

**“A Conflict Assessment of Split Estate Issues
and a Model Agreement Approach
to Resolving Conflicts Over
Coalbed Methane Development
in the Powder River Basin”**

**Conflict Assessment Report
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Prepared For:

U.S. Institute for Environmental Conflict Resolution

Presented By:

Michele Straube, Esq.
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362

Melinda Holland, Esq.
Consensus Solutions, Inc.
700 N. Trade Ave.
Landrum, SC 29356
828-894-5963

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Executive Summary

This conflict assessment is sponsored by the U.S. Institute for Environmental Conflict Resolution, an independent federal program established by Congress to assist parties in working collaboratively to build consensus and resolve environmental, natural resource, and public lands conflicts. The assessment of selected issues associated with coalbed methane development in the Powder River Basin derives from an application by the Powder River Basin Resource Council for assistance under the Institute's Environmental Conflict Resolution Participation Program. Michele Straube and Melinda Holland, two facilitators on the Institute's Roster of Environmental Conflict Resolution Practitioners, were selected to conduct the assessment. This report documents their observations, findings and recommendations.

The conflict assessment had two primary objectives. The first was to understand the nature and extent of the ongoing conflict between developers of coalbed methane (CBM) in the Powder River Basin of Wyoming and split estate surface landowners (those who only own rights to the surface of the land, with the rights to extract the minerals under that land owned by another entity). The second was to explore the utility and possibility of using a collaborative process to develop a model legal agreement – a Surface Use and Damage Agreement (SUDA) – between surface landowners and holders of the underlying mineral rights. Furthermore, if such a model agreement were judged useful and feasible, the assessors were to develop recommendations for the design of the collaborative process and for related initiatives to address the underlying causes of CBM and split estate-related conflicts.

More than 50 individuals were formally interviewed or provided important information. The stakeholder interests interviewed included representatives from the following general categories:

- federal and state regulatory agencies;
- other state government entities;
- local government entities;
- surface landowners (split estate, full and partial mineral ownership and adjacent landowners);
- CBM development companies;
- attorneys representing landowners and/or companies; and
- non-governmental organizations.

Under *both Federal and Wyoming* law, the mineral estate is dominant. This means that the owner of CBM minerals has a superior right of access across the surface above the minerals, along with “reasonable” use of the surface, in order to develop and extract the CBM. Over 50 percent of the Powder River Basin CBM resource is in a split estate situation – where the surface land and mineral rights have separate owners. This conflict assessment addresses split estate situations where private individuals own the land surface, and the underground CBM minerals are owned either by the federal government (and managed by the Bureau of Land Management - BLM), the State of Wyoming, or other private interests (fee minerals). CBM development companies then lease the mineral rights from the owners.

Underlying Causes of Conflict

Virtually all persons interviewed agreed that split estate situations create conflict for CBM development in the Powder River Basin. No one underlying cause can be considered controlling in split estate conflicts. In many cases, one source of conflict alone will not be significant, but the cumulative impact can create mistrust and dysfunctional relationships. Based on the interviews, the underlying causes of conflict in split estate situations for the Powder River Basin fall into four general categories:

Knowledge and Communication Issues. Surface landowners often do not understand that the mineral estate is dominant, and do not have adequate knowledge to negotiate with the CBM developer. Some CBM companies use negotiation strategies designed to build a long-term working relationship with the surface landowner, while others employ a “take it or leave it” negotiating approach. Communication between the companies’ representatives, often independent contractors, and landowners can lead to misunderstandings.

Differing Values. CBM developers and surface landowners often have differing long term goals, with the companies seeking to maximize profits and expedite mineral development and the surface landowners seeking to preserve their land and way of life for future generations. The property rights ideology of the West also creates a visceral resentment in some landowners and operators which influences their communications with each other. While mutual satisfaction of disparate value sets is not impossible, the knowledge and communication issues identified above can exacerbate the conflict that differing values sets up.

Nature of CBM Development in the Powder River Basin. Knowledge and practices for CBM development in the Powder River Basin are evolving as the mineral development proceeds. Unanticipated environmental consequences of CBM practices can affect relations between landowners and developers. The variable economics of CBM development also affect a company’s willingness and ability to perceive the benefit of negotiating a comprehensive Surface Use and Damage Agreement with the surface owner.

Legal / Regulatory Context. The legal and regulatory context for CBM development in the Powder River Basin is complex. The level of planning required before mineral development can take place, and some substantive requirements of development, differ by who owns the mineral rights. The lack of case law defining what the bounds of “reasonableness” are for purposes of obtaining access under the eminent domain provisions of Wyoming law create both an incentive and disincentive for reaching agreement between landowners and developers.

Opportunities for Resolution

The authors found fundamental support among most stakeholders interviewed for the concept of a model SUDA. The vast majority felt that a collaboratively developed comprehensive model agreement, or a basic model or template accompanied by guidance on its application to individual fact situations, could be useful in reducing the level of conflict around split estate issues in the Powder River Basin. Efforts to develop such a model agreement must, however, recognize two limiting factors:

- Polarization of the Conflict. For some individuals, the conversation about CBM development

in the Powder River Basin has taken on the aspect of a crusade, and the conflict has become very personal and passionate. As a result of the polarization of the conflict, it may be a challenge to gather an inclusive and representative group of individuals to explore the parameters of a model agreement. Any collaborative effort to address split estate issues will have to be sponsored by an entity that is perceived by all to be neutral, and will need to include representatives of all major interests who have the ability and willingness to work together.

- Use of the Model Should Not Be Mandatory. Given some CBM industry members' strong resistance to regulation and restrictions of any kind, and their reluctance to negotiate comprehensive agreements with surface owners, it is unclear whether they would agree to use a model SUDA if and when developed. If BLM and/or the state decided to encourage the use of a model agreement – whether by requiring its use or giving a presumption of approval for SUDAs which follow the model – the chances of its wholesale use will be increased.

A new administration took office in Wyoming on January 6, 2003, which may provide an opportunity for all stakeholders to step back and reflect on how the current conflict affects their interests. This administration may be motivated to encourage efforts to pursue conflict resolution. In addition, BLM's recent issuance of a Final Environmental Impact Statement sets the stage for rapid and extensive development of the federally-owned CBM resource in the Powder River Basin. Access provisions and surface damage reimbursements will need to be negotiated with thousands of surface landowners before this development can proceed. This may also be the opportunity to develop a model SUDA.

Recommendations

Based on the analysis of the underlying causes of conflict around CBM split estate issues and the opportunities for resolution identified in the interviews, we developed two sets of related recommendations.

1. Use a Collaborative Process to Develop a Surface Use and Damage Agreement Template with Accompanying Guide

The primary recommendation is the creation and implementation of a collaborative process to develop a SUDA template, along with an accompanying guide to assist parties in developing site-specific agreements. The template would include a list of topics that should be addressed in SUDA negotiations, and the basic agreement provisions that all participants agree are needed. This approach was supported by the majority of stakeholders interviewed. The model would be a guide and subject to change as circumstances change. An accompanying collaboratively-developed information guide could offer:

- background on CBM development techniques/activities;
- guidelines for negotiating a SUDA;
- guidance on how to analyze, interpret and apply site-specific information in a SUDA;
- guidance on how to identify and incorporate landowner and CBM developer needs/values/concerns into the SUDA;

- a “pick-list” of optional provisions or approaches which could be used in the site-specific portions of the SUDA, if individual circumstances warrant; and
- examples of possible site-specific applications of the general topics and provisions included in the template.

Development of a SUDA template and guide should serve to standardize negotiations over these agreements, level the playing field, as well as reduce transaction costs, time expended, and conflict for all parties in negotiations. The authors also anticipate that SUDAs negotiated using the template and guide will reduce future conflicts as CBM development proceeds and the SUDA is implemented. The process of developing the template and guide can become a model of constructive interactions between landowners and developers. Individuals and organizations representative of a wide range of interests should participate in the model SUDA development process.

2. Implement Collateral Activities which Support a Model SUDA and Address Fundamental Causes of CBM Conflicts

Several additional activities should be undertaken to support the development and application of a model SUDA, and to aid the management of CBM-related conflict whether or not a SUDA is developed and proves useful.

a. Provide Training in Communications and Interest-Based Negotiation Skills

During the interviews, we repeatedly heard how the negotiating style used by some CBM developers (and some landowners) creates conflict. Training in interest-based negotiation (the “mutual gains” approach taught in law and business schools and most alternative dispute resolution programs around the country) should be offered for all participants in the collaborative process to develop a model SUDA. In addition, such training may prove useful for anyone involved with negotiating site-specific agreements, including:

- landowners and their representatives, possibly offered through an association such as the Farm Bureau or individual associations;
- individuals who negotiate for companies, possibly offered through the Petroleum Association of Wyoming or the American Association of Professional Landmen or its Wyoming equivalent; and
- other interested individuals, possibly offered through the State.

b. Expand Dissemination of Existing Information

Landowners expressed a great deal of frustration during the interviews about the difficulty of obtaining information about who has leased or owns the minerals beneath their land, regulatory information, etc. The authors recommend that surface estate owners be given notice when the minerals under their land have been leased. The notice will likely need to be given by a government agency (BLM for federally-owned minerals, Wyoming State Lands and Investments for state-owned minerals, and possibly the Wyoming Oil and Gas Conservation Commission for fee minerals).

We also recommend the creation of an on-line source of information, or improvement and

expansion of existing web resources, to provide easy access and links to a wide range of CBM-related information for those who have access to the internet.

Based on our interviews, we recommend that federal, state, and local agencies make available or expand access to independent technical information for landowners that will help them explore site-specific solutions to CBM development problems and issues.

c. Increase Access to Alternative Dispute Resolution Services

In the stakeholder interview process, the authors heard many parties suggest alternative dispute resolution techniques to minimize and resolve conflicts related to CBM development and negotiation of SUDAs. Interviewees' suggestions included mediation for SUDAs, creation of a state ombudsman, and statutorily mandated arbitration. We thus recommend that alternative dispute resolution services be offered for split estate issues, but that the only processes considered should allow the parties to retain control over the ultimate solution. An alternative dispute resolution process that encourages good communication and development of working relationships, such as mediation, is preferable.

d. BLM Should Consider Creation of a Wyoming Resource Advisory Council

Interest in creating a Wyoming BLM Resource Advisory Council (RAC) was expressed by some BLM representatives during the interview process. Wyoming is the only western state that does not have a BLM RAC. Resource Advisory Councils operate on principles of collaboration and consensus, with the intent to enable an area's citizens to have a meaningful say concerning planning and management of the public lands and resources.

Creation of a Wyoming RAC could help to address and resolve some of the causes of conflict regarding CBM development of federal minerals. A BLM representative involved with management of RACs indicated that a Wyoming RAC could create a subgroup to focus on advising BLM on ways to reduce disputes between CBM developers of federal minerals and corresponding surface landowners. The subgroup recommendations could then be adopted by the full RAC and transmitted to Wyoming BLM officials. As creation of an Advisory Council through the Federal Advisory Committee Act process can be time consuming, the authors recommend that the dialogue on creation of a SUDA template and guide proceed independent of BLM consideration of creating a RAC.

I. Introduction and Background

A. The U.S. Institute and the Genesis of This Assessment

The U.S. Institute for Environmental Conflict Resolution is an independent federal program established by the U.S. Congress to assist parties in working collaboratively to build consensus and resolve environmental, natural resource, and public lands conflicts. A brief description of the Institute's programs and services and its position as an independent agency within the federal government is provided in Appendix 1.

One of the U.S. Institute's programs is the Environmental Conflict Resolution Participation Program. This is a competitive application program for non-federal organizations engaged in or contemplating a collaborative process involving a federal agency or interest regarding public lands, natural resources or the environment. The Institute offers consultation, financial assistance and project oversight to selected applicants.

In July 2002, the Powder River Basin Resource Council¹ applied to the Environmental Conflict Resolution Participation Program for assistance in investigating split estate issues involved with coal bed methane development in the Powder River Basin of Wyoming. The Resource Council is a grassroots organization of individuals and affiliate groups dedicated to the stewardship of Wyoming's resources. Concerned about the effects on landowners of coal bed methane development and conflicts that emerge from the split estate between surface and mineral owners, the Resource Council proposed a project focused on using a collaborative process to develop a model agreement between landowners and coal bed methane developers as an approach to managing split estate conflicts. The U.S. Institute agreed to investigate the utility of a model agreement approach by conducting a conflict or situation assessment – exploring with stakeholders the issues, concerns, and promises that lead to conflict; whether a collaboratively developed model agreement would be useful in helping to manage conflict; and, if so, who should and who would be willing to participate and how such a process might be structured.

The team of Michele Straube and Melinda Holland was selected to assist the Institute in conducting the assessment. Both are independent and experienced facilitators and mediators with keen interests in energy development in the West. Both are also members of the Institute's Roster of Environmental Conflict Resolution Practitioners. Brief biographical sketches for Ms. Straube and Ms. Holland are included in Appendix 2.

This conflict assessment had two primary objectives. The first was to understand the nature and extent of the ongoing conflict between developers of CBM in the Powder River Basin of Wyoming (referred to in this report as the Powder River Basin) and split estate surface landowners (those who only own rights to the surface of the land, with the rights to extract the minerals under that land owned by another entity). The second was to explore the possibility and utility of developing a model legal agreement (a Surface Use and Damage Agreement or SUDA) between surface landowners and holders of the underlying mineral rights. Furthermore, if such a model agreement were judged useful and feasible, the assessors were

¹ <http://www.powderriverbasin.org/prbrc/index.htm> .

to develop recommendations for the design of the collaborative process and for related initiatives to address the underlying causes of CBM and split estate-related conflicts.

This report is a communication by the authors to the U.S. Institute. It has been reviewed by the Institute and the authors have incorporated the the Institute's comments. The report has not been reviewed by any other organization or by any of the individuals interviewed during the assessment process. It reflects the authors' observations and recommendations regarding the nature of conflicts related to coal bed methane development in Wyoming's Powder River Basin, especially as affected by split estate laws and their application; the utility of a model agreement between energy companies and landowners; and how to proceed in developing a model agreement.

B. Coalbed Methane in the Powder River Basin

Coalbed methane is natural methane gas produced by bacterial or thermal/chemical activity within coal seams. Approximately 56 percent of the total coalbed methane (CBM) production in the U.S. has come from the Rocky Mountain states of Colorado, New Mexico, Montana, Utah, and Wyoming. The Powder River Basin coalbed methane production area of Wyoming is located in the North East corner of the state and includes Campbell County, and parts of Sheridan, Converse, and Johnson Counties. The first CBM wells were drilled in the Powder River Basin in 1986, with a total of approximately 13,000 wells drilled by 2001.

Estimates of coalbed methane reserves in the Powder River Basin range from 6 to 40 trillion cubic feet of natural gas, making the Basin potentially one of the larger sources of natural gas in the U.S. Because the gas may be obtained from fairly shallow wells, drilling costs are reasonable and technical risks are low, making the PRB coalbed methane development very attractive to the natural gas industry. It is hoped that natural gas from the Powder River Basin will play an important role in meeting the United State's growing needs for clean energy. Development of natural gas including coalbed methane plays a major role in the Bush administration's energy policy, which states that the projected shortfall between energy supply and demand in 2020 is nearly 50 percent. Natural gas is a relatively clean-burning fuel, thus it is desirable from an air quality perspective.

The federal government owns 63% of the subsurface mineral rights in the Powder River Basin, which extends into Wyoming and Montana. Approximately 65% of the surface over those federal minerals is owned privately. Development of the coalbed methane resource in the Basin is on the verge of a significant expansion. This is due to the fact that BLM has postponed development of federally-owned CBM minerals until completion of a Final Environmental Impact Statement (FEIS). Thus most of the coalbed methane development in the Powder River Basin to date has occurred on mineral rights owned by the state or private interests. The FEIS, covering the Wyoming portion of the Powder River Basin, was issued in January 2003. The State of Montana also has a one-year moratorium on all CBM development.

The BLM FEIS² predicts that an estimated 39 - 40,000 additional CBM wells will be drilled over

² The BLM Powder River Basin coalbed methane FEIS may be viewed or downloaded at: <http://www.prb-eis.org/prb-feis.htm> . Additional information may be obtained from the BLM Buffalo Field Office, 1425 Fort Street, Buffalo, Wy. 82834-2436; phone: 307-684-1100.

the next 10 years on federally-owned minerals in the Wyoming portion of the Powder River Basin project area, which encompasses over 8 million acres. Construction of wells is expected to begin in 2003. BLM estimates that development of this number of wells could disturb as many as 212,000 acres, of which approximately 109,000 acres would experience long-term effects. Split estate surface owners may see extensive CBM development activities on their land in the next few years.

Significant levels of controversy already exist as a result of ongoing CBM development on non-federally-owned lands and minerals.³ Much of the controversy stems from the split ownership of the surface of the land and the underlying mineral rights that is prevalent in the Powder River Basin. Because the mineral rights owner has a dominant legal right to access and develop the minerals, those who own only surface rights often feel that their property rights have been violated during the process of CBM development. Other controversial aspects of CBM development include:

- Production of large volumes of groundwater;
- Disposal of produced water;
- Impacts on downstream water quality;
- Increased dust, air pollution, and noise;
- Impairment of visual or aesthetic resources;
- Damage to drinking water resources;
- Disturbance of wildlife, alteration and loss of habitat;
- Damages to the surface owners' resources or operations; and
- Negotiation of legal agreements for access to the surface and for damages to surface uses.

The state of Wyoming has been actively promoting development of the CBM minerals it owns. CBM companies have also been steadily developing privately-owned (fee) minerals, the majority of which involve split estate situations. Once the development of federally-owned CBM begins, the already significant levels of controversy between surface owners and developers likely will increase.

C. Conflict Assessment Report

The methodology used for the conflict assessment is described in Section II of this report. Section III provides an overview of the highly complex legal and regulatory context for CBM development and split estate issues in the Powder River Basin. A basic understanding of the legal and regulatory issues is needed to comprehend the underlying causes of the conflicts analyzed in this report.

Section IV summarizes what the authors learned from the interviews about the utility of, and suggestions for developing, a model Surface Use and Damage Agreement. Section IV also discusses the major stakeholders' motivations, the relationships between interest groups, equity issues and general concerns expressed by the interviewees, and describes other relevant

³ For additional background on the issues see the New York Times article entitled "Ranchers Bristle as Gas Wells Loom on the Range" which may be viewed at: <http://www.nytimes.com/2002/12/29/national/29METH.html?todayshheadlines> .

collaborative efforts related to Powder River Basin split estate issues.

The analysis portion of the report (Section V), identifies the underlying causes of conflict in split estate situations for the Powder River Basin. It also outlines possible barriers to, and opportunities for, development and use of a model agreement. The recommendations in Section VI translate this analysis into practical opportunities for conflict management.

