UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Buffalo Field Office
Buffalo, Wyoming

SURFACE USE
CONDITIONS OF APPROVAL

POD Name: Quarter Circle 9 Beta

Operator: Lance Oil & Gas Company, Inc.

List of Wells:

	Well Name	Well #	QTR/QTR	Sec	TWP	RNG	Lease
1	Quarter Circle 9 Beta Fed	12-13*	SWNW	13	51N	79W	WYW142091
2	Quarter Circle 9 Beta Fed	14-13	SWSW	13	51N	79W	WYW142091
3	Quarter Circle 9 Beta Fed	21-13	NENW	13	51N	79W	WYW142091
4	Quarter Circle 9 Beta Fed	23-13	NESW	13	51N	79W	WYW142091
5	Quarter Circle 9 Beta Fed	24-13	SESW	13	51N	79W	WYW142091
6	Quarter Circle 9 Beta Fed	31-13	NWNE	13	51N	79W	WYW142091
7	Quarter Circle 9 Beta Fed	32-13	SWNE	13	51N	79W	WYW142091
8	Quarter Circle 9 Beta Fed	33-13	NWSE	13	51N	79W	WYW142091
9	Quarter Circle 9 Beta Fed	12-14	SWNW	14	51N	79W	WYW142091
10	Quarter Circle 9 Beta Fed	13-14	NWSW	14	51N	79W	WYW142091
11	Quarter Circle 9 Beta Fed	22-14	SENW	14	51N	79W	WYW142091
12	Quarter Circle 9 Beta Fed	23-14	NESW	14	51N	79W	WYW142091
13	Quarter Circle 9 Beta Fed	31-14	NWNE	14	51N	79W	WYW142091
14	Quarter Circle 9 Beta Fed	32-14	SWNE	14	51N	79W	WYW142091
15	Quarter Circle 9 Beta Fed	34-14	SWSE	14	51N	79W	WYW142091
16	Quarter Circle 9 Beta Fed	42-14	SENE	14	51N	79W	WYW142091
17	Quarter Circle 9 Beta	12-15	SWNW	15	51N	79W	WYW142092
18	Quarter Circle 9 Beta	14-15	SWSW	15	51N	79W	WYW142092
19	Quarter Circle 9 Beta	21-15	NENW	15	51N	79W	WYW142092
20	Quarter Circle 9 Beta	23-15	NESW	15	51N	79W	WYW142092
21	Quarter Circle 9 Beta	32-15	SWNE	15	51N	79W	WYW142092
22	Quarter Circle 9 Beta	34-15	SWSE	15	51N	79W	WYW142092
23	Quarter Circle 9 Beta	41-15	NENE	15	51N	79W	WYW142092
24	Quarter Circle 9 Beta	43-15	NESE	15	51N	79W	WYW142092
25	Quarter Circle 9 Beta	11-22	NWNW	22	51N	79W	WYW142092
26	Quarter Circle 9 Beta	12-22	SWNW	22	51N	79W	WYW142092
27	Quarter Circle 9 Beta	31-22	NWNE	22	51N	79W	WYW142092
28	Quarter Circle 9 Beta	41-22	NENE	22	51N	79W	WYW142092

	Well Name	Well #	QTR/QTR	Sec	TWP	RNG	Lease
29	Quarter Circle 9 Beta	42-22	SENE	22	51N	79W	WYW142092
30	Quarter Circle 9 Beta Fed	11-23	NWNW	23	51N	79W	WYW142091
31	Quarter Circle 9 Beta Fed	14-23	SWSW	23	51N	79W	WYW142091
32	Quarter Circle 9 Beta Fed	21-23	NENW	23	51N	79W	WYW142091
33	Quarter Circle 9 Beta Fed	23-23	NESW	23	51N	79W	WYW142091
34	Quarter Circle 9 Beta Fed	32-23	SWNE	23	51N	79W	WYW142091
35	Quarter Circle 9 Beta Fed	34-23	SWSE	23	51N	79W	WYW142091
36	Quarter Circle 9 Beta Fed	41-23	NENE	23	51N	79W	WYW142091
37	Quarter Circle 9 Beta Fed	44-23	SESE	23	51N	79W	WYW142091
38	Quarter Circle 9 Beta Fed	31-24	NWNE	24	51N	79W	WYW142091
39	Quarter Circle 9 Beta Fed	12-24	SWNW	24	51N	79W	WYW142091
40	Quarter Circle 9 Beta Fed	13-24	NWSW	24	51N	79W	WYW142091
41	Quarter Circle 9 Beta Fed	14-24	SWSW	24	51N	79W	WYW142091
42	Quarter Circle 9 Beta Fed	23-24	NESW	24	51N	79W	WYW142091
43	Quarter Circle 9 Beta Fed	32-24	SWNE	24	51N	79W	WYW142091
44	Quarter Circle 9 Beta Fed	34-24	SWNE	24	51N	79W	WYW142091
45	Quarter Circle 9 Beta Fed	43-24	NESE	24	51N	79W	WYW142091
46	Quarter Circle 9 Beta Fed	42-25	SENE	25	51N	79W	WYW142095

Programmatic mitigation measures identified in the PRB FEIS ROD

Programmatic mitigation measures identified in the PRB FEIS ROD

Programmatic mitigation measures are those, determined through analysis, which may be appropriate to apply at the time of APD approval if site specific conditions warrant. These mitigation measures can be applied by BLM, as determined necessary at the site-specific NEPA APD stage, as COAs and will be in addition to stipulations applied at the time of lease issuance and any standard COA.

Groundwater

1. In order to address the potential impacts from infiltration on shallow ground water, the Wyoming DEQ has developed and revised a guidance document, "Compliance Monitoring and sighting Requirements for Unlined Impoundments Containing Coalbed Methane Produced Water" (September, 2006) which can be accessed on their website. For all WYPDES permits the BLM will require that operators comply with the latest DEQ standards and monitoring guidance.

Surface Water

1. Channel Crossings:
   a) Minimize channel disturbance as much as possible by limiting pipeline and road crossings.
   b) Avoid running pipelines and access roads within floodplains or parallel to a stream channel.
   c) Channel crossings by road and pipelines will be constructed perpendicular to flow. Culverts will be installed at appropriate locations for streams and channels crossed by roads as specified in the BLM Manual 9112-Bridges and Major Culverts and Manual 9113-Roads. Streams will be crossed perpendicular to flow, where possible, and all stream crossing structures will be designed to carry the 25-year discharge event or other capacities as directed by the BLM.
   d) Channel crossings by pipelines will be constructed so that the pipe is buried at least four feet below the channel bottom.

2. Low water crossings will be constructed at original streambed elevation in a manner that will prevent any blockage or restriction of the existing channel. Material removed will be stockpiled for use in reclamation of the crossings.

3. Concerns regarding the quality of the discharged CBNG water on downstream irrigation use may require operators to increase the amount of storage of CBNG water during the irrigation months and allow more surface discharge during the non-irrigation months.

4. The operator will supply a copy of the complete approved UIC permit for the SDI system and associated infrastructure to BLM as they are issued by WDEQ.

Soils

1. The Companies, on a case by case basis depending upon water and soil characteristics, will test sediments deposited in impoundments before reclaiming the impoundments. Tests will include the standard suite of cations, ions, and nutrients that will be monitored in surface water testing and any trace metals found in the CBNG discharges at concentrations exceeding detectable limits.

Vegetation

1. Temporarily fence reseeded areas, if not already fenced, for at least two complete growing seasons to insure reclamation success on problematic sites (e.g. close to livestock watering source, erosive soils etc.). This is applicable as a performance based measure for those areas identified with poor reclamation potential. See Table 4.1 for the specific map unit symbols identify poor reclamation potential.

