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R645-301-100 CHAPTER 1**

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\*Not included on disk

112.420 Ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure.

Information regarding ownership or control relationship to the applicant is presented in Appendix 1-7.

112.500 Names and addresses of each legal or equitable owner of record of the surface and mineral property to be mined, each holder of record of any leasehold interest in the property to be mined, and any purchaser or record under a real estate contract for the property to be mined.

Surface Owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

Glen Wells  
700 West U.S. Hwy 6  
Price, Utah 84501

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

Dave Hinkins  
155 West 100 South  
Orangeville, Utah 84537

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Matt Rauhala  
1236 East Main  
Price, Utah 84501

Subsurface Owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

WEST RIDGE Resources, Inc. is the holder of record for federal lease SL-068754 and UTU 78562 which is composed of the area as listed in Table 1-1.

The area to be mined is comprised of acreage included in this lease and future lease(s) to be acquired under the lease-by-application (LBA) process. Proof of lease assignment for lease SL-068754 and UTU 78562 is provided in Appendix 1-4.

112.600 Names and addresses of owners of record of all property (surface and subsurface) contiguous to any part of the permit area.

Same as listed in 112.500 with the following additions:

Contiguous surface owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

Dave Hinkins  
155 West 100 South  
Orangeville, Utah 84537

Glen Wells  
700 West U.S. Hwy 6  
Price, Utah 84501

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Contiguous subsurface owners:

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

R645-301-114

**RIGHT OF ENTRY INFORMATION**

114.100 WEST RIDGE Resources, Inc., currently holds 4,297.01 acres of federal coal (2,650.67 acres leased under SL-068754 and 1646.34 acres leased under UTU 78562) in the Book Cliffs coal field (refer to Map 5-4A). WEST RIDGE also holds a 74.92 acre lease on contiguous private (fee) coal lands located along the eastern side of the mineable reserve (see Appendix 1-14). These leases are not the subject of any pending litigation. WEST RIDGE Resources, Inc. bases its legal right to enter and conduct mining activities in the permit area pursuant to the language contained in the Federal Coal Lease, Part I Lease Rights Granted which reads as follows:

"That the lessor, in consideration of the rents and royalties to be paid and the covenants to be observed as hereinafter set forth, does hereby grant and lease to the lessee the exclusive right and privilege to mine and dispose of all the coal in, upon, or under the following described tracts of land, situated in the State of Utah... together with the right to construct all such works, buildings, plants, structures and appliances as may be necessary and convenient for the mining and preparation of the coal for market, the manufacture of coke or other products of coal, the housing and welfare of employees, and subject to the conditions herein provided, to use so much of the surface as may reasonably be required in the exercise of the rights and privileges herein granted."

The substitute topsoil borrow area, which is also included within the permit area, is located on lands administered by the State of Utah, School and Institutional Trust Lands Administration (SITLA). This area is located within the SE1/4 of section 16, T 14 S, R 13 E. SITLA has issued a long term special use permit to WEST RIDGE Resources, Inc. which provides full assurance that the topsoil resource in this area will be available for (and, indeed dedicated to) final reclamation of the West Ridge minesite if needed. (See Appendix 1-4)

Coal lease SL-068754-U-01215 was modified by the BLM. Refer to Appendix 1-9 for the coal lease modification.

The permit area consists of federal coal leases SL-068754-U-01215 and UTU 78562 (4297.01 acres as described in Table I-1), the Penta Creek fee lease (74.92 acres), along with a special use state surface lease (9.6 acres as described in Table I-2). The two areas are not contiguous however. The 9.6 acre state surface lease is for a possible topsoil borrow site if it is needed at the time of final reclamation. This permit area also includes a 0.23 acre right-of-way issued by the BLM for a water pumping station (refer to Appendix 1-12). The permit area also includes a 0.79 acre area along the Carbon County C Canyon Road down to and including the security gate (refer to Appendix 1-13). The total permit area is 4382.55 acres. Refer to Map 1-1 for the permit area location. Refer to Table 1-4 for the legal description of the permit area.

