ranges from 6,922 feet to 7,883 feet above mean sea level. Although potential suitable habitat exists for this species, surveys along numerous lower elevation stream systems in southwest Wyoming and near the project area have not yielded a single specimen, nor has there been any found any specimens of this plant within this field office.

Environmental Consequences of the Proposed Action

No impacts are anticipated for Ute Ladies'-tresses from this project. Primarily because the Pacific Creek 3-D project elevation ranges from 6,922 feet to 7,883 feet and numerous surveys in or near the area have not yielded any plants.

3.2.9.4.4 Water Depletions to the Colorado River and Platte River Systems

Veritas has committed to use only air drills for shot holes and have no need to use any water on the proposed project. The Pacific Creek 3-D project has no potential to impact the Green River drainage or special status aquatic species living in it.

Environmental Consequences of the Proposed Action

The proposed project would have no effect on the Green River system due to non-use of water for the project.

3.2.9.5 BLM Sensitive Species

Thirteen special status species of wildlife occur or potentially occur in the project area. They are the mountain plover, dwarf shrew, pygmy rabbit, white-tailed prairie dog, swift fox, ferruginous hawk, greater sage-grouse, burrowing owl, sage thrasher, loggerhead shrike, Brewer's sparrow, sage sparrow and Great Basin spadefoot toad.

Environmental Consequences of the Proposed Action

Direct and indirect effects on BLM wildlife species of concern could occur due to impact with vehicles and minor loss of habitat or displacement due to geophysical activities. No cumulative effects would be expected to result from this project for any BLM sensitive species.

3.2.9.5.1 Mountain Plover

Mountain plover inhabit shrub-steppe habitats with low growth vegetation within the Pacific Creek project. They have been observed in cushion plant communities, prairie dog colonies and Gardner saltbush flats. Mountain plover breeding/nesting habitat is typified by short grass prairie and nearly barren areas, and is often associated with prairie dog towns (USFWS 2002). According to the USFWS positive indicators for mountain plovers include near-level terrain, prairie dogs, bare ground, cactus habitats, and low growing widely spaced plants (Fig. 3.4 Map).

No surveys have been conducted in the project area in accordance with the USFWS guidelines, but early morning observation in late April and May have found no less than eleven occupied mountain plover sites in the project area.

Environmental Consequences of the Proposed Action

Mountain plovers were observed within the project area during 2003 and 2004 field visits. Implementation of the Pacific Creek 3-D project is not expected to affect mountain plovers because activities are not planned during the nesting or brood rearing season (April 10 through July 10).

3.2.9.5.2 Dwarf Shrew

Dwarf shrews (*Sorex nanus*) are found in a variety of habitats including shortgrass and sage habitats, although the species has a predominantly montane distribution. The species prefers areas with fairly well formed soils. Species more frequently in riparian areas than in sagebrush, where the riparian area had a higher total cover and shrub cover than is found in the sagebrush (MacCracken et al. 1985). The animal is considered to be typically rare throughout its range, although it has been documented within the project area during a small mammal trapping study and is expected to be found in sagebrush-grass habitats and along riparian areas such as Monument Draw and tributaries to the Dry Sandy.

Environmental Consequences of the Proposed Action

No significant adverse effects are expected to result from the proposed project, nor is the project likely to threaten the population viability or reduce the local habitat capability below its potential.

3.2.9.5.3 Pygmy Rabbit

The pygmy rabbit is typically distributed in dense stands of big sagebrush growing in deep, loose soils. Such habitat is abundant in the project area and there has been a sighting to the north of the project on Dry Sandy creek. This species may occur in habitats within the project area. WYNDD (Wyoming Natural Diversity Database) is continuing to study distribution of this species and annually expands their known range in southwest Wyoming.

Environmental Consequences of the Proposed Action

This species is not known to occur in the Pacific Creek 3-D project and adverse effects the pygmy rabbits potential habitat is anticipated to be minimal.

3.2.9.5.4 White-tailed Prairie Dog

The white-tailed prairie dog is a species which typically live in towns or colonies established in shortgrass and sage steppe habitat. This species is present across much of the project area. Refer to the previous discussion on black-footed ferrets.

Environmental Consequences of the Proposed Action

The project may adversely impact individuals, but no colony or population is threatened.

3.2.9.5.5 Swift Fox

The swift fox has the potential to occupy the project area. No recent documentation of this species is known for the Pacific Creek project area.

Environmental Consequences of the Proposed Action

Potential habitat for this species exists throughout the project area. The project is very unlikely to impact this species population or individuals.

3.2.9.5.6 Ferruginous hawks

Ferruginous hawks are raptors found in sagebrush, juniper and cliff habitats. This species is a common desert dweller which nests on anything from a windmill, juniper tree, barren hilltop or artificial nest structure (ANS). A one-mile radius from the nest is protected from major human activity during the nesting and fledgling rearing season. This buffer is established because the nest is usually placed where the bird has a wide vista. In this part of Wyoming hatchlings are usually off the nest by the first of July. Five ferruginous hawk nests are known to occur within the project area.

Environmental Consequences of the Proposed Action

Timing of the project eliminates potential to adversely impact successful nesting of this species.

3.2.9.5.7 Greater Sage-Grouse

This species was previously discussed under “Upland Game Birds”.

3.2.9.5.8 Burrowing Owls

Burrowing owls have been observed in at least two prairie dog colonies and one nest was found along the county road in a badger burrow. This species is generally protected from April 1, generally when they arrive, through September 10, when the species generally leave in their southward migration. Surface disturbing activity buries these individuals resulting in 100% mortality of buried individuals. Burrowing owl nest success in 2005 has produced more young within the Rock Springs Field Office than any year since 1999.

Environmental Consequences of the Proposed Action

Since only a few burrowing owls are known to occur in the geophysical project area and the timing is after August 1st, it is unlikely that this project would adversely impact the species. Avoidance at with-tailed prairie dog towns should prevent adverse impact to the Burrowing Owls

3.2.9.5.9 Sage Thrasher

Sage thrashers are common migratory sagebrush obligate passerines. About the size of a robin, this mottled brown bird prefers sagebrush and greasewood communities for breeding and nesting. They are a common bird in the project area.

Environmental Consequences of the Proposed Action

The project would displace individuals. This would be a short-term condition.

3.2.9.5.10 Loggerhead Shrike

The loggerhead shrike is found in the project area from early spring until they migrate south to Mexico and Central America in the fall. This black and white bird is smaller than a robin and is often classified with raptors. They impale their prey on spinet thorns, barbed wire or greasewood thorns. Spring and summer of 2005 found more individuals in the project area than the previous four years, probably due to the abundance of insects.

Environmental Consequences of the Proposed Action

No significant adverse effects are expected to result from the proposed project, nor is the project likely to threaten the population viability.

3.2.9.5.11 Brewer’s Sparrow and Sage Sparrow

The Brewer’s sparrow and sage sparrow are both sagebrush obligate species and probably occur in the project area. Both nest on or near the ground and feed on seeds and small insects. The

Brewers sparrow is commonly seen in the area with the sage sparrow found more commonly near Old Eden Reservoir and habitats along Dry Sandy Creek.

Environmental Consequences of the Proposed Action

The project should not adversely impact individuals.

3.2.9.5.12 Great Basin Spadefoot Toad

The Great Basin spadefoot toad is small toad-like frog that has a spade-like growth on its hind feet to dig a burrow in sand or mud. Like other amphibians, they must live near a water body, even if the water is seasonal, for successful reproduction. They are commonly found in flowing well wetlands, along the Little Sandy River and Long Draw.

Environmental Consequences of the Proposed Action

The toad is expected to occur in the project area along streams and in perennial and ephemeral wetlands. The geophysical activities are unlikely to adversely impact spadefoot toads.

3.2.10 VISUAL RESOURCES

Affected Environment/No Action Alternative

The majority of Pacific Creek 3D falls within VRM Class IV designation, the least protected visual resource management class. Within the Wind River Front Special Recreation Management Area along the Big Sandy River is VRM Class III and a small portion of the project area that is within the South Pass Historic Landscape ACEC is VRM Class II (Fig. 3.5 Visual Resource Management Area Map). Based on BLM guidelines within Class IV areas (pg. 21 GRRMP), surface disturbance can reach moderate to high levels; however, every attempt should be made to minimize the impacts of these activities through careful location and minimizing disturbance. Activities within the VRM Class III areas should be designed to retain the characteristics of the landscape but should remain subordinate to the existing characteristic landscape and VRM Class II should be designed to blend into and retain the existing character of the natural landscape. The scenic values along Highway 28 within Fremont County would be protected as VRM Class II.

