

## **Appendix C**

### **Cultural Memorandum of Agreement**

**MEMORANDUM OF AGREEMENT  
AMONG  
THE BUREAU OF LAND MANAGEMENT  
THE WYOMING STATE HISTORIC PRESERVATION OFFICER  
AND  
QUESTAR GAS MANAGEMENT COMPANY  
REGARDING THE QUESTAR 611 PIPELINE PROJECT,  
SUBLETTE COUNTY, WYOMING**

**WHEREAS** the Bureau of Land Management (BLM) has determined that construction of the Questar 611 Pipeline Project will have adverse effects on 48SU261, which has been determined to be eligible for listing in the National Register of Historic Places (NRHP) under criterion d at 36 CFR § 60.4; and will affect sites 48SU2265, 48SU2615, and 48SU2800, which have been determined eligible for listing in the NRHP under criterion d but will affect non-contributing portions of these sites; and may affect other sites yet to be found within the APE; and

**WHEREAS** BLM has determined the Area of Potential Effect (APE) to be the linear corridor illustrated in Appendix A; and

**WHEREAS** BLM has consulted with the Wyoming State Historic Preservation Officer (SHPO) pursuant to the State Protocol Between the Wyoming BLM State Director and the Wyoming State Historic Preservation Officer (Protocol) regarding Section 106 of the National Historic Preservation Act; and

**WHEREAS** BLM and SHPO have agreed that identification and evaluation may be segmented for this undertaking; and

**WHEREAS** BLM has invited Questar Gas Management Company to participate in consultation and sign this Memorandum of Agreement (MOA); and

**WHEREAS** the use of Questar in this agreement will refer to Questar Gas Management Company employees, contractors and designees; and

**WHEREAS** the State of Wyoming and the SHPO do not waive their sovereign immunity by entering into this MOA, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this MOA; and

**WHEREAS** this MOA represents the entire and integrated agreement between the parties and supersedes all prior negotiation, representations and agreements, whether written or oral, regarding the Section 106 review of the effects of the Questar 611 Pipeline on historic properties;

**NOW, THEREFORE,** BLM, SHPO, and Questar agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

Questar 611 Pipeline Project Memorandum of Agreement

## STIPULATIONS

BLM shall ensure that the following measures are carried out:

### I. Segmentation

The project will be constructed in the following four segments, identified on map (Appendix A), north to south, each segment of which may or may not be constructed separately from other segments. Identification, evaluation, and treatment may be completed for each segment separately to expedite construction.

- A. Segment 1 – from the Pinedale #4 well location to the Pinedale Field Office/Rock Springs Field Office (PFO/RSFO) boundary
- B. Segment 2 – from the PFO/RSFO boundary to the Bird Canyon Compressor site
- C. Segment 3 – from the Bird Canyon Compressor site to the Green River (48SU390)
- D. Segment 4 – from the Green River to the LACT tank farm and from the LACT tank farm to Rocky Mountain Pipeline terminal

### II. Identification

- A. Reports documenting inventory and evaluation of cultural resources in Segments 1 and 2 have been submitted to SHPO.
- B. Class III inventory of Segments 3 and 4 has been completed and reports will be submitted to SHPO for review and concurrence after acceptance by BLM.

### III. Evaluation and Treatment

- A. All unevaluated cultural resources within the APE will be evaluated for National Register eligibility using criteria at 36 CFR § 60.4.
- B. Avoidance of historic properties is the preferred treatment. If historic properties cannot be avoided BLM, SHPO, and Questar will consult on treatment. Questar will fund treatment plans that meet the “Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation” (Federal Register, Vol. 48, No. 190, September 29, 1983). Treatment plans will be prepared by cultural resources specialists permitted by BLM and submitted to BLM.
- C. Adverse effects to archaeological site 48SU390, determined eligible for listing in the NRHP (criterion d) and located on State of Wyoming land, shall be avoided by using Horizontal Directional Drilling (HDD) to construct the pipeline under the site. No new testing will be conducted on this site unless new discoveries of cultural materials outside the known boundaries are made during work or it is found that HDD will not result in total avoidance of adverse effects. In the event of an unforeseen discharge of drilling fluid onto the ground surface within the established site boundary, operations will cease and Questar will notify BLM prior to entry into the site boundary for cleanup purposes. The HDD will be part of both Segments 3 and 4.

