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[a] Information pertaining to Pond 015 embankment stability analysis and survey certification was originally submitted in July 1992, but was not incorporated into March 1994 revisions.

machinery, lumber, and other combustible materials generated during previous mining activities will be placed and stored in a controlled manner in a designated portion of the mine area. This storage area will be determined at the time of reclamation activities and will be at the discretion of the permittee. Final disposal of non-coal mine wastes will be in a designated disposal site within the permit area or at a State-approved solid waste disposal facility. Notwithstanding any other provision of the R645 Rules, any non-coal mine waste defined as "hazardous" under 3001 of the Resource Conservation and Recovery Act (RCRA) and 40 CFR Part 261 will be handled in accordance with the requirements of Subtitle C of RCRA and any implementing agency.

3.7-5(3)(2) Permanent Sealing of Shafts

By October 23, 1991, sealing of Shafts No. 1 and No. 2 was completed, according to a letter written by Amax Coal Industries, Inc. (Appendix 3.7M). The map referenced in the Amax letter depicts the sealing of the No. 3 Mine in both Hardscrabble Canyon and Crandall Canyon. Also presented in Appendix 3.7M is the sealing plan proposed by Castle Gate Coal Company (once a subsidiary of Amax Coal) in March 1991. The sealing plan consisted of placing 6 inch thick concrete slabs over the top of the openings to shafts No. 1 and 2. A 2-inch PVC vent pipe was installed through the seal of both shafts. The seals were intended to be temporary in the event that mining operations resumed. However, the seals appear to be in compliance with MSHA guidelines 30 CFR 75.1711-1.

Phase II of reclamation will include permanent sealing of Shaft No. 1 and Shaft No. 2. Each shaft will be backfilled from bottom to top as discussed in the "Crandall Canyon Shaft Backfilling/Sealing Project Plan" and approved by MSHA (Appendix 3.7N) .

Assuming that the existing seals are removed to reactivate the mine in conjunction with Willow Creek development, water inflow and water level in the shafts will be measured prior to final abandonment of the shafts. If the mine is not reopened, the existing seals will be removed and the shafts backfilled prior to reclamation.

The interception of groundwater by the shafts has been considered during development of the reclamation plan. According to Mr. Lane Adair, an employee of Price River Coal Company who was present during construction and early operation of the shafts, most of the water that initially seeped into the shafts came in at the interface between the unconsolidated soils and the bedrock (30 to 60 feet below the top of the shaft). As stated in Section 3.7-3(1), this aquifer was grouted. Water inflow was apparently reduced to approximately 3 gallons per minute (gpm) in Shaft No. 1 and 10 gpm in Shaft No. 2. The balance of the shafts were fairly dry, according to Mr. Adair, except that the "Sub 3" seam and the "D" seam both contained groundwater (Adair, 1995).

The small flow of water seeping in through the sides of the concrete-lined shafts is primarily from an unconfined aquifer. Undoubtedly, the water level in the shafts will rise and reach an equilibrium level determined by the potentiometric head, transmission of water through the Blackhawk formation, and by the elevation of mine outlets, such as Adit No. 1. Adit No. 1 periodically discharges water, although it is approximately 850 feet higher than the base of the shafts in Crandall Canyon. Unless the water going into the shafts backs up into the mine workings sufficiently to discharge through an adit, the intercepted water will recharge the regional aquifer. Under recharge conditions, the water will be removed from the Price River drainage system.

As explained in Section 7.1-10(5) in Exhibit 19, water inflow into the No. 3 and No. 5 mines has been estimated at approximately 50 gpm. Although both of the shafts intersect the No. 3 mine, this inflow value probably excludes the infiltration into the shafts, since the shafts were installed after that portion of the permit was written. Infiltration into the shafts is approximately 13 gpm, with 50 gpm an expected upper inflow limit. Since the mean annual discharge rate for the Price River is 112 cfs, 50 gpm represents a loss of 0.1 percent to the Price River. If this value is added to the expected inflow rate of 289 gpm to the mine workings under full development conditions (Section 7.1-10(5), Exhibit 19), the total loss would be 0.7 percent. Thus, the impact of allowing a minor

amount of seepage water from the unconfined aquifer in Crandall Canyon to be transmitted through the shafts to the Blackhawk formation appears to be insignificant. Finally, Amax Coal Company has 1.7 cfs (763 gpm) of water right on the Price River to mitigate the minor reduction in yield of the drainage basin.

