APPENDIX F
HYDROLOGY

Table Hydro-1: Comparison of Direct Surface Water Impacts

	Flow Conditions	Historical (Pre-Sept 99) (0 gpm)			Modeled Existing/No Action (1085 gpm)			No Federal Action (1124 gpm)			Proposed Action (1600 gpm)		
		Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR
Tongue River at State Line	7Q10	42.0	1273	1.07	44.4	1302	1.49	44.5	1303	1.50	45.6	1314	1.70
	LMM	178.0	682	0.63	180.4	700	0.81	180.5	701	0.82	181.6	708	0.90
	HMM	1670.0	259	0.27	1672.4	261	0.30	1672.5	261	0.30	1673.6	262	0.31
Tongue River Below Dam	7Q10	70.0	814	0.97	72.4	829	1.18	72.5	830	1.19	73.6	837	1.28
	LMM	179.0	648	0.78	181.4	660	0.92	181.5	661	0.92	182.6	667	0.99
	HMM	1429.0	390	0.49	1431.4	394	0.53	1431.5	394	0.54	1432.6	397	0.56
Tongue River at Birney Day School	7Q10	49.0	1111	1.56	51.4	1126	1.77	51.5	1127	1.78	52.6	1134	1.87
	LMM	173.0	714	1.03	175.4	726	1.17	175.5	727	1.17	176.6	733	1.24
	HMM	1119.0	372	0.56	1121.4	376	0.60	1121.5	376	0.61	1122.6	379	0.63

Note: Value in parentheses represents the rate of discharge under MPDES permit MT-0030457.

Table Hydro-2: Comparison of Cumulative Surface Water Impacts

	Flow Conditions	Historical (Pre-Sept 99) (0 gpm)			Modeled Foreseeable/No Action (1085 gpm)			No Federal Action (1124 gpm)			Proposed Action (1600 gpm)		
		Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR	Flow (cfs)	EC (µS/cm)	SAR
Tongue River at State Line	7Q10	42.0	1273	1.07	48.2	1258	1.52	48.3	1259	1.53	49.4	1270	1.72
	LMM	178.0	682	0.63	184.2	694	0.84	184.3	695	0.84	185.4	703	0.93
	HMM	1670.0	259	0.27	1676.2	261	0.30	1676.3	261	0.30	1677.4	262	0.32
Tongue River Below Dam	7Q10	70.0	814	0.97	78.7	815	1.23	78.8	816	1.24	79.9	822	1.33
	LMM	179.0	648	0.78	187.7	658	0.96	187.8	659	0.97	188.9	664	1.03
	HMM	1429.0	390	0.49	1437.7	397	0.55	1437.8	397	0.55	1438.9	399	0.57
Tongue River at Birney Day School	7Q10	49.0	1111	1.56	57.7	1112	1.82	57.8	1113	1.83	58.9	1119	1.92
	LMM	173.0	714	1.03	181.7	724	1.21	181.8	725	1.22	182.9	730	1.28
	HMM	1119.0	372	0.56	1127.7	379	0.62	1127.8	379	0.62	1128.9	381	0.64

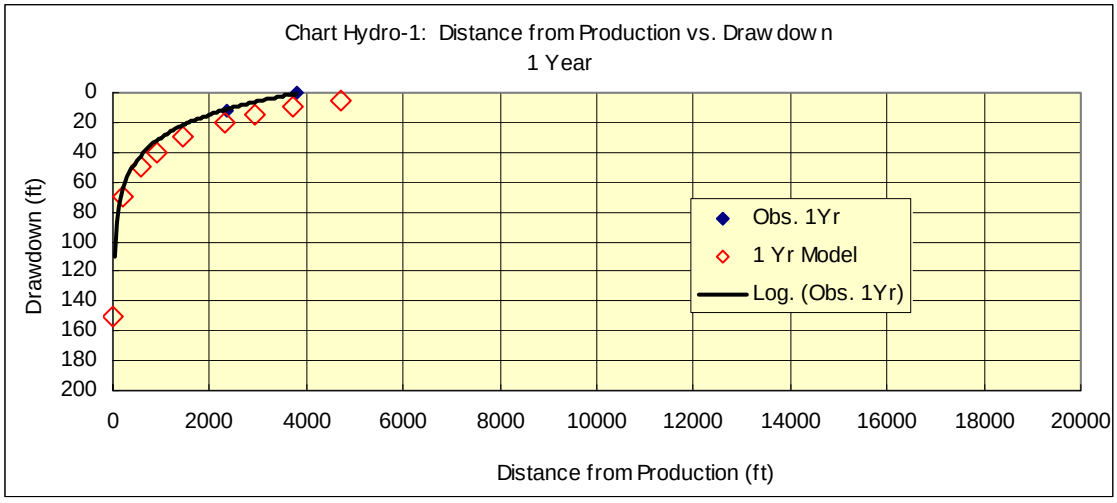
Note: Value in parentheses represents the rate of discharge under MPDES permit MT-0030457.