- D. Effects to National Register eligible site 48SU261 will be evaluated via pipeline archaeological open trench examination. Procedures for evaluating exposed cultural materials at this site are specified in the Discovery Plan (Appendix B). (This document is also attached as Appendix C to the cultural resources report for segments 1 and 2; Pinedale BLM Cultural Resources Report No. 046-05-133.)
- E. Open trench inspection at sites 48SU2265, 48SU2615, and 48SU2800 will be conducted to confirm that only non-contributing portions of these sites will be affected.
- F. Treatment of all other sites located during surface inventory and determined eligible under Criterion d will be carried out at the time that open trench inspection occurs following procedures specified in the Discovery Plan (Appendix B).
- G. Effects to known National Register eligible site 48SU852, the Opal Wagon Road, and other such sites, should they occur within the APE, will be reduced by redesigning the project to avoid impacting them. Should project redesign not be feasible, BLM, SHPO, and Questar will consult to develop treatment plans.
- G. Reports documenting results of treatment will be prepared and submitted to BLM for review. Upon acceptance by BLM, reports will be transmitted to SHPO.

### III. Monitoring

Monitoring at site 48SU390 during directional drilling will be carried out by cultural resource specialists permitted by BLM and hired by Questar. Monitoring will be carried out after drilling to determine whether or not subsidence or any other conditions resulting from drilling occur that may affect 48SU390. This monitoring will occur once every six months, beginning when drilling is completed. It will continue for a minimum of two years. If conditions resulting from drilling that may affect the site develop, all parties to this agreement will consult to resolve the issue.

### IV. Discoveries

- A. Open trench examination will be carried out by cultural resource specialists permitted by BLM and by BLM cultural resource specialists. Previously unknown sites discovered during construction will be identified and evaluated via open trench examination following procedures specified in the Discovery Plan (Appendix B).
- B. Unplanned Discoveries  
If BLM determines after completion of the review process that an undertaking may affect or has affected a previously unidentified property that may be eligible for listing in the NRHP, the BLM will consult with SHPO to resolve the adverse effects. Resolution may require that a treatment plan be prepared in consultation amongst all parties to the agreement.

V. Dispute Resolution

- A. The BLM shall consult with any signatory to this MOA if there is an objection by a signatory to the manner in which the terms of this agreement are implemented.
- B. If the objection cannot be resolved between the BLM Field Manager and the objecting signatory, the matter shall be referred to the BLM Deputy Preservation Officer (DPO) for resolution.
- C. If the objection cannot be resolved with the BLM DPO, then all signatories should consult to resolve the matter.
- D. If the objection cannot be resolved among the signatories, the matter shall be referred to the BLM State Director. The matter may be referred to the BLM Preservation Board, which will provide recommendations for resolution to the State Director. The final decision for resolution of the objection by any signatory shall be made by the BLM State Director.
- E. The BLM Field Manager shall consider non-signatory objections to the manner in which the terms of the terms of the agreement are implemented. If the objection cannot be resolved to the satisfaction of BLM and the objecting party, the BLM Field Manager shall request the signatories to provide their opinion on the matter. Prior to making a final decision on the matter, the BLM Field Manager shall take into account all the signatory opinions received within 15 days of the request.

VI. Amendment

Any party to this agreement may request that it be amended, whereupon the parties to the Agreement will consult to consider such amendment.

VII. Termination

BLM or SHPO may terminate this agreement by providing 30 calendar days written notice to the other parties. The parties shall consult during the period prior to the termination to seek agreement on amendments that would avoid termination. In the event of termination, the BLM will comply with the Protocol to complete the project.

