

In Reply Refer To:

1792

Dear Reader:

Dudley & Associates, LLC, of Denver, Colorado, is proposing to construct a natural gas compressor facility and pipeline in the vicinity of the Seminoe Road Coalbed Methane Pilot Project (pilot project) located in Carbon County, Wyoming. Portions of this proposal would be located on private lands and portions would be located on federal lands administered by the Bureau of Land Management (BLM), Rawlins Field Office. The compressor station would compress and prepare natural gas from the pilot project for shipment into the pipeline. The pipeline would be used to transport the compressed gas from the pilot project area to a natural gas distribution network 20.3 miles south and east in the vicinity of Walcott, Wyoming. Construction and operations activities will require road improvements within previously-disturbed areas of some existing roads. No new road construction is proposed.

We have prepared an environmental analysis for this proposal under the National Environmental Policy Act (NEPA) to assess the environmental impacts of implementing this proposal. You are invited to review the Environmental Analysis package and provide comments to us regarding this proposal. We believe implementation of this proposal would not generate significant impacts upon the human environment and an environmental impact statement is not needed to comply with the provisions of NEPA.

The "Seminoe Pipeline and Compressor Environmental Analysis" package contains the Environmental Analysis, this letter, three attachments, and a project map. The package is about 47 pages in size. Copies can be viewed or obtained in any one of three ways:

- At the BLM website, www.wy.blm.gov/nepa/nepadocs.htm
- At the Rawlins's Field Office, 1300 North Third Street, Rawlins, WY
- By calling and requesting a copy in the mail from the Rawlins's Field Office, (307) 328-4200

Comments must be received on or before September 9, 2002, to be considered. Upon review of comments, we will make a determination of the significance of this project under NEPA. If we determine that the effects of implementing this project are not significant, a Decision Record and Finding of No Significant Impact will be issued. If we determine that impacts will be significant, an environmental impact statement may be prepared.

If you have any questions or need additional information, please contact Dave Simons, Project Lead, at the address shown above or phone (307) 328-4328.

Sincerely,

/s/ Kurt Kotter

Field Manager

**ENVIRONMENTAL ASSESSMENT TITLE PAGE
RAWLINS FIELD OFFICE**

EA No. WY-030-EA2-229

Name or Title of Action: Dudley & Associates, LLC Seminole Road Natural Gas Gathering Pipeline/Access Road and Compressor Station/Storage Yard/Access Road Project

File Name and Number:	<u>Gas Pipeline Right-of-Way (ROW):</u>	<u>WYW-155296</u>
	<u>Pipeline Access Road #1 ROW:</u>	<u>WYW-147569</u>
	<u>Pipeline Access Road #2 ROW:</u>	<u>WYW-155297</u>
	<u>Pipeline Access Road #3 ROW:</u>	<u>WYW-155297</u>
	<u>Pipeline Access Road #4 ROW:</u>	<u>All Private Land</u>
	<u>Compressor Station/Storage Yard Site ROW:</u>	<u>WYW-153853</u>
	<u>Compressor Station/Storage Yard Access Road ROW:</u>	<u>WYW-147569</u>

Location:

Gas Pipeline ROW Public Lands: T21N, R84W:

<u>Sec. 6, Lots 3, 4, 6, 7, 10, 11, NE1/4SW1/4, SE1/4</u>
<u>Sec. 8, Lots 4, 8, NE1/4 SW1/4, W1/2 SE1/4</u>
<u>Sec. 16, W1/2 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4, W1/2 SE1/4, SE1/4 SE1/4</u>
<u>Sec. 22, W1/2 NW1/4, SE1/4 NW1/4, E1/2 SW1/4</u>
<u>Sec. 34, N1/2 NE1/4, NE1/4 NW1/4</u>

T22N, R85W:

<u>Sec. 4, Lot 4, SW1/4 NW1/4, N1/2 SW1/4, SE1/4 SW1/4, SW1/4 SE1/4</u>
<u>Sec. 14, SW1/4</u>
<u>Sec. 16, NE1/4 NE1/4</u>
<u>Sec. 24, SW1/4 SW1/4</u>

T23N, R85W:

<u>Sec. 10, NW1/4</u>
<u>Sec. 16, W1/2 W1/2</u>
<u>Sec. 28, W1/2 W1/2</u>

Gas Pipeline ROW Private/State Lands: T21N, R84W:

<u>Sec. 7, NE1/4 NE1/4</u>
<u>Sec. 8, NW1/4</u>
<u>Sec. 17, NE1/4 NE1/4</u>
<u>Sec. 21, NE1/4 NE1/4</u>
<u>Sec. 27, E1/2 W1/2</u>
<u>Sec. 35, N1/2 NW1/4</u>

T22N, R84W:

<u>Sec. 31, SW1/4 SW1/4</u>

T22N, R85W:

<u>Sec. 9, E1/2</u>
<u>Sec. 15, NE1/4, N1/2 NW1/4, NE1/4 SE1/4</u>
<u>Sec. 23, SW1/4 NE1/4, E1/2 NW1/4, N1/2 SE1/4, SE1/4 SE1/4</u>
<u>Sec. 25, W1/2</u>
<u>Sec. 36, W1/2 NE1/4, E1/2 NW1/4, SE1/4</u>

T23N, R85W:

<u>Sec. 9, S1/2 NE1/4, N1/2 S1/2, SW1/4 SW1/4</u>
<u>Sec. 21, W1/2 W1/2</u>
<u>Sec. 33, W1/2 W1/2</u>

Location (continued):

Pipeline Access Road #1 ROW Public Lands: T23N, R85W:

Sec. 4, S1/2 SE1/4

Sec. 8, NE1/4 NE1/4

Sec. 10, NW1/4

Pipeline Access Road #1 ROW Private/State Lands: T23N, R85W:

Sec. 9, N1/2 N1/2

Pipeline Access Road #2 ROW Public Lands: T22N, R85W:

Sec. 4, SW1/4 NW1/4

T23N, R85W:

Sec. 32, SW1/4 SW1/4

Pipeline Access Road #2 ROW Private/State Lands: T22N, R85W:

Sec. 5, Lots 2, 3, 4, S1/2 NE1/4

T23N, R85W:

Sec. 31, SE1/4 SW1/4, S1/2 SE1/4

Pipeline Access Road #3 ROW Public Lands: T21N, R84W:

Sec. 6, Lot 14, SE1/4 SW1/4

Sec. 8, SW1/4, SW1/4 SE1/4

Sec. 16, S1/2 NW1/4, NE1/4 SW1/4, SE1/4

Sec. 22, SE1/4, NW1/4, NE1/4 SW1/4

Sec. 26, NW1/4 NW1/4, NW1/4 SW1/4

Pipeline Access Road #3 ROW Private/State Lands: T21N, R84W:

Sec. 7, W1/2 NE1/4, SE1/4 NE1/4, NE1/4 NW1/4

Sec. 17, Lots 1, 2, 5, 6, NW1/4 NE1/4

Sec. 21, NE1/4 NE1/4

Sec. 26, SW1/4 NW1/4

Sec. 27, NE1/4 NE1/4

T21N, R85W:

Sec. 1, Lot 3, SW1/4 NE1/4, SE1/4 NW1/4, N1/2 SE1/4, SE1/4 SE1/4

T22N, R85W:

Sec. 25, E1/2 SW1/4

Sec. 36, E1/2 W1/2

Pipeline Access Road #4 ROW Private/State Lands: T21N, R84W:

Sec. 35, SW1/4 NE1/4, E1/2 NW1/4

Compressor Station/Storage Yard Site ROW Public Lands: T23N, R85W:

Sec. 10, E1/2 NW1/4

Applicant: Dudley & Associates, LLC (Dudley)

Field Office: Rawlins

INTRODUCTION

NEED FOR THE PROPOSED ACTION

The Proposed Action described in this Environmental Assessment (EA) is necessary to compress, dehydrate, and transport to market natural gas resources. Additional details of the Proposed Project can be found in the two ROW Plans of Development (PODs) for the Proposed Project (i.e., the gathering pipeline and access road POD, and compressor station, storage yard, and access road POD), which are incorporated by reference in this EA.

According to the Energy Information Administration in May 2001, U.S. demand for natural gas continues to rise and official Energy Information Administration estimates project a 52% increase in domestic consumption by 2020. Natural gas is an essential part of the present and future U.S. energy supply due to its general availability across a well developed transmission infrastructure and its unusually clean combustion properties as compared with other fossil fuels. Moreover, the development of abundant domestic reserves of natural gas reduces this country's dependence on foreign sources of energy, thereby improving the U.S. international balance of payments and contributing to the economic stability required for industrial production, efficient power generation and national security. The environmental advantages of natural gas combustion versus other conventional fuels are set out in the *Clean Air Act Amendments of 1990*.

Dudley anticipates that commercial production of natural gas from the Seminole Road Coalbed Methane Pilot Project (see WY-030-EA00-288) would begin in late 2002. The Proposed Project will be constructed with new materials, with a special emphasis on safety, and located to avoid sensitive areas, where practical. Presently there are no natural gas compression, dehydration, or transportation facilities at or near the vicinity of the project site.

CONFORMANCE WITH LAND USE PLAN

Natural gas development, including gas processing and transportation, is covered by the Great Divide Resource Management Plan (RMP). The RMP, which was approved on November 8, 1990 in a Record of Decision, indicates that "all Bureau of Land Management (BLM) -administered public lands will be open to consideration for placement of utility/transportation systems". Development of the Proposed Project as described in the Proposed Action is in conformance with RMP decisions.

RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

The BLM issues ROW grants for pipelines and compressor stations under the authority of the *Mineral Leasing Act of 1920*; access road ROWs on public lands are granted under the authority of the *Federal Land Policy and Management Act of 1976* (FLPMA). ROW applications and associated PODs are subject to standard approval procedures as outlined in ROW grant regulations (43 *Code of Federal Regulations* [C.F.R.] 2800). The aforementioned PODs provide sufficient detail to appraise the technical adequacy of, and environmental effects associated with, the Proposed Project, including provisions for the safe operation and adequate protection of surface resources/land uses, and other environmental components. The PODs also include adequate measures for reclamation of disturbed lands.

The Proposed Action is consistent with the Decision Record and Finding of No Significant Impact (FONSI) (BLM/WY/PL-01/017+1310) for the Seminole Road Coalbed Methane Pilot Project (WY-030-EA00-288). The Pilot Project EA also identifies the need for this Proposed Project.

The Proposed Action involves the construction and operation of a natural gas compressor station for gas compression and dehydration, and an associated storage yard (approximately 10 acres of federal land disturbance); a 20.3-mi long, 16-inch diameter buried natural gas gathering pipeline (approximately 243 acres total disturbance, 108 acres federal land disturbance, and 54 acres of 30-year life-of-project [LOP] disturbance) for delivery and sale of processed and compressed gas to an existing interstate gas pipeline; and four associated access roads, two of which (Access Roads #2 and #3) will require new surface disturbance (approximately 51 acres total, 26 acres on federal lands).

The Proposed Action is consistent with state and local government programs, plans, zoning, and regulations that apply to the action. The State of Wyoming has primacy over air quality and associated emissions from the proposed compressor station. A copy of the Wyoming Department of Environmental Quality, Air Quality Division (WDEQ-AQD) permit (No. CT-2833) for the compressor station is included as Attachment 1 to this EA.

PROPOSED ACTION AND ALTERNATIVES

Several alternative locations and designs for the pipeline route, compressor station/storage yard, and access roads were considered during the development of the Proposed Action. The locations and designs proposed in the PODs were selected to minimize and/or eliminate potential adverse project impacts to wetlands/riparian areas, wildlife (including mountain plover), known cultural resource sites, visually sensitive areas, and important recreation areas. Additional impact reduction techniques provided in the PODs and current Proposed Action include pipeline routing parallel to existing linear features (i.e., roads, a petroleum products pipeline, two-track routes) where practical; use of boring/directional drilling techniques for perennial water and wetland crossings; use of existing access routes to limit road improvement actions; confinement of all road improvement actions within existing disturbed areas; and siting or routing facilities away from important recreation and visually sensitive areas.

Standard design features and management practices, applicable to pipeline and compressor station construction and operation are included in the Proposed Action, and are specified in the PODs. The PODs contain complete descriptions of the proposal.

The Proposed Action would occur on lands managed by the BLM as well as on private and State of Wyoming lands. Dudley has represented to the BLM that legal access agreements to both fee and state lands will be in place prior to commencing operations on these properties.

Dudley would comply with all applicable federal, state, and local laws and regulations as they relate to public health, safety, and environmental protection during construction, operation, and maintenance of the Proposed Project.

PROPOSED ACTION

The Proposed Action is to approve Dudley's ROW applications for the Proposed Project as described in the PODs. Dudley proposes to construct:

- a pipeline, two pigging stations (one pig launching and one pig receiving station), two block valves, and a cathodic protection system;
- a compressor station and storage yard; and
- various road improvements along two of four proposed access routes.

Total temporary project disturbance would be approximately 304 acres. Total LOP disturbance would be approximately 125 acres.

Gathering Pipeline. The pipeline would be constructed with the customary equipment to conform with standard pipeline construction practices. The proposed pipeline is designed for a maximum capacity of 200 million cubic feet per day (mmcf/d). The maximum allowable operating pressure of 1,170 pounds per square inch gauge (psig) is set to ensure mechanical integrity of the line and provide a physical limitation on the volume of gas which the receiving line can accommodate; however, day-to-day pipeline operating pressures would change commensurate with throughput. The pipeline would have an outside diameter of 16-inches, a wall thickness of 0.250 inch and would be made from Grade X-52 steel pipe. Total temporary disturbance from the proposed pipeline is anticipated to be approximately 243 acres (108 acres on federal land), and total LOP disturbance on federal lands would be 54 acres.

A 100-ft wide temporary construction ROW and a 50-ft wide permanent (30-year) operating ROW would be required for the 20.3-mi pipeline route. The 100-ft temporary construction ROW width would be sufficient for all pipeline construction activities including boring and staging activities at the Union Pacific Railroad/Saint Mary's Creek crossing, where the pipeline would be bored underground for approximately 335 ft underground. However,

directional drilling operations designed to avoid disturbing wetlands, riparian areas, and cultural resources at the North Platte River would require additional temporary work space on both sides of the 100-ft construction ROW on both the north and south sides of the river. The pipeline would be drilled for approximately 1,500 ft underground at this crossing. A 150-ft wide by 250-ft long temporary (3-week) construction ROW on the south side of the river (50 x 250 ft outside the 100-ft pipeline construction ROW), and a 200-ft wide by 200-ft long temporary construction ROW on the north side of the river (100 x 200 ft outside the 100-ft pipeline construction ROW) would be required to allow for directional drilling operations and related storage and staging activities.

Two block valves, two pigging stations, a temporary (3-week) staging and equipment storage area near the North Platte River, a temporary (1-week) staging and storage area near the Union Pacific railroad crossing, surface equipment at the interconnect, pipeline markers along the pipeline route, and a cathodic protection system would also be constructed in association with the pipeline.

The two mainline block valves would be installed along the pipeline in accordance with U.S. Department of Transportation requirements. Each of the block valve stations would be contained entirely within the permanent pipeline ROW and located aboveground in such a way as to not be visible from the Seminole Road (Carbon County Road 351).

The two pigging stations, one for launching and one for receiving, would be constructed. Pigs would initially be run through the pipeline to remove any debris left from new construction. During service, pigs would be run periodically to remove free liquids from the line to maintain line efficiency and control corrosion. The pig launching station would likely be sited within the compressor station storage area at the northern terminus of the pipeline, whereas the pig receiving station would be sited within the existing interstate pipeline interconnect area at the southern terminus of the pipeline.

Additional surface equipment to be located at the interconnect location includes one or two storage tanks (approximately 100 barrel [bbl] capacity) to hold liquids captured during pipeline cleaning and one or two storage tanks (approximately 100 bbl capacity) to hold pigging sludge.

Once the pipeline is in place, the cathodic protection station would be designed, located, and constructed by a qualified corrosion contractor able to determine the best location and design for such a system. The system would be built entirely underground within the permanent pipeline ROW, likely at the northern or southern pipeline terminus.

After construction is completed, pipeline markers would be installed within the permanent ROW at a line-of-sight interval and at road crossings to identify the approximate pipeline location within the ROW.

Dudley would install the pipeline in one spread using approximately 50 workers, and pipeline construction is anticipated to occur at a rate of 1 to 2 mi per day in open country, with slower progress in areas with existing underground facilities. Additional field personnel may be working at the river directional drill and railroad bore sites.

Pipe would be brought to the area by rail or truck, and all pipe storage would occur on private lands or along already disturbed rail sidings. Pipe and other materials would be hauled by truck and strung along the ROW. The compressor site storage yard would also be used for pipeline construction staging and equipment storage.

Dudley would clear the construction corridor of vegetation and obstacles, ensuring that topsoil is segregated and preserved so that it can later be replaced. For the purposes of this EA, it is conservatively assumed that the entire 100-ft wide pipeline construction ROW would be disturbed. However, every effort would be made to disturb only that area actually necessary for safe and efficient pipeline construction. Blading and grading would be necessary to clear an adequate and safe working area along the pipeline ROW so that a 2- to 3- ft wide trench would be excavated with a trencher or backhoe. A bending machine would be used to bend the pipe to fit the trench. The pipe would be welded together and joints would be coated. Side-boom tractors would lower the pipe into the trench. The trench would be padded as necessary to prevent damage to pipe coating. After the pipe has been placed in the trench, it would be backfilled and compacted to prevent subsidence. Any excavated material that cannot be placed in the trench would be disposed of in compliance with landowner or government requirements (e.g., feathered out over the

disturbed area prior to topsoil replacement). The top of the pipeline generally would be buried to depths of 3.5 to 4.5 ft.

Portions of the trench would be open for no more than 20 days and the maximum unfilled trench length would be three miles. Trench bridges would be used to ensure wildlife and livestock movements are maintained. The open trench would be monitored regularly for trapped wildlife or livestock. Dudley would notify appropriate landowners when trenching occurs on their allotments or properties.

The pipeline would be bored under the Union Pacific Railroad/Saint Mary's Creek crossing at a depth of 16.6 ft using a horizontal bore for a length of approximately 335 ft to minimize disturbance and to ensure no wetlands, riparian areas, cultural resources, or railroad operations would be affected. The pipeline would be directionally drilled beneath the North Platte River for a distance of approximately 1,500 ft and at a maximum depth of 15 ft. The directional drill pads would be located far enough away from the river to ensure that no wetlands, riparian areas, or cultural resources are affected. Drill mud used at the directional drill site would be disposed of at approved off-site locations at the discretion of the BLM and/or landowner.

Dudley would use water as needed for dust control during construction. The pipeline would be pressure tested by filling the pipeline with water and pressurizing it to no less than 125% of its designated operating pressure for eight hours to verify mechanical integrity. Test and dust control water would be acquired either from the Sinclair municipality or from existing Pilot Project operations. A total of approximately 950,000 gal of water would be required for dust control and testing.

Dudley would discharge test water into ephemeral drainages at a rate commensurate with drainage capacity. Prior to discharge, Dudley would obtain all necessary discharge permits from the WDEQ, Water Quality Division (WQD) and would ensure that appropriate erosion control equipment (e.g., energy dissipaters) is installed.

Dudley would replace or repair all existing roads, fences, structures, or drainage facilities which may be damaged during construction to a reasonable standard of quality no less serviceable than that which existed before Dudley began pipeline construction. Fences crossed during construction would remain down during daylight hours while construction operations are occurring; however, when daily construction operations are concluded, fences would be reinstalled in a manner to prevent livestock passage.

Prior to placing the pipeline in service, Dudley would confirm to the BLM that the pipeline has been constructed and tested in accordance with the terms of the applicable ROW. Additionally, Dudley would submit surveyed construction detail plats to the BLM within 6 months of actual construction.

Dudley would routinely inspect the pipeline route for problems such as erosion, pipe exposure, ROW condition, unauthorized encroachment on the ROW, and any other conditions that may result in a safety hazard or require preventive maintenance. Dudley would notify the BLM prior to any non-emergency maintenance or repairs to the line to determine if there are resource concerns in those areas and to obtain the necessary approval. Inspections would be conducted on foot or by vehicle along the proposed ROW. Vehicles would be restricted to designated access roads and the ROW. If pipeline damage occurs from external sources, repair and/or replacement would be immediately completed. Dudley would develop an emergency response procedure stipulating that repair and replacement operations will begin immediately in the event of damage or failure of the mechanical integrity of the pipeline.

Access Roads. Four access roads would be developed and would require temporary construction and permanent ROWs of 50 ft. All access roads would be used during construction and permanent access needs would be as follows: Access Road #1--pigging station/launcher and compressor station access; Access Road #2--block valve access; Access Road #3--block valve access; and Access Road #4--pipeline interconnect and pigging station/receiver access. Travel frequency along Access Roads #2 and #3 would be notably less (monthly) than that for Access Roads #1 and #4, which may be used several times a week.

All access during pipeline construction and operations would be from existing improved routes or along the proposed pipeline ROW to minimize the amount of land disturbance for the Proposed Project. No new roads would be constructed, and all improvements to existing roads would occur within previously disturbed areas. No

improvements would be necessary for Access Roads #1 and #4. Access Road #2 would require approximately 1,500 ft of blading within an already disturbed area. Access Road #3 would require varying degrees of improvement occurring entirely within previously disturbed areas. The total mileage of all access roads would be 12.24 mi, with 4.29 mi of these roads requiring some level of improvement on previously disturbed federal lands. Total access road disturbance would be approximately 51 acres (26 acres on federal lands).

Access roads and the proposed pipeline ROW would be used to transport crews and equipment needed for project construction. All equipment and vehicular traffic would be confined to existing roads and established ROWs. Roads used for the project would be maintained and/or repaired as necessary to conditions equal to or better than those which existed before project-related use.

Compressor Station and Storage Yard. Equipment associated with the compressor station includes two natural gas powered compressors with 1,000 horsepower (hp) Caterpillar engines and one dehydrating unit. This equipment would be housed in a metal building (with a stack) anticipated to be less than 25 ft in height and painted to blend with the surrounding landscape per BLM specifications. The storage yard would contain a small maintenance building, pipe racks for casing, tubing, and rods as well as additional storage space for pumping units, motors, separators, and miscellaneous valves, fittings, poly pipe, and other equipment.

Dudley is requesting a 520-ft wide x 820-ft long permanent (i.e., 30-year) ROW for the compressor station and storage yard and a 30-ft wide by 275-ft long permanent (i.e., 30-year) road ROW for access, resulting in approximately 10 acres of disturbance during construction and operation.

Excavation would occur with customary earth moving equipment such that all locations will be fully crowned for drainage with perimeter ditching. The compressor station and storage yard would be fenced with four-strand barbed wire and equipped with a locked gate. Vegetation and topsoil would be stripped and stockpiled for use in reclamation. The compressor station pad and access road would be appropriately surfaced.

Construction Schedule. Pipeline construction is proposed to begin in August 2002 and end in November 2002. Dudley would notify BLM at least 5 days prior to the anticipated start of operations for construction and/or surface disturbing activities. The design, engineering, construction, maintenance, and inspection of the Proposed Project would be performed by Dudley and its contractors and subcontractors in accordance with safe and proven engineering practices, in compliance with the all applicable rules and regulations, and as directed by the BLM.

Termination/abandonment. At the end of the useful life of the pipeline (30 years), Dudley would obtain the necessary authorizations from the BLM to abandon the facilities. Dudley would contact the BLM to arrange a pre-termination conference and a joint inspection of the ROWs to agree on an acceptable plan.

Abandonment would be accomplished in accordance with the policies and standards employed by the BLM at the time of abandonment. The pipeline would be purged of all combustible materials and retired in place. All above ground facilities would be removed and unsalvageable materials would be disposed of at authorized sites. Regrading and revegetation of disturbed areas would be completed according to BLM or landowner standards, and the abandoned ROWs would revert to the control of the landowner.

Proposed Action Environmental Protection Measures. Dudley would obtain all applicable authorizations prior to project development and would comply with all applicable rules and regulations during project construction and operation. Dudley and its contractors would take appropriate measures to avoid, minimize, or mitigate potential impacts from development of the Proposed Project. The BLM may consider exceptions to these measures on a case-by-case basis if a thorough analysis determines the resource for which the measure was developed would not be affected by the Proposed Project. Dudley or a designated contractor approved by the BLM would ensure that qualified individuals are available during project construction, as needed, so that all mitigation measures discussed in this EA are applied. The BLM would be consulted on a case-by-case basis as necessary to establish alternative plans in the event unanticipated protection measures are necessary due to the discovery of protected resources.

Dudley would protect all survey monuments, benchmarks, witness corners, and other monuments within the ROWs. In the event any such monument is destroyed or damaged during project construction or operations, Dudley would arrange for a registered land surveyor to restore it in accordance with the *Manual of Surveying Instruction for the*

Survey of Public Lands of the United States, 1973 Edition. Dudley would record the survey with Carbon County and send a copy to the BLM.

Dudley would notify the BLM of any fires observed during project construction, would comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires, and would adhere to a project-specific Fire Management Plan (see Attachment 2). In the event of a fire, Dudley or its contractors would initiate fire suppression actions immediately until the fire is out or until relieved by an authorized representative of the agency or landowner on whose land the fire occurred. In the event heavy equipment is needed for fire suppression, it would be used outside of authorized ROWs only after prior approval of the BLM or private landowner unless there is imminent danger to life or property. Dudley would be responsible for all costs associated with the suppression (and subsequent rehabilitation) of fires resulting from its operations.

Dudley and its contractors would adhere to all construction plans identified in the ROW application PODs, and all necessary permits, plans, and arrangements for access would be acquired prior to construction. Furthermore, Dudley would confine all construction and reclamation actions to ROWs, and would not allow disturbance to occur beyond authorized ROW limits.

Dudley would use dust suppression techniques on disturbed areas (e.g., access roads, cleared pipeline ROW, spoil piles). Dudley would also reclaim all disturbed areas as soon as practical to facilitate soil stabilization, dust control, and to minimize wind erosion.

Dudley would minimize noise by keeping all internal combustion engines muffled and well maintained. Vehicle speeds also will be restricted to 35 mph to minimize noise and dust on project-required ROWs. Furthermore, compressors would be housed in a building to further reduce noise and odor.

Dudley would monitor construction activities for paleontological resources and if these resources are uncovered, Dudley would immediately suspend all operations that may further disturb such materials and contact the BLM. Dudley would not resume surface disturbing activities until the BLM determines the significance of the resource and recommends appropriate action. Mitigation for paleontological resources would be on a case-by-case basis as identified by the BLM. Dudley would incur all associated costs.

Dudley would ensure that topsoil sufficient to facilitate revegetation is segregated from subsoils during all construction operations and returned to the surface upon completion of operations. Dudley would keep the area of disturbance to the minimum necessary for safe project construction and operation by utilizing previously disturbed areas for project construction and access, and by clearly designating ROW boundaries and associated equipment/materials storage yards and staging areas. Dudley would further protect soils by avoiding construction activity during particularly muddy times and by using the practices identified in the project-specific Stormwater Pollution Prevention Plan (SWPPP) (see Attachment 3).

All disturbed ROW areas would be reseeded to landowner or BLM specifications. Seeding would take place as soon as practical after completion of construction, most likely during the spring of 2003. If conditions permit, seeding may occur immediately after construction in fall 2002. Seeding would be repeated until a satisfactory stand is established as determined by the BLM or landowner.

Dudley would control noxious weeds and other weedy species along the ROWs by using BLM- and/or county-specified control techniques identified following BLM inspection of reclaimed and other areas following project construction. Herbicide applications, if required, would be kept at least 500 ft from known special status plant populations. Efforts would be made to avoid disturbing areas with existing populations of noxious weeds. Furthermore, the BLM may require that all construction equipment be adequately cleaned prior to use on this project and/or throughout project construction to ensure noxious weed seeds are not spread by construction equipment.

