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*Act/007/041
Fldr #2*

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FACSIMILE TRANSMITTAL SHEET

DATE: 1/22/99

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: JIM SMITH

COMPANY: _____

FACSIMILE NUMBER: 801/359-3940

FROM: JEAN SEMBORSKI

TOTAL NUMBER OF PAGES (INCLUDING COVER SHEET): 6

Jim,

I MADE SOME CHANGES/ADDITIONS FOR YOU TO REVIEW. PLEASE LET ME KNOW IF THIS MEETS YOUR NEEDS. I WILL SEND A COPY WITH A REVISED MAP 7-6 IN THE MAIL.

Jan

01/04/99

WEST RIDGE Resources, Inc. believes that discontinuance of laboratory parameters after two years of operation will be approvable for two reasons. First, there are no mechanisms whereby the chemical composition of springs and streams that are above the mine workings can be adversely impacted by mining activities. Second, this type of groundwater monitoring program has been approved for the Alkali Creek and Dugout Canyon tracts at the Soldier Creek Mine, 10 miles north of the West Ridge area.

Each of the sampling locations and their hydrologic significance are described below. However, in order to comply with UDOGM directive Tech-004, baseline samples will be collected from each spring in the monitoring program during the low flow (fall) sampling and from each stream monitoring site during low flow every five years beginning with the first mid-term review. The five year baseline samples will be repeated every five years until reclamation is complete.

Baseline monitoring will be performed on the specified monitoring sites until construction of the mine and mine facilities begins. Once construction is initiated, the operational monitoring schedule will be utilized. Monitoring will continue through reclamation until bond release unless otherwise modified.

Streams

Grassy Trail Creek is the only perennial stream in the permit and adjacent areas. However, the permit area does not include any portion of the upper Grassy Trail Creek watershed. Nevertheless, two sites on Grassy Trail Creek will be monitored. Stream site ST-3 is located below the confluence with Hanging Rock Canyon and is upstream of the permit area. Stream site ST-8 is located just above the confluence with Water Canyon, downstream of the permit area.

On the west side of West Ridge, five stations will be monitored on ephemeral drainages contributing to lower Grassy Trail Creek. They are ST-4 (lower Bear Creek), ST-5 (below confluence of B and C Canyons), ST-6A and ST-6 (above and below the mine site, respectively, in C Canyon) and ST-7 (below A Canyon). ST-4 will be visual observation of the channel for flowing water. ST-5 will have a crest gauge and sampler while ST-6A, ST-6 and ST-7 will consist of a crest gauge and bottle samplers.

M-1 (ST-1) was a monitoring point used by Kaiser Coal during the mid-1980's. The point was identified as M-1 by Kaiser Coal in their 1986 permit application package. It was later redesignated as ST-1 by JBR Consultants in a monitoring plan later submitted for BP America. This point was located in Rock Canyon (approximately 2 miles to the northwest of the WEST RIDGE permit area in T. 13 S. R 13 E. Section

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32 NW1/4 SW1/4 on Rock Creek. When Andalex took over the monitoring program in 1997, they decided to utilize the same numerical designations of the monitoring points to minimize confusion over numbering and to maintain continuity in the baseline monitoring plan and facilitate utilization of previously collected hydrology information. Rock Creek was not included in the baseline monitoring plan for the WEST RIDGE mine because of the distance from the lease area and the low potential for mining operations to have any impacts. However, rather than renumbering the stations and causing confusion, it was decided to leave the existing numbering scheme in place but sample only those site important to the current mining proposal. The WEST RIDGE monitoring program does not include ST-1 and this point is not shown on our operational monitoring map (Map 7-7).

Stream monitoring stations, used for baseline collection and proposed for operational monitoring, are equipped as follows:

ST-4 No monitoring equipment is located at this site. The purpose of this station was to conduct baseline observations for two years to determine whether this portion of Bear Creek acted as an ephemeral or intermittent stream channel. Based on monthly monitoring during 1997 and 1998, it has been determined that intermittent flow does not occur in the lower section of Bear Creek and the channel responds only as an ephemeral drainage following substantial rainfall events.