Table Hydro-3: Surface Water Model Inputs by Scenario

	Discharge Rates (gpm)						Water Quality	
	Direct			Cumulative				
	Existing	B	C	Foreseeable	B	C	EC (µS/cm)	SAR
Fidelity-Untreated-East	467	506	982	467	506	982	2248	58.5
Fidelity-Untreated-West	618	618	618	618	618	618	1955	50.5
Powder River Gas	0	0	0	1122	1122	1122	742	3.0
Fidelity-Treated	0	0	0	1700	1700	1700	438	2.8

Table Hydro-4:
Summary of Predicted Radius of the 20 Foot Drawdown

Time Pumped	Coal Seam	Result (mi)
1 Year	D1	0.44
	D2	0.39
	D3	0.37
	Monarch	0.34
	Carney	0.37
5 Years	D1	0.88
	D2	0.78
	D3	0.74
	Monarch	0.69
	Carney	0.74
10 Years	D1	1.19
	D2	1.05
	D3	1.00
	Monarch	0.93
	Carney	1.00
20 Years	D1	1.60
	D2	1.42
	D3	1.34
	Monarch	1.26
	Carney	1.34
	Max =	1.60



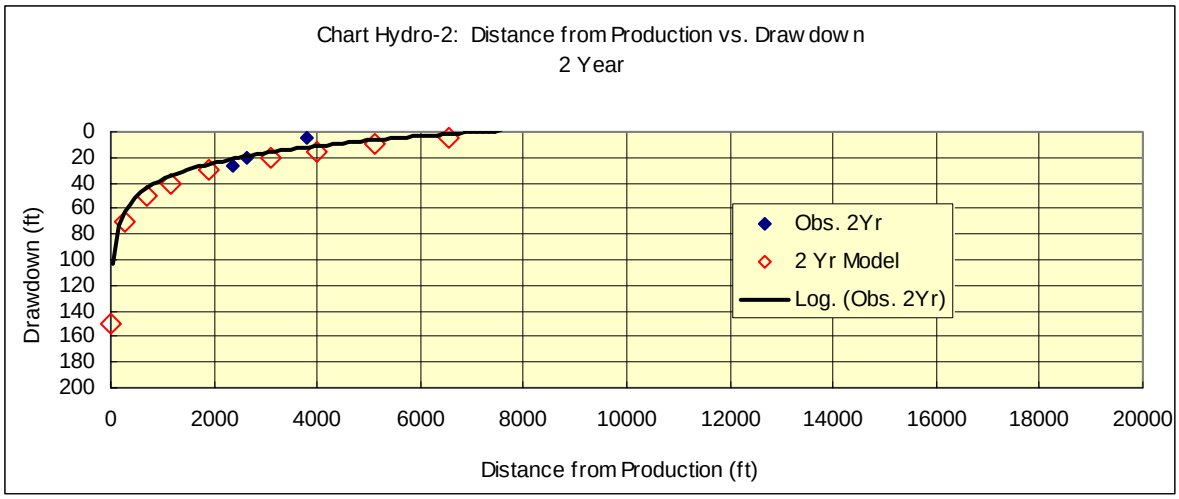


Chart Hydro-2: Distance from Production vs. Draw dow n
2 Year
Drawdown (ft)
0
20
40
60
80
100
120
140
160
180
200
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Distance from Production (ft)
Obs. 2Yr
2 Yr Model
Log. (Obs. 2Yr)

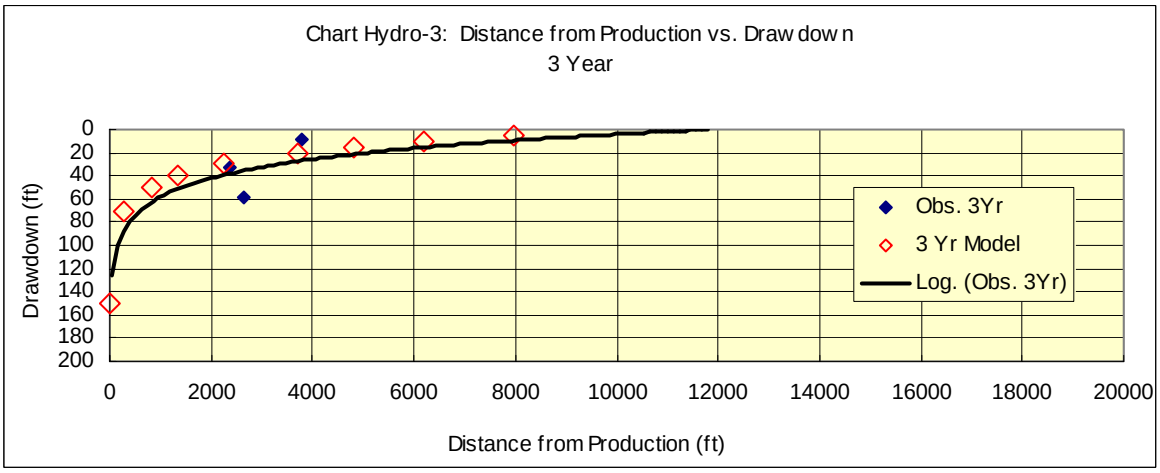


Chart Hydro-3: Distance from Production vs. Draw dow n
3 Year
Drawdown (ft)
0
20
40
60
80
100
120
140
160
180
200
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Distance from Production (ft)
Obs. 3Yr
3 Yr Model
Log. (Obs. 3Yr)