Seeding and stabilizing of disturbed areas would be conducted in accordance with BLM-approved reclamation guidance and would include: initiating revegetation operations in the first appropriate season after completion of construction activities; recontouring and use of BLM-approved native species during revegetation to aid in soil stabilization; restricting project-related travel to designated ROWs unless there is an emergency; avoiding areas with high erosion potential and/or rugged topography, where practical; employing environmental protection measures

identified in the SWPPP; ensuring that reclamation activities include the use of fencing when wildlife and/or livestock are impeding successful vegetation growth; and minimizing the removal or disturbance of vegetation by developing and implementing reclamation protocol as described in Appendices C, D, and F of the Decision Record and FONSI for the Pilot Project (BLM/WY/PL-01/017+1310).

Dudley would coordinate project activities with local ranching operations to minimize conflicts with livestock movement or other ranch operations and will maintain all fences, cattle guards, and other livestock-related structures required for their transportation network. In areas of high livestock use and where practical, Dudley may fence reclaimed federal lands to ensure successful revegetation. During pipeline construction, Dudley would employ trench bridges at appropriate intervals to facilitate safe and easy access by livestock and wildlife across open trenches. Dudley would also regularly monitor and, in the unlikely event livestock or wildlife become trapped in the trench, remove the animals as soon as practical.

Dudley would implement general wildlife protection measures which include: implementing and communicating to field staff policies designed to control poaching and littering and convey that any intentional poaching or littering may result in dismissal; enforcing existing drug, alcohol, and firearms policies; installing trench bridges at appropriate intervals over open trenches during construction to facilitate wildlife crossings and prevent wildlife from becoming trapped in the open trench; regular monitoring of open trenches for trapped wildlife; advising project personnel of appropriate speed limits (35 mph) on project access roads; informing project personnel about wildlife laws; netting and/or fencing areas potentially hazardous to wildlife, where appropriate; and using erosion control techniques that minimize impacts to fisheries.

Dudley would apply the following protection measures to reduce the potential for adverse effects to threatened, endangered, proposed, and BLM-sensitive species. Dudley would comply with all existing (see Appendices C, D, and E of the Decision Record and FONSI for the Pilot Project [BLM/WY/PL-01/017+1310]), and any future decisions regarding threatened, endangered, proposed, and BLM-sensitive species reached during consultations between BLM, Dudley, and the U.S. Fish and Wildlife Service (USFWS). Furthermore, Dudley would implement additional surveys for these species as required by BLM, and if found, further consultations would be initiated, as necessary, and construction activities relocated or curtailed until the BLM, USFWS, and Dudley concur on appropriate actions to avoid adverse effects. Dudley also would have a BLM-approved biologist on-site during construction, as deemed appropriate by the BLM.

To minimize potential impacts to cultural resources, Dudley and its contractors would inform employees about relevant federal regulations protecting cultural resources. If any cultural remains, monument sites, objects, or antiquities subject to *The National Historic Preservation Act of 1966* or the *Archeological Protection Act of 1979* are discovered during construction, construction activities would immediately cease, and the BLM would be notified. If this occurs, Dudley would comply with all resulting recommendations made by the BLM and Wyoming State Historical Preservation Office.

The BLM VRM specialist would pick the colors that Dudley would paint facilities. Conflicts with those using the area would be minimized by posting appropriate warning signs and speed limits, by conducting Operator safety training, and by requiring project vehicles to adhere to speed limits (35 mph).

Dudley would maintain all construction and operation sites in a sanitary condition at all times. Waste materials, including human waste, trash, garbage, refuse, etc., would be disposed of promptly at an appropriate off-site waste disposal facility in accordance with all applicable BLM rules and regulations. Dudley and their contractors would be responsible for having on site the proper Material Safety Data Sheets (MSDS) for materials used during project construction and operation. All measures appropriate for the prevention and containment of accidental discharges would be taken. Fuel storage would not occur within 500 ft of stream channels, wetlands, and open water areas. Dudley would also adhere to its Spill Prevention and Control Countermeasure (SPCC) Plan. All chemicals would be handled in an appropriate manner to minimize the potential for leaks or spills to the environment. Management of accidental releases, spills, and fires involving hazardous materials would be handled in accordance to Dudley's SPCC Plan and Dudley would abide by all applicable federal, state, and local laws or regulations as regards hazardous materials.

All overflow and roadway ditches crossed by the pipeline will be cleared of any material, which could obstruct water flow. Work would be accomplished so that reasonable conformance to the previous line, grade, and cross section is achieved. If any culverts clog due to project activities, the culvert would be cleared to provide unobstructed flow. All applicable road design and maintenance requirements, sewage and garbage disposal requirements, the SWPPP, appropriate speed limits, and noise and odor control requirements would be implemented.

NO ACTION ALTERNATIVE

Under the No Action Alternative, the BLM would deny construction of the pipeline and compressor station on federal lands as currently proposed, while allowing existing land uses to continue. No ground would be disturbed and no impacts to the existing physical and biological environment would occur. However, demand for natural gas would eventually necessitate some alternative means of product supply (e.g., alternate routing). The analysis of a No Action Alternative provides a benchmark, enabling decision-makers to compare the magnitude of environmental effects of the Proposed Action.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

The following critical elements of the human environment were considered during preparation of this EA. These elements either do not occur in the area or are adequately mitigated by the Proposed Action.

- Areas of critical environmental concern (none present)
- Floodplains (avoided by boring/drilling)
- Wetlands and riparian zones (avoided by boring/drilling)
- Prime or unique farmlands (none present)
- Native American religious concerns (none identified)
- Threatened or endangered species (adequately protected)
- Water quality (surface [avoided by boring/drilling] and ground [not affected])
- Wild and scenic rivers (none present)
- Wilderness values (no wilderness or wilderness study areas present)
- Environmental justice (not affected)
- Invasive nonnative species (adequately mitigated)
- Wastes (hazardous and solid) (adequately mitigated)
- Cultural resources (adequately avoided/mitigated)

In addition to the critical elements referenced above, reviews for impacts to air quality, wildlife, socioeconomics, livestock, noise, paleontology, recreation, soils, subsurface resources, vegetation, and visual resources were also conducted.

This EA impact assessment was written considering the PODs as part of the Proposed Action. No mitigation measures beyond those identified in the PODs are recommended.

Air Quality. Air quality in the project vicinity is generally considered good. Pollutant emissions from the Proposed Project would occur in two phases, the first occurring during construction (primarily from fugitive dust and construction vehicle exhaust), with the second being primarily from compressor station operations. Of the two phases, the construction phase would emit the most visible air pollutants, due to dust from construction vehicle traffic. Visibility would be affected near roads and construction sites primarily during construction. Due to the short duration of construction operations, these emissions would be minimal. Airborne pollutant concentrations resulting from compressor station emissions, which include oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and formaldehyde, would be in compliance with existing WDEQ-AQD permit CT-2833 (see Attachment 1). Dudley would adhere to all applicable Wyoming Ambient Air Quality Standards (WAAQS) and National Ambient Air Quality Standards (NAAQS) as directed by the BLM and/or WDEQ-AQD.

Noise and Odor. Like pollutant emissions, noise and odors associated with the Proposed Project would occur in two phases--during construction and operation. Short-term noises and odors would occur proximal to construction areas

during construction, whereas long-term noise increases and odors would occur near the compressor station site. The Proposed Action would increase noise levels in the immediate area due to construction and compressor station operation. Wildlife in the area may be adversely affected; however, only temporary wildlife displacement would occur during construction activities, and it is anticipated that most wildlife would adapt to the long-term increased noise levels associated with the compressor station. Furthermore, because of the remoteness of the area and considerable availability of adjacent areas with few human noise sources, project-produced noise would likely have a negligible affect on the human environment

Geology and Geologic Hazards. Given the nature of the Proposed Project and the terrain it crosses, no extensive geologic investigation was conducted. However, extensive investigations completed for the nearby Pilot Project (WY-030-EA00-288) indicate the potential for seismic activity in the region to be low. There are no known active faults in the area. Furthermore, no geological concerns were identified during multiple project-specific reviews implemented by the BLM Geologist.

Mineral Resources. While the Proposed Project does not directly involve leasing and locating mineral resources, it is designed to process and transport such resources. Some loss of access to mineral resources could occur from areas beneath project-required features (e.g., compressor station, pipeline); however, no mineral development operations are currently proposed and most potential future operations could still occur. No oil and gas conflicts were noted during a BLM project-specific review of the area. The Proposed Project would result in a net gain for the economy of Carbon County, the State of Wyoming, and the U.S. due to the creation of stable jobs and tax revenues associated with natural gas processing and transportation.

Paleontology. No significant fossil localities are known to occur in the area of the Proposed Project, nor were any identified during multiple project-specific reviews implemented by the BLM geologist.

Soils and Vegetation, Reclamation, Rehabilitation, and Stabilization. Soils in the area are generally shallow to deep loams to sandy clay loams, with wind erosion hazard potentials being moderate and water erosion hazard potentials being moderate to severe as identified during BLM project-specific reviews. Potential impacts would include mixing of soil horizons, soil compaction, loss of topsoil productivity, an increase in wind and water erosion, and a slight potential for contamination through accidental materials spills.

Vegetation in the area, as described in Appendices C and D of the Pipeline and Access Roads POD and verified during BLM project-specific reviews, consists of eight community types, all of which are common to the region. These types are: mixed grass/shrubland; sagebrush/shadscale shrubland; mixed grass/low shrub; cushion plant; greasewood shrub; riparian; rock outcrop; and disturbed. Noxious weeds observed in the area include leafy spurge (along the North Platte River), Russian knapweed (near the railroad crossing), and whitetop (at several existing disturbed areas). Other weedy species known from the area include halogeton, Russian thistle, cheatgrass, curlycup gumweed, goatsbeard, and goosefoot, which all primarily occur on existing disturbed areas.

Project construction would result in the disturbance of soils and removal of vegetation from approximately 304 acres of land; however, all but the approximately 10 acres at the compressor site would be reclaimed immediately following construction. Direct impacts would include short-term loss of vegetation on construction-required areas and long-term impacts on areas required for project operations (these areas would be devoid of vegetation for the LOP). Indirect impacts would include the long- and short-term potential for exposure of soil to increased wind and water erosion, an increased potential for undesirable and/or noxious weed invasion/spread, changes in vegetative species abundance and cover, reduction of wildlife habitat and livestock forage availability, and changes in visual aesthetics.

Water Resources. Ground water would not be affected by the Proposed Project. Surface water in the area occurs in the North Platte River and Saint Marys Creek; however impacts to these resources would be minimized by: avoiding surface waters through the use of boring and directional drilling techniques; adhering to the mitigation measures identified in the SWPPP (see Attachment 3); and complying with the *Clean Water Act*, recommendations specified in the *Jurisdictional Wetlands and Other Waters of the U.S. Report* (see Appendix C of the Pipeline and Access Road POD), and associated U.S. Army Corps of Engineers 404 Permit requirements. No wetlands and less than 0.1 acre of waters of the U.S. would be affected by the Proposed Project.

Livestock Grazing. Livestock grazing does occur on project-required lands and the Proposed Action would not preclude livestock grazing. Livestock may be temporarily displaced during construction; however, they would return to most areas after completion of construction. Impacts to livestock grazing because of the presence of long-term project features would be minimal. It is estimated that the general livestock carrying capacity of the area is between 7 and 9 acres per animal unit month (AUM); therefore, temporary forage loss is estimated to be approximately 34 to 44 AUMs and LOP loss is estimated to be approximately 14 to 18 AUMs.

Wildlife Resources. Key wildlife resources on project-required lands include sage grouse, raptors, and big game species, and these resources are described in detail in Appendix D of the Pipeline and Access Road ROW Application POD, and are further assessed in BLM project-specific wildlife reviews. The primary impacts to wildlife occurring in the area would be direct loss of habitat until areas are adequately reclaimed and indirect loss of habitat due to increased human presence and noise.

Three sage grouse leks are known to occur within 2 mi of project-affected lands, and of these, one lek located in NENW of Section 5, T22N, R85W, occurs within 0.25 mi of proposed Access Road #2. However, no surface disturbance activities are proposed for this road segment, nor is any other surface disturbance proposed within 0.25 mi of any known leks. Approximately 8.3 mi of the proposed pipeline route would be constructed within 2.0 mi of known sage grouse leks, and this area as well as other sagebrush-dominated areas are likely used for sage grouse nesting, brood rearing, and wintering. However, since project construction is proposed for August–November (i.e., outside of important sage grouse nesting, brood rearing, and wintering periods), Proposed Project impacts would be negligible.

A search of the BLM database (i.e., overlay information) revealed numerous raptor nests within 1.0 mi of Proposed Project features. The activity status of many of these nests is unknown. Since project construction is proposed for August–November (i.e., outside of the raptor nesting season [February 1–July 31]), Proposed Project impacts would be minimal.

Wyoming Game and Fish Department (WGFD) data reveal the presence of crucial winter yearlong range for pronghorn antelope and mule deer along portions of the proposed pipeline and access road corridors. Construction activities in these crucial winter ranges would not occur during crucial winter periods (i.e., November 15–April 30), unless granted an exception by the BLM.

Threatened, Endangered, Proposed, and BLM-sensitive Species. Federally listed threatened, endangered, and proposed species potentially affected by the Proposed Project are black-footed ferret, Ute ladies' tresses, blowout penstemon, bald eagle, mountain plover, and North Platte River species. These resources are described in detail in Appendix D of the Pipeline and Access Road ROW application POD, and are further assessed in BLM project-specific wildlife reviews. With the implementation of protection measures as described in the ROW application POD, no adverse effects to threatened, endangered, proposed, or BLM-sensitive species are anticipated.

Surveys for black-footed ferret were completed as directed by the BLM and USFWS on potentially affected black-footed ferret habitat (i.e., suitable prairie dog colonies) during 2002, and no ferret or sign indicating the presence of ferret was observed. Therefore, the Proposed Project is not likely to adversely affect the endangered black-footed ferret.

All potential Ute ladies' tresses habitat would be avoided by boring or directional drilling; therefore, this species would not be affected.

No suitable habitat (active sand dunes) for blowout penstemon would be affected; therefore, the Proposed Project would not affect the species.

Although bald eagle observations have been made on and adjacent to project-required lands, no known bald eagle nests or winter roosts are known to occur within 1.0 mi of the area. Migrating eagles and those wintering at locations sufficiently close to the Proposed Project may occasionally fly over or forage on the area. However, since no known nests or roosts occur near the Proposed Project, nor are nests or roosts likely to be established, the Proposed Project is not likely to adversely affect bald eagle.

While no suitable mountain plover nesting habitat occurs at the proposed compressor station site, suitable nesting habitat does occur along proposed access road and pipeline corridors. However, since project construction is scheduled for August-November, outside of the mountain plover breeding season (i.e., April 10-July 10), the Proposed Project is not likely to adversely affect this species.

Since 1978, the USFWS has consistently taken the position in its Section 7 consultations that federal agency actions resulting in water depletions to the North Platte River system may affect the endangered whooping crane, interior least tern, pallid sturgeon, and eskimo curlew, as well as the threatened piping plover, bald eagle, and western prairie fringed orchid. Since no North Platte River depletions would occur from this project, the project would not adversely affect these species.

Cultural Resources. Class III cultural resources inventories and file searches have been completed for all proposed disturbance areas associated with the Proposed Project. Where cultural resources were located during these inventories, Proposed Project features were relocated to avoid any known cultural resources. Therefore, the proposed project could have a minimal affect on cultural resources.

Visual Resources. The Proposed Project is located within a Visual Resource Management (VRM) Class III area. In a Class III area, changes in the basic elements of the characteristic landscape may be evident while remaining subordinate to the visual strength of the existing character of the landscape. Project activities may attract attention, but should not dominate the view of the casual observer. Project related changes should repeat the basic elements of form, line, color, and texture found in the predominant natural landscape features. With the implementation of mitigation measures as described in ROW application PODs the Proposed Project would not violate VRM Class III standards.

There would be both short-term and long-term impacts to visual resources. During construction, dust plumes from traffic may be apparent in the vicinity of access roads and construction sites. However, this visual impairment would only occur during construction. The compressor station and other aboveground features would remain visible for the LOP.

Dudley, working with the BLM VRM Specialist to reduce long-term impacts and visual intrusions to the Seminole Road Scenic Byway have sited project facilities on both public and private lands behind hills and ridges. With the exception of the compressor station, roads, block valves, pipeline markers, pigging stations, and storage tanks there are no permanent surface facilities associated the Proposed Project, and Dudley has designed these facilities to minimize disturbance, preserve viewsheds, and conform to the standards for VRM Class III areas.

Recreation. Primary recreational activities in the area include: hunting for pronghorn antelope, mule deer, upland game birds, coyotes, and other small game; camping; hiking; wildlife and wild horse viewing; off-road vehicle use; and general sightseeing. Construction operations would have an impact on recreational opportunities in the immediate vicinity of construction areas during construction by temporarily displacing people who would normally use these area for recreational purposes. Furthermore, person wishing to use the area may be displaced from the compressor station site for the LOP. Easier area access may also allow more people to use the area while discouraging other users. People that want a more primitive recreational experience would be less likely to use the area.

Hazardous Materials. The Proposed Project is not located near any known hazardous waste sites. Certain materials identified by the EPA as hazardous materials may be used for or produced by the Proposed Project. Since project operations would comply with all applicable federal and state laws concerning hazardous materials and the Operator's SPCC Plan, no impacts are anticipated.

Transportation. Construction may cause minor transportation-related impacts such as increased truck traffic to and from the area; however, most impacts would be temporary and limited. Construction, operation, and maintenance are not expected to cause safety hazards or to notably inconvenience motorists or other area users. Construction traffic would be limited to approved access routes.

Socioeconomics. Project construction and operation would have a benefit on the local economy through increased revenues from production royalties and other taxes as well as through potential employment opportunities.

Residual Impacts. Residual impacts for the LOP include:

- loss of vegetation/soil productivity, direct wildlife habitat, and livestock forage from approximately 10 acres;
- wildlife and persons wishing to use area in the vicinity of the compressor site;
- Some air quality impairment from emissions from the compressor station, consistent with the WDEQ air quality permit.
- visual impairment within viewsheds containing visible project features.

Cumulative Impacts. Cumulative impacts would primarily result from those of this Proposed Action in combination with those resulting from the Pilot Project (WY-030-EA00-288), and can be considered minimal provided the Proposed Project including appropriate environmental protection measures as specified in this EA and in ROW application PODs are implemented. Cumulative impacts to wildlife include direct and indirect habitat loss through displacement from Proposed Project disturbed areas, areas disturbed during development of the Pilot Project, areas disturbed during road improvement actions along the Seminole Road, and adjacent undisturbed areas due to increased human presence and noise. There is a potential for the Proposed Project to have increased adverse effects on recreational opportunities on public lands within the immediate proximity of the compressor station and construction areas during construction. However, due to the low level of development in adjacent areas, the mix of public and private lands throughout the area, and the limited level of recreation known to occur on most the area, the recreationists that may use the area could conduct their activities in adjacent areas that provide the levels of isolation and solitude often desired. The visual quality of the area would be reduced by the Proposed Project primarily during construction, but construction activities would be temporary and most impacts would occur only during project construction and would be undetectable upon reclamation. The more permanent project features (i.e., compressor station, access roads) would not dominate the landscape and would be compatible with existing VRM classifications. Air emissions from the proposed project would contribute to regional declines in visibility.

No additional developments other than the ongoing work to improve the Seminole Road are currently proposed for the area. However, additional developments for oil and gas resources may occur in the area. Any cumulative impacts associated with any new development actions would be analyzed in consideration of this project, other existing projects, and other reasonably foreseeable actions

PERSONS OR AGENCIES CONSULTED

Ken Moor, Operations & Compliance Specialist, Dudley & Associates, LLC
Kate Fay, Environmental & Regulatory Specialist, Dudley & Associates, LLC
Don Schroeder, Land Manager, Dudley & Associates, LLC
David Jensen, Engineering & Operations Officer(COO), Dudley & Associates, LLC
David Dudley, Operating Manager (CEO), Dudley & Associates, LLC
Pete Guernsey, Project Manager, TRC Mariah Associates Inc.
Dave Simons, Environmental Coordinator, BLM
Gay Seay, Realty Specialist, BLM
Chuck Valentine, Realty Specialist, BLM
Larry Jackson, Natural Resource Specialist, BLM
Susan Foley, Soil Scientist, BLM
Frank Blomquist, Wildlife Biologist, BLM
Larry Apple, Wildlife Biologist, BLM
Mark Newman, Geologist, BLM
Sarah Crump, Archaeologist, BLM
Robert Epp, Rangeland Management Specialist, BLM
Krystal Clair, Recreation Planner, BLM



The State
of Wyoming

RECEIVED

JUN 25 2002

Dudley & Associates LLC



Department of Environmental Quality

Jim Geringer, Governor

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

ADMIN/OUTREACH (307) 777-7758 FAX 777-3610	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7368 FAX 777-6937	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
---	--	--	--	---	---	--

June 19, 2002

Ms. Kate Fay
Environmental & Regulatory Specialist
Dudley & Associates LLC
1776 Lincoln St, Ste 904
Denver, CO 80203

Permit No. CT-2833

Dear Ms. Fay:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Dudley & Associates LLC's application to construct the Seminole Compressor Station which is to consist of two (2) 1340 hp Caterpillar 3516LE engines and one (1) 20 MMSCFD glycol dehydration unit located in the NW¼ of Section 10, T23N, R85W approximately seventeen (17) miles northeast of Rawlins, in Carbon County, Wyoming.

Following this agency's proposed approval of the request as published April 23, 2002 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed new source, and an opportunity for a public hearing. No comments have been received. Therefore, on the basis of the information provided to us, approval to construct the Seminole Compressor Station as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.
2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.
3. That a permit to operate, in accordance with Chapter 6, Section 2(a)(iii) of the WAQSR, is required after a 120 day start-up period, in order to operate this facility.
4. That all notifications, reports and correspondences associated with this permit shall be submitted to the Stationary Source Compliance Program Manager, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002 and a copy shall be submitted to the District Engineer, Air Quality Division, 3030 Energy Lane, Suite 200, Casper, WY 82604.

5. That written notification of the actual date of initial start-up for the engines is required 15 days after start-up in accordance with Chapter 6, Section 2(i)(ii) of the WAQSR.
6. That the date of commencement of construction shall be reported to the Administrator within 30 days of commencement. The construction or modification must commence within 24 months of the date of permit issuance, in accordance with Chapter 6, Section 2(h) of the WAQSR, or the permit becomes invalid. The Administrator may extend the period based on satisfactory justification of the requested extension. If the construction is discontinued for a period of 24 months or more, then the permit will also become invalid.
7. That performance tests be conducted, in accordance with Chapter 6, Section 2(j) of the WAQSR, within 30 days of achieving a maximum design rate but not later than 90 days following initial start-up, and a written report of the results be submitted. The operator shall provide 15 days prior notice of the test date. If a maximum design rate is not achieved within 90 days of start-up, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.
8. Initial performance tests, as required by Condition #7 of this permit, shall be conducted on the following source:
 - i. Caterpillar 3516LE engines: Compliance tests for NO_x and CO emissions. Compliance tests for the first engine in operation shall consist of 3-1-hour tests following EPA Reference Methods 1-4, 7E and 10. Compliance testing for the remaining engine shall consist of one (1)-twenty-one (21) minute test following EPA Reference Methods 3, 7E, 10, and 19.
 - ii. Caterpillar 3516LE (ID #s 1-2): The first engine in operation shall be tested to determine the formaldehyde emission rate. Testing shall follow Reference Methods 1-4 and SW846 Method 0011. An alternate formaldehyde test may be used with approval for this Division

A test protocol shall be submitted to this office for review and approval prior to testing. Engine horsepower and operating conditions shall be recorded during each test run and submitted with the test report. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. Results shall be submitted to this Division within 30 days of completion.

9. That emissions from each source shall be limited as follows:

Engine	NO _x			CO		
	g/hp-hr	lb/hr	TPY	g/hp-hr	lb/hr	TPY
Caterpillar 3516LE	1.5	4.4	19.3	0.5	1.5	6.6

10. That the engine configuration at the Seminole Compressor Station shall be limited to two (2) 1340 hp Caterpillar 3516LE engines equipped with an oxidation catalyst.

11. That Dudley and Associates, LLC shall follow the preventative maintenance program (PM), attached as Appendix A, for the Caterpillar 3516LE engines to ensure the engine operates within the NO_x and CO allowable emission limits on a continuous basis. Annually, the engine shall be tested to verify compliance with the NO_x and CO limits set forth in this permit. Testing for NO_x and CO shall be conducted in accordance with EPA reference methods or the State of Wyoming's Portable Analyzer Protocol. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. Results of tests shall be submitted to this Division within 30 days of completing the tests.
12. That the 20 MMSCFD Dehydration unit shall be limited to coal bed methane service as represented in the application.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with conditions 3, 5, 6 and 7. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within sixty (60) days of permit issuance per Section 16, Chapter I, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,



Dan Olson
Administrator
Air Quality Division



Dennis Hemmer
Director
Dept. of Environmental Quality

cc: Chris Hanify

DO/cs

Emission Summary

Table 1: Engine Emission Factors (g/hp-hr)						
Engine	hp	Controls	NO _x	CO	VOC	Formaldehyde
Caterpillar 3516LE	1340	Lean Burn w/ oxidation catalyst	1.5	0.5	1.0	0.07

Table 2: Estimated Emissions									
ID	Source	NO _x		CO		VOC		Formaldehyde ¹	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	Caterpillar 3516LE	4.4	19.3	1.5	6.6	3.0	13.1	0.2	0.9
2	Caterpillar 3516LE	4.4	19.3	1.5	6.6	3.0	13.1	0.2	0.9
3	Dehy Unit	0.1	0.4	0.1	0.4	Insignificant due to CBM			
Total Emissions		8.9	39.0	3.1	13.6	6.0	26.2	0.4	1.8

¹ Formaldehyde only significant HAP.

Appendix A

Preventative Maintenance Plan Caterpillar 3516LE Dudley & Associates, LLC

This preventative maintenance plan addresses which operators will routinely conduct on Caterpillar 3516LE engines to ensure that units will operate within emission limits set forth by the issued construction permit.

Routine Engine Operations: Operators will observe engines routinely. Records of suction and discharge pressures will be recorded. Engine operations will be adjusted as needed if the operator observes an engine to be mis-firing or otherwise operating in a substandard manner

Standard preventative maintenance on each engine will be conducted on a monthly basis. This effort will include changing oil filters, running valves, setting fuel gas pressures and setting the timing as needed. The operating characteristics of the air/fuel ratio controller will be monitored by the operations control panel and quarterly sampling of the exhaust O₂ concentrations using a portable analyzer.

Scheduled Overhaul: Engine overhauls will be conducted on each engine at least every 80,000 hours of operation.

Catalyst Preventative Maintenance: The engines will be equipped with oxidation catalyst. The catalyst bed for each subject engine which is installed with oxidation catalyst will be equipped with pre-bed temperature indicators. Catalyst bed inlet temperatures will be checked once quarterly to ensure inlet temperature remains greater than 700°F. Catalyst will be cleaned and replaced in accordance with manufacturer recommendations.

Initial Performance Test: Emissions of NO_x and CO will be sampled from subject engines during the required initial performance test at locations downstream of the catalyst to assess catalyst effectiveness and compliance with emission limits. CO will also be sampled upstream of the catalyst for subject engines equipped with catalyst to assess control efficiency and to establish an approximate correlation between CO and formaldehyde control so that CO may be used as a surrogate indicator of formaldehyde control efficiency

Annual Emissions Assessment: TCGS, facility operators or a third-party testing crew will use a portable analyzer to conduct NO_x and CO emissions assessments on each engine on an annual basis per the State of Wyoming's Analyzer Protocol.