Wetland/Riparian

1. No waste material will be deposited below high water lines in riparian areas, flood plains, or in natural drainage ways.

2. The lower edge of soil or other material stockpiles will be located outside the active floodplain.

3. Disturbed channels will be re-shaped to their approximate original configuration or stable geomorphological configuration and properly stabilized.

4. Reclamation of disturbed wetland/riparian areas will begin immediately after project activities are complete.

Wildlife

1. For any surface-disturbing activities proposed in sagebrush shrublands, the Companies will conduct clearance surveys for sage grouse breeding activity during the sage grouse's breeding season before initiating the activities. The surveys must encompass all sagebrush shrublands within 0.5 mile of the proposed activities.

2. The Companies will locate facilities so that noise from the facilities at any nearby sage grouse or sharp-tailed grouse display grounds does not exceed 49 decibels (10 dBA above background noise) at the display ground.

3. The Companies will locate impoundments to avoid sagebrush shrublands, where practical.

4. Containment impoundments will be fenced to exclude wildlife and livestock. If they are not fenced, they will be designed and constructed to prevent entrapment and drowning.

5. All stock tanks shall include a ramp to enable trapped small birds and mammals to escape. See Idaho BLM Technical Bulletin 89-4 entitled Wildlife Watering and Escape Ramps on Livestock Water Developments: Suggestions and Recommendations.

Threatened, Endangered, or Sensitive Species

Black-footed Ferret

1. Prairie dog colonies will be avoided wherever possible.

2. If any black-footed ferrets are located, the USFWS will be consulted. Absolutely no disturbance will be allowed within prairie dog colonies inhabited by black-footed ferrets.

3. Additional mitigation measure may be necessary if the site-specific project is determined by a BLM biologist to have adverse effects to black-footed ferrets or their habitat. In the event that a mountain plover is located during construction or operation, the USFWS' Wyoming Field Office (307-772-2374) and the USFWS' Law Enforcement Office (307-261-6365) will be notified within 24 hours.

Mountain Plover

1. Project-related features that encourage or enhance the hunting efficiency of predators of mountain plover will not be constructed within ¼ mile of occupied mountain plover nesting habitat.

2. Construction of ancillary facilities (for example, compressor stations, processing plants) will not be located within ½ mile of known nesting areas. The threats of vehicle collision to adult plovers and their broods will be minimized, especially within breeding aggregation areas.

3. Work schedules and shift changes will be set to avoid the periods from 30 minutes before to 30 minutes after sunrise and sunset during June and July, when mountain plovers and other wildlife are most active.

4. Creation of hunting perches or nest sites for avian predators within 0.5 mile of identified nesting areas will be avoided by burying power lines, using the lowest possible structures for fences and other structures and by incorporating perch-inhibiting devices into their design.

5. When above ground markers are used on capped and abandoned wells they will identified with markers no taller than four feet with perch inhibiting devices on the top to avoid creation of raptor hunting perches within 0.5 mile of nesting areas.

6. Reclamation of areas of previously suitable mountain plover habitat will include the seeding of vegetation to produce suitable habitat for mountain plover.

Ute Ladies'-tresses Orchid

1. Suitable habitat will be avoided wherever possible.

2. If suitable habitat for Ute ladies'-tresses cannot be avoided, surveys will be conducted in compliance with USFWS standards (USFWS 1995) by a BLM approved biologist or botanist. Surveys can only be conducted between July 20 and August 31.

3. Moist soils near wetlands, streams, lakes, or springs in the project area will be promptly revegetated if construction activities impact the vegetation in these areas. Revegetation will be designed to avoid the establishment of noxious weeds.

Air Quality

1. During construction, emissions of particulate matter from well pad and resource road construction will be minimized by application of water, or other dust suppressants, with at least 50 percent control efficiency. Roads and well locations constructed on soils susceptible to wind erosion could be appropriately surfaced or otherwise stabilized to reduce the amount of fugitive dust generated by traffic or other activities, and dust inhibitors (surfacing materials, non-saline dust suppressants, and water) could be used as necessary on unpaved collector, local and resource roads that present a fugitive dust problem. The use of chemical dust suppressants on BLM surface will require prior approval from the BLM authorized officer.

Site specific mitigation measures

Surface Use

All changes made at the onsite will be followed. They have all been incorporated into the operator's POD. See Attachment 1 for specific changes.

1. The operator will follow the guidance provided in the Wyoming Policy on Reclamation (IM WY-90-231) specifically the following:

   Reclamation Standards:

   1. The reclaimed area shall be stable and exhibit none of the following characteristics:
      a. Large rills or gullies.
      b. Perceptible soil movement or head cutting in drainages.
      c. Slope instability on, or adjacent to, the reclaimed area in question.
   2. The soil surface must be stable and have adequate surface roughness to reduce runoff and capture rainfall and snow melt. Additional short-term measures, such as the application of mulch, shall be used to reduce surface soil movement.
   3. Vegetation canopy cover (on unforested sites), production and species diversity (including shrubs) shall approximate the surrounding undisturbed area. The vegetation shall stabilize the site and support the planned post disturbance land use, provide for natural plant community succession and development, and be capable of renewing itself. This shall be demonstrated by:
      a. Successful onsite establishment of species included in the planting mixture or other desirable species.
      b. Evidence of vegetation reproduction, either spreading by rhizomatous species or seed production.
   4. The reclaimed landscape shall have characteristics that approximate the visual quality of the adjacent area with regard to location, scale, shape, color and orientation of major landscape features and meet the needs of the planned post disturbance land use.

2. Provide 4" of aggregate where grades exceed 8%.

3. Surfacing material will be from a permitted pit. The parent material (rock) must be crushed and screened to meet road grade W standards as set forth in Wyoming Supplement to BLM Road Manual 9113.

4. The culvert locations will be staked prior to construction. The culvert invert grade and finished road grade will be clearly indicated on the stakes. Culverts will be installed on natural ground, or on a designed flow line of a ditch. The minimum cover over culverts will be 12" or one-half the diameter whichever is greater. Drainage laterals in the form of culverts or waterbars shall be placed according to the following spacing:

Grade	Drainage Spacing
2-4%	310 ft
5-8%	260 ft
9-12%	200 ft
12-16%	150 ft

5. If produced water is to be applied to road surfaces as dust abatement, the operator needs an approved Wyoming Oil & Gas Commission Facility Information for Road Application of Waste and Waste Water (Form 20) along with the proposed action describing locations, application rates, etc. Form 20 is available at http://wogcc.state.wy.us.

6. All permanent above-ground structures (e.g., production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The paint used will be a color which simulates "Standard Environmental Colors." The color selected for the Quarter Circle 9 Beta POD is Covert Green.

7. The approval of this project does not grant authority to use off lease federal lands. No surface disturbing activity, or use of off-lease federal lands, is allowed on affected leases until right-of-way grants become effective on the date in which the right-of-way grant is signed by the authorized officer of the BLM.

8. Adequate drainage control must be in place at all stages of construction and culverts installed as soon as feasible.

9. Final grading and surfacing shall occur immediately after utility installation is complete. All rills, gullies, and other surface defects shall be ripped to the full depth of erosion across the entire width of the roadway prior to final grading and surfacing.

10. Horizontal curves with radius less than 220 feet require curve widening as follows:

Turning Radius (ft)	Min. Curve Widening (ft)	Widened Lane Width (ft)
220 +	0	12
120 to 219	2	14
90 to 119	4	16
50 to 89	8	20

11. All roads, well pads, rig slot, culverts, spot upgrades and locations where engineered construction will occur will be completely slope staked for the pre-construction meeting.