ST-5 This location contains the ISCO automatic sampler and a crest gage. The crest gage is a steel pipe concreted into the channel bottom. The pipe has a hole near the bottom so that water can rise in the pipe and record the maximum flow height on a stick inside of the pipe. This station monitors drainage from both the B and C Canyon drainages. However, it is apparent that all of the flow comes from the B Canyon drainage, primarily the lower side drainages and adjacent Mancos slopes. Both the B and C Canyon drainages respond as ephemeral drainages. No drainage has been recorded in C Canyon.

ST-6 and ST-6A

These two stations are located below and above the proposed mine site in C Canyon, respectively. A crest gage (as described above) and bottle samplers are cemented in the channel at each location. The bottles consist of one liter plastic bottles which are strapped to the pipe at specific heights. The bottle cap has two copper tubes which would allow a sample to fill the bottle when the flow height reaches the inlet level. The crest gages have not recorded any flow in the channel in 1997 or 1998 even though the rain gage in C Canyon has recorded 1-2" precipitation events.

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ST-7 A crest gage and sampler bottles are located in the A Canyon drainage. It measures the maximum height of the flow down the A Canyon drainage as well as collecting a sample should the flow height reach the bottle inlet.

If it becomes necessary to discharge water from the proposed mine, this water will discharge into the ephemeral C Canyon drainage. Discharge water will be subject to monthly monitoring stipulated by a UPDES permit. Because the monitoring required under the UPDES permit is more stringent and more frequent than that proposed in this permit application, ~~no monitoring in the C Canyon drainage below the mine discharge is proposed.~~ discharge samples will be collected from the UPDES discharge monitoring point rather than at the drainage monitoring station.

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Springs

Seven springs in the permit and adjacent areas will be monitored. Four of these springs (SP-12, SP-13, SP-15, and SP-16) discharge from the lower slopes of West Ridge in Whitmore Canyon. Two springs, WR-1 and WR-2, discharge from the upper slope of West Ridge in Whitmore Canyon. Refer to Map 7-6. One spring (SP-8) discharges in the upper drainage of C Canyon.

Most of the monitoring stations in this monitoring program are located on the east slope of West Ridge. This is because, with the exception of SP-8, there are no springs that are suitable for monitoring on the west side of West Ridge.

Kaiser Coal Company had identified and proposed monitoring for several other springs in the region. Review of their 1986 permit application was interrupted by the sale of the coal leases to BP America in 1987. BP America retained JBR Consultants to proceed with baseline water monitoring. JBR Consultants renumbered previously monitored points into a different numbering system. In places of this Permit Application Package (such as Appendix 7-1, Table A-1) a cross-reference is made between the previous (Kaiser) spring numbers and the present (JBR) labels. Mining plans for both Kaiser Coal and BP America included a larger mining area. When WEST RIDGE acquired the property they did not acquire the coal lease area referred to as the north area. Therefore, in the WEST RIDGE PAP, those monitoring points that were north of Bear Canyon were eliminated from the baseline monitoring plan due to their distance from the proposed mine workings and the low potential to be impacted by mining operations.

SP-1, SP-2 and SP-3 were spring monitoring points used by Kaiser Coal during the mid-1980's. These three points were located in Rock Canyon, several miles to the north of the WEST RIDGE permit area. They were eliminated from the monitoring program because they are quite a distance from the permit area and would not be affected by the WEST RIDGE mining operations.

Also, SP-4 and SP-5 (referred to in the Kaiser plan as S-40 and S-39) were eliminated from the monitoring plan because they occur about a mile north of Bear Canyon and are separated from the proposed mining area by several large drainages. The likelihood of impact to these sites is negligible since WEST RIDGE did not acquire coal leases in this area. SP-4 and SP-5 were monitored in 1988 and 1989 and found to be dry. These sites have been added to Map 7-6 for reference to historical monitoring locations.