3.7-5(3)(3) Backfilling and Grading

The reclamation topography plan is presented on Exhibits 3.7-7A, 7B, 7C, and 7D. The plan has been developed to be in compliance with the R645 requirements for obtaining approximate original contour, as discussed in Section 3.7-5(3)(4). The engineering issues of the reclamation plan pertaining to the walls, roads, shafts, and utilities are discussed in this section. The hydraulic and sediment control issues are presented in Section 3.7-5(4).

During the grading process, the following work will be performed:

1. Elimination of berms and temporary operational diversions,
2. Grading to establish surface overland flow drainage where possible, and backfilling of shafts,
3. Construction of permanent stream channels as shown on the plans,
4. Removal of certain operational culverts,
5. Removal of sediment ponds,
6. Construction of alternative sediment controls, and installation of reclamation culverts, and
7. Construction of reclamation road R-1. This will be a primary road with compacted roadbase or equivalent and a 2% top slope towards a ditch on the inside of the road (see Exhibit 3.7-7D). The road will be used for access for the intended post mining land uses.

Grading will be done in order to establish drainage and stabilize cutslopes. The scheduling of the grading work will minimized the disturbance to the hydrologic balance. Sediment ponds will remain in place as long as possible during grading work. The planned sequence of removal of the sediment control structures follows:

stability. A copy of the "Slope Stability Analyses" is located in Appendix 3.7R and additional information is provided in Appendix 3.7U.

The backfill grading topography is compatible with the approved postmining land use, and provides adequate drainage and long-term stability as required by R645-301-553.522.

There are no highwalls in Crandall Canyon, since the only access to the underground workings is through the shafts. There are no spoil piles, refuse piles, or small depressions that will be retained in the reclamation plan.

The primary objectives of the backfilling and grading plan associated with Phase I and II of reclamation is to reclaim the main channel, reclaim cutslopes in the canyon where possible, sufficiently cover remaining building foundations with a minimum of 4 feet of soil, and sufficiently backfilling of shafts No. 1 and No. 2. Backfill will be placed in the shafts in accordance with the approved MSHA Shaft Backfilling/Sealing Plan (Appendix 3.7N). No slopes will exceed the maximum safe angle of repose. A potentially worst-case reclamation slope was assumed for the area west of the existing hoist building and south of the channel centerline at approximately Station 17+25. Assuming that the existing cutslope in this area were to be completely backfilled, the reclaimed soils would lie at a maximum slope of 36 degrees. As discussed in Section 3.7-5(3)(5) and Appendix 3.7R, the slope would have a critical safety factor of 1.4 under static conditions. However, since slopes greater than 2:1 can be erosionally unstable, slopes within the reclaimed area will generally be constructed to lie at or less than a 2:1 slope.

Cut material necessary to cover the facilities area will come from two on-site sources. Initially, topsoil was removed from the disturbed area and stored in stockpiles Nos. 1 and 2. However, since stockpile No. 1 is being treated to eradicate the noxious weeds, its use is marginal as a topsoil source. Therefore, topsoil will be taken from stockpile No. 2, located along access road P-1, and from soils located within the facilities area. The soils report in Appendix 3.7S concluded that the soils identified in the facilities area can be used as a substitute topsoil. The soils report determined that at least the top 8 feet of soil in this area can be used as substitute topsoil. The approximate volume of substitute topsoil available is 51,400 cubic yards, which is far more than is needed to cover the reclaimed area with one foot of topsoil. Soils in the facilities area will be used to achieve final grade to the extent possible. Topsoil from stockpile No. 2 will be used as needed. Depending on what occurs during rough grading of the facilities area all of the soil available in

The current reclamation plan for this area of the facilities pad includes establishing the reclamation channel near the middle of the lower pad. It is not anticipated that this material will be needed as substitute topsoil, however to avoid using material as substitute topsoil that has elevated selenium concentrations, the applicant will sample soils in the lower pad area prior to using it as substitute topsoil for reclamation construction activities or will use this material to backfill the shafts since it is this same material that was removed during the construction of the shafts (see Sections 3.7-3(1) and 3.7-4(4)). At least three samples will be obtained from the soils in the lower pad if these soils are to be used as substitute topsoil. The location of the samples will be chosen based on the vegetation cover and apparent coarseness of the soils. The worst case soils will be sampled and analyzed for the parameters listed above in accordance with recommended UDOGM guidelines.