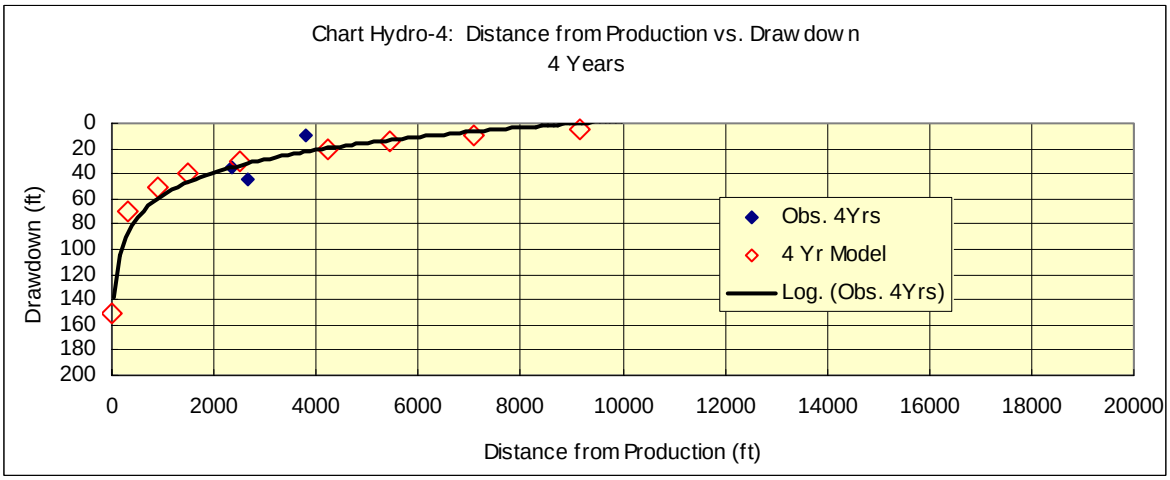
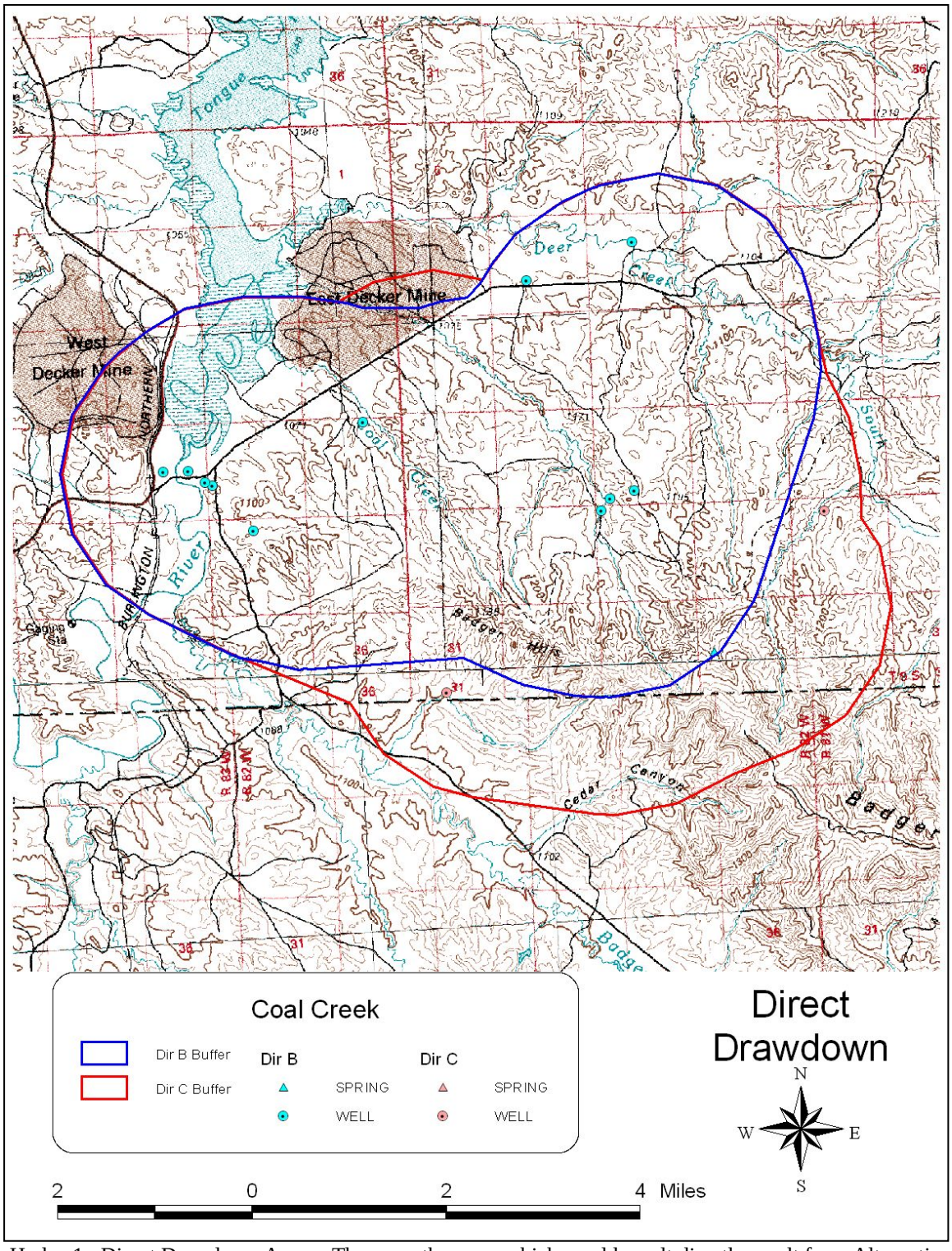
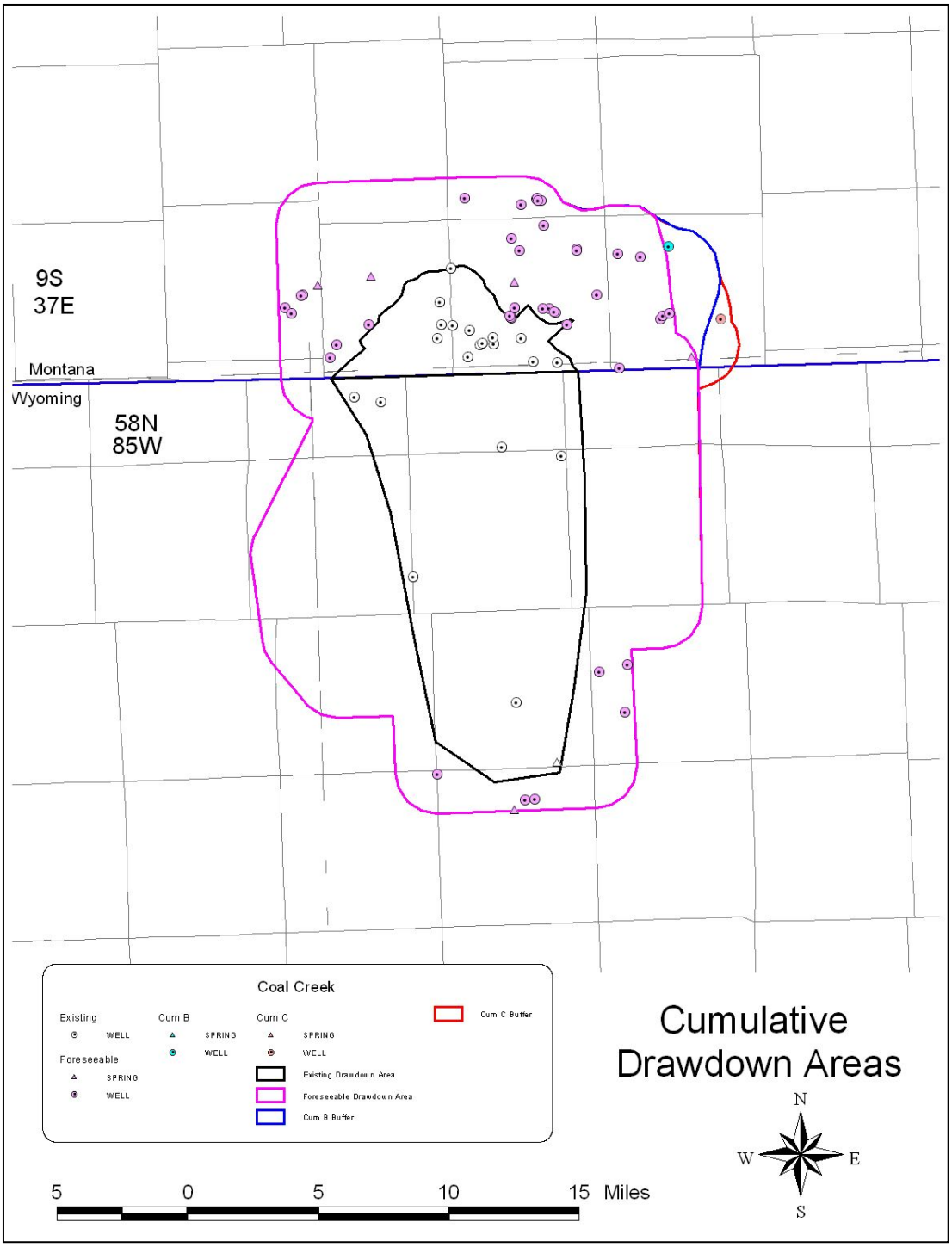