12. Disturbance for pipelines and utility corridors adjacent to access roads will be contained within the disturbance allowed for road construction. Allowances will be granted for culverts, low water crossings, gas/electric metering points and valve sets.

13. Pipeline installation and/or corridors without road access will not exceed a disturbance width of 40 feet with clearing and blading not to exceed 30 feet.

14. Utility corridors will be expediently reclaimed following construction and maintained in a professional and workmanship manner avoiding tire rutting, settling and erosion.

15. A minimum 20 foot undisturbed vegetative buffer will be maintained for erosion features and drainages along the access roads to the following well locations:

16. Mowing at the well site where a constructed pad is not approved as designed will be minimized to a 35 foot radius of the well(s) stake unless otherwise stated in the "Changes agreed to during the onsite" Table 1.1 and Attachment 1.

17. The operator will maintain well drilling, completion and associated construction operations within a 150 foot by 170 foot work area for those locations where a constructed pad is not approved as designed.

18. Reserve pits containing frozen fluids will not be closed. See "Operations/Maintenance", COA #11 of the Conditions of Approval document for further clarification.

19. Top soil will be segregated for all excavation including the entire disturbance area for constructed pads and excavated areas for rig slots, reserve pits, constructed roads, spot upgrades, reservoir upgrades, outfalls and utility trenches. Segregation will not be required for trenches installed with wheel trenchers.

20. Segregated top soil will be redistributed once the instillation of gas, water and electrical utilities is complete at the well head.

21. Disturbance areas within the Quarter Circle 9 Beta POD have fragile soils and erosive conditions that shall be stabilized in a manner which eliminates erosion until a self-perpetuating non-weed native plant community has stabilized the site. These areas are identified in the road descriptions and engineered designs included in the MSUP, Access Roads Component to the Surface Use Plan, engineered road and well pad designs. Stabilization efforts shall be finished within 30 days of the completion of construction activities.

22. The operator will drill seed on the contour to a depth of 0.5 inch, followed by cultipaction to compact the seedbed, preventing soil and seed losses. To maintain quality and purity, the current years tested, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used. See page 18 of the MSUP for the appropriate seed mix as per the soil type.

Wildlife

Bald Eagles

23. The following conditions will alleviate impacts to bald eagles:

    No project related actions shall occur within one mile of bald eagle habitat identified along Crazy Woman Creek annually from November 1 through April 1 (CM9), prior to a winter roost survey or from February 1 through August 15 (CM8) prior to a nesting survey. This timing limitation will be in effect unless surveys determine the nest/roost to be inactive. This affects the following wells and infrastructure:

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**3**	**ALL** proposed **SDI , pipeline & utility corridor** within this section.
T51N/R79W	**9**	**ALL** proposed **SDI , pipeline & utility corridor** within this section.
T51N/R79W	**10**	**ALL** proposed **SDI , pipeline & utility corridor** within this section.

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**11**	**ALL** proposed **pump station, SDI , pipeline & utility corridor** within this section.
T51N/R79W	**14**	**ALL** proposed road/corridor within **N1/2 NWNW** of this section.
T51N/R79W	**15**	**Wells: 12-15-5179, 14-15-5179, 21-15-5179, 23-15-5179, 32-15-5179 & 41-15-5179** **ALL** proposed road/corridor within **NW, SW, NENE & SWNE** of this section.
T51N/R79W	**16**	**ALL** proposed **SDI , pipeline & utility corridor** within this section.
T51N/R79W	**17**	**ALL** proposed **SDI and pipeline** within this section.
T51N/R79W	**20**	**ALL** proposed **SDI and pipeline** within this section.
T51N/R79W	**22**	**Wells: 11-22-5179 & 12-22-5179** **ALL** proposed road/corridor within **NWNW and SWNW** of this section.

a. If a roost is identified and construction has not been completed, a year-round disturbance-free buffer zone of 0.5 mile will be established for all bald eagle winter roost sites (November 1 - April 1). Additional measures such as remote monitoring and restricting maintenance visitation to between 9:00 AM and 3:00 PM may be necessary to prevent disturbance.
b. If a nest is identified and construction has not been completed, a disturbance-free buffer zone of 0.5 mile (i.e., no surface occupancy) would be established year round for all bald eagle nests. A seasonal minimum disturbance buffer zone of 1 mile will be established for all bald eagle nest sites (February 1 - August 15).
c. Additional mitigation measures may be necessary if the site-specific project is determined by a Bureau biologist to have an adverse affect to bald eagles or their habitat.

Burrowing Owls

24. The following conditions will alleviate impacts to burrowing owls:

No surface disturbing activity shall occur within 0.25 miles of all identified prairie dog colonies from April 15 to August 31, annually, prior to a burrowing owl nest occupancy survey for the current breeding season. A 0.25 mile buffer will be applied if a burrowing owl nest is identified. This condition will be implemented on an annual basis for the duration of surface disturbing activities within the prairie dog town(s). This timing limitation will be in effect unless surveys determine the nest(s) to be inactive. This timing limitation will affect the following

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**20**	**ALL** proposed **SDI and pipeline** within the **NENE** of this section.
T51N/R79W	**16**	**ALL** proposed **SDI and pipeline** within the **SWSW & SESW** of this section.
T51N/R79W	**17**	**ALL** proposed **SDI and pipeline** within the **SESE** of this section.
T51N/R79W	**3**	**ALL** proposed **SDI and pipeline** within the **South Quarter** of this section.

Mountain Plover

25. The following conditions will alleviate impacts to mountain plovers:

a. A mountain plover nesting survey is required in suitable habitat prior to commencement of surface disturbing activities in the following areas:

LEGAL LOCATION
SESW, NESW, SE, SWNE, SENE & NENE Sec. 2, T51N/R79W
NENW & NWNE Sec. 11, T51N/R79W
NESW, SWNW & SENW Sec. 15, T51N/R79W
NENW & SWNE Sec. 23, T51N/R79W
SESE Sec. 9, T51N/R79W

26. No surface disturbing activities are permitted in the suitable habitat area listed above, from March 15-July 31, unless a mountain plover nesting survey has been conducted during the current breeding season. This timing limitation will be in effect unless surveys determine no plovers are present. This timing limitation will affect the following:

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**2**	**ALL** proposed **SDI and pipeline** within the **SW, SE, & NE** of this section.
T51N/R79W	**9**	**ALL** proposed **SDI, pipeline & utility corridor** within the **SENE &NENE** of this section.
T51N/R79W	**11**	**ALL** proposed **SDI, pipeline & utility corridor** within the **North Half** of this section.
T51N/R79W	**14**	**Wells: 23-14-5179 & 32-14-5179** **ALL** proposed road/corridor within the NE**SW, NWSE & SWNE** of this section.
T51N/R79W	**15**	**Wells: 12-15-5179, 14-15-5179, 21-15-5179, 23-15-5179, 31-15-5179, 32-15-5179 & 34-15-5179** **ALL** proposed road/corridor within the **SW, NW & E½ SE** of this section.
T51N/R79W	**16**	**ALL** proposed **SDI and pipeline** within the **NE, SE & S½ SW** of this section.
T51N/R79W	**23**	**Wells: 21-23-5179, 23-23-5179 & 32-23-5179** **ALL** proposed road/corridor within **NENW, SWNW, NWSW, SESW, NESW & S½ NE** of this section.

1) Mountain plover nesting surveys shall be conducted by a biologist following the most current USFWS Mountain Plover Survey Guidelines (the survey period is May 1-June 15). All survey results must be submitted in writing to the BFO and approved prior to initiation of surface disturbing activities.
    a. If occupied mountain plover habitat is identified, then a seasonal disturbance-free buffer of ¼ mile shall be maintained between March 15 and July 31. If no mountain plover observations are identified, then surface disturbing activities may be permitted within suitable habitat until the following breeding season (March 15).