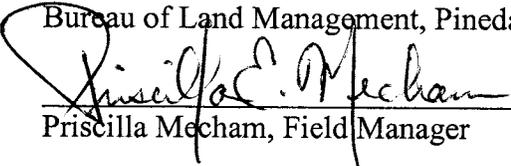
VIII. Duration

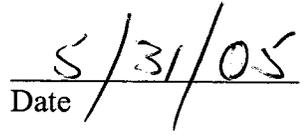
This agreement will terminate upon acceptance of final data recovery reports by BLM and SHPO. If final reports are not completed within four (4) years of the date of execution all parties will meet to evaluate progress under this agreement and extend or amend this agreement as necessary.

This agreement may be executed on separate signature pages.

**SIGNATORIES**

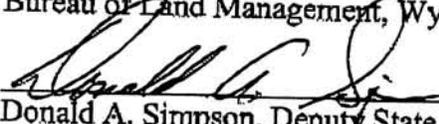
Bureau of Land Management, Pinedale Field Office

  
Priscilla Mecham, Field Manager

  
Date

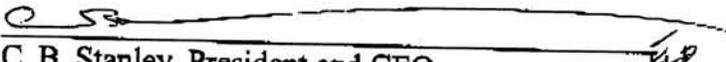
Questar 611 Pipeline Project Memorandum of Agreement