For a glossary of acronyms used in this Conflict Assessment Report please see Appendix 3.

II. The Conflict Assessment Methodology

The first step in the conflict assessment was gathering and reviewing background information obtained from the U.S. Institute, the Bureau of Land Management (BLM), the State of Wyoming, and other agencies and organizations involved in coalbed methane (CBM) development and split estate issues in the Powder River Basin. The authors also undertook extensive legal and internet research, and read recent newspaper articles about CBM and split estate issues in Wyoming. For a partial list of internet addresses used in this research please refer to Appendix 4.

Interviews were conducted in person or by telephone with key stakeholders who might have an interest in split estate issues related to CBM development in the Powder River Basin. Based on the background research, the authors developed a preliminary list of 20-30 organizations and individuals to interview, and sent letters of introduction. Additional interviews were conducted based on the findings from these initial conversations, which often included the names of other individuals with relevant experience and perspectives. Approximately 50 individuals were formally interviewed or provided important information.⁴ The individuals interviewed included those who support CBM development in the Powder River Basin, and those who do not. They also included people who have had positive landowner - developer experiences, and those who have experienced difficulties. The stakeholder interests interviewed included representatives from the following general categories:

- federal and state regulatory agencies;
- other state government entities;
- local government entities;
- surface landowners (split estate, full and partial mineral ownership and adjacent landowners);
- CBM development companies;
- attorneys representing landowners and/or companies; and
- non-governmental organizations.

The authors offered interviewees confidentiality to encourage them to be candid in our conversations. As was explained to the interviewees, this final report reflects what the authors heard in the interviews, but every effort has been made to avoid attribution to specific individuals or organizations (unless the individual stated that attribution was acceptable). The authors express their gratitude to those interviewed for sharing their experiences and opinions freely.

The letter of introduction, and the list of stakeholders interviewed, are attached to this assessment report as Appendices 5 and 6. Although no formal list of interview questions was prepared, in part to allow the person interviewed to share all information they felt relevant to the assessment, a list of general topics pursued in the interviews is attached as Appendix 7.

The interviews were used to identify:

⁴ A small number of individuals declined to be formally interviewed, but did engage in substantive conversations with either one of the authors. Despite their wish not to be identified as participating in the assessment process, their perspectives and suggestions inform the report.

- 1) the split estate and other issues of controversy;
- 2) the interests and positions of the parties, as well as their BATNAs (best alternative to a negotiated agreement or resolution of the controversy);
- 3) the factual and legal context of the controversy; and
- 4) interviewees' suggested options for resolving split estate issues, including the utility of a model surface use and damage agreement.

Based on the information received from the interviews, and our independent research and analysis, the authors developed recommendations and prepared this report. The assessment report makes recommendations on the possible design of a collaborative dialogue with a focus on developing a model or template surface use and damage agreement as a means to assist in resolving split estate conflicts between landowners and coalbed methane developers in the Powder River Basin. It also includes recommendations on other approaches that may be useful for addressing split estate-related conflicts.

The draft assessment report was reviewed by the U.S. Institute, and this final report reflects their input. Despite requests from several stakeholders, no individual or entity other than the U.S. Institute received a copy of, or reviewed, the draft conflict assessment report. This is common practice to maintain the independence of the conflict assessment. As a consequence, the authors take full responsibility for any errors, misstatements or omissions. This conflict assessment report is also not intended to be an in-depth research report or legal/regulatory analysis. Instead, it is intended to provide a high-level overview of the circumstances and issues involved in the conflict, and offer analysis and recommendations.

This final conflict assessment report will be distributed to all stakeholders who were interviewed, and is available to anyone who would like a copy. The report is posted on the U.S. Institute for Environmental Conflict Resolution's website at: www.ecr.gov.

III. Legal and Regulatory Context for CBM Development and Split Estate Issues in the Powder River Basin

The legal and regulatory context is key to understanding the nature of the conflict between split estate surface owners and CBM mineral developers in the Powder River Basin, and the opportunities for resolution. It is an extremely complicated topic, about which many law review articles have been and are being written. The following summary captures the essence of the issues, and is not intended to provide comprehensive legal research or advice. It is based on our independent research, and information gathered during the interview process.

A. Mineral Estate is Dominant

Under *both Federal and Wyoming* law, the mineral estate is dominant. This means that the owner of CBM minerals has a superior right of access across the surface above the minerals, along with “reasonable” use of the surface, in order to develop and extract the CBM. The surface owner, in situations where that is a different entity than the mineral owner, has the right to be repaid for damages caused by the mineral developer. The authors are unaware of Wyoming case law defining the scope of reimbursable damages related to CBM development.

Although no damage agreement is required by law as a precondition to access,⁵ CBM developers generally do initiate negotiations with split estate surface owners to formalize the grant of access and to quantify, in advance of development, the damages that will be paid. These negotiations are formalized in a Surface Use and Damage Agreement (SUDA).

In cases where negotiations for a SUDA are unsuccessful, or when the CBM operator reaches a point of frustration in the negotiations, the operator can institute eminent domain proceedings in state court to condemn an easement covering construction, maintenance and operation of all facilities necessary to develop the CBM resource. The easement, or right of access to the surface owner’s property, granted by the court could include the wells, roads, reservoirs, pumping stations and other facilities. At a later time, the court will hold a trial to determine the appropriate damages to be paid to the surface owner.

In order to prevail in an eminent domain proceeding and obtain court-ordered access over the surface to develop the CBM, the operator must prove that it made “reasonable and diligent efforts to acquire [the] property by good faith negotiations.”⁶ It is presumed that good faith negotiations have occurred if the operator discusses the following topics with the surface owner:

- valuation or damages recognized by law;
- extent or nature of property interest needed for CBM development;
- quality, location or boundary of property needed for CBM development;
- management of improvements and personal property during CBM development;

⁵ See, *Mingo Oil Producers v. Kamp Cattle Co.*, 776 P.2d 736 (Wyo. 1989).

⁶ By “acquir[ing the] property,” the court is referring to the operator’s obtaining the legal right to use the property for specified uses, not acquiring full title to the property.

- date of proposed entry and use of the property;
- time and method of agreed compensation; and
- any other terms and conditions deemed appropriate by either party.

While condemnation actions have been filed in the Powder River Basin, our interviews indicated that most have settled on the courthouse steps. There is one case pending that may provide guidance on what level of disruption to the surface is “necessary” for CBM development.⁷

B. Regulation of CBM Extraction

This section briefly discusses the regulatory process and approvals required to develop CBM in the Powder River Basin. This information is summarized in the following chart, making it easier to compare the nature and extent of regulatory controls according to mineral ownership. (See Appendix 3 for definitions of acronyms)

⁷ *Wyoming Resources Corp. v. T-Chair Land Co.*, 49 P.3d 999 (Wyo. 2002), requiring the trial court to consider whether the use of the surface property, in this case the management of produced water, was “necessary” for CBM development, and whether the operator had complied with “good faith negotiations” requirements.

Regulatory Approvals According to Mineral Ownership

Point in Process	Regulatory Requirement / Issuing Authority	Federally-Owned Minerals	State-Owned Mineral	Privately-Owned (Fee) Minerals
Pre-Lease	Resource Management Plan	√		
Mineral Lease	Competitive Bids	√ BLM	√ WY State Ofc Lands & Invests	
Mineral Development	Plan of Development (POD) - BLM <i>(not a requirement)</i>	√		
	Application for Permit to Drill (APD) - BLM	√		
Access to Surface	bonding on - BLM	√		
	eminent domain - state law	√	√	√
Fracing (hydraulic fracturing)	not currently regulated under WDEQ UIC program			
Well Construction	Permit and bond -WOGCC	√	√	√
	Water Well Mitigation Agree.	√		
Water Withdrawal	Permit - WY State Engineer	√	√	√
Produced Water Discharge into surface waters	NPDES permit - WDEQ	√	√	√
into off-channel containment pit	NPDES general permit - WDEQ (beneficial use only)	√	√	√
	reservoir permit - WY State Eng. (beneficial use only)	√	√	√
	pit construction approval and bond - BLM	√		
	pit construction approval and discretionary bond - WOGCC		√	√
into on-channel reservoir	reservoir permit - WY State Engineer	√	√	√
other methods E.g., spray irrigation, atomizer	unregulated, unless causes direct discharge			
reinjection	UIC permit - WDEQ	√	√	√
Activity in Wetlands	Clean Water Act § 404 permit - USACE	√	√	√
Compressors	air permit - WDEQ	√	√	√
Dust	currently unregulated			
Noise	regulated at local level, if at all			

1. Federally-Owned Minerals

The development of federally-owned minerals is a multi-step process that involves several levels of review, moving from an overview of the entire CBM field regarding its suitability for development, to leasing of areas within the CBM field to individual operators, to review and approval of a lessee's large scale plan of development, to granting permission to drill and operate individual CBM wells.⁸ In the Powder River Basin, all these activities are under BLM jurisdiction. In January 2003, BLM issued a final environmental impact statement (FEIS) in support of expanded CBM development in the Powder River Basin.⁹ Unless the FEIS is appealed and a court injunction is issued, the issuance of the FEIS sets the stage for full-scale development of federally-owned CBM minerals in the Powder River Basin.

a. Land Use / Resource Management Plans

Under the Federal Land Policy and Management Act, BLM is required to develop land use plans (known as Resource Management Plans or RMPs) to address all "reasonably foreseeable development" within the geographic area covered by the plan. The RMP establishes land area use, resource uses, resource goals and objectives, and management practices. It identifies those portions of the plan area that will be open to leasing, exploration and development.

In 1985, BLM developed a RMP covering oil and gas development in the Powder River Basin (referred to generally as the Buffalo¹⁰ RMP). While BLM has issued CBM leases under the Buffalo RMP, three such leases were recently invalidated by an administrative law judge and remanded to BLM for additional environmental review.¹¹ The decision states that the Buffalo RMP did not specifically consider CBM as "reasonably foreseeable development" in the Powder River Basin, and could therefore not be used to justify issuance of the three CBM leases at issue. This decision is currently under appeal.

As part of its ongoing planning efforts for the Powder River Basin, the BLM Buffalo Field Office recently released a final environmental impact statement (FEIS) evaluating development of federally-owned CBM resources in the Powder River Basin. The FEIS may serve as support for amendments to the Buffalo RMP to incorporate CBM as a "reasonably foreseeable development." The FEIS also states that BLM will use its findings to decide whether additional environmental management stipulations need to be added to existing CBM leases in the Powder River Basin.

⁸ BLM's "Surface Operating Standards For Oil and Gas Exploration and Development" (3rd Edition, also known as the "Gold Book") may be found at: <http://www.mt.blm.gov/oilgas/operation/GoldBook.pdf> .

⁹ *Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project*, U.S. Department of the Interior, Bureau of Land Management, Wyoming State Office, Buffalo Field Office. January 2003. WY-070-02-065.

¹⁰ The name refers to the issuing office, the BLM Buffalo Field Office.

¹¹ *Wyoming Outdoor Council*, 156 IBLA 347 (4-6-02), and denial of reconsideration on 10-17-02).

b. Mineral Lease

BLM initiates a competitive bidding process prior to issuing leases. BLM's standard lease terms require the lessor to "minimize adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users."¹²

c. Plan of Development (POD)

BLM *requests* CBM developers to submit for approval a plan of development (POD)¹³ and encourages plans that cover multiple wells. The intent of *the POD* is to assess the cumulative impacts of development. BLM can require companies to consolidate infrastructure on the basis of the POD, where this will minimize surface disturbance and environmental impacts of CBM development.

The information submitted to BLM as part of the POD includes:

- master drilling plan;
- master surface use plan (roads, wells, water supply, facilities, waste disposal, reclamation plans, etc.);
- water management plans (exploratory and permanent);
- project map; and
- applications for permit to drill (APD) for individual wells included in the POD.

The POD (or APD) must also contain a certification that a water well mitigation agreement was offered to all landowners with permitted water wells within the circle of influence of each proposed well covered by the POD. BLM *encourages* the use of a model water well mitigation agreement to permit applicants (the model may be found in Attachment G of the Final Environmental Impact Statement¹⁴). The BLM Buffalo Field Office facilitated negotiation of this model agreement between landowner, agency, and developer representatives, then BLM adopted the resulting consensus agreement. This water well agreement form provides that the circle of influence for impacts to water wells is a one-half mile radius from a CBM well. The agreement also describes the conditions under which the CBM producer is responsible for replacing impaired water wells and water supplies, and provides monitoring and testing requirements. The agreement provides for resolution of disputes under the agreement by a special arbitration board.

BLM cannot guarantee access to federally-owned minerals under surface property that it does not own, despite Wyoming law's provisions that the mineral estate is dominant. In split estate situations, BLM will not approve the POD (or APD) unless the operator certifies that it has entered into a Surface Use and Damage Agreement (SUDA) with the surface owner. BLM does not generally review the content of the SUDA, relying on the fact of its existence to demonstrate that access will be provided. Interviewees stated that, in certain circumstances,

¹² BLM Standard Lease Term No. 6.

¹³ For a sample POD from BLM's web site see:
<http://www.mt.blm.gov/oilgas/operation/samplepod.html> .

¹⁴ http://www.prb-eis.org/Vol_3/Appndx_G.pdf .

the BLM provides conditional approval of the POD (or APD), pending the operator's obtaining access through legal proceedings.

Where an operator is unable to negotiate a SUDA with the split estate surface owner, the operator can provide a bond under the bonding-on procedures of the Stock-Raising Homestead Act of 1916. The bond amount is calculated to compensate the surface owner for damages caused by the CBM development, including crops, tangible improvements, loss of grazing land, and adverse water impacts. The surface landowner is notified by BLM when a bond is posted, and BLM will not approve the POD or APD until after a 30-day appeal period has passed. The BLM Wyoming Office indicated that only three bonds had been issued for CBM development, and that the bond amounts have ranged from \$1,000 to \$5,000, based on inspections to estimate possible future damages.

BLM's Buffalo Field Office indicated that they give notice to surface owners when BLM begins review of a POD. They also offer surface owners the opportunity to accompany BLM and company staff during on-site inspections in support of POD/APD review. According to BLM order, these inspections should occur within 15 days of BLM's receipt of the POD/APD.

d. Application for Permit to Drill (APD)

An Application for Permit to Drill must be submitted for each individual well, whether or not the operator has submitted a POD for approval. While much of the supporting information for a POD and APD appears to be the same, and the two applications are often submitted together, the APD must include well-specific drilling, surface use, and water management information.

e. Hydraulic Fracturing (Fracing)

Hydraulic fracturing (fracing) is a process which is sometimes used to free the groundwater and CBM from the coalbed in which it is found. Fracing may require an underground injection control permit under the federal Safe Drinking Water Act.¹⁵ However, the Wyoming Department of Environmental Quality does not currently regulate CBM-related fracing under its Underground Injection Control program. Wyoming Department of Environmental Quality officials stated that fracing has not been necessary yet to access the CBM resource in the Powder River Basin, so the permitting question has not arisen.

f. Well Construction

A well construction permit issued by the Wyoming Oil and Gas Conservation Commission is required before a CBM well can be drilled. The Wyoming Oil and Gas Conservation Commission regulates well drilling, casing and any plugging required to prevent the escape of gas. It reviews well construction, spacing and density.

The Wyoming Oil and Gas Conservation Commission has authority to regulate well location, disposal of salt water and contamination or waste of underground water. It requires the well operator to post a bond in an amount adequate to cover the costs of plugging a dry or abandoned well. The bond does not cover reclamation.

¹⁵ *Legal Environmental Assistance Foundation, Inc. v. US EPA*, 276 F.3d 1253 (CA 11, 2001).

g. Water Withdrawal

The process of extracting CBM begins with withdrawing groundwater to release the pressure within the coal seam and allow the methane gas to begin flowing. Wyoming state statute limits groundwater withdrawals to those for beneficial uses. The state has determined that CBM extraction is a beneficial use. Operators must therefore obtain a permit from the Wyoming State Engineer to appropriate groundwater as one of the first steps in CBM extraction.

In determining whether a water withdrawal permit should be issued, the Wyoming State Engineer confirms the beneficial use for which the water is needed, which also serves as confirmation that the groundwater will not be wasted. Water withdrawal permits may be denied if “demanded by the public interests.” Our research reflects that water withdrawal permits for CBM development activities are routinely granted.

h. Produced Water

The groundwater withdrawn during CBM extraction, called “produced water,” must be disposed of in some way. Due to the volume of water extracted, and in response to regulatory and ecological concerns, new approaches to handling produced water seem to be evolving over time. This summary includes the produced water disposal methods that the authors learned about during the interviews.

Direct Discharge to Surface Waters

In many cases, the easiest way of handling produced water is to discharge it directly into a stream or ditch. If the receiving channel is a “navigable water” as defined in federal statute, the operator must obtain a National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act from the Wyoming Department of Environmental Quality prior to discharge. The permit is intended to regulate the chemical quality of the discharge. Since there are no national technology-based effluent limitations for the CBM industry, no prescribed treatment of produced water is required. Instead, discharges must not degrade the receiving waters so as to affect state-promulgated in-stream water quality standards. For the Powder River Basin, the in-stream water quality standards are narrative (as opposed to numerical)¹⁶ and designed to protect agricultural use of the water for irrigation. Depending on the chemical nature of the produced water and the existing water quality of the receiving stream, treatment of the produced water prior to discharge into surface waters may be required in order to maintain suitability of the in-stream water for irrigation uses. The primary pollutant of concern in produced water is total dissolved solids - “salt” in common parlance. High salt content makes the water of poor quality or unusable to raise crops or water stock.

Operators in the Powder River Basin cannot currently discharge produced water directly into the

¹⁶ NPDES permits issued under the Clean Water Act set limits on the level of pollutants that a facility may discharge to a surface stream. These effluent limits are calculated in part to maintain the desired water quality of the receiving stream. The water quality standards for the receiving stream are set by state regulation, and are often expressed in numerical terms – e.g., xx parts per million. Thus, the numerical effluent limit in a NPDES permit is calculated as the amount of a given pollutant that can be discharged without bringing the receiving stream water quality above xx parts per million. By contrast, the water quality standards for the Powder River Basin are expressed in narrative form (to protect use of the receiving stream water for irrigation).

Powder or Tongue Rivers or their tributaries. Due to concerns at the federal and state levels about possible water quality impacts in Montana, the downstream state, Wyoming has issued a prohibition against such direct discharges. BLM's Final Environmental Impact Statement for CBM development in the Powder River Basin incorporates this concern by choosing a development alternative that emphasizes infiltration of produced water to minimize the volume of water reaching surface streams.