Source points would occur 300 feet and beyond from the historic trail ruts (pg. 15 GRRMP); therefore, there is potential for source points and geophysical operations to be noticed by visitors to the trails (Also see discussion of historic trails in the recreation portion of this EA.).

Environmental Consequences of the Proposed Action

Off-road vehicle traffic by buggy vibes and repetitive passes by ATVs could cause linear obtrusions (i.e., two-track paths) across the landscape. This potential to create linear visual scars is possibly the most substantial impact by the Pacific Creek 3D. In order to avoid linear visual obtrusions, reduce soil compaction, and reduce the degree of vegetation loss, BLM requires that geophysical projects offset their vehicle operations such that the tires of one vehicle do not follow in the path of another. This approach has been successful for other geophysical projects and linear-two-tracks have not been created. With this vehicle offsetting system (see approval conditions below) and the prescribed slope restriction (see approval conditions for soils), visual impacts caused by the project are anticipated to be low level and short term.

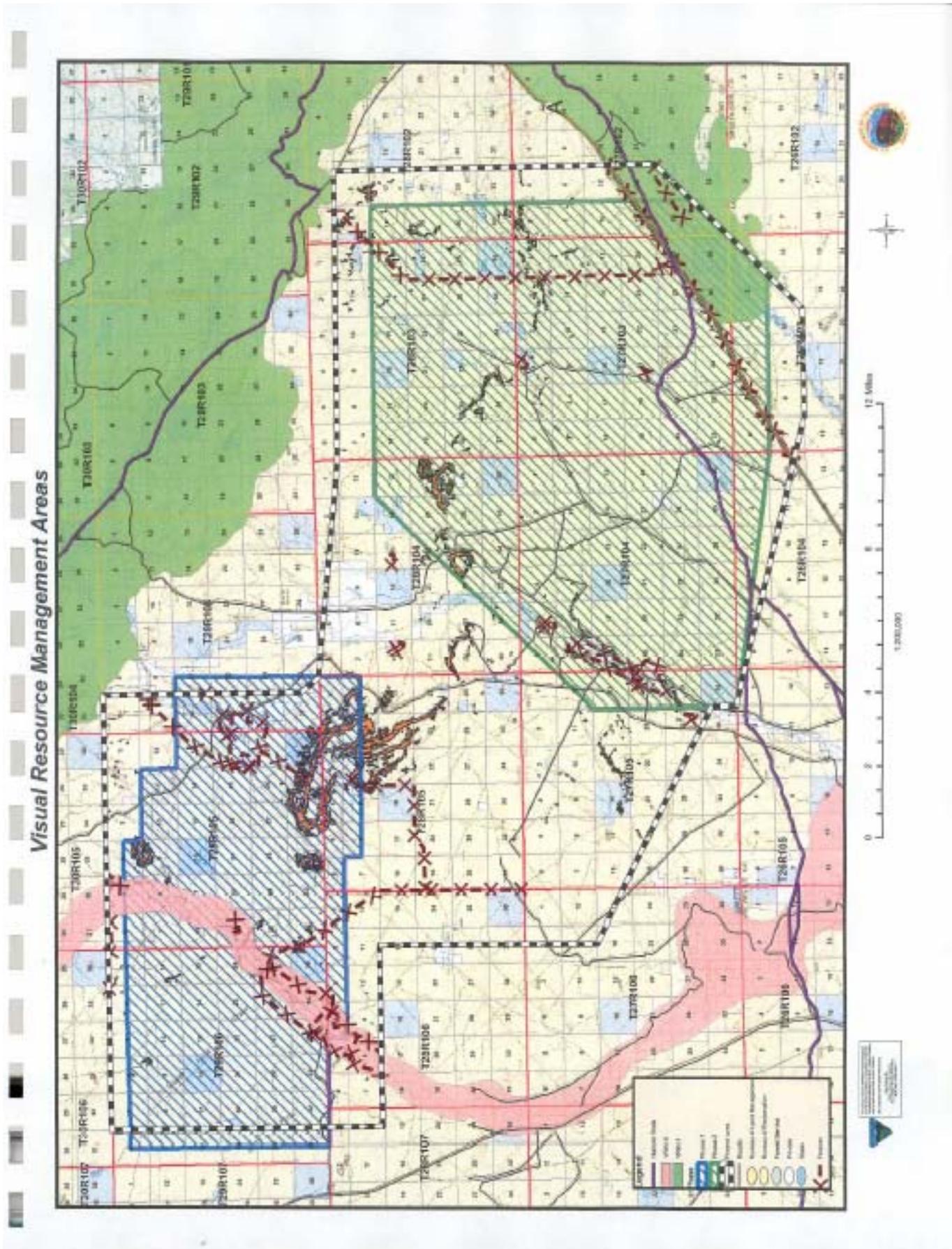


Fig. 3.5 Visual Resource Management Area Map

Based on field review conducted in July, 2004, source points have been relocated within the 0.25-mile corridor on either side of the trail so as these points are screened from view by visitors along the historic trails to the extent possible. Once geophysical operations move near the trail system, such operations would be visible temporarily.

3.2.11 RECREATION (Wind River Front Special Recreation Management Area)

Affected Environment/No Action Alternative

The Wind River Front SRMA, Western portion is managed for dispersed recreation uses such as camping, hunting, and fishing, with full consideration given to wildlife, cultural, vegetation, watershed values, and mineral development activities (Fig. 3.7 Wind River SRMA and South Pass ACEC Map). Recreational use in the project area is light and centers primarily on hunting. Antelope and sage grouse are the predominant species hunted; however, some prairie dog, mule deer, and rabbit hunting also occur. Antelope rifle hunting in Area 90 and 91 runs from September 10 through October 30, mule deer rifle hunting in Area 130 and 138 runs from September 15 through October 31, elk rifle hunting in Area 98 and 99 runs from September 20 through January 31, 2003, and sage grouse hunting in the Upper Green River Basin runs from September 28 to October 6 (tentative). Statewide, cottontail rabbits can be hunted Jan 1-Mar 1 and Sept 1-Dec 31. Prairie dogs, jackrabbits, coyotes, and foxes can be hunted year-round.

BLM has authorized commercial big game outfitting in this area, primarily for antelope. Other dispersed recreational activities that may take place in the Pacific Creek 3D include driving on the historic trails, off-road vehicle (ATV) use, mountain biking, hiking, wildlife viewing, and sightseeing. There are three interpretive sites for the trails within the project area.

BLM-administered lands in the project area are limited to existing roads (Map 20 Green River RMP). ORV management calls for motorized vehicles to stay on existing roads and trails, unless permitted or otherwise allowed an exception by the Authorized Officer (pg. 15-16).

No new oil and gas leases would be authorized in the eastern portion of the SRMA. The area has been closed to leasing since 1997.

Off Road Vehicles

The RMP identifies ORV use on public lands within the Wind River Front SRMA as limited to designated roads and trails (p 18). Where roads and trails have not been formally designated vehicle use is limited to existing roads and trails. RMP decisions, however, recognize the use of vehicles for geophysical operations may be given site-specific authorization for off-road use in areas with ORV designations subject to appropriate limitations. Surface disturbing activities are prohibited in the Dry Sandy Swales and the area within 1 mile of the Dry Sandy Swales. No new roads would be authorized for construction in this area.

Environmental Consequences of the Proposed Action

Project operations could disrupt recreation activities by visibly and audibly intruding on recreationists and by temporarily displacing game, which would inconvenience hunters should project operations overlap with hunting seasons. Some visitors to the historic trails could be inconvenienced by geophysical operations. Considering the size of the project area as compared to the size of surrounding big game and sage grouse habitat and hunting area boundaries, project impact to hunting is expected to be minimal. Similarly, in view of the low known levels of other

recreation use in the Pacific Creek 3D, project effects to dispersed recreation are anticipated to be minimal. No impacts to recreation would occur following completion of the project. Overall, impacts to recreation are considered less than significant.

Geophysical operations could occur during hunting periods. Those hunters in the immediate area where operations are occurring would be inconvenienced but this is considered a temporary impact. Other visitors in the immediate area where operations are occurring would also be temporarily inconvenienced. No indirect or cumulative impacts to recreation are anticipated.

In the BLM-RSFO, temporary 'casual' off-road vehicle use is permitted on a case-by-case basis for the performance of tasks in support of formally permitted actions. Casual use in such instances is defined as the single pass of vehicles under 10,000 lbs GVW off-road, subject to the 25% slope restriction (in conformance with BLM Manual 3150, part 3.1.B.5). Surveyors, biologists, and archeologists working on project planning and inventories operate under this exception. With the ORV use limitations stipulated, no resource damage is anticipated as of ORV casual use authorization.