Chart Hydro-4: Distance from Production vs. Draw dow n
4 Years
Drawdown (ft)
0
20
40
60
80
100
120
140
160
180
200
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Distance from Production (ft)
Obs. 4Yrs
4 Yr Model
Log. (Obs. 4Yrs)



Map Hydro-1: Direct Drawdown Areas: These are the areas which would result directly result from Alternatives B and C over 20 years. Alternative A would not result in any direct drawdown. Under Alternative B the area within the direct 20' drawdown contour is 29.8 mi^2; 11 wells and 1 spring are contained within this area. Under Alternative C the area within the direct 20' drawdown contour expands by 9 mi^2 to 38.8 mi^2; 1 well is added to the drawdown area as a result of this expansion.



Map Hydro-2: Cumulative Drawdown Areas: These are the existing (estimated in WY), and the foreseeable drawdown areas. Also included are the cumulative drawdown areas that would result from Alternatives B and C over 20 years. Alternative A would be the same as the Foreseeable drawdown. The existing area within the direct 20' drawdown contour is 128.9 mi^2; 21 wells and 1 spring are contained within this area. Over 20 years it is foreseeable that the area within the 20' drawdown contour would expand to 344.8 mi^2; 64 wells and 6 springs would be contained within this area. Under Alterative B the area within the 20' drawdown contour would expand to 352.2 mi^2; 1 well would be added to the drawdown area over that foreseen from the existing level of development. Under Alterative C the area within the 20' drawdown contour would expand to 355.8 mi^2; 1 well would be added to the drawdown area over Alternative B.

Table Hydro-5: Wells and Springs in Direct Alt B Drawdown Area

Site Name	Township	Range	Sec	Depth (ft)	Type
44 MAGNUM	09S	41E	34	NA	SPRING
* HOLMES RANCH * 7.4 M E DECKER MT *	09S	41E	8	NR	WELL
HOLMES RANCH * 8.5 M E DECKER MT *	09S	41E	9	28.7	WELL
JOHNSTON	09S	41E	21	200	WELL
JOHNSTON	09S	41E	21	280	WELL
MUNSON EMMET * 2.4 M NE DECKER MT *	09S	40E	22	169.4	WELL
MUNSON EMMET * 3.5 MI NE DECKER	09S	40E	22	170	WELL
MUNSON EMMETT	09S	40E	26	40	WELL
MUNSON EMMETT	09S	40E	24	140	WELL
MUNSON MRS EMMETT	09S	40E	22	30.1	WELL
MUNSON MRS EMMETT	09S	40E	22	80	WELL
RANCHOLME CATTLE CO.	09S	41E	28	200	WELL

NA = Not Applicable
NR = Not Reported

Table Hydro-6: Additional Wells and Springs in Direct Alt C Drawdown Area

Site Name	Township	Range	Sec	Depth (ft)	Type
ELDER WILLIS W.	09S	41E	26	252	WELL
MUNSON VADA	09S	41E	31	257	WELL