The prohibition on direct discharge of produced water to the Tongue and Powder Rivers has required operators to find alternative methods for handling produced water from most CBM wells in the Powder River Basin.

On-Channel Reservoirs

Many landowners wish to use the produced water for stock watering. Historically, ranchers with intermittent streams running through their land have built on-channel reservoirs (small dams) to impound stream water during high flow for stock watering use throughout the summer. CBM operators can use existing on-channel reservoirs (or enlarge them), or build additional reservoirs to contain produced water for landowner use.

On-channel reservoirs built for beneficial use (such as stock watering or dust control) are permitted by the State Engineer. In cases where the reservoir holds CBM produced water, the permit is issued in the name of the landowner (the beneficial user). It remains to be seen whether the State Engineer would hold the landowner and/or the CBM operator liable for complying with applicable water quality standards, maintaining the reservoir, and breaching or reducing reservoir size as CBM produced water production decreases over time.

Off-Channel Containment Pits

Following the prohibition against direct discharge of produced water into the Tongue and Powder Rivers or their tributaries, operators increased their reliance on man-made upland impoundments (off-channel containment pits), often built near the wellhead, to hold produced water. The use of containment pits appears to have been unanticipated by the regulatory community, and initial regulatory responses were contradictory. The four agencies with primary responsibility over such pits have recently issued joint guidance to clarify the regulatory requirements for off-channel containment pits.¹⁷

All off-channel containment pits, regardless of the use (or not) to be made of the produced water, must receive regulatory approval prior to construction. The construction approval is issued by a different agency, depending on mineral ownership. For water produced from federally-owned minerals, BLM will issue the construction approval. BLM reviews siting, water quality, and pit construction, and requires operators to post a closure and reclamation bond.

The Wyoming Oil and Gas Conservation Commission issues construction approval for containment pits holding water produced from state-owned and fee minerals. The Wyoming Oil

¹⁷ *Permitting Requirements Associated with Off-Channel Containment Pits*, dated 10-12-02. These guidelines were developed jointly by the Wyoming Department of Environmental Quality, the Wyoming Oil and Gas Conservation Commission, BLM and the Wyoming State Engineer, and were approved by the Wyoming Department of Environmental Quality Water and Waste Advisory Board on 10-1-02.

and Gas Conservation Commission has drafted siting guidelines for operators to follow, and “routinely” requires the operator to identify where a pit will be sited before giving approval. Closure and reclamation bonding is required at the Wyoming Oil and Gas Conservation Commission’s discretion. No bond will be required in instances where the landowner has signed a statement that it will continue to use the off-channel containment pit after CBM production has ceased.

Construction of an off-channel containment pit in a wetlands area additionally requires a dredge and fill permit under the federal Clean Water Act, issued by the U.S. Army Corps of Engineers.

If the water to be contained in the off-channel pit has designated uses (such as livestock watering, wildlife use, irrigation), the operator must obtain an NPDES permit for the produced water discharge from the Wyoming Department of Environmental Quality. The Wyoming Department of Environmental Quality has developed a general NPDES permit,¹⁸ which is designed to reduce the administrative burden and time required to receive Wyoming Department of Environmental Quality approval for off-channel containment pits. According to the Wyoming Department of Environmental Quality, the produced water disposed in off-channel pits is prohibited from reaching the surface water of the state, whether directly or through a subsurface hydrologic connection.

Off-channel containment pits containing produced water that will be used for designated uses must also obtain a reservoir permit from the State Engineer. Depending on the size of the pit, construction requirements may apply to prevent catastrophic impoundment failure.

Discharge onto Land

Direct discharge of produced water onto land as a disposal method is prohibited. The authors nevertheless heard several anecdotes during our interviews of produced water flowing overland, often onto a neighboring property. The authors do not know enough about each incident, however, to conclude whether the overland flow was intentional or was caused by a failure of other produced water disposal methods. We did learn of one instance in which The Wyoming Oil and Gas Conservation Commission used its enforcement authority to stop production at a CBM well that was causing the uncontrolled discharge of produced water over land.

In response to the limitations and expense of the produced water disposal methods described above, some operators are looking for alternative ways of managing produced water. In addition, some operators are experimenting with land application methods that might be beneficial to the landowner. The authors heard examples of sprinkler irrigation and atomizers, where the produced water is applied to the land surface using dispersion technology. It is our understanding that these types of produced water management are not prohibited, but are also unregulated, unless they result in a direct discharge to surface water. Some interviewees expressed concern, however, that unless well-designed and closely monitored, such methods could result in saturated saline soils or damaging soil water chemistry interactions.

¹⁸ Under the NPDES program, an agency can issue a “general” permit by regulation. Such a permit is generally applicable to a particular type of activity. Any person who conducts that activity and meets the requirements listed in the general permit regulation can notify the agency that they wish to be covered by the general permit. This eliminates the need for individual permit applications, and extensive case-by-case agency analysis. A site-specific permit is never issued.

Reinjection

In other areas of the country, CBM operators reinject the produced water back into groundwater, sometimes into the same aquifer from which it came and sometimes into other aquifers. Some operators in the Powder River Basin have experimented with this method, but it is not generally being used. Some interviewees stated that re-injection does not work in their area because the geologic formations will not accept the volumes of water that need to be re-injected. Jurisdiction for permitting of produced water re-injection is apparently split between EPA and the Wyoming Oil and Gas Conservation Commission, and falls under the underground injection control program of the federal Safe Drinking Water Act. Which agency has primary jurisdiction over the reinjection activity depends on the amount of total dissolved solids in the produced water. The Wyoming Oil and Gas Conservation Commission told us that its current policy not to re-inject “good” water into an aquifer with worse water quality is probably the reason that re-injection has not been used in the Powder River Basin.

i. Air Emissions

Once extracted, gaseous methane needs to be compressed to facilitate storage and transport. The Wyoming Department of Environmental Quality issues air quality permits for compressors associated with CBM development.

Dust from roads is apparently unregulated, unless the dust occurs in the vicinity of a permitted compressor. Our interviews revealed that dust is an issue in at least one county in the Powder River Basin; Campbell County is at risk of becoming a non-attainment area under the Clean Air Act, with dust as one of the contributing factors.

j. Noise

While noise was mentioned as a concern by many landowners interviewed during this conflict assessment, the authors found no evidence of state or federal regulations on noise levels. Noise may be regulated by local government, but such regulations were not revealed by the research conducted for this conflict assessment.

2. State-Owned and Privately-Owned Minerals

The regulation of state-owned and privately-owned (fee) minerals differs from that of federally-owned minerals in one major respect – well-field plans of development and the cumulative impacts of CBM development are not reviewed by a government agency at any point in the development process. This leaves consideration of such concerns to the negotiations between the surface owner and operator (perhaps resulting in a SUDA), if they are discussed at all.

Individual activities necessary to develop the state-owned or fee CBM resources are permitted in the same manner as for federally-owned minerals. Thus, the operator must obtain relevant permits or approvals for the following activities:

- fracing;
- well construction;
- water withdrawal;
- management of produced water; and
- emission of air pollutants.

In the case of split estate surface ownership, no SUDA is required by law or regulation for state-owned and fee minerals. SUDAs that are entered into are not reviewed by any state agency. Our interviews revealed that the state agencies feel they do not have jurisdiction over such private transactions. The authors are also unaware of any policies or requirements at the state level under which a split estate landowner is given notice that an operator has taken steps to develop the CBM resource underlying their surface.

IV. Perspectives on the Utility of a Model Surface Use and Damage Agreement and Other Issues Identified in the Conflict Assessment Process

This section summarizes what the authors learned through the conflict assessment process, incorporating information gathered from the interviews. The first part of this section summarizes the comments of landowners, mineral developers, government entities, and environmental/landowner organizations on the utility of a model Surface Use and Damage Agreement (SUDA), relationships between interest groups, equity issues and general concerns. The second portion gives an overview of these parties' suggestions for the contents of a model or template SUDA. Other relevant efforts related to split estate issues in the Powder River Basin revealed during the interviews are discussed at the end of this section. During the interviews, people shared a wide range of thoughts on CBM development beyond split estate and SUDA issues. Significant observations that fall outside the scope of this conflict assessment have been compiled in Appendix 8.

A. Parties' Interests and Concerns Regarding Surface Use and Damage Agreements

1. Landowners

This section covers interviews with all types of landowners including split estate owners, those who own some or all of the minerals under their land, and downstream landowners. Unique perspectives provided by downstream landowners and those who own some or all of the minerals are set out separately. Fourteen landowners were interviewed whose land holdings ranged from 90 acres to 500,000 acres. Most of these landowners are involved in active ranch operations, although some of the smaller ranches are used for personal instead of business purposes.

a. Key Landowner Interests

Landowners stressed the importance of understanding each owner's values and needs from the land, as they may differ greatly from landowner to landowner. Important landowner values include unspoiled visual aesthetics, silence and remoteness, protecting special areas, sufficient amount of clean water, passing pristine land on through generations of the family, sustainable stewardship of natural resources, special needs for ranching, recreational uses, wildlife habitat, etc. While landowners feel it is important that they receive adequate compensation for surface damages and interference with the use of their land, some of the things they value the most cannot be replaced with money, and they fear will be destroyed by CBM operations.

CBM is perceived by some to be a threat to the ranching way of life. Drilling wells every 80 acres with roads and power lines connecting each well may lead to eventual subdivision of the land into 80 acre ranchettes. Many expressed concern about the impacts of CBM development on their land reaching their downstream/downgradient neighbors. Of primary concern was the discharge of produced water.

Oversight of CBM activities and enforcement of SUDA terms is extremely time consuming - for many ranchers it becomes one person's full time job. This time is not compensated under the SUDA, but results in a loss of income for the landowner because the person overseeing CBM cannot do other work during those hours.

Many landowners cannot afford the legal costs of fighting CBM development or of negotiating a protective SUDA, due to the financial hardships of ranching (e.g. drought, multiple families making a living from one ranch, etc.). In the western portion of Sheridan County, some landowners feel that CBM development is greatly lowering the value of their properties because one of the key values in that area is the scenic beauty and open landscape. In addition, land uses in this part of the Powder River Basin extend beyond ranching to include personal or commercial recreational uses, wildlife habitat, horse training, personal home, etc.

b. Perceptions of Lack of Equity

Split estate owners who own no mineral rights feel an extreme lack of equity with owners/lessors of oil and gas rights. Wyoming law makes the mineral estate dominant over the surface estate, with the accompanying right of access over and reasonable use of the surface as needed to extract the mineral. Many split estate owners feel powerless and violated by CBM development. Litigation and other avenues of equalizing power have been largely unsuccessful. Surface owners also feel that current state and federal government bonding requirements are grossly inadequate.

To remedy this situation, split estate landowners suggested changing state (or federal) laws to require accommodation of surface owner rights and needs; creation of adequate bonding for restoration and damages on a lease basis; payment of a small overriding royalty; requiring landowner consent to location of wells, pits, roads, etc; and/or requiring use of a model SUDA.

c. Relationship with CBM Developers

Many split estate landowners report very unpleasant experiences with landmen¹⁹ and other company representatives. These landowners say that landmen use intimidation and threats to force landowners to the terms in the companies' SUDA. In some instances, company representatives and state officials encourage landowners *not* to use lawyers. We were told that some companies prohibit landowners from sharing SUDAs, apparently in the hopes that the company can benefit from a landowner's lack of knowledge in each new negotiation. One company representative admitted that they "intend to intimidate" when negotiations have passed.²⁰

Not all interviewees experienced poor relationships with CBM developers. Even the landowners with good relationships, however, stressed the importance of using a lawyer to negotiate SUDAs (to equalize the level of knowledge and power between negotiating parties). They also mentioned the need for constant monitoring of CBM activity on their land to ensure that the SUDA was fully complied with and that activities unanticipated in the SUDA were discovered and discussed before problems arose.

¹⁹ Landmen are independent contractors traditionally used by the oil and gas industry to be their representatives with landowners. Although some CBM companies have local offices, the landmen often report to staff at company headquarters outside the Powder River Basin. The landmen we interviewed and heard about work with one oil and gas company at a time, but may have worked for more than one operator over the course of their career.

²⁰ An extreme example of strained relations with CBM developers is a company letter to a landowner stating "that our field personnel . . . take great pride in the operation of our field, and to accuse them of not doing their job may be risking significant physical harm."

Due to past bad experiences, many landowners (including some who are generally satisfied with the CBM development on their property) feel they cannot trust anything a CBM company says. Their perception is that the operators will lie to get what they want. They also feel that operators lack an understanding of the landowner values, perspectives, and interests which need to be protected.

d. Surface Owners with Partial or Full Ownership of Mineral Rights

Interviews with landowners who also owned a significant portion of the mineral rights under their land revealed that those landowners are generally much more satisfied with CBM development. This results from several things:

- these landowners receive a royalty, which may bring in significant income, so they perceive a stake in the success of the wells;
- they have far more leverage to get the terms they want in the SUDA, if they negotiate the SUDA before or at the same time they negotiate the lease of the minerals;
- they have more control over operations under the lease and SUDA;
- they can interview CBM developers before signing a lease and choose an operator they are most comfortable with, based on past performance; and
- they may have an incentive to pursue CBM development to prevent drainage of their gas by neighboring wells.

e. Downstream or Downgradient Landowners' Special Concerns

Many landowners reported that operators refused to negotiate protections in the SUDA for downstream landowners, but some have had success with these provisions. Downstream owners generally want consideration of their water rights and uses before allowing upstream on-channel reservoirs, irrigation, or discharge of produced water. They also ask that discharges of water from upstream pits or other discharges not be allowed to degrade downstream water quality or damage the soil (e.g., the ability to grow crops, hay, or grass for grazing).

Downstream owners indicate that they want some legal protections or written agreement with operators to protect their interests. They also feel that they should be contacted before government agencies issue permits for pits, irrigation or discharge of produced water that may impact downstream owners.

f. Utility of a Model SUDA

When landowner interviewees were asked if they felt a collaboratively developed model SUDA would be useful, not all were fully supportive. The majority felt that if a "model" was defined as a one-size-fits-all document, it would not work, as many of the provisions must be site- or landowner-specific. Some felt a model would reduce the landowner's bargaining power and eliminate the opportunities for trade-offs during negotiations. The vast majority of landowners interviewed said it would be useful if "model" was defined as including the provisions which are common to most SUDAs, accompanied by optional provisions that the landowner could select depending on his/her circumstances.

Some suggested that the effort to develop and use a model SUDA be focused on areas where CBM development has not begun or is just beginning - such as on areas containing BLM

minerals, in Sheridan County or Montana. If the focus was on BLM minerals, they recommended that BLM participate in the collaborative process to develop the model, then require its use as they have for the Water Well Protection Agreement.²¹

Some landowners would like to see standardized amounts for damage payments in the agreements. Others would not. Those favoring standardized amounts cited equity and fairness as their primary interests. Those opposed to standardized amounts wished to maintain negotiating flexibility. For some, this was simply an effort to maximize the landowner's financial gain. But others felt that each landowner might value the impacts of CBM development differently, and should have the opportunity to accept higher damage payments for more intrusion, or to negotiate lower damage payments in exchange for improvements to their property (such as new fences or gates).

Some landowners commented that finding organizations or individuals who can speak for the full range of Powder River Basin landowners in a collaborative dialogue will be difficult. Some landowners avoid affiliation with any organization; most are fiercely independent. Yet, in at least one case, adjacent landowners are forming a landowner association based on the drainage and are negotiating collectively with CBM developers. They feel this approach gives them more leverage. They can also negotiate the same SUDA for all, so oversight can be done by a contractor working for the association. Other landowners are giving each other notice of ongoing negotiations for SUDAs.

2. Mineral Developers/Operators

This section summarizes the issues and concerns raised in our interviews with individuals who work for CBM development/operation companies.

a. Key Interests of Mineral Developers

The primary interest of CBM developers and operators is to keep costs down and to make a profit from their operations. The price of natural gas has been falling, and some companies report that they are in a negative cash flow situation. The authors were told that some CBM operations have been curtailed or temporarily shut down. During times of low gas prices, companies are much more reluctant to sign SUDAs which require significant annual damage payments or future commitment of resources. Virtually all CBM company representatives interviewed claim that the Powder River Basin is the only area in the U.S. where such high annual damage payments per well have been agreed to in SUDAs. Some operators stated that some split estate owners make more money from damage payments than from their ranching operations and are looking for CBM to provide them with an annuity. Some operators feel that greed has become the primary motivation behind some split estate owners' tough negotiation tactics. Developers are also concerned that CBM development on BLM leases will be much more expensive, due to the additional federal regulatory requirements.

Other companies feel that a reasonable SUDA will help them predict future costs and requirements, and is thus worth having. A SUDA also is felt to benefit operators by reducing / avoiding conflicts and controversy, and aiding in development of a good working relationship

²¹ The collaborative process used to develop the Water Well Protection Agreement is described in Section IV.D.4 of this report.

with the surface owner.

All CBM companies want to see development of the CBM resource without unnecessary delay. Some feel that the life of profitable CBM development may be as short as 5-7 years; other companies see a 20-year window of opportunity. A BLM Application for Permission to Drill is only valid for a specified period of time. This may create a time constraint to reach resolution with the landowner. Additional time pressures can be created by companies that wait until almost the end of the lease to negotiate a SUDA and start drilling.

Most CBM developers are concerned about their image and public relations. Most acknowledge that the whole industry has a black eye due to *some* players, and some companies want to upgrade the image of the CBM industry as a whole. Some felt that the industry's efforts at "self policing" have been successful; others did not. Many recognize the political consequences of individual actions and realize that the dominant estate is a "fragile" right. If it is abused, the industry may suffer political (and perhaps legislative) consequences. Some prefer to avoid going to court with landowners to gain access for fear of the resulting negative public relations and image. Others feel that the mineral estate is dominant, and there is nothing to negotiate or worry about.

Uncertainty or rapid change in regulatory requirements can have a great impact on the costs of development. For example, the Wyoming Department of Environmental Quality's recent prohibition of discharge of produced water in certain watersheds (Powder and Tongue River Basins) required companies to construct containment pits (or find other methods to manage produced water), which was an unexpected and more expensive alternative. In general, operators feel that additional environmental regulation is not necessary for CBM.

b. Relationship with Landowners

Operators feel that landowners lack understanding of CBM developer values, perspectives and needs. Poor communications can lead to conflicts, for example, after the SUDA is signed and implementation begins. Companies often find that the landowner and the company have a different understanding about what various terms in the agreement mean.

