II. STATEMENT OF DECISION

Based upon the analysis of environmental consequences described in the Riley Ridge Natural Gas Project Draft Environmental Impact Statement (DEIS) and Final EIS (FEIS), and in consideration of all public, state and federal agency, and industry scoping, hearing, and written comments received, the BLM and FS have jointly identified the Agency Decision to be a modification of the Shute Creek Alternative. The Shute Creek Alternative is modified to the extent that the East Dry Basin plant site is preferred to the Buckhorn plant site. Therefore, plant sites would be Craven Creek, Shute Creek, and East Dry Basin.

The Agency Decision was selected on the basis of the comparative analysis presented in Section 2 of the FEIS and the ultimate impacts which would result from the implementation of this Alternative with all applicable mitigation. The Agency Decision would have fewer overall adverse impacts to resources than the other alternatives considered. Implementation of the Agency Decision would be subject to the mitigation measures identified in Attachment B. Other measures subsequently identified and deemed necessary by the Authorizing Officer may be added.

All practical means to avoid or minimize environmental harm have been adopted. Intensive inspection and enforcement to ensure that the decisions are carried out in accordance with required mitigation will be performed.

The BLM and FS have entered into a Memorandum of Understanding (MOU) (Attachment A) that establishes agreement and procedure for overseeing implementation of the Riley Ridge ROD. This includes review and quality control of required applicant plans for associated construction, operation, maintenance, and termination of proposed facilities and well field development.

The applicants will be required to develop a comprehensive monitoring program which will be approved as a part of the required applicant CU plans. They will be required to implement and/or fund, at least in part, the monitoring identified in Section VI of this ROD and Appendix E of the FEIS. Specifically, monitoring of groundwater, air quality related values, and fisheries and surface water quality (Attachment B.5 measures W-1 & 2; AQ-1 & 2; WF-13. FEIS Appendix E-1; E-2; E-3).

Under the terms of the Endangered Species Act, the applicants will be required to conduct surveys, no more than one year prior to disturbance, to determine if listed plant or animal species or their habitats might be present on areas to be disturbed, regardless of land ownership (Attachment B.5, measure 27).

The applicants will also be required to develop a cultural resources plan to locate cultural resources which would be directly affected by the project. A class III field survey would be used in locating these resources (Attachment B.5, measures 43 through 46).

As a result of any applicant delays in their project plans, the cumulative impacts associated with the Riley Ridge Project, or other planned or proposed projects would be reevaluated prior to granting any of the requested Federal actions to determine if they are still within the paraneters considered in the EIS.

A description of the Riley Ridge Project components and associated actions as they would be permitted for each applicant follows. The "Decision Rationale" is provided in Section IV, pages 26 through 33.

WELL FIELD

Before any development activity occurs within the well field area, each lessee or unit operator would be required to submit an APD. The process for issuing APDs is described in the DEIS on pages 1-3 and 1-12. and more specifically will follow the procedure outlined in Attachment D, "Application for Permit to Drill (APD) Environmental Reference Report and Decision Record". Approval of an APD would include site-specific application of the mitigation measures (Attachment B) to well siting, access roads, pipelines, powerlines, and other associated facilities. A description of the lease operator activities that would require issuance of an APD by the BLM is summarized by applicant in the DEIS (pages 1-35 and 1-36).

Forest Service

The Bridger - Teton National Forest administers 34 percent of the 159,928 acres of well field surface. Use authorizations (i.e. ROWs, leases, permits) for roads, powerlines, pipelines, well site facilities, etc. will be handled through the normal APD process as long as the facilities remain on-lease. On-lease facilities constructed by the unit operator will not require individual (separate) use authorization. However, if the facilities on the lease area are constructed by or transferred to a third party then the third party must have an individual use authorization. Any facility (i.e., road, powerline, pipeline, etc.) off-lease will require individual use authorization. All Forest Service use authorizations will be issued by the Forest Service Supervisors Office, Jackson, Wyoming.

Bureau of Land Management

The Rock Springs District of the Bureau of Land Management administers the balance, 66 percent, of the well field surface acres. The same use authorization procedure will be followed as described for the FS. Individual use authorizations will be issued by the BLM Pinedale Resource Area Office of the Rock Springs District.