3.2.12 SOCIOECONOMIC CONSIDERATIONS

Affected Environment/No Action Alternative

The Pacific Creek 3D project is located within Sweetwater, Sublette, and Fremont Counties, Wyoming. The local economy is heavily dependent on oil and gas exploration and development. Information in the document is incorporated by reference. Please refer to the Jonah II document for information on the current status of local socio-economic conditions.

Environmental Consequences of the Proposed Action

Peak workforce at any one time for the Pacific Creek 3D project is expected to be approximately 30 persons and total time to complete the project is estimated at three months. Seismic crews would likely be headquartered in Rock Springs, Wyoming. Crews would be transported to the project area and back to Rock Springs on a daily basis. Most of the workers have permanent residences else where, consequently the project is not expected to place any demands on schools, or other similar facilities.

It is unlikely that project activities would generate significant levels of concern, opposition, or dissatisfaction among local residents; residents of local communities are accustomed to and generally accepting of oil and gas related activities, including seismic operations, and are unlikely to view this project as problematic, particularly since it is located adjacent to areas where previous oil and gas related activities have occurred.

An indirect economic benefit would be new producing gas wells in hydrocarbon-bearing strata identified through the geophysical data. The level of benefit associated with new wells would be similar to those described in the Jonah II document.

3.2.13 CULTURAL/HISTORICAL RESOURCES/HISTORIC TRAILS

Affected Environment/No Action Alternative

The Pacific Creek project files search area contains hundreds of known cultural resource sites,

with most of the area still un-inventoried for cultural resources (Fig. 3.6 SHPO-Cultural Sites Map). Examples of some of the known resources are the Oregon National Historic Trail, the Mormon-Pioneer National Historic Trail, the California National Historic Trail, the Pony Express National Historic Trail, the Dry Sandy Pony Express/Stage Station, the Green River/Bryan to South Pass City Stage Road, numerous Native American cultural sites, and numerous historic and prehistoric campsites. Class III cultural resource inventory of the project area is needed to evaluate potential impacts of the project.

Following standard procedures established in the Wyoming State Protocol Agreement between the BLM State Director and the Wyoming State Historic Preservation Officer (Section VII, D1(a)), geophysical operations would be re-designed to avoid cultural resource sites eligible or unevaluated for the National Register of Historic Places (NRHP). All newly discovered sites would be avoided by project re-design and need not be evaluated. Previously recorded sites would also be avoided by project re-design. If sites should be evaluated then it would be according to criteria established by the National Historic Preservation Act of 1966 as amended (NHPA). Sites avoided by project re-design need not be evaluated.

The majority of sites found (and which may be anticipated) in the area are prehistoric camps exhibiting chipped stone artifacts and fire-cracked rock on their surface. Occasionally, hearth stains are also visible on the site surfaces. Burnt bone, groundstone, and prehistoric ceramics could be present in the area, and potential exists for site complexes surrounding playa lakes. Prehistoric stone circles, rock alignments and cairns also occur in the region but with far less frequency. Historic-era cairns and tin can scatters also could be found, and would not be unexpected. History and prehistory of the area, and notable local sites are summarized at greater length in the Green River RMP DEIS (pp. 314-317) and is incorporated by reference.

The Oregon, California, Mormon Pioneer, and Pony Express Trails converges through the project area as the route that parallels State Highway 28 as it heads southwest through the project area. The assessment area for historic trails is five miles to the south of the congressionally designated historic trails and from the Rock Springs to South Pass Stage Road. The RSFO manages hundreds of miles of the best remaining traces of 19th century emigration trails, including the Oregon, Mormon Pioneer, California, and Pony Express National Historic Trail systems. These trails represent the main overland routes for the transport of people, property, and information during the nation's westward expansion.

Environmental Consequences of the Proposed Action

The proposed seismic exploration could cause effects to sites eligible for the NRHP. An effect is defined as an alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Places (43 CFR 800.16(i)). These effects could be in the form of direct, indirect or cumulative impacts. Direct impacts are physical and can adversely affect the site or its setting. Direct impacts could occur from vehicle traffic through sites during geophysical field operations, creating two-tracks, surface soil displacement and/or soil compaction. If exploration activities are carried out in wet weather, rutting could also occur within sites. The new trails themselves, a direct impact, could also affect the setting of sites for which setting is a component of site significance, such as for the Historic Trails (see discussion below). Indirect effects to sites could occur through creation of trails which subsequently might be used by recreationists or stimulate erosion. By providing access into areas containing sites these paths could be used by the public and facilitate illicit artifact collection which could radically change site interpretations and result in the loss of important

scientific information.

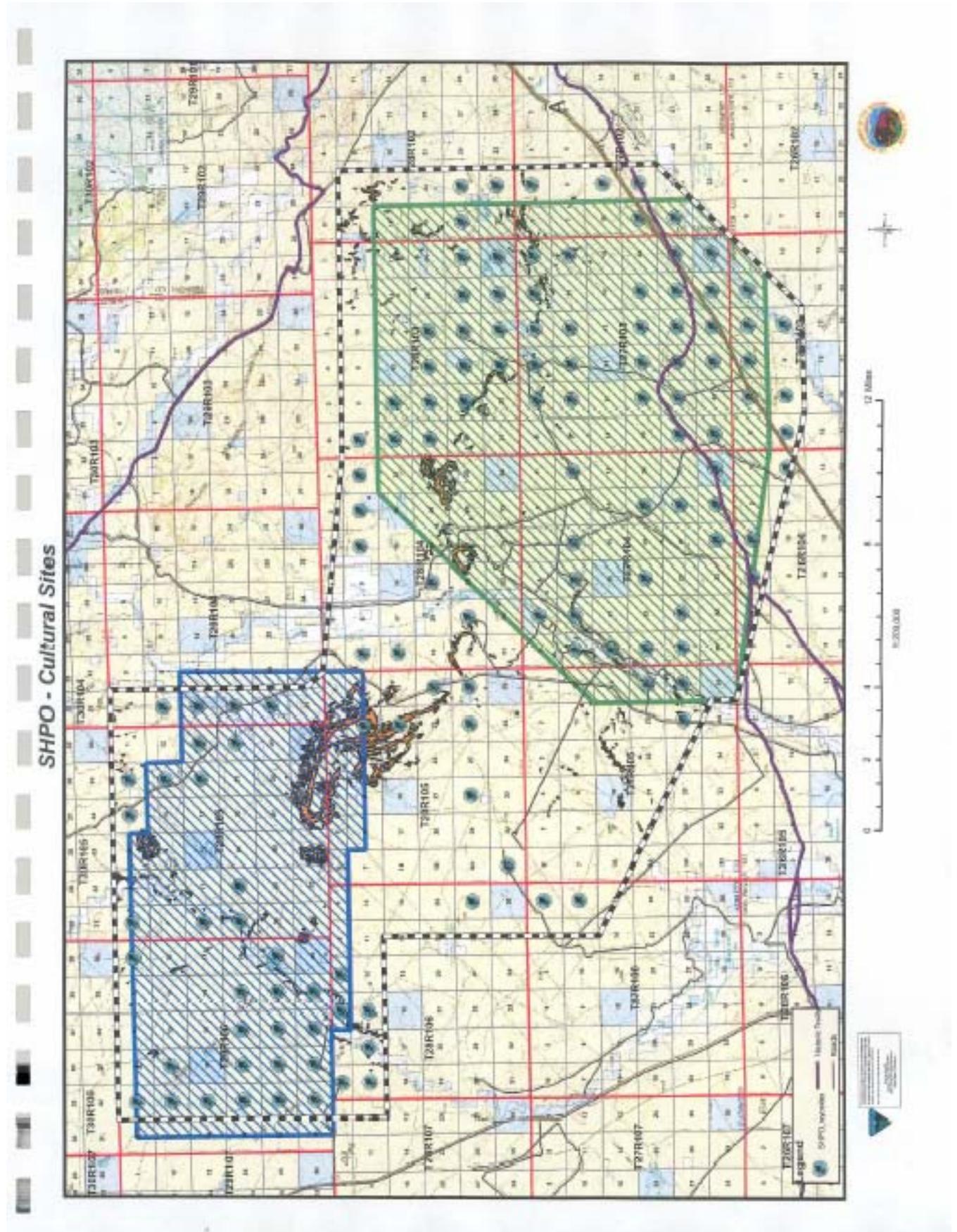


Fig. 3.6 SHPO-Cultural Sites Map

Cumulative effects consist of a gradual degradation of the cultural landscape through erosion and illicit artifact collection, as well as the aggregate effects of possible development and use in an area, which affects the surface. With the implementation of the spread out vehicle pattern (see vegetation section) and the standard avoidance of cultural resource for geophysical operations, no effect to significant cultural resources is foreseen.