CBM developers have a wide range of negotiating strategies for SUDAs. Some companies begin discussions with the landowner one year in advance of the time they need a signed SUDA. This allows time to develop a working relationship, explore landowner concerns and needs, answer questions, and negotiate a detailed agreement. These companies find the SUDA works best when the landowner understands what the CBM development activities will entail, knows exactly what they want done (or not done) on their land, and can articulate what they need in a SUDA. These operators recognize the need to respect landowner needs/concerns (e.g., no use of dirt roads when it is muddy, no work during calving season, no drilling near homes) to reduce the impact on ranching operations and promote quiet enjoyment of the surface. They feel that through the SUDA negotiations, they get the landowner's cooperation and set the tone for interaction during the rest of development. They want the landowner to call the company (instead of an agency, lawyer, or media) when there are problems. The companies believe that this cooperative negotiation approach (trying to satisfy landowners's real needs / concerns) results in less conflict and delay in signing a SUDA, thus CBM development proceeds more quickly.

Other companies take a hard line approach, allowing a limited period of time (sometimes only

30 days) to negotiate a SUDA before moving on to filing legal actions to gain access. They say virtually all cases are settled before the court date, so they also feel their strategy is successful.

To our knowledge, no one has analyzed which approach (cooperative or hard line negotiation) results in lower transaction costs and delays, or determined which approach results in the lowest overall costs for the life of the wells. Of course, many companies take a middle approach between the above two examples of negotiation styles.

Several companies felt that some landowner requests in SUDA negotiations are financially difficult or technically infeasible (e.g., underground injection of produced water, placing all power lines underground). The authors found that while some companies are willing to negotiate water management plans with landowners, some adamantly refuse.

Companies expressed varying degrees of distrust of or antipathy towards local/regional environmental organizations which represent some landowner interests on CBM issues. They view these groups as being too strident in their tactics and feel that they are encouraging landowners to make unreasonable demands during the negotiation of SUDAs. Some companies interviewed stated that groups like the Powder River Basin Resource Council (PRBRC) do not represent the majority of landowners in the Basin and are disliked or distrusted by many landowners.

c. Utility of a Model SUDA

Some CBM operators feel they are close to a model already for the standard non-monetary SUDA provisions. Certain operators felt that a model SUDA that tries to standardize damage and other payments is not a good idea and may be in violation of antitrust laws, yet other operators would like to see a model SUDA that covers payment amounts. Other operators stated that a landowner guide to negotiating SUDAs would be very helpful, if fees/royalties are not set or listed.

Some operators felt a collaborative effort to develop a model SUDA is not needed, unless the ongoing collaborative discussion between the Petroleum Association of Wyoming, Wyoming Stockgrowers, Wyoming Woolgrowers, and Wyoming Farm Bureau, fails to produce something which will significantly reduce the level of controversy between split estate landowners and operators. (See summary of this effort in Section V.D. of this report.) Based on the conversations the authors had with some participants, the Petroleum Association of Wyoming effort does not appear to be aimed at development of a model SUDA.

It was suggested by some interviewees that BLM should endorse and attach a collaboratively-developed model SUDA to the BLM lease. This would be similar to BLM's current endorsement and use of the model water well protection agreement. Others suggested that the State of Wyoming similarly endorse and require the use of a model agreement, similar to the State's use of its standard oil and gas lease.

Some companies indicated that they might participate in collaborative development of a model SUDA if they thought having a model would save money on negotiations and transaction costs. But, other operators are concerned that if they participate in a collaborative effort with all stakeholder interests, the proceedings or outcomes could be used against them in litigation. One operator felt that a model SUDA could contain all the basic provisions, then deal with site-

specific provisions in exhibits.

3. Government

a. Key Government Interests

The U.S. Environmental Protection Agency's (EPA) primary concerns resulting from CBM development in the Powder River Basin are air pollution (primarily from dust) and water quality problems. Dust is a major air quality problem in the Powder River Basin. The authors were told that Campbell County is close to a non-attainment designation²² by EPA due to dust problems. EPA and the State of Montana are concerned that contaminants in produced water discharged from the Powder River Basin in Wyoming can have a negative impact on water quality downstream in Montana.

Some federal mineral managers are concerned that a few landowners are not negotiating SUDAs in good faith, but are just trying to delay CBM development on federally-owned leases as long as possible. These landowners may believe that delay will result in drainage of federal CBM through development of privately owned CBM on adjacent lands.

Some BLM representatives interviewed felt that a BLM Resource Advisory Council (RAC) chartered under the Federal Advisory Committee Act would be helpful with CBM issues in Wyoming. They mentioned that Wyoming is the only western state that does not have a RAC, which are operating in 24 other western states.

b. Utility of a Model SUDA

The federal agency representatives interviewed felt that some form of collaboratively-developed model agreement would be useful. The BLM representatives from the Buffalo, Wyoming office stated that it is willing to encourage the use of a model SUDA and make it generally available, but not mandate its use. BLM does require that some type of SUDA be signed (*or that the CMB developer "bond on" to the land*) before a Plan Of Development or Application for Permission to Drill will be approved.

Some federal interviewees questioned whether it would be possible to negotiate model clauses for damage payment types and amounts. They felt a model SUDA should focus on best management practices, basic provisions needed in each agreement, guidance on how to analyze and interpret site-specific information and landowner needs/values/concerns. They also suggested that a model SUDA should be accompanied by a "pick-list" of provisions which could be used if site-specific circumstances warrant.

State agency representatives were hesitant to give an opinion on the utility of a model SUDA, insisting that these were private issues between the landowner and the CBM developer. They did mention, however, that any reduction in the level of conflict on split estate issues would be beneficial and would make their job easier.

²² Under the Clean Air Act, states must regularly determine whether the air quality in the geographic regions within their boundaries meets ambient air quality standards. Regions that do meet the ambient air standards are said to be "attainment" areas. Regions that do not meet the ambient air standards are said to be in "non-attainment," and must take steps to come into "attainment."

Most federal and state agency representatives interviewed were willing to participate (pending management approval) in a collaborative dialogue to develop a model SUDA with optional provisions. Some agency representatives stated their belief that a model SUDA will not see widespread use unless it is mandatory.

Agency representatives felt that a model agreement would be most useful for BLM minerals in Sheridan County and Montana, which are areas where CBM development is just starting or yet to begin.

4. Non-Profit Environmental or Landowner Organizations

a. Key Environmental and Landowner Organization Interests

Two very different types of non-profit organizations state that they represent at least some landowner interests on CBM in the Powder River Basin - environmentally oriented groups (such as the Powder River Basin Resource Council, Wyoming Outdoor Council) and agriculture oriented groups such as Wyoming Stockgrowers, Woolgrowers, and Farm Bureaus. Some of the landowners interviewed stated that while their personal philosophies were not in line with most environmentalists, they have found common ground with the environmental groups on protection of the natural resources on their lands from damage by CBM development. It appears that increasing numbers of Powder River Basin landowners are turning to groups like the Powder River Basin Resource Council (PRBRC) for assistance or information. The environmental organizations feel that existing state laws and regulations provide inadequate protection. Thus they are working towards passage of new state legislation to protect landowner rights and environmental resources from damage by CBM development.

The agriculture oriented organizations like Stockgrowers, Woolgrowers, and the Farm Bureau recognize that their members who are split estate owners need help with CBM development related issues. As discussed in Section IV. D. these groups have joined with the Petroleum Association of Wyoming in a collaborative effort to resolve some of the concerns of split estate landowners.

b. Utility of a Model SUDA

Some organizations believe that a one-size-fits-all model agreement would be difficult to develop, because agreement contents need to be very site-specific. These groups acknowledged, however, that some basic concepts do remain the same between all agreements. A model agreement could level the playing field, they felt, and reduce the time and cost of negotiating a SUDA. They also recommended that model SUDA development and use should start with BLM. Other organizations stressed the need for a model or template and landowner guidance on negotiation of SUDAs, especially for areas where CBM development is just beginning.

A concern expressed about model provisions is that they freeze things in time. Flexibility is needed to incorporate new and improved technologies or techniques into SUDAs as they evolve, for example in dealing with issues such as produced water.

B. Key Issues to Address in a Surface Use and Damage Agreement

There is considerable agreement between landowners, their representative organizations, and *some* CBM operators interviewed regarding many of the topics that should be included in a SUDA. Some CBM operators, however, strongly resist addressing certain of these topics in their SUDAs. The following discussion reflects what the authors heard in the interviews about preferred SUDA content.

1. Landowners

A key SUDA component for most landowners was the degree of control over where, when and how activities take place on the surface, including:

- agreement between the landowner and the operator on an overall development plan showing the location of wells, roads, pipelines, compressors, water disposal/discharge, etc. *before* development starts, with allowance for changes as development progresses;
- protection and preservation of aesthetic values (e.g., hide compressors behind hills, consolidate roads and pipes, etc.);
- reduction of noise from compressor stations, requiring the use of reduced noise equipment or installation of noise reducing materials;
- reduction and consolidation of the number of above-ground power lines, maximizing use of buried power lines;
- flexibility to include site-specific surface enhancement issues (e.g., new fences, new gates / cattle guards); and
- techniques for preventing/controlling erosion.

Another issue listed by most landowners interviewed as crucial for inclusion in a SUDA was the management of produced water. Some specific suggestions included:

- the CBM operator should remain responsible for closure and restoration of containment pits, regardless of whether the landowner uses the produced water they hold, as well as for clean up of any hazardous materials left in the bottom of the pits upon closure;
- the operator should be required to test water quality and provide regular reports to the landowner on the test results; and
- the landowner should retain the right to require the operator to move the point of discharge, if it is causing an environmental or biological threat (e.g., killing hay meadows, riparian vegetation / trees).

Enforceability of the agreement was identified by most landowners as a major problem. Even in the case of a SUDA containing protective provisions, the landowner may have little recourse except legal action, if and when the operator fails to comply with the agreement. There is at least one pending court case in the Powder River Basin to explore the scope of enforceability of a SUDA.²³ Those landowners who have had good experiences with CBM development on their property also emphasized that non-compliance with SUDAs is commonplace. Some landowners made suggestions for SUDA provisions which might make the agreement easier to enforce, including:

²³ See, *Wyoming Resources Corp. v. T-Chair Land Co.*, 49 P.3d 999 (Wyo. 2002).

- SUDA penalty clauses or stipulated damages provisions for violations of the agreement (e.g., \$300/day while a pit is leaking);
- operator payment of the landowner's attorney fees if the landowner prevails in a suit to enforce the agreement; and
- escrow account or other financial guarantee to be created by the initial operator, which can be drawn against to correct violations of the SUDA that are not cured in a reasonable amount of time.

2. Mineral Developers/Operators

Some operators suggested that the SUDA should address all foreseeable issues up-front, so that both operator and landowner know what to expect as development progresses. These operators also believed there was a benefit to having the same agreement across a number of wells, ensuring that requirements are consistent.

Some companies resisted making commitments as to location of wells and supporting infrastructure during the exploratory phase of development (or before all relevant information is known), fearing that this could limit locating future wells in areas which will result in maximum production.

Some CBM developers prefer to postpone negotiation of a water management agreement until more information is available on the quality and quantity of produced water, especially in an exploratory situation. Another company negotiates all things up front, so they do not spend capital to drill wells and then are "held hostage" by the landowner regarding produced water disposal issues.

Company representatives described varying approaches to the monetary reimbursement component of a SUDA. Some had a fixed, non-negotiable price that they offer for each aspect of the development; a landowner's attempt to discuss a different reimbursement schedule signaled the end of "good faith" negotiations from the company's perspective. Others showed more willingness to integrate the damage reimbursement provisions with operational details to address the individual landowners' use of the property. Some companies were willing to consider alternatives to strict damage reimbursement payments; they might be willing to pay a percentage overriding royalty to split estate owners, if it is in lieu of surface damage payments.

Some companies recognized that implementation of the SUDA during the course of CBM development was a potential area of conflict. Some felt that giving the landowner a single, local point of contact in the SUDA would be good. Others did not necessarily provide for this in the SUDA, but related their belief that landowners preferred companies who have a local office or point of contact. Some company representatives also stated that more authority should be given to local company staff to resolve disputes.

3. Government

Government officials were reluctant to address the details of SUDA content. They did acknowledge that the potential for landowner-operator conflict is not limited to negotiation of SUDA language, and continues through CBM development and SUDA implementation. One government interviewee suggested that the SUDA include dispute resolution through binding arbitration, or that this should perhaps be required by statute.

4. Non-Profit Environmental or Landowner Organizations

Environmental and landowner groups interviewed felt that a model agreement or template accompanied by a guide for landowners is needed. One local group offers assistance to landowners including the provision of sample SUDAs donated by their members and a check list for SUDA preparation.²⁴ Some had very specific suggestions about what a model agreement should cover, including:

- master development plan;
- best management practices for CBM development;
- water management plan;
- construction/location of roads, pipelines, compressors and other supporting equipment;
- noise mitigation;
- indemnification;
- enforcement, bond, escrow;
- dispute resolution;
- documentation of baseline conditions;
- water well replacement;
- downstream impacts;
- operator-created escrow account tied to the land; and
- financial components based on a sliding scale (i.e., tied to the market price of gas).

These groups also emphasized the necessity for, and difficulty of, enforcing SUDA agreements. In addition to including enforcement provisions or compliance incentives in the SUDA, they stated that all SUDA provisions must be very specific about activities that will take place under the agreement, including adequate details about time, place and scope.

C. Review of Sample Surface Use and Damage Agreements

As part of the interview process, we solicited and collected sample SUDAs from all individuals who would share them. The authors received many agreements, some of which had been signed and some of which had not. Some were model agreements that served as the starting point for negotiations. None were identical.

Our review of the SUDAs that we collected reveals some consistency in content, along with a lot of variety. The variety between these agreements undoubtedly reflects the unique differences between landowners and their site-specific needs, the experience and style of the drafters, and the details of CBM development on each different property. It also reflects the reality, however, that the scope and content of each SUDA are largely dependent on the sophistication, tenacity and skill of the parties' negotiators. Thus, landowners who are unrepresented by legal counsel and who have not educated themselves about the process may have a much less comprehensive (and less expensive) agreement than do more knowledgeable landowners negotiating with the same company. It remains to be seen whether

²⁴ See the following link to the Powder River Basin Resource Council's (PRBRC) checklist for landowners on SUDAs: http://www.powderriverbasin.org/surface_agreement_checklist.htm; and the link to PRBRC's web site to download sample SUDAs, water well protection agreement, and a right of way agreement: http://www.powderriverbasin.org/legal_documents_agreements.htm

the less comprehensive agreements result in more or less conflict as CBM development continues.

Appendix 10 contains a listing of topics covered in the various SUDAs that the authors received. No one agreement contains all these provisions, but each provision is contained in at least one SUDA.

D. Other Relevant Efforts Related to Split Estate Issues in the Powder River Basin

During the interviews, the authors asked about the existence of other efforts in the Powder River Basin that addressed split estate issues. The recommendations in this conflict assessment have been informed by these efforts, and we have sought, to the extent possible, to avoid duplication.

1. Petroleum Association of Wyoming

The authors regret that we were unable to conduct an interview with Petroleum Association of Wyoming representatives and thus cannot include a complete analysis of the organization's efforts. As a result, there is the possibility that our recommendations may overlap with collaborative efforts that are already underway, or fail to properly acknowledge and support a worthwhile initiative to improve landowner-operator communications.

The authors heard from several interviewees and read in a newspaper report that the Petroleum Association of Wyoming was sponsoring a dialogue process to address split estate issues. However, both the Executive Director and staff declined to be interviewed.

Despite our inability to get details directly from the Petroleum Association of Wyoming, several interviewees who have had involvement with the Petroleum Association's effort shared relevant information with us. The primary players in the effort include the Petroleum Association as representative of CBM developers, and the Stockgrowers Association of Wyoming, the Woolgrowers Association of Wyoming, and Farm Bureau as representatives of these landowner groups. They are relying on other organizations as informational resources, including the Wyoming Oil and Gas Conservation Commission, the Wyoming Department of Agriculture, Natural Resources Conservation Service, select companies, and a conservation district representative. We heard of one individual landowner who has been consulted as part of the Petroleum Association process. A company representative stated that the American Petroleum Institute also is developing a list of best management practices for working with surface landowners in the Rocky Mountain states. The American Petroleum Institute sent questionnaires to its members to gather information for this effort. He did not know the timeline for this project.

We do not know the goals or objectives, or the current status, of the Petroleum Association of Wyoming's initiative. All the information we received reflected that communication issues between landowners and operators were at the heart of the Association's focus.

2. Wyoming Energy Commission Landowner Advisory Committee

The Wyoming Business Council, through its Wyoming Energy Commission, has conducted an extensive review of the state's energy policy and is making recommendations for change. Our interviews, conducted prior to the recent gubernatorial election, reflect that the Business Council did not intend to recommend any legislative changes on split estate issues.

The Wyoming Energy Commission also created a Landowner Advisory Committee to address split estate issues more directly. The committee consists of three landowners and three industry representatives (a pipeline company, an electric utility, and a contract landman representing a CBM development company). While the authors were told that the Landowner Advisory Committee has developed recommendations, we have not seen them in writing.

Based on our interviews, the Landowner Advisory Committee will recommend the following:

- the use of corridors for CBM-related infrastructure wherever possible, with coordination between operators encouraged;
- creation of an ombudsman within state government to hear landowner/ developer disputes and recommend solutions; and
- recognition that a one-time damage payment may not be adequate in all circumstances to reimburse the surface owner.

3. Coalbed Methane Coordination Coalition (CBMCC)

The Coalbed Methane Coordination Coalition was established in 2000 as an independent and neutral entity to disseminate and coordinate information about CBM development. The coalition includes several counties and conservation districts, as well as one state government and one industry representative. It has two staff members. They have developed, and continue to expand, an information website. They also offer site-specific information and assistance to landowners and operators on request, without purporting to represent either the landowner's or operator's perspective.

Several landowners interviewed were either unaware of the coalition's existence, or did not know that the coalition provided site-specific assistance on request. Some industry members did not perceive the coalition as neutral, apparently because it submitted comments on the draft EIS that industry felt did not unconditionally support industry's perspective on CBM development in the Powder River Basin.

4. Past Experience with Collaboration

The authors learned of two past experiences with collaboration involving at least some of the same stakeholders involved in split estate issues.

Early in the history of CBM development in the Powder River Basin (1995/1996), BLM sponsored a dialogue to develop a model water well protection agreement. The dialogue included BLM, the Wyoming State Engineer's Office, the Powder River Basin Resource Council as representative of landowners, and each of the six CBM development companies operating in the basin at that time. Additional input was solicited through an open letter to landowners. After six months of discussions, the group reached consensus on a model agreement that is now required for development of federally-owned minerals, and available for use with state-

owned and fee minerals. This model agreement provides that the circle of influence for impacts to water wells is a one-half mile radius from a CBM well. The agreement also describes the conditions under which the CBM producer is responsible for replacing impaired water wells and water supplies, and provides monitoring and testing requirements. The agreement provides for resolution of disputes under the agreement by a special arbitration board. Some of the provisions in the Water Well Protection Agreement (such as the circle of influence) are no longer viewed as adequate by many parties, and may need to be renegotiated. The authors are not aware whether the involved agencies plan to reconvene this dialogue to update the model agreement's provisions.