FIRE MANAGEMENT PLAN

Seminole Road Gas Gathering Pipeline Project Dudley & Associates, LLC

June 2002

1. Dudley & Associates, LLC (**Dudley**) and its contractors and inspectors will carry dry chemical fire extinguishers during project construction.
2. The on-site contractor will have a water supply available for the purpose of fire control. This may include, but not be limited to, portable water sprayers and a stand-by water supply.
3. Fire watches will stand by and be ready to respond to a fire event any time construction activity requires sparking or open flames.
4. As conditions dictate, the project will use barriers to prevent hot sparks and/or slag from leaving the ROW.
5. **Dudley** or its contractors will make daily checks during pipeline construction of where fires might be located in close proximity to the project work area, including access roads.
6. **Dudley** or its contractors will attempt to extinguish immediately any fires that develop within the 100-foot ROW.
7. **Dudley** or its contractors may extinguish a fire that breaks out of the ROW if it remains within 10 to 15 feet from the edge of the ROW and is readily extinguishable without impairing the safety of all personnel .
8. The following protocol will be observed in the event an uncontrolled fire that extends beyond the ROW occurs:
 - On-site fire safety personnel will immediately contact local emergency responders by calling “911”. Safety personnel for pipeline spreads will be identified and their names and cellphone numbers will be provided to BLM and **Dudley** management prior to the initiation of construction.
 - Ken Morr, Field Compliance Specialist for **Dudley** (cell phone number 303.919.6102 or 307.320.5198) will be notified by site field personnel immediately. If, during an event, Ken Morr cannot be reached, every attempt will be made to contact Dave Jensen, Chief Operating Officer for **Dudley** (cell phone number 913.481.5651 or at home: 913.814.0326).
 - A representative of **Dudley** will notify the BLM Fire Manager Office (Larry Trapp) immediately upon learning of a fire event by calling the BLM fire reporting number: 800.295.9953.
 - The following information should be communicated when reporting a fire to the BLM Fire Manager: Township/Range, road numbers, driving directions, size of the fire, wind direction, type of vegetation that is burning, amount of water supply available at the fire site.
 - **Dudley** and its contractors will support to the maximum extent possible local authorities in their efforts to bring the fire under control.
 - **Dudley** will respond promptly to any follow-up reporting requests regarding the fire event that BLM makes.

**STORM WATER POLLUTION
PREVENTION PLAN, SEMINOE ROAD
COALBED METHANE PILOT
PROJECT, CARBON COUNTY,
WYOMING**

Prepared for

Dudley & Associates, LLC
Denver, Colorado

Prepared by

TRC Mariah Associates Inc.
Laramie, Wyoming

January 2002

**STORM WATER POLLUTION PREVENTION PLAN,
SEMINOE ROAD COALBED METHANE PILOT PROJECT,
CARBON COUNTY, WYOMING**

Prepared for

**Dudley & Associates, LLC
Denver, Colorado**

Prepared by

**TRC Mariah Associates Inc.
Laramie, Wyoming**

January 2002

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	1
1.2 PROJECT LOCATION AND DESCRIPTION	1
1.3 PROJECT OWNER AND OPERATOR	2
2.0 CONSTRUCTION ACTIVITIES AND SITE DESCRIPTION	3
2.1 POTENTIAL POLLUTANTS	3
2.2 RECEIVING WATERS	4
3.0 EROSION AND SEDIMENT CONTROL	6
3.1 GENERAL PRACTICES	6
3.2 TEMPORARY STABILIZATION	7
3.3 TEMPORARY EROSION CONTROL PRACTICES	7
3.4 PERMANENT STABILIZATION MEASURES	11
4.0 PREVENTION AND MANAGEMENT OF NON-STORM WATER RELEASES ...	13
5.0 PREVENTIVE MAINTENANCE	14
5.1 DRILLING FLUIDS	14
5.2 SPILLS AND LEAKS	14
6.0 INSPECTION AND TRAINING	15
6.1 TRAINING	15
6.2 INSPECTION	15
6.3 RECORD KEEPING AND REPORTING	15
6.4 PLAN REVISIONS	16
6.5 TERMINATION	17
7.0 REFERENCES	18
APPENDIX A: INSPECTION REPORTS	

LIST OF MAPS

	<u>Page</u>
Map 1 Project Location	MAP POCKET

LIST OF TABLES

		<u>Page</u>
Table 2.1	Potentially Affected Drainages, Seminoe Road Coalbed Methane Pilot Project	4
Table 2.2	Potentially Affected Drainages, Transmission Pipeline and Access Road Routes, Carbon County, Wyoming	5

1.0 INTRODUCTION

1.1 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

This document establishes a plan to manage the storm water runoff resulting from construction activities associated with Dudley & Associates, LLC's (Dudley's) Seminoe Road Coalbed Methane (CBM) Pilot Project (Project) and associated transmission pipeline and compressor station development. Under the federal *Clean Water Act*, construction projects that disturb more than 5 acres of land are required to file and publish a Notice of Intent and obtain a permit under the NPDES program. The federal program is administered by the Environmental Protection Agency (EPA); however, the State of Wyoming obtained primacy in 1974 and in Wyoming the program is administered by the Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD).

WDEQ/WQD issues permits for storm water runoff from construction projects. This document comprises the Storm Water Pollution Prevention Plan (SWPPP) required by the WDEQ/WQD. This plan was developed in accordance with *Authorization to Discharge Storm Water Associated with Construction Activities Under the NPDES* (WDEQ/WQD 2001).

1.2 PROJECT LOCATION AND DESCRIPTION

Dudley, of Denver, Colorado, has proposed the Project in Townships 23 and 24 North, Range 85 West, Carbon County, Wyoming (see Map 1, map pocket). The Project consists of drilling, completing, and producing 18 CBM wells for evaluation (including two alternative well locations that may or may not be developed) and one centrally located monitoring well (19 total wells). Production wells will be spaced at 160 acres, or four wells per section. Additional Project features include access roads, in-field water and natural gas pipelines, and produced water discharge facilities. A compressor station will be built within the Project area and a natural gas transmission pipeline will be constructed linking the compressor station with existing interstate

natural gas pipelines located approximately 20 mi southeast of the Project area near Walcott, Wyoming (see Map 1, map pocket).

Access to the Project area is from Sinclair, Wyoming, along Carbon County Road 351 (Seminoe Road). The Project area (excluding the transmission pipeline route) encompasses approximately 8,320 acres, 3,840 (46%) of which are federal surface and mineral estate. Total surface disturbance will be 401 acres (156 acres of initial disturbance and 80 acres of life-of-project disturbance within the Project area and 245 acres of short-term construction-related disturbance for the transmission pipeline). Detailed map and site descriptions of the Project area are found in the Bureau of Land Management (BLM) Environmental Assessment (EA) and Project Decision Record (DR) (BLM 2001a, 2001b) and the Project area riparian investigation report and Project water management plan (Dudley 2001a, 2001b). Detailed descriptions of the transmission pipeline are found in the pipeline wetland report and wildlife letter report (Dudley 2002a, 2002b).

1.3 PROJECT OWNER AND OPERATOR

The Project owner is Dudley and the Project contact is:

Ms. Kate Fay
Dudley & Associates, LLC
1776 Lincoln St., Suite 904
Denver, CO 80203-1026

2.0 CONSTRUCTION ACTIVITIES AND SITE DESCRIPTION

Project construction activities are described in Chapter 2.0 of the Project EA (BLM 2001a). Typical construction details are provided in the site-specific Applications for Permit to Drill (APDs) and rights-of-way (ROWs) applications and associated Plans of Development (PODs) submitted for all Project features.

Soils in the area range in texture from sandy to clayey, and slopes range from relatively flat to rolling, so erosion potential varies widely depending on location. The predominant land uses in the Project area are agricultural (livestock grazing), wildlife habitat, recreation, and transportation (Seminole Road). Most rainfall in the Project area occurs as brief relatively intense summer storms.

The runoff coefficient (C value) for the Project area will be between 0.10 and 0.80 and will average 0.35 (adapted from Table 1 in WDEQ/WQD 2001). This value is based on general terrain, soils properties (e.g., porosity, density), slope, and vegetative cover (e.g., grassland, shrubland), and is affected by rainfall intensity and duration. For a given terrain, the ratio of runoff to rainfall will increase as storm intensity and duration increase. Post-development C values for Project-required lands will be roughly equivalent to pre-development values.

2.1 POTENTIAL POLLUTANTS

The primary potential pollutants from construction are disturbed soils and subsequent surface water runoff from access road, well pad, pipeline, and ancillary facility sites. Other potential pollutants could include spills of petroleum products, antifreeze, or drilling fluids.

Soil-disturbing activities will include:

- access road and pipeline construction,
- excavating holes at drill locations,

- minor cutting and filling,
- soil compaction from traffic on access roads, and
- construction of ancillary facilities.

A list of the hazardous materials to be used for or produced by this Project is provided in Appendix D of the EA (BLM 2001a).

2.2 RECEIVING WATERS

Lists of the drainage channels and associated wetlands potentially affected by Project area facility corridors (i.e., in-field road and pipeline routes) and the transmission pipeline and transmission pipeline construction access roads are provided in Tables 4.1 and 4.2, respectively. These channels and adjacent wetlands are considered to be the waters of the U.S. (WUS) that will receive storm water discharge. These WUS are based on information shown on U.S. Geological Survey (USGS) 7.5' series topographic quadrangles and National Wetlands Inventory Maps; these WUS are further described for the Project area in Dudley (2001a and 2001c) and for the transmission pipeline in Dudley (2002a). The North Platte River is the only perennial water located near affected areas. Seminoe Reservoir, Carbon County, Wyoming, will ultimately receive runoff from the Project area resulting from storm events, whereas the North Platte River and Saint Marys Creek will receive runoff from the transmission pipeline route.

Table 2.1 Potentially Affected Drainages, Seminoe Road Coalbed Methane Pilot Project.

Feature Type	USGS Quadrangle	Location	Mitigation
East Fork Pool Table Draw	Seminoe Dam SW	Sec. 27, 33, and 34, T24N, R85W	Culverts, bubblers
East Fork Pool Table Draw	Ferris Lake	Sec. 3, T23N, R85W	Culverts
West Fork Pool Table Draw	Seminoe Dam SW	Sec. 27, T24N, R85W	Culverts, bubblers
Pool Table Draw	Seminoe Dam SW	Sec. 23, T24N, R85W	Culvert
Pool Table Draw Reservoir Wetland ¹	Seminoe Dam SW	Sec. 27, T24N, R85W	Monitoring

¹ There will be no construction activities within this wetland; monitoring will be as described in Dudley (2001a, 2001b, and 2001c).

Table 2.2 Potentially Affected Drainages, Transmission Pipeline and Access Road Routes, Carbon County, Wyoming.

Feature Type	USGS Quadrangle	Location	Mitigation
Pipeline Route			
Dirtyman Draw	Ferris Lake	SWSW Sec. 9, T23N, R85W	Restore banks
Dry wash	Ferris Lake	SWNW Sec. 21, T23N, R85W	Restore banks
Dry wash	Ferris Lake	SWSW Sec. 28, T23N, R85W	Restore banks
North Platte River/wetland	Ferris Lake	NESE Sec. 9, T22N, R85W	Bore
Dry wash	Ferris Lake	Sec. 15, T22N, R85W	Restore banks
Dry wash	Fort Steel	SESW Sec. 14, T22N, R85W	Restore banks
Dry wash	Fort Steel	SESE Sec. 23, T22N, R85W	Restore banks
Dry wash	Fort Steel	SWSE Sec. 8, T21N, R84W	Restore banks
Dry wash	Walcott	SESE Sec. 16, T21N, R84W	Restore banks
Dry wash	Walcott	SESW Sec. 22, T21N, R84W	Restore banks
Saint Marys Creek/wetland	Walcott	NWSE Sec. 22, T21N, R84W	Bore
Dry wash	Walcott	NENE Sec. 34, T21N, R84W	Restore banks
Pipeline Construction Access Roads			
Dry wash	Lone Haystack Mountain	NESW Sec. 31, T23N, R85W	Culvert
Dry wash	Fort Steel	SESW Sec. 8, T21N, R84W	Culvert
Dry wash	Walcott	Sec. 16 and 22, T21N, R84W	Culverts
Saint Marys Creek	Walcott	Sec. 26 and 27, T21N, R84W	Culverts

3.0 EROSION AND SEDIMENT CONTROL

3.1 GENERAL PRACTICES

The objectives of sediment and erosion control are to conserve soils and to prevent water pollution caused by storm water runoff. Dudley will use soil erosion and sediment control measures to reduce the amount of soil that is carried off disturbance areas and deposited in receiving waters, thereby minimizing impacts to surface and ground water. Dudley will install temporary and permanent erosion control devices as necessary during Project construction. These devices will include waterbars, roadside ditches with subsurface culverts, berms, energy-dissipating structures, mulches, and reestablishment of permanent vegetation in all areas disturbed during construction, as necessary. All applicable soil erosion and sediment control measures will be implemented in accordance with the guidelines contained herein prior to commencement of field construction activities at each location. Measures will be maintained during and after construction until final stabilization is completed.

Site-specific circumstances will often dictate the types of erosion control measures needed and, while certain measures are recommended herein, Dudley will evaluate all disturbed areas and make on-site decisions on a case-by-case basis. This SWPPP establishes goals of erosion control and regulation but leaves some flexibility in the specific implementation methods necessary to achieve these goals. Dudley will monitor construction to ensure that erosion control devices are properly installed and functioning.

Dudley will suspend construction activities when soils are so wet that equipment traffic causes ruts deeper than 4 inches. Construction will resume when soils become dry enough to support construction equipment. Due to the variability in soil conditions within the Project area, Dudley will determine when conditions are too wet to continue construction activities.

Dudley will construct access roads approximately 1 ft above natural surfaces to allow wind to blow roads free of snow. However, because the actual effects of the proposed Project on snow redistribution are unknown, Dudley proposes no other mitigation measures at this time. Dudley will construct all new access roads in compliance with all BLM, Carbon County, or other applicable road requirements. Permanent roads will be designed, graded, and appropriately surfaced to provide all-weather use.

3.2 TEMPORARY STABILIZATION

Since construction proceeds very quickly, temporary stabilization measures (e.g., terracing, temporary seeding, or mulching) are not likely to be required. Dudley will implement temporary stabilization measures if construction in a given area ceases for 14+ days and is not expected to resume within 21 days.

Dudley will implement temporary stabilization practices to control potential surface water and groundwater impacts that might occur as a result of construction-related activities. Temporary stabilization procedures include but are not limited to the following best management practices (BMPs) pursuant to U.S. Environmental Protection Agency (EPA) guidance (EPA 1992):

- install temporary berms,
- regrade disturbed land,
- texture and regrade soil,
- install erosion control blankets or mulching on disturbed land,
- install silt fences or straw bales (i.e., sediment barriers),
- install culverts across large channels, and
- water or otherwise stabilize wind-prone materials.

3.3 TEMPORARY EROSION CONTROL PRACTICES

The soil erosion and sediment control measures described herein are the minimum control measures Dudley will implement during construction and restoration. However, Dudley may

implement additional practice to comply with all applicable erosion control requirements. Dudley will implement all appropriate pollution prevention measures as soon as practical before disturbance or after construction activities have been completed.

Temporary erosion control of backfilled structures, graded well pads, and staging areas will include leaving disturbed surfaces rough to reduce erosion potential. Construction equipment will avoid travel in undisturbed areas to the extent possible. Erosion control blankets or other comparable devices will also be used, if deemed necessary, on cut-and-fill slopes, in roadside ditches, on soil stockpiles, and on disturbed areas adjacent to the roadway where cut slopes exceed 3:1. Temporary sediment barriers will be used in roadside ditches and at the base of cut-and-fill slopes to slow runoff and trap sediments wherever slopes exceed 5:1. Stockpiled topsoil will be stabilized with water as needed for dust control and regraded to allow natural establishment of vegetation.

Dudley will adhere to the following sequence of operations for construction of access/facilities corridor roads, pipelines, well pads, and compressor stations unless otherwise directed by the BLM. Revisions to sequences may be instituted if approved by the BLM, and if such modifications do not result in increased erosion or sedimentation at the site.

The sequence for access road/facilities corridor construction includes:

- construct crown-and-ditch roads,
- install temporary sediment control silt fences or straw bales as needed,
- install culverts at channel crossings, and
- install permanent erosion control including using wing ditches and/or seeding and mulching all disturbed areas where no other permanent measure is required.

The sequence for pipeline installation will include:

- install temporary sediment control silt fences or straw bales as needed;
- excavate and stockpile topsoil;

-
- stockpile excavated material for backfill--for wet-excavated material, the installation of a sediment control silt fence may be required along the lower perimeter of the stockpile area;
 - construct and install the pipeline;
 - backfill and compact excavated area; and
 - install permanent erosion control including seeding and mulching.

The sequence for construction of well pads and ancillary facilities will include:

- install temporary sediment control silt fences or straw bales as needed;
- excavate and stockpile topsoil;
- stockpile excavated material for backfill--for wet-excavated material, the installation of a sediment control silt fence may be required along the lower perimeter of the stockpile area;
- construct well pad or ancillary facility;
- backfill and compact excavated area; and
- install permanent erosion control including seeding and mulching all disturbed areas where no other permanent measure is required.

Sediment Barriers

Dudley will use sediment barriers to intercept and retain the small amounts of sediment carried by sheet flow or rills from disturbed areas. Sediment barriers will be placed in critical areas where high surface runoff is expected (e.g., slopes). They will be used wherever no other practice is reasonable, where there is no concentration of water in a channel or other drainageway above the barrier, and where erosion could occur in the form of sheet and/or rill erosion.

Dudley will use sediment barriers where:

- the contributing drainage area is less than 1 acre,
- the length of slope above the barriers is less than 150 ft, and/or

-
- the slope of the contributing drainage area for at least 30 ft adjacent to the barriers does not exceed 5%.

Dudley will construct barriers so water cannot bypass the barrier around the ends. Barriers will be removed when no longer needed (i.e., upon successful revegetation of disturbed areas) so as not to block or impede storm flow or natural drainage.

Silt fences and straw bales will be installed in accordance with accepted construction practices. Silt fence posts will be spaced 10 ft center-to-center or closer. The posts will extend at least 16 inches into the ground and at least 20 inches above the ground. A metal fence with 6-inch or smaller openings and at least 2 ft in height may be fastened to the fence posts. A filter fabric, recommended for such use by the manufacturer, will be buried at least 6 inches into the ground and exposed at least 20 inches above the ground. It may be fastened in place by stakes or other accepted means as specified by the BLM.

Straw bale barriers will be securely tied and staked along contour. Bales will be placed at least 4 inches into the ground in a row with ends tightly abutting adjacent bales. Bales will be securely anchored in place by two stakes or rebar driven through each bale. The first stake in each bale will be driven toward previous placed bales to force the bales together.

Dudley will inspect barriers weekly in areas of active construction or equipment operation or within 24 hours of each 0.5 inch or greater rainfall or snowmelt event. Maintenance inspection reports will be completed after each inspection (see Appendix A). If identified, ineffective erosion control measures will be repaired (e.g., re-anchored) or replaced. Sediment will be removed from behind silt fences when it reaches 30% of the height of the barrier, and all silt and other debris will be disposed of at an approved location. Dudley will immediately install additional erosion control devices in any area deemed in need of further protection.

3.4 PERMANENT STABILIZATION MEASURES

Dudley will implement permanent stabilization practices on disturbed areas associated with construction of pipelines, access roads, well pads, ancillary facilities, and any other disturbed areas. Dudley will implement any permanent stabilization practices deemed necessary.

Dudley will complete post-construction reclamation in the first appropriate season following the completion of construction. The short-term goal of reclamation will be to stabilize disturbed areas as rapidly as possible, thereby protecting sites and adjacent undisturbed areas from degradation. The long-term goal will be to return the land to approximate pre-disturbance conditions through the establishment of an ecologically sustainable vegetation community.

Most post-construction work will entail stabilizing slopes and reseeding unused disturbed areas including portions of well pads, road ROWs, ancillary facility sites, and all disturbed areas associated with pipelines.

The objective of regrading will be to establish overall slope stability and to re-establish and stabilize drainages via grading and contouring earthwork. All disturbed areas not required for the life-of-project will be regraded to the approximate original contour. Fill slopes will be reduced to a grade of 3:1 or lower, where possible. If it is not possible to reduce slopes to 3:1, stringent soil stabilization measures (e.g., erosion control blanket or soil tackifier application) will be implemented to minimize soil loss and improve slope stability.

Seedbed preparation will occur between September 15 and ground freeze-up or in the spring after the ground thaws but before April 15 in the first season following construction. Surface preparation, soil placement, and tillage will not occur during times when soils or the ground is wet or frozen. Dudley will conduct revegetation in accordance with standard reclamation procedures.

Final stabilization is achieved when all soil-disturbing activities at the site have been completed and when a uniform perennial vegetative cover has been established or equivalent measures (such as the use of riprap, gabions, or geotextiles) have been employed. When the site has been fully stabilized and all storm water discharges from construction activities are eliminated, Dudley will submit a Notice of Termination to the WDEQ/WQD.

4.0 PREVENTION AND MANAGEMENT OF NON-STORM WATER RELEASES

This section identifies the general practices Dudley will employ to prevent and manage non-storm water releases (e.g., hazardous material, human waste, fugitive dust).

To minimize potential adverse effects from the release of hazardous materials, Dudley and its contractors will manage hazardous materials in compliance with federal, state, and local regulations. Dudley will prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan and this plan will be followed in the event of a spill. Copies of the SPCC Plan will be given to appropriate Dudley personnel, contractors, and field personnel, and will also be available at Dudley's Denver, Colorado, office.

Dudley will not dispose of solid, hazardous, or petroleum wastes on-site, and will comply with applicable federal and state waste disposal laws and regulations. Dudley will locate, handle, and store any hazardous substances in a manner that prevents them from contaminating soil and water resources. Any release (leaks, spills, etc.) of oil or hazardous substances in excess of the reportable quantity as established by 40 *Code of Federal Regulations* (C.F.R.) Parts 112 and 117 will be reported as required by WDEQ/WQD and/or EPA. If the release of oil or hazardous substances in a reportable quantity were to occur, a copy of the report would be furnished to the appropriate federal and state agencies.

Dudley will manage and dispose of solid and sanitary waste during construction as approved by the BLM (2001b).

Dudley will control all fugitive dust emissions occurring from traffic on gravel roads, clearing and grading, foundation excavation, etc., as required by BLM (2001b).

5.0 PREVENTIVE MAINTENANCE

All Dudley employees will inspect work areas for which they are responsible regularly while the work is being conducted, and if any damaged, faulty, or ineffective pollution prevention practices are noted, they will be immediately repaired or replaced. All Dudley employees will also inspect the equipment for which they are responsible and will repair or replace any piece of equipment that might be or has the potential to release any product or waste material into the environment. Dudley will clean up any spilled fuel or other petroleum product immediately.

5.1 DRILLING FLUIDS

Boring requires the use of a bentonite-based drilling fluid for lubrication of the cutting head and stabilization of the drill hole. Dudley will contain drilling fluids in drill pits which will be surrounded by silt fences, as necessary. Drilling fluids will not be discharged into any stream or wetland.

5.2 SPILLS AND LEAKS

Dudley will not store petroleum products on-site. A fuel truck will furnish fuel necessary for equipment during construction operations. Any leaks of petroleum products from equipment will be cleaned up and disposed of in accordance with applicable state and federal laws and regulations.

6.0 INSPECTION AND TRAINING

6.1 TRAINING

Dudley personnel and its contractors and subcontractors will be required to read this SWPPP before performing professional services at the sites identified in this SWPPP. Dudley will further provide appropriate storm water management training to all personnel designated to implement this SWPPP and/or conduct site inspection. Training will be conducted annually and address topics such as the selection, maintenance, and installation of pollution controls, spill response, and material management. Training records will be maintained for a minimum of 3 years.

6.2 INSPECTION

During construction, Dudley will designate qualified personnel to inspect disturbed areas at least once every 7 calendar days and within 24 hours of any rain storm that exceeds 0.5 inch or after periods of rapid snowmelt. These inspections will cover areas that have not been stabilized and/or contain structural control measures. Inspections may be more frequent during wet periods if deemed necessary.

If inspection results indicate a need for revision to this SWPPP, the plan will be revised and implemented following the inspection. Inspection reports will identify any incidents of noncompliance.

Following the completion of construction but prior to return of the site to approximate preconstruction conditions and termination of coverage under this permit, qualified personnel will inspect the site at least once every quarter.

6.3 RECORD KEEPING AND REPORTING

Dudley will maintain a copy of this SWPPP on-site until the date of Project termination. Dudley will retain copies of the SWPPP and all reports required by the General Permit for a period of at least 3 years from the date of Project termination.

An inspection report will be prepared and signed by the inspector following each inspection (see Appendix A). If the report describes deficiencies in pollution control structures or procedures, such deficiencies will be corrected within 24 hours. Copies of inspection reports will be retained at the construction site. The SWPPP will also be modified within 30 days to reflect any required structural or procedural changes.

All inspection reports will be prepared, certified, and signed by Dudley personnel following each inspection. Each inspection report will be incorporated into the SWPPP. In addition, all inspection reports will be maintained at the Dudley office in Denver, Colorado, for a minimum of 3 years.

6.4 PLAN REVISIONS

Dudley will modify or revise this SWPPP if at any time while this SWPPP is in effect, Dudley determines that changes are necessary due to revisions in the specific location where the SWPPP is applied or changes are necessary in the required design, construction, operation, or maintenance of facilities or processes under the BMPs utilized for the Project. This also applies to changes in any facility and/or operation which could significantly affect potential storm water discharge. All changes or amendments to this SWPPP will follow page replacement formatting, as set up in this document, so that the SWPPP will be kept current and up-to-date.

6.5 TERMINATION

Upon completion of construction and any reclamation activities, Dudley will submit a Notice of Termination to WDEQ/WQD.

7.0 REFERENCES

- Bureau of Land Management. 2001a. Environmental assessment for the Seminole Road Coalbed Methane Pilot Project, Carbon County, Wyoming. Prepared for Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming, by TRC Mariah Associates Inc., Laramie, Wyoming.
- _____. 2001b. Decision record and finding of no significant impact for the Seminole Road Coalbed Methane Pilot Project, Carbon County, Wyoming. BLM/WY/PL-01/017-1310. 4pp + append.
- Dudley & Associates, LLC. 2001a. Riparian vegetation baseline investigations of discharge drainage channels for the Seminole Road Pilot Project, Carbon County, Wyoming. Prepared for Dudley & Associates, LLC, Denver, Colorado by TRC Mariah Associates Inc., Laramie, Wyoming. 16 pp. + append.
- _____. 2001b. Water management plan, Seminole Road Pilot Project. Prepared for Dudley & Associates, LLC, Denver, Colorado, and Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming, by HydroGeo Inc., Crested Butte, Colorado, and TRC Mariah Associates Inc., Laramie, Wyoming.
- _____. 2001c. Final report, spring monitoring, Seminole Road Project. Prepared for Dudley & Associates, LLC, Denver, Colorado, by HydroGeo Inc., Crested Butte, Colorado, and TRC Mariah Associates Inc., Laramie, Wyoming. 33 pp. + append.
- _____. 2002a. Jurisdictional wetlands and other waters of the U.S. Prepared for Dudley & Associates, LLC, Denver, Colorado, by TRC Mariah Associates Inc., Laramie, Wyoming. 10 pp. + append and maps.
- _____. 2002b. Letter report to Kate Fay, Dudley and Associates, LLC, Denver, Colorado, from Peter J. Guernsey, TRC Mariah Associates Inc., Laramie, Wyoming. 9 pp. + tables and maps.
- U.S. Environmental Protection Agency. 1992. Storm water management for construction activities: Developing pollution prevention plans and best management practices. Office of Water, EPA 833-A-92-001.
- Wyoming Department of Environmental Quality, Water Quality Division. 2001. Authorization to Discharge Storm Water Associated with Construction Activity Under the National Pollutant Discharge Elimination System (NPDES). Wyoming Department of Environmental Quality at <http://deq.state.wy.us/wqd/watershed/71736.htm>. 21 pp. Data accessed December 21, 2001.