Vehicular traffic on the Oregon, Mormon Pioneer, Pony Express Trails or other historic transportation routes could affect integrity of design, workmanship, and feeling of contributing segments. Off-road vehicle traffic within the setting of these historic transportation routes could affect their integrity of setting and feeling. With implementation of the protective setback restriction prescribed for historic trail, effects to the historic transportation routes would not be adverse.

3.2.14 NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment/No Action Alternative

At the time of the drafting of this document cultural resource inventories had not been completed. The project area contains several cultural resource locations known to be of cultural significance to Native American Tribes. Sites of Native American concern would be identified during the cultural resources inventory and appropriate tribes would be consulted. The Bureau would solicit recommendations regarding measures necessary to eliminate potential effects of the project. With implementation of the following measures there should be no impact to Native American Sacred sites.

Environmental Consequences of the Proposed Action

Previously recorded and yet unidentified sites of Native American concern could suffer impacts by adversely affecting their physical integrity or by interfering with their ceremonial use. Native American groups historically associated with this area may consider prehistoric rock alignments, cairns, stone circles, rock art, geological features and potential funerary sites highly sensitive. These sites are specially managed by BLM via the use of buffer zones. Project-related cultural resource inventory likely would identify additional sites of these types within the Pacific Creek project area, particularly cairns and stone circle sites. With implementation of the following conditions of approval in section 4.0 of this EA, the project should cause no adverse impacts to Native American cultural sites.

3.2.15 SOUTH PASS HISTORICAL LANDSCAPE ACEC

Affected Environment/No Action Alternative

A variety of heritage resources are found within the South Pass Historical Landscape (SPHL) ACEC (Fig. 3.7 Wind River SMA and South Pass ACEC Map) including the Oregon, California, Mormon Pioneer, and Pony Express National Historic Trails, the South Pass National Historic Landmark, Green River/Bryan to South Pass City Stage Road, the Point of Rocks to Rock Springs Stage Road, numerous prehistoric encampments, historic period campsites, historic graves, the Halter and Flick Ranch, commemorative sites, and other historic wagon roads/sites. The ACEC boundary encompasses 57,954 acres including 49,266 acres of public lands managed by the BLM, 3,531 acres owned by the State of Wyoming, and 5,157 acres under private ownership. The federal mineral estate encompasses 52,295 acres, while 3,151 acres are state-

owned minerals, and 3,794 mineral acres are privately owned. Generally speaking, State Highway 28 constitutes the northern boundary of the ACEC, with the remaining boundary located approximately three miles from the historic trails location. The ACEC was established by the Green River RMP. The ACEC is used for other activities including grazing, roads/two-track trails, recreational activity, pipeline rights-of-ways, a coaxial cable power lines, and mining activity.

To ensure that the objective of the Congressional NHL designation was not compromised, BLM designated the South Pass Historic Landscape ACEC with approval of the Green River RMP (BLM 1997). The RMP management objective for the ACEC is to protect the visual and historical integrity of the historic trails and its setting. No new oil and gas leases would be authorized in the SPHL portion of this proposed area. Vibroseis activity and shot-hole activity is prohibited on and within 300 feet the historic trails. Other geophysical operations may be allowed within the historic trails corridor (about 16.42 miles) if site specific analysis determines that no adverse effects would occur to the visual and historical integrity of the trails.

All activities for the ACEC would be managed consistent with the Class II visual resources management classification. Other than Vibroseis vehicles, off- road vehicle travel is limited to existing roads and trails in these area that are shielded by topography (pg. 33 Green River RMP). The scenic values of the Highway 28 visual corridors (3 linear miles) would be protected.

Existing disturbance in the ACEC includes 50 acres of historic trails and roads, 120 acres of county road, 174 acres of two-track roads, 5.3 acres of power line, 1.5 acres of fencing, 1 acre of telephone line, 5 acres for an abandoned railroad grade, 0.5 acres of ditches, 3.25 acres for reservoirs and pits, 5 acres for an on-going mining exploration and another 5 acres for miscellaneous mining disturbance. In addition, the BLM assumes another 37.06 acres of disturbance for facilities on privately owned lands or other unauthorized disturbance on public lands. Therefore, total disturbance in the SPHL ACEC is 407.61 acres or 0.70 percent. South Pass has long been recognized as one of the most exceptional examples of an historic landscape.

Environmental Consequences of the Proposed Action

The proposed seismic exploration could cause effects to sites eligible for the NRHP. (Definition see 3.2.13)

Vehicular traffic on the Oregon, Mormon Pioneer, Pony Express Trails or other historic transportation routes could affect integrity of design, workmanship, and feeling of contributing segments.

Off-road vehicle traffic within the setting of these historic transportation routes could affect their integrity of setting and feeling. With implementation of the Trail setting traffic restrictions, effects to the historic transportation routes would not be adverse.

Environmental Consequences of the Eliminate the South Pass Historic Landscape ACEC

With the elimination of activity in the South Pass Historic Landscape ACEC as part of the project boundary all existing disturbance in the ACEC would remain the same. Exclusion of the trail corridors from the project would effectively stop the majority of the project from continuing, so much in fact, that it wouldn't really be worth the expense of continuing on. There are standard restriction in place to protect the trails and associated corridors from permanent

damage from vibroseis projects. Visual intrusions to the trail corridors would be temporary, lasting for the duration of the project.

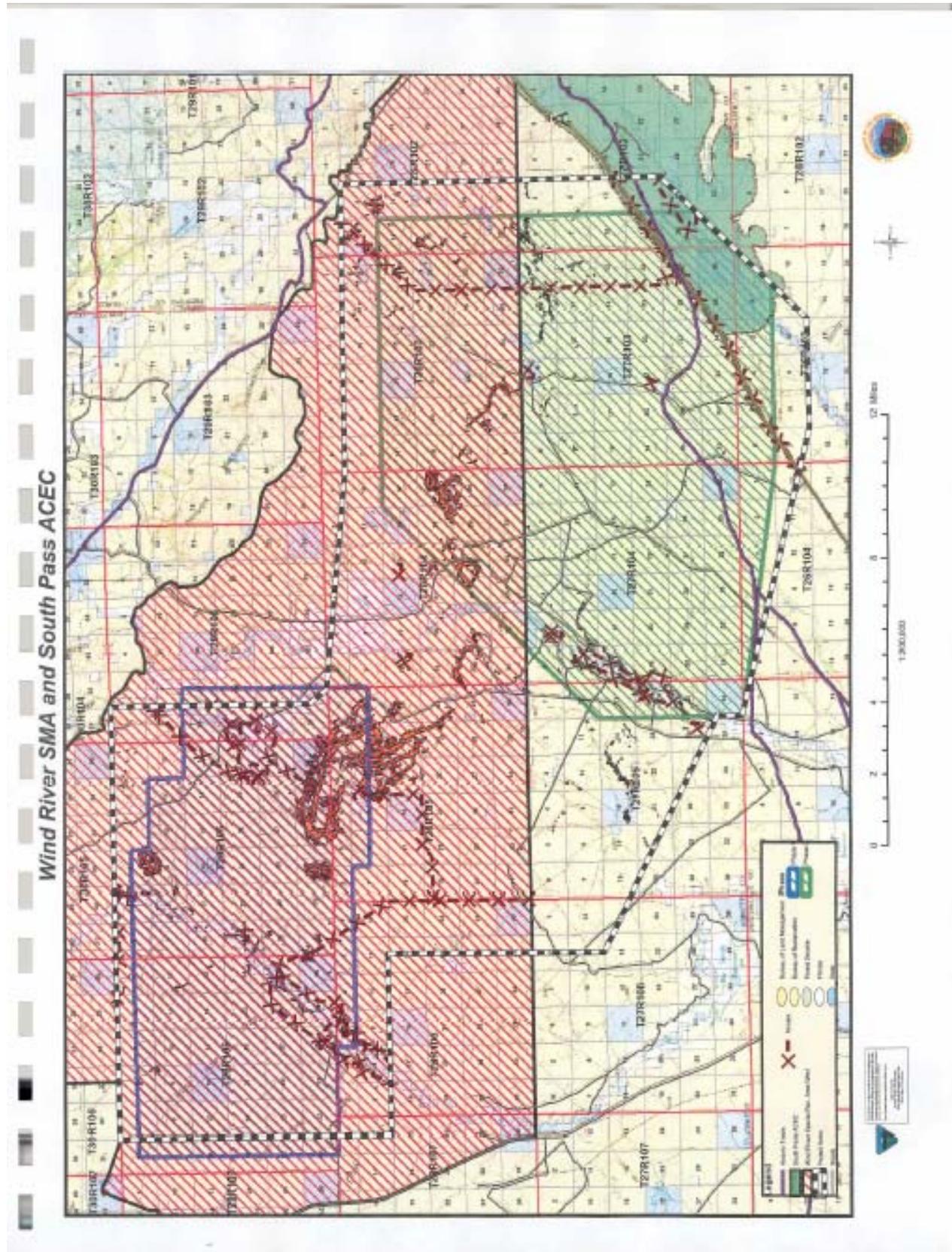


Fig. 3.7 Wind River SMA and South Pass ACEC Map

3.2.16 NOISE, WASTE, and SAFETY

Affected Environment/No Action Alternative

Major sources of noise within the project area are localized vehicular, drilling rigs and occasional blow-down sounds at existing wells within the project area. These noise sources currently create variable but generally modest disturbances within the area.