Some of the landowners interviewed, including BLM, had participated in Wyoming's Coordinated Resource Management (CRM) Plan development process. The CRM process that interviewees described was intended to be a collaborative dialogue between stakeholders concerned with a particular drainage area, facilitated by a Wyoming Department of Agriculture employee. CRM planning has been attempted on several drainages in the Powder River Basin. There was general disappointment with the CRM process among those who mentioned it during the interviews. Some felt that the planning effort did not work because it was too open ended; there was no mandate to reach agreement, and no consequence for failure to implement any agreements that might have been reached. The authors also heard that meetings were held, and agreements discussed, without notifying or including all identified stakeholders. Thus, it is not surprising that consensus and effective resource management plans were not achieved. If a collaborative dialogue to create a SUDA template and guide is undertaken, the conveners should take care to learn from and avoid the shortcomings of the CRM process.

5. Western Governors' Association

The Western Governors' Association passed a policy resolution in June 2002 relating to coalbed methane development, which, among other things, encourages "the sharing of information and best management practices across the states and the private sector." Policy Resolution 02-27. The resolution includes a management directive: "If adequate resources can be procured, WGA should develop regional workshops to focus on the issues mentioned above." If funding is obtained (which now appears likely), it is anticipated that the Western Governors' Association will implement this directive by sponsoring workshops to develop or document best management practices in coalbed methane development.

V. Discussion of the Potential for Resolving the Split Estate Conflict

Virtually all persons interviewed agreed that split estate situations create conflict for CBM development in the Powder River Basin. The authors heard anecdotal information about landowner-developer interactions that were highly positive, as well as landowner-developer interactions that could only be resolved through litigation. Even in the cases of positive landowner-developer relations, however, the landowners stressed the importance of a comprehensive SUDA, along with full knowledge about CBM development, an attitude of self-protection, and vigilance to ensure that the provisions of the SUDA were followed.

This section identifies the underlying causes of conflict in split estate situations for the Powder River Basin, and describes possible barriers to, and opportunities for, resolution of the conflict. The recommendations in the next section translate this analysis into practical opportunities.

A. Underlying Causes of Conflict

No one underlying cause can be considered controlling in split estate conflicts. Each influences the other, and it is a unique combination of factors that defines the nature and extent of conflict on any given property with split estate ownership. In many cases, one source of conflict alone will not be significant, but the cumulative impact can create mistrust and dysfunctional relationships.

1. Knowledge and Communication Issues

a. Surface Owner Lack of Knowledge about Split Estate and Nature of CBM Development

Many surface owners may know that they do not own the mineral estate, but they do not understand the legal or practical significance of this split estate situation. They often do not understand that the mineral estate is dominant, and when informed of this situation, have difficulty accepting that they cannot totally prohibit access to and development of the mineral estate.

Unless informed by neighbors or a lawyer, surface owners also do not know about the legal process by which access for purposes of development can be accomplished. They often do not know that negotiation of a SUDA is possible, and do not understand the possible scope of terms that can be included. Until they hear about “condemnation” or “eminent domain” from the operator, which is often perceived as a threat, many landowners are not aware that a court proceeding can be used to enforce the dominant estate.

Lack of knowledge about the fundamentals of CBM development and relevant property rights can put a landowner at significant disadvantage in negotiations with an operator, and can create tension in that communication. Negative feelings and resentments created during the parties’ initial discussions about the developer obtaining access to the surface often taints future relations between the parties.

The surface owner’s lack of knowledge and understanding will be a continuing issue as long as

new CBM development occurs. As CBM development moves across the basin, there will always be new landowners who need to be educated.

The authors heard about several resources that are currently available or in stages of development to provide surface owners with knowledge about SUDAs and the nature of CBM development and its regulation. The local BLM field office is revising its Plan Of Development / Application for Permission to Drill development guide, which contains summaries of all applicable requirements, and plans to make it available on the internet. Various entities have developed information guides about CBM development.²⁵ Some organizations serve as a clearinghouse for information specific to SUDAs.²⁶

Despite the apparent abundance of educational information, the authors heard numerous comments about surface owners who were not aware that this information is available, or who mistrusted the accuracy of the information due to its source. Likewise, the form and volume of the information makes it difficult for a surface owner to apply it to their individual situation.

b. Surface Owner Surprise About Planned Mineral Development

The authors heard numerous anecdotes about surface owners whose first knowledge that CBM development was imminent on their property was either the arrival of well-drilling equipment, or the appearance of an operator's representative with a draft SUDA in hand demanding access next week. By contrast, the authors also heard of companies who begin discussions with the surface owner long before they anticipate initiating development activities. The difference in the quality of the landowner-developer relationship between these two examples is great, with surprise generally adding to the potential for conflict in the relationship.

In the past year, the BLM Buffalo Office has changed its procedures to ensure that the agency itself contacts the surface owner when it receives a Plan Of Development / Application for Permission to Drill application. The BLM Buffalo office also indicated that surface owners are invited to participate in on-site inspections that occur during the application review process. The authors are unaware of any requirements for notice to the surface owner regarding the contemplation of CBM development on their property where the split estate includes state-owned or fee minerals. Neither BLM nor the state provide notice to the landowner of issuance/transfer of an oil and gas lease on their property.

c. Lack of Consistent Interest-Based Negotiation Approach

The interest-based negotiation approach focuses on the parties' interests (*why* they have an interest in negotiating and what they seek to accomplish) and issues (*what* they need to talk about), with the objective of discovering potential solutions that create mutual gain. This contrasts with a position-based negotiation approach, in which the parties enter negotiations

²⁵ See, e.g., *Coalbed Methane Development Information*, prepared by the Powder River Coalbed Methane Information Council, made up of production, gathering and transportation companies active in the Powder River Basin. Undated.

²⁶ The Coal Bed Methane Coordination Council, (www.cbmcc.vcn.com), serves as an information resource for all persons interested in CBM, including landowners. The Powder River Basin Resource Council, (www.powderriverbasin.org), has sample SUDAs on its website.

with a pre-conceived notion of *how* to solve the situation to their benefit, with any one solution resulting in a “win” for one party and a “loss” for the other. In situations where the parties will have ongoing relationships, as in split estate situations, an interest-based negotiation approach can help to build a working partnership between the parties, while also resolving discrete issues.

Some companies proudly described their negotiating strategy of trying to identify and address the landowner’s needs, and use the SUDA negotiation process as a means to develop a partnership for the long-term. They claimed that it was easier to work with “educated landowners.” Not surprisingly, many of the landowners interviewed who had agreements with these companies were generally satisfied with their relationship.

Other companies clearly preferred to withhold information from landowners, some going so far as to include non-disclosure provisions in the SUDAs they signed. Several landowners could not share their signed SUDAs with us due to such provisions; one landowner refused to be interviewed due to fear that the company they were currently negotiating with would feel that they had inappropriately shared information about their negotiations and agreements. In general, landowners dealing with more secretive companies had a higher level of mistrust and resentment about their relations with the company and about CBM development on their land.

d. Poor Communication

The authors heard many instances of misunderstandings based on a landowner and developer placing different meanings on the same terminology. As an example, an operator assumed that ‘blading’ of a dirt road would involve digging into the undersurface of the road bed on a one-time basis and replacing the road surface, an activity which alarmed the landowner who assumed that blading simply meant regrading the top surface of the road. This type of misunderstanding can negatively affect the trust between the parties, and is often preventable.

For most CBM developers in the Powder River Basin, contract landmen are the company’s point persons for interactions with the surface owner. They negotiate for access to the surface, negotiate the SUDA, and generally represent the company as the CBM development on the property progresses. Some landmen have excellent reputations as caring and responsive communicators. Others are considered more abrasive, intimidating, and intransigent. The landmen also apparently have little or no formal training in effective negotiation techniques. Clearly interpersonal dynamics and negotiating ability affect how smoothly and quickly the landowner-developer interaction moves forward.

In addition, landmen in the Powder River Basin, who are independent contractors, often have little decision-making authority, needing to consult someone at company headquarters before reaching agreements or resolving issues with the surface owner. This consultation process often causes delays in the resolution of problems with landowners. Some landowners expressed a preference for working with operators who had local staff that could deal with operational difficulties immediately, without having to “call Denver.” These added frustrations for the landowner can affect the success of the partnership.

e. Poor Relationships Between Interest Groups

During the interviews, it became obvious that there is a lack of trust and lack of effective communication between some of the numerous non-profit interest-based local organizations

such as Petroleum Association of Wyoming, the Powder River Basin Resource Council, Stockgrowers Association, Woolgrowers Association, Coal Bed Methane Coordinating Coalition, and the Farm Bureau. Communications and relationships between organizations with similar interests seem to work fairly well, but not so with those whose interests appear to conflict or are perceived to conflict. Even organizations which try hard to remain “neutral,” such as the Coordinating Coalition, have run into problems with one interest or another viewing them as taking “sides.”

2. Differing Values

a. Perceived Benefit from CBM Development

CBM developers value the potential for profit from development of the CBM resource. As corporate entities, they have a responsibility to maximize profits, which often corresponds to minimizing costs and moving forward quickly with development. Some landowners share the value of maximizing financial gain, but the landowner’s gain (in damage and/or royalty payments) is obtained at the company’s expense. Other landowners are uninterested in profit from CBM development, but rather wish to preserve their land and way of life for future generations. In a split estate situation, where the landowner owns no mineral rights and receives no royalties as a matter of right, this preservation value creates a great potential for conflict with the operator’s short-term profit motive.

Based on our interviews, many companies in the Powder River Basin have not yet accepted that values may differ between landowners, and that virtually all landowners by definition will not share the company’s values. Mutual satisfaction of disparate value sets, however, is not impossible. The existence of surface owners with signed SUDAs who are relatively satisfied with the CBM development on their land is evidence of this. Some operators have observed that making a good faith effort to satisfy the landowner’s needs in the SUDA and during the CBM development process often leads to faster development of the resource. However, as described in the next section (Opportunities for Resolution), these differences in values have been personalized by some in the Powder River Basin, resulting in a highly charged situation.

b. Property Rights

Relying on the legal priority of the mineral estate, some companies believe they have no obligation to enter into SUDAs with surface owners. One company representative told us that a SUDA is a “gift” to the surface owner. Another said that surface owners should not have a say in how the land is developed. This attitude results in taking many issues of concern to landowners, such as water management plans and road maintenance, “off the table” for negotiation with companies holding this view. This attitude also supports a “take-it-or-leave-it” negotiating style. By contrast, however, many of the SUDAs that the authors reviewed (which were received from both landowners and operators) addressed issues such as water management and road maintenance.

The property rights ideology of the West also creates a visceral resentment in some landowners and operators alike. For company representatives who share this viewpoint, it was expressed as anger that anyone – be it government (BLM specifically) or landowners – could impose any restrictions on their “right” to develop the mineral estate. For landowners, this translates into outrage that mineral rights are dominant over their right to quiet enjoyment of their surface estate. The authors cannot estimate what percentage of the players in the

Powder River Basin share these values and emotions, but our research and interviews make it clear that this perspective has a strong voice in the region. The visceral reaction of individuals holding strong property rights beliefs colors all aspects of their dealings with CBM-related issues and players.

3. Nature of CBM Development in the Powder River Basin

a. Evolving Knowledge and Practices for CBM Development

CBM development in the Powder River Basin has moved forward relatively quickly, with both the industry and regulators often being in a reactive, rather than proactive, position. This is particularly true with the management of produced water. As more became known about the downstream impacts of discharging produced water directly into the Tongue and Powder Rivers, direct discharge to those drainages was prohibited by the state of Wyoming. The affected operators had to find alternative methods for managing produced water.

Many started building and using off-channel containment pits, a method of managing water that had not been explicitly considered from a regulatory or permitting perspective. While the agencies, working collaboratively, have clarified the applicable regulatory controls for such containment pits, little is known of how the pits operate, what residual substances may accumulate, and what will be required at the time of closure. To the extent that there is a beneficial use intended for the water in the pit, the landowner may be asked to obtain a permit for the pit in his/her name and thus be liable for extensive restoration actions upon closure.

As produced water increasingly requires management, some companies are trying other innovative methods. Some will be successful and some will not. Agencies' regulatory approaches, and agreements between landowners and operators, need to have the flexibility to evolve to address new technologies and techniques.

As CBM development moves west within the Powder River Basin, the quality of produced water changes, as does the nature of the soil. The authors were told that water quality (such as the SAR level) and soil nature (sand vs. clay) can vary within and across properties in a small geographic area, and that certain substances in produced water can react negatively with some types of soils.²⁷ To the extent that CBM development and produced water management occurs on an ad-hoc basis, without prior study of the potential environmental impacts, there are likely to be instances of environmental damage or other negative consequences from the water management measures undertaken. Examples given included irrigation of hay fields or pasture with high SAR water resulting in reduction or destruction of the soil's ability to support those crops. Another example was discharge of high SAR water into waterways which killed downstream riparian trees and vegetation.

Such unanticipated conditions and consequences are not welcomed by the surface owner on whose land they occur. If the SUDA does not cover such contingencies, the surface owner may have few legal remedies to correct problems caused by unforeseen events or conditions. The

²⁷ For a more technical look at this issue see: "Quality and Characteristics of Saline and Sodic Water Affect Irrigation Suitability", Dr. Jim Bauder, Soil and Water Quality Specialist, Montana State University-Bozeman, at: http://waterquality.montana.edu/docs/methane/irrigation_suitability.shtml; and "Salt-Affected Soils" by G.E. Cardon and J.J. Mortvedt, Colorado State University Cooperative Extension; at: <http://www.cbmcc.vcn.com/saltsoil.htm>.

problems for surface owners caused by the evolving knowledge and science of CBM development can underscore the fear and mistrust that already exists in many quarters.

b. Economics of CBM Development

The market price for natural gas is highly variable; it is currently very low. From the companies' perspective, this creates a special sensitivity to any additional costs associated with CBM development when the market is down. One company representative asserted that the new requirements under BLM's final EIS will double the current cost of development. To the extent that a given operator is on the margin of profitability, they do not readily perceive the benefit of negotiating a comprehensive SUDA with the surface owner, especially if there is no perceived immediate consequence to beginning development operations without one.

Some company representatives, however, view the SUDA as a means of fixing expenses and reducing surprises during the duration of development operations. While these companies still are motivated by cost control, they see a benefit to knowing the scope of the costs they will incur for development of a particular property.

4. Legal / Regulatory Context

a. Legal Complexities

As described in Section III (Legal and Regulatory Context), the level of planning required before mineral development can take place, and some substantive requirements of development, differ by who owns the mineral rights. For example, unlike developers of federally-owned minerals, developers of state-owned and fee minerals have no legal requirement to plan extensively for development of their leases. Since most of the CBM development in the Powder River Basin has thus far taken place with state-owned and fee minerals, surface owners interested in knowing the full scope of development on their land before entering into a SUDA have had to negotiate for it. While some companies agree that planning is in their best interests as well, some are reluctant to share future development plans with the surface landowner. Similarly, there are no guidelines as to what constitutes the appropriate scope of planning for state-owned and fee minerals.

With BLM issuance of the final EIS for the Powder River Basin, development of federally-owned minerals is likely to proceed. For surface owners whose land is underlain with minerals of varying ownership (federally- and/or state-owned and/or fee minerals), as many are, the legal requirements for different portions of the surface will differ. This creates the potential for significantly different provisions in SUDAs on adjacent parcels, or even within single parcels, even though the land use and interests of the surface owner are the same.

b. Uncertainty of Applicable Legal Rules

Lawyers for both landowners and CBM developers mentioned the role of uncertainty in applicable legal rules as a motivating factor in split estate conflicts. The lack of case law defining what the bounds of "reasonableness" are for purposes of obtaining access under the eminent domain provisions of Wyoming law create both an incentive and disincentive for reaching agreement. For some companies, the lack of specifics regarding what the limits might be on "reasonable" access support their view that there are no limits, and that any use of the surface that supports CBM development is valid. For these companies, the threat of eminent

domain and the filing of condemnation proceedings is a reasonable negotiating tactic.

By contrast, other companies are apprehensive about what a court might impose as limits for “reasonable” access, giving them the incentive to rely more heavily on negotiation and compromise in their dealings with surface owners.

B. Opportunities for Resolution

1. Stakeholder Views on the Utility of a Collaboratively Developed SUDA for the Powder River Basin

As mentioned above, a vast majority of people interviewed felt that a collaboratively developed comprehensive model agreement, or a basic model accompanied by guidance that allowed its application to individual fact situations, could be useful in reducing the level of conflict around split estate issues in the Powder River Basin. There is not, however, general agreement on what issues should be included in such a model.

Federal and state agency representatives interviewed were willing to participate, or to approach management about participation, in an “*ex-officio*” (non-decision-making) capacity in a dialogue develop a model SUDA.

Efforts to develop such a model agreement must, however, recognize two limiting factors: the polarization of the conflict and whether a voluntary model will actually be used.

2. Polarization of the Conflict

For some individuals, the conversation about CBM development in the Powder River Basin has taken on the aspect of a crusade, and the conflict has become very personal and passionate. In the past, some of these extreme positions have found political support within state government, or at least have been tolerated.

Our experience while conducting interviews for this conflict assessment exemplifies this polarization. Some industry representatives initially refused to speak with us because this assessment process had been requested by the Powder River Basin Resource Council, a group whose views they disagreed with. For the same reason, one state government official initially declined to be interviewed, claiming to be on the “opposite side” on CBM issues. After explaining the neutral nature of the conflict assessment process, and the neutral position of the sponsoring organization (the U.S. Institute), the authors were granted an interview. Finally, the Petroleum Association of Wyoming declined to be interviewed, painting the picture as an “us v. them” situation, despite their involvement in a process that may be addressing similar issues to those covered in this conflict assessment.

As a result of the polarization of the conflict, it may be a challenge to gather an inclusive and representative group of individuals to explore the parameters of a model agreement. The authors were told by some industry interviewees that they would not participate in any collaboration that included the Powder River Basin Resource Council or any of its members. Other industry representatives expressed reluctance to give up the political and decision-making control they perceive they have by participating in a collaborative effort.

Any collaborative effort to address split estate issues will have to be sponsored by an entity that

is perceived by all to be neutral, and will need to include representatives of all major interests who have the ability and willingness to work together.

3. Use of the Model SUDA Should Not Be Mandatory

Given some CBM industry members' strong resistance to regulation and restrictions of any kind, and their reluctance to negotiate comprehensive SUDAs with surface owners, it is unclear whether they would agree to use a model SUDA if and when developed.