TREATMENT PLANTS

Air Quality

The State of Wyoming is responsible for assuring compliance with all air quality standards and regulations, including the requirement of Best Available Control Technology (BACT). The potential problem of Quasar's predicted violation of the SO_2 24-hour average PSD Class II increment (based on use of off-site meteorological data) would have to be resolved during the State's PSD permitting process. Resolution of this problem is potentially a two-step process. The first step would be to remodel Quasar's SO_2 impacts with on-site meteorological data. (This would simultaneously resolve the problem of results based on off-site meteorological data.) If violations are still predicted, the second step would be for Quasar to install additional in-plant sulfur controls or other options they may develop. Quasar's plant also shows predicted violations of the Wyoming half-hour H_2S standards. Resolution of this problem would be identical to that for SO_2.

The Exxon and Northwest plants will undergo similar review as part of the PSD permitting process. On-site meterological data would be used by the Wyoming Department of Environmental Quality to verify the results found in the EIS (e.g., no significant impact). If the on-site data showed problems of compliance with PSD increments or air quality standards, that issue would have to be resolved by installation of additional plant emmission controls or other appropriate modifications.

Resolution of these issues must be achieved before granting approval to begin project construction.

Treatment Plant Location

Quasar

The East Dry Basin plant site is approved. The East Dry Basin site is comprised of 640 acres in Sections 34 and 35 of T. 29 N., R. 112 W. and Section 4 of T. 28 N., R. 112 W., Sublette County, Wyoming. See Map S-1 for location.

Northwest

The Craven Creek plant site is approved. This site is comprised of 640 acres in the E 1/2 of Section 29 and W 1/2 of Section 28 in T. 22 N., R. 113 W., Lincoln County, Wyoming. See Map S-2 for location.

Exxon

The Shute Creek plant site is approved. This site is comprised of 640 acres in section 14 of T. 22 N., R. 112 W., Lincoln County, Wyoming. See Map S-2 for location

TRUNK LINES

Approximate sour gas trunk line alignments are indicated on Maps S-1 and S-2. Portions of the alignment have changed from that considered in the DEIS and FEIS. Since the changes were considered to be outside the general 1-mile corridor analyzed in the DEIS-FEIS, a supplemental environmental analysis was conducted and it was concluded that the additional sour gas pipeline routes as mitigated would not have a significant impact on the human environment. Therefore no supplemental EIS is necessary. The analysis is documented in a supplemental Environmental Assessment (EA) in Attachment C. The final specific alignment location will be determined during the preparation of the CU plans.

1. Pipeline Alignment

Quasar and Williams

Quasar's trunk line from the Darby Mountain, Riley Ridge and North Riley Ridge Units, and Williams trunk line from the Sawmill Area would join in Section 18, T. 29 N., R. 113 W.. A 10-mile trunk line would run from the well field to the East Dry Basin plant site.

Northwest and Mobil

Northwest would purchase gas from Mobil at the wellhead. Northwest's trunk line from the Tip Top and Hogsback Units would begin in Section 20 of T. 28 N., R. 113 W., at their Big Piney Compressor Station. Three other gathering lines from the Hogsback Unit would tie in to Northwest's main trunk line off the well field in Sections 5 and 21 of T. 27 N., R. 113 W., and Section 3 of T. 26 N., R. 113 W.. Northwest's trunk line would be approximately 40 miles long, terminating at the Craven Creek plant site.

Exxon

Exxon's trunk line from the Lake Ridge, Fogarty Creek, and Dry Piney Units, and the Dry Piney Annex would begin in Section 1 of T. 27 N., R. 114 W. The trunk line would be approximately 37 miles long, terminating at the Shute Creek plant site.

Northwest's and Exxon's sour gas pipelines would parallel each other for approximately 18 miles south to the south side of Fontenelle Creek. In Section 2 of T. 24 N., R. 113 W., the two pipelines separate with Exxon's pipeline trending southeast approximately 16 miles to the Shute Creek plant. Northwest's pipeline trends southwest approximately 19 miles to the Craven Creek plant (see Maps S-1 and S-2).

