

**Decision on Action and Application for Categorical Exclusion
For Activities Associated with Oil and Gas Development
Section 390, Energy Policy Act of 2005**

MJ POD
Petro-Canada Resources (USA), Inc.
WY 070-CX07-2-053 to 112
Bureau of Land Management
Buffalo Field Office

Description of the Proposed Action:

Petro-Canada Resources (USA), Inc. (the operator) has proposed to drill the following wells to additional coal zones at existing well locations to produce coal bed natural gas (CBNG) from Federal mineral estate:

Table 1: MJ POD Wells

| | Well Name | QTR | Sec | TWP | RNG | Lease | CX Number |
|----|-------------------|------------|------------|------------|------------|--------------|------------------|
| 1 | MJ Throne 6-13CO | SWNE | 6 | 50N | 74W | WYW79450 | 2-053 |
| 2 | MJ Throne 6-21CO | NENW | 6 | 50N | 74W | WYW79748 | 2-054 |
| 3 | MJ Throne 6-21LA | NENW | 6 | 50N | 74W | WYW79748 | 2-055 |
| 4 | MJ Throne 6-23CO | SWNW | 6 | 50N | 74W | WYW79450 | 2-056 |
| 5 | MJ Throne 6-23LA | SWNW | 6 | 50N | 74W | WYW79450 | 2-057 |
| 6 | MJ Throne 6-31CO | NESW | 6 | 50N | 74W | WYW79450 | 2-058 |
| 7 | MJ Throne 6-31LA | NESW | 6 | 50N | 74W | WYW79450 | 2-059 |
| 8 | MJ Throne 6-33CO | SWSW | 6 | 50N | 74W | WYW79450 | 2-060 |
| 9 | MJ Throne 6-33LA | SWSW | 6 | 50N | 74W | WYW79450 | 2-061 |
| 10 | MJ Throne 6-43CO | SWSE | 6 | 50N | 74W | WYW79450 | 2-062 |
| 11 | MJ Throne 6-43LA | SWSE | 6 | 50N | 74W | WYW79450 | 2-063 |
| 12 | MJ Love 12-13CO | SWNE | 12 | 50N | 75W | WYW146810 | 2-064 |
| 13 | MJ Love 12-33WA | SWSW | 12 | 50N | 75W | WYW146810 | 2-065 |
| 14 | MJ Love12-41CO | NESE | 12 | 50N | 75W | WYW146810 | 2-066 |
| 15 | MJ Love 12-43CO | SWSE | 12 | 50N | 75W | WYW146810 | 2-067 |
| 16 | MJ Floyd 23-33-CO | SWSW | 23 | 51N | 75W | WYW31786 | 2-068 |
| 17 | MJ Floyd 23-33-CA | SWSW | 23 | 51N | 75W | WYW31786 | 2-069 |
| 18 | MJ Floyd 23-43-CO | SWSE | 23 | 51N | 75W | WYW31786 | 2-070 |
| 19 | MJ Floyd 23-43-CA | SWSE | 23 | 51N | 75W | WYW31786 | 2-071 |
| 20 | MJ Floyd 24-33-CO | SWSW | 24 | 51N | 75W | WYW31786 | 2-072 |
| 21 | MJ Floyd 24-33-CA | SWSW | 24 | 51N | 75W | WYW31786 | 2-073 |
| 22 | MJ Fed 25-11CO | NENE | 25 | 51N | 75W | WYW30762 | 2-074 |
| 23 | MJ Fed 25-11LA | NENE | 25 | 51N | 75W | WYW30762 | 2-075 |
| 24 | MJ Yonkee 25-21CA | NENW | 25 | 51N | 75W | WYW30762 | 2-076 |
| 25 | MJ Yonkee 25-21CO | NENW | 25 | 51N | 75W | WYW30762 | 2-077 |
| 26 | MJ Yonkee 25-21WA | NENW | 25 | 51N | 75W | WYW30762 | 2-078 |