If, however, the companies holding the majority of leased acres in the Powder River Basin participate in and/or support the development of a model agreement through a collaborative process, the effort will probably be worthwhile. Alternatively, if BLM and/or the state decided to encourage the use of a model agreement -- whether by requiring its use or giving a presumption of approval for SUDAs which follow the model -- the chances of its wholesale use will be increased.

4. New Wyoming Governor

An additional opportunity for resolution of some of the issues and conflicts discussed in this report may result from the change in administration in Wyoming. Governor Dave Freudenthal took office in Wyoming on January 6, 2003. The authors are unaware of the policy or staffing changes, if any, that have yet been implemented. This change in leadership may provide an opportunity for all stakeholders to step back and reflect on how the current state of conflict affects their interests, and consider policy and other changes that might be more effective. Initial conversations with Governor Freudenthal's staff indicated a strong interest in developing a model SUDA.

5. BLM Final EIS

The Final EIS issued by BLM in January 2003 sets the stage for rapid and extensive development of the federally-owned CBM resource in the Powder River Basin. Access provisions and surface damage reimbursements will need to be negotiated with thousands of landowners before this development can proceed. To the extent that negotiations do not proceed to a CBM developer's satisfaction, eminent domain cases may be filed on many federal leases. CBM developers will undoubtedly be anxious to complete this step of the process quickly, efficiently, and in a way that does not create additional problems for the near- and long-term future.

6. Legal Context

For federally-owned minerals at a minimum, many of the topics that stakeholders felt were important to include in a SUDA must be addressed in the pre-mineral development approval process. For all minerals, the uncertainty created by the state of the law regarding the scope of "reasonable" use of the surface estate for CBM development provides the opportunity for the stakeholders to frame this in a thoughtful and broad manner. Without some inclusive effort to outline the parameters of "reasonable" use, the rules will be set in a case-by-case manner by a court looking only at the specifics of the facts before it. This may or may not work to particular stakeholders' advantage.

VI. Recommendations

The recommendations provided in this section are based on the findings from the conflict assessment interviews, our factual and legal/regulatory research, and our best professional judgment based on over 47 years of combined mediation, legal, and natural resource/environmental experience. The majority of the people interviewed felt that a template for a SUDA, accompanied by a guide for site-specific development of SUDAs, would be helpful in reducing conflict between surface owners and CBM developers. The authors feel that a SUDA template and guide would avoid the problems associated with a one-size-fits-all model agreement, while still providing common ground and guidance for development of individual SUDAs. Our primary recommendation is therefore the creation and implementation of a collaborative process to develop a SUDA template and guide.

Even if a model agreement is developed, it will only be helpful if stakeholders have the information, knowledge and skills to use it. Therefore, this section also contains recommendations for expanding dissemination of existing information, increasing access to alternative dispute resolution services, providing communication and negotiation skills training, and formation of a Wyoming BLM Resource Advisory Council.

A. Use a Collaborative Process to Develop a Surface Use and Damage Agreement Template with Accompanying Guide

The primary recommendation resulting from this conflict assessment is the creation and implementation of a collaborative dialogue to develop a SUDA template, along with an accompanying guide to assist parties in developing a site-specific SUDA.

_____ 1. Recommended Scope and Product of Collaborative Dialogue

We recommend that the collaborative dialogue address issues surrounding reducing conflict between split estate surface landowners and CBM developers of federal, state and privately owned mineral interests in the Powder River Basin of Wyoming.²⁸

The dialogue participants would endeavor to create a consensus SUDA template document. The template would include a list of topics that should be addressed in SUDA negotiations, along with the basic agreement provisions that all participants agree are needed. An accompanying collaboratively-developed information guide could offer:

- background on CBM development techniques/activities;
- guidelines for negotiating a SUDA;
- guidance on how to analyze, interpret and apply site-specific information in a SUDA;
- guidance on how to identify and incorporate landowner and CBM developer needs/values/concerns into the SUDA;
- a “pick-list” of optional provisions or approaches which could be used in the site-specific

²⁸ The scope of the dialogue could include CBM development in both the Wyoming and Montana portions of the Powder River Basin. The majority of stakeholders interviewed felt that this dialogue would be of most use to areas like Montana where CBM development has not yet begun. If the Montana portion of the Powder River Basin is to be included in the scope of the dialogue, participation would need to be expanded to include representatives of appropriate Montana stakeholders.

- portions of the SUDA, if individual circumstances warrant; and
- examples of possible site-specific applications of the general topics and provisions included in the template.

Development of such a guide will probably require the assistance of either a consultant or existing agency staff to help with research and drafting.

Another need identified during the interviews was the development of best management practices for CBM development activities on the types of lands and land uses found in the Powder River Basin of Wyoming. However, development of best management practices would probably be too large an undertaking for the type of collaborative dialogue recommended in this report.²⁹

Development of a SUDA template and guide should serve to standardize SUDA negotiations, level the playing field, as well as reduce transaction costs, time expended, and conflict for all parties in negotiations. The authors also anticipate that SUDAs negotiated using the template and guide will reduce future conflicts as CBM development proceeds and the SUDA is implemented. The process of developing the template and guide can become a model of constructive interactions between landowners and developers.

The topics and issues to be included in the template and guide would be decided by the participants in the collaborative dialogue, but group discussions might include the following topics:

- scope of access for CBM development activities;
- location of wells, infrastructure, facilities and other activities;
- appropriate level of detail for SUDA provisions;
- timing of development;
- coordination of development activities;
- site-specific preferences (e.g., reduced impact on ranching operations, special income-producing activities like guided hunting trips, dude ranching, etc.);
- aesthetic and visual preferences;
- noise prevention and abatement ;
- natural resource and historical/cultural resource protection/preservation;
- produced water management on and off property;
- water well mitigation (if not addressed adequately in a separate agreement);
- reclamation after completion or abandonment of drilling;
- guarantees for reclamation;
- process, content, and schedule of landowner / operator communication during CBM operations;
- process to address unforeseen events and changes;
- enforcement provisions (incentives for compliance / disincentives for non-compliance);
- dispute resolution; and
- transfer/assignment of agreement and conditions.

We envision that the SUDA template would acknowledge that money damages are a

²⁹ Development of best management practices by the Western Governors' Association and possibly by the American Petroleum Institute may respond to this need (see Section IV. D).

component of SUDAs, and the accompanying guide might identify the types of activities for which surface use damages are usually available. The authors do not, however, recommend that the collaborative dialogue or its product specify dollar amounts, due to both the risks in doing so raised by some interviewees and the apparent limited benefits.

The dialogue should also result in recommendations on the best methods for disseminating the SUDA template and guide to split estate owners and companies who still need to negotiate SUDAs.

A collaborative SUDA dialogue process can have significant benefits, even if it does not result in a consensus template or guide. A collaborative dialogue such as this can promote improved communications, resolve misunderstandings, build constructive relationships, enhance participants' collaborative problem solving skills, and build understanding of the divergent values and interests of the stakeholders involved in the process. Such a dialogue can also provide a forum for creative problem solving (short of consensus) on tough issues like produced water management, mitigating future land use impacts of CBM development, or developing concepts for new regulations or legislation. Finally, good faith participation in an inclusive dialogue could enhance CBM developers' public image.

2. Convening the SUDA Collaborative Process

a. Who Sponsors and Convenes the SUDA Dialogue?

We recommend that the dialogue be convened with an appropriate mix of stakeholders to address SUDA issues for federal, state and privately owned minerals. In our view, the best way to accomplish this is for BLM and Governor Freudenthal to work together to co-sponsor the convening of the dialogue participants. This recommendation has not been discussed with BLM or the state, thus the authors cannot predict how it will be accepted. If the collaborative process scope included BLM, state, and fee CBM development, it would engage the full range of stakeholders and mobilize existing knowledge and experience with split estates and SUDAs. This broad scope would provide the greatest potential benefit and applicability of its consensus products.

If a joint State/BLM sponsored dialogue is not feasible, the dialogue could be sponsored by either entity and focus only on SUDAs for the mineral estate(s) over which the sponsoring entity has jurisdiction. Under this scenario, the membership should include those most involved with CBM development and SUDAs on that type of mineral ownership. The resulting consensus product should be adopted and disseminated by the sponsoring agency and recommended (or required) as a starting point for SUDA negotiations.

Regardless of who sponsors the dialogue, a neutral organization perceived to be impartial by all stakeholders should convene the process. One possibility for that role is the William D. Ruckelshaus Institute of Environment and Natural Resources (IENR)³⁰ of the University of

³⁰ See: <http://www.uwyo.edu/enr/ienr/overview.htm> . " The William D. Ruckelshaus Institute of Environment and Natural Resources represents a partnership among more than two hundred research faculty, a prominent advisory board of leaders in the field of environment and natural resources, and the aspirations of a land-grant university. Its mission is to advance effective decision-making on environmental and natural resource issues by promoting and assisting collaborative informed approaches that sustain both the economy and the environment."

Wyoming. IENR is a neutral organization focusing on collaborative problem solving on environment and natural resource issues. It has convened and sponsored several workshops and dialogues on Wyoming natural resource issues. IENR staff interviewed as part of this convening assessment indicated that the Institute is qualified and would be interested in convening a dialogue on Surface Use and Damage Agreements. Other neutral organizations such as the U. S. Institute for Environmental Conflict Resolution could serve in a convener role as well.

b. Select a Facilitator to Organize and Facilitate the SUDA Dialogue

A neutral facilitator should be hired to help convene and facilitate the dialogue process, preferably one with experience in facilitation of natural resource issues (specifically CBM) and experience mediating or facilitating emotionally charged, technically complex controversies. The facilitator must have effective communication skills and be perceived by all participants as neutral and objective. A neutral facilitator will add credibility to the dialogue and can help allay concerns that the process is biased towards one interest or another. The facilitator should begin the convening process by utilizing the information provided in this Conflict Assessment.

As the dialogue process progresses, the facilitator's role is to create functional and safe environments where people can discuss critically important issues and work collaboratively to resolve them. In a large, complex dialogue such as this, it may be most effective to use two facilitators at least during the convening and initial meetings, with one serving to record summary points on a flipchart.

The facilitator(s) may also be asked to provide additional support for the SUDA dialogue:

- prepare meeting summaries and agendas;
- compile existing resource material;
- incorporate additional information learned from participants and resources;
- assist with drafting of proposals for group discussion; and
- facilitate conference calls, caucuses, and workgroup sessions.

Consideration should be given to providing staff to take care of meeting logistics, material copying and dissemination, research, drafting, etc.

c. Convening Activities

The facilitator should contact all potential participants to determine their suitability for membership and willingness to participate in this dialogue. The facilitator should work to assure that the membership fairly represents the various interests with a stake in these issues (stakeholders) while keeping the number of members small enough to allow effective dialogue. Generally, an ideal number of participants is between 20 and 25. It is very important that those who agree to participate are committed to attending each meeting, as the success of a collaborative dialogue is highly dependent upon the set of relationships built over time. The individuals selected to participate in the dialogue should also be willing and able to communicate regularly with their constituency (the interest they represent) about the dialogue's progress. In this way, the dialogue group's conversation can be informed by any concerns and

additional suggestions that the larger community may contribute.

While there are several approaches to convening a collaborative dialogue, the authors recommend that the facilitator develop categories of stakeholder interests that should be represented in the group (starting with the ones provided in this report). The facilitator would then work with the sponsor(s) to identify and invite individuals representing each category of stakeholder interests to participate in the dialogue, using criteria that assure appropriate representation of all interests. Thought should also be given to providing support (financial and other) for participants for whom the cost of travel or lost work time may prove a hardship.

Key stakeholders identified in this Conflict Assessment include:

- Coal Bed Methane development and operations industry representatives;
 - ▶ contract landmen,
 - ▶ local development/operations field managers for CBM companies,
 - ▶ CBM-related professional association member(s) (possibly Wyoming Business Alliance or Petroleum Association of Wyoming), and
 - ▶ contractors/businesses who perform the development/operations activities.
- Powder River Basin landowners;
 - ▶ owners of surface estate only (a representative sampling of different surface uses, possibly including owners of working ranches, investment landowners, conservation landowners, and small 'hobby' ranches),
 - ▶ owners of both surface and some or all mineral estate interests, and
 - ▶ some landowners who are also leaders for interest groups within the community (such as local Farm Bureau, Woolgrowers Association, Stockgrowers Association, local Conservation District Board members, local landowner associations, or environmental organizations such as the Powder River Basin Resource Council).
- Federal or state agencies (in *ex-officio* role, if they prefer);
 - ▶ Wyoming BLM,
 - ▶ EPA Region 8,
 - ▶ U.S. Natural Resource Conservation Service (NRCS),
 - ▶ Wyoming Oil and Gas Conservation Commission,
 - ▶ Wyoming State Engineer, and
 - ▶ Wyoming State Lands and Investments;
 - ▶ Montana DEQ (or other organization) regarding downstream concerns
- Local government entities;
 - ▶ Soil Conservation Districts, and
 - ▶ City Councilperson/County Commissioner[s].
- Local, regional, or national natural resource, conservation, and/or environmental group representatives.

Some of the state and local agencies may participate as "*ex-officio*" members, attending all or only selected meetings. Similarly, existing entities with extensive knowledge and experience with split estate issues and SUDAs (such as the Coalbed Methane Coordination Council, Powder River Basin Resource Council, Soil Conservation Districts, Petroleum Association of

Wyoming, or other organizations) could be invited to share their expertise with the collaborative dialogue group on an as-needed basis. In this role, staff for these agencies and entities would serve as a resource to the group; they could participate to answer questions, provide information and education, investigate concerns, but would not be decision-making members. This does not preclude a member of one of these organizations from being a dialogue participant.

The federal and state agencies which act as landlord for federal and state-owned mineral rights should participate as full dialogue members. The issues of full participation and decision-making process can be further explored during the convening process and in development of the group's operating procedures.

3. Organizing and Operating the Collaborative SUDA Dialogue

The dialogue participants will work with the facilitator to design the detailed process by which the group will do its work. This section highlights some of the considerations that will be important in organizing and operating the collaborative SUDA dialogue to maximize its success.

To achieve effectiveness, the group must have a mission and goals, operating procedures, behavioral ground rules, and good leadership. Ongoing communication systems must be established, and process guidance and logistics must be in place that will help the SUDA Dialogue achieve its goals and ensure productivity. These include proper meeting location, accessible meeting times, neutral and skilled facilitation, as well as meaningful and productive agendas.

The following topics should be addressed at the outset of the process:

- Information about the SUDA dialogue goals and process;
- The roles of the participants, and the facilitator;
- Process for keeping members' constituencies informed and involved, and replacement of members if they resign;
- Discussion and adoption of ground rules and operating procedures, including agreements on when and how individual participants will discuss group activities with others, and media relations ;
- Meeting logistics - time, date, and duration;
- Future meeting location(s) - consideration of travel distances, costs, and regional distribution;
- Discussion about topics and goals for future meetings;
- Adequate time for discussion and the cataloguing of concerns (for future agendas) by members; and
- An optional CBM development tour, if time allows.

The initial meeting could also include a role-play exercise, selected and organized by the facilitator, that helps participants experience the advantages of effective communications and using a collaborative approach. This would help group members break through preconceived ideas or stereotypes about each other, and develop the skills of collaborative dialogue (as opposed to advocacy).

Informational or educational presentations should be included in all of the initial meetings, but should not be lengthy or formal. Educational or informational topics might include:

- Presentations on other ‘models’ for SUDAs, or results of related collaborative processes;
- Presentations or panels on landowner and CBM developer concerns, needs, experiences, and issues;
- Orientation to federal and state regulatory programs relevant to CBM development in Wyoming;
- Educational presentations on technical issues identified, as needed, by dialogue participants; and
- Additional collaborative problem solving, interest-based negotiations, or communications training as deemed needed by the facilitator (and acceptable to the members).

4. Timeline for Collaborative Dialogue

The authors recommend that the SUDA dialogue be convened as soon as possible. As described in Section V.D. of this report, a potentially brief window of opportunity exists now to address split estate issues before a large number of additional SUDA negotiations begin.

B. Implement Collateral Activities Which Support a Model SUDA and Address Fundamental Causes of CBM Conflicts

Several additional activities should be undertaken to support the development and application of a model SUDA, and to aid the management of CBM-related conflict whether or not a SUDA is developed and proves useful.

1. Provide Training in Communications and Interest-Based Negotiation Skills

Our interviews reflected that split estate conflicts at the individual level are often caused or exacerbated by incompatible communication and negotiation styles. While some landmen and company representatives were lauded for their ability to get along with landowners, the experience of most landowners interviewed was not positive and left them feeling that they were at a disadvantage in their “partnership” with the operator using their surface for CBM development.

During the interview process, the authors heard anecdotes and witnessed for ourselves that some (but certainly not all) individuals who negotiate SUDAs (on both the landowners’ and companies’ behalf) employ negotiation strategies that are one-sided or coercive and do not seek to maximize both parties’ interests. It is our recommendation that training in interest-based negotiation (the “mutual gains” approach³¹ taught in law and business schools and most ADR programs around the country) be offered for all who are interested, including:

- landowners and their representatives, possibly offered through an association such as the Farm Bureau or individual associations;
- individuals who negotiate for companies, possibly offered through the Petroleum Association of Wyoming or the American Association of Professional Landmen or its Wyoming equivalent; and

³¹ “Mutual gains” negotiation is based on understanding the underlying ‘interests’ as compared to the stated ‘positions’ of the parties in the negotiation. Negotiators then attempt to craft agreements which maximize the mutual achievement of these interests.

- other interested individuals, possibly offered through the State.

The training should be provided by qualified individuals with experience in teaching “mutual gains” communication and negotiation skills. To maximize the learning experience for participants, the training could include CBM-specific simulations and role plays, in which landowner and company representatives must trade roles and negotiate as if they were the “other side.”

2. Expand Dissemination of Existing Information

During the interviews, many surface landowners stated a concern that they have no warning that the minerals under their land have been leased until a CBM landman calls or shows up at their door demanding access. Some landmen only allow 30 days to negotiate access and a SUDA with the surface owner before pursuing other legal remedies. The surface owner may have no knowledge that the mineral estate is dominant, and may be unaware of the nature of the remedies available to the CBM developer. The element of surprise in this type of situation creates a very negative atmosphere for negotiations, and is very difficult for surface estate owners.

Many of those interviewed, especially state and local government officials, acknowledged that additional notice, public outreach and education to landowners would serve a valuable purpose and could reduce conflict. While some efforts have been made to address this need, the authors recommend several specific steps to be taken to address the lack of landowner knowledge and understanding that we heard about in the interviews.