Soils found to be unacceptable to use as substitute topsoil will be used as backfill against cutslopes. In the unlikely event that none of the soils in the lower pad area are found to be acceptable substitute topsoil, the applicant will consider using the majority of the available topsoil from stockpile No. 2 to cover the area. The 6680 CY of topsoil in stockpile No. 2 would cover approximately 4 acres with 12 inches of topsoil.

The soils present west of Shaft No. 1 and east of the LP tanks (middle and upper pads) appear to sustain moderate vegetative growth. The chemical and physical results of the soil study indicate that these soils could be considered, as substitute topsoil.

To determine the reason(s) for the apparent less-than-satisfactory establishment of vegetation in the middle and upper pads, a vegetation field study was conducted. For the 1996 study, a test plot area was chosen, gouged and reseeded in an attempt to prove that the soils could produce adequate vegetation to meet revegetative standards. The vegetative cover in the middle and upper pad areas had previously included very few grasses.

During a technical field visit in October of 2000 the test plot area was measured by vegetation life form in ten one-square-meter quadrants by UDOGM Reclamation Biologist, Paul Baker. The average values were 24% cover by grasses, 21.5% cover by broadleaf forbs, and 0.5% cover by shrubs for a total of 46% cover. A copy of the technical field visit report is located in Appendix 3.7V.

In the determination of reclamation success in Crandall Canyon, the grass/sage reference area in Barn Canyon will be used for comparison. When the grass/sage reference area was measured in the early 1980's the cover was estimated at 53%. The standard to be met for Crandall Canyon is 90% of 53% or 47.7%, with 90% statistical confidence. The difference between the 46% and 47.7% is minimal and the Crandall Canyon site will likely meet the success standard.

Based on the soils information and the information gathered during the field trials, Paul Baker concluded that the soils in the test plot area should be adequate as growth medium. Therefore, the suitable topsoil identified in the upper, middle, and lower pad areas will be used to supplement the existing 6680 CY of topsoil and make-up for the shortfall of approximately 18,920 CY of available topsoil for reclamation.

Prior to spreading topsoil, all accessible regraded areas will be scarified to a depth of 18 to 24 inches by deep ripping or other appropriate methods. These efforts will reduce the potential for slippage of the topsoil, increase moisture retention, and promote root penetration. While it is recognized that this deep gouging process could extend below the thickness of the growth media, the soil materials which will be used for backfilling in the canyon are neither acid- nor toxic-forming. Therefore, if these materials are exposed, they will not create revegetation concerns. Furthermore, wind transport of the adjacent growth media will soon cover exposed subsoils.

The seed bed will be prepared using the mechanical treatments described in Section 3.7-5(3)(7).

Backfilling of the shafts will utilize the majority, if not all, of the material removed during the construction of the shafts. However, should additional backfill material be required to augment the available material onsite as a result of settling, the permittee will address the issue in accordance with the coal rules.

Because settling is expected, the permittee will delay final backfilling, grading, topsoil redistribution and revegetation activities until the following year to allow as much time as possible for settling to stabilize and avoid redisturbing reclaimed areas.

Access to the shafts, following the backfilling, by wildlife and humans will be precluded by fencing the areas and posting the appropriate signage.

inspections, as well as corrective actions taken, will be recorded. Corrections to any weaknesses in the implementation of the sediment control plan will be remedied immediately to prevent future sediment runoff into the main stream channel. Corrective action will be taken when a gully greater than nine inches in depth is created due to lack of vegetation establishment, or when the mulch and seed have been transported by wind or overland flow. Corrective action will consist of regrading of the ground surface only as necessary to fill in gullies caused by erosion, and reseeding and mulching to reestablish vegetation.

3.7-5(5) Reclamation Surface and Ground Water Monitoring

The groundwater and surface water monitoring sites for Crandall Canyon, will continue to be monitored quarterly during and after completion of reclamation activities and until bond release is achieved in accordance with the approved plan.

Operational monitoring site B-25 located above Pond 015 and site B-26 located below Pond 014, will be retained for monitoring during the reclamation. Maps 3.7-7A, 3.7-7B and 3.7-7C show the location of these monitoring sites. Each of these sites will be monitored for the parameters listed in Table 4.7-2 of the MR&P.