| | Well Name | QTR | Sec | TWP | RNG | Lease | CX Number |
|----|-------------------|------------|------------|------------|------------|--------------|------------------|
| 27 | MJ Yonkee 25-41CO | NESE | 25 | 51N | 75W | WYW31336 | 2-079 |
| 28 | MJ Yonkee 25-41LA | NESE | 25 | 51N | 75W | WYW31336 | 2-080 |
| 29 | MJ Yonkee 26-11CA | NENE | 26 | 51N | 75W | WYW31336 | 2-081 |
| 30 | MJ Hayden 26-13CA | SWNE | 26 | 51N | 75W | WYW31336 | 2-082 |
| 31 | MJ Hayden 26-13CO | SWNE | 26 | 51N | 75W | WYW31336 | 2-083 |
| 32 | MJ Yonkee 26-21CA | NENW | 26 | 51N | 75W | WYW31336 | 2-084 |
| 33 | MJ Hayden 26-33CA | SWSW | 26 | 51N | 75W | WYW31336 | 2-085 |
| 34 | MJ Hayden 26-43CA | SWSE | 26 | 51N | 75W | WYW31336 | 2-086 |
| 35 | MJ Hayden 26-43CO | SWSE | 26 | 51N | 75W | WYW31336 | 2-087 |
| 36 | MJ Fed 27-13CA | SWNE | 27 | 51N | 75W | WYW31336 | 2-088 |
| 37 | MJ Fed 27-21CA | NENW | 27 | 51N | 75W | WYW31336 | 2-089 |
| 38 | MJ Fed 27-21CO | NENW | 27 | 51N | 75W | WYW31336 | 2-090 |
| 39 | MJ Hayden 27-23CA | SWNW | 27 | 51N | 75W | WYW31336 | 2-091 |
| 40 | MJ Hayden 27-23CO | SWNW | 27 | 51N | 75W | WYW31336 | 2-092 |
| 41 | MJ Hayden 27-31CA | NESW | 27 | 51N | 75W | WYW31336 | 2-093 |
| 42 | MJ Hayden 27-31CO | NESW | 27 | 51N | 75W | WYW31336 | 2-094 |
| 43 | MJ Fed 27-33CA | SWSW | 27 | 51N | 75W | WYW31336 | 2-095 |
| 44 | MJ Fed 27-33CO | SWSW | 27 | 51N | 75W | WYW31336 | 2-096 |
| 45 | MJ Yonkee 31-33LA | SWSW | 31 | 51N | 74W | WYW132244 | 2-097 |
| 46 | MJ Yonkee 34-11CA | NENE | 34 | 51N | 75W | WYW31336 | 2-098 |
| 47 | MJ Fed 34-13CA | SWNE | 34 | 51N | 75W | WYW31336 | 2-099 |
| 48 | MJ Fed 34-13CO | SWNE | 34 | 51N | 75W | WYW31336 | 2-100 |
| 49 | MJ Fed 34-21CA | NENW | 34 | 51N | 75W | WYW31336 | 2-101 |
| 50 | MJ Fed 34-21CO | NENW | 34 | 51N | 75W | WYW31336 | 2-102 |
| 51 | MJ Hayden 34-23CA | SWNW | 34 | 51N | 75W | WYW31336 | 2-103 |
| 52 | MJ Hayden 34-23CO | SWNW | 34 | 51N | 75W | WYW31336 | 2-104 |
| 53 | MJ Fed 34-31CA | NESW | 34 | 51N | 75W | WYW31336 | 2-105 |
| 54 | MJ Fed 34-31CO | NESW | 34 | 51N | 75W | WYW31336 | 2-106 |
| 55 | MJ Hayden 34-33CO | SWSW | 34 | 51N | 75W | WYW31336 | 2-107 |
| 56 | MJ Yonkee 34-41CA | NESE | 34 | 51N | 75W | WYW31336 | 2-108 |
| 57 | MJ Yonkee 34-41CO | NESE | 34 | 51N | 75W | WYW31336 | 2-109 |
| 58 | MJ Fed 34-43CA | SWSE | 34 | 51N | 75W | WYW31336 | 2-110 |
| 59 | MJ Fed 35-21CA | NENW | 35 | 51N | 75W | WYW31336 | 2-111 |
| 60 | MJ Yonkee 35-33CO | SWSW | 35 | 51N | 75W | WYW31336 | 2-112 |

The following impoundments, which were approved for use in previous PODs, are approved for use in association with the water management strategy for this POD.

| | IMPOUNDMENT Name / # /POD | Qtr/Qtr | Sec | T | R | Lease Number | Type Containment |
|---|----------------------------------|----------------|------------|----------|----------|---------------------|-------------------------|
| 1 | EX11-14 – Love | NENE | 14 | 50 | 75 | N/A | FC |

| | IMPOUNDMENT Name / # /POD | Qtr/Qtr | Sec | T | R | Lease Number | Type Containment |
|----|--------------------------------------|----------------|------------|----------|----------|-------------------------|-----------------------------|
| 2 | EX13-14 – Love | SWNE | 14 | 50 | 75 | N/A | FC |
| 3 | EX41-14 – Love | NESE | 14 | 50 | 75 | WYW51875 | FC |
| 4 | P12-2 – Love | NWNW | 12 | 50 | 75 | N/A | FC |
| 5 | P11-5 – Love | NESE | 11 | 50 | 75 | N/A | FC |
| 6 | P14-2 – Love | NENE | 14 | 50 | 75 | N/A | FC |
| 7 | Throne 2-11 - Jeffers | NENE | 2 | 50 | 75 | N/A | Flow |
| 8 | Mooney Res. – Mont. | SWSE | 22 | 51 | 75 | N/A | FC |
| 9 | Res.23-6 – Mont. Draw | NWSW | 23 | 51 | 75 | WYW31786 | FC |
| 10 | 26-4 – Mont. Draw | NESW | 26 | 51 | 75 | NA | Flow |
| 11 | 35-5 (Ellen) – Mont. | NWSW | 35 | 51 | 75 | NA | FC |
| 12 | Res.P23-1 – Mont. | NESE | 23 | 51 | 75 | WYW31786 | FC |
| 13 | P 2-4 – Jeffers Draw | NENW | 2 | 50 | 75 | NA | FC |