First, the authors recommend that surface estate owners be given notice when the minerals under their land have been leased. Since there is no such legal requirement for the lessor at this time, the notice will likely need to be given by a government agency (BLM for federally-owned minerals, Wyoming State Lands and Investments for state-owned minerals, and possibly the Wyoming Oil and Gas Conservation Commission for fee minerals). The surface owner should be given:

- contact information for the lease holder;
- duration of the lease;
- a copy of the lease;
- basic educational materials about CBM development and SUDAs; and
- notice whenever the lease is transferred to a new developer.

In addition, to the extent that this is not already happening, notice should be given to the surface owner when permits related to CBM development are applied for. Again, since there is currently no legal requirement for the CBM developer to provide such notice, it will likely need to be provided by the relevant agency. The surface owner should be given the option to request copies of agency permit manuals and other guidance. (The agencies could provide an annotated order form.) The information provided to surface owners should be written in a manner to make it understandable for a landowner who is new to CBM development.

The authors also recommend the creation of an on-line source of information, or improvement and expansion of existing web resources, to provide easy access and links to a wide range of CBM-related information. A starting point for this would be a review of existing web resources to identify what is available, what is missing, insufficient, or not user-friendly. All web-accessible

resources should also be maintained in hard copy at a central location for landowners who do not have easy access to the internet.

Based on the interviews, the authors recommend that federal, state, and local agencies provide increased availability of independent technical information for landowners that will help them explore site-specific solutions to CBM development problems and issues (for example, to perform chemical analysis of produced water, local soils and the interaction of the two). Some level of technical support is currently provided by organizations such as the Coalbed Methane Coordinating Coalition, University of Wyoming (especially the William D. Ruckelshaus Institute for the Environment and Natural Resources), the Soil Conservation Districts, and the U.S. Natural Resources Conservation Service (NRCS). Increased funding may be needed to provide more technical support and to reach out to a broader audience.

3. Increase Availability and Access to Alternative Dispute Resolution Services

In the stakeholder interview process, the authors heard many parties suggest alternative dispute resolution techniques to minimize and resolve conflicts related to CBM development and negotiation or implementation of SUDAs. Interviewees suggestions included mediation, creation of a state ombudsman, and statutorily mandated arbitration. At least one mediation program exists in Wyoming, sponsored by the Department of Agriculture³², but no one interviewed mentioned any experience with or knowledge of this program in resolving CBM disputes.

For the purposes of this discussion the authors use the following definitions:

- Mediation is a voluntary and confidential process in which a neutral third-party facilitator helps people discuss difficult issues and negotiate an agreement. Basic steps in the mediation process include gathering information, framing the issues, developing options, negotiating, and formalizing agreements. Parties in mediation create their own solutions and the mediator does not have any decision-making power over the outcome.
- Arbitration is a process in which a third-party neutral, after reviewing evidence and listening to arguments from both sides, issues a decision to settle the case.
- According to the ABA Standards For The Establishment and Operation of Ombuds Offices³³ the essential characteristics of an ombuds are independence, impartiality in conducting inquiries and investigations, and confidentiality. Ombuds traditionally receive complaints and questions, work for the resolution of particular issues and, where appropriate, make recommendations. Additional information on ombuds, such as a Code of Ethics and Standards of Practice, may be found at the Ombudsman

³² The Wyoming Mediation Board was created by the 1987 Legislature to establish a procedure for mediation of disputes between farmers or ranchers and their creditors (W.S. 11-41-101 to 110). The Board's size and duties were expanded by the 1998 Legislature to address natural resource and agricultural issues and to identify solutions that are accepted by all conflicting parties. The Board operates in conjunction with the Wyoming Department of Agriculture. For more information see: <http://agecon.uwyo.edu/mediation/> .

³³<http://www.ombuds-toa.org/downloads/ApprABASStand.pdf> .

Association's web site.³⁴

The key difference between these ADR techniques is the degree of control over the outcome retained by the parties. Mediation and facilitation leave all decisionmaking power in the hands of the participants, whereas arbitration and often ombudsman, render a binding or non-binding recommendation based on what they heard from the parties.

It is our recommendation that ADR services be offered to resolve split estate disputes, but only those ADR processes which allow the parties to retain control over the ultimate solution should be considered. An ADR process that encourages good communication and development of working relationships, such as mediation, would be preferable.

The knowledge, experience and qualifications of the third-party neutral in such an ADR process have a huge impact on the success of the process. The third-party neutral must actually be, and must be *perceived* to be, impartial, with no vested interest in the outcome of the issues. Mediators must be acceptable and trusted by all parties to the mediation for the process to be effective. This requires that all parties are involved in the selection of the mediator and that they select someone who is acceptable to every party in the dispute. The authors strongly recommend that mediators be selected through one of the existing qualified mediator roster programs such as the ones run by the U.S. Institute for Environmental Conflict Resolution³⁵ or the American Arbitration Association³⁶.

Recommended characteristics for effective ADR in CBM cases include:

- independent mediator with no vested interest in outcome (not affiliated in any way with landowners, CBM developers, or an employee of an agency with CBM jurisdiction);
- experience with (or receive training on) technical and legal CBM issues (but a technical expert should not be the ADR provider, unless trained and experienced in mediation);
- experience working with parties of significantly different sophistication and knowledge; and
- experience working in highly charged emotional situations.

In addition, a mechanism should be created to allow parties to participate who cannot afford to pay for their share of the mediation.

4. BLM Should Consider Creation of a Wyoming BLM Resource Advisory Council

During the interviews, the authors heard interest from some BLM representatives in recreating a Wyoming BLM Resource Advisory Council (RAC) under the Federal Advisory Committee Act process. It is our understanding that a RAC had been operating in Wyoming in the late 1990s, but due to unresolved issues between the state and BLM, its charter was not renewed. Wyoming is the only western state that does not have a BLM RAC.

³⁴http://www.ombuds-toa.org/code_of_ethics.htm .

³⁵ www.ecr.gov .

³⁶<http://www.adr.org/index2.1.jsp> .

According to BLM website information, there are 24 Resource Advisory Councils (RACs) that were formed in the West in 1995, as part of Secretary Babbitt's Healthy Rangelands initiative. The purpose of the Resource Advisory Council is to enable an area's citizens to have a meaningful say concerning planning and management of the public lands and resources. Interested in all aspects of managing public lands and resources, a RAC should provide sound advice on a broad array of resource, social, and economic issues. The RAC operates on principles of collaboration and consensus, and is committed to working together for the long-term benefit of public lands and resources and the people who enjoy and rely on them.

According to BLM information, RAC membership is to be balanced between the three following categories (to ensure balanced representation of the various interests and users of the public lands and resources):

- Holders of Federal grazing permits, energy and mining development, timber industry, transportation or rights of way, off-road vehicle use, or developed recreation;
- Environmental and resource conservation organizations, dispersed recreational activities, archeological and historic interests, or wild horse and burro groups; and
- Elected State, county or local government, employees of State agencies responsible for management of natural resources, land or water, Native American tribes, academicians involved in natural sciences, and the public at large.

Creation of a Wyoming RAC could help to address and resolve some of the causes of conflict regarding CBM development of federal minerals. Interview of a BLM representative involved with management of RACs indicated that a Wyoming RAC could create a subgroup to focus on advising BLM on ways to reduce disputes between CBM developers of federal minerals and corresponding surface landowners. The subgroup recommendations could then be adopted by the full RAC and transmitted to Wyoming BLM officials. As creation of an Advisory Council through the Federal Advisory Committee Act process can be time consuming, the authors recommend that the dialogue on creation of a SUDA template and guide proceed independent of BLM consideration of creating a RAC.

APPENDICES

Appendix 1 - Description of the U.S. Institute for Environmental Conflict Resolution

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Appendix 1

Description of The U.S. Institute for Environmental Conflict Resolution

The U.S. Institute for Environmental Conflict Resolution was created in 1998 by unanimous vote of Congress. Its mission is to help parties resolve environmental, natural resources and public lands disputes involving a federal agency or interest. In addition to providing conflict resolution services, the Institute seeks to (1) increase the use of environmental conflict resolution in general and specifically by federal agencies and parties in conflict with federal agencies, and (2) engage in and encourage collaborative problem-solving and consensus-building during the design and implementation of federal policies to prevent future environmental disputes.

The U.S. Institute serves as an impartial, non-partisan institution providing professional expertise, services, and resources to all parties involved in such disputes, regardless of who initiates or pays for assistance. The Institute helps parties determine whether collaborative problem solving is appropriate for specific environmental conflicts, how and when to bring all the parties to the table, and whether a third-party facilitator or mediator might be helpful in assisting the parties in their efforts to reach consensus or to resolve the conflict. In addition, the Institute maintains a roster of qualified facilitators and mediators with substantial experience in environmental conflict resolution, and can help parties in selecting an appropriate neutral to assist them. Specific services offered by the Institute include case consultation, conflict assessment, process design, convening of the parties, facilitation, mediation, and dispute system design. See www.ecr.gov for more information about the U.S. Institute.

Appendix 2

Biographical Sketches of the Authors



CommUnity Resolution Inc.

*Facilitation & Mediation
Environmental Consulting
Dispute Resolution Training
Participatory Process Design*

2915 East Oakhurst Drive Salt Lake City, UT 84108 Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

Michele Straube

CommUnity Resolution Inc.

Ms. Straube has over 20 years' experience in environmental and natural resource issues, having dealt with such conflicts from many perspectives – as an advocate, a policy analyst, an educator, a process designer, and a mediator/facilitator. She has practiced law as an enforcement attorney for the Commonwealth of Pennsylvania, and in private practice assisting municipal governments and businesses (including mining companies) attain environmental compliance. She has provided environmental policy analysis to federal, state and local governments and NGOs since 1987. In 1993, Ms. Straube developed and taught an environmental practice seminar for the University of Virginia University School of Law. She has also developed and currently teaches an environmental dispute resolution course at the University of Utah S.J. Quinney College of Law.

Ms. Straube has lived and worked in the West for the past eight years. Her facilitation and mediation experience covers a wide range of issues and western stakeholders, including:

- The Park City Soils Ordinance Area work group (including federal, state, county and city government agencies, business and rental community representatives, and local citizens), developing a plan to identify and reduce any residual risk from previous mining activities.
- The Kennecott Resource Roundtable. A public involvement process she designed to assist the company and regulators explore future use options for contaminated property. Interests represented included economic development, open space and recreation, transportation, mining closure and reuse, sustainable resources, and community planning.
- Clean Utah! Program, an incentives-based state-wide program to encourage participants to improve environmental performance, developed by the Utah Department of Environmental Quality's Performance Track working group (consisting of industry, government and environmental groups representatives).
- Hill Air Force Base Restoration Advisory Board, with representatives from seven adjacent communities and environmental groups, who advise the base on priorities and appropriate remedies for hazardous waste cleanups.

Melinda J. Holland

Senior Mediator, Consensus Solutions, Inc.
700 N. Trade Ave.
Landrum, SC 29356
828-894-5963; fax 864-457-5393

Ms. Holland has twenty seven years of combined legal, facilitation, mediation, regulatory policy and technical experience in environmental protection, specializing in water quality, wetlands, Superfund, hazardous waste, and wastewater treatment related issues. Also extensive experience in environmental policy, watershed planning, environmental technology, land conservation, natural resources, and microbiology. Ms. Holland has performed numerous conflict and convening assessments during her 15 years of mediation and facilitation beyond the cases described below including:

- ◆ An EPA Federal Advisory Committee on urban wet weather and stormwater issues
- ◆ An EPA Federal Advisory Committee on sanitary sewer overflow issues
- ◆ An EPA Regulatory Negotiation [Reg-Neg] on regulatory standards for closing bathing beaches
- ◆ Numerous 1 - 3 day workshops such as: DOE Southeastern Regional Technology Deployment Workshop; EPA/Clean Sites Innovative Technology Public-Private Partnerships; DOE Innovative Technologies and Waste Cleanup Workshop; ATSDR's Community Health Assessment Workshops; Clean Sites' Community Industry Forum; and several EPA conferences on Allocation in Superfund Settlements, *de minimis* Settlements, and Innovative Technologies.

Conflict Assessment Descriptions:

Tri-State Plant Food Facility, Dothan, Alabama

Ms. Holland conducted a conflict assessment at the request of U.S. EPA at this facility. This long-standing dispute between the plant and the surrounding minority community over anhydrous ammonia releases involves two class action lawsuits and numerous administrative agency enforcement actions. She conducted interviews with stakeholders (including low-income community members; city and county elected officials; city and county, state and federal regulatory agency staff; plant management and workers; local clergy; neighboring businesses) and provided process recommendations in a convening assessment report.

West Valley Citizen Task Force, West Valley, NY

Ms. Holland conducted the conflict assessment at this high-level nuclear waste site which led to the formation of the Task Force by the State of New York and the Department of Energy. The parties include all key stakeholder groups, local

citizens, business people, environmental groups, the Seneca Nation of Indians, state and county regulatory agencies, and site representatives. Ms. Holland's conflict assessment recommended creation of a community advisory panel, as well as consensus-building training for citizens and site management. Since its beginning six years ago, Ms. Holland has served as facilitator/mediator for the resulting Task Force. In that role she has provided negotiation and consensus training to participants; facilitated meetings, conference calls and workgroup sessions; and assisted in development of a 'game' or exercise which allowed participants to visually develop site cleanup options. A wide range of issues has been addressed by the Task Force including cleanup standards, nuclear safety, worker safety, citizen oversight role, NEPA, erosion, long term institutional controls [1,000 years +], cleanup and containment technology, siting of on-site disposal facilities, Nuclear Regulatory Commission regulations and licenses. The Task Force has developed consensus recommendations on cleanup and closure of the site and now meets every month in an oversight role.

A Dialogue for Identifying Barriers to Distributed Energy & Combined Heat and Power Technologies and Developing the Strategies for Overcoming Them - Virginia Department of Environmental Quality.

Ms. Holland conducted a convening assessment for VADEQ on this subject. She conducted extensive research into energy regulation and barriers to use of distributed energy technologies. She also held numerous telephone interviews with potential stakeholders (including national, regional and state environmental and consumer groups; utility companies; state regulatory agencies; electric coops; local government officials; energy consultants; technology vendors) to identify the issues needing resolution, opportunities for success, and the appropriate stakeholders. She recommended stakeholder participants, issues to be resolved, and process design elements for a series of planned dialogues on overcoming barriers to increased utilization of distributed energy technologies in Virginia.

Ms. Holland has performed a significant amount of facilitation/mediation work in the Western states including:

- The Western Governors' Association [WGA] "Development of On-site Innovative Technologies [DOIT] Federal Advisory Committee" where for three years she facilitated two of the four workgroups - the Military Base Workgroup and Munitions Workgroup dealing with Western DOD facilities;
- Federal Mining Dialogue Conference (focused on federal agency efforts to clean up western hard rock mine sites)
- Western Governors' Association Roundtable on Stakeholder Participation
- Western Governors' Association Roundtable on implementation of the DOIT Federal Advisory Committee's recommendations;
- Regional citizens' conferences for ATSDR on Superfund site health assessments.

Appendix 3

Glossary of Acronyms

APD - BLM Application to Drill
BATNA - Best Alternative to a Negotiated Agreement
BLM - U. S. Department of Interior's Bureau of Land Management
CBM - Coalbed Methane
CBMCC - Coalbed Methane Coordinating Coalition
EIS - Environmental Impact Statement
EPA - US Environmental Protection Agency
FEIS - Final Environmental Impact Statement
FLPMA - Federal Land Policy and Management Act
NPDES - National Pollutant Discharge Elimination System
NRCS - U. S. Natural Resource Conservation Service
PAW - Petroleum Association of Wyoming
POD - BLM Plan of Development
PRB - Powder River Basin
PRBRC - Powder River Basin Resource Council
RAC - BLM Resource Advisory Committee
RMP - Resource Management Plan
SUDA - Surface Use and Damage Agreement
TDS - Total Dissolved Solids
UIC - Underground Injection Control
US ACE - U. S. Army Corps of Engineers
US IECR - U. S. Institute for Environmental Conflict Resolution
WDEQ - Wyoming Department of Environmental Quality
WOGCC - Wyoming Oil and Gas Conservation Commission
WSE - Wyoming State Engineer

Appendix 4

Index of Web Sites Researched

<http://www.landman.org/LMTools.htm> American Association of Professional Landmen

<http://www.prb-eis.org/prb-feis.htm> BLM's PRB Environmental Impact Statement

<http://www.cccdwy.net/> Campbell County Conservation District

http://www.conservewy.com/wacd/districts/lake_desmet.html Lake DeSmet Conservation District

<http://www.deq.state.mt.us/CoalBedMethane/index.asp> Montana DEQ Coalbed Methane site

<http://www.deq.state.mt.us/CoalBedMethane/Wyoming.asp> Montana DEQ web site about Wyoming coalbed methane

http://www.northernplains.org/Issues/CBM/Doing_It_Right_Options.asp Northern Plains Resource Council publication "Doing It Right - Ensuring Responsible Development"

<http://www.wyomingoutdoorcouncil.net/> Wyoming Outdoor Council

<http://www.nrcs.usda.gov/> U. S. Natural Resource Conservation Service

<http://www.powderriverbasin.org/prbrc/index.htm> Powder River Basin Resource Council

<http://www.uwyo.edu/enr/ienr.htm> Ruckelshaus Institute of Environment and Natural Resources, University of Wyoming

<http://www.conservewy.com/> Wyoming Association of Conservation Districts

<http://deq.state.wy.us/> Wyoming Department of Environmental Quality

<http://deq.state.wy.us/wqd/index.asp?pageid=57> WDEQ's Coalbed Methane site

<http://lands.state.wy.us/> Wyoming Office of State Lands and Investments

<http://www.ipams/org/> Independent Petroleum Association of Mountain States

<http://www.sierraclub.org/wy/> Sierra Club, Wyoming Chapter

http://www.wyomingenergy.org/minerals/energy_commission/ Wyoming Business Council / Wyoming Energy Commissions

<http://www.pawyo.org/> Petroleum Association of Wyoming

<http://www.wy.blm.gov/bfo/> Bureau of Land Management, Buffalo Field Office

<http://wyagric.state.wy.us/natres/mediation/index.htm> Wyoming Department of Agriculture, Ag and Natural Resource Mediation

<http://www.cbmwyo.org> Powder River CBM Information Council

<http://www.cbmcc.vcn.com/> CoalBed Methane Coordination Coalition

<http://www.wba.vcn.com> Wyoming Business Alliance

<http://wogcc.state.wy.us> Wyoming Oil and Gas Conservation Commission

<http://seo.state.wy.us> Wyoming State Engineer

Appendix 5

Letter of Introduction



CommUnity Resolution Inc.