No 'contaminated sites' are present in the Pacific Creek 3D area according to Wyoming Department of Environmental Quality Solid and Hazardous Waste sites data available via the Internet at <http://deq.state.wy.us>.

Hazardous materials are present in the project area in the form of well drilling reserve pits, natural gas/oil pipelines, material transport containers on passing trucks, above ground fluid tanks at producing well locations, and fuel tanks in parked and moving vehicles. These materials, however, are contained and readily recognizable and merit no further consideration. Material Safety Data Sheets (MSDS's) for all hazardous materials associated with the proposed Pacific Creek 3D geophysical operations are maintained by the Veritas Safety Officer and are available for review upon request.

No H2^S or other unusual safety hazards are known for the project area.

Environmental Consequences of the Proposed Action

Seismic-related activities, including buggy vibe engine noise, helicopters, and support traffic would create sound disturbance within the project area. These impacts would be transient as the project recording operations proceed across the 107 square mile area and would occur for the duration of the project. Because of the remote location of the proposed activity, perception of the added noise would be primarily by wildlife and livestock, as human presence in the project and surrounding area is at very low levels (project employees notwithstanding). No occupied dwellings are known within the project boundary. Noise-related effects, consisting of temporary wildlife displacement and annoyance to some recreationists present are expected to be minor (also see wildlife and recreation sections of this EA). Overall, project noise elevation is anticipated to be of low to moderate level, localized, and transient, and is not expected to be significant. Thus, no approval conditions are proposed.

Use of helicopters to transport equipment and personnel could temporarily inconvenience visitors to the South Pass Historic Landscape ACEC and Wind River Front SRMA due to noise and the sight of the helicopter. However, any impacts to visitors would be momentary. Walking and temporarily laying geophones along receiver lines would not detract from the naturalness of these areas nor impact the characteristics found there. Once the lines are removed, any minor disturbance to the surface caused from geophones or footprints would disappear with the next weather event.

Project markers in the form of wooden lath, ribbon flagging, pin-flags and spray paint could contribute litter / solid waste in the project area. However, Veritas has made an operational commitment in their Proposed Action to remove project lath and flagging as recording operations progress, so no debris should remain behind the project as planned. No impact in this regard is foreseen.

Hazardous substances such as gasoline, diesel, vehicle lubricating and hydraulic oil used in the

field during project operations could contaminate natural resources, if spilled. With implementation of the waste disposal prescription, however, no significant impact is foreseen.

3.3 CUMULATIVE IMPACTS

The BLM must consider the cumulative effects of the proposed action in conjunction with other activities. A cumulative impact is an impact on the environment that results from the incremental impact of the proposed action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Geophone cable deployment and vehicle traffic would cause animals to leave the immediate area of human activity. This displacement of wildlife would be brief and localized, as small scale transitory activities are spread over multiple small sites within the project area. Overall, with implementation of the seasonal restrictions protecting wildlife during the more sensitive birthing/rearing season, no significant impacts to wildlife are foreseen as a result of this activity.

Noise and vibrations caused by the proposed vibroseis operations would cause prairie dogs and other underground-dwellers to flee to their burrows while equipment is in close proximity. Due to the generally clay-like, loamy texture of soils in the project, vibroseis operations are not expected to result in burrow failure. However, should tunnel collapse occur, an animal within the tunnel could be crushed. Of interest, data suggest that within approximately 6 months of completion of a 3D vibroseis project, impacts associated with the geophysical activity appear to have had positive effects on new burrow construction, as loosened soil along vehicle travel paths is attractive to some burrowing rodents (Thomas 1995). In summary, accidental entombment, temporary displacement, and stress to small animals may occur, but long-term impacts to small mammals are expected to be negligible. Concomitantly, impacts to small mammal predators, principally raptors, are also anticipated to be not significant.

With implementation of the proposed measures prescribed earlier in this document (see Proposed Action), the primary impact associated of the proposed action would be that of driving on approximately 3% of the ground surface in the project area and potentially damaging and to a much lesser extent killing a percentage of the brush within the tire paths. This project would affect primarily vegetation and visual resources. No cumulative impacts to other resources are foreseen.

Incremental effects to overall vegetation are considered negligible because:

- 1) They are limited to species composition changes (not vegetation removal/dirt work);
- 2) Species composition changes would occur on less than 3% of the project area;
- 3) Species composition shifts would involve only a proportional change among existing native plants (no introduced species); and
- 4) Species composition changes would be short term, as new brushy plants would begin to reoccupy the vehicle paths within a few years.

As with visual resources, BLM field inspection of past projects has indicated that 3D seismic projects do not leave major vegetative changes. The amount or percentage of sagebrush actually killed within the 'thinned' corridors (under tire tracks and pads) is considerably less. Cumulative impacts to vegetation are therefore not expected to differ much from those described under

environmental consequences above and are expected to be minimal.

No cumulative impacts are expected to the Wind River Front SRMA from ORV road use.

Conclusively, considering the relatively low level and short-term nature of the anticipated project impacts and the implementation of the protective measures proposed, the proposed 3D vibroseis project together with on-going activities would not adversely affect elements of the human environment.

No Action Alternative

Adoption of this alternative would not end oil and gas exploration or development. With or without the geophysical data, well drilling is anticipated in the project area. Without the 3D data, lessees are more likely to drill 'dry holes'; resulting in greater environmental impact than if they had the 3D data. Well pad and access road construction for dry holes involves removal of vegetation cover. Seismic exploration is the least surface-disturbing means available to obtain subsurface geologic data.

Eliminate Activity within the South Pass Historic Landscape ACEC Alternative

The adoption of this alternative would alter the southern portion of the Phase II boundary, eliminating the South Pass Historic Landscape ACEC. This action would alter the data gathering and analysis of the seismic exploration. This alternative would not impact the environmental health, cultural/historic value, or visual characteristic of the area. The proposed action is a stakeless operation and all seismic lines are being laid by individuals walking the topography and all off road vehicle, except vibroseis vehicles, would be designated to existing roads and trail and within designated corridors. No cumulative impacts are expected from ORV road use.

3.4 RESIDUAL IMPACTS

Mitigation measures developed through this EA addressing potential environmental impacts under the proposed action alternative would be included as Terms and Conditions attendant to approval of the NOI. As the mitigation measures would avoid or minimize impacts, no residual effects are foreseen.

4.0 CONDITIONS OF APPROVAL

The following mitigation measures were identified during analysis in response to the anticipated impacts, in conformance with the RMP, and would be applied by the BLM during the permitting process as deemed necessary to further reduce adverse impacts upon the environment.

Additional site-specific mitigation measures may be identified and applied during site visits and reviews. Stipulation would be enforced where applicable. Activities on all lands would be conducted in accordance with all appropriate federal, state, and county, laws, rules and regulations.

Only some resource values identified during analysis are included.

4.1 FLUID MINERALS: OIL & GAS

Vibroseis source points should be located a minimum of 300 feet from existing facilities.

Veritas should be required to repair any damage to facilities caused by their operations.