3.7-5(6) Reclamation Timetable

Contemporaneous reclamation and final reclamation is anticipated to proceed in accordance with the following schedule:

Reclamation Monitoring

Phase I Reclamation

1.	Demolition - structure removal	Week 1-8

Phase II Reclamation

2.	Shaft backfilling sealing	Week 8-12
3.	Final grading, resoiling, and initial mulching (including construction of reclamation channels and installation of temporary silt fences)	Year 2 Week 1-8
4.	Seeding and final mulching (to occur after September 15). This stage may occur immediately following initial mulch incorporation, when the soils are most conducive to seeding.	Week 8-12

Phase III Reclamation

5.	Vegetation and water monitoring	For 10 years after seeding
6.	Reclamation monitoring	Until bond release
7.	Diversion maintenance	2-10 years

3.7-5(7) Reclamation Costs

The reclamation bond amount calculated for Crandall Canyon is presented in Exhibit 19, Appendix 3-2.

3.7-6 Bond Release

Phase III bond release was authorized for the Crandall Canyon leach field area as shown on Exhibits 3.7-7A and 3.7-7B and supported by information in Appendix 3.7V and Appendix 3.7W.

APPENDIX 3.7N

Crandall Canyon Shaft Backfilling/Sealing Project Plan

U. S. Department of Labor
Mine Safety and Health Administration
P O Box 25367
Denver, Colorado 80225
Coal Mine Safety and Health
District 9

JUN 12 2003

W. John Borla
Engineering & Safety Manager
Plateau Mining Corp.
847 NW Hwy 191
Helper, UT 84526

RE: Willow Creek Mine
ID No. 42-02113
Shaft Reopening and Backfilling Plan

Dear Mr. Borla:

The Shaft Reopening and Backfilling Plan, dated May 6, 2003, and June 10, 2003, consisting of two cover letters, 9 pages, and replacement pages 3 and 4 addressing the reopening and backfilling of the Crandall Canyon Shafts, has been approved. The plan is subject to review and possible revision at any time. All changes proposed to the plan shall be approved by MSHA prior to implementation. A copy of this plan should be made available to the miners and shall be reviewed with all affected personnel at the mine.

This approval is site specific for this project and will terminate upon completion.

Prior to implementing the approved ventilation change, 24-hour notification must be given to the field office supervisor, Ted Farmer, at 435-637-3051, so that an MSHA inspector may be present.

If you have any questions, please contact Bill Reitze at 303-231-5458.

Sincerely,

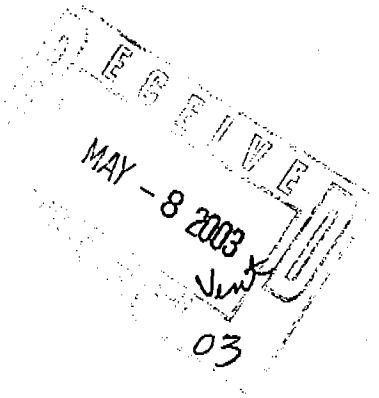
Allyn C. Davis
District Manager

Enclosure

PLATEAU MINING CORPORATION

Willow Creek Mine
847 NW Hwy 191
Helper, Utah 84526
(435) 472-0475
Fax: (435) 472-4780
An affiliate of RAG

May 6, 2003



Al Davis, District Manager
Mine Safety and Health Administration
Coal Mine Safety and Health, District 9
P.O. Box 25367, DFC
Denver, Colorado 80225-0367

Dear Mr. Davis,

Please find enclosed for your review the revised plan to re-open, ventilate, and backfill the two mine shafts in Crandall Canyon near the Willow Creek Mine. These shafts and facilities are covered in the Willow Creek SCMRA permit and these activities are for the purpose of completing final reclamation of this site.

As outlined in the enclosed plan, no one will re-enter either of the mines that are intersected with the two shafts or enter the shafts for any reason. The revised plan also addresses all of the issues as discussed in our meeting at your office several weeks ago. There is one change that we did not address in the meeting at your office. The original plan was to remove all of the caps using overhead cranes. After further investigation, it appears that some of the caps may be attached to the collars. I've modified the plan to allow breaching of these caps rather than using cranes to lift them. We will attempt lifting the caps with cranes, but if the caps can not be lifted we will need to breach them using trackhoes mounted with hydraulic breaking rams. In either case, the caps will not be removed or breach unless the environment is safe.

As agreed in the meeting this plan is being submitted under the Willow Creek Mine, ID 42-02113. If you or your staff have any questions please call, my phone number is 435-472-4744.