FC = Full Containment except in storm events

Flow = Continuous Flow Through

The proposed action involves the following:

- Drilling of 60 total federal CBNG wells to the coal zones listed below on 37 locations:

| Coal Zone | Targeted Depth, feet |
|------------------|-----------------------------|
| (Lower) Anderson | 927 to 1183 |
| Canyon | 1004 to 1715 |
| Cook | 1164 to 1855 |
| Wall | 1605 to 2104 |

- This operator believes that it is beneficial to complete individual wells to each coal zone in order to maximize gas recovery. These wells are proposed to develop coal zones which have not been drilled at these existing locations. The result could be that there would be a maximum of four wells drilled at each location.
- Drilling and construction activities are anticipated to be completed within two years, the term of an APD. Drilling and construction occurs year-round in the PRB. Weather may cause delays lasting several days but rarely do delays last multiple weeks. Timing limitations in the form of COAs or agreements with surface owners may impose longer temporal restrictions on portions of this POD, but rarely do these restrictions affect an entire POD.
- Well metering shall be accomplished by well visitation. Metering would entail 8 to 12 visits per month to each location.
- A Water Management Plan (WMP) that adds the water produced from these wells to existing infrastructure (20 discharge points and 13 impoundments) within the Upper Powder River watershed. The operator has obtained a permit to discharge this water from the Wyoming Department of Environmental Quality (WDEQ) under the Wyoming Pollutant Discharge Elimination System (WYPDES). This

permit (WY0051985) regulates Petro-Canada projects which encompass a larger area than the MJ POD.

- An existing unimproved and improved road network.
- An existing approved above ground power line network, constructed by a third party is in various states of completion.
- An existing buried gas, water and power line network will be used for this project. No new facilities will be added.

The wells are located on existing disturbance which was analyzed and permitted for Petro-Canada under three previous NEPA documents:

Jeffers Draw POD EA # WY-070-04-167 Approved 08-30-04

Love POD EA # WY-070-234 Approved 09-23-04

Montgomery Draw POD EA # WY-070-176 Approved 8-13-04

An additional Petro-Canada project (Sand Draw) shares some of the water management infrastructure (EA # WY-070-06-010 Approved 02-16-06).

Drilling will commence as soon as possible after approval and after any existing wildlife timing limitations have passed. Each well will take 4 days to be drilled and 2 days to be completed. Wells are expected to produce for 10 years.

There will be no additional surface disturbance for this action which was not included in the previous analyses.

Plan Conformance

The proposed action is in conformance with the terms and the conditions of the Approved Resource Management Plan for the Public Lands Administered by the Bureau of Land Management, Buffalo Field Office (BFO), April 2001 and the PRB FEIS, as required by 43 CFR 1610.5

Plan of Operations

The proposal is designed in conformance with all Bureau standards and incorporates appropriate best management practices, required and designed mitigation measures determined to reduce the effects on the environment.

A surface use plan of operations describing all proposed surface-disturbing activities has been reviewed and is approved pursuant to Section 17 of the Mineral Leasing Act, as amended.

Compliance with the Energy Policy Act of 2005

The proposed activity has been determined to be statutorily categorically excluded from NEPA documentation in accordance with Section 390 of the National Energy Policy Act of 2005. The second exclusion (CX2) applies to *“Drilling an oil and gas location or well pad*

at a site at which drilling has occurred within five (5) years prior to the date of spudding the well.” The existing wells were spudded as follows:

Table 2: Spudded Wells within the MJ POD Area

| Well Name | Well # | TWP | RNG | Sec | QTR | Spud Date |
|-------------------------|-----------|-----|-----|-----|------|------------|
| JEFFERS DRAW THRONE | 6-13WA | 50N | 74W | 6 | SWNE | 07/21/2005 |
| JEFFERS DRAW THRONE | 6-21GA | 50N | 74W | 6 | NENW | 08/03/2005 |
| JEFFERS DRAW THRONE | 6-23WA | 50N | 74W | 6 | SWNW | 08/01/2005 |
| JEFFERS DRAW THRONE | 6-31WA | 50N | 74W | 6 | NESW | 08/26/2005 |
| JEFFERS DRAW THRONE | 6-33WA | 50N | 74W | 6 | SWSW | 08/16/2005 |
| JEFFERS DRAW THRONE | 6-43WA | 50N | 74W | 6 | SWSE | 08/08/2005 |
| LOVE FED | 12-13WA | 50N | 75W | 12 | SWNE | 07/25/2005 |
| LOVE FED | 12-33CO | 50N | 75W | 12 | SWSW | 06/16/2005 |
| LOVE FED | 12-41WA | 50N | 75W | 12 | NESE | 07/14/2005 |
| LOVE FED | 12-43WA | 50N | 75W | 12 | SWSE | 07/06/2005 |
| MONTGOMERY DRAW FLOYD | 23-33WA | 51N | 75W | 23 | SWSW | 06/29/2006 |
| MONTGOMERY DRAW FLOYD | 23-43WA | 51N | 75W | 23 | SWSE | 12/16/2005 |
| MONTGOMERY DRAW FLOYD | 24-33WA | 51N | 75W | 24 | SWSW | 11/02/2005 |
| MONTGOMERY DRAW FEDERAL | 25-11CO | 51N | 75W | 25 | NENE | 01/20/2006 |
| MONTGOMERY DRAW FEDERAL | 25-11WA | 51N | 75W | 25 | NENE | 01/20/2006 |
| MONTGOMERY DRAW YONKEE | E/25-21CO | 51N | 75W | 25 | NENW | |
| MONTGOMERY DRAW YONKEE | E/25-21WA | 51N | 75W | 25 | NENW | |
| MONTGOMERY DRAW YONKEE | 25-41WA | 51N | 75W | 25 | NESE | 02/25/2006 |
| MONTGOMERY DRAW YONKEE | 26-11CO | 51N | 75W | 26 | NENE | 12/20/2005 |
| MONTGOMERY DRAW YONKEE | 26-11WA | 51N | 75W | 26 | NENE | 11/23/2005 |
| MONTGOMERY DRAW HAYDEN | 26-13WA | 51N | 75W | 26 | SWNE | 11/23/2005 |
| MONTGOMERY DRAW YONKEE | 26-21CO | 51N | 75W | 26 | NENW | 12/20/2005 |
| MONTGOMERY DRAW YONKEE | 26-21WA | 51N | 75W | 26 | NENW | 11/16/2005 |
| MONTGOMERY DRAW HAYDEN | 26-33CO | 51N | 75W | 26 | SWSW | 12/14/2005 |
| MONTGOMERY DRAW HAYDEN | 26-33WA | 51N | 75W | 26 | SWSW | 12/15/2005 |
| MONTGOMERY DRAW HAYDEN | 26-43WA | 51N | 75W | 26 | SWSE | 11/01/2005 |
| MONTGOMERY DRAW FEDERAL | 27-13CO | 51N | 75W | 27 | SWNE | 12/21/2005 |

| Well Name | Well # | TWP | RNG | Sec | QTR | Spud Date |
|-------------------------|---------|-----|-----|-----|------|------------|
| MONTGOMERY DRAW FEDERAL | 27-13WA | 51N | 75W | 27 | SWNE | 11/29/2005 |
| MONTGOMERY DRAW FEDERAL | 27-21WA | 51N | 75W | 27 | NENW | 10/19/2005 |
| MONTGOMERY DRAW HAYDEN | 27-23WA | 51N | 75W | 27 | SWNW | 09/13/2005 |
| MONTGOMERY DRAW HAYDEN | 27-31WA | 51N | 75W | 27 | NESW | 10/03/2005 |
| MONTGOMERY DRAW FEDERAL | 27-33WA | 51N | 75W | 27 | SWSW | 10/20/2005 |
| JEFFERS DRAW YONKEE | 31-33CO | 51N | 74W | 31 | SWSW | 01/18/2005 |
| JEFFERS DRAW YONKEE | 31-33WA | 51N | 74W | 31 | SWSW | 01/03/2005 |
| MONTGOMERY DRAW YONKEE | 34-11CO | 51N | 75W | 34 | NENE | 12/21/2006 |
| MONTGOMERY DRAW YONKEE | 34-11WA | 51N | 75W | 34 | NENE | 09/20/2005 |
| MONTGOMERY DRAW FEDERAL | 34-13WA | 51N | 75W | 34 | SWNE | 08/06/2005 |
| MONTGOMERY DRAW FEDERAL | 34-21WA | 51N | 75W | 34 | NENW | 08/16/2005 |
| MONTGOMERY DRAW HAYDEN | 34-23WA | 51N | 75W | 34 | SWNW | 08/19/2005 |
| MONTGOMERY DRAW FEDERAL | 34-31WA | 51N | 75W | 34 | NESW | 08/22/2005 |
| MONTGOMERY DRAW HAYDEN | 34-33WA | 51N | 75W | 34 | SWSW | 09/01/2005 |
| MONTGOMERY DRAW YONKEE | 34-41WA | 51N | 75W | 34 | NESE | 09/06/2005 |
| MONTGOMERY DRAW FEDERAL | 34-43CO | 51N | 75W | 34 | SWSE | 12/22/2005 |
| MONTGOMERY DRAW FEDERAL | 34-43WA | 51N | 75W | 34 | SWSE | 08/22/2005 |
| MONTGOMERY DRAW FEDERAL | 35-21CO | 51N | 75W | 35 | NENW | 02/14/2005 |
| MONTGOMERY DRAW FEDERAL | 35-21WA | 51N | 75W | 35 | NENW | 01/26/2005 |
| MONTGOMERY DRAW YONKEE | 35-33WA | 51N | 75W | 35 | SWSW | 07/22/2005 |

Onsite inspections were conducted as follows:

- 06-20-07: Alan Vrooman, Erich Zwaagstra, Krystal Price and Rusty Roush – Petro-Canada; Bill Ostheimer, David Skinner and Kathy Brus – BLM
- 06-21-07: Erich Zwaagstra and Krystal Price – Petro-Canada; Kathy Brus – BLM

Persons and Agencies Consulted

Karen Klaahsen, Legal Assistant
Kathy Brus, Natural Resource Specialist
Bill Ostheimer, Wildlife Biologist
G.L. “Buck” Damone III, Archeologist

Becky Wilkerson, Legal Instruments Examiner
 Jerry Queen, Geologist
 Amber Bryan, Petroleum Engineer
 Thomas Bills, NEPA Coordinator
 Casey Freise, Natural Resource Specialist
 Buddy Green, Assistant Field Manager
 Paul Beels, Associate Field Manager
 Chris Hanson, Field Manager

Cultural Resources

Three previously reviewed and accepted Class III cultural resource inventories (BFO # 070040020, 070040021 and 070040061) adequately covered the proposed project area. No cultural resources are in the area of potential effect. On 8/14/07 G.L. “Buck” Damone III, BLM Archaeologist, electronically notified the Wyoming State Historic Preservation Office (SHPO) following sections IV(C)(1) and VI (A)(1) of the Wyoming State Protocol, of a finding of no effect for the proposed project.

Wildlife

The U. S. Fish & Wildlife Service was consulted under Section 7 for the following PODs which will have multiple wells added with this action: Jeffers Draw POD EA # WY-070-04-167 Approved 08-30-04; Love POD EA # WY-070-234 Approved 09-23-04; Montgomery Draw POD EA # WY-070-176 Approved 8-13-04. The wildlife biologist has reviewed and certified the Biological Assessments and has determined that:

- The Section 7 consultation in the above referenced EAs is consistent with the PRB FEIS tiered consultation in place for this project.
- The project “*may adversely impact individuals or habitat, but is not likely to result in a loss of species viability range-wide*” for BLM BFO sensitive species, “*nor cause a trend to federal listing*”.
- This project is consistent with the RMP and PRB FEIS for wildlife.

Water Management

The operator has submitted a comprehensive WMP for this project, which incorporates water management practices which were included in the previously approved PODs, monitoring of downstream impacts within the Wild Horse Creek watershed which is tributary to the Upper Powder River watershed and commitment to comply with Wyoming State water laws and regulations.

The water production for these wells predicted by coal zone is listed below:

Table 3: Predicted Water Production Rate – MJ POD

| Coal Zone | MJ POD # of Wells | Predicted Water Rate per well, gpm | Total POD Water Production rate, gpm |
|------------------|--------------------------|---|---|
| Lower Anderson | 8 | 5 | 40 |
| Canyon | 22 | 15 | 330 |
| Cook | 28 | 15 | 420 |
| Wall | 2 | 30 | 60 |
| Total | 60 | | 850 |

Maximum water production is calculated to be 850 gpm (1.89 cfs or 1371 acre-feet per year) for this POD. The PRB FEIS projected the total amount of water that was anticipated to be produced from CBNG development per year (Table 2-8 Projected Amount of Water Produced from CBM Wells Under Alternatives 1, 2A and 2B pg 2-26). For the Upper Powder River drainage, the projected volume produced within the watershed area was 163,521 acre-feet in 2007 (maximum production was estimated in 2006 at 171,423 acre-feet). As such, the volume of water resulting from the production of these wells is 0.8 % of the total volume projected for 2007. This volume of produced water is within the predicted parameters of the PRB FEIS.

Groundwater

The PRB FEIS predicts an infiltration rate of 40% to groundwater aquifers and coal zones in the Upper Powder River drainage area (PRB FEIS pg 4-5). For this action, it may be assumed that a maximum of 340 gpm will infiltrate at or near the discharge points and impoundments (548 acre feet per year).

In the process of dewatering the coal zone to increase natural gas recovery rates, this project may have some effect on the static water level of wells in the area. There are 11 existing permitted stock water wells in and around the project area. These wells produce from depths which range from 33 to 1,185 feet compared to 927 feet to the Lower Anderson to 2104 feet to the bottom of the Wall coal zones. As mitigation, the operator has committed to offer water well agreements to holders of properly permitted domestic and stock wells within the circle of influence (½ mile of a federal CBNG producing well) of the proposed wells.

Adherence to the drilling plan, the setting of casing at appropriate depths, following safe remedial procedures in the event of casing failure, and utilizing proper cementing procedures will protect any potential fresh water aquifers above the target coal zone. This will ensure that ground water will not be adversely impacted by well drilling and completion operations.

Surface Water

The following table shows the average value measured at selected USGS gauging stations for the Upper Powder River watershed at high and low monthly flows and Wyoming groundwater quality standards for TDS and SAR for Class I to Class III water. It also shows water quality limits for TDS, SAR and EC detailed in the WDEQ’s WYPDES permit, the levels found in the POD’s representative water sample and existing shallow ground water quality determined at spring/stock water well locations in the project area.