Raptors

27. The following conditions will alleviate impacts to raptors:

b. No surface disturbing activity shall occur within 0.5 mile of all identified raptor nests from February 1 through July 31, annually, prior to a raptor nest occupancy survey for the current breeding season. This timing limitation will affect the following

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**1**	**ALL** proposed **SDI and pipeline** within the **West Quarter** of section.
T51N/R79W	**2**	**ALL** proposed **SDI, pipeline &** utility corridor within this section.
T51N/R79W	**3**	**ALL** proposed **SDI, pipeline &** utility corridor within the **SE & SESW** of this section.
T51N/R79W	**9**	**ALL** proposed **SDI and pipeline** within this section.
T51N/R79W	**10**	**ALL** proposed **SDI and pipeline** within the **North Half** of this section.
T51N/R79W	**11**	**ALL** proposed **SDI and pipeline** within the **NWNW & NENW** this section.
T51N/R79W	**12**	**ALL** proposed road/corridor within **NWSW, SWSW & SWSE** of this section.
T51N/R79W	**13**	**Wells: 12-13-5179 & 31-13-5179** **ALL** proposed road/corridor within the **NENE, SENW & NENW** of this section.
T51N/R79W	**14**	**Wells: 12-14-5179, 13-14-5179, 22-14-5179, 23-15-5179, 31-14-5179, 32-14-5179 & 42-14-5179** **ALL** proposed road/corridor within the**, NESW, NWSW, NWSW, W½NW & S½NW & NE** of this section.
T51N/R79W	**15**	**Wells: 31-15-5179, 34-15-5179 & 43-15-5179** **ALL** proposed road/corridor within the **NWSW, W½NW, SESE, NESE,SENE & W½SWSE** of this section.
T51N/R79W	**16**	**ALL** proposed **SDI and pipeline** within this section.
T51N/R79W	**17**	**ALL** proposed **SDI and pipeline** within the **E½ SE** of this section.
T51N/R79W	**20**	**ALL** proposed **SDI and pipeline** within the **NENE** of this section.
T51N/R79W	**22**	**Wells: 31-22-5179 & 41-22-5179** **ALL** proposed road/corridor within the **NENE &NWNE** of this section.
T51N/R79W	**23**	**Wells: 11-23-5179, 14-23-5179, 23-23-5179, 34-23-5179 & 44-23-5179** **ALL** proposed road/corridor within the **SW, SE & NWNW** of this section.
T51N/R79W	**25**	**Wells: 42-25-5176** **ALL** proposed road/corridor within the **SWSW** of this section.
T51N/R79W	**26**	**ALL** proposed road/corridor within the **NWNW & NE** of this section.
T52N/R79W	**35**	**ALL** proposed **SDI and pipeline** within the **East half** of this section.

1) Surveys to document nest occupancy shall be conducted by a biologist following BLM protocol, between April 15 and June 30. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities. Surveys outside this window may not depict nesting activity. If a survey identifies active raptor nests, a 0.5 mile timing buffer will be implemented. The timing buffer restricts surface disturbing activities within 0.5 mile of occupied raptor nests from February 1 to July 31.
2) Nest productivity checks shall be completed for the first five years following project completion. The productivity checks shall be conducted no earlier than June 1 or later than June 30 and any evidence of nesting success or production shall be recorded. Survey results will be submitted to a Buffalo BLM biologist in writing no later than July 31 of each survey year. This applies to the following nest(s):

BLM ID#	Species	UTMs (NAD83)	Legal Location
448	Golden Eagle	391733E 4918186N	Sec. 6, T51N/R79W
2652	Unknown Raptor	396383E 4912678N	Sec. 25, T51N/R79W
3445	Red-tail Hawk	394717E 4922100N	Sec. 35, T52W/R79W
3448	Red-tail Hawk	391042E 4917843N	Sec. 9, T51N/R79W
3449	Red-tail Hawk	395446E 4922653N	Sec. 25, T52N/T79W
3452	Unknown Raptor	394755E 491777N	Sec. 35, T52N/R79W
3453	Unknown Raptor	395220E 4921395N	Sec.36, T52N/R36W
3454	Unknown Raptor	395083E 4921421N	Sec.36, T52N/R79N
3792	Red-tail Hawk	393460E 4916095N	Sec. 14, T51N/R79W
3794	American Kestrel	394060E 4914114N	Sec. 23, T51N/T79W
4050	Golden Eagle	391739E 4918248N	Sec. 9, T51N/T79W
4051	Red-tail Hawk	393275E 4918336N	Sec. 10, T51N/T79W
4052	Red-tail Hawk	391956E 4918336N	Sec.10, T51N/R79W
4053	Great Horned Owl	394682E 4917164N	Sec. 14, T51N/R79W
4054	Great Horned Owl	390640E 4916186N	Sec. 16, T51N/R79W
4055	Golden Eagle	390070E 4916305N	Sec. 17, T51N/R79W
4116	Long Eared Owl	395650E 4920243N	Sec. 1, T51N/R79W
4117	Golden Eagle	394525E 4920039N	Sec. 2, T51N/R79W
4118	Red-tail Hawk	394424E 4920489N	Sec. 2, T51N/R79W
4119	Prairie Falcon	395776E 4918423N	Sec. 12, T51NR79W
4120	American Kestrel	395806E 4918345N	Sec. 12, T51N/R79W
4471	American Kestrel	389697E 4917139N	Sec. 17, T51N/R79W

BLM ID#	Species	UTMs (NAD83)	Legal Location
4472	Prairie Falcon	396276E 4917742N	Sec.12, T51N/R79W
4473	American Kestrel	391253E 4916493N	Sec. 16, T51N/R79W
4474	Red-tail Hawk	390634E 4916171	Sec. 16, T51N/R79W
4476	Red-tail Hawk	389693E 4915495N	Sec. 20, T51N/R79W
4477	Red-tail Hawk	389747E 4917344N	Sec. 8, T51N/R79W
4762	Unknown Raptor	391706E 4918162N	Sec. 9, T51N/R79W
5130	Great Horned Owl	390955E 4917679N	Sec. 9, T51N/R79W
5154	Unknown Raptor	394502E 4919985N	Sec. 2, T51N/R79W

c. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.
d. Well metering, maintenance and other site visits within 0.5 miles of raptor nests should be minimized as much as possible during the breeding season (February 1 – July 31).