4.2 PALEONTOLOGICAL RESOURCES

If vertebrate paleontological resources (fossils) are discovered on BLM-administered land during project operations, Veritas should suspend operations within 100 feet, and immediately contact the BLM Rock Springs Field Office Manager (Authorized Officer). The Authorized Officer would arrange for evaluation of the find within 5 working days and determine the need for any mitigation actions that may be necessary (pg.6, Green River RMP ROD). Any mitigation would be developed in consultation with Veritas, who may be responsible for the cost of site evaluation and mitigation of project effects to the site. If the operator can avoid disturbing a discovered site, there is no need to suspend operations; however, the discovery shall be immediately brought to the attention of the Authorized Officer. BLM request that Veritas avoid sites # 82143 and #51010 if at all possible. If this is not possible then a qualified BLM approved Paleontologist must be on site to monitor these sites.

4.3 SOILS

Driving on sand dunes should be avoided by vehicles and shotholes should be offset to the interdunal swales where possible. Should any steep-sided drainages be encountered, they should not be crossed by any vehicles to protect banks. Low bank areas could be used for drainage crossings. Any surface damage should be repaired to the satisfaction of the BLM inspector as soon as possible after the completion of operations but no later than March 2007

No vehicle operations (buggy vibes, recorder trucks, pickups, ATVs) should be allowed on slopes of 25 percent or greater (pg. 159 GRRMP).

The operator should conduct no vehicle operations during periods of saturated ground conditions when surface rutting could occur (pg. 159 GRRMP).

Any ruts created should be repaired in a way that would produce the least disturbance (i.e., hand shovel).

All drill holes should be reclaimed promptly and all cuttings should be removed from the

surface.

4.4 WATER RESOURCES

Although Seismic exploration is not considered a surface disturbing activity, there are several standard practices outlined within this document and the Green River Resource Management Plan that would help to minimize potential disturbance. These measurements include:

- Avoidance of seeps and springs by ¼ mile.
- No surface disturbance, maintenance point, etc within 500 feet - of or on 100-year riparian/wetland areas or 100 feet from the outer edge of the inner gorge of ephemeral channels.
- To the extent practical, all surface travel would occur on existing roads and trails and equipment would use established channel crossings.
- Vibration points would not be located directly in active channel bottoms or within the inner gorge of ephemeral channels.

Vehicular traffic across/through drainage channels should be limited to sloping drainage sides or to vertical banks of less than two feet. Channel crossings should be aligned perpendicular to the stream channel, to the extent practicable (project-specific adaptation of guidance at pg. 22).

4.5 VEGETATION

Because all vehicle use would use offset or staggered pattern for cross-country travel, crushing of vegetation is an expected impact but would be minimized to the extent possible. Observation of previous geophysical projects where an offset vehicle pattern was used show that shrub plants in the vehicle paths can be crushed or killed but underlying grasses and forbs survive. Cushion plant communities present on slopes and in other areas that are susceptible to erosion could take over 20 years to recover if disturbed by heavy equipment. Use of helicopters or a single pass by big-tire buggies should limit impacts to cushion plant communities to the extent possible. Any reclaimed areas that become rutted due to truck traffic would be reseeded.

4.6 SPECIAL STATUS PLANTS

Avoid disturbance within riparian areas to prevent potential affect to federally listed Ute ladies'-tresses.

4.7 INVASIVE SPECIES

To prevent the introduction of new weeds, Veritas shall thoroughly power-wash all field vehicles (buggy vibes, pick-ups, ATVs, etc.) before transporting them to the project area.

Veritas shall reclaim and reseed any areas where their operations have caused surface rutting or have otherwise removed all of the surface vegetation as directed by the Authorized Officer. Seed mixtures guidelines are listed in Appendix B of this EA.

4.8 LIVESTOCK/RANGE

Veritas shall make every effort to avoid disturbing or altering fences. The fence should be passable for most wire or cable apparatus, but vehicles would be required to go around the fence through established gates. If this fence is broken in any capacity, the BLM range staff (Juliane

Zimmerman at 307-352-0367 or Bernie Weynand at 307-352-0247) would be notified immediately with the location in order to coordinate fixing the break by a qualified person. Vibroseis source points shall be located a minimum of 300 feet from all water wells and reservoirs unless written permission to encroach closer has been given by the landowner or operator (BLM H-3150-1 Handbook).

Moving or altering any range improvement project is not authorized. The Rock Springs BLM range staff shall be notified prior to any moving or alterations. Veritas would be responsible for the repair and or replacement of any facilities damaged during the course of this project.

4.9 WILDLIFE and SPECIAL STATUS ANIMAL SPECIES

No project activity is permitted November 15 through April 30 in the antelope crucial winter range depicted on EA Map 15 (pg. 91 GRRMP) unless exception is granted.

If project field activities are proposed during the period between February 1 and July 31, a raptor nest survey should be conducted to find nests occupied in spring 2004. From February 1 through May 31 (nest selection period), geophysical operations shall not be allowed on BLM-administered lands within 0.5-mile radius of occupied raptor nests, except ferruginous hawk nests, for which the seasonal buffer is a 1.0-mile radius. A survey of nests was conducted June 14, 2004 and findings include no ferruginous hawk nests, but 16 other raptor-nesting sites. Exception can be granted on a case-by-case bases.

If activities are proposed between March 1 and June 30, the geophysical operator would provide BLM with a sage grouse lek survey report covering all areas to be affected during this period. Current lek/nesting survey data addressing parts of the Pacific Creek 3D project area would be utilized as much as possible and is available at the Rock Springs Field Office.

If activities are proposed for the period April 1 through July 31, the geophysical operator would provide BLM with a sage grouse nesting inventory, completed by a qualified biologist covering all areas to be affected during this period (pp 9, 10, 59 PRMP, p. A-19 PAPA ROD).

To protect wildlife cover, vehicle traffic should avoid stands of tall sagebrush. Stands of tall sagebrush are defined as areas in which the majority (more than 50%) of sagebrush plants are 4 feet or taller.

There would be no staking/vibrosis in white-tailed prairie dog towns.

4.9.1 Upland Game Birds

The Green River RMP contains mitigating practices that protect the breeding, nesting and brood-rearing activities of greater sage-grouse from March 1 to July 15. No surface occupancy stipulations apply within a one-quarter mile buffer around the perimeter of active leks.

4.9.2 Raptor

The Green River RMP contains mitigating practices that protect the breeding and nesting of raptors from February 1 to July 31.

4.10 VISUAL RESOURCES

Class II VRM management actions would be retained on public lands near the highway.

Veritas should offset all off-road vehicle traffic over a 50-foot wide swath on either side of the staked seismic line, so that one vehicle does not drive the same path as another vehicle.

Historic trails would only be crossed by vehicles at established crossings, and Veritas would maintain a 300-foot buffer on each side of the trails.

All vibration points within one-quarter mile of the trail ruts would be hidden behind topography to the extent possible. Where topography is not available, the operator would employ a sinuous approach and retreat from the points as to not create linear visual impacts in this zone.

4.11 RECREATION (Wind River Front Special Recreation Management Area)

Off-road vehicle use in advance of issuance of project approval is limited to the single pass (no overlapping tire tracks) of vehicles under 10,000 lbs GVW (ATVs and ½ ton pick-ups or the equivalent in conformance with BLM Manual 3150, part 3.1.B.5). The 25% slope restriction, saturated soil restriction, and seasonal greater sage grouse nesting seasonal restrictions still apply.

To prevent conflicts with recreation users, alternative access may be needed. Be aware of hunters if in the area during hunting season. Wear the proper color clothing for recognition.

4.12 CULTURAL/HISTORICAL RESOURCES/HISTORIC TRAIL

Veritas should provide a Class III cultural resource inventory for all public lands where off-road vehicle traffic would occur. The inventory shall cover 75 feet either side of the flagged centerline of off-road travel routes, for total inventory coverage of 150 feet. Such inventory would not be required for areas covered by previous inventories, provided those inventories meet current standards. The cultural resource inventory would be designed to locate and prescribe avoidance routes or other mitigation for all significant sites, previously recorded as well as newly discovered. Standard site avoidance entails a 150 foot or more buffer zone around all eligible and unevaluated sites. Sites of potential Native American concern are subject to special measures, as specified below. Sites previously determined to be ineligible for nomination to the NRHP require no further action should they match the previously recorded description. Sites that have changed sufficiently to warrant a modified site form or site form addendum would be reevaluated.

Interpretive sites, False Parting of the Ways, Parting of the Ways, and Rock interpretive sites, cannot be used as staging areas. All staging areas proposed within the view of these locations must be approved by the BLM. No source locations would be allowed within ½ mile of the interpretive sites and includes an approximate mile long segment of double swales known as Dry Sandy Swales. No vehicle would be permitted within one-quarter mile of the interpretive sites except to traverse designated crossings approved by the BLM. Phones would not be strung across the interpretive sites.