Bureau of Land Management, Wyoming State Office

  
Donald A. Simpson, Deputy State Director, Resource Policy  
and Management

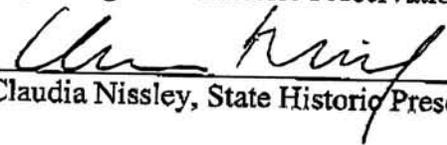
6/11/05  
Date

Questar Gas Management Company

  
C. B. Stanley, President and CEO *EDP RHP*

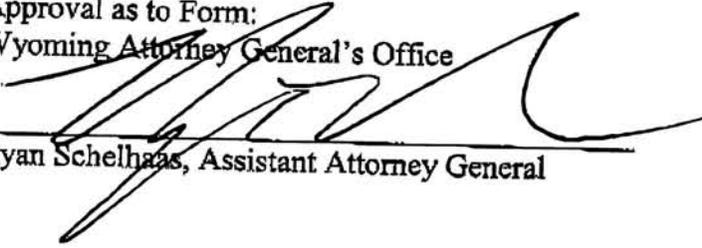
6/8/05  
Date

Wyoming State Historic Preservation Office

  
Claudia Nissley, State Historic Preservation Officer

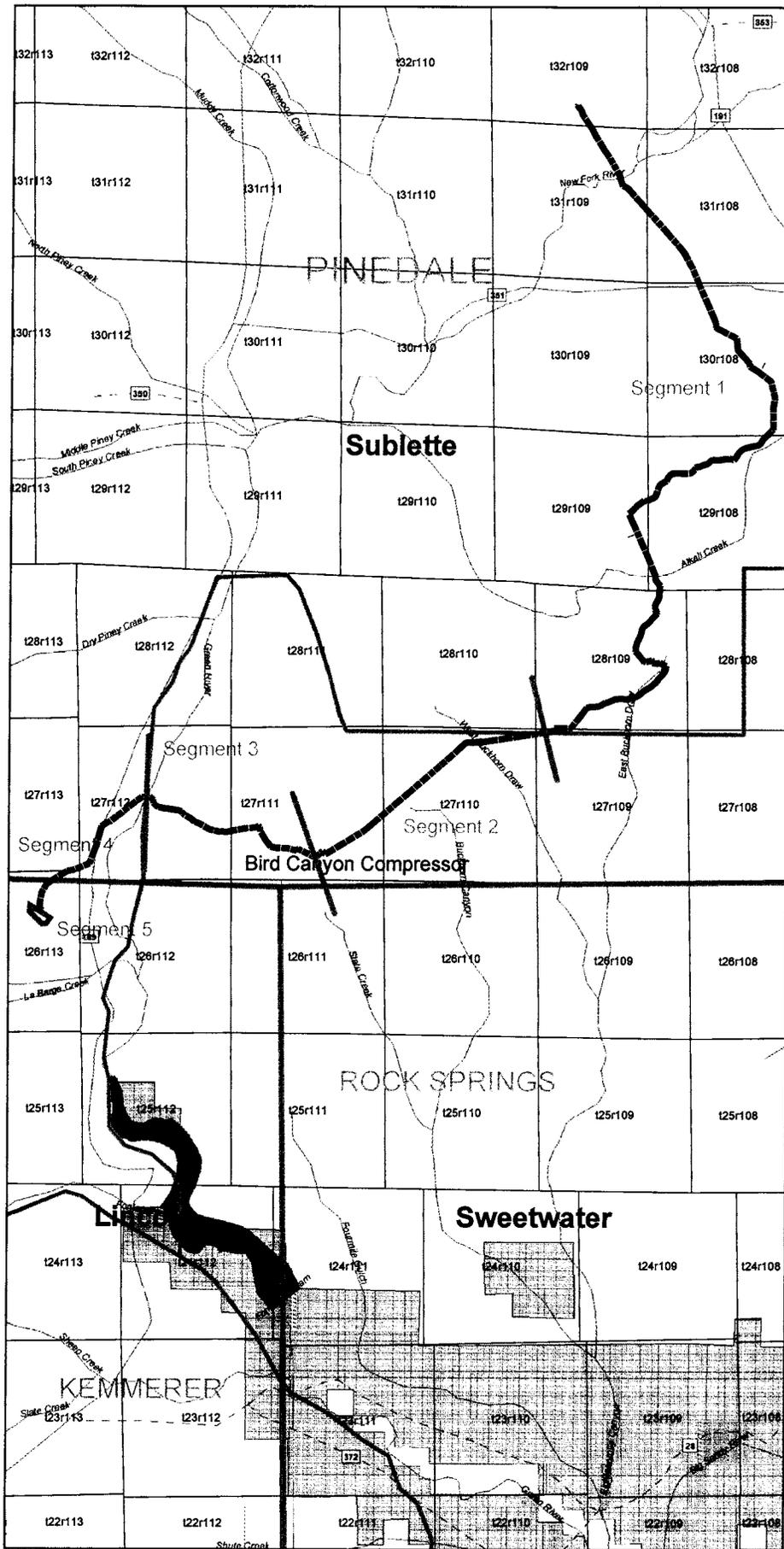
6/14/05  
Date

Approval as to Form:  
Wyoming Attorney General's Office

  
Ryan Schelhaas, Assistant Attorney General

6/17/05  
Date

**Figure 1:  
Proposed  
Questar Gas  
Management  
Pipeline 611  
Showing Cultural  
Segments**



**Legend**

— QGM Pipeline 611 Alignment

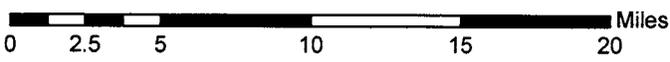
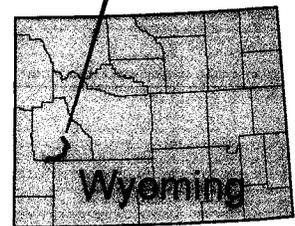
**Roads**

- Limited Access Highway
- - - - Other Highway
- Other Through Highway
- Principal Highway

**Federal Lands**

- BLM
- BOR

**Project Area**



***APPENDIX B***  
***DISCOVERY PLAN***

***Questar Gas Management***  
***611 Pipeline***

***by***

***Jana V. Pastor***  
***And***  
***K.W. Thompson***

## *Introduction*

The following document outlines the proposed cultural resource compliance procedures to be followed during construction of the Questar Gas Management (QGM) 611 pipeline. These procedures are pursuant to the recommendations for an open trench inspection requested by the Bureau of Land Management (BLM). The discovery procedures needed to identify, record, and evaluate any buried cultural resources detected during trenching operations are summarized.

The discovery plan is based on the results of the Class III inventory of the proposed QGM 611 pipeline and on previous work done within the pipeline corridor. Based on these results, trenching and earth-moving activities associated with construction of the proposed pipeline are thought to have a moderate potential for exposing significant cultural resources. The types of cultural resources expected to be encountered are buried prehistoric hearth features, stone and bone artifacts, and ecofacts that are associated with residential activity areas. Housepits and trash dump areas could also be found, but the potential for encountering these other types of resources is low.