APPENDIX A:
INSPECTION REPORTS

DUDLEY & ASSOCIATES, LLC
STORM WATER POLLUTION PREVENTION PLAN
INSPECTION REPORT

Date of Inspection: _____

Signature of Inspector

Date

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: _____

Signature and Date: _____

RIGHT-OF-WAY PLAN OF DEVELOPMENT

COMPRESSOR STATION, STORAGE YARD & ACCESS ROAD

- I. **APPLICANT:** Dudley & Associates, LLC
1776 Lincoln Street, Room 904
Denver, Colorado 80203-1026
303-861-0800
- II. **PROJECT NAME:** Seminole Road CBM Pilot Project Compressor Station, Storage Yard & Access Road Right-Of-Way
- III. **LEGAL DESCRIPTION OF LANDS TO BE CROSSED:**
T23N-R85W Sec. 10: E²NW⁴ ROW WYW-147569

1.0 PURPOSE AND NEED FOR THE FACILITY

The purpose of the Seminole Road CBM Pilot Project Compressor Station, Storage Yard & Access Road Right-Of-Way ("PROPOSED PROJECT") is to compress and dehydrate natural gas produced from the Seminole Road CBM Pilot Project ("PILOT PROJECT") wells, located north of Sinclair, in Carbon County, Wyoming. Once treated, produced natural gas will be distributed for sale by pipeline delivery to the CIG interstate transmission facility near Sinclair, Wyoming. A right-of-way ("ROW") application will follow shortly for construction of this pipeline.

U.S. demand for natural gas continues to steadily rise and official Energy Information Administration estimates project a 30% increase in domestic consumption by 2010. Natural gas is an essential part of the present and future U.S. energy supply due to its general availability across a well developed transmission infrastructure and its unusually clean combustion properties as compared with other fuels. Moreover, the development of abundant domestic reserves of natural gas reduces this country's dependence on foreign sources of energy, thereby improving the U.S. international balance of payments and contributing to the economic stability required for industrial production, efficient power generation and national security. The environmental advantages of natural gas combustion versus other conventional fuels are set out in the Clean Air Act Amendments of 1990.

Dudley & Associates, LLC ("DUDLEY") anticipates that the PILOT PROJECT could reasonably begin producing natural gas by the end of 2001. The PROPOSED PROJECT will therefore be needed to compress and dehydrate this produced natural gas before it can enter a pipeline for delivery to the CIG interstate transmission facility near Sinclair, Wyoming, about 20 miles south of the project site. Presently there are no natural gas compression, dehydration or transportation facilities at or near the vicinity of the project site.

2.0 FACILITY DESIGN FACTORS

DUDLEY proposes construction of a compressor station, storage yard and access road on or across approximately 11 acres of Federal land. See Exhibit I for a map of the proposed compressor station, storage yard, and access road. Equipment associated with the compressor station includes:

1. two (2) natural gas powered compressors with 1000 hp Caterpillar engines; and
2. one (1) dehydrating unit.

The equipment will be housed in a metal building to be fabricated on site. Its dimensions have yet to be determined, however, DUDLEY anticipates that the height will not exceed ~25 feet above ground level.

The storage yard will contain pipe racks for storage of casing, tubing, and rods. Additional storage will be available for pumping units, motors, separators and miscellaneous valves, fittings, poly pipe and other general oil field equipment.

DUDLEY is requesting a 520' wide x 820' long permanent (i.e. 30 year) ROW for the compressor station and storage yard; and a 30' wide by 275' long permanent (i.e. 30 year) road ROW for the access road to the compressor station and storage yard. These proposed ROWs will result in approximately 11 acres of disturbance during construction and operation (10 acres associated with the compressor station and storage yard, and 1 acre associated with the access road). The proposed ROW sites were selected in order to avoid unnecessary disturbance to archaeological sites, visual resources and other resources protected by NEPA (see detailed discussion below).

The PROPOSED PROJECT will be excavated with customary earth moving equipment to conform to the general design characteristics presented in Exhibits II through V. The entire 11-acre location will be fully crowned for drainage with perimeter ditching to channel away rain and snow melt. The compressor station and storage yard will be fenced with four-strand barbed wire on the interior of the ditches, fitted with "H" braces where necessary, and equipped with a locked gate. Veg-

etation and topsoil will be stripped from the entire location and stockpiled along the edge of the pad and access road (see Exhibit II).

The compressor station pad and access road will be appropriately surfaced in accordance with Appendices C and D of the **DECISION RECORD AND FONSI** for the **PILOT PROJECT** (see Section 3.0 below). An enclosed building, typically used for such purposes, will protect the compression equipment. **DUDLEY** anticipates that this building and stack will not exceed ~25 feet above ground level. It will be painted to blend with the surrounding landscape, per BLM specifications identified in the Appendices C and D of the **DECISION RECORD AND FONSI** (see Section 3.0 below).

3.0 ADDITIONAL COMPONENTS

This **PROPOSED PROJECT** contains no additional components. **ROW** applications will follow shortly for the associated pipeline and fiber optic cable (including access roads) to be co-located in the same trench/boring. Natural gas produced for compression and dehydrating will be developed from the **PILOT PROJECT**, as described and authorized by BLM in two documents:

1. Environmental Assessment for the Seminole Road Coalbed Methane Pilot Project, Carbon County, Wyoming ("**EA**") and;
2. Decision Record and Finding of No Significant Impact For the Seminole Road Coalbed Methane Pilot Project Carbon County, Wyoming ("**DECISION RECORD AND FONSI**").

4.0 GOVERNMENT AGENCY AND DUDLEY PERSONNEL INVOLVEMENT

BLM issues **ROW** grants for compressor stations under the authority of the Mineral Leasing Act of 1920. The **ROW** grant application for the **PROPOSED PROJECT** will be subject to the standard approval procedures as outlined in **ROW** grant regulations (43 CFR 2800). The **PROPOSED PROJECT** lies within areas covered by the BLM Great Divide Resource Management Plan ("**RMP**"). This plan provides for the development of compressor stations and associated facilities with stipulations to protect natural resources.

The contacts at **DUDLEY** for this **ROW** application are:

- | | | | |
|----|---------------|--|--------------|
| 1. | Kate Fay | Environmental & Regulatory Specialist | 303-910-2830 |
| 2. | Ken Morr | Operations & Compliance Specialist | 303-863-4488 |
| 3. | Don Schroeder | Land Manager | 303-863-4483 |
| 4. | David Jensen | Operating Manager/Chief Operating Officer | 816-842-5671 |
| 5. | David Dudley | Operating Manager/Chief Executive Officer. | 303-863-4480 |

If Kate Fay cannot be reached by telephone, please contact Don Schroeder.

BLM Rawlins Field Office staff who have offered guidance with this **ROW** application and the related pre-application site visit are:

- | | | |
|----|-----------------|-----------------------------|
| 1. | Gay Seay | Pipeline ROW Team Leader |
| 2. | Krystal Clair | Recreation/Visual Resources |
| 3. | Janelle Wrigley | Realty |
| 4. | Frank Blomquist | Wildlife and T&E |
| 5. | Ken Peacock | Water Resources |
| 6. | Larry Jackson | Project Inspector |
| 7. | Brenda Newman | EA Team Leader. |

The Rawlins Field Office staff can be reached at 307-328-4200.

Construction and operation of the proposed compressor station, storage yard and access road will also require authorizations from several federal, state, and local agencies. **DUDLEY** will obtain applicable authorizations and comply with all applicable rules and regulations contained in them.

As mentioned in Section 3.0 above, environmental documents relevant to the **PROPOSED PROJECT** include the **EA** and the **DECISION RECORD AND FONSI**. These documents were prepared by BLM in accordance with the National Environmental Protection Act ("**NEPA**") and comply with all subsequently passed applicable regulations and laws.

The **PROPOSED PROJECT** for which this **ROW** application is being submitted lies within the area evaluated by the **EA**. It represents part of the natural gas compression, dehydration and distribution system needed to support the **PILOT PROJECT**. Given the extensive investigations already completed for this **EA**, including the environmental practices and protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI**, no additional background data collection is required for this **ROW** application's site-specific **NEPA** investigation, with the exception of a cultural resources investiga-

tion of areas to be disturbed. Section 6.14 addresses additional cultural resources investigations undertaken for this proposed **ROW**.

5.0 COMPRESSOR STATION, STORAGE YARD AND ACCESS ROAD RIGHT-OF-WAY LOCATION

The **PROPOSED PROJECT** will be accessed by traveling north from Sinclair, Wyoming, on County Road 351 for a distance of ~18 miles; from there, turn right (east) on an existing oilfield road and travel ~1 mile to the compressor station and storage yard access road. The **PROPOSED PROJECT** is not expected to be visible from County Road 351 because it will be located on a plateau hidden behind a knoll. The entire site embraces approximately 11 acres (see attached map) within the E²SE⁴ of Section 4-23N-85W.

6.0 RESOURCE VALUES AND ENVIRONMENTAL CONCERNS

This section addresses measures **DUDLEY** or its contractors will take to avoid, minimize, or mitigate potential impacts from development of the **PROPOSED PROJECT**. BLM may consider exceptions to these measures on a case-by-case basis if a thorough analysis determines the resource for which the measure was developed will not be affected by the **PROPOSED PROJECT**. **DUDLEY** or a designated contractor approved by BLM will ensure that qualified individuals will be available during project construction as needed to ensure that all mitigation measures discussed in this Plan of Development ("**POD**") are followed. BLM will be consulted on a case-by-case basis as necessary to establish alternative plans in the event unanticipated protection measures are necessary due to the discovery of protected resources.

As part of this **ROW** application, **DUDLEY** will fully adhere to all applicable environmental practices and protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI**. Any additional (completed or ongoing) environmental/resource investigations (e.g. cultural, biological, wetlands, etc.) described below are a result of recommendations made by BLM staff after conducting an investigation of the **PROPOSED PROJECT** site on May 31, 2001. These are referenced in the appropriate section below. BLM-approved consultants hired by **DUDLEY** are conducting all investigations and writing associated follow-up reports. These reports will be provided to BLM within 5 days of completion.

6.1 SURVEY MONUMENTS

DUDLEY will protect all survey monuments, benchmarks, witness corners and other monuments within the **ROW** that exist to delineate property boundaries and characteristics. In the event any such monument is destroyed or damaged in the course of project construction or by its operations, **DUDLEY** will arrange for a registered land surveyor to restore it in accordance with the *Manual of Surveying Instruction for the Survey of Public Lands of the United States, 1973 Edition*. **DUDLEY** will record the survey with Carbon County and send a copy to the BLM Rawlins field office.

6.2 FIRE CONTROL

DUDLEY will notify the BLM Rawlins Field Office of any fires observed during project construction and will comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires. In the event of a fire, **DUDLEY** or its contractors will initiate fire suppression actions immediately until the fire is out or until relieved by an authorized representative of the agency or landowner on whose land the fire occurred. In the event heavy equipment is needed for fire suppression, it will be used beyond the **ROW** only after prior approval of the BLM or landowner unless there is imminent danger to life or property. **DUDLEY** will be responsible for all costs associated with the suppression (and subsequent rehabilitation) of fires resulting from its operations.

6.3 PERMITTING AND CONSTRUCTION

DUDLEY and its contractors will adhere to all construction plans identified in this **POD**. All necessary permits and arrangements for access will be acquired prior to construction.

DUDLEY will confine all construction and reclamation actions to a width that is practical and will not allow disturbance to occur beyond the authorized **ROW**.

6.4 AIR QUALITY, NOISE AND ODOR

DUDLEY will adhere to all applicable WAAQS and NAAQS, and permit requirements including preconstruction compliance testing, operating permits and other regulations, as required by the WDEQ-AQD. **DUDLEY** has met with WDEQ-AQD and agreed to file permits to construct and operate the compressor station combustion equipment (two 1000 hp 4-stage reciprocating engines, de-rated for altitude and one 20 mm scf/day dehydration unit) in early August 2001. The compressors will be equipped with oxidation catalyst to reduce emissions and meet Best Available Control Technology requirements, as determined by the WDEQ-AQD. **DUDLEY** will also perform a dispersion modeling analysis to determine the air quality impacts of the **PROPOSED PROJECT**. **DUDLEY** will keep copies of the WDEQ-AQD air permits and supporting analysis at its office in Denver, Colorado and provide them to BLM upon request.

Dust suppression techniques will be used as necessary on all disturbed areas (e.g. access roads, cleared **ROW** and spoil piles).

DUDLEY will minimize noise and odor associated with the **PROPOSED PROJECT** by keeping all internal combustion engines muffled and maintained. In addition, the compressors will be housed in a building to further reduce noise and odor levels. Vehicle speeds will be restricted.

6.5 GEOLOGY AND GEOLOGIC HAZARDS

The geology as well as the potential for geologic hazards in the area is assessed in detail in the **EA** for the **PILOT PROJECT**. The potential for seismic activity in the project area is low and there are no known or suspected active faults in the area. As such, geologic hazards are unlikely and not addressed further in this **ROW** application.

6.6 MINERAL RESOURCES

Leasable and locatable mineral resources are assessed in detail in the **EA** for the **PILOT PROJECT**. Please refer to this document for a discussion of such resources. The treatment and compression of produced natural gas from the **PILOT PROJECT** would result in a depletion of CBM resources in the area, but would not interfere with the potential recovery of other minerals. CBM production will be a net addition to the economy of Carbon County, the state of Wyoming, and the U.S. through the creation of stable jobs and tax revenues associated with oil and gas production.

6.7 PALEONTOLOGY

Paleontological resources were evaluated and discussed in detail in the **EA** for the **PILOT PROJECT**. No known significant fossil localities have been identified in the project area. Please refer to the **EA** and Appendices C and D of the **DECISION RECORD AND FONSI** for further discussion and the applicable environmental practices and protection measures **DUDLEY** will take to minimize impacts to paleontological resources.

If **DUDLEY** uncovers any paleontological resources during ground disturbing activities, **DUDLEY** will suspend all operations that may further disturb such materials and immediately contact the BLM. BLM would then arrange for a determination of significance and, if necessary, would recommend a recovery or avoidance plan. Mitigation of paleontological resources would be on a case-by-case basis and **DUDLEY** would incur all associated costs. Surface disturbing activities would not resume until BLM issues a Notice to Proceed.

6.8 SOILS

Soils were assessed in detail in the **EA** for the **PILOT PROJECT**. **DUDLEY** will ensure that topsoil sufficient to facilitate revegetation will be segregated from subsoils during all construction operations and returned to the surface upon completion of operations. Topsoil stockpiles will be seeded with native vegetation protected to prevent erosion and protected to maintain soil microflora and microfauna.

DUDLEY will keep the area of disturbance to the minimum necessary for construction and operation of the **PROPOSED PROJECT**. Please refer to Appendices C and D of the **DECISION RECORD AND FONSI** for all applicable environmental practices and protection measures **DUDLEY** will take to minimize impacts to soils.

6.9 WATER RESOURCES

Water resources, including streams and wetlands, were assessed in detail in the **EA** for the **PILOT PROJECT**. The site for this proposed **ROW** application is not located near any such resources. **DUDLEY** will fully adhere to all applicable environmental practices and protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI** to minimize impacts to water resources.

6.10 VEGETATION

Vegetation resources were assessed in detail in the **EA**. **DUDLEY** will fully adhere to all applicable vegetation protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI**.

As part of this **PROPOSED PROJECT**, **DUDLEY** will control noxious weeds, apply herbicides, remove vegetation, and stabilize disturbed areas in accordance with all environmental practices and protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI**.

6.11 LIVESTOCK AND CROPLAND

There is no cropland in the area of the **PROPOSED PROJECT**, although, as noted in the **EA**, livestock grazing does occur in the area. **DUDLEY** will coordinate project activities with the owner(s) of surface grazing permits to minimize conflicts with livestock movement or other ranch operations. **DUDLEY** will also build and maintain all fences, cattle guards, and other live-

stock-related structures required for their transportation network. In areas of high livestock use, **DUDLEY** will fence reclaimed land to ensure successful revegetation. Please refer to Appendices C and D of the **DECISION RECORD AND FONSI** for all applicable measures **DUDLEY** will take to ensure impacts to livestock and cropland are minimized.

6.12 WILDLIFE RESOURCES

DUDLEY will implement all environmental practices and protection measures identified in Appendices C and D of the **DECISION RECORD AND FONSI** to ensure that impacts from the **PROPOSED PROJECT** on wildlife resources are reduced. These include minimizing impacts on wildlife access across the land (e.g. crucial big game winter range), raptors, sensitive species (see 6.13 below), economic species such as sage grouse, and fisheries.

6.13 THREATENED AND ENDANGERED SPECIES

BLM completed a detailed Biological Assessment for the **PILOT PROJECT** that covers this proposed **ROW** application project site. At the request of BLM during the May 31, 2001 pre-**ROW** application site visit, **DUDLEY** engaged a BLM-approved consultant to complete a one-time mountain plover survey of all suitable mountain plover breeding and nesting habitats within 200 meters of the **PROPOSED PROJECT** site. An area of approximately 155 acres was investigated. No mountain plover were found and the July 5, 2001 letter from Mr. Peter Guernsey, TRC Mariah, to Ms. Gay Seay, BLM (with a copy sent to Mr. Frank Blomquist, BLM) provides further details of this investigation.

Appendices C and D of the **DECISION RECORD AND FONSI** contain extensive lists of commitments made by **DUDLEY** to mitigate impacts on a host of species. These include threatened and endangered species occurring or likely to occur in the area of the **PROPOSED PROJECT** (i.e., mountain plover, black-footed ferret, swift fox), and other species not considered threatened or endangered pursuant to the Endangered Species Act but protected by the BLM as "sensitive species" (i.e. white-tailed prairie dog and sage grouse). Please refer to Appendices C and D of the **DECISION RECORD AND FONSI** for lists of these measures. **DUDLEY** will adhere to these measures for this **PROPOSED PROJECT**.

Since the **PROPOSED PROJECT** lies within the project area assessed by the **EA** and will be implemented pursuant to the **DECISION RECORD AND FONSI**, no adverse effects to threatened species, endangered species or species proposed for listing are anticipated.

6.14 CULTURAL RESOURCES

A BLM-approved archaeologist completed a Class III Cultural Resources Inventory and literature search on July 24, 2001 for all areas to be disturbed by the **PROPOSED PROJECT**. No cultural resources were discovered. **DUDLEY** anticipates receiving a report of this investigation by July 31, 2001, a copy of which will be simultaneously provided to BLM.

As discussed in detail in the **EA** and Appendices C and D of the **DECISION RECORD AND FONSI**, **DUDLEY** and its contractors will inform their employees about relevant federal regulations protecting cultural resources. If any cultural remains, monument sites, objects, or antiquities subject to The National Historic Preservation Act of 1966 or the Archeological Protection Act of 1979 are discovered during construction, activities shall immediately cease and the BLM will be notified. If this occurs, **DUDLEY** will comply with all resulting recommendations made by the BLM and WSHPO. Please refer to the Appendices C and D of the **DECISION RECORD AND FONSI** for the cultural resources protection measures.

6.15 VISUAL RESOURCES

The project location is located within a Visual Resource Management Area ("**VRM**") Class III area. In a Class III area, changes in the basic elements of the characteristic landscape may be evident while remaining subordinate to the visual strength of the existing character of the landscape.

DUDLEY has designed all surface facilities associated with this **PROPOSED PROJECT** to minimize disturbance, to preserve protected viewsheds and to conform to the standards for the applicable **VRM** Class. The **PROPOSED PROJECT** will be located behind a knoll and it is anticipated that it will be concealed from view of the Seminole Road (approximately one mile to the West) and the Seminole Reservoir (its closest point being approximately four miles to the north). **DUDLEY** will paint facilities with the colors prescribed by BLM in Appendices C and D of the **DECISION RECORD AND FONSI**, to blend with the surrounding landscape.

6.16 SANITATION

DUDLEY will maintain all construction and operations sites in a sanitary condition at all times. Waste materials, including human waste, trash, garbage, refuse, etc., will be disposed of promptly at an appropriate waste disposal site and in accordance with the **DECISION RECORD AND FONSI** for the **PILOT PROJECT**.

6.17 POWER, ELECTRIFICATION AND COMMUNICATIONS

Any decision to electrify the **PROPOSED PROJECT** will be made after the **PILOT PROJECT** is determined to be commercially feasible. At that point, electric power may be utilized on the **PROPOSED PROJECT** site for which this **ROW** application is being submitted, for which **DUDLEY** will secure a **ROW** on public lands from the BLM. Until then, power for the **PROPOSED PROJECT** will be provided by two reciprocating engines (see Section 6.4 for description and discussion of air quality measures **DUDLEY** will undertake). Please refer to the **EA** for further discussion. **DUDLEY** will also file a **ROW** application, along with the pipeline **ROW** application referred to earlier in this **POD** for a fiber optic line for the sole purpose of two-way communication, command and control for automation of field operations.

6.18 FLOODPLAINS AND COASTAL ZONES

The **PROPOSED PROJECT** site is not located near any floodplain or a coastal zone.

6.19 PROXIMITY TO HAZARDOUS WASTE SITES

The **PROPOSED PROJECT** site is not located near any known hazardous waste site.

6.20 MISCELLANEOUS

DUDLEY will adhere to all environmental practices and protection measures contained in Appendices C and D of the **DECISION RECORD AND FONSI**. They include those applying to ditches and culverts, litter, spill prevention, control and counter-measures, stormwater prevention (including development of a stormwater pollution prevention plan) and traffic and public safety. Please refer to the **DECISION RECORD AND FONSI** for specific measures.

7.0 PROJECT CONSTRUCTION

7.1 PLANS AND SPECIFICATIONS

Detailed surveys and drawings for the **PROPOSED PROJECT** are attached. Additional details will be provided to BLM as they become available. The design, engineering, maintenance, and inspection of the **PROPOSED PROJECT** will be performed by **DUDLEY** and its contractors in accordance with safe and proven engineering practices, in compliance with the **DECISION RECORD AND FONSI**.

7.2 CONSTRUCTION

Construction will begin with BLM authorization, anticipated for September 2001. The goal is to complete the **PROPOSED PROJECT** by the end of November 2001, so that produced natural gas from the **PILOT PROJECT** can be treated and transported by pipeline (the **ROW** application for which will be submitted to BLM for consideration in two weeks) to the CIG interstate transmission facility near Sinclair. **DUDLEY** will oversee all aspects of construction by its contractors. **DUDLEY** will notify BLM at least five days prior to the anticipated start of construction and/or any surface-disturbing activities.

The construction effort will utilize earth-moving equipment to remove and store vegetation and topsoil in a manner that will minimize erosion and sedimentation. Ditches will be cut and the overburden used for crowning of **PROPOSED PROJECT**. The access road will be appropriately surfaced and graded, which construction will take 2 workers approximately 3 days. After final grading, a roustabout crew of 3 will need approximately 2 days to erect the fence and gate. No additional land will be necessary for staging or storage of the construction equipment. Next, a concrete foundation for the compressor and compressor site building will be poured and cured, and compressor station equipment will be delivered by truck to be set in place on the concrete foundation.

7.3 HAZARDOUS MATERIALS

Hazardous and extremely hazardous materials are identified in the EPA's Consolidated List of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986. **DUDLEY** will take all measures necessary and appropriate to prevent and contain accidental discharges of any listed materials. Refueling and fuel storage will not occur within 500' of stream channels. Any unused or used engine oil or other lubricants will be stored in appropriately labeled containers and disposed of at an approved site. Lubricants will not be stored within 500 feet of stream channels.

DUDLEY will conform with provisions of the Toxic Substances Control Act of 1976. As such, any toxic substances that are used, generated by, or stored on the **ROW** or at facilities under the **ROW** grant will be handled in accordance with this law and its implementing regulations. Any release of toxic substances in excess of the reportable quantity as established in the Code of Federal Regulations (40 CFR 117.3) will be reported as required. **DUDLEY** will furnish copies of required reports to BLM within 5 working days of occurrence. Appropriate safety guides and emergency response procedures will

be adhered to for this project. Copies of emergency response plans are available for review at **DUDLEY**'s office in Denver, Colorado.

8.0 ACCESS ROADS

One new access road will be required as part of this **PROPOSED PROJECT**. The construction phase of the **PROPOSED PROJECT** will require no new roads. All equipment and vehicular access to the compressor station, storage yard and associated access road will be confined to existing roads and established **ROWS**. Upon approval of this **ROW** application, BLM would issue a **ROW** grant under the authority of FLPMA for the access road, located in Sec. 4-23N-85W. This road will be 275' long and be crowned and ditched for drainage. One 18' x 32' culvert will be installed on the access road at the entry to the compressor site.

9.0 RECLAMATION, REHABILITATION AND STABILIZATION

Reclamation and rehabilitation of the compressor station, storage yard and access road will take place immediately following project abandonment. This effort will include site stabilization. **DUDLEY** will be responsible for weed control on the disturbed areas within the **ROW** and will consult with BLM and/or local authorities for acceptable weed control methods. Disturbed areas not needed for the entire life of the project will be reclaimed, rehabilitated and stabilized in accordance with BLM guidance.

DUDLEY will create a post-project abandonment plan in accordance with BLM abandonment guidance in effect at the time of abandonment. It will include immediate removal and recycling (where practical) of all surface structures and reseeded all disturbed areas to regulatory agency specifications (See Appendix F of the **DECISION RECORD AND FONSI**).

10.0 OPERATION AND MAINTENANCE

DUDLEY will perform daily checks of all equipment at the **PROPOSED PROJECT** site, including compression and dehydration equipment. Periodic maintenance will be performed on the equipment to insure mechanical reliability. The equipment will have a remote notification system installed to automatically alert the operator of equipment failure.

11.0 TERMINATION

The compressors and yard will be in operation 365 days per year. The estimated duration for this project is 30 years. At the end of the useful life of the project, **DUDLEY** will obtain necessary authorizations from the BLM to abandon the facility (see Section 9.0, above). **DUDLEY** will contact BLM to arrange a pre-termination conference and a joint inspection of the **ROW** to agree on a mutually acceptable abandonment plan.

**THE SEMINOE ROAD COALBED METHANE NATURAL
GAS GATHERING PIPELINE AND ACCESS ROAD
PROJECT**

RIGHT OF WAY APPLICATION

PLAN OF DEVELOPMENT

**Submitted to:
The U.S. Bureau of Land Management
Rawlins, Wyoming**

**Submitted By:
Dudley & Associates, LLC
1776 Lincoln Street, Room 904
Denver, Colorado 80203-1026**

April 2002

Table of Contents

	<u>Page Number</u>
I. Applicant	1
II. Project Name	1
III. Legal Description of Lands to be Crossed – Pipeline	1
IV. Legal Description of Lands to be Crossed – Access Roads	2
1.0 Project Purpose and Need	3
2.0 Project Characteristics	4
2.1 General	4
2.2 Pipeline Access Roads and Rights of Way and Total Surface Disturbance	4
2.2.1 Pipeline	
2.2.2 Access Roads	
3.0 Additional Project Components	7
4.0 Project Construction	8
4.1 Schedule and General Design	8
4.2 Equipment Staging and Storage	8
4.3 Pipeline Corridor Preparation and Trenching	8
4.4 Railroad/St. Mary's Creek Crossing	9
4.5 North Platte River Crossing	9
4.6 Water Use	9
4.7 Construction Practices	9
5.0 Pipeline Operation and Maintenance	10
6.0 Pipeline Termination and Abandonment	11
7.0 Government Agency and Dudley Personnel Involvement	12
8.0 Resource Values and Environmental Considerations	13
8.1 Survey Monuments	13
8.2 Fire Control	13
8.3 Permitting and Construction	14
8.4 Air Quality, Noise and Odor	14
8.5 Geology and Geologic Hazards	14
8.6 Mineral Resources	14
8.7 Paleontology	14
8.8 Soils, Reclamation, Rehabilitation and Stabilization	15
8.9 Water Resources	15

Table of Contents (Cont.)