Table 4: Comparison of Regulated Water Quality Parameters to Predicted Water Quality

| Predicted Values | TDS, mg/l | SAR | EC, µmhos/cm |
|--|-----------|------|--------------|
| Primary Watershed at the Arvada, WY Gauging station | | | |
| Historic Data Average at Maximum Flow | | 4.76 | 1,797 |
| Historic Data Average at Minimum Flow | | 7.83 | 3,400 |
| WDEQ Quality Standards for Wyoming Groundwater (Chapter 8) | | | |
| Drinking Water (Class I) | 500 | | |
| Agricultural Use (Class II) | 2,000 | 8 | |

| Predicted Values | TDS, mg/l | SAR | EC, µmhos/cm |
|--|------------------|------------|---------------------|
| Livestock Use (Class III) | 5,000 | | |
| WDEQ Water Quality Requirement for WYDES Permits # WY0051985 | | | |
| At discharge point | 1,567 | 15 | 2,350 |
| Predicted Produced Water Quality | | | |
| Lower Anderson Coal Zone | 640 | 14.1 | 1,030 |
| Canyon Coal Zone | 840 | 17.1 | 1,360 |
| Cook Coal Zone | 1,420 | 14.6 | 2,270 |
| Wall Coal Zone | 590 | 11.0 | 996 |
| Shallow Ground Water Quality | | | |
| Reutner # 2 Well SWNW Sec 11 T50N R75W | 1,620 | 5.3 | 2,150 |
| Yonkee Spring NWSW Sec 35 T51N R75W | 2,750 | 1.8 | 3,830 |

The quality for the water produced from these wells is predicted to be similar to a water quality sample collected from location near the POD.

The operator provided the following historical water production figures for the Love POD and the Montgomery Draw/Jeffers Draw PODs:

| | Love POD | | | Montgomery Draw/Jeffers Draw | | |
|---------------|--------------------------|-------------------------|----------------------|-------------------------------------|-------------------------|----------------------|
| | # Wells Producing | Average gpm/well | POD Total gpm | # Wells Producing | Average gpm/well | POD Total gpm |
| Jan-07 | 30 | 5.61 | 168 | 83 | 12.86 | 1067 |
| Feb-07 | 30 | 5.02 | 151 | 83 | 10.55 | 876 |
| Mar-07 | 31 | 4.64 | 144 | 83 | 8.72 | 723 |
| Apr-07 | 31 | 4.78 | 148 | 83 | 7.35 | 610 |
| May-07 | 31 | 4.46 | 138 | 84 | 6.55 | 550 |
| Jun-07 | 31 | 3.79 | 118 | 84 | 7.03 | 591 |

The addition of the initial production from the wells in the MJ POD could add 850 gpm to the total 1235 gpm for an increase of 41%. However, this is not anticipated to occur due to the following factors.

1. Some of these wells will not be drilled,
2. New wells will be phased in over an extended period of time, and
3. A decline in well discharge generally occurs after several months of operation.

The PRB FEIS assumes that 15% of impounded water will re-surface as channel flow (PRB FEIS pg 4-74). Consequently, the total volume of water produced from these wells may result in the addition of 0.28 cfs below the lowest reservoir (after infiltration and evapotranspiration losses). Eleven (11) of the 13 impoundments included in the water management plan have been approved for use as full containment, which means no continuous discharge to the channel below the impoundment. There may be periodic discharges resulting from storm events. In many locations, the channels below these impoundments are not stable enough to support continuous discharge. Also, some of the landowners will not permit the water to be discharged. Several of the existing permitted discharge points will discharge directly to ephemeral channels at some distance above an impoundment or directly to Wild Horse Creek. Two of the 13 impoundments are permitted and approved as flow through impoundments:

| | IMPOUNDMENT Name / Number | Qtr/Qtr | Sec | TWP | RNG | Lease Number | Type Containment |
|---|--------------------------------------|----------------|------------|------------|------------|-------------------------|-----------------------------|
| 1 | Throne 2-11 | NENE | 2 | 50 | 75 | N/A | Flow |
| 2 | 26-4 | NESW | 26 | 51 | 75 | NA | Flow |

The operator has committed to monitor the condition of channels and address any problems resulting from discharge or resurfacing. In some cases, discharge from the impoundments could potentially allow for streambed enhancement through wetland-riparian species establishment. Sedimentation will occur in the impoundments, but would be controlled through a concerted monitoring and maintenance program. Phased reclamation plans for the impoundments will be submitted and approved on a site-specific, case-by-case basis as they are no longer needed for disposal of CBNG water, as required by BLM applied COAs.

Alternative (2A), the approved alternative in the Record of Decision for the PRB FEIS, states that the peak production of water discharged to the surface will occur in 2006 at a total contribution to the mainstem of the Upper Powder River of 68 cfs (PRB FEIS pg 4-86). The predicted maximum discharge rate from these 60 wells could be 850 gpm or 1.89 cfs. Using an assumed conveyance loss of 20% (PRB FEIS pg 4-74), the produced water flowing to Wild Horse Creek from this action may add a maximum 1.5 cfs to Upper Powder River flows, or 2.2% of the predicted total CBNG produced water contribution. The Powder River is over 26 stream miles downstream of the lowest water discharge point to Wild Horse Creek. For more information regarding the maximum predicted water impacts resulting from the discharge of produced water, see Table 4-6 (PRB-FEIS pg 4-85).