Sage Grouse

28. The following conditions will alleviate impacts to sage-grouse:

a. No surface disturbing activities are permitted within 2 miles of the Fleetwood Draw, Double Cross, Frank and Alvaro sage- grouse lek(s) between March 1 and June 15, prior to completion of a greater sage grouse lek survey. This condition will be implemented on an annual basis for the duration of surface disturbing activities. This timing limitation will affect the following:

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**1**	**ALL** proposed **SDI and pipeline** within the **NWNW** of this section.
T51N/R79W	**2**	**ALL** proposed **SDI and pipeline** within the **North ¼, SWNW & NWSW** of this section.
T51N/R79W	**3**	**ALL** proposed **SDI, pipeline and utility corridor** within the **NESE, SESE, SWSE, SESW & SWSW** of this section.
T51N/R79W	**9**	**ALL** proposed **SDI, pipeline and utility corridor** within the **SENE, NENE, NWSE, SWSE, NESE & N½SESE** of this section.
T51N/R79W	**10**	**ALL** proposed **SDI, pipeline and utility corridor** within the **North Half** of this section.
T51N/R79W	**11**	**ALL** proposed utility corridor within the **South Half** of this section**.**
T51N/R79W	**12**	**ALL** proposed road/corridor within the W½ SW& **SWSE**of this section**.**
T51N/R79W	**13**	**Wells: All 8 wells within this section.** **ALL** proposed road/corridor within this section**.**

Township/Range	Section	Wells and Infrastructure
T51N/R79W	**14**	**Wells: All 8 wells within this section.** **ALL** proposed road/corridor within this section**.**
T51N/R79W	**15**	**Wells: All wells except the 12-15-5179 (7 wells)** **ALL** proposed road/corridor within this section **Except the NWNW & N½SWNW.**
T51N/R79W	**22**	**Wells: All 5 wells within this section.** **ALL** proposed road/corridor within this section
T51N/R79W	**23**	**Wells: All 8 wells within this section.** **ALL** proposed road/corridor within this section
T51N/R79W	**24**	**Wells: All 8 wells within this section.** **ALL** proposed road/corridor within this section
T51N/R79W	**25**	**Wells: 42-25-5179** **ALL** proposed road/corridor within this section
T51N/R79W	**26**	**ALL** proposed road/corridor within this section
T52N/R79W	**35**	**ALL** proposed **SDI and pipeline** within the **East Half** of this section.

1) If an active lek is identified during the survey, the 2 mile timing restriction (March 1-June 15) will be applied and surface disturbing activities will not be permitted until after the nesting season. If surveys indicate that the identified lek is inactive during the current breeding season, surface disturbing activities may be permitted within the 2 mile buffer until the following breeding season (March 1). The required sage grouse survey will be conducted by a biologist following the most current WGFD protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.

b. Well metering, maintenance and other site visits within 2.0 miles of documented sage grouse lek sites should be minimized as much as possible during the breeding season (March 1– June 15).

c. Maximum design speed on all operator-constructed and maintained roads will not exceed 25 miles per hour except travel along roads within 1/2 mile of the Fleetwood Draw sage grouse lek located in. These roads will be posted at 10 mph. This will affect the following roads: Template Road Sections 2 (St 60+00 to 110+00), 5, 6 & 22 (St 0+00 to 35+00).

Ute ladies-tresses orchid

29. A Ute ladies'-tresses orchid survey shall be conducted in compliance with U.S. Fish and Wildlife Service guidelines (USFWS 1995) along Crazy Woman Creek within the area described below (CM21). Multiple surveys are recommended as the orchid does not flower every year. If a population is identified, additional monitoring will likely be required.

Township/Range	Section	SDI and Infrastructure
T51N/R79W	**2**	**ALL** proposed **SDI and pipeline** along stream bank at the **SENW, NESW, NWSE, NWNE & NENE** of this section.
T51N/R79W	**9**	**ALL** proposed **SDI and pipeline** along stream bank at the **NWSE, NESE, SENE & NENE** of this section.
T51N/R79W	**10**	**ALL** proposed **SDI and pipeline** along stream bank at the **SWNW, SENW, NWNE & NENE** of this section.
T51N/R79W	**16**	**ALL** proposed **SDI and pipeline** along stream bank at the **NWSW, NESW & SWNE** of this section.
T51N/R79W	**17**	**ALL** proposed **SDI and pipeline** along stream bank at the **NESE** of this section.
T52N/R79W	**35**	**ALL** proposed **SDI and pipeline** along stream bank at the **SESE, SENE & NENE** of this section.

Sharp-tailed Grouse

30. The following conditions will minimize impacts to sharp-tail-grouse:
    a. A survey is required for sharp-tailed grouse between April 1 and May 7, annually, within the project area for the life of the project and results shall be submitted to a BLM biologist.
    b. If an active lek is identified during the survey, the 0.64 mile timing restriction (March 1-June 15) will be applied and surface disturbing activities will not be permitted until after the nesting season. The required sharp-tailed grouse survey will be conducted by a biologist following WGFD protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
    c. If surveys indicate that the identified lek is inactive during the current breeding season, surface disturbing activities may be permitted within the 0.5 mile buffer until the following breeding season (April 1).
    d. Creation of raptor hunting perches will be avoided within 0.64 miles of documented sharp-tailed grouse lek sites. Perch inhibitors will be installed to deter avian predators from preying on grouse.

Cultural

31. BLM cannot approve the disposal of federally produced water into the SDI system associated with the Quarter Circle Nine POD until BFO and the Wyoming SHPO decide upon an adequate inventory strategy.
    a. The inventory strategy will likely involve subsurface testing to determine the possibility of impacts to buried cultural resources. It is assumed that BFO and SHPO will come to a consensus over this issue by mid-August. Please keep in mind that additional fieldwork may or may not be necessary before BFO can approve the disposal of federally produced water into the SDI system associated with this POD.
32. All earth moving activity in the following areas will be monitored by an archeologist who meets or exceed the qualification standards recommended by the Secretary of the Interior. The Bureau has identified this area as containing the potential for buried cultural deposits (areas containing deep alluvial deposits).
    a. All earth moving activities associated with construction of the buried utility corridor and SDI fields in T51N R79W Sections 20, 17, 16, 9, 10, 2, 3, 1 and T52N R79W section 35 that are in the alluvial deposits of the river floodplain.

Please contact Jim Verplancke Natural Resource Specialist, @ (307) 684-1057, Bureau of Land Management, Buffalo, if there are any questions concerning these surface use COAs.

Standard Conditions of Approval

A. General

1. If any cultural values [sites, artifacts, human remains (Appendix L FEIS)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo 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 (AO). 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.

2. If paleontological resources, either large or conspicuous, and/or a significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will 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 (5) 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 will not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant will 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.
3. The operator shall restrict travel on unimproved two-track roads during periods of inclement weather or spring thaw when the possibility exists for excessive surface resource damage (e.g., rutting in excess of 4-inches, travel outside two-track roadway, etc.).
4. The first producing well drilled to each targeted coal zone will be designated as the POD "Reference Well". Reference wells will not be required for PODs within a 6 mile radius of the first reference well designated by the operator, nor for co-mingled coal zones. The designated reference well must be equipped to be sampled at the well head. A reference well sample will be collected from the wellhead and submitted for analysis; using the list of analytes identified in WDEQ WYPDES Application for Permit to Surface Discharge Produced Water from CBM New Discharges, Renewals, or Major Modifications, within 30 to 60 days of initial water production. Results of the analysis will be submitted to the BFO-BLM authorized Officer as they become available.
5. By November 1 each year, companies will provide georeferenced spatial data depicting as-built locations of all facilities, wells, roads, pipelines, power lines, reservoirs, discharge points, and other related facilities to the BLM for all PODs where construction and development have been completed.
6. If any dead or injured threatened, endangered, proposed, or candidate species is located during construction or operation, the U.S. Fish and Wildlife Service's Wyoming Field Office (307-772-2374), their law enforcement office (307-261-6365), and the BLM Buffalo Field Office (307-684-1100) shall be notified within 24 hours. If any dead or injured sensitive species is located during construction or operation, the BLM Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

7. Wildlife species are dynamic and new individuals may have moved into the Quarter Circle 9 Beta POD area after the initial wildlife surveys were completed. The Record of Decision for the PRB FEIS includes a programmatic mitigation measure that states, "The companies will conduct clearance surveys for threatened and endangered or other special-concern species at the optimum time". The measure requires companies to coordinate with the BLM before November 1 annually to review the potential for disturbance and to agree on inventory parameters. Should this project not be completed by January 15, and surface disturbance is planned for that year, a Lance Oil & Gas company representative will coordinate with the BLM to discuss required surveys.
8. All other conservation measures and terms and conditions identified in the Powder River Basin Oil and Gas Project Biological Opinion (WY07F0075) shall be complied with.
9. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.
10. All contractors will have a copy of the pod map and conditions of approval with them at all times.