Table Hydro-7: Wells and Springs in Existing Drawdown Areas

Site Name	Township	Range	Sec	Depth (ft)	Type
NR	NR	NR	NR	NA	SPRING
BUMBACA DOMINIC F & ESTHER I	09S	40E	29	155	WELL
CONNOR ARLOW	09S	40E	34	37	WELL
FOSS CLARIS	09S	40E	31	NR	WELL
FOSS CLARIS W	09S	40E	31	NR	WELL
FOSS CLARIS W.	09S	39E	25	150	WELL
MCCARTHY JAMES * 5 M SW SQUIRREL SCH *	09S	40E	29	151	WELL
MULLER JAMES	09S	40E	28	300	WELL
MULLER JIM	09S	40E	35	120	WELL
MYER GARRETT	09S	40E	29	620	WELL
PKS-CX RANCH * 4 MI SW OF DECKER MT	09S	40E	30	NR	WELL
POWERS EVERETT	09S	39E	24	235	WELL
POWERS EVERETT	09S	39E	24	244	WELL
POWERS EVERETT G.	09S	40E	30	238	WELL
POWERS EVERETT G.	09S	40E	7	274	WELL
SQUIRRELL CREEK SCHOOL	09S	40E	29	189	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL

NA = Not Applicable
NR = Not Reported

Table Hydro-8: Additional Wells and Springs in Foreseeable Drawdown Area

Site Name	Township	Range	Sec	Depth (ft)	Type
44 MAGNUM	09S	41E	34	NA	SPRING
CX RANCH	09S	39E	16	NA	SPRING
THOMPSON J.W. *14 MI S OF BIG BEND SCHOOL	09S	40E	16	NA	SPRING
NR	NR	NR	NR	NA	SPRING
NR	NR	NR	NR	NA	SPRING
* HOLMES RANCH * 7.4 M E DECKER MT *	09S	41E	8	NR	WELL
* KUKUCHKA * 7M N SQUIRREL CREEK SCHOOL *	09S	40E	3	NR	WELL
EIDER WILLIS * 1.5 M NE DECKER MT	09S	40E	21	110	WELL
ELDER WILLIAM * 1.5 MI NE DECKER MT	09S	40E	21	110	WELL
HERRINGTON D * 13 MI SE BIG BEND SCHOOL	09S	40E	9	150	WELL
JOHNSTON	09S	41E	21	200	WELL
JOHNSTON	09S	41E	21	280	WELL
JOHNSTON * 1.3 M NE DECKER MT *	09S	40E	21	227	WELL
JOHNSTON MANSEL	09S	40E	21	280	WELL
KUCHKUKA	08S	40E	34	98	WELL
KUKUCHKA	08S	40E	34	40	WELL
KUKUCHKA * 1.25 MI NE TONGUE RIVER MINE.	08S	40E	34	553	WELL
KUKUCHKA WILLIAM	08S	40E	34	98	WELL
KUKUCHKA WM * 6.5 M NE DECKER MT	08S	40E	33	NR	WELL
MINER JIM * 4.2 M SE DECKER MT	09S	40E	4	NR	WELL
MONTANA CLUB BAR * 1.5 MI NE DECKER MT	09S	40E	21	227	WELL
MUNSON	09S	40E	21	171	WELL
MUNSON EMMET * 2.4 M NE DECKER MT *	09S	40E	22	169.39999	WELL
MUNSON EMMET * 3.5 MI NE DECKER	09S	40E	22	170	WELL
MUNSON EMMETT	09S	40E	26	40	WELL
MUNSON EMMETT	09S	40E	24	140	WELL
MUNSON MRS EMMETT	09S	40E	22	30.1	WELL
MUNSON MRS EMMETT	09S	40E	22	80	WELL
MUNSON VADA	09S	41E	31	257	WELL
PADLOCK RANCH	09S	38E	26	NR	WELL
PADLOCK RANCH	09S	38E	26	NR	WELL
PENSON CHARLES & GREGG	09S	40E	11	100	WELL
PENSON CHAS. & GREG	09S	40E	11	35	WELL
PORTER HARVEY	09S	41E	7	338	WELL
RANCHOLME CATTLE CO.	09S	41E	28	200	WELL
SCHREIBELS H. * 20 M NW SHERIDAN WY.	09S	38E	24	240	WELL
SCHREIBIES*5.5 MI NE DECKER MT*	09S	38E	24	19	WELL
STATES J. VERNON	09S	39E	32	160	WELL
STATES J. VERNON	09S	39E	21	615	WELL
STATES VERNON	09S	39E	29	64	WELL
THOMAS JESS	09S	40E	21	462	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL
NR	NR	NR	NR	NR	WELL

NA = Not Applicable

NR = Not Reported

Table Hydro-9: Additional Wells and Springs in Alt B Cumulative Drawdown Area

Site Name	Township	Range	Sec	Depth (ft)	Type
HOLMES RANCH * 8.5 M E DECKER MT *	09S	41E	9	28.700001	WELL

Table Hydro-10: Additional Wells and Springs in Alt C Cumulative Drawdown Area

Site Name	Township	Range	Sec	Depth (ft)	Type
ELDER WILLIS W.	09S	41E	26	252	WELL

APPENDIX G
ALTERNATIVE C
ADDITIONAL MITIGATING MEASURES

General

1. A pre-construction field meeting must be conducted prior to beginning any construction activities approved under this POD. The operator must contact the BLM Authorized Officer, (406-233-3645) at least 4 days prior to beginning operations so that the meeting can be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent and for providing all contractors copies of the approved POD, project map and BLM Conditions of Approval pertinent to the work that each would be doing.

2. The operator must submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities related to federal leases that are not specifically addressed in the approved APD or POD Surface Use Plan.

3. If any cultural values (sites, artifacts, human remains, etc.) are observed during operation of this lease/permit/right-of-way, they are to be left intact and the Miles City Field Manager notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials and contact the authorized BLM officer. Within five working days, the AO will inform the operator as to:
    - Whether the materials appear eligible for the National Register of Historic Places;
    - The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
    - A time-frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction measures.