### *Identification of Buried Cultural Resources*

The detection and identification of buried cultural resources will be accomplished by performing an inspection of the excavated pipeline trench. To minimize the natural hazards associated with pipeline construction, close coordination between the project archaeologists and pipeline personnel will be emphasized at all times. This will include following all safety procedures and regulations applicable to the project and project personnel. In the event that cultural materials are detected in the trench wall, it may be necessary for the archaeologist to enter the trench to properly document and evaluate the remains. When this is necessary, all safety precautions as recommended by the pipeline construction company will be followed.

Inspection of the open pipeline trench will entail physically walking along the edge of the trench and examining the walls for cultural features. This will also include the identification of geologic strata which have the potential to contain prehistoric cultural remains. The entire length of the constructed pipeline will be inspected.

Recordation of the detected cultural materials will consist of: 1) completion of an Wyoming Cultural Properties (WCP) site form (or some other approved site form) for newly discovered sites or amending the existing WCP site form for cultural remains occurring at known site locations; 2) generating a stratigraphic profile of the trench wall clearly showing the relationship of the cultural features, natural stratigraphy, and the ground surface; 3) photographing definable features; 4) collection of appropriate samples for radiocarbon dating and other ancillary analyses. A site-specific datum stake, marked with the temporary field number and Western Archaeological Services (WAS) project identification, will be placed off the construction right-of-way so that the cultural remains can be relocated after construction is complete. To facilitate relocation of the cultural remains, distance and compass bearings to each feature and/or soil unit profile from the site datum or a permanent reference point will be recorded.

In some cases it may be desirable to augment the examination of the cultural remains visible in the open trench wall by auger/shovel probes and hand-dug test units. When required, the auger/shovel probes will be systematically placed to encompass the area containing the cultural

materials. Formal hand-dug units will be excavated as necessary to gain a better understanding of the geomorphic and geoarchaeologic context of the cultural materials and to aid in the evaluation of the remains. Of particular interest will be the recovery of sediment or charcoal samples for radiocarbon assay.

After completion of the open trench inspection and associated fieldwork, a meeting between Questar Gas Management personnel, the Pinedale Field Office Archaeologist, and WAS staff may be held. The purpose of this meeting will be to discuss the cultural resources located in the trench (if any) and to develop additional testing and/or mitigation procedures, if appropriate.

All artifacts encountered during the open trench inspection will be analyzed following standard WAS procedures. All collected artifacts and ancillary samples (e.g., soil, charcoal, botanic) will be curated at Western Wyoming College, Rock Springs.

The BLM Pinedale Field Office archaeologist will be updated periodically regarding the progress of the project, including all cultural materials detected during the open trench inspection. Except in extreme cases, in particular the detection of human remains, pipeline construction will be allowed to continue with no interruptions due to the detection of buried cultural materials.

### *Treatment of Human Remains*

In the event that human remains are encountered, all construction activity in the area of the find will be immediately suspended and the BLM Pinedale Field Office archaeologist or the compliance officer will be contacted. If human remains are discovered, no construction activities shall be allowed until authorization is provided by the Bureau of Land Management authorized officer. In the event of the discovery of any human remains or other items covered under the Native American Graves Protection and Repatriation Act (NAGPRA), compliance with the terms of NAGPRA shall be required.

### *Evaluation Criteria*

The cultural materials will be evaluated using National Register of Historic Places (NRHP) criteria A and D (36CFR60.4, 7/1/89 edition) and various supporting state and federal guidelines for the evaluation of significant cultural resources.

Criterion A deals with historic era cultural properties and states that significant sites are those that are associated with events that have made a significant contribution to the broad patterns of history. For example, historic trails, town sites, and other localities which played a major role in the development of the west are usually considered significant.