114.200 Not applicable, the fee lease mineral estate is not severed from the surface estate.

**Table 1-3**  
**Surface Ownership within the Permit Area**

T(S)/R(E)	Section	BLM	Penta Creek	Hinkins	Wells	Rauhala	SITLA	Total
13/13	35	-	-	168.91	71.09	-	-	240.0
14/13	1	283.75	285.77	-	-	39.92	-	609.44
14/13	10	360	-	-	-	-	-	360
14/13	11	650.87	-	-	-	-	-	650.87
14/13	12	-	648.96	-	-	-	-	648.96
14/13	13	640	-	-	-	-	-	640
14/13	14	440	-	-	-	-	-	440
14/13	15	40.79	-	-	-	-	-	40.79
14/13	16	-	-	-	-	-	9.6	9.6
14/13	21	0.23	-	-	-	-	-	0.23
14/13	24	440	-	-	-	-	-	440
14/14	6	36.41	-	-	-	-	-	36.41
14/14	7	74.08	-	-	-	-	-	74.08
14/14	18	117.25	74.92	-	-	-	-	192.17
		3083.38	1009.65	168.91	71.09	39.92	9.6	4382.55

**TABLE 1-4 (CONTINUED)**  
**LEGAL DESCRIPTION OF PERMIT AREA**

<u>PARCEL</u>	<u>ACREAGE</u>	<u>LEGAL DESCRIPTION</u>
PUMPING STATION (BLM R.O.W. UTU-77120)	0.23	T 14 S, R 13 E Section 21: NE ¼ NE ¼
TOPSOIL SALVAGE AREA (SITLA special use agreement #1163)	9.6	T 14 S, R 13 E Section 16: NE ¼ SE ¼
SECURITY GATE (Carbon County authorization)	0.79	T 14 S, R 13 E Section 15: NW ¼ SE ¼ NE¼
PENTA CREEK FEE LEASE	74.92	T 14 S, R 14 E Lots 2 and 3
TOTAL PERMIT AREA	4382.55	

**R645-301-115 STATUS OF UNSUITABILITY CLAIMS**

115.100 The proposed permit area is not within an area designated as unsuitable for mining. WEST RIDGE Resources, Inc. is not aware of any petitions currently in progress to designate the area as unsuitable for coal mining and reclamation activities.

The area in which the proposed facility will be located has been evaluated within area management plans. It has not been found unsuitable for mining activities under any categories of examination.

115.200 Not applicable.

115.300 WEST RIDGE Resources, Inc. will not be conducting mining operations within 100 feet of an occupied dwelling. WEST RIDGE Resources, Inc. has received permission from Carbon County to construct facilities and operate coal mining activities within 100 feet of a public road. Refer to the letter from Carbon County in Appendix 1-8.

**R645-301-116 PERMIT TERM**

116.100 The anticipated starting and termination dates of the coal mining and reclamation operation are as follows:

	<u>Begin</u>	<u>Complete</u>
Construction of Mining Pad, Mining Support Structures, and Portals	Apr. 1999	Dec. 1999
Begin Mining	Jan. 2000	
Terminate Mining		Dec. 2017*
Remove Facilities	Jan. 2018*	June 2018*
Regrade Area	July 2018*	Sept. 2018*
Revegetate Site	Oct. 2018*	Nov. 2018*

\*This assumes mine life extended through acquisition of adjacent state and federal coal reserves.

Approximately 4,382.55 acres will be within the permit boundary. Of this acreage, about 25 acres will be utilized for surface facilities and structures. The proposed surface facilities should be capable of supporting the life of the mine operations as presented in this permit application.

**APPENDIX 1-14**

**PENTA CREEK FEE LEASE**

**R645-301-520            OPERATION PLAN****R645-301-521            GENERAL**

WEST RIDGE Resources, Inc. holds federal coal leases SL-068754 and UTU-75862 and the Penta Creek fee lease, totaling 4,371.93 acres in the West Ridge area of eastern Carbon County. WEST RIDGE Resources, Inc. has signed an option agreement with the State of Utah (School and Institutional Trust Lands Administration) for rights to mine coal on Section 16, T. 14 S. R. 13 E. These areas cannot be mined until the leases are granted and permits issued. Refer to Map 5-4B, Mining Projections - Extended Reserves.