5. If paleontological resources, either large or conspicuous and/or a significant scientific value are discovered during construction, the find must be reported to the Authorized Officer immediately. Construction must be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery must not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant must bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.

6. Prior to the use of pesticides on public land, the applicant must obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers and any other information deemed necessary by the authorized officer to such use. Disturbed areas must be monitored annually for the presence of noxious weeds from June through August. Monitoring must begin prior to disturbance.

7. Fidelity Exploration Production Co. employees and subcontractors will be prohibited from possessing firearms on the project.

8. The operator is responsible for obtaining all required authorizations and permits.

9. The operator shall monitor specific wildlife species as required:
    -Raptor nest productivity

-Bald eagle winter roosts

11. Construction and drilling timing stipulation for grouse: No construction from March 1 to June 15 in grouse nesting habitat within two miles of an active lek for the following wells: 11-1991, 42-2091, 21-2191, 23-2191, 33-2191, 41-2191, 14-2291, 12-2791, 14-2791, 24-2891, 31-2891, 44-2891, 21-2991, 13-2991, 44-2991, 34-3091, 42-3091, 42-3191, 21-3291, 42-3291, 13-3391, 21-3391, 32-3391, 21-3491, 23-2490, 42-2490, and 44-2490, unless BLM grants an exception.

12. Construction and drilling timing stipulation for crucial mule deer winter range: No construction from December 1 to March 31 within the boundaries of the crucial winter range would apply to the following wells: 41-2191 and 14-2291, unless BLM grants an exception.

13. Construction and drilling timing stipulation for raptor nests active within the past two years: Construction and drilling activities are prohibited within 0.5 miles of a nest from March 1 to August 1, on the following wells: 42-2091, 14-2291, 12-2791, 21-2991, 42-3091, 42-2490, and 44-2490, unless BLM grants an exception.

14. The operator shall notify BLM (406-232-7001) at least 48 hours before beginning construction activities. BLM shall immediately notify the Northern Cheyenne Tribe about construction activities. The company shall have its consulting archaeologist or an archaeologist holding a valid BLM Cultural Resources Permit available should the need to conduct monitoring occur as a result of prehistoric sites being discovered during construction. The operator shall provide the opportunity to the Northern Cheyenne Tribe for a qualified Tribal cultural resources specialist to monitor construction of the Federal portion of the Coal Creek project area. The results of any monitoring shall be reported in writing by the Consulting Archaeologist and Tribe to BLM within 14 days after completion of monitoring activities.

    The purpose of the monitoring is to identify any cultural resources that may be discovered by construction activities. The archaeologist or cultural resources specialist may temporarily halt construction within 300 feet (100 meters) of the find until it can be evaluated by a BLM Cultural Resources Specialist. The operator shall immediately notify BLM (406-232-7001) upon the discovery of cultural resources. The BLM authorized officer shall respond to the operator within the five working days as per Condition of Approval No. 3. The same conditions in Condition of Approval No. 3 would apply for buried cultural resources encountered during monitoring.

<u>Drilling</u>

1. All wait on cement times must be sufficient for the cement to reach 500 psi compressive strength as required by Onshore Oil & Gas Order No. 2.III.B.

2. A minimum of three centralizers must be installed on the production casing and spaced to afford maximum protection of the shallow coals and aquifers.

3. Reserve pits must be adequately fenced during and after drilling operations until pit is reclaimed to effectively keep out wildlife and livestock. Adequate fencing, in lieu of more stringent requirements by the surface owner, is defined as follows:
    - Construction materials must consist of steel or wood posts. Three or four strand wire (smooth or barbed) fence or hog panel (16-foot length by 50-inch height) must be used with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc.
    - Construction standards: Posts must be firmly set in ground. If wire is used, it must be taut and evenly spaced, from ground level to top wire, to effectively keep out animals. Hog panels must be tied securely into posts and one another using fence staples, clamps, etc. Fence must be at least 2 feet from edge of pit, three sides fenced before beginning drilling, and the fourth side fenced immediately upon completion of drilling and prior to rig release. Fence must be left up and maintained in adequate condition until pit is closed.

4. The reserve pit must be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having permeability less than 10-7 cm/sec. The liner must be installed so that it

will not leak and must be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material must be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand must be used prior to installing the liner.

5. The reserve pit must be constructed so that at least half of its total volume is below natural ground level.

6. Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM Authorized Officer requiring specific testing and closure requirements.

7. Any materials classified as nonexempt hazardous wastes must be disposed of in an EPA approved facility.

8. If these wells are drilled during the fire season (June-October), the operator must take all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access routes and well sites and keeping fire fighting equipment readily available when drilling.

Access

1. Access roads, including drainage control, must be improved and maintained as necessary or as directed by the BLM Authorized Officer to prevent soil erosion and to provide for safe and environmentally-sound access.

2. Vehicle travel on unimproved two-track roads is prohibited during periods of inclement weather or spring thaw when the possibility exists for excessive surface resource damage such as creating ruts in excess of 4 inches or causing vehicles to travel outside two-track roadway.

3. Culverts must be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them and aligned parallel to the channel to minimize erosion. Backfill material must be thoroughly compacted. All culverts must be appropriately sized in accordance with standards in BLM Manual 9113.

4. Construction and other project-related traffic are restricted to approved routes. Cross-country vehicle travel outside of approved travel routes is not allowed.

5. Maximum design speed on all operator constructed and maintained roads must not exceed 25 miles per hour.

6. Water or other non-saline dust suppressants with at least 50 percent control efficiency must be applied during well site, battery site and road construction. Dust inhibitors (surfacing materials, non-saline dust suppressants and water) must be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.