The Holden Hill alignment of the sour gas pipelines (Sections 23 and 26 of T. 25 N., R. 113 W.) will be along the west side of the western-most existing pipeline of Northwest Pipeline Company. This adjustment of approximately three-fourths of a mile west is made because of the highly sensitive Emigrant Trail (Sublette Cutoff) and other cultural values occuring in this area.

In the area of the LaBarge Creek crossing, three options remain open to Northwest and Exxon for aligning the sour gas pipelines through the existing residences (H_2S sensitive receptors) while maintaining the Health and Safety requirements of mitigation measure H-4 (see Attachment B.8).

Option one is to cross LaBarge Creek approximately 3/4 of a mile west of Northwest's western-most existing pipeline along the section line common to sections 26 and 27 of T. 26 N., R. 113 W. (see Map S-1). Approval of a crossing following this alignment is contingent upon consumating a sensitive receptor purchase agreement and obtaining two sensitive receptor variances.

Option two is to cross LaBarge Creek approximately 1.5 miles west of Northwest's western-most existing pipeline in the west 1/2 of Section 27 of T. 26 N., R. 113 W. (not shown on Map S-1). Approval of a crossing following this alignment is also contingent upon consumating a sensitive receptor purchase agreement and obtaining two sensitive receptor variances.

Option three is to route the pipelines west of Calpet (1.5 miles) along the toe of the Hogsback and cross LaBarge Creek just east of the narrows in Sections 19 and 30 of T. 26 N., R. 113 W. and then return to the original alignment. This third option would result in approximately two miles of additional pipeline. No sensitive receptor purchase agreement would be required, but one variance would be needed.

If the first option for crossing LaBarge Creek is arranged, then the sour gas pipeline will be required to pass one-mile east of Calpet. If the distance of the pipelines from Calpet is less than one mile at any point then a variance must be obtained from the Authorized Officer (Health and Safety mitigation measure H-4). If the second or third option is selected then the two sour gas pipelines will be located approximately 1.5 miles west of Calpet along the toe of the Hogsback. This would comply with the requirements of the Health and Safety mitigation measure and therefore not require a variance for Calpet.

Two other residential areas (sensitive receptors) will require requests for variances under any of the three alignments. These are Western Camp and Dry Piney Camp.

2. Design Safety Aspects

The presence of the toxic H_2S in the sour gas will require incorporation of numerous monitoring and safety control measures in the design and operation of the gathering and trunk line systems. These include siting considerations, monitoring and shutdown systems, and emergency response procedures.

Siting Considerations

Well production areas and the gas treatment plant locations are fixed; however, pipeline system locations can be adjusted. Proposed pipeline routing must avoid passing closer than 1-mile to existing residences, communities, recreation areas, and businesses. Emergency shutdown or block valves will be required and spaced along the pipeline to assure protection of residents near the gathering system and trunk lines in the unlikely event of a pipeline rupture.

Emergency Procedures

Emergency procedures that will be taken in the event of an accidental release of sour gas (H_2S) will be identified in contingency plans prepared by the applicants. Applicants must prepare an individual site-specific H_2S contingency and evacuation plan for the drilling and completion of each well. This is required by BLM regulation (NTL-10) and each plan will outline steps to be taken to control wells and, if necessary, evacuate the area in the event of a blowout.

In addition, the applicants must prepare a contingency and evacuation plan for the operation of the well field, the pipelines, and the plant facilities. This will identify steps to be taken to control an H_2S gas release from wellheads, gas gathering or trunk lines, or a plant upset during operation. It will include public mass alert and evacuation procedures, and provide for appropriate training to ensure that all personnel have the ability and knowledge to implement the established contingency and evacuation plan.

In the event of a sudden pressure drop, trunk line block valves or wellhead valves would stop the flow of gas, depending on the location of the leak. In addition, wells could be remotely shut-in by plant personnel.

Finally, if the sour gas release could not be contained, company personnel would intitiate evacuation procedures for residents in the vicinity of the hazard.