8.10	Livestock and Cropland	15
8.11	Wildlife Resources	16
8.12	Threatened, Endangered, Proposed and BLM-Sensitive Species	17
8.13	Vegetation	18
8.14	Cultural Resources	18
8.15	Visual Resources	19
8.16	Sanitation	20
8.17	Floodplains and Coastal Zones	20
8.18	Proximity to Hazardous Waste Sites	20
8.19	Hazardous Materials	20
8.20	Transportation	20
8.21	Miscellaneous	20

TABLES

Table 1 – Summary of Temporary and Permanent Project Disturbance and Improvements

EXHIBITS

Exhibit 1 - Seminole Road Pipeline Project Map
Exhibit 2 - Union Pacific Railroad/St Mary's Creek Crossing Diagram
Exhibit 3 - North Platte River Crossing Diagram
Exhibit 4 - Access Road 2 Improvement Plan
Exhibit 5 - Access Road 3 Improvement Sections A, B & C
Exhibit 6A - Typical Cross Section of Pipeline Installation
Exhibit 6B - Pipeline Construction Detail

APPENDICES

Appendix A

The Stormwater Pollution Prevention Plan

Appendix B

Class III Cultural Resources Inventories: Alternative Pipeline, Abandoned Pipeline Route and Wetlands Avoidance Routes

Appendix C

The Report on Jurisdictional Wetlands and Other Waters of the U.S for the Seminole Road Gas Gathering Pipeline and Access Roads

Appendix D

The Seminole Road Gas Gathering Pipeline and Access Road Project Biological Investigations Letter Report

RIGHT-OF-WAY PLAN OF DEVELOPMENT

- I. **APPLICANT:** Dudley & Associates, LLC
1776 Lincoln Street, Room 904
Denver, Colorado 80203-1026
303-861-0800
- II. **PROJECT NAME:** Seminole Road Coalbed Methane Natural Gas Gathering Pipeline and Access Roads Project, Carbon County, Wyoming

III. **LEGAL DESCRIPTION OF LANDS TO BE CROSSED - PIPELINE - 20.3 Miles (see Exhibit 1)**

PUBLIC LANDS:

T21N-R84W

Sec. 6: NW⁴ and S²

Sec. 8: S²

Sec. 16: NW⁴ and S²

Sec. 22: W²

Sec. 34: NE⁴NW⁴, N²NE⁴

T22N-R85W

Sec. 4: W² and SW⁴SE⁴

Sec. 14: SW⁴

Sec. 16: NE⁴NE⁴

Sec. 24: SW⁴SW⁴

T23N-R85W

Sec. 10: NW⁴

Sec. 16: W²W²

Sec. 28: W²W²

PRIVATE/STATE OF WYOMING LANDS:

T21N-R84W

Sec. 7: NE⁴NE⁴

Sec. 8: NW⁴

Sec. 17: NE⁴NE⁴

Sec. 21: NE⁴NE⁴

Sec. 27: W²

Sec. 35: N²NW⁴

T22N-R85W

Sec. 9: E²

Sec. 15: N² and NE⁴SE⁴

Sec. 23: N² and SE⁴

Sec. 25: W²

Sec. 31: SW⁴SW⁴

Sec. 36: N² and SE⁴

T23N-R85W

Sec. 9: NE⁴ and S²

Sec. 21: W²W²

Sec. 33: W²W²

IV. LEGAL DESCRIPTION OF LANDS TO BE CROSSED - ACCESS ROADS (See Exhibit 1)

Access Road #1 - 1.68 Miles (Existing Road ROW WYW-147569):

PUBLIC LANDS:

T23N-R85W
Sec. 4: S²SE⁴
Sec. 8: NE⁴NE⁴
Sec. 10: NW⁴

PRIVATE/STATE OF WYOMING LANDS:

T23N-R85W
Sec. 9: N²N²

Access Road #2 – 1.92 Miles

PUBLIC LANDS:

T22N-R85W
Sec. 4: W²

T23N-R85W
Sec. 32: SW⁴SW⁴

PRIVATE/STATE OF WYOMING LANDS:

T22N-R85W
Sec 5: N²

T23N-R85W
Sec. 31: S²

Access Road #3 – 8.11 Miles

PUBLIC LANDS:

T21N-R84W
Sec. 6: S²SW⁴
Sec. 8: SW⁴ and SW⁴SE⁴
Sec. 16: S² and NW⁴
Sec. 22: SE⁴ and W²
Sec. 26: NW⁴SW⁴ and NW⁴NW⁴

PRIVATE/STATE OF WYOMING LANDS:

T21N-R84W
Sec. 7: N² and NE⁴SE⁴
Sec. 17: NE⁴
Sec. 21: NE⁴NE⁴
Sec. 26: SW⁴NW⁴
Sec. 27: NE⁴NE⁴

T21N-R85W
Sec. 1: SE⁴ and N²

T22N-R85W
Sec. 25: SW⁴
Sec. 36: W²

ACCESS ROAD #4 – 0.53 Miles

PRIVATE/STATE OF WYOMING LANDS:

T21N-R84W
Sec. 35: N²

1.0 PROJECT PURPOSE AND NEED

The purpose of the Seminoe Road Coalbed Methane (CBM) Gas Gathering Pipeline and Access Roads Project (**Proposed Project**) is to construct and operate a 16-inch diameter buried natural gas pipeline for delivery and sale of compressed and dehydrated natural gas from the Seminoe Road CBM Pilot Project (**Pilot Project**) Compressor Station (A ROW permit application is pending with the US Bureau of Land Management (**BLM**) in Rawlins, Wyoming). The Compressor Station will be located in the NW¼ of Sec.10, T23N, R85W, approximately 18 miles north of Sinclair in Carbon County, Wyoming. The proposed gas gathering pipeline will travel south to the Colorado Interstate Gas (CIG) pipeline, located approximately ½ mile south of Walcott, Wyoming in the NW ¼ of Section 35, T21N, R84W. Please refer to **Exhibit 1** for a map presenting key project features and locations.

U.S. demand for natural gas continues to steadily rise and official Energy Information Administration estimates project a 30% increase in domestic consumption of natural gas by 2010. Natural gas is an essential part of the present and future U.S. energy supply due to its general availability across a well developed infrastructure and its unusually clean combustion properties as compared with other fuels. Moreover, the development of abundant domestic reserves of natural gas reduces this country's dependence on foreign sources of energy, thereby improving the U.S. international balance of payments and contributing to the economic stability required for industrial production, efficient power generation, and national security. The environmental advantages of natural gas combustion versus other conventional fuels are set out in the *Clean Air Act Amendments of 1990*.

Dudley & Associates, LLC (**Dudley**) anticipates that the Seminoe Road CBM Pilot Project could reasonably begin producing natural gas in late 2002. The **Proposed Project** will therefore be needed for gathering natural gas for delivery to the CIG interstate gas transmission lines near Walcott, Wyoming. The proposed pipeline will be constructed with new pipeline materials and with a special emphasis on safety. It has been routed to avoid sensitive areas. Presently, there are no natural gas pipelines in the vicinity of the **Proposed Project**.

2.0 PROJECT CHARACTERISTICS

2.1 General

The **Proposed Project** consists of constructing a pipeline, two pigging stations (one pig launcher and one pig receiver), two block valves, and a cathodic protection system, as well as making various road improvements along two existing routes. The pipeline trench will be excavated with customary earth moving equipment to conform with standard pipeline construction practices. The proposed pipeline is designed to gather approximately 200 million cubic feet per day (mmcf) of natural gas for delivery to the existing interstate pipeline system. The operating pressure of the pipeline will vary based on throughput but will not exceed the maximum allowable operating pressure of 1170 pounds per square inch gauge (psig). This will ensure pipeline integrity is preserved and that the CIG line can accommodate the natural gas gathered by the **Proposed Project**. Natural gas will be distributed by CIG to consumers throughout the United States via existing pipeline systems.

Dudley considered several alternative pipeline and access road routes during project planning. The pipeline and access road routes proposed in this document reflect **Dudley's** efforts to reduce and/or eliminate potential project impacts to wetlands, riparian areas, wildlife and cultural resources. The **Proposed Project** is considered optimal because it parallels existing linear features (roads, two-track routes, pipelines) for a significant portion of its length, disturbs no additional land surface along access roads and avoids all known environmentally and culturally sensitive areas, where practical.

Dudley will comply with all applicable federal, state, and local laws and regulations as they relate to public health, safety and environmental protection during construction, operation and maintenance of the **Proposed Project**. See Section 8.0 for further details.

2.2 Pipeline and Access Road Rights of Way and Total Surface Disturbance

2.2.1 Pipeline

In all cases except as described in the following paragraph, a 100-ft wide temporary construction right-of-way (ROW) and a 50-ft wide permanent (30-year) operating ROW will be required for the 20.3 mile pipeline route.

The temporary construction ROW width for the pipeline will be sufficient for all boring and staging activities at the Union Pacific Railroad/Saint Marys Creek crossing, where the pipeline will travel underground for approximately 335 feet (See **Exhibit 2**). However, directional drilling operations designed to avoid disturbing wetlands, riparian areas, and cultural resources at the North Platte River will require additional temporary work space on both sides of the 100-ft construction ROW on both the north and south sides of the river (See **Exhibit 3**). **Dudley** will need a 150-ft wide by 250-ft long temporary (3 week) construction ROW on the south side of the river (50-ft X 250 ft area outside the 100-ft pipeline construction ROW), and a 200-ft wide by 200-ft long temporary construction ROW on the north side of the river (100 ft X 200 ft area outside the 100-ft pipeline construction ROW) to allow for directional drilling operations and related storage and staging activities.

2.2.2 Access Roads

The four access roads will require temporary construction and permanent ROWs of 50 feet. All access roads will be used during pipeline construction and permanent access needs will be as follows: Access Road 1 - pigging station/launcher access; Access Road 2 - block valve access; Access Road 3 - block valve access; and Access Road 4 - CIG interconnect and pigging station/receiver access (See **Exhibit 1**). Travel frequency along Access Roads 2 and 3 will be significantly less (monthly) than that for Access Roads 1 and 4 which may be used several times a week.

The proposed pipeline will terminate at the CIG interconnect facility, near Walcott, Wyoming . At this terminus, located on private land, **Dudley** proposes to construct the pig receiving station, including up to four small (approximately 100 bbl) storage tanks.

All access during pipeline construction and operations will be from existing improved routes or will occur along the proposed pipeline ROW to minimize the amount of land disturbance associated with the **Proposed Project** (see **Exhibit 1**). No new roads will be constructed and all improvements (see below) to existing roads will occur within already disturbed areas. The total mileage of all access roads will be 12.24 miles, with 4.29 miles of these roads requiring some level of improvement on previously disturbed federal lands.

Access roads and the proposed pipeline ROW will be used to transport crews and equipment needed for project construction. Temporary equipment storage and staging areas will also be needed (see Section 4.2).

No improvements will be necessary for Access Roads 1 (Existing **ROW** WYW-147569) and 4. Access Road 2 will require approximately 1,500 feet of improvements, consisting of blading within an already disturbed area (See **Exhibits 1 and 4**). Access Road 3 will require varying degrees of improvement in three sections along the road (Sections A, B and C), occurring entirely within the previously disturbed road ROW area (See **Exhibits 1 and 5**).

All equipment and vehicular traffic will be confined to existing roads and established ROWs. As mentioned earlier, all improvements to existing roads will occur within already disturbed areas. Roads used for the project will be maintained and/or repaired as necessary to conditions equal to or better than that which existed before project-related use.

Table 1, on the following page, summarizes the estimated total disturbance and access road improvements for the **Proposed Project**.

**Table 1 – Summary of Temporary and Permanent Project
Disturbance and Improvements**

INSERT EXCEL SPREADSHEET

3.0 ADDITIONAL PROJECT COMPONENTS

Besides the natural gas gathering pipeline, the **PROPOSED PROJECT** will contain two block valves, two pigging stations (one launching and one receiving station), a temporary (three week) staging and equipment storage area, a temporary (one week) staging and storage area, surface equipment at the CIG interconnect, pipeline markers along the pipeline route, and a cathodic protection system. **Exhibit 1** shows the planned location of these additional project components (except for the cathodic protection station, since it cannot be located until the pipeline has been constructed).

Dudley will install two mainline **block valves** along the pipeline in accordance with U.S. Department of Transportation requirements. Each of the two block valve stations will be located above ground and will be contained entirely within the permanent pipeline ROW and will not be visible from Seminole Road.

As soon as pipeline construction is complete, **Dudley** will require two **pigging stations**; one for launching pigs and one for receiving them. **Dudley** will run pigs through the pipeline to remove any debris left in it from new construction and to remove mill scale or welding icicles from the line. When the pipeline is in service, **Dudley** will need to remove any free liquids by “pigging the line” regularly. This will maintain line efficiency and control corrosion. The pig launching station will likely be sited within the compressor station storage area at the northern terminus of the pipeline and the pig receiving station will be sited within the CIG interconnect area, at the southern terminus of the pipeline. **Surface equipment**, to be located at the CIG interconnect location, is needed for capturing fluids and solids removed from the pipe during pigging operations. This equipment includes 1-2 storage tanks (approximately 100 bbl capacity each) to hold the pigged liquid captured during pipeline cleaning and 1-2 storage tanks (approximately 100 bbl capacity each) to hold pigging sludge.

Cathodic protection is an anti-corrosion technique in which weak electrical current is induced via a rectifier in the pipeline to offset the current associated with metal corrosion. **Dudley** will employ a qualified corrosion contractor to determine the best design for the cathodic protection system. A deep groundbed of anodes will be required in the general vicinity of the rectifier and their location will be determined after the corrosion contractor can survey the pipeline ROW and determine the area of lowest soil resistivity. This system will be designed and constructed (within the permanent ROW for the proposed pipeline after completion of pipeline construction. It will likely be sighted within the compressor station ROW at the northern terminus of the pipeline or at the CIG interconnect, located at the southern terminus of the pipeline. This system will be underground.

After construction is completed, **pipeline markers** will be installed within the permanent **ROW** at a line of sight interval and at road crossings to identify the approximate pipeline location within the **ROW**.

4.0 PROJECT CONSTRUCTION

4.1 Schedule and General Design

Dudley plans to begin construction of the **Proposed Project** in July 2002 and expects construction to end no later than October 2002. **DUDLEY** will notify BLM at least 5 days prior to the anticipated start of construction and/or surface disturbing activities. The design, engineering, construction, maintenance, and inspection of the **PROPOSED PROJECT** will be performed by **DUDLEY** and its contractors and subcontractors in accordance with safe and proven engineering practices and in compliance with all applicable rules and regulations. Drawings (pipeline plans and specifications, alignment maps, road profiles, cross sections) for the **PROPOSED PROJECT** are attached in **Exhibits 6a and 6b**. Additional details will be provided to BLM as requested. The proposed pipeline will have an outside diameter of 16-inches, a wall thickness of 0.250 inch and be made from Grade X-52 steel pipe with a maximum operating pressure commensurate with pipe grade and wall thickness.

Dudley will install the pipeline in a single spread using approximately 50 workers. **Dudley** expects pipeline construction will occur at a rate of 1-2 miles per day in most areas, with slower progress in areas where existing underground facilities will need to be crossed near the CIG gas pipeline. Additional field personnel may be working at the river directional drill and railroad bore sites.

4.2 Equipment Staging and Storage

Dudley will bring pipe to the vicinity of the proposed **ROW** by rail or truck, with any pipe storage occurring on private lands or along rail sidings that are already disturbed (See **Exhibit 1** for locations.) Pipe and other materials will be hauled by truck and strung along the **ROW**. The compressor site storage yard (for which a permanent ROW application is pending) will be used for pipeline construction staging and equipment storage. As mentioned, temporary staging areas will also be needed during directional drilling of the North Platte River and boring of the Railroad (see Sections 4.4 and 4.5 for details). Any additional temporary equipment staging will be located within the proposed pipeline corridor as the trench is being dug and the pipe is being laid.

4.3 Pipeline Corridor Preparation and Trenching

Dudley will clear the construction corridor of vegetation and obstacles, ensuring that topsoil is preserved so that it can be replaced. For the purposes of this ROW application, **Dudley** has assumed conservatively that the entire 100-ft wide construction **ROW** will be disturbed along the entire pipeline length. Nonetheless, all efforts will be made to disturb only that area necessary for safe and efficient pipeline construction. Schematic of typical pipeline construction are provided in **Exhibits 6a and 6b**

Blading will be necessary to clear a safe and suitable working area along the pipeline ROW. Once the **ROW** is graded, **Dudley** will dig a 2-3 ft wide trench with a trencher. In rocky areas or locations where the pipeline changes directions digging will be accomplished with a backhoe. A bending machine will be used to bend the pipe to fit the trench. The pipe will be welded together and the joints will be coated. Side boom tractors will lower the pipe into the trench. The trench will be padded as necessary with sand or soil to prevent damage to the pipes external coating. After the pipe has been placed in the trench, it will be backfilled and the soil will be compacted to prevent subsidence. Any excavated material that cannot be placed in the trench will be disposed of in compliance with landowner or government requirements (e.g., feathered out over the disturbed area prior to topsoil replacement). The pipeline will be buried to depths of 3.5 to 4.5 ft.

See Sections 4.4 and 4.5 for pipeline depths under the railroad and under the North Platte River.

Portions of the trench will be open for no more than 20 days and the maximum unfilled trench length will be 10 miles. As discussed in more detail in Section 8.2, **Dudley** will use trench bridges to ensure wildlife and livestock will remain able to migrate and will monitor the open trench regularly for any trapped wildlife or livestock. **DUDLEY** will notify appropriate landowners when trenching will occur in their allotments or properties.

4.4 Railroad/St. Mary's Creek Crossing

The pipeline will be placed under the Union Pacific Railroad/St. Mary's Creek at a depth of 16.6 feet (See **Exhibit 2**) using a horizontal bore. The length of this crossing will be 335 feet to minimize disturbance and to ensure no wetlands, riparian areas, cultural resources, or railroad operations are affected (See Section 8.0 for more details on **Dudley's** efforts to mitigate project impacts and **Exhibit 1** for a map detailing the crossing and bore pit locations).

4.5 North Platte River Crossing

The pipeline will travel beneath the North Platte River. A directional drilling method will be used for this crossing. The pipeline will travel under the riverbed at a maximum depth of 15 feet. The directional drill pads will be located far enough away from the river to ensure that no wetlands, riparian areas or cultural resources are affected (See **Exhibits 1 and 3**); thus causing the total length of the directional drill to be approximately 1,500 feet. Drill muds used at the directional drill site will be disposed of at approved off-site locations, at the discretion of the BLM and/or landowner.

4.6 Water Use

Dudley will use water as needed for dust control during construction. The pipeline will be pressure tested with water once it is in place. The pipeline will be filled with water and pressurized to no less than 125% of its designated operating pressure for 8 hours to verify integrity. **Dudley** will acquire test water and water for dust control either from the Sinclair municipality or from its Seminoe CBM Pilot Project operations. A total of approximately 950,000 gallons of water will be required for dust control and pressure testing.

Dudley will discharge hydrostatic test water into ephemeral drainages at a rate commensurate with drainage capacity. Prior to doing so, **Dudley** will obtain all required discharge permits from the Wyoming Department of Environmental Quality and will ensure that appropriate erosion control equipment (e.g. energy dissipaters) is installed.

4.7 Construction Practices

Dudley will replace or repair to at least as good as pre-project conditions all existing roads, fences, structures, or culverts damaged during construction. Fences crossed during construction will remain down during daylight hours while construction operations are occurring. When daily construction operations are concluded fences will be reinstalled in a manner to prevent livestock passage. Some existing access roads will require upgrading prior to construction and permission will be obtained from the BLM or appropriate landowner prior to upgrading.

Equipment used to construct the proposed pipeline will include but not be limited to trenchers, tractor-trailers, fuel trucks, lowboy trucks, buses, pickup trucks, tractors, backhoes, track-hoes, cats, side-booms, welding trucks, and boring and directional drilling equipment.

5.0 PIPELINE OPERATION AND MAINTENANCE

Prior to using the pipeline, **DUDLEY** will verify with the BLM that the pipeline has been constructed and tested in accordance with the terms of the applicable **ROW**. Additionally, **DUDLEY** will submit as-built maps to the BLM within 6 months of construction.

DUDLEY will routinely inspect the pipeline route to check for problems such as erosion, pipe exposure, **ROW** condition, unauthorized encroachment on the **ROW**, and any other conditions that may result in a safety hazard or require preventative maintenance. **DUDLEY** will notify the BLM prior to any maintenance or repairs to the line to determine if there are any resource concerns in these areas and obtain the necessary approval. Inspections will be conducted on foot, or by vehicle along the proposed **ROW**. Vehicles will be restricted to designated access roads and the **ROW**. If pipeline damage is noted from external sources, repair and/or replacement will be immediately completed. **DUDLEY** will develop an emergency response procedure which will be implemented in the unlikely event of an emergency.

6.0 PIPELINE TERMINATION and ABANDONMENT

At the end of the anticipated useful life of the pipeline (30 years), **DUDLEY** will obtain the necessary authorizations from the BLM to abandon the facility. **DUDLEY** will contact the BLM to arrange a pre-termination conference and a joint inspection of the **ROW** to agree on an acceptable plan.

Abandonment of the pipeline will be accomplished in accordance with the policies and standards employed by the BLM at the time of abandonment. The pipeline will be purged of all combustible materials and retired in place. **DUDLEY** will remove all above ground facilities and dispose of unsalvageable material at authorized sites. Regrading and revegetation of disturbed areas will be completed according to BLM or reasonable private landowner standards, and the abandoned **ROW** generally will revert to the control of the BLM or private landowner (See Section 8.8 for further discussion on reclamation).

7.0 GOVERNMENT AGENCY AND DUDLEY PERSONNEL INVOLVEMENT

BLM issues **ROW** grants for pipelines under the authority of the *Mineral Leasing Act of 1920*. BLM issues **ROWS** for access roads on public lands pursuant to *Federal Land Policy and Management Act of 1976*. The **ROW** grant application for the **PROPOSED PROJECT** will be subject to the standard approval procedures as outlined in **ROW** grant regulations (43 C.F.R. 2800). The **PROPOSED PROJECT** lies within areas covered by the BLM Great Divide Resource Management Plan ("**RMP**"). This plan provides for the development of pipelines and associated facilities with stipulations to protect natural resources.

The contacts at **DUDLEY** for this **ROW** application are:

- | | | |
|------------------|---|--------------|
| 1. Kate Fay | Environmental & Regulatory Specialist | 303-910-2830 |
| 2. Ken Morr | Operations & Compliance Specialist | 303-863-4488 |
| 3. Don Schroeder | Land Manager | 303-863-4483 |
| 4. David Jensen | Operating Manager/Chief Operating Officer | 816-842-5671 |
| 5. David Dudley | Operating Manager/Chief Executive Officer | 303-863-4480 |

BLM Rawlins Field Office staff who have offered guidance on this **ROW** application and the related pre-application site visit are:

- | | |
|--------------------|-----------------------------|
| 1. Gay Seay | Pipeline ROW Team Leader |
| 2. Krystal Clair | Recreation/Visual Resources |
| 3. Janelle Wrigley | Realty |
| 4. Frank Blomquist | Wildlife and T&E |
| 5. Larry Jackson | Project Inspector |
| 6. Brenda Newman | EA Team Leader |
| 7. Clare Miller | Project Advisor |

The Rawlins Field Office staff can be reached at 307-328-4200.

Construction and operation of the proposed pipeline will also require authorizations from several federal, state, and local agencies. **DUDLEY** will obtain applicable authorizations and comply with all the applicable rules and regulations contained in them.

8.0 RESOURCE VALUES AND ENVIRONMENTAL CONSIDERATIONS

This section addresses measures **DUDLEY** and its contractors will take to avoid, minimize, or mitigate potential impacts from development of the **PROPOSED PROJECT**. **DUDLEY** understands that BLM may consider exceptions to these measures on a case-by-case basis if a thorough analysis determines the resource for which the measure was developed will not be affected by the **PROPOSED PROJECT**. **DUDLEY**, or a designated contractor approved by BLM, will ensure that qualified individuals will be available during project construction, as needed, so that all mitigation measures discussed in this **Plan of Development (POD)** are followed. BLM will be consulted on a case-by-case basis as necessary to establish alternative plans in the event unanticipated protection measures are necessary due to the discovery of protected resources.

The northernmost end of the **Proposed Project** is located adjacent to and south of the **Pilot Project** area for which BLM issued the “*Decision Record and Finding of No Significant Impact for the Seminoe Road Coalbed Methane Pilot Project, Carbon Country Wyoming*” (**DR/FONSI**) in July 2001. Most **Proposed Project** environmental and natural resource background data requirements established by BLM to date have been gathered by BLM-approved consultants hired by **DUDLEY**. These consultants have completed all recommended investigations in all affected areas, with the exception of approximately one mile along the northernmost section of the pipeline and along Access Road 4. These investigations will be in April 2002 provided acceptable field conditions exist at the time. **Appendix B**, *Class III Cultural Resources Inventories: Alternative Pipeline, Abandoned Pipeline Route and Wetlands Avoidance Routes*, prepared by High Country Archeology, **Appendix C**, “*The Report on Jurisdictional Wetlands and Other Waters of the U.S for the Seminoe Road Gas Gathering Pipeline and Access Roads*”, prepared by TRC Mariah Associates Inc. and **Appendix D**, “*Seminoe Road Gas Gathering Pipeline and Access Road Project Biological Investigations Letter Report*”, prepared by TRC Mariah Associates Inc. constitute these investigation reports and are discussed further below.

As part of this **ROW** application, **DUDLEY** will fully adhere to all applicable and appropriate environmental practices and protection measures. Any additional (completed or ongoing) environmental/resource investigations (e.g. cultural, biological, wetlands, etc.) described below are a result of recommendations made by BLM staff after conducting an investigation of portions of the **PROPOSED PROJECT** route in 2001.

8.1 SURVEY MONUMENTS

DUDLEY will protect all survey monuments, benchmarks, witness corners and other monuments within the **ROW** that exist to delineate property boundaries and characteristics. In the event any such monument is destroyed or damaged during project construction or operations, **DUDLEY** will arrange for a registered land surveyor to restore it in accordance with the Manual of Surveying Instruction for the Survey of Public Lands of the United States, 1973 Edition. **DUDLEY** will record the survey with Carbon County and send a copy to the BLM Rawlins field office.

8.2 FIRE CONTROL

Dudley will notify the BLM of any fires observed during project construction and will comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires. In the event of a fire, **Dudley** or its contractors will initiate fire suppression actions immediately until the fire is out or until relieved by an authorized representative of the agency or landowner on whose land the fire occurred. In the event heavy equipment is needed for fire suppression, it will be used outside of authorized **ROWS** only after prior approval of the

BLM or private landowner unless there is imminent danger to life or property. **Dudley** will be responsible for all costs associated with the suppression (and subsequent rehabilitation) of fires resulting from its operations.

8.3 PERMITTING AND CONSTRUCTION

DUDLEY and its contractors will adhere to all construction plans identified in this **POD**. All necessary permits, plans, and arrangements for access will be acquired prior to construction.

DUDLEY will confine all construction and reclamation actions to a width commensurate with best operating practices. **Dudley** will not allow disturbance to occur beyond authorized **ROWS**.

8.4 AIR QUALITY, NOISE AND ODOR

Dudley will adhere to all applicable Wyoming Ambient Air Quality Standards (WAAQS) and National Ambient Air Quality Standards (NAAQS). As directed by the BLM and/or Wyoming Department of Environmental Quality-Air Quality Division, **Dudley** will use dust suppression techniques on disturbed areas (e.g., access roads, cleared pipeline ROW, spoil piles). **Dudley** will also reclaim all disturbed areas as soon as practical to facilitate soil stabilization, dust control and to minimize wind erosion (See Section 8.8 for further discussion on reclamation).

Dudley will minimize noise and odor associated with the project construction by keeping all internal combustion engines muffled and well maintained. Vehicle speeds also will be restricted to 35 miles per hour to minimize noise and dust on project required **ROWS**.

8.5 GEOLOGY AND GEOLOGIC HAZARDS

Given the nature of the **Proposed Project** and the terrain it crosses, **Dudley** believes no extensive geologic investigation appears warranted and therefore has not conducted one. However, extensive investigations completed for the nearby **Pilot Project** demonstrate the potential for seismic activity in the region to be low and found no known or suspected active faults. For more information, please refer to the "*Environmental Assessment for the Seminoe Road Coalbed Methane Project, Carbon, County, Wyoming*" (EA), BLM. April 2001.

8.6 MINERAL RESOURCES

While the **Proposed Project** does not directly involve leasing and locating mineral resources, it is designed to deliver such resources to the CIG natural gas pipeline interconnect, located along Interstate 80, near Walcott. The movement of produced natural gas from the **PILOT PROJECT** would result in a depletion of Coalbed Methane (CBM) resources in the area, but would not interfere with the potential recovery of other minerals. CBM production will be a net gain for the economy of Carbon County, the state of Wyoming, and the U.S. due to the creation of stable jobs and tax revenues associated with oil and gas production. No other mineral resources are known to occur beneath project-affected areas, therefore mineral resources recovery would not be precluded by the **Proposed Project**.