7. The operator must establish, post and enforce speed limits to achieve at least a 65% reduction of fugitive dust emissions from an assumed base speed equal to 40 miles per hour. The operator must administer dust control measures on active access roads, well sites and battery sites.

Well Sites

1. Equipment must not be stored on the topsoil stockpiles.

Flowlines

1. Pipeline trenches must be compacted during backfilling and must be routinely inspected and maintained to ensure proper stabilization and reclamation.

2. Pipeline construction must not block nor change the natural course of any drainage. Pipelines must cross perpendicular to drainages. Pipelines must not be run parallel in drainage bottoms.

Produced Water

1. The effluent limitations, other conditions and self-monitoring requirements must be met as contained in the MDEQ's MPDES Permit (MT-0030457). All reporting will be as described in the MPDES permit, except that copies of reports will be submitted to the BLM, in addition to the MDEQ.

Reclamation

1. Reclamation plans must be submitted to BLM for approval via a Notice of Intent (NOI) Sundry Notice before abandoning individual federal POD facilities. Any deviation from the Surface Reclamation Plan included in the Fidelity Coal Creek POD must be included at this time. Individual facilities include well locations, pipelines/utility corridors, access roads, impoundments, and compressor sites.

2. Pit reclamation:
    a. All pit(s) must be emptied of all fluids within 90 days after completion of drilling operations. The pit must be closed properly to assure protection of soil, water and vegetation.
    b. The pit may not be cut or trenched.
    c. Pit mud/sludge material may be buried onsite after the material has dried.
    d. The plastic pit liner (if any) must be cut off below grade and properly disposed of at a state authorized landfill before beginning to recontour the site.
    e. The pit material must be covered with a minimum of 3' of soil

3. Reclamation of disturbed areas on private surface must be in accordance with agreements between Fidelity and the landowners. The disturbed areas must be disked and seeded with a weed-seed free mix approved by the Natural Resource Conservation Service and the surface owner. At a minimum, 12 pounds per acre of seed would be planted, with the initial reseeding in the fall of 2005.

4. Areas of surface disturbance must be ripped or scarified to a depth of at least 12 inches before recontouring and redistributing topsoil. The rippers must not be set more than 24 inches apart.

5. Topsoil must be distributed evenly over the entire recontoured area. Prepare the seedbed by disking to a depth of 4-to-6 inches following the contour. Seed must be drilled on the contour to a depth of one-half inch, followed by cultipaction to compact the seedbed, preventing soil and seed losses

6. All disturbed areas on BLM surface must be seeded after October 1 (before ground freezes) or prior to May 15 (after ground thaws) at 6" drill row spacing at a depth of ¼" to ½" with the following mixture:

    Combination must include at least four of the following species:

Species of Seed	***(Variety)***	***Common Name***	***Pounds/acre *(PLS)***
Pascopyrum smithii	(Rosanna)	Western wheatgrass	3.00
Pseudoroegneria spicata	(Goldar)	Bluebunch wheatgrass	2.00
Stipa viridula	(Lodom)	Green needlegrass	2.00
Elymus trachycaulus	(Pryor)	Slender wheatgrass	2.00
Stipa comata		Needleandthread	1.00
Bouteloua curtipendula		Sideoats Grama	2.00
Schizachyrium scoparium		Little bluestem	2.00

    *******Pure Live Seed (PLS) formula: % of purity of seed mixture times %* germination of seed mixture = portion of seed mixture that is PLS

    Western wheatgrass must be included in the seed mix. Thickspike wheatgrass may be substituted only when Western wheatgrass is unavailable.

7. Any mulch used for reclamation must to be certified weed seed free and crimped into the soil.

8. Reclamation will be determined successful when the disturbed area and any areas of subsidence are stabilized, potential water erosion is effectively controlled, the area is free of debris and the vegetative stand is established with at least a 70% ground cover and is composed of at least 60% of the required species.

9. Slopes too steep for machinery may be seeded by hand broadcast with twice the amount of specified seed and raked.

10. Waterbars must be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage and extended into established vegetation. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

Slope (percent)	Spacing Interval (feet)
< 2	200
2 – 4	100
4 – 5	75
> 5	50

11. BLM will not release the bond until all disturbed areas associated with the APD/POD have been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.

12. For bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.

13. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.

14. The abandonment marker must exhibit the same information required for the well sign. The abandonment marker must be installed when the wells are plugged and consist of a steel plate welded to surface casing 4 feet below ground level.

OTHER APPLICABLE REQUIREMENTS

This is not a complete list of requirements, but is an abstract of some major requirements.

1. General Requirements

   a. The lessee or designated operator shall comply with applicable laws and regulations; with the lease terms, Onshore Oil and Gas Orders; NTL's; and with other orders and instructions of the authorized officer. Any deviation from the terms of the approved APD require prior approval from BLM (43 CFR 3162.1(a)).

   b. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease due to a lease or unit boundary change, the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.

2. Drilling Operations (Onshore Order No. 2)

   a. All applicable safety precautions outlined in Onshore Order No. 2 shall be observed.

3. Well Abandonment (43 CFR 3162.3-4, Onshore Order No. 1 - Sec. V)

   Approval for abandonment shall be obtained prior to beginning plugging operations. Initial approval for plugging operations may be verbal, but shall be followed-up in writing within 30 days. Subsequent and final abandonment notifications are required and shall be submitted on Sundry Notice (Form 3160-5), in triplicate.

4. Reports and Notifications (43 CFR 3162.4-1, 3162.4-3)

   a. Within 30 days of completion of the well as a dry hole or producer, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions or data obtained and compiled during the drilling, workover, and/or completion operations shall be filed with a Completion Report (Form 3160-4), in duplicate.

   b. In accordance with 43 CFR 3162.4-3, this well shall be reported on the Oil and Gas Operations Report (OGOR, MMS-4054), starting with the month in which drilling operations commence, and continuing each month until the well is physically plugged and abandoned.

   c. Notify this office within 5 business days of production start-up if either of the following two conditions occur:

      (1) The well is placed on production.
      (2) The well resumes production after being off of production for more than 90 days.