Design Requirements

No sour gas trunk line will be located closer than one mile to the populated areas or sensitive receptors as identified on Map 2-1 in the FEIS. The applicants must use the best available engineering design (i.e., alignment, block valve type and spacing, pipe grade, etc.), best construction techniques (i.e., pipe depth, hydrostatic testing, etc.), and monitoring plans (i.e., surveillance, warning signs, etc.) as approved by the Authorized Officer to minimize both the probability of rupture and radius of exposure in the event of an accidental pipeline release of sour gas.

A variance from the 1-mile distance may be granted by the Authorized Officer based on submission of a detailed site-specific analysis by the applicant that would consider meteorology, topography, and special pipeline design and/or construction measures. This analysis would ensure that populated areas and sensitive receptors would not be exposed to an increased level of risk.

As part of the CU plan, the applicants will be required to prepare a sour gas pipeline health and safety design, construction, and operation plan for approval by the Authorizing Officer.

Design requirements will reduce both the probability of a rupture and minimize the extent of exposure by sensitive receptors to both discomfort and lethal levels of H_2S in the event of a sour gas pipeline rupture. The probability of rupture can be reduced by such measures as warning signs, burial depth, pipe thickness and grade, while such measures as block valve types and spacing and pipeline alignment would minimize the exposure radius from the point of rupture in the event of an accident. See Appendix B.9 for a discussion of the effectiveness of block valve spacing and resultant exposure distances.

SALES GAS PIPELINES

No alternatives to the proposed sales gas pipeline alignments were considered in the EIS. Comments received on the proposed Quasar and Exxon alignment along the toe of White Mountain, northwest of Rock Springs, rendered this alignment unacceptable because it traversed prime city expansion land. Also, the Exxon line would cross the Seedskadee National Wildlife Refuge; this received adverse comment. Therefore, other alignment opportunities must be identified for Quasar's and Exxon's sales gas pipelines. An environmental analysis will be required before a final route is selected.

Northwest's proposed sales gas pipeline right-of-way is approved. It would connect their treatment plant with Northwest's existing 16-inch line 3-miles to the west of the Craven Creek plant site.

CARBON DIOXIDE (CO_2) GAS PIPELINES

The same situation exists for Quasar's and Exxon's CO_2 pipelines as stated for their sales gas pipelines.

No adverse comments were received on Northwest's CO_2 pipeline. The proposed 27-mile alignment from the Craven Creek plant south to the MAPCO Corridor is approved. However, no right-of-way grant will be issued until the final delivery point is identified.

SULFUR TRANSPORT AND LOADOUT FACILITY

Sulfur, a by-product of H_2S processing in the treatment plants, would be sold as markets are developed. If markets are not identified prior to plant start-up, or if estabished markets are interrupted, sulfur would be stored at the plant sites until it is needed to supply demand.

Quasar

The Agency Decision for transporting produced sulfur is by molten sulfur pipeline. However, since only one alignment has been analyzed, and in consideration of the concerns expressed by the public relative to the sulfur drain locations and the proximity of the pipeline to the Emigrant Trail, additional site-specific environmental analysis would be required before the selection of a final alignment. This process will be initiated when Quasar submits their amended application.

Quasar has stated that they would truck the sulfur produced in their first 400 million cfd processing modules to a loadout facility near Opal, Wyoming. This would amount to approximately 654 tons/day. This method of transportation would not require any action on the part of the BLM or the FS. With the additional processing of 800 million cfd and a production of 1,960 tons of sulfur per day, transportation would be in an above-ground, 54-mile molten sulfur pipeline from the East Dry Basin plant to the terminus near Opal.

The system would be powered by a 69-kilovolt transmission line paralleling the molten sulfur line; the line would receive power from Utah Power and Light Company at the plant site, pipeline midpoint, and loadout facility. Emergency generators to power the heating system would be located at both ends of the pipeline to ensure a source of power should an outage of commercial power occur. See Maps S-1 and S-2 for the general pipeline alignment.

Northwest and Exxon

The rail spur that would service the Craven Creek and Shute Creek plants is the approved means of sulfur transport. Northwest and Exxon would build a railroad spur from the Union Pacific Railroad line to the treatment plants. The spur would extend from a point about three miles east of Opal in a northerly direction about seven miles to Craven Creek and then easterly about 8.5 miles to Shute Creek. See Map S-2 for location. Northwest's and Exxon's respective production at full capacity would be 757 and 2,240 tons of sulfur per day.