8.7 PALEONTOLOGY

No significant fossil localities are known to be in the area of the **Proposed Project**. However, **Dudley** will monitor construction activities closely. If paleontological resources are uncovered during ground disturbing activities, **Dudley** will immediately suspend operations and contact the BLM. **Dudley** will not resume surface disturbing activities until BLM determines the significance of the resource and recommends appropriate action.

8.8 SOILS, RECLAMATION, REHABILITATION and STABILIZATION

DUDLEY will ensure that topsoil sufficient to facilitate revegetation will be segregated from subsoils during all construction operations and returned to the surface upon completion of operations.

DUDLEY will also keep the area of disturbance to the minimum necessary for construction and operation of the **PROPOSED PROJECT**. **Dudley** will further mitigate impacts to soils by avoiding construction activity during particularly periods when spoils are saturated and excessive road rutting (e.g., >4 inches) may occur and by using the practices identified in the SWPPP (See **Appendix A**) developed for the **Proposed Project**. **Dudley** will also ensure that construction activities occur prior to soil freezing or after soils have thawed.

All disturbed areas along the pipeline corridor will be reseeded to landowner or BLM specifications. Seeding will take place as soon as possible and appropriate after completion of construction. If conditions permit, the **ROW** will be seeded immediately after construction. Seeding will be repeated until a satisfactory stand is established as determined by the BLM or private landowner.

DUDLEY will be responsible for weed control on the disturbed areas within the **ROW** and will consult with the BLM and/or local authorities for acceptable weed control methods.

8.9 WATER RESOURCES

Dudley will protect and mitigate impacts to water resources by: 1) adhering to the mitigation measures identified in the SWPPP (see **Appendix A**); 2) complying with the recommendations contained in **Appendix C**; and, 3) complying with all applicable federal and state requirements. **Dudley** will also:

- Follow all practical alternatives and designs to limit disturbance within drainage channels, including ephemeral and intermittent draws.
- Avoid surface disturbance within 500 feet of perennial surface water and/or wetland and riparian areas, where practical.
- Avoid surface disturbance within 100 feet of ephemeral drainage channels, where practical.
- Not cross surface wetlands.

Finally, **Dudley** will ensure that all project activities are conducted in compliance with the Clean Water Act.

8.10 LIVESTOCK AND CROPLAND

There is no cropland in the area of the **PROPOSED PROJECT**, although, livestock grazing does occur. **DUDLEY** will coordinate project activities with local ranching operations to minimize conflicts with livestock movement or other ranch operations and will maintain all fences, cattle guards, and other livestock-related structures damaged during construction. In areas of high livestock use and where practical, **DUDLEY** may fence reclaimed federal land to ensure successful revegetation. During pipeline construction, **Dudley** will employ trench bridges at appropriate intervals to facilitate safe and easy access by livestock and wildlife across open trenches. **Dudley** will also regularly monitor and, in the unlikely event livestock or wildlife become trapped in the trench, remove the animal(s) as soon as practical.

8.11 WILDLIFE RESOURCES

Using a qualified biologist, **Dudley** has conducted a biological investigation along the majority of the proposed natural gas gathering pipeline route and along most access roads (Note: Approximately 1 mile of the northernmost portion of the pipeline route and Access Road 4 have not been investigated, due to route changes. This investigation will occur in April 2002, provided field conditions are acceptable. Soon thereafter an addendum report will be provided to **BLM**.) **Appendix D** contained the results and recommendations of the biological investigation. **Dudley** has used the findings associated with this investigation to re-align certain portions of the access and pipeline routes to avoid, where possible and practical, impacts to wildlife.

In response to this investigation, **Dudley** will employ a number of measures to further ensure the **Proposed Project** will minimize significant impacts to wildlife. Specifically, **Dudley** will:

- Implement and communicate to field staff policies designed to control poaching and littering and convey that any intentional poaching or littering may result in dismissal.
- Enforce existing drug, alcohol, and firearms policies.
- Curtail construction activities on crucial big game winter range from November 15 – April 30, unless BLM grants an exception pursuant to its rules and regulations.
- Install trench bridges at appropriate intervals over open trenches during pipeline construction to allow wildlife to cross the trench.
- Regularly monitor the open trench for trapped wildlife.
- Where required, implement the raptor protection measures identified in **Appendix D**.
- If project construction occurs prior to June 30, implement the sage grouse protection measures identified in **Appendix D**.
- Continue efforts to locate proposed project facilities and design them to minimize disturbances to areas of high wildlife habitat value.
- Advise project personnel of appropriate speed limits (35 mph) on project access roads, educate them about wildlife laws to prevent mortality and prohibit firearms and dogs from the project area.
- Protect areas potentially hazardous to wildlife by netting and fencing them, where appropriate.
- Use erosion control techniques (See **Appendix A**) that minimize impacts to fisheries and, where channel crossings require trenching, construct project facilities when flows are not expected (summer and fall).
- Comply with the recommendations contained **Appendices A and D**.

8.12 THREATENED, ENDANGERED, PROPOSED AND BLM-SENSITIVE SPECIES.

Using a qualified biologist, **Dudley** conducted a biological investigation along the proposed natural gas gathering pipeline route and most access roads that surveys these areas for suitability as threatened, endangered, or proposed (**TE&P**) species habitat (**See Appendix D**). (Note: Approximately 1 mile of the northernmost portion of the pipeline route and Access Road 4 have not been investigated, due to route changes. This investigation will occur during April 2002, provided field conditions are acceptable. Soon thereafter an addendum report will be provided to **BLM**.) **Dudley** has used the findings associated with this investigation to re-align certain portions of the access and pipeline routes to avoid, where possible and practical, impacts to protected wildlife and wildlife habitats.

Dudley will comply with any decisions related to the **Proposed Project** made regarding Threatened, Endangered, Proposed and BLM- Sensitive Species reached during informal consultation between the BLM and the U.S Fish and Wildlife Service (**USFWS**). **Dudley** will implement additional surveys for **TE&P** species as required by BLM and the USFWS and has included a description of those which are anticipated in **Appendix D**. If **TE&P** species are found, consultation with the USFWS will be initiated, as necessary, and construction activities will be relocated or curtailed until the BLM, USFWS, and **Dudley** concur on appropriate actions to avoid adverse effects.

Also in response to the investigation mentioned above, **Dudley** will employ (or in some cases has employed) a number of measures to ensure the **Proposed Project** does not present significant impacts to **TE&P** and BLM-Sensitive Species. Specifically, **Dudley** will:

- For all **TE&P and BLM Sensitive species**:
 - Have a BLM-approved biologist on-site during construction, as deemed appropriate by the BLM.
 - Apply herbicide greater than 500 feet from known sensitive plant populations, where necessary.
 - Using a BLM approved biologist, support and conduct all required site-specific surveys for **TE&P** and submit the results to the BLM.
- For **Mountain Plover**:
 - Obtain information about how to identify mountain plover, its habitat, status as a **TE&P**, and possible impacts of pipeline construction projects and convey this information to all project staff.
 - Survey for mountain plover if construction activity in mountain plover habitat will occur between April 10 and July 10. If an active mountain plover nest is found within 0.25 miles of proposed facilities, delay construction activities for 37 days, or for one-week after chicks hatch, or for at least one week if a brood of flightless chicks is observed (**See Appendix D**).
 - Construct project facilities at least 0.25 miles from known mountain plover concentration areas, where practical.

- Report immediately to Wyoming Game and Fish Department (**WGFD**) any road-killed animal from areas within 0.25 miles of identified mountain plover concentration areas and request its removal by authorized personnel. Limit project features that attract mountain plover predators, and use approved perch inhibitors where practical.
- Report all suspected observations of plover adults, eggs, chicks, or carcasses within 24 hours to the BLM Wildlife Biologist and the **USFWS** AND notify WGFD immediately.
- For **Black-footed Ferret**:
 - Obtain information about how to identify black footed ferret, its habitat, status as a **TE&P**, and possible impacts of pipeline construction projects and convey this information to all project staff.
 - Map prairie dog towns along the project pipeline corridor and access roads; if prairie dog towns suitable for ferret habitat (colonies greater than 200 acres and having more than eight open burrows per acre) are found, locate project components at least 164 feet from these towns and ensure that surface disturbing activities will not be conducted unless a survey of black-footed ferrets has occurred within the past 12 months. (See **Appendix D**); **NOTE**: Prairie dog mapping has been completed for all but the northernmost 1 mile of the pipeline route and for Access Road 4. To date, no prairie dog colonies meeting potential black-footed ferret habitat criteria were located within 0.5 miles of proposed disturbance.
 - Report to BLM any sign of a black footed ferret within 24 hours. If a ferret its sign is found, BLM will request that **Dudley** stop project activity and initiate Section 7 review with the USFWS and no project activities that could affect black footed ferret will occur until the USFWS issues a Biological Opinion.

8.13 VEGETATION

Plant communities in the **Project Area** are described in **Appendix D** and the previously referred to forthcoming addendum report). **Dudley** will protect vegetation using the measures identified in **Appendix D**, including:

- Controlling noxious weeds along the **ROWS**.
- Ensuring that herbicide applications, if necessary, are kept at least 500 feet from known special status plant populations.
- Keeping to a minimum the removal or disturbance of vegetation by using previously disturbed areas and existing **ROWS** for project construction and access roads and by clearly designating equipment/materials storage yards and staging areas.
- Seeding and stabilizing disturbed areas in accordance with BLM-approved reclamation guidance.

- Beginning revegetation operations in the first appropriate season after completion of construction.
- Recontouring and using BLM-approved native species during reclamation to aid in soil stabilization.
- Restricting project-related travel only to designated access roads unless there is an emergency, in which case travel may occur off-road.
- Avoiding areas with high erosion potential and/or rugged topography where practical.
- Implementing reclamation plans that include stabilizing and revegetating disturbed areas and ensuring that reclamation activities include the use of wildlife-proof fencing when wildlife species are impeding successful vegetation growth.

Dudley will also employ vegetation protection measures identified in the SWPPP (See **Appendix A**).

8.14 CULTURAL RESOURCES

A BLM-approved archeologist, hired by **Dudley**, has completed Class III cultural resources inventories and file searches for all proposed disturbance areas associated with the **Proposed Project**. In most cases, no cultural resources were found. However, in those few areas where they were found, **Dudley** has already relocated proposed surface disturbing activities to avoid them (See **Appendix B** and forthcoming addendum report to be provided by High Country Archeology). Thus, no known cultural resources lie within proposed pipeline disturbance areas or will be affected by the **Proposed Project**.

To ensure further that the proposed project presents no impacts to cultural resources, **DUDLEY** and its contractors will inform their employees about relevant federal regulations protecting cultural resources. If any cultural remains, monument sites, objects, or antiquities subject to “The National Historic Preservation Act of 1966” or the “Archeological Protection Act of 1979” are discovered during construction, construction activities shall immediately cease, and the BLM will be notified. If this occurs, **DUDLEY** will comply with all resulting recommendations made by the BLM and Wyoming State Historical Preservation Office (**WSHPO**).

8.15 VISUAL RESOURCES

The **Proposed Project** is located within a Visual Resource Management Area (**VRM**) Class III area. In a Class III area, changes in the basic elements of the characteristic landscape may be evident while remaining subordinate to the visual strength of the existing character of the landscape.

With the exception of the additional project components (2 block valves, pipeline markers, 2 pigging stations and 4 storage tanks) described in Section 3.0 there are no permanent surface facilities associated with the **Proposed Project**. **Dudley** has designed these small surface facilities to minimize disturbance, to preserve protected viewsheds and to conform to the standards of applicable **VRM** class areas. The majority of the **PROPOSED PROJECT** will be well away from Seminoe Road and is temporary in nature, since it is a pipeline construction project. **DUDLEY** will paint all surface facilities with colors prescribed by BLM to blend with the surrounding landscape.

8.16 SANITATION

DUDLEY will maintain all construction and operation sites in a sanitary condition at all times. Waste materials, including human waste, trash, garbage, refuse, etc., will be disposed of promptly at an appropriate waste disposal site and in accordance with all applicable BLM rules and regulations and the SWPPP (See **Appendix A**).

8.17 FLOODPLAINS AND COASTAL ZONES

No permanent above ground project features associated with the **PROPOSED PROJECT** will be located in any floodplain or a coastal zone.

8.18 PROXIMITY TO HAZARDOUS WASTE SITES

The **PROPOSED PROJECT** site is not located near any known hazardous waste site.

8.19 HAZARDOUS MATERIALS

Certain materials identified by the EPA as hazardous materials may be used for or produced by the **Proposed Project**. All contractors will be responsible for having the proper Material Safety Data Sheets (**MSDS**) for materials used in construction. All measures appropriate for the prevention and containment of accidental discharges will be taken. Fuel storage will not occur within 500 ft of stream channels, wetlands, or open water areas. **Dudley** will also develop and implement a Spill Prevention and Control Countermeasure Plan (**SPCCP**) for the **Proposed Project** prior to its construction.

8.20 TRANSPORTATION

Construction may cause minor transportation-related impacts such as increased truck traffic to and from the proposed pipeline **ROW**. Impacts will be temporary and limited. Construction, operation, and maintenance are not expected to cause safety hazards or to inconvenience notably motorists or other area users. Construction traffic will be limited to approved access routes and the pipeline ROW. All overflow and roadway ditches crossed by the pipeline will be cleared of any material, which could obstruct water flow. Work will be accomplished so that reasonable conformance to the previous line, grade, and cross section is achieved. If any culverts clog due to proposed project activities, the culvert will be cleared to provide unobstructed flow.

8.21 MISCELLANEOUS

DUDLEY will adhere to all other rules and regulations applicable to the **Proposed Project**. They include developing, distributing to personnel, and implementing a field-wide **SPCC**, applicable road design and maintenance requirements, applicable sewage and garbage disposal requirements, stormwater prevention planning (See **Appendix A**), and applicable noise and odor control requirements.

REFERENCES

“Environmental Assessment for the Seminoe Road Coalbed Methane Project, Carbon, County, Wyoming”. BLM. April 2001.

“Decision Record and Finding of No Significant Impact for the Seminoe Road Coalbed Methane Pilot Project, Carbon Country Wyoming” (DR/FONSI). BLM. July 2001.

April 16, 2002

VIA FEDERAL EXPRESS OVERNIGHT

Ms. Kate Fay
Dudley & Associates, LLC
1776 Lincoln St., Suite 904
Denver, CO 80203-1026

**RE: Seminoe Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project
Biological Investigation**

Dear Kate:

This letter summarizes the findings of TRC Mariah Associates Inc.'s (TRC Mariah's) biological investigation along Dudley & Associates, LLC's (Dudley's) proposed natural gas gathering pipeline and construction access road corridors located in Carbon County, Wyoming. This letter report is provided in support of the Plan of Development for this proposed project (Dudley 2002a). Baseline conditions along proposed pipeline and access road corridors were identified so that potential project impacts may be evaluated by the Bureau of Land Management, Rawlins Field Office (BLM-RFO) during project permitting. On-site surveys were conducted on July 27 to August 1; August 6; October 16 to 19; November 2 and 13; and December 19, 2001. The purpose of the investigations was to map vegetation types; identify potential jurisdictional wetlands and other waters of the U.S. (WUS) under the jurisdiction of the U.S. Army Corps of Engineers (COE); identify potentially affected threatened, endangered, proposed, and candidate (TEP&C) species habitat (e.g., mountain plover, Ute ladies' tresses); and delineate prairie dog towns along the affected corridors and determine their suitability as black-footed ferret habitat. In addition, the occurrence of known crucial big game range, sage grouse leks, and raptor nests along the proposed pipeline route and access roads were investigated.

The northernmost portion of the pipeline route and the southernmost access road have not been field investigated (see Maps 1 and 2 in map pockets). Field investigations for vegetation, wetland/WUS, and TEP&C habitat delineations are scheduled to be conducted in these areas during the week of April 15, 2002 and, once completed, a supplemental report describing conditions would be prepared.

Vegetation Mapping

Vegetation along the 100-ft wide temporary construction right-of-way (ROW) for the pipeline and access road corridors (50 ft on each side of centerline) was mapped by traversing the area on foot or using four-wheel-drive trucks or all-terrain vehicles. Eight primary vegetation types occur along the affected corridors: mixed shrub/grassland; sagebrush/shadscale shrubland; mixed grass/low shrub; cushion plant; greasewood shrub; riparian; rock outcrop; and disturbed land (see Map 1). A list of the plant species observed is presented in Table 1 (attached).

Ms. Kate Fay
Dudley & Associates, LLC
April 16, 2002
Page 2

The mixed shrub/grassland is the predominant vegetation type along the corridor, typically occurring on slopes, hilltops, terraces, and gently sloping plains. Wyoming big sagebrush, Douglas rabbitbrush, and shadscale are the dominant shrub species, with broom snakeweed, winterfat, fringed sage, and greasewood also being common. Grasses/grass-like species include a mix of western wheatgrass, needle-and-thread, Sandberg bluegrass, Indian ricegrass, bluebunch wheatgrass, galleta, blue grama, and threadleaf sedge. Franklin's sandwort, Hood's phlox, various buckwheat species, milkvetch, prickly pear cactus, and various annual species such as bluebur stick seed are the principal understory forb species.

Vegetation cover in the mixed shrub/grassland type varies with topographic location and soil depth. Lichen and rock fragments are present on the soil surface in some locations.

The sagebrush/shadscale shrubland community is similar in composition to the mixed shrub/grassland but is characterized by greater shrub cover. The sagebrush/shadscale shrubland occurs on slopes and gently sloping plains and along drainages.

The mixed grass/low shrub community is dominated by grasses (e.g., Indian ricegrass and western wheatgrass) and low shrubs (i.e., Gardner's saltbush, fringed sage, and birdfoot sage) intermixed with scattered forbs. This vegetation type generally occurs in areas of low topographic relief to slightly sloping uplands. Franklin's sandwort, Hood's phlox, various buckwheat species, and prickly pear cactus are common forbs in this type.

The cushion plant community generally occurs on nearly level to slightly sloping uplands and is composed primarily of Gardner's saltbush and birdfoot sage. Grasses and forbs are a minor component of this vegetation type. Prickly pear cactus is common within the cushion plant communities located south of the North Platte River. Bare ground occupies greater than an estimated 40% of the area within this type.

The greasewood shrub community occurs along ephemeral drainages and on nearly level to gently sloping areas throughout the corridors. Although Wyoming big sagebrush, shadscale, and Gardner's saltbush occur within this type, greasewood is the predominant shrub species. Douglas rabbitbrush is also common at some locations. Grasses such as western wheatgrass, Sandberg bluegrass, alkali bluegrass, and galleta and forb species such as seepweed, halogeton, and Russian thistle are common.

The riparian community primarily occurs along the North Platte River. Willow, skunkbush sumac, and basin wildrye are the dominant species. Grasses/grasslike species include spikerush, bulrush, and tufted hairgrass. Vegetation is dense, with cover near 100%.

In addition to the above-mentioned vegetative communities, small scattered rock outcrops exist along low ridges and topographic high points. Vegetation is sparse to nonexistent in these areas. Shrub species include dwarfed individuals characteristic of the aforementioned vegetation types.

Ms. Kate Fay
Dudley & Associates, LLC
April 16, 2002
Page 3

Disturbed land consists primarily of bladed and two-track roads and railroad tracks.

The vegetation types that occur along the proposed pipeline and project-related access road routes are common throughout Wyoming.

Wetlands and Waters of the U.S. (WUS)

A complete description of the wetlands and other WUS along the proposed pipeline and access road routes is presented in a separate report, *Wetlands and Waters of the U.S., Seminoe Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project, Carbon County, Wyoming* (TRC Mariah 2002).

Threatened, Endangered, Proposed and Candidate Species

Based on our current general understanding of the area to be affected by the proposed project, the federally listed threatened and endangered species that could occur in the area are the black-footed ferret, Ute ladies' tresses, and blowout penstemon. The bald eagle, a species previously listed as endangered that has been downlisted to threatened also occurs in the area, and mountain plover, a species proposed for listing as threatened, also may be present in the vicinity of the proposed project. Federally listed North Platte River species potentially occurring downstream from the proposed project include whooping crane, interior least tern, pallid sturgeon, eskimo curlew, piping plover, bald eagle, and western prairie fringed orchid.

Additional TEP&C species known to occur, potentially occurring, and/or potentially affected by actions within the BLM-RFO area include: Wyoming toad, boreal toad, Preble's meadow jumping mouse, Canada lynx, and Colorado butterfly plant, as well as the Colorado River system fish species humpback chub, razorback sucker, Colorado pikeminnow, and bonytail chub. Habitat for these species does not occur in the vicinity of the proposed project and/or would not be affected by the proposed project; therefore, no impacts are expected and these species are not discussed further in this report.

Black-footed Ferret

The black-footed ferret is a federally listed endangered species. The *Black-footed Ferret Survey Guidelines for Compliance with the Endangered Species Act* (U.S. Fish and Wildlife Service [USFWS] 1989) defines potential black-footed ferret habitat as any white-tailed prairie dog colonies or complexes greater than 200 acres in size with a burrow density of greater than 8 burrows per acre. A complex consists of two or more neighboring prairie dog colonies within 4.3 mi of each other.

Potentially affected white-tailed prairie dog colonies occurring within 0.5 mi of the proposed pipeline and access road corridors were mapped by traversing the area on foot, or using four-wheel-drive trucks and all-terrain vehicles (see Map 2). Other prairie dog colonies in the vicinity of the

project which were mapped for other projects are also presented on Map 2. Colony boundaries were mapped using a global positioning system (GPS). Burrow densities were determined for most colonies occurring within 0.5 mile of proposed pipeline construction by using burrow censuses (i.e., all open burrows within the town were counted) (see Table 2, attached).

Thirteen prairie dog colonies occur within 0.5 mi of proposed project disturbance areas. Individual towns range in size from approximately 6 to 276 acres. Burrow densities range from 1.6 to 8.4 burrows/acre. Six of the colonies would be disturbed during pipeline construction and/or potential road improvements (see Map 2). Seven prairie dog colonies, numbers 1, 3, 4, 7, 8, 14, and 15 would not be disturbed by the proposed project (i.e., not within the 100-ft wide proposed construction right-of-way [ROW] corridors), but are within 0.5 mi of proposed pipeline route and/or access road disturbance areas. Two colonies (14 and 15) were surveyed for black-footed ferret in 2002 for another project and no black-footed ferret or sign indicative of black-footed ferret was found (Dudley 2002b).

All prairie dog colonies within 0.5 mi of proposed pipeline and access road route disturbance areas that meet USFWS criteria as potential black-footed ferret habitat (i.e., burrow densities greater than eight per acre) (USFWS 1989) have been surveyed for black-footed ferret and no black-footed ferret or sign of black-footed ferret was found (Dudley 2002b). Therefore, the proposed project would not adversely affect black-footed ferret.

Ute Ladies' Tresses

The Ute ladies' tresses is a federally threatened orchid, 20 to 50 cm in height, with narrow leaves and small white or ivory flowers clustered into a spike arrangement. They flower from mid-July to September and can remain dormant for several years. This species occurs in flat floodplain terraces, abandoned oxbows, wetlands, wet meadows, springs, lakes, and perennial streams from 4,650 to 5,420 ft (1,417 to 1,652 m) above sea level (Fertig 2000). Ute ladies' tresses colonize early successional riparian habitats such as point bars, sandbars, and low gravely, sandy, or cobbley edges and persist in those areas that are provided with perennial moisture.

Four populations of Ute ladies' tresses are known to occur in eastern Wyoming; however, there are no known occurrences of Ute ladies' tresses in central Wyoming along the North Platte River (personal communication, July 26, 2001, with Walt Fertig, Wyoming Natural Diversity Database [WNDD], Laramie, Wyoming). Two areas of potential Ute ladies' tresses habitat occur within the wetland areas adjacent to the North Platte River and along Saint Marys Creek (see Map 1 and TRC Mariah [2002]). **Since all potentially suitable Ute ladies' tresses habitats would be avoided by boring and/or directional drilling during pipeline construction, the proposed project would not adversely affect this species.**

Blowout Penstemon

Blowout penstemon, a federally endangered species, is a perennial herb associated with blowout depressions in sparsely vegetated, active sand dunes. Individual plants have deep root systems and multiple stems which can survive burial in shifting sands. Currently, only 3,000-5,000 plants are known from 12 sites in Nebraska, and 300-500 individuals are documented in the Ferris Mountains of Wyoming. The Wyoming population of blowout penstemon occurs on steep blowing slopes with less than 5% cover of blowout grass (*Redfieldia flexuosa*), thickspike wildrye (*Elymus lanceolatus*), lemon scurf-pea (*Psoralidium lanceolatum*), and occasional rubber rabbitbrush (*Chrysothamnus nauseosus*) (Fertig 1999). **No suitable habitat for this plant species was identified during vegetation mapping; therefore, the proposed project would not adversely affect the species.**

Bald Eagle

The bald eagle is a federally threatened species (downlisted from endangered and now proposed for removal from federal listing). Although bald eagle observations have been made on and adjacent to proposed pipeline and access road corridors (personal communication with Steve Tessman, Biologist, Wyoming Game and Fish Department [WGFD] June 2000), no known bald eagle nests or winter roosts are known to occur within 1.0 mi of the area (WNDD 2000; WGFD 2000). Migrating bald eagles and those wintering at locations sufficiently close to the proposed project may occasionally fly over the area while foraging. **Since no known nests or roosts occur near the proposed project nor are nests or roosts likely to be established, the proposed project is unlikely to adversely affect bald eagles.**

Mountain Plover

The mountain plover is proposed for federal listing as threatened. The species nests on high plains shortgrass prairie, shrub-steppe, and desert tablelands, commonly on or near prairie dog colonies or pastures that are heavily grazed by livestock. Potential plover habitat occurs throughout the region, and areas of potential mountain plover habitat were noted during vegetation mapping. Mountain plover habitat (Graul 1975, Graul and Webster 1976, Knopf 1996, USFWS 2001) is characterized by the following:

- generally flat or gently sloping terrain;
- sparse ground vegetation with at least 30% bare ground (ocular estimate);
- grasses, shrubs, and forbs (less than 4 inches [10 cm] tall) in spaced clumps or mats (e.g., cushion plant communities);
- widely spaced and generally low-growing shrubs (4 to 16 inches [10-41 cm] tall); and/or
- active prairie dog colonies.

Both the mixed grass/low shrub and the cushion plant communities, as well as small inclusions within the mixed shrub/grassland community types (see Map 1) and prairie dog colonies (see Map 2), are suitable nesting habitat for mountain plover within the proposed pipeline and access road corridors.

Ms. Kate Fay
Dudley & Associates, LLC
April 16, 2002
Page 6

Mountain plover generally nest beginning in April and the young are fledged by July. Plovers occupy the breeding range in Wyoming from about April 10 to July 10 then migrate to wintering grounds located in California, Texas, and New Mexico. No plover were observed during vegetation mapping, prairie dog town delineations, or wetland inventory tasks; however, based on the presence of potential mountain plover breeding habitat on and adjacent to the proposed pipeline and access road routes, there is potential for mountain plover to occur in project-affected areas. If construction activities are planned for the period of April 10 to July 10, mountain plover presence/absence surveys would need to be implemented in potential breeding habitat prior to construction pursuant to USFWS (2001). If an active mountain plover nest is found within 0.25 mile of a proposed facility, construction activities would be delayed, the BLM and USFWS would be notified, and appropriate avoidance and/or protection measures would be implemented as deemed necessary by the BLM in conference with the USFWS. **With the implementation of the aforementioned survey, avoidance, and protection measures, the proposed project is unlikely to adversely affect this species.**

North Platte River Species

Since 1978, the USFWS has consistently taken the position in its Section 7 consultations that federal agency actions resulting in water depletions to the North Platte River system may affect the endangered whooping crane, interior least tern, pallid sturgeon, and eskimo curlew, as well as the threatened piping plover, bald eagle, and western prairie fringed orchid. **Since no North Platte River depletions would occur from this project, the project would not adversely affect these species.**

Sage Grouse

Three sage grouse leks occur within 2 mi of the proposed pipeline and access road routes. Of these, one lek, located in NENW of Section 5, T22N, R85W, occurs within 0.25 mi of a proposed access road (see Map 2 and ROW Plan of Development, Exhibit 1, Access Road 2 [Dudley 2002a]). However, no surface disturbance activities are proposed for this road segment, nor is any other surface disturbance proposed within 0.25 mi of any known leks.