The mine, as proposed, will consist of one longwall and two continuous miner sections. The mining sequence for the first five year term is shown on Map 5-4A, Mining Projections. Initial mine production will come from reserves located in the southeastern portion of the existing lease area. If WEST RIDGE Resources, Inc. acquires the state reserves, a permit modification will be submitted to incorporate the new lease area(s) into the existing permit. WEST RIDGE Resources, Inc. will propose to extend the longwall panels onto this new lease area. Panels will be developed to the north and south of the mains, progressing in an eastward direction. With the existing lease, the projected life of the West Ridge Mine is 10 years. However, acquisition of additional state coal reserves in the West Ridge area would extend the life of the mine to nearly 15 years. After the economically recoverable reserves within the permit area have been depleted, the portals would be sealed and reclamation of the surface facility area would begin unless additional leases were acquired.

Surface facilities will be located in C Canyon, where the left and right forks converge, in a previously disturbed area. The extent of the previous disturbance includes access roads, outcrop excavations and exploration drill holes. Previous disturbance at this site is estimated to be approximately 1.62 acres. The total proposed surface disturbed area, as delineated by the tan line on the maps, amounts to approximately 29 acres. Actual anticipated disturbance for surface facilities and topsoil stockpiles (within the disturbance area) is estimated at 26.02 acres. This includes approximately 0.79 acres of Carbon County road which has been included in the disturbed area down to the C Canyon gate, and 0.23 acres for the pumphouse area located below the minesite.

An alternate (substitute) topsoil borrow area would be located about 1 ½ miles to the west of the proposed mine site on a ten acre parcel of State School Trust land. This area would not be included unless needed for final reclamation. No surface disturbance would take place at this location until the time of final reclamation. No additional acreage should be required for the project as proposed in this permit application.

521.130 Landownership And Right Of Entry Maps

Ownership boundaries and the names of the present owners of record for surface lands as well as underground are depicted on Maps 5-2, Surface Ownership and 5-3, Subsurface Ownership.

Map 5-4A delineates the federal coal lease SL-068754 and UTU-78562 and the Penta Creek fee lease, totaling 4,371.93 acres held by WEST RIDGE Resources, Inc., which is the area for which WEST RIDGE Resources, Inc. Resources has the legal right to enter and begin coal mining and reclamation operations.

Included in Appendix 5-2 is a letter from Carbon County granting WEST RIDGE Resources, Inc. permission to conduct mining operations within 100 feet of the Carbon County road. This would basically be that segment of road where the road enters the mine facility area.

Also included in Appendix 5-2 is an approval letter from Carbon County, allowing for the periodic closure of approximately 960' of the "C" Canyon Road from the gate to the original mine permit area. The permit area has been extended to the gate, as shown on Plate 4-1.

A public notice has been published providing for request for a public hearing as provided in R645-103-234. A copy of this notice is also included in Appendix 5-2.

521.140 Mine Maps And Permit Area Maps

The permit area proposed to be affected by the coal mining and reclamation operation is shown on Map 5-3. WEST RIDGE Resources, Inc. is presently pursuing acquisition of lease rights to mine on adjacent state reserves. Permit renewals will be reapplied for on five year intervals.

521.141 The mining operation has been divided into five year mining blocks in an attempt to show future areas that will be mined under the permit renewals. The mining blocks are shown on Map 5-4B. All projections and timing are preliminary and general in nature and may change in the future depending on mining, marketing, environmental conditions and/or acquisition of additional state and federal reserves.

Surface support facilities in C Canyon will be utilized for the life of mine operations. The proposed mine surface facility area is depicted on Map 5-5, Surface Facility Map. Reclamation of the facilities will be performed following completion of mining activities and sealing of the portals.

521.142 The surface above mined out longwall panels may be subject to conditions associated with subsidence. Subsidence may occur under the mined out area.

**R645-301-522 COAL RECOVERY**

A Resource Recovery and Protection Plan (R2P2), has been approved by the BLM. The R2P2 will assure that coal mining and reclamation operations are conducted so as to maximize the utilization and conservation of the coal, while utilizing the best technology currently available to maintain environmental integrity, so that re-affecting the land in the future through coal mining and reclamation operations is minimized. Refer to Appendix 5-3 for the R2P2 which includes a discussion of coal resource utilization and conservation.