Respectfully,

John Borla
Plateau Mining Corporation

APPROVED
JUN - 13 2003
CMSH

PLATEAU MINING CORPORATION

Willow Creek Mine
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C/007/0013

June 10, 2003

Al Davis, District Manager
Mine Safety and Health Administration
Coal Mine Safety and Health, District 9
P.O. Box 25367, DFC
Denver, Colorado 80225-0367

Dear Mr. Davis,

Please find enclosed for your review revised pages 3 and 4 for the plan (submitted to MSHA on May 6, 2003) to re-open, ventilate, and backfill the two mine shafts in Crandall Canyon near the Willow Creek Mine.

The changes made to these pages are shown in "bold" print and address the concerns outlined in your letter of June 5, 2003. The changes basically state that the caps over the mine shafts and ventilation drifts will not be removed unless the environment beneath the specific cap has a methane content of less than 3%. The second change to the plan indicates that we will not proceed with using a ventilation fan or inert gas to lower the methane content without first submitting a detailed plan to MSHA and obtaining approval of this plan.

Your quick review of these changes will be greatly appreciated. If you or your staff have any questions please call, my phone number is 435-472-4744.

Respectfully,

John Borla
Plateau Mining Corporation

Crandall Canyon Shaft Backfilling/Sealing Project Plan

I. BACKGROUND & CURRENT STATUS

History

Two mine shafts were developed as part of the Castle Gate Mine property at the Crandall Canyon site. The spoil material from the development of the shafts was stored on site between the two shaft locations. Note that all coal material was removed from the spoil. The shafts were sealed with 6" thick caps (constructed from metal I beams and concrete) when the Castle Gate Mine was closed. Reclamation work was not done at this time because the shafts were projected to be used for future mining activities.

When the Willow Creek Mine was developed in the late 1990's, the long term mine projections included mining towards the western portion of the property and eventually utilizing the Crandall Canyon shafts for ventilation purposes. Therefore, when the Willow Creek SMCRA permit was written it included the Crandall Canyon area.

Following the mine fire at the Willow Creek Mine in 2000 and an unsuccessful sale of the mine in 2002, all recoverable equipment and materials were removed from the mine and reclamation activities commenced. As part of the mine's current reclamation schedule, the Crandall Canyon site is projected to be reclaimed in 2003.

The currently approved reclamation plan details installing heavier caps over the existing seals and reclaiming over the top of the caps (covering the permanent caps with earth and re-vegetating). The BLM expressed concerns that this approved method of reclamation does not adequately protect their underlying coal (Federal coal leases exist beneath the shafts) and methane resources. The DOGM has reversed their previous position of supporting the currently approved plan and now supports the BLM's position.

Following numerous meetings and communications with these agencies, Plateau Mining has agreed that it will consider backfilling the shafts as part of the reclamation process, IF AND ONLY IF, it can be done safely and cost effectively. Therefore, this plan is being submitted to MSHA for approval to proceed with the BLM & DOGM requested method for the reclamation of the subject shafts.

Description of Shafts & Mine Entries

The former intake shaft has a collar elevation of 6822', a landing station at the "D" coal seam entry floor at 5861', a landing station at the "A" coal seam

entry floor at 5623', a landing station at the "Sub 3" coal seam entry floor at 5402', and the shaft bottom at 5352'. The finished diameter of the intake shaft is 26'. This shaft was constructed to accommodate an elevator cage. The hoist head frame building still exists above the sealed shaft and the cage is located above the current seal. There are also two fan drifts that intersect this intake shaft. These two drifts are also sealed with concrete caps at the surface and have had the mine fans and fan ducting removed.

The former return shaft has a collar elevation of 6780', intersects the "D" coal seam entry floor at 5775', intersects the "A" coal seam entry floor at 5542', and intersects the "Sub 3" coal seam entry floor at 5324'which is also the shaft bottom. The finished diameter of the return shaft is 20'. This shaft was constructed to accommodate an emergency escape capsule which was operated from an adjacent hoist building. The emergency escape capsule is currently located above the seal.

Figure 1 shows a schematic of the two shafts. Note that although a landing was developed at the "A" seam level in the 26' diameter shaft, there are no entries connecting the two shafts in the "A" seam. Therefore the diagram does not include the intersection of the shafts with the "A" seam.

The caps that currently seal the mine shafts and fan drifts were constructed and placed upon the collar of the shaft and drift openings. Insulation was placed between the shaft collar and the seals. Lifting hooks were installed on the caps over the ventilation drifts. The caps directly over the shafts do not have lifting hooks installed.