POWER TRANSMISSION LINES

Quasar plans to purchase electrical power from Utah Power and Light Company. Electrical power for operation of their treatment plant would require construction of a 75-mile, 230-kilovolt transmission line from the Naughton Power Plant to the East Dry Basin plant. Approximately seven miles of the total distance would parallel an existing transmission line. Tangent structures would be wood pole H-frames. A 69-kilovolt line would run to the sulfur loadout facility. The gas field electrical distribution system would also originate from the plant substation. (See Maps S-1 and S-2 for location).

Power for Northwest's and Exxon's treatment plants would also be obtained fom Utah Power and Light Company's Naughton Power Plant south of Kemmerer. A 230 or 345-kilovolt transmission line would extend northeast from Naughton, paralleling Quasar's transmission line for approximately 15 miles. The main line would then parallel the railroad spur to the plant sites for a distance of approximately 29 miles. Tangent structures would be either wood pole or lattice steel H-frames. (See Map S-2 for location).

TREATMENT PLANT WATER REQUIREMENTS

Quasar and Exxon

Groundwater wells would be used by both applicants for all water requirements (Quasar, 22,010 acre-feet for project life; Exxon, 11,040 acre-feet for project life). Permits for groundwater use must be obtained from the Wyoming State Engineer's Office.

Northwest

The applicant's proposed water pipeline is approved. (See Map S-2 for alignment location). Northwest's treatment plant water requirements (2,400 acre-feet for project life) would be supplied from the Green River. The water pipeline would extend from a reinforced concrete intake structure on the Green River below the Fontenelle Dam to the plant site. The approximate distance would be 12 miles using eight-inch pipe, buried to a depth of eight feet. Water would be stored in a large tank and serve as plant makeup water storage and fire water storage.

PLANT SITE ACCESS ROADS

The applicants' proposed plant site access routes are approved. (See Maps S-1 and S-2 for locations). A 3.3-mile paved access road would be required from the Calpet Road (Sublette County Road 23-134) to the East Dry Basin plant. The Craven Creek plant access road would extend from Highway 240 directly east to the treatment plant. It would be paved and 1.4 miles in length. The Shute Creek plant

approved access roads are from Wyoming State Highway 372 and 240, and U.S. Highway 30. A total of 27.5 miles of existing maintained dirt road would be upgraded. Nine miles would pass through private land, while the remaining 18.5 miles are located on land administered by the BLM. Exxon's access from Highway 240 directly east to the treatment plant would be paved and 8.5 miles in length. Access roads to all plant sites would be built to American Association of State Highway Transportation Officials standards.

EMPLOYEE HOUSING

All applicants are required to provide construction camps for employees and contractor housing. If the construction camps are located on public land at a site other than those analyzed in the EIS, additional environmental analysis may be required.

GRAVEL, RIPRAP AND FILL MATERIALS

Required gravel, riprap, and fill materials will be obtained from the right-of-way; commercial sources (which would require transportation to the location), or adjacent lands where permitted by the federal surface management agency or the landowner. (Note: If value of needed material exceeds $5,000, sale must be competitive.) An environmental analysis (EA) will be required if mineral materials are obtained from public lands.

WASTEWATER

The effects on groundwater of deep well reinjection of wastewater from the sour gas treatment plants and well field dehydrators have not been fully analyzed due to lack of information on the applicant's injection engineering plans and specific water resource data. Prior to allowing this activity, the BLM will require further analysis of impacts. In addition, Wyoming Oil and Gas Commission, Wyoming Department of Environmental Quality, and BLM-Mineral Resource Division must review and approve the applicants' disposal plans. The necessary permits and/or approvals will be required before the applicants could begin disposal. See Section VI Monitoring for further discussion of permitting requirements.

GAS VENTING

It is the Agencies' decision to allow the Applicants' to vent CO_2 until an economic market is determined by the BLM. When a market is identified, the CO_2 must either be sold or compensatory royalty will be assessed for the marketable volume. In addition, the helium will be allowed to be vented until such time as the Bureau of Mines makes a final determination regarding its disposition.