B. Construction

1. A pre-construction field meeting shall be conducted prior to beginning any dirt work approved under this POD. The operator shall contact the BLM Authorized Officer Jim Verplancke @ 307-684-1057 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 will be doing.
2. The operator will limit vegetation removal and the degree of surface disturbance wherever possible. Where surface disturbance cannot be avoided, all practicable measures will be utilized to minimize erosion and stabilize disturbed soils.
3. Construction and drilling activity will not be conducted using frozen or saturated soil material during periods when watershed damage or excessive rutting is likely to occur.
4. Remove all available topsoil (depths vary from 4 inches on ridges to 12+ inches in bottoms) from constructed well locations including areas of cut and fill, and stockpile at the site. Topsoil will also be salvaged for use in reclamation on all other areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Any topsoil stockpiled for one year or longer will be signed and stabilized with annual ryegrass or other suitable cover crop.
5. The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impede watershed and drainage flows.
6. Construct the backslope no steeper than 1½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
7. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.

8. With the overall objective of minimizing surface disturbance and retaining land stability and productivity, the operator shall utilize equipment that is appropriate to the scope and scale of work being done for roads and well pads (utilize equipment no larger than needed for the job).
9. To minimize electrocution potential to raptors, all overhead electrical power lines will be constructed to Avian Power Line Interaction Committee (1996) standards and additional standards identified in the PRB FEIS Biological Opinion (Volume 3, Appendix K, page 43).
10. The operator shall utilize wheel trenchers or ditchers to construct all pipeline trenches, except where extreme topography or other environmental factors preclude their use.
11. Reserve pits will be adequately fenced during and after drilling operations until pit is reclaimed so as 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 will 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) or plastic snow fence must be used with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc. Electric fences will not be allowed.
    - Construction standards: Posts shall 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. Plastic snow fencing must be taut and sturdy. Fence must be at least 2-feet from edge of pit. 3 sides fenced before beginning drilling, 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.
12. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.
13. The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having a permeability less than 10^{-7} cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will 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 will be used prior to installing the liner.
14. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
15. Culverts will 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 will be thoroughly compacted.
16. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
17. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
18. Maximum design speed on all operator-constructed and maintained roads will not exceed 25 miles per hour.

19. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.

20. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.

21. During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will 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.

22. Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb five or more acres (changing to one acre in March 2005). This general construction storm water permit must be obtained from WDEQ prior to any surface disturbing activities and can be obtained by following directions on the WDEQ website at http://deq.state.wy.us. Further information can be obtained by contacting Barb Sahl at (307) 777-7570.

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

24. Weed educational material will be reviewed with operators during pre-construction on-site meetings with operators, subcontractors, and landowners and will also be attached to approved APDs and PODs.

25. Companies will contact the counties to pursue development of maintenance agreements to ensure county roads are adequately maintained for the projected increase in use.

C. Operations/Maintenance

1. The operator shall complete coal bed natural gas wells (case, cement and under ream) as soon as possible, but no later than 30 days after drilling operations, unless an extension is given by the BLM Authorized Officer.

2. If in the process of air drilling the wells there is a need to utilize mud, all circulating fluids will be contained either in an approved pit or in an aboveground containment tank. The pit or containment tank will be large enough to safely contain the capacity of all expected fluids without danger of overflow. Fluid and cuttings will not be squeezed out of the pit, and the pit will be reclaimed in an expedient manner.

3. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.

4. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.

5. Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.

6. The operator will be responsible for prevention and control of noxious weeds and weeds of

concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the applicable Federal and State laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall 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.

7. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.

8. The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of these wells will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.

9. Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Order #7.

10. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes. These include:

    – drilling muds & cuttings
    – rigwash
    – excess cement and certain completion & stimulation fluids defined by EPA as exempt

    It does not include drilling rig waste, such as:

    – spent hydraulic fluids
    – used engine oil
    – used oil filter
    – empty cement, drilling mud, or other product sacks
    – empty paint, pipe dope, chemical or other product containers
    – excess chemicals or chemical rinsate

    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.

11. Reserve pits will be closed as soon as possible, but no later than 90 days from time of drilling/well completion, unless the BLM Authorized Officer gives an extension. Squeezing of pit fluids and cuttings is prohibited. Pits must be dry of fluids or they must be removed via vac-truck or other environmentally acceptable method prior to backfilling, re-contouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet below re-contoured grade. The operator will be responsible for re-contouring any subsidence areas that develop from closing a pit before it is sufficiently dry.

12. Operators are advised that prior to installation of any oil and gas well production equipment which has the potential to emit air contaminants, the owner or operator of the equipment must notify the Wyoming Department of Environmental Quality, Air Quality Division (phone 307-

777-7391) to determine permit requirements. Examples of pertinent well production equipment include fuel-fired equipment (e.g., diesel generators), separators, storage tanks, engines and dehydrators.

13. If this well is drilled during the fire season (June-October), the operator shall institute all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access route(s) and well location(s), keeping fire fighting equipment readily available when drilling, etc.

D. Dry Hole/Reclamation

1. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific COAs.
2. Disturbed lands will be re-contoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.
3. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring of any subsidence areas that develop from closing a pit before it is completely dry. The plastic pit liner (if any) will be cut off below grade and properly disposed of at a state authorized landfill before beginning to re-contour the site.
4. Before the location has been reshaped and prior to redistributing the topsoil, the operator will rip or scarify the drilling platform and access road on the contour, to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.
5. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking to a depth of 4-to-6 inches following the contour.
6. Phased reclamation plans will be submitted to BLM for approval prior to individual POD facility abandonment via a Notice of Intent (NOI) Sundry Notice. Individual facilities, such as well locations, pipelines, discharge points, impoundments, etc. need to be addressed in these plans as they are no longer needed. Individual items that will need to be addressed in reclamation plans include:

    - Pit closure (Close ASAP after suitably dry, but no later than 90 days from time of drilling unless an extension is given by BLM Authorized Officer.) BLM may require closure prior to 90 days in some cases due to land use or environmental concerns.
    - Configuration of reshaped topography, drainage systems, and other surface manipulations
    - Waste disposal
    - Revegetation methods, including specific seed mix (pounds pure live seed/acre) and soil treatments (seedbed preparation, fertilization, mulching, etc.). On private surface, the landowner should be consulted for the specific seed mix.
    - Other practices that will be used to reclaim and stabilize all disturbed areas, such as water bars, erosion fabric, hydro-mulching, etc.
    - An estimate of the timetables for beginning and completing various reclamation operations relative to weather and local land uses.
    - Methods and measures that will be used to control noxious weeds, addressing both ingress and egress to the individual well or POD.
    - Decommissioning/removal of all surface facilities

- Closure and reclamation of areas utilized or impacted by produced CBM water, including discharge points, reservoirs, off-channel pits, land application areas, livestock/wildlife watering facilities, surface discharge stream channels, etc

7. BLM will not release the performance 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.
8. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
9. For performance 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.
10. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
11. Any mulch utilized for reclamation needs to be certified weed free.
12. Waterbars are to 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

E. Producing Well

1. Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
2. Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM Authorized Officer. Reduce slopes by pulling fill material up from foreslope into the toe of cut slopes.
3. Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by the BLM Authorized Officer.
4. Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-3A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.