*Facilitation & Mediation
Environmental Consulting
Dispute Resolution Training
Participatory Process Design*

2915 East Oakhurst Drive Salt Lake City, UT 84108 Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

November XX , 2002

XXX

Re: Coal Bed Methane Development Conflict Assessment

Dear XXX:

We are writing to introduce ourselves and a project about which we will soon be contacting you to set up a time for an interview. We are environmental mediators under contract to the U. S. Institute for Conflict Resolution [www.ecr.gov] to conduct a conflict assessment of selected issues related to coal bed methane [CBM] development in the Powder River Basin of Wyoming. This conflict assessment will focus specifically on the utility of developing a model legal agreement [most likely a surface use and damage agreement] which could address and help resolve split estate issues between landowners and holders of mineral rights. As a part of the conflict assessment, we will be interviewing a large number of individuals representing the different interests involved in these issues (including: federal, state and local regulatory agencies; federal, state and local legislative entities; surface and mineral estate owners; and non-governmental organizations). If our conflict assessment concludes that developing such a model legal agreement would be useful, we will detail a recommended collaborative process (i.e., a process that provides the opportunity for all interest groups to participate) to undertake the effort.

We will be contacting you in the next week or two by telephone to set up a day and time for an interview, and to answer questions or hear any concerns you have about this project. Depending on our schedule and your availability, the interview may be in-person or by telephone. Our plan is to arrive in the Sheridan area on November 8th or 9th and conduct interviews over the weekend and the following week.

The interview will provide you an opportunity to share your experience with coalbed methane issues in the Powder River Basin, with specific emphasis on the relations between surface and mineral estate owners. We will explore the challenges and opportunities presented by the split estate aspect of coalbed methane development, and how the opportunities might be realized while overcoming the challenges. We would like to discuss the key issues that you feel need to be resolved and your goals regarding agreements between owners of surface rights and owners or lessees of oil and gas rights on the same land. Discovering the key roadblocks you anticipate to resolving those issues and the outcomes you would like to see on the key issues is important to us. We would also like your suggestions on who should participate *if* a collaborative dialogue involving all key stakeholders was convened to create a template or “model” agreement between owners of surface rights and owners or lessees of oil and gas rights on the same land. Our final report will reflect what we hear in the interviews, but nothing will be attributed to specific individuals or organizations.

To give you a bit of background on who we are, brief biographical sketches follow this letter. We look forward to speaking with you soon. If you wish to contact us prior to our calling you, feel free to email or call us at the numbers provided below.

If you wish to learn more about the U.S. Institute for Environmental Conflict Resolution or talk to someone at the Institute about this project, contact Dale Keyes, Senior Program Manager (520-670-5653, keyes@ecr.gov).

Sincerely,

Michele Straube
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362; 801-582-2043 (fax)
801-455-5789 (cell)
mstraube@mindspring.com

Melinda J. Holland
Senior Mediator
Consensus Solutions, Inc.
700 N. Trade Ave.
Landrum, S.C. 29356
(864) 457-4202; (864) 457-5393 (fax)
mholland@piedmont.net

Biographical Sketch for Melinda J. Holland

Ms. Holland has 15 years experience as a Senior Mediator/Facilitator working exclusively on environmental and natural resource issues. She has 27 years of combined legal, mediation and technical experience in environmental protection, specializing in water, natural resources, oil and gas, energy, Superfund, and hazardous waste issues for the past 20 years. Ms. Holland's undergraduate training and work experience as a microbiologist and environmental scientist provides her with useful scientific knowledge and background relative to technical issues.

Biographical Sketch for Michele Straube

Ms. Straube has more than 20 years of experience with natural resource and environmental disputes. She began her career as an enforcement attorney for a state environmental agency. She has counseled industry and municipalities about regulatory compliance, and has provided policy analysis to all levels of government on a broad range of energy and natural resource issues. Ms. Straube currently mediates a variety of disputes, and facilitates collaboration between communities and decision-makers. She has developed and teaches a course in environmental dispute resolution at the law school level.

Appendix 6

List of Completed Interviews

Government Entities

Federal

Dennis R. Stanger, Field Office Manager
Bureau of Land Management, Buffalo Field Office

Richard A. Zander, Assistant Field Office Manager
Bureau of Land Management, Buffalo Field Office

Willy Frank, Supervisory Natural Resource Specialist
Bureau of Land Management, Buffalo Field Office

Alan Kesterke, Associate State Director
Bureau of Land Management, Wyoming Office

Ayn Schmit, CBM Coordinator
Environmental Protection Agency, Region VIII

Cindy Cody, Director, NEPA Programs
Environmental Protection Agency, Region VIII

State

Dennis Hemmer, Director
Wyoming Department of Environmental Quality

Gary Beach, Administrator, Water Quality
Wyoming Department of Environmental Quality

Don J. Likwartz, State Oil and Gas Supervisor
Wyoming Oil and Gas Conservation Commission

Patrick T. Tyrell, State Engineer
Wyoming State Engineer's Office

Brian Kuehl
Gov. Freudenthal's Transition Team

Patrick G. Pitet, Minerals, Energy & Transportation Director
Wyoming Energy Commission / Wyoming Business Council

Local

Mickey Steward, Coordinator
CBM Coordination Coalition

Bj Kristiansen, Assistant Coordinator
CBM Coordination Coalition

Alan Weakly, Commissioner
Campbell County Commission

Michelle Cook
Campbell County Soil Conservation District

Bill Wells
Lake DeSmet Conservation District

Mac White
Natural Resources Conservation Service (NRCS)

Surface Landowners

Dale Ackels

Eric and Bernie Barlow

Mary Brannaman

John Heynemann, Jr.

Neltje

Nancy and Robert Sorenson

Ed Swartz

Joanne Tweedy

Bill Wells

Bill and Marge West

Attorneys

Haultain (Hal) E. Corbett

John M. Daly

S. Thomas Throne

Tom Toner

CBM Developers

Wayne Ransbottom, Regulatory Coordinator
Marathon Oil Co.

G. Bruce Williams, Vice President Operations
Fidelity Exploration and Production Co.

Joe Icenogle, Regulatory Affairs
Fidelity Exploration and Production Co.

Rick D. Briscoe, Landman
J. M. Huber Corp.

Jim DeArman, Landman
Williams Production RMT Co.

Kennedy Oil (not formally interviewed)

Non-Governmental Organizations

Petroleum Association of Wyoming (not formally interviewed)

Powder River Basin Resource Council

Western Organization of Resource Councils

Wyoming Stockgrowers Association

Wyoming Outdoor Council

The Nature Conservancy

University of Wyoming

William D. Ruckelshaus Institute of Environment and Natural Resources

Appendix 7

Interview Topics

Powder River Basin Coalbed Methane Split Estate Issues Conflict Assessment

- Interests, concerns, or past involvement with coalbed methane [CBM] development in the Powder River Basin of Wyoming.
- Major issues and motivating factors in the dispute between the landowners and the CBM developers.
- Key issues that need to be resolved regarding agreements between owners of surface rights and owners or lessees of CBM rights on the same land; key roadblocks to resolving those issues; and preferences for resolution of the issues described.
- Differences between split estate and non-split estate landownership regarding CBM conflicts.
- Relationships between the various players involved in CBM development, regulation, land ownership, etc.
- Role of state and federal regulatory agencies.
- Zoning or local government land use regulations' usefulness in resolving the issues w/ CBM development.
- Scope of existing legal/regulatory authorities to address problems regarding CBM development on split estate lands.
- Key issues with, and components contained in, Surface Use and Damage Agreements (SUDA).

- Current and preferred methods of negotiating SUDAs.
- Utility of a model SUDA; types of provisions needed for a model SUDA.
- Interest in participating in a collaborative dialogue with the goal of developing a model agreement which could be used by CBM developers and landowners.

Appendix 8

Significant Observations That Fall Outside the Scope of This Conflict Assessment

This section lists miscellaneous issues and concerns regarding CBM development mentioned during the interviews that did not directly address the central focus of this conflict assessment (split estate issues and the utility of a model SUDA). However, these issues are very relevant to understanding the reasons behind the complex conflicts between landowners and CBM developers.

Environmental, Conservation and Land Use Issues:

- Air quality is a big issue for residents and all levels of government. Most of the problem comes from dust from dirt roads used in CBM development related activities. A dust mitigation strategy and implementation methodology is needed.
- CBM development is resulting in fragmentation of large open tracts of land into 80 acre parcels divided by roads, pipelines, electric lines, etc., which disrupts wildlife migration and eventually may lead to large ranches being broken up into 40 to 80 acre ranchettes (viewed as sprawl in this area).
- Landowners and some government representatives believe that the water well protection agreement's assumptions on the zone of influence are arbitrary and do not reflect the reality that a CBM well can ruin a drinking water well much further than one mile in some areas. The water well protection agreement needs to be revised to reflect modern understanding of the geology and to allow flexibility for areas with differing geology.
- A program and funding to purchase mineral rights to protect surface lands with conservation or ranch/farm preservation easements from CBM development is needed.

Technical Issues:

- Technical assistance for landowners is needed to perform chemical analysis of soil and produced water and to predict the results of interaction of soils & produced water. Conservation Districts/NRCS do not have funding to provide this assistance.
- High SAR water can be successfully used for irrigation with good soil science (example given was a western sugar cane grower). NRCS or Conservation Districts should be able to provide technical assistance to ranchers and farmers to allow more widespread safe use of high SAR water.
- CBB produced water filtration plants like those in use in Colorado should be used in PRB - where water is treated by reverse osmosis, micro filtration with the small amount of residual water re-injected.
- Some CBM operators have been successful in irrigation with high SAR produced water by adding substances to the soil to successfully offset impacts of high SAR.

Information Sharing and Dispute Resolution:

- Landowner education regarding the CBM development process, impacts on the landowner, the relevant law and regulations, etc. is needed.
- Title companies should disclose who owns mineral rights and make it clear that title insurance coverage is only for the surface estate.

Regulatory/Legal Issues Raised During Interviews:

Suggestions for Governor Freudenthal for Changes in Wyoming Regulatory Approach/Structure:

- The new Governor should appoint new members to the Oil and Gas Commission to give it more balance and more support for surface owners' rights and renewable energy.

- Wyoming should become a participating agency in the BLM EIS process.
- The CBM industry would welcome some type of dispute resolution process, short of litigation, for conflicts with landowners; perhaps created/supported by the state.
- Landowners hope the new Governor will make changes in state regulation of CBM to provide more accommodation for surface landowners rights.

State Law or Regulation:

- Mineral estate owners should pay real estate tax all along, not just after they begin extracting minerals (similar to Colorado).
- Water management regulatory requirements have been changing rapidly; industry worries about future changes and impact on the costs of development.
- Current metering of gas produced is inaccurate; landowners and the state are losing revenues as a result. State regulation/calibration of meters is needed.
- Existing state law/regulations does not provide adequate protections for split estate surface owners; Wyoming state law needs to change to embrace the accommodation doctrine where the needs of both the landowner and developer are accommodated.
- What state law/regulation there is has not been adequately enforced in favor of split estate landowners; state agencies were told by the past administration not to do anything to slow down CBM development.
- Current uncertainty in Wyoming case law makes both landowners and companies reluctant to go to court for fear that a bad precedent will result.
- Wyoming has no state 'NEPA', which limits the state's ability to protect the environment from some CBM related problems.

- Some feel that until state law changes, it will be difficult to provide more protections for private or state-owned oil and gas leases.
- Some landowners want to see a Landowners Bill of Rights passed by the Wyoming legislature; others want a surface rights protection statute adopted which is similar to other western states.
- Wyoming's Section 401 water quality certification process needs improvement.
- Counties and cities lack legal authority to take action to force abatement of public nuisances.
- Wyoming's eminent domain statute needs revision; it is too broad. It should require a clear showing of public benefit.
- State minerals and private minerals have little regulation/protection for the surface owner and the environment.

Federal and State Law/Regulation:

- Current state and federal government required bonding is viewed as grossly inadequate by many government representatives and landowners.
- Landowners who own surface rights over federal, state and private minerals say that, of the three, they receive the best protection from BLM. BLM has regulations and requirements which are much more protective of landowners than the state of Wyoming has for the CBM it owns or regulates.
- More legal/regulatory protections regarding discharge of produced water are needed for the downstream landowner (when the CBM development/discharge is not on the downstream owner's land).
- In some cases, produced water disposal pits are not regulated by state or

federal agencies, but should be.

- Agencies need to be able to deny permits to bad actors, i.e. those who have serious past violations of environmental laws or oil and gas development laws.
- Split estate landowners need a new statute which requires operators to negotiate a SUDA, provides some basic protections and reasonable accommodations for surface owners. This law should require the consent of the landowner for certain activities such as produced water discharge or disposal, location of wells, roads, pipelines, etc.

Federal Law/Regulation:

- BLM does not have adequate legal authority to regulate problems resulting from produced water being discharged off-lease.
- BLM needs authority to require project-specific bonds (now only have single inadequate bond for all of a company's projects in multiple states).

Appendix 9

Topics Covered in the Various SUDAs Reviewed

This listing represents topics covered in the various Surface Use and Damage Agreements obtained and reviewed as part of the Conflict Assessment. The SUDAs reviewed included ones that were signed by both parties, ones that were not, and ones that served as model agreements used to initiate negotiations. No one agreement contains all the topics listed in this appendix, but each topic listed appears in at least one SUDA.

Landowner Rights

- Prior notice required before operator's entry onto land (some specify no. of days' notice)
- Prior approval by landowner of location of each well, road, pipeline, power line, gathering system and facility
- Operator to provide designated primary contact person
- Right of landowner to take ownership of and convert abandoned well bore into water well
- Landowner to be given first opportunity to perform contract work needed by operator

CBM Operator Rights and Responsibilities

- Operator's right of entry onto and use of land acknowledged
- Operator to cooperate in prevention of spread of agricultural diseases
- Authorization for use of landowner's water, gravel, shale and fee
- Operator responsibility to clean up litter / trash / rocks
- Activities not permitted under agreement:
 - Living quarters for workers
 - Storage of excess equipment
 - Guns or explosives
 - Hunting
 - Drugs or alcohol
- Operator's fire prevention responsibilities and required equipment
- Restoration after CBM operations cease

- Restoration and reseeded techniques specified
- Plug and properly abandon unused wells
- Duty to comply with environmental laws, and abate environmental damages

Scope of CBM Development

- Plan of development to be mutually developed and agreed upon before CBM development begins; plan to include:
 - Maps showing important features on landowner's land
 - Location of operator's planned wells and supporting equipment
 - Location of pipelines
 - Schedule
 - Construction standards for all facilities
 - Water management plan
 - Noise control
 - Dust control
 - Weed control
- Consolidation of facilities to serve as many wells as practical
- Obligation to minimize visual impact on the landscape

Activities Related to CBM Development

Well Sites

- Size limits (by acreage)
- Limitation of agreement to shallow wells or particular coal formations

Roads

- Width of roads
- Right of ways
- Repair of landowner's existing roads, if used
- Reclamation of roads no longer used (or used by landowner)
- No permanent roads without landowner permission
- Construction specifications, techniques specified
- Roads to be maintained; weeds to be controlled by operator

Pipelines

- Construction techniques specified
- Landowner to be provided with plat showing location of all pipelines
- Removal, cleanup, restoration required

Compressors, gathering facilities

- Noise limitations or reduction techniques
- Location restrictions
- Visual impact to be reduced

Power lines

- Overhead lines to cause least interference with visual landscape
- Buried pipelines to be used when possible
- Restoration, construction techniques

Protections for cattle/ranching operations

- Installation of gates in fences when breached due to CBM operation
- Gates to be kept as they are found (to be closed, if they were closed when operator goes through)
- Areas (pits, drill sites, etc) to be fenced off to protect livestock
- Special considerations during calving / lambing / foaling / hunting seasons
- Special considerations for recreational ranch business operations (e.g., hunting, dude, horse training)

Produced Water Management

- Discharge location and conditions for discharge specified
- Pits for disposal authorized (including provisions for construction, prohibition of overflow, fencing, permits, reclamation after end of use, monetary damages for leaking or discharging pits)
- Reservoirs for beneficial reuse of water by landowner authorized
- Operator responsibility for downstream damage to other lands, livestock, crops, improvements, etc.
- Downstream landowners intended to be third party beneficiaries who can enforce the agreement
- Operator to provide water analysis of streams, reservoirs or soils proposed to receive discharge of produced water (testing methods, locations, etc. specified)

- Landowner approval of written water management plan required for each water discharge point on or off landowner property, along with a copy of the NPDES permit application
 - Minimum contents of plan specified
 - Landowner right to require revision to plan if damage to landowner water, soil, vegetation
 - Landowner shall not unreasonably withhold consent
- Operator may re-inject or transport water off landowner's property, if landowner and operator cannot agree on water management plan
- Operator cannot prevent landowner from beneficially using produced water

Water Well Agreement Conditions (usually based on the model water well agreement)

- Testing of existing water wells to be paid for by CBM operator

Monetary Provisions

- Payment (as damages or rental) for one or more of the following disturbances:
 - Roads (sometimes calculated by length of road)
 - Pipelines and right of ways
 - Gathering system
 - High pressure transmission lines
 - Compressor stations
 - Electric lines (above and below ground)
 - Pits / impoundments
 - Stratigraphic test hole
 - Wells
 - Service access points
 - Pod building
- Comprehensive damage payment
- Payment for loss of agricultural production on land used by operator
- Compensation for loss of range land due to fire caused by operator
- Overriding royalty - a percentage royalty interest in the oil and gas lease
- Adjustment in payment amounts every so often according to a formula tied to the Consumer Price index

Enforcement and Dispute Resolution

- Non-defaulting party has right to enforce the agreement
- Operator to pay attorneys' fees and other costs of enforcing agreement, upon default
- Natural resource management mediator jointly selected by landowner and operator to attempt to resolve dispute; if not resolved in 30 days, parties have legal remedies
- Operator to deposit \$ xxx in bank as security for reclamation and other obligations under SUDA
- Monetary compensation, or correction to damage, required for livestock, water wells, property, fences, springs, reservoirs (including pollution)

Miscellaneous Provisions

- Operator to have insurance
- SUDA not to be recorded without both parties' consent
- SUDA not to be disclosed to third parties' without consent
- Assignment of agreement
 - Fully assignable
 - Assignable with consent (but landowner cannot unreasonably withhold consent)
 - No assignment outside company unless landowner consents (without such consent, operator remains bound to agreement, even after assignment)
- Operator agreement to indemnify, defend and hold landowner harmless for all actions / claims that arise out of operator's activities on land, including:
 - violation of environmental laws
 - liabilities for personal injury, death or property damage
 - mineral trespass
 - water trespass
- Waiver of liability to landowner for damage caused by livestock to CBM operations