Criterion D states that eligible properties are those which have yielded, or may be likely to yield, information important to the understanding and interpretation of history or prehistory. These data may include, but are not limited to, culturally and temporally diagnostic artifacts and features, charcoal or other materials suitable for radiocarbon dating, and preserved flora, fauna, and other materials that would provide information on prehistoric subsistence and settlement patterns. Also of interest are soils data and pollen which can provide information on past depositional regimes and paleoclimatic models. It is generally understood that physical integrity is the primary criterion necessary for cultural materials to be considered significant.

## ***CRITERIA TO BE USED EVALUATING NRHP ELIGIBILITY FOR PREHISTORIC SITES IN THE PINEDALE AREA***

Eligibility will be defined on the basis of site characteristics and data which are necessary to test the model of prehistoric land use patterns and culture change postulated in the foothills and basin margins. Eligibility determinations are derived from inventory and evaluation, including results of surface documentation and subsurface exploration.

General criteria which are applicable to all aspects of the research design include:

1. Does the site contain important paleoenvironmental information?
2. Does the site contain data by which to infer seasonality of occupation?
3. Does the site contain high quality evidence of prehistoric subsistence practices?
4. Can artifacts and/or features be associated in a definable occupation with a high degree of integrity?
5. Is the investigator able to define the size of a single occupation or series of occupations based upon horizontal extent and depth of cultural staining.
6. Does the site contain unusual remains and/or features which are not expected to occur or thought to be uncommon in the project area?

A site does not have to exhibit all of the criteria listed above to be considered NRHP eligible. Some combination of more than one of the above criteria should generally be present. The presence of one criterion in outstanding form or quality can occasionally be sufficient to justify NRHP eligibility, if adequate justification is presented by the field investigator.

1. With respect to paleoenvironmental information, stratigraphic profiles of sites should show some general indication of change in past environmental conditions, for example change in depositional regimes or pedological changes. Datable materials should also occur within stratigraphic units in order to gain chronological control over depositional and pedological events.
2. Seasonality can be inferred by the presence of items such as animal bone, egg shell, fish bone or other extremely well-preserved organic remains. Field investigators are urged to use all potential sources of information in evaluating site seasonality.
3. Well-preserved evidence of specific types of food resources utilized throughout prehistory is an important criterion for NRHP eligibility. This will primarily include plant remains and bone or functionally specific procurement or processing implements.
4. Artifacts and/or features should occur in a definable cultural level in primary context. Integrity of a cultural deposit can be inferred by the thickness of the cultural level. The thickness of the cultural level should be generally equivalent to the predicted thickness of the cultural churn zone relative to the texture of sediments. The thickness of the carbonaceous stained horizon can be used as a general indicator of the churn zone. The reader should refer to Eckerle's chapter in the Moxa Arch

Research Design for a discussion of churn zone thickness in different types of sediments (MARDT 1996).

5. An NRHP-eligible property should contain a cultural level which is a minimum size of 5m in diameter.
6. Sites containing unusual remains and/or features not expected to occur or thought to be uncommon in the project area can also be considered for NRHP eligibility. Examples include sites which contain any type of domestic architectural features (e.g. housepits, wickiups, stone circles and alignments), rock art, well-preserved processing or storage features, or bone beds, or exotic materials. Sites with a reasonable degree of integrity dating to the Paleoindian period, the Great Divide phase, Opal phase, or Firehole phase should also be considered NRHP eligible. This should not be considered an all-inclusive list.

### ***Report Production***

Upon completion of the open trench inspection, a written report will be submitted to the BLM Pinedale Field Office, which will document all cultural materials located during the trenching operations. Included in the report will be National Register evaluations of the remains and detailed site-specific data recovery recommendations (if necessary) based on established research objectives. In consultation with the reviewing agencies, any additional work will be detailed subsequent to this evaluation.

### ***REFERENCES CITED***

MARDT (Moxa Arch Research Design Team.)

1996 *Modeling Prehistoric Adaption in Western Wyoming: The Moxa Arch Archaeological Research Design*. K.W. Thompson and J.V. Pastor, compilers. Copies available from BLM-Kemmerer Field Office.