**R645-301-523 MINING METHODS**

Both longwall and continuous miner methods will be employed to recover the coal resource. Longwall will be the primary production method, while continuous miners will be used mainly for mine development to support the longwall. The longwall panels shown on Map 5-4B have been laid out to maximize recovery of the primary coal reserves. Continuous miners will be utilized to develop main entries, longwall gate entries, sumps and other similar development areas.

Initial mine production has come from reserves located in the southeastern portion of the existing lease area. If West Ridge acquires these state reserves, a permit modification will be submitted to incorporate these new lease area(s) into the existing permit. West Ridge will propose to extend the longwall panels onto these new lease areas. Panels will be developed to the north and south of the mains, progressing in an eastward direction. Longwall panel layout may change depending on conditions encountered in the underground workings. As longwall mining approaches Grass Trail Reservoir, existing ongoing subsidence monitoring information will be used to determine the angle of draws and subsidence ratio in this area. Based on this information the underground workings will be designed to ensure that the reservoir is not adversely affected by mining activity.

With the existing leases, the projected life of the West Ridge Mine is 10 years. However, acquisition of additional state coal reserves in the West Ridge area would extend the life of the mine to nearly 15 years. In the unlikely event that non federal reserves cannot be acquired then the mine plan projection will be altered to maximize the economic and recovery of federal coal in the irregular blocks not amenable to mining. After the economically recoverable reserves within the lease area have been depleted, the portals would be sealed and reclamation of the surface facility area would begin unless additional leases were acquired.

The West Ridge mine is being proposed as an average size underground longwall mine by Utah industry standards, producing at an average rate of about 3 million tons per year. Mine production is subject to normal fluctuations depending on operational variables such as

geologic mining conditions, marketing, equipment availability, and/or worker productivity. The mine is expected to produce about 35 million tons of coal from the existing federal leases. An additional 11 million tons of recoverable coal are available on adjacent unleased state lands, for a total potential reserve of about 42 million tons. Acquisition of these additional reserves would result in a mine life of nearly 15 years. The existing mine plan assumes that mining in the area northeast of Whitmore Canyon will be limited by heavy cover (plus 3000'). However, if conditions allow, mining activity will continue as far as possible in this direction on federal coal which would be leased in the future.

Full production could be reached by a gradual buildup during the first two years of mining. See Map 5A for mine projections and timing information for the initial mining area. See Map 5B for mine projections and timing information for the future expanded mining area.

Major equipment for the mine will include:

Continuous Mining System:

- Drum-Type Continuous Mining Machine
- Shuttle Cars
- Roof Bolter
- Diesel Scoop Tractor
- Feeder Breaker
- Section Power Center
- Section Auxiliary Face Ventilation Fan

Longwall Mining System:

- Double Drum Shearing Machine
- Armored Face Conveyor
- Hydraulically Activated Shield Roof Support
- Armored Stage Loader and Crusher
- Longwall Power Center
- High Pressure Hydraulic Pumping System

No surface coal mining (strip mining) will be done.

indicates the angle of draw in the West Ridge area is about 15 degrees. A more conservative angle of 20 degrees has been used to project the maximum extent of subsidence for the West Ridge Mine as shown on Map 5-7.

Map 5-7 shows the results of using a 20° angle of draw to identify zones of potential subsidence over the projected mining area. This map depicts several areas in which the potential subsidence may extend slightly beyond the permit area. These areas are on adjacent SITLA coal lands which are included in the extended mining projections. The SITLA reserves are presently secured under an option agreement. There is an extremely high probability that these areas will be mined as shown on the extended mine plan depicted by the black projections on Map 5-7. If, for any reason, these adjacent reserves cannot be acquired and mined as shown, the underground longwall panels will be reconfigured as necessary (i.e., shortened and/or narrowed) to ensure that subsidence effects do not extend beyond the permit area onto these adjacent lands. By the time these panels are mined the actual angle of draw characteristic of the West Ridge reserve will have been more accurately determined from actual empirical subsidence monitoring survey measurements and can be used to more accurately configure the longwall panels in those areas. Map 5-7 clearly notes that "longwall panels will be reconfigured to prevent unauthorized subsidence beyond the permit area if extended reserves are not acquired in the future." The mine plan depicted on Map 5-7 has been approved by the BLM as part of the current Resource Recovery and Protection Plan (R2P2).