The proposed method for surface discharge provides passive treatment through the aeration supplied by the energy dissipation configuration at each discharge point outfall. Aeration adds dissolved oxygen to the produced water which can oxidize susceptible ions, which may then precipitate. This is particularly true for dissolved iron. Because iron is one of the key parameters for monitoring water quality, the precipitation of iron oxide near the discharge point will improve water quality at downstream locations.

The operator has obtained a WYPDES permit (#WY0051985) for the discharge of water produced from this project from the WDEQ.

Permit effluent limits were set at (WYPDES page 2):

| | |
|-------------------------|----------------|
| pH | 6.5 to 9.0 |
| TDS | 1,567 mg/l max |
| Specific Conductance | 2,350 mg/l max |
| Dissolved iron | 1,000 µg/l max |
| Total Barium | 1,800 µg/l max |
| Total Arsenic | 7 µg/l max |
| Chlorides | 150 mg/l |
| Sodium Adsorption Ratio | 15 |

The WYPDES permit also addresses existing downstream concerns, such as irrigation use, in the COA for the permit. The permit was modified in October of 2006 to conform with the Chapter 1 Section 20 irrigation requirements. It established a designate point of compliance (IMP) on Wild Horse Creek at SWNE Sec 17 T52N R75W - over 9 miles north, or downstream, of the project area. The operator is required to monitor the flow (weekly) and water quality (monthly) at this IMP. There are also compliance monitoring

points at the confluence of Wild Horse Creek with the Powder River and upstream and downstream of that confluence. The permit establishes the maximum allowable discharge volume at the water discharge points at 16.16 MGD or 11,222 gpm. The operator has been monitoring flow rates at this compliance point weekly since 10-02-06, and water quality monthly. The average flowrates have ranged from 2500 to 4000 gpm, outside of major storm events. The addition of 510 to 850 gpm would increase this total volume by 20 to 34%. However, the maximum predicted flow rate is not expected to be discharged from this project area because of the reasons stated previously. The water quality of the effluent is not expected to differ from the existing discharge water quality as monitored at the IMP.

Four outfalls are situated along Montgomery Draw have the potential to add flow to that drainage. An area in the SENE Section 26 T51N R75W (identified as impoundment 26-5), is a stock dam which has been breached. In this area, sedimentation has masked any existing flow path, turning the area to a broad bottomed swale. Water discharged above this point could inundate a large area, making a potentially hazardous situation for wildlife and livestock. The operator proposed to restore this section of channel in the Montgomery Draw POD. A COA was added to that POD approval which required that the operator supply additional information prior to construction of that channel. A COA will be added to this approval requiring that the additional information be provided and an onsite conducted prior to restoration of this channel.

The development of coal bed natural gas and the production and discharge of water in the area surrounding the existing natural spring may affect the flow rate or water quality of the spring. The operator is required to monitor the water quality and flow rates of existing springs in this POD area as well as those which were identified in the original PODs.

In-channel downstream impacts are addressed in the WMP for the MJ POD prepared by Western Water Consultants for Petro-Canada on pages 32 to 35.

Refer to the POD Water Management Plan for additional details.

Decision and Rationale on Action

I have decided to implement the drilling and completion of 60 CBNG wells in the MJ POD area with the following Conditions of Approval (COAs):

1. The operator will comply with the Plans of Development and all the Conditions of Approval included in the original PODS:
 - Jeffers Draw POD EA # WY-070-04-167 Approved 08-30-04
 - Love POD EA # WY-070-04-234 Approved 09-23-04
 - Montgomery Draw POD EA # WY-070-04-176 Approved 8-13-04
 - Sand Draw POD EA#WY-070-06-010 Approved 02-16-06
2. Please contact Kathy Brus, Natural Resource Specialist, @ (307) 684-1087, Bureau of Land Management, Buffalo, if there are any questions concerning these COAs.
3. Onshore Order #1, as revised effective 05-07-07, requires that all operators certify to the Field Office in writing that they have supplied a copy of the Surface Use Plan to each of the private surface owners affected by the project. This self-certification must be received by this office before construction on the project begins.

Please note, effective 05-07-07, operators must supply a copy of the Surface Use Plan to each of the private surface owners prior to approval of the APD.