      "Placed on production" means shipment or sales of hydrocarbons from temporary tanks, production into permanent facilities or measurement through permanent facilities.

      Notification may be written or verbal with written follow-up within 15 days, and must include the following information:

      1. Operator name, address, and telephone number.

      2. Well name and number, county and state.

      3. Well location, "¼¼", Section, Township, Range, P.M."

      4. Date well begins or resumes production.

      5. The nature of the well's production; that is crude oil, or crude oil casing gas, or natural gas

and entrained liquid hydrocarbons.

6. The Federal or Indian lease number.

7. As appropriate, the Unit Agreement name, number and Participating Area name.

8. As appropriate, the Communitization Agreement number.

5. Verbal Notifications

Made to the BLM, MCFO 406-232-7001, or after business hours to the appropriate individual's home phone shown on the list attached.

A. Notify this office verbally at least 48 hours prior to beginning construction.
B. Notify this office verbally at least 12 hours prior to spudding the well. (To be followed up in writing within 5 days.)
C. Notify this office verbally at least 12 hours prior to running any casing or conducting any BOP tests. (To be followed up in writing within 5 days.)
D. Notify this office verbally at least 6 hours prior to commencing any DST test.
E. Notify this office verbally at least 24 hours prior to plugging the well to receive verbal plugging orders. (Refer to Informational Notice Item No. 3 for additional abandonment instructions.)
F. Notify this office verbally at least 24 hours prior to removal of fluids from the reserve pit.

6. Environmental Obligations and Disposition of Production (43 CFR 3l62.5-1, 3162.7-1 and 40 CFR 302-4)

a. With BLM approval, water produced from newly completed wells may be temporarily stored in reserve pits up to 90 days. During this initial period, application for the permanent disposal method shall be made to this office in accordance with Onshore Order No. 7. If underground injection is proposed, an EPA or State permit shall also be obtained. If surface discharge of produced water is proposed, an MPDES permit shall also be required.

b. Spills, accidents, fires, injuries, blowout and other undesirable events shall be reported to this office within the timeframes in NTL-3A.

c. You are required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing or production operations must be reported to this office and the United States Fish and Wildlife Service within 24 hours.

We may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completion or production of this well. Fencing, screening and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion of operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in the accumulation of oil.

Voluntary pit fencing, screening and netting, or sealing vessels, is encouraged to avoid potential instances that may result in the death of a migratory bird.

7. Well Identification (43 CFR 3162.6)

Each drilling, producing or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (either footages or the quarter-quarter section, the section, township and range). The Indian lessor's name may also be required. All markings shall be legible, and in a conspicuous place.

8. A complete copy of the approved Application for Permit to Drill (APD), including conditions, stipulations, and the H2S contingency plan (if required) shall be available for reference at the well site during the construction and drilling phases.

9. This drilling permit is valid for either one year from the approval date or until lease expiration, whichever occurs first.

10. Public Availability of Information (43 CFR 3100.4)

All submitted information not marked "CONFIDENTIAL INFORMATION" will be available for public inspection upon request.

If you have any questions, please contact a member of our staff at 406-232-7001, or at home, after business hours.

BUSINESS HOURS: 7:45 A.M. to 4:30 P.M. (Mountain Time) Monday - Friday

APPENDIX H
OIL & GAS LEASE STIPULATIONS

Certain resources require protection from impacts associated with oil and gas activities. The specific resource and the method of protection are contained in lease stipulations. Lease stipulations are usually no surface occupancy, controlled surface use or timing limitation. Lease stipulations become a part of the lease and modify the terms of the lease.

Circumstances under which stipulations may be waived, excepted or modified are described in the stipulation. Stipulations may be waived, excepted, or modified at the discretion of the Authorized Officer during the environmental review process conducted for proposed Applications for Permit to Drill (APDs) or other permits related to oil and gas exploration and development. Waivers, exceptions and modifications of stipulations must be granted in accordance with the guidelines identified in the Record of Decision for the Miles City Oil & Gas RMP/FEIS Amendment, 1994.

The lessee or operator may submit a written request to the Authorized Officer for a waiver, exception or modification. The Authorized Officer will respond in writing by either granting or denying the request after reviewing circumstances and data pertinent to the request, as well as consulting with other applicable agencies. The response will include any constraints associated with granting the request or reasons for denying the request.

Coal Creek POD wildlife lease stipulations:

Construction and drilling timing stipulation for grouse: No construction from March 1 to June 15 in grouse nesting habitat within two miles of an active lek for the following wells: 11-1991, 42-2091, 21-2191, 23-2191, 33-2191, 41-2191, 14-2291, 12-2791, 14-2791, 24-2891, 31-2891, 44-2891, 21-2991, 13-2991, 44-2991, 34-3091, 42-3091, 42-3191, 21-3291, 42-3291, 13-3391, 21-3391, 32-3391, 21-3491, 23-2490, 42-2490, and 44-2490, unless BLM grants an exception.

Construction and drilling timing stipulation for crucial mule deer winter range: No construction from December 1 to March 31 within the boundaries of the crucial winter range would apply to the following wells: 41-2191 and 14-2291, unless BLM grants an exception.

Construction and drilling timing stipulation for raptor nests active within the past two years: Construction and drilling activities are prohibited within 0.5 miles of a nest from March 1 to August 1, on the following wells: 42-2091, 14-2291, 12-2791, 21-2991, 42-3091, 42-2490, and 44-2490, unless BLM grants an exception.