Wherever feasible, longwall mining has been planned. This will minimize the impacts of subsidence because of the uniform nature of longwall related subsidence. Support pillars in main entries, permanent air courses and travelways will be developed on 80' x 80' (minimum) centers. Entries will be driven 20' wide leaving 60' x 60' (minimum) remaining pillars. Main entries and air courses will be driven approximately 8' high.

#### Subsidence Monitoring

Monitoring for subsidence will be conducted to document the effects of mining activities and to develop a model for subsidence prediction. Aerial photography and mapping will be used to monitor subsidence. Aerial photography for subsidence monitoring is commonly used in the industry and is highly accurate.

In order to monitor for subsidence, a network of ground control stations will be located on the surface outside the mining area. Typical locations for the first set of control points for the initial five year mining area are shown on Map 5-7. These control stations will be field surveyed and used for baseline reference data. Additional control points will be added as mining progresses.

## **INTRODUCTION**

The West Ridge property is located in the Book Cliffs Coal Field of central Utah (see Plate 1). This reserve was previously owned first by U.S. Steel and then SOHIO (BP AMERICA) and was historically called the B Canyon property. The name was taken from B Canyon where test entries, driven by Kaiser Steel (late-1950's) from their adjacent mine works, surfaced to the outcrop. The current project envisions C Canyon as the most suitable portal site and consequently the name has been revised to the West Ridge Project named after the prominent ridge overlying the reserve.

Surface facilities are located in C Canyon, where the left and right forks converge. The total proposed surface facility area occupies about 25 acres. This area has been previously disturbed by mine related activities.

West Ridge Resources holds a federal coal lease SL-068754 (2650.67 acres) and UTU-78562 (1646.34 acres), totaling 4,297.01 acres in the West Ridge area of eastern Carbon County. West Ridge has also acquired rights to mine private (fee) coal located contiguous to these federal leases. West Ridge has signed an option agreement with the State of Utah (School and Institutional Trust Lands Administration) for rights to mine coal on Section 16, T. 14 S. R. 13 E. These reserves cannot be mined until the leases are granted and permits issued.

The West Ridge reserves are located immediately northwest of the historic Kaiser Sunnyside Mines. C Canyon is approximately six miles north of the city of East Carbon. Access to the C Canyon minesite is via US Highway 6 from Price to Sunnyside Junction, then east on Utah Highway 123 for four miles to the intersection of the mine access road. The mine access road is a 6.8 mile public road constructed, owned and maintained by Carbon County, extending from Highway 123 to the C Canyon minesite.

The mine consists of one longwall and two continuous miner sections. Initial mine production has begun from reserves located in the southeastern portion of the existing lease area. If West Ridge acquires the state reserves, a permit modification will be submitted to incorporate these new reserve areas into the existing permit. West Ridge will propose to extend the longwall panels onto these new reserves. Panels will be developed to the northwest and southeast of the mains, progressing in a northeastward direction. With the existing federal and fee leases, the projected life of the West Ridge Mine is 10 years. However, acquisition of additional state coal reserves in the West Ridge area would extend the life of the mine to nearly 15 years. After the economically recoverable reserves within the lease area have been depleted, the portals will be sealed and reclamation of the surface facility area will begin.

Revised 4/05/2003

**CFR 3482.1 (c)(3)(ii)**

**The resource recovery and protection plan shall include a description of the proposed mining operation, including: the methods of mining and/or variation of methods, basic mining equipment and mining factors, including but not limited to, mining sequence, production date, estimated recovery factors, stripping ratios, highwall limits, and number of acres to be affected.**

1) Mining method to be used:

Both longwall and continuous miner methods will be employed to recover the coal resource. Longwall will be the primary production method, while continuous miners will be used mainly for mine development to support the longwall. The longwall panels have been laid out to maximize recovery of the primary coal reserves. Continuous miners will be utilized to develop main entries, longwall gate entries, sumps and other similar development areas.