4. The operator may choose to drill one well at each location to produce one to three coal zones. In the event that the location selected for drilling is not designated to be drilled to the coal zone identified on the permit application, the operator must submit a Sundry notice for the change.
5. In order to monitor any changes in the groundwater quality in the project area, the operator will sample and analyze the springs located within the POD boundary in the spring and the fall of each year, continuing for at least two years after the wells no longer are productive. Analysis will follow the NPDES Suite parameters and protocol. Copies of the water analysis including depth to water table and flowrate will be supplied to the BLM Authorized Officer.
6. The installation of additional treatment facilities at the water discharge points in the project area is not authorized at this time. If it is determined that there is a need for treatment prior to discharge, the operator will submit a Sundry notice for analysis and approval of the treatment facility prior to any construction.
7. With the exception of the two impoundments identified as flow through systems (Throne 2-11 and 26-4), no continuous discharge will be permitted from the impoundments included in this project. If, in the future, the operator intends to operate the remaining impoundments as flow through systems, a Sundry notice for the change to the water management plan will be submitted and additional NEPA analysis will be required.
8. The representative water analysis submitted for this project may be designated as Reference Well samples for the following PODs.

| Well Name and Number | POD | Qtr/Qtr | Sec | TWP | RNG | Coal Zone |
|-----------------------------|-----------------|----------------|------------|------------|------------|------------------|
| 13-43LA | Cedar Draw | SWSE | 13 | 51 | 75 | Anderson |
| 25-33CA | Montgomery Draw | SWSW | 25 | 51 | 75 | Canyon |
| 35-13CO | Montgomery Draw | SWNE | 35 | 51 | 75 | Cook |
| 13-43WA | Cedar Draw | SWSE | 13 | 51 | 75 | Wall |

9. The channel restoration area that is proposed in Montgomery Draw (SENE Sec 26 T51N R75W) must be centerline and slope staked and inspected by the BFO Hydrologist prior to construction. The proposed location for the distribution of the excavated cut material must be provided prior to construction.
10. The channel restoration area will be expediently reclaimed and revegetated using the seed mix listed below:

| <i>Species - Cultivar</i> | % in Mix | Lbs/Acre PLS* |
|---|----------|---------------|
| Thickspike Wheatgrass – <i>Critana</i> OR Western Wheatgrass - <i>Rosana</i> | 10 | 2.0 |
| Alkali sacaton | 50 | 6.0 |

| Species - <i>Cultivar</i> | % in Mix | Lbs/Acre PLS* |
|--|-------------|----------------------|
| Beardless Wildrye | 10 | 1.0 |
| American vetch OR | | |
| Cicer Milkvetch - <i>Lutana</i> | 10 | 1.5 |
| White – <i>Antelope</i> | | |
| Or Purple Prairie Clover – <i>Bismarck</i> | 5 | 0.5 |
| Lewis - <i>Appar</i> , Blue flax | 5 | 0.5 |
| Totals | 100% | 11.5 lbs/acre |

11. The water discharge point identified as WDP 018 has not been constructed. It is located in the SENW Sec 2 T50N R75W and was approved in the Jeffers Draw POD as WDP 009 located in the NENE Sec 2. The map identifies the discharge point at the head of one ephemeral drainage, the latitude and longitude for this discharge point in the MJ POD identifies the location in a different ephemeral drainage to the east in the SE of the NWNE of Sec 2 while the Jeffers Draw approved location is ~ 650 feet to the NE in the NE of the NWNE Sec 2. This water discharge point cannot be constructed until the exact proposed location is approved by the BFO.

12. The following water discharge points were included in the WYPDES Permit WY0051985. They have been withdrawn from the water management plan and therefore are not approved at this time:

| Outfall | Status | QQ | Sec | T | R | Latitude | Longitude |
|---------|-----------------|------|-----|----|----|----------|------------|
| 007 | Not Constructed | NWSW | 7 | 50 | 74 | 44.32171 | -105.80858 |
| 009 | Not Constructed | NWNE | 7 | 50 | 74 | 44.32792 | -105.79898 |
| 012 | Not Constructed | NWSE | 6 | 50 | 74 | 44.33688 | -105.80070 |
| 037 | Not Constructed | NESE | 23 | 51 | 75 | 44.37843 | -105.84374 |

The operator must submit the proposal for construction for any of these discharge points for approval via Sundry notice if the discharge point is going to be constructed.

13. The Companies will locate aboveground power lines, where practical, at least 0.5 miles from any sage grouse breeding or nesting grounds to prevent raptor predation and sage grouse collision with the conductors. Power poles within 0.5 miles of any sage grouse breeding ground will be raptor-proofed to prevent raptors from perching on the poles. This will apply to the power poles within 0.5 miles of the Montgomery Draw lek (NE Section 26 T51R75).

The above COAs and/or terms and conditions provide justification for this decision and may not be segregated from project implementation without further NEPA review. In addition, I have reviewed the plan conformance statement and have determined that the proposed activity is in conformance with the applicable land use plan(s). Further, I have reviewed the proposal to ensure the appropriate exclusion category as described in Section 390 of the Energy Policy Act of 2005 has been correctly applied. It is my determination that no further environmental analysis is required.

The above described action must be completed by August 24, 2009

Implementation Date

This project will be implemented on or after the below date.

Chris E. Hanson
Field Manager

Date

Administrative Review or Appeal Opportunities

This decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Contact Person

For additional information concerning this decision, contact
Kathy Brus, Natural Resource Specialist
1425 Fort Street
Buffalo, WY 82834
(307)684-1087