Veritas should provide a cultural resource inventory report(s) addressing that portion of the project located within the area of potential effect of historic transportation routes/site for which

setting might be an issue. The report, including recommendations, shall be submitted to BLM who, in consultation with the Wyoming SHPO, would determine effects of the proposed project. Geophysical activities would not be permitted to create visual intrusions or adverse effects to the Oregon Trail and other historic transportation routes/site for which setting might be an issue (pg. 4). Based on determination of effect, BLM-RSFO would issue project authorization for operations in this area with appropriate conditions.

Vibroseis (source) points must be at least 300 feet from the Historic trails (pg. 4). Cable within one-quarter mile of the trail would be placed by helicopter-assisted pedestrians.

No project-related vehicle traffic (industrial access) is permitted on the Historic trails (pg. 4). The Historic trails may be crossed at existing disturbances or in areas previously determined to be non-contributing. Single pass crossings on poorly established roads would be permitted when the route is approved by the Bureau archaeologist and would not result in resource damage.

Veritas's archeological consultant should obtain a cultural resource files search printout from the SHPO Cultural Records Office shortly before commencing fieldwork. Based on this, the consultant would identify previously recorded cultural resource sites on federal and non-federal lands in the project area. Using site form copies obtained from SHPO, the consultant would plot these sites onto the Pacific Creek 3D project map for Veritas, who is requested to arrange avoidance for these properties. Previously determined not eligible properties would be revisited to assure that they are adequately recorded.

All off-road vehicular traffic on BLM land should be confined to a corridor 150 feet wide (75 feet either side of the flagged centerline) along lines that have been inventoried for cultural resources.

Long-term effects to the setting of the trail of the ruts are not permitted. If the stipulations above are followed there should only be short-term (less than three years) impacts. Should there be any unanticipated damages the applicant would fund necessary remediation measures to restore the setting to its former condition.

Any maps produced by Veritas showing specific locations of cultural sites would be considered confidential and would not be released to the public or distributed to unauthorized employees.

4.13 NATIVE AMERICAN RELIGIOUS CONCERNS

If any sites of potential Native American religious concern (e.g., rock art, vision quest structures, human burial sites, prehistoric cairns, stone circles, stone alignments, altars, medicine wheels) are identified by Veritas personnel or subcontractors within the project boundary but outside the cultural resource inventory (vibe line) corridors, the BLM RSFO Archeologist shall be promptly notified. The BLM RSFO shall determine the need for special measures and/or Native American consultation. This stipulation applies to both federal and non-federal lands.

Native American cultural sites would be avoided by a minimum of 300 feet unless closer activities are approved through completion of consultation with the affected tribes.

4.14 SOUTH PASS HISTORICAL LANDSCAPE ACEC

Veritas should provide a Class III cultural resource inventory for all public lands where off-road vehicle travel would occur, however within SPNHL and ACEC off-road travel is limited to existing roads and travel in those areas that are shielded by topography.

The inventory shall cover 75 feet either side of the flagged centerline of off-road travel routes, for total inventory coverage of 150 feet. Such inventory would not be required for areas covered by previous inventories, provided those inventories meet current standards. The cultural resource inventory would be designed to locate and prescribe avoidance routes or other mitigation for all significant sites, previously recorded as well as newly discovered. Standard site avoidance entails a 150 foot or more buffer zone around all eligible and unevaluated sites. Sites of potential Native American concern are subject to special measures, as specified below. Sites previously determined to be ineligible for nomination to the NRHP require no further action should they match the previously recorded description. Sites that have changed sufficiently to warrant a modified site form or site form addendum would be reevaluated. Parting of the Ways, False Parting of the Ways and Plume Rocks interpretive sites cannot be used as staging areas. All staging areas proposed within the view of these locations must be approved by the BLM. No source locations would be allowed within ½ mile of the interpretive sites and includes an approximate mile long segment known as Dry Sandy Swales. No vehicle would be permitted within one-quarter mile of the interpretive sites and Dry Sandy Swales except to traverse designated crossings approved by the BLM. Phones would not be strung across the interpretive sites. No new leases would be authorized in the SPHL portion of this proposed area.

Veritas would provide a cultural resource inventory report(s) addressing that portion of the project located within the area of potential effect of historic transportation routes/site for which setting might be an issue. The report, including recommendations, shall be submitted to BLM who, in consultation with the Wyoming SHPO, would determine effects of the proposed project. Geophysical activities would not be permitted to create visual intrusions or adverse effects to the Oregon Trail and other historic transportation routes/site for which setting might be an issue (pg. 4). Based on determination of effect, BLM-RSFO would issue project authorization for operations in this area with appropriate conditions.

Vibroseis (source) points must be at least 300 feet from the Historic trails (pg. 4). Cable within one quarter mile of the trail would be placed by helicopter-assisted pedestrians. No project-related vehicle traffic (industrial access) is permitted on the Historic trails (pg. 4). The Historic trails may be crossed at existing disturbances or in areas previously determined to be noncontributing. Single pass crossings on poorly established roads would be permitted when the route is approved by the Bureau archaeologist and would not result in resource damage.

Veritas's archeological consultant should obtain a cultural resource files search printout from the SHPO Cultural Records Office shortly before commencing fieldwork. Based on this, the consultant would identify previously recorded cultural resource sites on federal and non-federal lands in the project area. Using site form copies obtained from SHPO, the consultant would plot these sites onto the Pacific Creek 3D project map for Veritas, who is requested to arrange avoidance for these properties. Previously determined not eligible properties would be revisited to assure that they are adequately recorded.

All off-road vehicular traffic on BLM land should be confined to a corridor 150 feet wide (75 feet either side of the flagged centerline) along lines that have been inventoried for cultural

resources. Long-term effects to the setting of the trail of the ruts are not permitted. If the stipulations above are followed there should only be short-term (less than three years) impacts. Should there be any unanticipated damages the applicant would fund necessary remediation measures to restore the setting to its former condition.

4.15 NOISE, WASTE, and SAFETY

Veritas should clean up all oil, diesel or hydraulic fuel spills, including contaminated soils. All spill-related material should be hauled to a Wyoming DEQ approved disposal site. Spills resulting from ruptured pipelines or well casings shall be cleaned up as directed by DEQ and the facility owner/operator.

Veritas should prepare an Emergency Response Plan addressing fire and submit it to the Authorized Officer for review at least one week prior to any project field operations.

Veritas should coordinate with the nearest paramedic providers for life flight and ambulance service to establish Landing Zones across the project. These zones would be used in case of serious injury to workers needing immediate evacuation.

Veritas should keep noise level at a minimum where vehicles are not used extensively for unnecessary travel, especially during the hours between 9:00 pm and 8:00 am.

Veritas would place all tanks holding bulk liquids in lined and bermed areas. Capacity of the bermed area shall be 110% of the largest tank. Bulk liquids contained in tanker semi-trailers may be parked in a safe location on the staging area. Fueling of equipment or maintenance of equipment should be done away from riparian or other open water areas.

Veritas would ensure that no firearms be allowed on the job site at any time due to hazardous explosives.

Dogs (excluding seeing-eye dogs) would be prohibited on all job sites during exploration.

This side left blank

5.0 CONSULTATION AND COORDINATION

5.1 PUBLIC INVOLVEMENT PROCESS

A Notice of Scoping for the Environmental Assessment (EA) for the Pacific Creek 3D Geophysical Project, Sweetwater, Sublette, and Fremont Counties, Wyoming was issued on May 23, 2005, to government officials, public land users and user groups, newspapers, radio stations, and television stations, for a 30-day public comment period (Appendix A). Twenty (20) comment letters were received.

The WGFD expressed numerous concerns regarding terrestrial and aquatic resources in the Pacific Creek Project area. The USFWS provided a list of threatened and endangered species that could occur in the area, as well as comments regarding protection of candidate species, sensitive species, greater sage-grouse, wetlands and riparian area. The Biodiversity Conservation Alliance provided a list of comments regarding ecological impacts of the project as well as specific comments on the NEPA process, protection of natural resources, and alternative technologies.

5.2 LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS CONTACTED

List of government offices, elected and other officials, public land users and groups, and public media can be located on the scoping notice in Appendix A.

5.3 LIST OF PREPARERS

Table 3: List of the preparers and cooperators of this EA.