After the gate entries have been driven the length of the panel, the longwall equipment will be moved in. The longwall face will consist of a panline with a chain conveyor to collect the mined coal, a shearer, and hydraulic jacks that support the roof while the shearer cuts the coal. Coal is cut as the shearer makes passes across the face (width) of the longwall panel. Coal is moved by the chain conveyor to the headgate end of the longwall panel. The coal then passes through a feeder/breaker (stage loader) before being transferred to the conveyor system that carries the coal outside. On the west side of the mine the longwall equipment will start on the west end of the panels and mine to the east, i.e., from the extremity of the reserve toward the mains in the middle of the reserve. Mining on the east side would follow the same pattern, from the outside to the interior of the reserve.

Initial mine production has come from reserves located in the southeastern portion of the existing lease area. If West Ridge acquires these state reserves, a permit modification will be submitted to incorporate these new lease area(s) into the existing permit. West Ridge will propose to extend the longwall panels onto these new lease areas. Panels will be developed to the north and south of the mains, progressing in an eastward direction. Longwall panel layout may change depending on conditions encountered in the underground workings. As longwall mining approaches Grass Trail Reservoir, existing ongoing subsidence monitoring information will be used to determine the angle of draw and subsidence ratio in this area. Based on this information the underground workings will be designed to ensure that the reservoir is not adversely affected by mining activity.

With the existing lease, the projected life of the West Ridge Mine is 10 years. However, acquisition of additional state coal reserves in the West Ridge area would extend the life of the mine to nearly 18 years. In the unlikely event that non federal reserves cannot be acquired then the mine plan projection will be altered to maximize the economic recovery of federal coal in the irregular blocks not amenable to mining. After the economically recoverable reserves within the lease area have been depleted, the portals would be sealed and reclamation of

Revised 4/05/2003

the surface facility area would begin unless additional leases were acquired.

The West Ridge mine is being proposed as an average size underground longwall mine by Utah industry standards, producing at an average rate of about 3 million tons per year. Mine production is subject to normal fluctuations depending on operational variables such as geologic mining conditions, marketing, equipment availability, and/or worker productivity. The mine is expected to produce about 31 million tons of coal from the existing federal and fee leases. An additional 11 million tons of recoverable coal are available on adjacent unleased state lands, for a total potential reserve of about 42 million tons. Acquisition of these additional reserves would result in a mine life of nearly 15 years. The existing mine plan assumes that mining in the area northeast of Whitmore Canyon will be limited by heavy cover (plus 3000'). However, if conditions allow, mining activity will continue as far as possible in this direction on federal coal which would be leased in the future.

Full production has been reached by a gradual buildup during the first two years of mining. See Map 5A for mine projections and timing information for the initial mining area. See Map 5B for mine projections and timing information for the future expanded mining area.

2) Basic mining equipment to be used:

Continuous Mining System:

Drum-Type Continuous Mining Machine  
Shuttle Cars  
Roof Bolter  
Diesel Scoop Tractor  
Feeder Breaker  
Section Power Center  
Section Auxiliary Face Ventilation Fan

Longwall Mining System:

Double Drum Shearing Machine  
Armored Face Conveyor  
Hydraulically Activated Shield Roof Support  
Armored Stage Loader and Crusher  
Longwall Power Center  
High Pressure Hydraulic Pumping System

3) Mining Sequence:

Refer to Plates 5A and 5B for the proposed mining sequence.

Revised 4/05/2003

4) Production Date:

The anticipated starting and termination dates of the coal mining and reclamation operation are as follows:

	<u>Begin</u>	<u>Complete</u>
Construction of Surface Facilities	Oct. 1998	Dec. 1999
Begin Initial Mine Production	Jan. 2000	
Add Second CM Unit	May 2000	
Begin Longwall Production	May 2001	
Terminate Mining		Dec. 2017*
Remove Facilities	Jan. 2018*	June 2018*
Regrade Area	July 2018*	Sept. 2018*
Revegetate Site	Oct. 2018*	Nov. 2018*

\*This assumes mine life extended through acquisition of adjacent state coal reserves.

5) Estimated Recovery Factors:

The recovery rate from the West Ridge Mine will depend on a number of factors, including: coal quality, roof conditions, affects of heavy cover, the occurrence of burn and/or weathered coal, the ability to acquire adjacent, unleased reserves, and other variables. As a result of these variable factors, the recovery rate can not be predicted with accuracy. However, if the lease property can be mine as proposed, recovery from leases SL 068754 and UTU 78562 could approach 60% based on the extended mine plan shown on Plate 5B. Recovery from the extended LMU area could also approach 60% based on this same mine plan.