5. Distribute stockpiled topsoil evenly over those areas not required for production and reseed as recommended.
6. Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM Authorized Officer to prevent soil erosion and accommodate safe, environmentally-sound access.
7. Prior to construction of production facilities not specifically addressed in the APD/POD, the operator shall submit a Sundry Notice to the BLM Authorized Officer for approval.
8. If not already required prior to constructing and drilling the well location, the operator shall immediately upgrade the entire access road to BLM standards (including topsoiling, crowning, ditching, drainage culverts, surfacing, etc.) to ensure safe, environmentally-sound, year-round access. This requirement does not supercede or apply where specific road requirements are addressed in the APD/POD surface use plan (e.g., two track road, spot upgrade, etc.)
9. Waterbars shall be installed on all reclaimed pipeline corridors per the guidelines in D #12.

Attachment 1

Table 1.1 Changes to the POD agreed to by the operator.

Well #	Changes
12-13	Culvert added at the beginning of well access, St. 10+00. No mowing of sage brush will be needed at this location; utilize open grassy area surrounding well.
14-13	Reroute access to begin just NW of the 34-14 location and then skirt around above the 44-14 reservoir. Template # 6 will be realigned and engineered #5 withdrawn. Well access and impoundment need to be coordinated.
21-13	Primitive roads leading west from this location will be signed closes to O & G traffic.
23-13	A liberal turning radius will be allowed at this location; it is the end of the road. Add typical B improvement to template road #24 at St 64+00 due to side slope. The proposed utility corridor to the west was withdrawn by the operator; this route is a narrow ridge leading to the drainage bottom; too steep and narrow to provide maintenance access for pumper without engineered access. The grazing lessee requested we add a stock tank at the well site and BLM agreed.
24-13	BLM recommended realignment of the access between St. 44+00 to the well location to avoid steep slopes. LOG agreed.
31-13	BLM recommended moving the well 75 feet north to avoid the bare soil slopes at the pad corners; pad will utilize the area between and upslope from the bare soil where slopes are less steep and reclamation potential is greater. This will be a drive through location to provide access to the 34-12 well in the Stewart Draw POD. The original access to the Stewart Draw 34-12 will be withdrawn to avoid slopes in access of 25% along the existing primitive road. The well access template section will be engineered to ensure that proper drainage and soil stabilization is planned. LOG will incorporate expedient reclamation into the well pad and road designs. Revisit at preconstruction to inspect road & pad staking; any adjustments warranted will be made at that time.
32-13	The well pad design will be modified to provide a 20 foot vegetative buffer for the drainage located at the lower edge of the pad and extended on the east end along the access. Expedient reclamation will apply; LOG will incorporate expedient reclamation into the well pad design.
33-13	Template road #25 will be upgraded to a typical D due to side slope. Expedient reclamation will apply to pad and access & corridor; LOG will incorporate expedient reclamation into the well pad and road designs.

Well #	Changes
12-14	LOG requested to move this well approximately 1/4 mile north to provide better well spacing. New well location is next to the existing road to be improved by engineered section #8. Expedient reclamation applies; LOG will incorporate expedient reclamation into the engineered segment #8's design to address high erosion potential at St 1+00 to 3+00. LOG requested a 75 foot mowing radius at this well location adjacent to the existing access road; BLM agreed.
13-14	The well was moved 120 feet north to provide adequate work space avoiding a head cut and sage brush habitat. Revisit this location at the preconstruction inspection.
22-14	Revisit at preconstruction to inspect road & pad staking; any adjustments warranted will be made at that time. LOG requested a 75 foot mowing radius at this well location adjacent to the existing access road; BLM agreed.
23-14	LOG requested a 75 foot mowing radius at this well location adjacent to the existing access road; BLM agreed. The grazing lessee requested a stock tank be added at this location; BLM agreed.
31-14	LOG volunteered to minimize the template #10's well access & corridor to 35 feet clearing & 45 feet working width and 10 foot running surface. Ditch slopes of 1:1.5 to 1 will be allowed along the template access to facilitate minimizing width of disturbance. LOG will re-seed with forbs to minimize impacts to sage grouse as sage grouse sign was found within proximity of the well and access. Utilities will be placed in the road way to minimize width. There will be no parking or staging of materials beyond the disturbed areas of the access/corridor and well pad. During pipeline installation, fused pipe will be braced at least 6 inches no less than every 300 feet to allow sage grouse brood to cross. LOG would like to revisit this location at the preconstruction to reinforce the need to their crew the need to minimize where possible to reduce the effects to sage grouse.
32-14	Installation of a gate along engineered #7 at fence will be allowed prior to the preconstruction. LOG volunteered to minimize the template well access & corridor to 35 feet with 45 feet working width and reseed with forbs to minimize impacts to sage grouse as sage grouse sign was found within proximity of the well and access. Ditch slopes of 1:1.5 to 1 will be allowed along the engineered & template access to facilitate minimizing width of disturbance. LOG would like to revisit this location at the preconstruction to reinforce the need to their crew the need to minimize where possible to reduce the effects to sage grouse.
34-14	BLM recommended that the well location be moved 300 feet east and to the existing access road to avoid sage brush habitat; LOG agreed. LOG volunteered to add forbs to the seed mix to promote sage grouse forage.
42-14	BLM recommended shifting the NE edge of pad away from steep slopes and extending the pad north along the access road; LOG agreed. LOG volunteered to minimize the template well access & corridor to 35 feet clearing & 45 feet working width and reseed with forbs to minimize impacts to sage grouse as sage grouse sign was found within proximity of the well and access. Ditch slopes of 1:1.5 to 1 will be allowed along the template access to facilitate minimizing width of disturbance. Utilities will be placed in the road way to minimize width. There will be no parking or staging of materials beyond the disturbed areas of the access/corridor and well pad. During pipeline installation, fused pipe will be braced at least 6 inches no less than every 300 feet to allow sage grouse brood to cross. LOG would like to revisit this location at the preconstruction to reinforce the need to their crew the need to minimize where possible to reduce the effects to sage grouse and inspect pad staking and any adjustments will be made at that time.
12-15	Template #15 will be upgraded to typical B.
14-15	LOG request a larger 30 X 120 rig slot; BLM agreed.
21-15	Template #14 will be upgraded to typical B. Liberal turning radius will be allowed at this end of the road location. Expedient reclamation applies here; LOG will incorporate expedient reclamation into the rig slot diagram.
23-15	The location was moved 78 feet south to provide adequate the turning radius of the engineered access.
32-15	Engineered road #9 modified to include adequate stabilization measures. The pad design was modified to be show the topsoil pile on the east side of a drive through pad; resubmit design. Expedient reclamation applies; LOG incorporated expedient reclamation into the well pad design