Approximately 8.3 mi of the proposed pipeline route would be constructed within 2.0 mi of known sage grouse leks. If pipeline construction is planned to occur between March 1 and June 30, the following measures may be required by the BLM to mitigate potential impacts to sage grouse.

- 1) One aerial sage grouse lek survey of areas within 2.0 mi of proposed disturbance may be conducted during mid-March/mid-April 2002 to identify potentially unknown leks in the area.
- 2) Existing and newly identified leks in the area would be avoided (i.e., no surface disturbance requiring long-term repeated human presence would occur within 0.25 mi of the leks).
- 3) Project-required areas within 0.25 mi of a lek which do not require surface disturbance, but which will have use (e.g., existing suitable access roads) would not be used from midnight to 9:00 a.m. from March 1-June 1 to avoid disturbing strutting grouse.

- 4) Areas of suitable sage grouse nesting habitat (e.g., sagebrush dominated areas within 2.0 mi of known leks) would be searched for active sage grouse nests prior to disturbance and in the event an active nest is found no disturbance to the nest site would occur until nesting is complete.

Raptors

A search of the BLM-RFO database (i.e., overlay information) revealed numerous raptor nests within 1.0 mi of the proposed pipeline and access road routes (see Map 2); however, the activity status of these raptor nests is unknown. Therefore, if project construction is proposed during the raptor nesting season (i.e., February 1-July 31), the following measures may be implemented as directed by the BLM to mitigate potential project-related impacts to raptors.

- 1) A search for active raptor nests on and within 1.0 mi of proposed construction sites would be implemented prior to construction during the period of March - May.
- 2) In the event an active nest is found, construction activities within 1.0 mi of the nest or other suitable distance as determined by the BLM would be avoided until nesting is complete, unless an exception is granted by the BLM.

Wildlife Crucial Winter Range

WGFD data reveal the presence of crucial winter yearlong range for pronghorn antelope and mule deer along approximately 2.0 miles of the southernmost portions of the proposed pipeline and access road corridors. The locations of these ranges are presented on Map 2. Construction activities in crucial winter range would not occur during crucial winter periods (i.e., November 15 - April 30), unless granted an exception by the BLM.

Conclusion

With the implementation of mitigation and monitoring measures defined for each species/wildlife group, the proposed project is not likely to adversely affect TEP&C species or significantly affect vegetation, wetlands, and/or the other wildlife species discussed herein.

References

- Biggens, D.E., B.J. Miller, L.R. Hanebury, B. Oakleaf, A.H. Farmer, R. Crete, and A. Dood. 1993. A technique for evaluating black-footed ferret habitat. *In* J.L. Oldemeyer, D.E. Biggens, and B.J. Miller (eds). Proceedings of a Symposium on the Management of Prairie Dog Complexes for the Reintroduction of the Black-footed Ferret. U.S. Fish and Wildlife Service National Ecology Research Center, Fort Collins, Colorado. 96 pp.
- Bureau of Land Management. 2000. Biological assessment for the Seminoe Road Coalbed Methane Pilot Project, Carbon County, Wyoming. Prepared for U.S. Department of the Interior, Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming, by TRC Mariah Associates Inc., Laramie, Wyoming. 40 pp. + append.

Ms. Kate Fay
Dudley & Associates, LLC
April 16, 2002
Page 8

- _____. 2001. Environmental assessment for the Seminoe Road Coalbed Methane Pilot Project, Carbon County, Wyoming. Prepared for U.S. Department of the Interior, Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming, by TRC Mariah Associates Inc., Laramie, Wyoming. WY-030-EA00-288, BLM/WY/PL-01/012+1320. 147 pp. + append.
- Dudley & Associates, LLC. 2002a (In progress). Right-of-way plan of development, Seminoe Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project. Prepared for Dudley & Associates, LLC, Denver, Colorado, by TRC Mariah Associates Inc., Laramie, Wyoming.
- _____. 2002ba. Black-footed ferret survey of prairie dog towns 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, and 18, Seminoe Road Coalbed Methane Pilot Project Pipelines, Carbon County, Wyoming. Prepared for Dudley & Associates, LLC, Denver, Colorado, by TRC Mariah Associates Inc., Laramie, Wyoming. 7 pp. + append.
- Fertig, W. 1999. Blowout penstemon: Wyoming's first endangered plant species. http://uwsdmnweb.uwyo.edu/wyndd/What's_new_blowout_penstemon.htm.
- _____. 2000. *Spiranthes diluvialis*, Ute ladies' tresses. State species abstract. Wyoming Natural Diversity Database, Laramie, Wyoming.
- Graul, W.D. 1975. Breeding biology of the mountain plover. *Wilson Bulletin* 87:6-31.
- Graul, W.D., and L.E. Webster. 1976. Breeding status of the mountain plover. *Condor* 78:265-267.
- Knopf, F.L. 1996. Mountain plover (*Charadrius montanus*). In A. Poole and F. Gill, editors. The birds of North America, No. 211. The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C. 16 pp.
- TRC Mariah Associates Inc. 2002. Wetlands and waters of the U.S., Seminoe Road coalbed methane gas gathering pipeline and access roads project, Carbon County, Wyoming. Prepared for Dudley & Associates, LLC, Denver, Colorado, by TRC Mariah Associates Inc., Laramie, Wyoming. 10 pp. + append. and maps.
- U.S. Fish and Wildlife Service. 1989. Black-footed ferret survey guidelines for compliance with the *Endangered Species Act*. U.S. Forest Service, Denver, Colorado, and Albuquerque, New Mexico. 10 pp. + append.
- _____. 2001. Mountain plover survey guidelines. Revised by USFWS Service Biologists and F. Knopf. USGS Biological Resources Division. 10 pp.
- Wyoming Game and Fish Department. 1991. A cooperative management plan for black-footed ferrets, Shirley Basin/Medicine Bow, Wyoming. Prepared by Shirley Basin/Medicine Bow Black-footed Ferret Working Group. Published by Wyoming Game and Fish Department, Cheyenne, Wyoming.
- _____. 2000. Cheyenne, Wyoming, Office. Verbal communication with Steve Tessmann (June 5, 2000).
- Wyoming Natural Diversity Database. 2000. *Species of Concern in Townships 21-24/ Ranges 84-86, Wyoming*. June 2000.

Ms. Kate Fay
Dudley & Associates, LLC
April 16, 2002
Page 9

Thank you for using TRC Mariah for this project. Please feel free to call me or Ms. Jan Hart with any questions, or if we may be of further assistance.

Sincerely,

TRC Mariah Associates Inc.

Peter J. Guernsey
Project Manager

PJG:ta
Enclosures
28757\pipeline\bio-ltr-rpt\final 3-word97\bio letter report.doc

Table 1 List of Plant Species Observed Along the Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project.

Life Form	Common Name	Scientific Name
Shrubs and Subshrubs	Wyoming big sagebrush	<i>Artemisia tridentata wyomingensis</i>
	Broom snakeweed	<i>Gutierrezia sarothrae</i>
	Skunkbush sumac	<i>Rhus trilobata</i>
	Shadscale	<i>Atriplex confertifolia</i>
	Gardner's saltbush	<i>Atriplex gardneri</i>
	Douglas rabbitbrush	<i>Chrysothamnus viscidiflorus</i>
	Grey rabbitbrush	<i>Chrysothamnus nauseosus</i>
	Sandbar willow	<i>Salix exigua</i>
	Greasewood	<i>Sarcobatus vermiculatus</i>
	Winterfat	<i>Kraschennikovia lanata</i>
	Spiny horsebrush	<i>Tetradymia spinosa</i>
	Birdfoot sage	<i>Artemisia pedatifida</i>
	Fringed sage	<i>Artemisia frigida</i>
Forbs	Milk vetch	<i>Astragalus</i> spp.
	Clasping pepperweed	<i>Lepidium perfoliatum</i>
	Bluebur stickseed	<i>Lappula redowskii</i>
	Scarlet globemallow	<i>Sphaeralcea coccinea</i>
	Franklin's sandwort	<i>Arenaria franklinii</i>
	Buckwheat	<i>Eriogonum</i> spp.
	Yellow beeplant	<i>Cleome lutea</i>
	Canada thistle	<i>Cirsium canadensis</i>
	Field mint	<i>Mentha arvensis</i>
	Russian thistle	<i>Salsola kali</i>
	Seepweed	<i>Iva axillaria</i>
	Lupine	<i>Lupine</i> spp.
	Rockcress	<i>Arabis</i> spp.
	Halogeton	<i>Halogeton glomerata</i>
	Hood's phlox	<i>Phlox hoodii</i>
Prickly pear cactus	<i>Opuntia polyacantha</i>	

Table 1 (Continued)

Life Form	Common Name	Scientific Name
Grasses/Grasslike	Blue grama	<i>Bouteloua gracilis</i>
Species	Threadleaf sedge	<i>Carex filifolia</i>
	Smooth brome	<i>Bromus inermis</i>
	Scouring rush	<i>Equisetum arvense</i>
	Cheatgrass	<i>Bromus tectorum</i>
	Slender wheatgrass	<i>Elymus trachycaulum</i>
	Spike rush	<i>Eleocharis palustris</i>
	Meadow barley	<i>Hordeum pusillum</i>
	Sandberg bluegrass	<i>Poa sandbergii</i>
	Basin wildrye	<i>Elymus cineris</i>
	Rush	<i>Juncus compressus</i>
	Needle-and-thread grass	<i>Stipa comata</i>
	Bulrush	<i>Scirpus maritimus</i>
	Junegrass	<i>Koeleria macrantha</i>
	Timothy	<i>Phleum pratense</i>
	Alkali bluegrass	<i>Poa juncifolia</i>
	Indian ricegrass	<i>Oryzopsis hymenoides</i>
	Foxtail barley	<i>Hordeum jubatum</i>
	Tufted hairgrass	<i>Deschampsia cespitosa</i>
	Seaside arrowgrass	<i>Triglochin maritimum</i>
	Bottlebrush squirreltail	<i>Sitanion hystrix</i>
	Western wheatgrass	<i>Pascopyron smithii</i>
	Crested wheatgrass	<i>Agropyron cristatum</i>
	Bluebunch wheatgrass	<i>Psuedorygnaria spicatum</i>
	Galleta	<i>Hilaria jamesii</i>
	Inland saltgrass	<i>Distichlis stricta</i>

Table 2 Potentially Affected Prairie Dog Colonies and Associated Burrow Densities, Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Road Project.

Colony Identification Number ¹	Burrow Density Determination Method	Number of Open Burrows	Area (acre)	Density (burrows/acre)
PD-1 ²	Census	262	47.2	5.6
PD-2	Census	746	128.0	5.8
PD-3 ²	Census	372	48.6	7.6
PD-4 ¹ /5 ^{2,3}	Census	275	71.4	3.9
PD-6	Census	449	276.4	1.6
PD-7 ²	Census	199	57.4	3.5
PD-8 ²	Census	42	5.9	7.1
PD-9 ⁴	Census	256	45.4	5.6
PD-10 ^{4,5}	None	Unknown	19.0	Unknown
PD-11 ^{2,4}	Census	34	10.8	3.1
PD-14 ^{2,6}	Modified Biggins et al. (1993)	Unknown	131.3	8.4
PD-15 ^{2,6}	Modified Biggins et al. (1993)	Unknown	102.1	7.8

¹ See Map 2 for locations; colony numbers are not sequential to preserve the existing colony identification numbers reported in BLM (2001) for those colonies occurring within the Seminole Road Coalbed Methane Pilot Project area.

² Colonies not affected by the proposed project, but occurring within 0.5 mi of proposed pipeline and access road corridor disturbance areas.

³ Colonies 4 and 5 occur within 200 m of each other and were therefore considered a single colony for acreage and burrow density determinations.

⁴ Colony occurs in Carbon County, Wyoming, south and east of North Platte River which was designated “ferret-free” pursuant to WGFD (1991); and 56 *Federal Register* 41486 (August 21, 1991). Any ferrets potentially occurring in this area would be from the designated nonessential experimental population which must be treated as a species proposed for listing (rather than listed as threatened or endangered) for purposes of Section 7 of the *Endangered Species Act of 1973*, as amended (16 *United States Code* 1531 et seq.) (56 *Federal Register* 41473, August 21, 1991).

⁵ All proposed disturbance within this colony would occur within existing disturbed areas.

⁶ Colonies described in BLM (2002) and surveyed for black-footed ferret as described in Dudley (2002b).

**JURISDICTIONAL WETLANDS
AND OTHER WATERS OF THE U.S.,
SEMINOE ROAD COALBED METHANE
GAS GATHERING PIPELINE AND
ACCESS ROADS PROJECT,
CARBON COUNTY, WYOMING**

Prepared for

Dudley & Associates, LLC

Denver, Colorado

Prepared by

TRC Mariah Associates Inc.

Laramie, Wyoming

April 2002

**JURISDICTIONAL WETLANDS AND OTHER WATERS OF THE U.S.,
SEMINOE ROAD COALBED METHANE GAS GATHERING
PIPELINE AND ACCESS ROADS PROJECT,
CARBON COUNTY, WYOMING**

Prepared for

**Dudley & Associates, LLC
Denver, Colorado**

By

**TRC Mariah Associates Inc.
Laramie, Wyoming
MAI Project 28757**

April 2002

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION.....	1
2.0 METHODS.....	3
3.0 RESULTS.....	5
3.1 OVERVIEW.....	5
3.2 EPHEMERAL WUS/NON-WUS.....	8
3.2.1 Ephemeral WUS--Sites 1, 3, 4, 7-12, 16, 21-23, 26, A, and C-G.....	8
3.2.2 Non-WUS Sites 2, 5, 13-15, 17-20, 24, and B.....	8
3.3 PERENNIAL WUS/WETLAND.....	8
3.3.1 Site 6--North Platte River, Perennial WUS/Wetland.....	8
3.3.2 Wetland--Site 25.....	9
3.4 SUMMARY AND RECOMMENDATIONS.....	9
4.0 LITERATURE CITED.....	10
APPENDIX A: WETLAND DELINEATION FORMS	
APPENDIX B: PHOTOGRAPHS OF SELECTED WETLAND AND WATERS OF THE U.S. SITES	
APPENDIX C: LIST OF PLANTS SPECIES ENCOUNTERED AND WETLAND INDICATOR STATUS	

LIST OF TABLES

	<u>Page</u>
Table 3.1 Potential Wetland Sites, Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project.....	6

LIST OF MAPS

	<u>Page</u>
Map 1 Vegetation/Wetland/WUS Map.....	Map Pocket

1.0 INTRODUCTION

A survey of wetlands and other waters of the U.S. (WUS) was conducted by TRC Mariah Associates Inc. (TRC Mariah) for Dudley & Associates, LLC (Dudley) of Denver, Colorado, to facilitate compliance with Section 404 of the *Clean Water Act* during the planned construction of a natural gas gathering pipeline and associated access road improvements. The proposed pipeline would gather gas from Dudley's proposed compressor station (Section 10, T23N, R85W) adjacent to and south of the Seminoe Road Coalbed Methane Pilot project area and send it to the existing Colorado Interstate Gas pipeline (Section 35, T21N, R84W) located near Walcott, Wyoming (see Map 1 in map pocket).

The pipeline corridor would cross (using boring and/or directional drilling procedures) the North Platte River and the Saint Marys Creek/Union Pacific Railroad (UPRR) right-of-way (ROW). The project would utilize existing improved roads off Carbon County Road 351 (Seminoe Reservoir Road) to access segments of the pipeline north and west of the North Platte River. A secondary unpaved road that heads north from Walcott (referred to in this report as the Walcott access road) would provide access to the pipeline route south and east of the North Platte River (see Map 1). Portions of the Walcott access road would require improvements to accommodate project-related construction access; however, all improvements would occur within currently disturbed areas (see ROW Plan of Development [POD]).

The proposed pipeline and access road routes traverse a mosaic of rolling sagebrush-grasslands, greasewood shrublands, cushion plant communities, and rock outcrops. The North Platte River is the only perennial water within the area of the project. A complete description of the vegetation communities present along the proposed pipeline route and access roads is presented in a separate letter report: *Seminoe Road Gas Gathering Pipeline and Access Roads Project Biological Investigations* (TRC Mariah 2002).

The current regulatory definition of wetlands is "areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and [which] under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (U.S. Army Corps of Engineers [COE] 1987; Wetlands Training Institute, Inc. 1995). A WUS has an active channel that exhibits relatively stable characteristics; thus, the criterion for a WUS is the presence of a well-defined bed and bank. The boundaries of a WUS extend to the ordinary high-water mark or to the boundaries of adjacent wetlands.

2.0 METHODS

A routine wetland delineation with an on-site inspection of the proposed pipeline and access road corridors (assumed 100-ft disturbance width--50 ft each side of centerline) was conducted on October 16 and 17, 2001. The northern-most portion of the pipeline route and the southern-most access road have not been field investigated (see Map 1). Field investigations for wetlands/WUS are scheduled to be conducted in these areas during the week of April 15, 2002 and, once completed, a supplemental report describing conditions would be prepared.

Prior to fieldwork, background information was obtained from National Wetland Inventory (NWI) maps (U.S. Fish and Wildlife Service [USFWS] 1991, 1994a, 1994b, 1994c), U.S. Geological Survey (USGS) 7.5' topographic maps, the soil survey for Carbon County, Wyoming (Munn and Arneson 1999), and the federal hydric soils list (U.S. Soil Conservation Service 1991). These sources were used to identify areas likely to contain wetlands and other WUS.

During the on-site inspection, hydrologic, vegetative, and geomorphic characteristics of individual sites along the proposed pipeline and access road corridors were investigated to determine if potential wetland site(s) were present. Each site was investigated to determine if primary wetland hydrology indicators were present, including inundation, saturation, water marks, sediment deposits, drainage patterns, and drift lines. Secondary indicators (e.g., oxidized root channels) were searched for if no primary indicators were identified.

Dominant plant species were identified at each potential site to determine if wetland vegetation was present. Plant species were either identified on-site using the *Vascular Plants of Wyoming* (Dorn 1992), or voucher specimens were identified by Dr. Robert Dorn (Mountain West Environmental Services, Cheyenne, Wyoming). Because the survey is located in south-central Wyoming, both *The National List of Plant Species that Occur in Wetlands: North Plains (Region 4)* (Reed 1988a) and *The National List of Plant Species that Occur in Wetlands: Northwest (Region 9) and Region 9 Supplement* (Reed 1988b) were

used to determine the indicator status of dominant plants at each potential wetland site. Plant species were classified as obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), or upland (UPL) species. Ocular estimates of percent cover by dominant plant species were determined at each site. Both Region 4 and Region 9 indicator statuses are provided on the wetland delineation forms and in Appendix C, which provides a list of all plant species encountered.

If hydrologic and vegetation wetland criteria were met at areas proposed for surface disturbance, soil profiles were examined for hydric soil characteristics (e.g., mottling, gleying, saturation). Soil color was determined using a Munsell Soil Color Chart.

All ephemeral, intermittent, or perennial streams illustrated as such on the USGS topographic maps were investigated to determine if a defined bed and bank was present. All wetland areas designated as such on the NWI maps within the affected corridors were also investigated.

Width of wetlands and WUS was measured in the field by pacing. Wetland/WUS disturbance acreages were calculated based on the width (ft) of the wetlands and/or WUS and the assumed 100-ft pipeline construction disturbance width. A wetland delineation form was completed for each site investigated; complete forms are presented in Appendix A. Photographs of typical wetland sites and selected other WUSs are presented in Appendix B. Site locations are presented in Map 1 in map pocket.

3.0 RESULTS

3.1 OVERVIEW

Thirty-three potential wetland and other WUS sites were investigated along the proposed pipeline and project-related access road corridors (Table 3.1; Map 1). Of these, 22 were determined to be either wetlands or WUS. The remaining 11 sites neither exhibit wetlands indicator criteria nor the defined bed and bank characteristics necessary to be identified as WUS. One perennial WUS, the North Platte River and two potential wetland areas--one adjacent to the North Platte River (approximately 8 ft width) and one at Saint Marys Creek (20 ft width)--occur along the proposed pipeline and access road corridors. **However, these areas would not be affected by the proposed project since directional drilling and/or boring methods would be employed to avoid these sites. Furthermore, all project-related surface disturbances would avoid these sites.**

The proposed pipeline would cross 14 ephemeral WUS for a total crossing width of 26 linear ft (Table 3.1). Project-related access roads would cross 6 WUS (7 ft total crossing width), all of which are ephemeral drainages. Because only portions of these access roads would be improved to accommodate project-related activities and all improvements would occur within existing disturbed areas, no additional disturbances are anticipated to the WUS occurring along proposed access roads.

In summary, construction of the proposed pipeline (assumed 100-ft disturbance width) and associated access road improvements would affect approximately 33 linear ft or 0.058 acre of WUS. Therefore, pipeline installation would be covered by a COE 404 Permit (COE Nationwide Permit Number 12 [NW-12], Utility Line Discharges), and since the total project-affected acreage of WUS would be less than 0.10 acre, no COE notification is required.

Table 3.1 Potential Wetland Sites, Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project.

Site	Description	Location	NWI Designation ¹	Jurisdictional Status ²	Channel/Wetland Width (ft)	Affected Acreage ³
Pipeline Route						
1	Dirtyman Draw	NWSWSW, 9, T23N, R85W	R4SBA	WUS	1	0.002
2	Unnamed ephemeral stream	SWSWSW, Section 16, T23N, R85W	--	Non-WUS	--	--
3	Unnamed ephemeral stream	NWSWNW, Section 21, T23N, R85W	--	WUS	1	0.002
4	Unnamed ephemeral stream	SWSWSW, Section 28, T23N, R85W	R4SBA	WUS	4	0.009
5	Unnamed ephemeral stream	NWNWNE, Section 9, T22N, R85W	--	Non-WUS	--	--
6	North Platte River	SWNESE, Section 9, T22N, R85W	--	WUS/ Wetland	158 ⁴	0.363 ⁵
7	Unnamed ephemeral stream	SWSESE, Section 9, T22N, R85W	--	WUS	1	0.002
8	Unnamed ephemeral stream	NENWNW, Section 15, T22N, R85W	--	WUS	1	0.002
9	Unnamed ephemeral stream	SWNWNW, Section 15, T22N, R85W	--	WUS	1	0.002
10	Unnamed ephemeral stream	SENWNE, Section 15, T22N, R85W	--	WUS	2	0.005
11	Unnamed ephemeral stream	NENESE, Section 15, T22N, R85W	--	WUS	6	0.014
12	Unnamed ephemeral stream	SWSESW, Section 14, T22N, R85W	--	WUS	1	0.002
13	Unnamed ephemeral stream	NENENW, Section 23, T22N, R85W	--	Non-WUS	--	--
14	Unnamed ephemeral stream	SESWNE, Section 23, T22N, R85W	--	Non-WUS	--	--
15	Unnamed ephemeral stream	SWNESE, Section 23, T22N, R85W	--	Non-WUS	--	--
16	Unnamed ephemeral stream	SESESE, Section 23, T22N, R85W	--	WUS	1	0.002
17	Unnamed ephemeral stream	NWNWNW, Section 25, T22N, R85W	--	Non-WUS	--	--
18	Unnamed ephemeral stream	SENWNW, Section 25, T22N, R85W	--	Non-WUS	--	--
19	Unnamed ephemeral stream	SWNESE, Section 36, T22N, R85W	--	Non-WUS	--	--
20	Unnamed ephemeral stream	NWSWNW, Section 8, T21N, R84W	--	Non-WUS	--	--
21	Unnamed ephemeral stream	NESWSE, Section 8, T21N, R84W	--	WUS	1	0.002
22	Unnamed ephemeral stream	SWSESE, Section 16, T21N, R84W	--	WUS	3	0.007
23	Unnamed ephemeral stream	NWSENW, Section 22, T21N, R84W	--	WUS	1	0.002
24	Unnamed ephemeral stream	NWNWSE, Section 22, T21N, R84W	--	Non-WUS	--	--
25	Saint Marys Creek	NWNWSE, Section 27, T21N, R84W	R4SBA	WUS/ Wetland	20	0.046 ⁵
26	Unnamed ephemeral stream	NWNENE, Section 34, T21N, R84W	--	WUS	2	0.005
Subtotal Pipeline Route						0.467
Subtotal Pipeline Route Affected						0.058

Table 3.1 (Continued)

Site	Description	Location	NWI Designation ¹	Jurisdictional Status ²	Channel/Wetland Width (ft)	Affected Acreage ³
Access Roads						
A	Unnamed ephemeral stream	SENESEW, Section 31, T23N, R85W	--	WUS	2	0.005
B	Unnamed ephemeral stream	NESWNE, Section 7, T21N, R84W	--	Non-WUS	--	--
C	Unnamed ephemeral stream	NESESEW, Section 8, T21N, R84W	--	WUS	1	0.002
D	Unnamed ephemeral stream	NESWSE, Section 16, T21N, R84W	--	WUS	1	0.002
E	Unnamed ephemeral stream	NESESEW, Section 22, T21N, R84W	--	WUS	1	0.002
F	Unnamed ephemeral stream	NWSESEW, Section 22, T21N, R84W	--	WUS	1	0.002
G	Unnamed ephemeral stream	SESESEW, Section 26, T21N, R84W	--	WUS	1	0.002
Subtotal Access Roads						0.015
Subtotal Access Roads Affected						-- ⁶
Total						0.482
Total Affected						0.058

¹ National Wetland Inventory (NWI) Designations: R4SBA = intermittent riverine streambed, temporarily flooded; -- = no designation on NWI maps.

² WUS = water of the U.S. (i.e., a site with a defined bed and bank); wetland = all three wetland criteria (wetland hydrology, hydrophytic vegetation, and hydric soils) were observed.

³ Based on an estimated 100-ft disturbance width.

⁴ Approximately 150-ft wide channel (WUS) and 8-ft wide wetland.

⁵ Site would be bored and/or directionally drilled; therefore, it is not included in the affected acreage total.

⁶ Assumes road improvements as necessary would occur within existing disturbed areas, and no additional disturbance would occur to WUS.

3.2 EPHEMERAL WUS/NON-WUS

3.2.1 Ephemeral WUS--Sites 1, 3, 4, 7-12, 16, 21-23, 26, A, and C-G

Sites 1 and 4 are classified on the NWI maps as R4SBA (intermittent riverine streambed, temporarily flooded); however, field investigations found these sites to be only WUS because, while defined beds and banks were present, one or more wetland indicator criteria were absent (Appendix B, Photograph B.1). Remaining sites are not classified on the NWI maps. Vegetation varied from site to site; sites were grouped based on sites were dry at the time of the on-site investigation. Channel widths generally ranged from 1 to 6 ft wide and a site form was completed for each group of similar sites (Appendix A). Vegetation at WUS sites was generally composed of upland species such as Wyoming big sagebrush, greasewood, rabbitbrush, western wheatgrass, slender wheatgrass, and alkali bluegrass (see Table C.1 for wetland indicators status). Soil pits were not excavated at most of these sites because neither hydrophytic vegetation nor indicators or wetland hydrology were observed. Approximately 33 linear ft (0.058 acre) of WUS would be affected.

3.2.2 Non-WUS Sites 2, 5, 13-15, 17-20, 24, and B

These sites were investigated because they were illustrated as either ephemeral or intermittent streams on USGS topographic maps (Map 1). Based on field inspection of these areas, defined beds and banks were not present within the proposed pipeline or access road corridors; therefore, these sites are not WUS (Appendix B, Photograph B.2).

3.3 PERENNIAL WUS/WETLAND

3.3.1 Site 6--North Platte River, Perennial WUS/Wetland

Site 6 is the North Platte River (Map 1; Appendix B, Photograph B.3), which is approximately 150 ft wide at the proposed pipeline crossing. A small potential wetland

(approximately 8 ft wide) is located adjacent to the river but was not investigated because this site would not be disturbed since directional drilling and/or boring methods would be used to avoid the site. Based on field inspection of the location of the directional drill pad/bore pit areas, all wetlands and WUS at this site would be avoided.