6) Stripping ratios:

No surface coal mining (strip mining) will be done. Therefore there will be no stripping ratios.

7) Highwall limits:

No surface coal mining (strip mining) will be done. Therefore, there will be no operational highwalls. The highwall for the portals for the underground mine will be about 150' long and about 30' high (estimated).

8) Number of acres to be affected:

Approximately 4,382.55 acres will be within the initial permit boundary which includes leases SL 068754 and UTU 78562 and the Penta Creek fee lease. Of this acreage, about 29 acres are utilized for surface facilities and structures in C Canyon. The surface facilities should be capable of supporting the life of the mine operations. If additional state reserves are obtained the LMU mining area could be extended to about 5880 acres.

Revised 5/04/2003

**CFR 3482.1 (c)(3)(iii)**

**The resource recovery and protection plan shall include a description of the proposed mining operation, including: an estimate of the coal reserve base, minable reserve base, and recoverable coal reserves for each Federal lease included in the resource recovery and protection plan. If the resource recovery and protection plan covers an LMU, recoverable coal reserves will also be repeated for the non-Federal lands included in the resource recovery and protection plan.**

At present, federal leases SL 068754 and UTU 78562 and the Penta Creek fee lease are involved in the West Ridge mine proposal. West Ridge has negotiated a lease option agreement on an 801 acre reserve of Utah School Trust Lands located directly north of the existing federal lease. ( See Plate 2). If these additional state leases are acquired in the future, they will be combined with lease SL 068754 and UTU 78562 to form a single LMU. One set of mine plans has been developed for the existing federal leases on a stand-alone basis. Another set of extended mine plans has been developed to include the additional state reserves which could be combined to form a future LMU for the West Ridge mine.

The Lower Sunnyside seam is the only mineable, recoverable seam within federal lease SL 068754 and UTU 78562. All other seams are too thin and discontinuous to be economically viable. The in-place reserves for the Lower Sunnyside seam is based on computer generated coal seam isopachs. This isopach model has been developed from information acquired from numerous drill holes, outcrop exposures and in-seam measurements from the Sunnyside Mine (including the "Motor Road Extension" test entries which bisect much of the lease). Plate 6 shows the drill hole locations within the West Ridge lease area; Figure 3 shows the drill hole logs. Based on this information, the in-place coal reserves for the combined lease area is estimated at 57,100,000 tons. Based on the longwall mine plan developed for the "stand-alone" lease area (see Plate 5A), the recoverable reserve for lease SL 068754 and UTU 78562 is estimated at 21,500,000 tons. However, if these leases can be mined as part of a future LMU which includes the additional adjacent state and private coal reserves (see Plate 5B), the recoverable reserve of SL 068754 and UTU 78562 is estimated at 30,000,000 tons. The total future LMU recoverable reserves could be as much as 42,000,000 tons, depending on the ability to mine under deeper cover (i.e. plus 2,000').

Revised 4/05/2003

**CFR 3482.1 (c)(4)(i)(B)**

**The resource recovery and protection plan shall include a plan map of the area to be mined showing LMU boundaries, if applicable;**

No LMU is being proposed at this time. If additional adjacent state reserves are acquired in the future, an LMU will be formed at that time. Plate 5B shows the extended mine plan and probable area that would be included in a future LMU.

Revised 4/05/2003

**CFR 3482.1 (c)(4)(v)(A)**

**The resource recovery and protection plan shall include a plan map of the area to be mined showing a general layout of proposed underground mine showing planned sequence of mining by year for the first 5 years, thereafter in 5-year increments for the remainder of mine life,**

Plate 5A shows a general layout of the existing and proposed underground mining showing the planned sequence of mining for the first 5 years.

Plate 5B shows the general layout of the proposed underground mining showing the planned sequence of mining for the life of the mine. (This map assumes that additional adjacent state reserves will be acquired and combined into an LMU).

Map(s) is kept with this application located in the Public Information Center of our Salt Lake City office.