Well #	Changes
	and engineered #9.
34-15	The access to the well location was upgraded to a typical B template road.
41-15	BLM recommended moving the well location to the opposite side of the reservoir to avoid using the dam as a crossing and compromising the structure with the installation of utilities. LOG looked at rerouting their utilities below the dam but multiple crossing of Black Diamonds infrastructure makes it prohibitive. LOG agreed to move the well as per BLM's recommendation. LOG requested that a pullout be added along engineered access #13 to support a small pad at the new location; BLM agreed. The landowner is in support of these changes. Template road #11 upgraded to a typical B. The landowner is in support of these changes. Revisit access route and well pad staking at preconstruction with any adjustments warranted to be made at that time.
43-15	LOG requested to enlarge the pad to 150 X 200 to provide adequate turning radius as this is the end of the road; BLM agreed. Staking to be inspected at the preconstruction with any adjustments warranted to be made at that time. Primitive road SW of pad to be signed closed to O & G traffic. Expedient reclamation applies; LOG incorporated expedient reclamation into the well pad design.
11-22	LOG request a larger 30 X 120 rig slot; BLM agreed.
12-22	Template road #15 will be upgraded to typical B starting at the 11-22 location due to headcuts and side slopes along this main access. Culverts were added at 2 small drainage crossings and a 20'vegetative buffer is required at headcut(s) along access near the well location. The landowner requested a stock tank to be added at this location.
31-22	Template road #19 will be upgraded to typical B but minimized to 20 foot clearing & 40 foot working width and utilities placed in the roadway. Revisit pad design & onsite staking during the preconstruction; any alterations to the design will be made at that time. Pad must avoid bare ground at the upper edge of the location.
41-22	At the start of Template road #20, the 18" culvert at drainage crossing was changed to a culvert/low water crossing combo. Resource road 34-15 will be added to the project as Template road #9. The existing parallel road to the NE (along the drainage bottom) within section 15 authorized under sundry will not be utilized for O & G traffic and will be signed "Closed to O & G traffic" at the state land boundaries.
42-22	The location was moved 120 feet north to avoid sage brush and allow more turning radius to the location. Template #20 was upgraded to typical B due to side slope; minimize the access road to 20 foot blading with 40 foot working width. Place utilities in the roadway. LOG requested a pad at this location. Revisit this location at the preconstruction with any adjustment needed to be address in the field at that time.
11-23	LOG requested a 75 foot mowing radius at this well location adjacent to the existing access road; BLM agreed.
14-23	LOG added a stabilization measures note to the well pad design and template # 28 road descriptions.
21-23	LOG has volunteered to minimize that portion of template segment #22 & corridor along an existing road and within the 1/4 mile of the Fleetwood sage grouse lek (St 0+00 to St 20+00) to 35 foot blading and 45 foot working width. LOG also volunteered to reseed the disturbance within the 1/4 mile CSU with forbs that will provide sage grouse forage.
32-23	No mowing of sage brush will be allowed here. LOG agreed to utilize the surrounding grassy area.
34-23	No mowing of sage brush will be allowed here. LOG agreed to utilize the surrounding grassy area.
41-23	Expedient reclamation applies Template road #2 from St 75+00 to St 105+00, utility corridor & well pad; LOG will incorporate expedient reclamation into the road descriptions and pad design. LOG has volunteered to minimize that portion of template segment #2 this (an existing primitive road) & corridor within the 1/4 mile of the Fleetwood sage grouse lek (St 75+00 to St 100+00) to 45 foot clearing and 50 foot working width. During pipeline installation, fused pipe will be braced at least 6 inches no less than every 300 feet to allow sage grouse brood to cross. LOG also volunteered to reseed the disturbance within the 1/4 mile CSU with forbs that will provide sage-

Well #	Changes
	grouse forage.
44-23	LOG requested a turnout off the access road at this location, BLM agreed. LOG requested a 75 foot mowing radius at this well location adjacent to the existing access road; BLM agreed.
12-24	This well location is 0.27 miles from the Fleetwood Sage Grouse Lek but is very visible from the Lek. LOG volunteered to restrict well visitation hours before 9:00 am and after 3:00 pm during the sage grouse breeding season for the life of the well. LOG has volunteered to minimize that portion of template segments #2 & #22 & corridor within the 1/4 mile of the Fleetwood sage grouse lek to 45 feet clearing and 60 working width and template segment #5 & corridor within the 1/4 mile to 45 feet clearing and 75 working; this is existing primitive road. LOG also volunteered to reseed the disturbance within the 1/4 mile CSU with forbs that will provide sage grouse forage. During pipeline installation, fused pipe will be braced at least 6 inches no less than every 300 feet to allow sage grouse brood to cross. BLM requests that LOG modify the project MSUP to reflect this voluntary restriction for this well location as well as those template road segments #2, #5 & #22 that lie inside the 1/4 mile CSU of the Fleetwood Sage Grouse Lek. BLM commends LOG's voluntary mitigation measure but must stress that approval of the associated APD's hinges on LOG's commitment to reduce effects to sage grouse within the Quarter Circle Nine Beta project area.
13-24	LOG volunteered to minimize the access road to primitive road with gravel surface. Mowing will avoid sage brush habitat west side of location with no more than a 50 foot working space utilized west of well stake. LOG would like to revisit this location at the preconstruction to reinforce the need to their crew the need to minimize where possible to reduce the effects to sage grouse.
14-24	The well location was moved 250 feet south to avoid numerous erosion features at the pad location. Rerouted access utilizing existing primitive road SW of the location and crossing the draw above the 11-25-5179 impoundment approved with Quarter Circle 9 Alpha POD; engineered #6 is withdrawn and template #23 was realigned. Expedient reclamation will be applied LOG will incorporate expedient reclamation into the road template #23 road description and pad design. Revisit this location at preconstruction with any adjustments warranted to be may in the field at that time.
21-24	Expedient reclamation applies; LOG will incorporate expedient reclamation into the entire engineered segment #3 & pad design. BLM recommended moving the well 60 feet south to provide adequate work space; LOG agreed and requested a 70 X 200 pad incorporated into the road. Revisit pad staking during the preconstruction with any adjustments warranted to be made in the field at that time.
23-24	The ingress to the well pad was shifted east into the cut end of the well pad to provide a 20 foot vegetated buffer for the drainage located at the north edge of the design pad.
32-24	Expedient reclamation applies LOG will incorporate expedient reclamation into the entire engineered segment #3 & pad designs. BLM recommended realignment of engineered #3 beginning at St. 17+00 to the pad shifting the road uphill and avoiding sage brush habitat. LOG recommended realignment beginning at St 8+50 removing s-curve & 25% slope between St 11+00 to 15+00. A 20 foot vegetative buffer will be provided for the headcut below the proposed road.
43-24	A note will be added to the Engineered #2 and pad designs to include appropriate soil stabilization measures along the access route and pad.
32-25	LOG and BLM agreed that this location should be withdrawn from the project to avoid steep slopes and highly erosive soils as well as quality sage grouse habitat demonstrating active sage grouse use. BLM recommended that the 43-25 pit be a secondary impoundment at this time to avoid sage brush habitat; LOG agreed. LOG recognizes the reclamation challenges this location presents due to the erosion potential as well as the loss of sage grouse habitat. LOG does control the surrounding leases therefore drainage is not an issue.
42-25	Pad will be enlarged to facilitate truck turn around as this will be the end of the road. New pad design required. A note will be added to the pad designs to include appropriate soil stabilization measures. Revisit at the preconstruction to inspect pad staking; any adjustments warranted will be made at that time. This well lies beyond the road closer sign as per COA in the Coal Gulch Unit Beta POD; The sign will be moved to the west edge of this pad closing the road west of this

Well #	Changes
	location to O & G traffic.
General	All drilling and construction equipment and materials will be confined to a 150foot by 170foot work area for those well locations proposed without a constructed pad; agreed to by LOG.
WMP	Changes
SDI	LOG added subsurface drip irrigation (SDI) along Crazy Woman Creek capable of utilizing the majority of the CBNG produced water from the Quarter Circle 9 Beta POD to the as an alternative to water storage.
Impoundments	LOG withdrew all 14 proposed impoundments from POD in an effort to reduce effect to sage-grouse.
Stock Tanks	BLM proposed that all existing stock tanks within the project area be retrofitted with escape ramps. The landowner was comfortable with this and LOG agreed to install escape ramps on all proposed and existing stock tanks within the Quarter Circle 9 Beta POD.
Road	Changes
Template #27	The road description was modified to indentify stations along this access for barrow areas to be used for road building materials as well as top soil storage areas.
General	Utility corridor disturbance will be contained within the width of disturbance described in the road design plans with the exception of drainage/culverts crossings where the utilize most avoid the drainage structure installed.