3.3.2 Wetland--Site 25

Site 25 is Saint Marys Creek, which is an ephemeral/intermittent WUS. This site is classified as a R4SBA on the NWI map (Map 1; Appendix B, Photograph B.4). The channel width at the proposed pipeline crossing is approximately 20 ft. In addition, hydrophytic vegetation and hydric soils were observed at this site (Appendix A). This area also would be directionally drilled or bored to avoid any surface disturbance to the wetland and WUS.

3.4 SUMMARY AND RECOMMENDATIONS

Based on field investigations of the proposed pipeline and access road corridors, a total of approximately 0.058 acre (33 linear ft) of WUS and no wetlands would be disturbed by the proposed project (Table 3.1). The pipeline corridor (assumed 100-ft disturbance width) would affect 14 WUSs.

As a result of these findings, a COE 404 Permit from the COE is required. Pipeline installation would be covered under a COE Nationwide Permit NW-12, Utility Line Discharges, since disturbances to wetlands or other WUS would not exceed a total of 0.5 acre. Furthermore, since total disturbance to WUS would be less than 0.10 acre, the COE does not require notification.

4.0 LITERATURE CITED

- Dorn, R.D. 1992. Vascular plants of Wyoming. Second Edition. Mountain West Publishing. Cheyenne, Wyoming. 340 pp.
- Munn, L.C., and C.S. Arneson. 1999. Draft 1:100,000 scale digital soils map of Carbon County, Wyoming. University of Wyoming Agricultural Experiment Station, Laramie, Wyoming.
- Reed, P.B., Jr. 1988a. The national list of plant species that occur in wetlands: North plains (Region 4). U.S. Department of the Interior, Fish and Wildlife Service. Biological Report 88 (26.4). 64 pp.
- _____. 1988b. The national list of plant species that occur in wetlands: Northwest (Region 9) and Region 9 supplement. U.S. Department of the Interior, Fish and Wildlife Service. Biological Report 88 (26.9). 81 pp. + append.
- TRC Mariah Associates Inc. 2002. Seminoe Road pipeline and access road biological investigations. Letter report prepared by TRC Mariah Associates Inc., Laramie, Wyoming, for Dudley & Associates, LLC, Denver, Colorado.
- U.S. Army Corps of Engineers. 1987. Wetlands Delineation Manual, Technical Report Y-8. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. + append.
- U.S. Fish and Wildlife Service. 1991. National Wetland Inventory, Lone Haystack Mountain, WYO. U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado.
- _____. 1994a. National Wetland Inventory, Ferris Lake Quadrangle, WYO. U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado.
- _____. 1994b. National Wetland Inventory, Fort Steele, WYO. U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado.
- _____. 1994c. National Wetland Inventory, Walcott, WYO. U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado.
- U.S. Soil Conservation Service. 1991. Hydric soils of the United States. Soil Conservation Service. Publication Number 1491.
- Wetlands Training Institute, Inc. 1995. Field Guide for Wetland Delineation. 1987 Corps of Engineers Manual. Poolesville, Maryland. WTI 95-3. 143 pp.

APPENDIX A:
WETLAND DELINEATION FORMS

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)**

Project/Site: <u>Seminole Road Pipeline and Access Roads/Ephemeral Streams</u>	Date: <u>10/16/01</u>
Applicant/Owner: <u>Dudley & Associates, LLC</u>	County: <u>Carbon</u>
Investigator: <u>Jan Hart</u>	State: <u>Wyoming</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes [] No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? [] Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? [] Yes <input checked="" type="checkbox"/> No	Plot ID: <u>Sites 1, 10, 11, 12, 16, and 26</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator*	Dominant Plant Species	Stratum	Indicator
1. <i>Artemisia tridentata wyomingensis</i> (50%)	S	UPL/UPL	6.		
2. <i>Chrysothamnus viscidiflorus</i> (20%)	S	UPL/UPL	7.		
3. <i>Elymus smithii</i> (10%)	H	FACU/ FACU	8.		
4. <i>Stipa comata</i> (10%)	H	UPL/UPL	9.		
5. <i>Lepidium perfoliatum</i> (10%)	H	FACU/ FACU	10.		
Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). <u>0/5=0%</u>					
Remarks: * Both Region 4 and Region 9 (Reed 1988a, 1988B) indicator status is given.					

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u> 0 </u> inches Depth to Free Water in Pit: <u> - </u> inches Depth to Saturated Soil: <u> - </u> inches	
Remarks: At the time of the survey, the channels were dry. No wetland hydrology indicators were observed.	

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Map Type? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions (test required)		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: These sites are waters of the U.S. because they have defined beds and banks.	

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)**

Project/Site: <u>Seminole Road Pipeline and Access Roads/Ephemeral Streams</u>	Date: <u>10/16/01 and 10/17/01</u>
Applicant/Owner: <u>Dudley & Associates, LLC</u>	County: <u>Carbon</u>
Investigator: <u>Jan Hart</u>	State: <u>Wyoming</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes [] No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? [] Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? [] Yes <input checked="" type="checkbox"/> No	Plot ID: <u>Sites 2, 5, 13 14, 15, 17, 18, 19, 20, and B</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator*	Dominant Plant Species	Stratum	Indicator
1. <i>Sarcobatus vermiculatus</i> (20%)	S	FACU/ FACU+	6.		
2. <i>Artemisia tridentata wyomingensis</i> (40%)	S	UPL/ UPL	7.		
3. <i>Elymus smithii</i> (30%)	H	FACU/ FACU	8.		
4. <i>Chrysothamnus viscidiflorus</i> (10%)	S	UPL/ UPL	9.		
5.			10.		
Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). <u>0/4=0%</u>					
Remarks: * Both Region 4 and Region 9 (Reed 1988a, 1988B) indicator status is given.					

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u> 0 </u> inches Depth to Free Water in Pit: <u> - </u> inches Depth to Saturated Soil: <u> - </u> inches	
Remarks: These sites were investigated because they were designated as ephemeral streams on the USGS 7.5' series quadrangles.	

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Map Type? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions (test required)		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: No soil pit was dug since neither hydrophytic vegetation nor indicators of wetland hydrology were present.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: All of these sites did not exhibit defined bed and bank criteria; therefore, these sites are not WUS as defined by the U.S. Army Corps of Engineers.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site: <u>Seminole Road Pipeline and Access Roads/Ephemeral Streams</u>	Date: <u>10/16/01</u>
Applicant/Owner: <u>Dudley & Associates, LLC</u>	County: <u>Carbon</u>
Investigator: <u>Jan Hart</u>	State: <u>Wyoming</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>Sites 3, 4, 21, 23, A, D, E, F, and G</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator*	Dominant Plant Species	Stratum	Indicator
1. <i>Sarcobatus vermiculatus</i> (40%)	S	FACU/ FACU+	7.		
2. <i>Artemisia tridentata wyomingensis</i> (10%)	S	UPL/ UPL	8.		
3. <i>Poa juncifolia</i> (10%)	H	FAC/ FACU+	9.		
4. <i>Elymus smithii</i> (20%)	H	FACU/ FACU	10.		
5. <i>Elymus trachycaulum</i> (10%)	H	FACU/ FAC	11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0/5=0%

Remarks: * Both Region 4 and Region 9 (Reed 1988a, 1988B) indicator status is given.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ inches Depth to Free Water in Pit: ____ inches Depth to Saturated Soil: _____ inches	
Remarks: These sites are designated as ephemeral streams on the topographic maps.	

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Map Type? [] Yes [] No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
[] Histosol		[] Concretions			
[] Histic Epipedon		[] High Organic Content in Surface Layer of Sandy Soils			
[] Sulfidic Odor		[] Organic Streaking in Sandy Soils			
[] Aquic Moisture Regime		[] Listed on Local Hydric Soils List			
[] Reducing Conditions (test required)		[] Listed on National Hydric Soils List			
[] Gleyed or Low-Chroma Colors		[] Other (Explain in Remarks)			
Remarks: A soil pit was not dug since hydrophytic vegetation was not present.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? [] Yes [X] No Wetland Hydrology Present? [] Yes [X] No Hydric Soils Present? [] Yes [X] No	Is this Sampling Point within a Wetland? [] Yes [X] No
Remarks: These sites are waters of the U.S. because a defined bed and bank was observed at each site.	

**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)**

Project/Site: <u>Seminole Road Pipeline and Access Roads/ North Platte River</u>	Date: <u>10/16/01</u>
Applicant/Owner: <u>Dudley & Associates, LLC</u>	County: <u>Carbon</u>
Investigator: <u>Jan Hart</u>	State: <u>Wyoming</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes [] No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? [] Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? [] Yes <input checked="" type="checkbox"/> No	Plot ID: <u>Site 6</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator*	Dominant Plant Species	Stratum	Indicator
1. _____	_____	_____	7. _____	_____	_____
2. _____	_____	_____	8. _____	_____	_____
3. _____	_____	_____	9. _____	_____	_____
4. _____	_____	_____	10. _____	_____	_____
5. _____	_____	_____	11. _____	_____	_____
6. _____	_____	_____	12. _____	_____	_____

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). n/a

Remarks: n/a = Not applicable. No vegetation is growing in the river.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>60</u> inches Depth to Free Water in Pit: _____ inches Depth to Saturated Soil: _____ inches	
Remarks: This site is the North Platte River. The channel is approximately 150-ft wide at the proposed pipeline crossing and has an adjacent 8-ft wide potential wetland. Channel depth is up to 5 ft.	

SOILS

Map Unit Name (Series and Phase):	Ustic Torriorthents and Aquic Haplustrols with Typic Fluvaquents	Drainage Class:			
Taxonomy (Subgroup):		Field Observations Confirm Map Type? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions (test required)		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: A soil pit was not dug because this site would be directionally drilled.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: This site, the North Platte River, is a WUS. A small potential wetland is located adjacent to the river. This area was not investigated because this site would be directionally drilled/bored, and would be avoided by project-related activities.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site: <u>Seminole Road Pipeline and Access Roads/Ephemeral Streams</u>	Date: <u>10/16/01</u>
Applicant/Owner: <u>Dudley & Associates, LLC</u>	County: <u>Carbon</u>
Investigator: <u>Jan Hart</u>	State: <u>Wyoming</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: _____
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>Sites 7, 8, and 9</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator*	Dominant Plant Species	Stratum	Indicator
1. <i>Atriplex gardneri</i> (40%)	S	UPL/UPL	7.		
2. <i>Elymus smithii</i> (50%)	H	FACU/ FACU	8.		
3. <i>Artemisia tridentata wyomingensis</i> (10%)	S	UPL/UPL	9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0/3=0%

Remarks: * Both Region 4 and Region 9 (Reed 1988a, 1988B) indicator status is given. *E. smithii* is growing in the channel. Greasewood also occurs but is not the dominant species at this location.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u> 0 </u> inches Depth to Free Water in Pit: <u> - </u> inches Depth to Saturated Soil: <u> - </u> inches	
Remarks: The channel was dry at the time of the survey. The channel width is 2 ft and incised approximately 8-10 inches deep. No indicators of wetland hydrology were observed.	

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Map Type? [] Yes [] No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
[] Histosol		[] Concretions			
[] Histic Epipedon		[] High Organic Content in Surface Layer of Sandy Soils			
[] Sulfidic Odor		[] Organic Streaking in Sandy Soils			
[] Aquic Moisture Regime		[] Listed on Local Hydric Soils List			
[] Reducing Conditions (test required)		[] Listed on National Hydric Soils List			
[] Gleyed or Low-Chroma Colors		[] Other (Explain in Remarks)			
Remarks: A soil pit was not dug since hydrophytic vegetation was not present at this site.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? [] Yes [X] No Wetland Hydrology Present? [] Yes [X] No Hydric Soils Present? [] Yes [X] No	Is this Sampling Point within a Wetland? [] Yes [X] No
Remarks: These sites are waters of the U.S. because a defined bed and bank was observed at each site.	

APPENDIX B:
PHOTOGRAPHS OF SELECTED WETLAND
AND WATERS OF THE U.S. SITES

Photograph B.1 Typical WUS.

Photograph B.2 Typical Non-WUS.

Photograph B.3 Site 6, North Platte River.

Photograph B.4 Site 25, Saint Marys Creek.

APPENDIX C:

**LIST OF PLANTS SPECIES ENCOUNTERED
AND WETLAND INDICATOR STATUS**

Wetlands and Other WUS, Seminole Road Coalbed Methane Pipeline and Access Roads C-1

Table C.1 List of Plant Species Occurring on Surveyed Sites, Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project.¹

Life Form	Common Name	Scientific Name	Indicator ²	
			Region 4	Region 9
Shrubs, and Subshrubs	Wyoming big sagebrush	<i>Artemisia tridentata wyomingensis</i>	UPL	UPL
	Skunkbush	<i>Rhus trilobata</i>	NI	NI
	Shadscale	<i>Atriplex confertifolia</i>	UPL	UPL
	Gardner's saltbush	<i>Atriplex gardneri</i>	UPL	UPL
	Douglas rabbitbrush	<i>Chrysothamnus viscidiflorus</i>	UPL	UPL
	Grey rabbitbrush	<i>Chrysothamnus nauseosus</i>	UPL	UPL
	Sandbar willow	<i>Salix exigua</i>	FACW	OBL
	Greasewood	<i>Sarcobatus vermiculatus</i>	FACU	FACU+
	Winterfat	<i>Kraschennikovia lanata</i>	UPL	UPL
	Fringed sage	<i>Artemisia frigida</i>	UPL	UPL
Forbs	Clasping pepperweed	<i>Lepidium perfoliatum</i>	FACU	FACU
	Scarlet globemallow	<i>Sphaeralcea coccinea</i>	UPL	UPL
	Franklin's Sandwort	<i>Arenaria franklinii</i>	UPL	UPL
	Field mint	<i>Mentha arvensis</i>	FACW	FACW-
	Russian thistle	<i>Salsola kali</i>	FACU-	FACU
	Seepweed	<i>Iva axillaria</i>	FACU	FAC
	Halogeton	<i>Halogeton glomeratus</i>	UPL	UPL
	Thistle	<i>Cirsium arvensis</i>	UPL	UPL
Grasses and Grasslike Species	Smooth brome	<i>Bromus inermis</i>	UPL	UPL
	Slender wheatgrass	<i>Elymus trachycaulum</i>	FACU	FAC
	Alkali saccaton	<i>Sporobolus airoides</i>	FAC	FAC-
	Western wheatgrass	<i>Elymus smithii</i>	FACU	FACU
	Meadow barley	<i>Hordeum pusillum</i>	FACU	FACU
	Basin wildrye	<i>Elymus cinerus</i>	NI	FAC
	Baltic rush	<i>Juncus balticus</i>	OBL	FACW+
	Bulrush	<i>Scirpus maritimus</i>	NI	OBL
	Alkali bluegrass	<i>Poa juncifolia</i>	FAC	FACU+
	Foxtail barley	<i>Hordeum jubatum</i>	FACW	FAC+
	Tufted hairgrass	<i>Deschampsia cespitosa</i>	FACW	FACW+
	Seaside arrowgrass	<i>Triglochin maritimum</i>	OBL	OBL
	Crested wheatgrass	<i>Elymus cristatum</i>	UPL	UPL
	Inland saltgrass	<i>Distichlis stricta</i>	NI	FAC+
	Needleandthread	<i>Stipa comata</i>	UPL	UPL
Weeping alkaligrass	<i>Puccinella distans</i>	FACW	FACW+	
Cacti	Prickly pear cactus	<i>Opuntia polyacantha</i>	UPL	UPL

¹ This list is a compilation of both dominant and non-dominant species observed during the wetland delineation.

² Based on Reed (1988a, 1988b). OBL = obligate upland; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = obligate upland; + = occurs more often in wetlands than in uplands; - = occurs more often in uplands than wetlands; NI = insufficient information available to determine an indicator status.

May 22, 2002

Ms. Kate Fay
Dudley & Associates, LLC
1776 Lincoln St., Suite 904
Denver, CO 80203-1026

RE: Supplement to the *Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project Biological Investigation* (letter report) (TRC Mariah Associates Inc. [TRC Mariah] 2002a) and *Jurisdictional Wetlands and Other Waters of the U.S., Seminole Road Coalbed Methane Gas Gathering Pipeline and Access Roads Project, Carbon County, Wyoming* (TRC Mariah 2002b) Reports

Dear Kate:

This letter report is provided as a supplement/addendum to the aforementioned reports. The original reports were provided in April 2002 as appendices to the Plan of Development for the Dudley & Associates, LLC's proposed natural gas gathering pipeline and construction access road corridors project located in Carbon County, Wyoming.

This report summarizes the findings of our biological and wetland/waters of the U.S. investigations along the northernmost portion of the proposed pipeline route and the southernmost access road (see attached Maps 1 through 4). Site investigations were conducted on April 17 and 23, 2002, by Mr. Larry DeBrey to map vegetation types; to identify potential jurisdictional wetlands and other waters of the U.S. (WUS) under the jurisdiction of the U.S. Army Corps of Engineers (COE); to identify potentially affected threatened, endangered, proposed, and candidate (TEP&C) species habitat; and to delineate prairie dog towns along the affected corridors and determine their suitability as black-footed ferret habitat. In addition, occurrences of known crucial big game range, sage grouse leks, and raptor nests along the proposed pipeline route segment and access road were investigated.

This supplemental report also revises and clarifies actions necessary for black-footed ferret survey work in compliance with the *Endangered Species Act* and the most current U.S. Fish and Wildlife Service (USFWS) guidance.

Vegetation Mapping

Vegetation along the 100-ft wide temporary construction right-of-way for the pipeline segment and access road corridor (50 ft on each side of centerline) was mapped by traversing the areas on foot or using four-wheel-drive trucks or all-terrain vehicles. The vegetation types occurring along the northernmost portion of the pipeline route are mixed shrub/grassland and mixed grass/low shrub (see Map 1), whereas vegetation along the southernmost access road is entirely mixed shrub/grassland (see Map 3). These vegetation types are described in TRC Mariah (2002a).

Ms. Kate Fay
Dudley & Associates, LLC
May 22, 2002
Page 2

Wetlands and Waters of the U.S.

The northernmost portion of the pipeline route and the southernmost access road do not cross any drainages or other areas (i.e., wetlands or WUS) that would fall under the jurisdiction of the COE. Protection measures for these features remain unchanged from that described in TRC Mariah (2002b).

Black-footed Ferret

No new white-tailed prairie dog colonies were found within 0.5 mile of the northernmost portion of the pipeline route or the southernmost access road (see Maps 2 and 4).

Based upon conversations with the BLM on May 21, 2002, and with the USFWS on May 20, 2002, this letter provides revisions to the conclusions regarding the need for black-footed ferret surveys for the proposed project as formerly presented in TRC Mariah (2002a). The following protection measures for black-footed ferret supercede those provided in TRC Mariah (2002a) and would be implemented as follows.

- 1) All black-footed ferret surveys identified below would be implemented prior to proposed surface-disturbing activities in compliance with USFWS guidelines (USFWS 1989) and as clarified in the aforementioned conversations with BLM and USFWS.
- 2) Prairie dog towns that occur within areas proposed for disturbance along the pipeline route and access roads north of the North Platte River (i.e., PD-2, PD-4/5, and PD-6; see Map 2, Wildlife, in TRC Mariah [2002a]) will be surveyed in their entirety.
- 3) Portions of those prairie dog towns that occur within 0.5 mile of areas proposed for disturbance along the pipeline route and access roads north of the North Platte River (i.e., PD-1, PD-3, and PD-7) but are not actually within the area proposed for disturbance will be surveyed.
- 4) Prairie dog towns (PD-14 and PD-15) that have been surveyed within the past 12 months (survey completed in February 2002) will not be surveyed.
- 5) Prairie dog towns that occur on and within 0.5 mile of the proposed pipeline route and access roads south of the North Platte River (i.e., PD-9, PD-10, and PD-11) will not be surveyed since this area is included within the area designated by the USFWS for black-footed ferret re-introduction, and all reasonable project design efforts have been made to minimize disturbances to the prairie dog towns in this area.
- 6) In the event surveys find a black-footed ferret or its sign, the BLM would stop all action on the application in hand and/or action on any future application that may directly, indirectly, or cumulatively affect the colony/complex and will initiate Section 7 review with the USFWS. No project-related activities would be allowed to proceed until the USFWS issues its Biological Opinion (BO). The USFWS BO would specify when and under what conditions and/or prudent measures the action could proceed or whether the action would be allowed to proceed at all.

Ms. Kate Fay
Dudley & Associates, LLC
May 22, 2002
Page 3

Ute Ladies' Tresses

There is no suitable habitat (wet/riparian areas) for Ute ladies' tresses along the northernmost portion of the pipeline route or the southernmost access road.

Blowout Penstemon

There is no suitable habitat (sand dunes) for blowout penstemon along the northernmost portion of the pipeline route or the southernmost access road.

Bald Eagle

There are no known bald eagle nests or roosts along the northernmost portion of the pipeline route or the southernmost access road. Existing information on bald eagle nests as referenced in TRC Mariah (2002a) remains relevant to the northernmost pipeline route segment and southernmost access road.

Mountain Plover

The only potential mountain plover habitat identified during site investigations along the northernmost pipeline segment and southernmost access road occurs as mixed grass/low shrub habitat along approximately 300 ft of the northernmost pipeline segment (see Map 1). Mountain plover protection measures would remain unchanged from those described in TRC Mariah (2002a) but would occur as necessary in the newly mapped area.

North Platte River Species

No changes to the information provided in TRC Mariah (2002a) are necessary as a result of the site investigations reported herein.

Sage Grouse/Raptors/Wildlife Crucial Winter Range

Information on the presence of known sage grouse leks, raptor nests, and crucial big game range along the northernmost pipeline segment and southernmost access road are provided on Maps 2 and 4, respectively. The protection measures identified for these wildlife features remains unchanged from that described in TRC Mariah (2002a).

Conclusion

The conclusions presented in TRC Mariah (2002a, 2002b) remain unchanged as a result of the information presented herein.

Ms. Kate Fay
Dudley & Associates, LLC
May 22, 2002
Page 4

References

TRC Mariah Associates Inc. 2002a. Seminoe Road coalbed methane gas gathering pipeline and access roads project biological investigation. Letter report to Ms. Kate Fay, Dudley & Associates, LLC, Denver, Colorado, from Peter Guernsey, TRC Mariah Associates Inc., Laramie, Wyoming on April 16, 2002. 9 pp. + tables and maps.

TRC Mariah Associates Inc. 2002b. Jurisdictional Wetlands and other waters of the U.S., Seminoe Road coalbed methane gas gathering pipeline and access roads project, Carbon County, Wyoming. Prepared for Dudley & Associates, LLC, Denver, Colorado, by TRC Mariah Associates Inc., Laramie, Wyoming. 10 pp. + append. and maps.

U.S. Fish and Wildlife Service. 1989. Black-footed ferret survey guidelines for compliance with the *Endangered Species Act*. U.S. Fish and Wildlife Service, Denver, Colorado, and Albuquerque, New Mexico. 10 pp. + append.

Thank you for using TRC Mariah for this project. Please feel free to call me or Mr. Larry DeBrey with any questions, or if we may be of further assistance.

Sincerely,

TRC Mariah Associates Inc.

Peter J. Guernsey
Project Manager

PJG:ttl

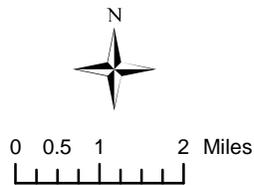
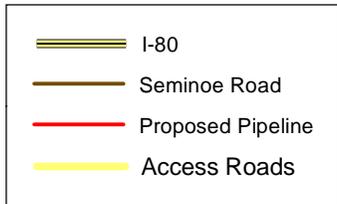
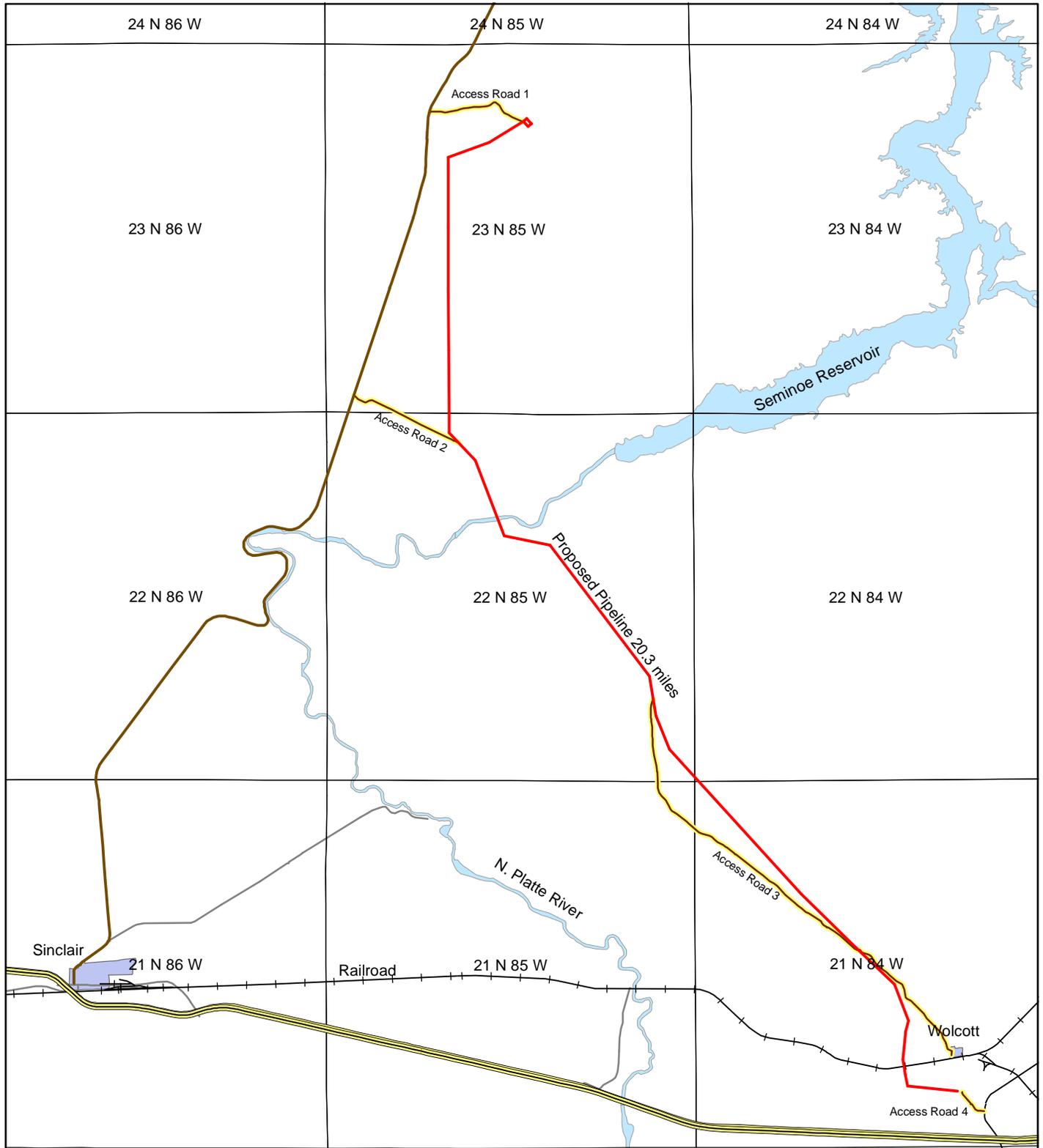
Enclosures

xc: Gay Seay, BLM Rawlins (w/enclosures)

Frank Blomquist, BLM Rawlins (w/enclosures)

Larry Apple, BLM Rawlins (w/enclosures)

28757\pipeline\supplement Bio-ltr.rpt\supplement bio-ltr



Dudley & Associates, LLC

Exhibit 1
Seminoe Road
Pipeline Project Map

GIS: D. Loken		
Carbon Co. WY	Scale = 1":12,000'	7/24/2002