TABLE 3 – List of Preparers

Specialist	Position	Office or Organization
Darlene Horsey	Environmental Protection Specialist	RSFO
Terry Del Bene	Archeologist	RSFO
Bonni Bruce	Archeologist	RSFO
Jim Glennon	Botanist	RSFO
Jim Dunder	Wildlife Biologist	RSFO
Dennis Doncaster	Hydrologist	RSFO
Juliane Zimmerman	Range Management Specialist	RSFO
Susan Davis	Petroleum Engineer	RSFO
Shelly Devoss	Natural Resource Specialist	RSFO
Angelina Pryich	Writer Editor	RSFO

Specialist	Cooperating Agencies	Position
Lee Kreutzer	National Park Service: National Trail Sys.	Archeologist

This side left blank

APPENDIX A
SCOPING NOTICE

This side left blank



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901-3447



TAKE PRIDE
IN AMERICA

1792, 1310 (040)
Veritas Pacific Creek
3D Geophysical

May 23, 2005

SCOPING NOTICE Pacific Creek 3D Geophysical Project

Dear Reader:

Veritas DGC Land, Incorporated has filed a Notice of Intent (NOI) to Conduct Geophysical Operations with the Bureau of Land Management (BLM), Rock Springs Field Office, for a 3D geophysical project on public lands within Sweetwater, Fremont and Sublette Counties, Wyoming. The proposed project is located in Townships 26-29 North, Ranges 102-107 West, 6th Principal Meridian. The attached document serves as notice of the beginning of the environmental analysis process to fulfill the requirements of the National Environmental Policy Act. If you are interested in participating in the process and have concerns, issues, or alternatives you would like to see addressed, please respond with your written comments by **June 24, 2005**.

Send written comments to:

Address: Shelly Devoss
Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901

Email: rock_springs_wymail@blm.gov
(Please reference Pacific Creek 3D Project in the subject field)

Written comments in response to this notice, including the names and addresses of respondents, will be available for public review at the BLM Rock Springs Field Office during regular business hours (7:45 a.m. - 4:30 p.m.), Monday through Friday (except federal holidays) after the comment period closes. These comments may be published as part of the environmental process although individual respondents may request confidentiality. If you wish to withhold your name and/or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

If you have questions regarding this project, please contact Shelly Devoss at 307 - 352-0213.

Sincerely,

Michael R. Holbert
Field Manager

Attachment

**Bureau of Land Management
Rock Springs Field Office**

**SCOPING NOTICE
PACIFIC CREEK 3D GEOPHYSICAL PROJECT**

Description of Project

Veritas DGC Land, Incorporated filed a Notice of Intent (NOI) to Conduct Geophysical Operations with the BLM-Rock Springs Field Office on May 04, 2005. The project is referred to as “Pacific Creek 3D”.

The proposed project is located approximately 40 miles northeast of Rock Springs, east of U.S. Highway 191 and principally north of State Highway 28, in the South Pass and Wind River Front area. The project area would encompass about 186,240 acres of federal land, 6,720 acres of private land, and 11,840 acres of State land within Township 26 North, Range 103-105 West, Township 27 North, Range 102-106 West, Township 28 North, Range 102-107 West and Township 29 North, Range 104-106 West, 6th Principle Meridian, Sweetwater County, Wyoming (see attached map). Those portions of the project occurring on private and state lands are not subject to BLM authorization and would be permitted separately by Veritas.

The proposed project would be completed with the use of four buggy mounted vibrators (large off-road vehicles with 48- inch low -pressure Terra tires). The source station interval would be 200 feet, with source lines 1,200 feet apart. The receiver station interval would be 200 feet, with receiver lines 1,800 feet apart. A helicopter would be used to deploy recording equipment. The project is scheduled to take approximately 90 days to complete during the summer and fall of 2005.

Relationship to Existing Plans and Documents

Resource Management Plan –The document that directs management of BLM-administered lands within the analysis area is the Green River Resource Management Plan (RMP, August 8, 1997). The objective for management of geophysical exploration is to provide opportunity for exploration of mineral resources and collection of geophysical data, while protecting other resource values.

Use Authorization – An approved Notice of Intent to Conduct Geophysical Operations is subject to the Terms and Conditions for a Notice of Intent to Conduct Geophysical Exploration. Other conditions of approval to protect important resources may be added to the authorization if analysis proves such measures would further reduce environmental impact.

National Environmental Policy Act

On reviewing the proposal from Veritas, the BLM has determined that an Environmental Analysis is required. The proposed project would be analyzed in accordance with the requirements of the National Environmental Policy Act (NEPA) to determine whether impacts from the Proposed Action would be considered significant. A comparison of the economic and environmental consequences of multiple alternatives would be included in the EA. Stipulations or other Conditions of Approval which could mitigate effects of the Proposed Action would be

considered in the analysis and may be applied as requirements for the proposed project to proceed on federal land. Additionally, NEPA requires that a No Action Alternative be considered in all environmental documents. Under the No Action Alternative, geophysical operations would not occur within the project area.

This Scoping Statement has been prepared to enable governmental agencies, the general public, and other interested parties to participate in and contribute to the analysis process. Public input is important in establishing the scope of analysis for any NEPA document, and the BLM encourages public participation.

Identified Resource Management Issues, Concerns, and Opportunities

The following issues and concerns have been identified by the BLM to date. This is not meant to be an all-inclusive list, but rather a starting point for public input and a means of identifying the resource disciplines needed to conduct the analysis.

Raptor nesting habitat
Greater sage-grouse habitat
Big game winter range
Potential black-footed ferret reintroduction sites
Steep slopes
Big Sandy River, Little Sandy River, Dry Sandy Creek, related springs and riparian areas
Cultural resources
Historic Trails and interpretive sites
Wind River Front Special Management Area
South Pass Historic Landscape ACEC
Visual Resource Management
Native American Sacred/ Respected places
Highway 191 and Highway 28
Hunt Areas
Livestock grazing and associated fences

Timing Needs or Requirements

Public input is important in establishing the level and scope of the analysis. The public is encouraged to participate in the environmental analysis process to help in identifying the level of analysis needed, alternatives to the proposed action, other issues or concerns that should be analyzed, mitigate opportunities, and any other comments or ideas to help ensure the completeness of the analysis process.

Please submit your comments by **June 24, 2005**. Written comments should be mailed to:

Address: Shelly Devoss
Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901

Email: rock_springs_wymail@blm.gov

Public Participation

The following individuals and organizations would receive a copy of this scoping statement:

Government Offices

Bureau of Land Management, Wyoming State Office (910, 912, 920, 930)
Office of the Governor
National Park Service
U.S. Department of the Army, Corps of Engineers
U.S. Fish and Wildlife Service
Wyoming State Clearinghouse
Wyoming Department of Agriculture
Wyoming Department of Environmental Quality
Wyoming Oil and Gas Conservation Commission
Wyoming Game and Fish Department (Cheyenne, Green River)

Elected and Other Officials

Mayors of Rock Springs, Green River, Superior, Pinedale
State Senators: Rae Lynn Job, Tex Boggs, Grant Larson, Cale Case
State Representatives: Steve Watt, John Hastert, Del Mcomie, Bill Thompson, Marty Martin, Monte Olsen
Sweetwater, Fremont and Sublette County Commissioners
Sweetwater, Fremont and Sublette County Libraries: Green River, Rock Springs, Pinedale, Lander
U.S. Congresswoman Barbara Cubin, Bonnie Cannon, Representative
U.S. Senator Mike Enzi, Lyn Shanaghy, Representative
U.S. Senator Craig Thomas, Pati Smith, Representative

Public Land Users and User Groups

Grazing permittees within the project area
Alliance for Historic Wyoming
Affected oil and gas lessees
Affected rights-of-way holders
People for the USA
Petroleum Association of Wyoming
Independent Petroleum Association of Mountain States
National Trust for Historic Preservation
Native American Tribes: Eastern Shoshone, Northern Ute, Northern Arapaho, Shoshone-Bannock
Oregon California Trails Association
Sierra Club, Northern Plains Representative
Southwest Wyoming Industrial Association
Wilderness Society
Rocky Mountain Elk Foundation
National Wildlife Federation
Western Watersheds Project
Wyoming Wildlife Federation
Wyoming Association of Professional Archaeologists
Wyoming Outdoor Council
Wyoming Public Lands Council
Wyoming Chapter of the Sierra Club

Environmental Defense Fund
Biodiversity Conservation Alliance

Newspapers

Rock Springs Daily Rocket-Miner
Casper Star Tribune
Green River Star
Pinedale Roundup
Sublette Examiner

Radio Stations

KQSW/KRKK Rock Springs
KYCS - Rock Springs
KUWR - Laramie
KPIN- Pinedale
KUGR - Green River

Television Stations

KTWO-TV Casper
KWFY-TV Casper
KCWY-TV Casper
KGWC-TV Casper
KGWN-TV Cheyenne
KCWC- TV Riverton