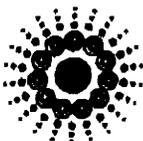
SP-7 (Kaiser point S-22) is located about ½ mile north of the permit area. It was not included in the baseline monitoring program because access is poor and during previous monitoring in the spring of 1986 flows were low (1-3 gpm). When this site

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was re-checked in 1988, 1989 and the fall of 1997 no flow could be found in the vicinity of the old spring. SP-10 (Kaiser S-1) is in the lower right-hand corner of the permit area was also eliminated from the baseline monitoring plan because of difficulty of access and low previous flow measurements. This site was also revisited in 1988, 1989 and 1997 and no flow or dampness could be located. No water rights exist on SP-4, SP-5, SP-7 or SP-10. SP-7 and SP-10 are included on Map 7-6 for reference to historical points.

Wells

Only one groundwater monitoring well (DH86-2) exists in the permit area. This well monitors the Sunnyside Sandstone Member of the Blackhawk Formation, which is below the coal seam that will be mined. Water level will be measured in this well.



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FACSIMILE TRANSMITTAL SHEET

DATE: _____

1/14/99

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: _____

Jim Smith

COMPANY: _____

FACSIMILE NUMBER: _____

359-3940

FROM: _____

Jean Sumborski

TOTAL NUMBER OF PAGES (INCLUDING COVER SHEET): _____

2

Jim,

ATTACHED IS A PARAGRAPH THAT HOPEFULLY
WILL CLARIFY M-1/ST-1 AND IDENTIFY IT AS
A HISTORICAL ~~AND~~ RATHER THAN AN OPERATIONAL
MONITORING POINT. PLEASE LET ME KNOW
IF THERE IS ANYTHING ELSE I SHOULD
INCLUDE IN THE DISCUSSION. THANK YOU. *Jean*

01/04/99

R645-301-722 Cross Sections and Maps

- 722.100 As described by Mayo and Associates (1997; Appendix 7-1), groundwater systems in the permit and adjacent area have limited areal and vertical extent due to the heterogeneous lithology of the rock units containing and overlying the coal-bearing strata. No aquifers exist in the permit and adjacent areas. Therefore, no map has been prepared to show the location and extent of subsurface water.
- 722.200 The location of surface water bodies can be found on Map 7-3 "Water Rights", which shows Grassy Trail Reservoir and it's location with respect to the permit area.
- 722.300 Baseline monitoring stations are shown on Map 7-6 "Hydrologic Monitoring Map (Historical Monitoring Locations)". This map shows the stations that were utilized to collect baseline information in 1997 as well as earlier monitoring programs conducted between 1985 and 1993.

M-1 (ST-1) was a monitoring point used by Kaiser Coal during the mid-1980's. The point was identified as M-1 by Kaiser Coal in their 1986 permit application package. It was later redesignated as ST-1 by JBR Consultants in a monitoring plan later submitted for BP Minerals. This point was located in Rock Canyon (approximately 2 miles to the northwest of the WEST RIDGE permit area in T. 13 S, R. 13 E, Section 32 NW1/4 SW1/4 on Rock Creek. When Andalex took over the monitoring program in 1997, they decided to utilize the same numerical designations of the monitoring points to minimize confusion over numbering and to maintain continuity in the baseline monitoring plan and facilitate utilization of previously collected hydrology information. Rock Creek was not included in the baseline monitoring plan for the WEST RIDGE mine because of the distance from the lease area and the low potential for mining operations to have any impacts. However, rather than renumbering the stations and causing confusion, it was decided to leave the existing numbering scheme in place but sample only those site important to the current mining proposal. The WEST RIDGE monitoring program does not include ST-1 and this point is not shown on our operational monitoring map (Map 7-7).

- 722.400 The location of water wells is also shown on Map 7-6. DII 86-2 was monitored during 1986, 1987, 1997 and 1998.
- 722.500 Map 5-1 shows contours of the proposed disturbed mineyard area.

R645-301-723 Sampling and Analysis

Water quality sampling and analyses have been and will be conducted according to the "Standard Methods for the Examination of Water and Wastewater" or EPA