Since the mine was sealed, water has flooded the mines. In late 1998 the water level was measured at 5765' and was recently measured at 5785'. At this level the water essentially has formed a seal below this level and thus no ventilation can circulate between the shafts below this level (the undeveloped "A" seam and "Sub 3" seam workings are isolated from the shafts due to the water). The height of the entry at the "D" seam in the return shaft is 15' therefore the water level is 5' from the roof of the "D" seam in the return shaft, which is the lowest elevation within the ventilation circuit between the shafts in the "D" seam. Figure 2, shows the ventilation circuit between the two shafts in the "D" seam and the seals that isolate these entries from the majority of the "D" seam mine. Further evidence that a ventilation circuit exists is that the seal at the collar of the return shaft is in-gassing very heavily and the seals at the intake shaft are out-gassing very heavily.

Current Status of Environment Beneath Caps

The environment beneath each of the two shafts has been tested several times using an Industrial Scientific ATX 620 meter. A sample tube was lowered into the shafts via the existing vent pipes. The results are as follows:

	Methane	Oxygen	Carbon Monoxide
26' diameter shaft:	3.5-7%	17-18%	0 ppm
20' diameter shaft:	0-1.8%	17-18%	0 ppm

Note that the methane was not detected in the 20' shaft until the sampling tube was lowered to approximately 10' beneath the cap.

II. BACKFILLING/SEALING PLAN

Preparation for Removal of Shaft Caps

Guards will be constructed around the perimeter of the capped shafts to protect personnel once the caps are removed from the shafts. The guards will be a minimum of 6' high and constructed of chain link fencing or heavier material and concrete barricades at the dump point. The positioning of the guards will not interfere with the removal of the caps from the shafts.

A dump point will be established as part of the protective guards around the shaft and drift openings. This dump point will consist of heavy duty concrete barricades. The barricades will be placed such that they will allow material to be safely dumped into the shafts with front end loaders or trackhoes. The barricades will be installed in a location that will keep the backfilling equipment a safe distance from the shaft and drift openings during backfilling activities.

Removal of Shaft Caps

Prior to beginning work to remove the caps the local MSHA office will be notified of the schedule for this work. Personnel will be posted at the gate at the entrance to Crandall Canyon to ensure no unauthorized person enters the work site during this critical stage of the project. The personnel at the gate will have radio communication with the personnel at the shafts. The number of people allowed in the canyon during this critical task will be limited to only those that need to be there.

Prior to removing the caps, the environment beneath the caps will be tested. **When the methane content beneath a cap is less than 3%, the process of removing that cap can commence.** The sequence of which cap will

be removed first will depend upon the results of the sampling beneath the caps. It is expected that the results will be similar to the samples taken and listed above. If this is the case, then the 20' shaft cap will be breached first. The environment beneath the 26' diameter shaft will then be tested. Once the environment beneath this cap is below 3% methane then the cap covering one of the drift openings will be removed.

If the methane beneath the 26' diameter shaft is not reduced below 3% following the removal of the 20' diameter shaft cap, then a ventilation fan will used to blow air from the 20' diameter shaft opening to ventilate the methane. If this procedure does not reduce the methane below 3%, then an inert gas will be injected into the environment beneath the cap to reduce the methane to a safe level. **In no case will a cap be removed unless the methane level beneath that cap is less than 3%. If either of these procedures needs to be enacted, a specific plan will be submitted and approved by MSHA prior to proceeding.**

The removal of the caps will be done either by using overhead mobile cranes (for the caps with lifting hooks installed) or by breaking the caps with a trackhoe mounted with a hydraulic ram (for the caps without lifting hooks). During the process of removing or breaching the caps the equipment will be positioned as far away from the caps as possible, and will be located "up wind" from the shaft opening. All other personnel will be located "up wind" at a minimum distance of 200' from the shafts.

The two remaining caps will be removed or breached following the same sampling, safety, and removal protocol described above prior to beginning backfilling. The removal or breaching of these two caps will eliminate the possibility of methane being "trapped" beneath them during backfilling.

Monitoring of Environment

The air returning from the ventilation circuit will be monitored to ensure it is below 3% prior to proceeding with further work on the project. It is expected that the methane within the ventilation circuit will be quickly removed, since the majority of the mine workings (methane sources) are sealed by the water ("A" & "Sub 3" seams) or the mine entry seals ("D" seam). The elevation difference of the two shafts will provide a pressure differential for adequate ventilation to dilute the methane.

The air above both of the shafts will be monitored continuously to ensure safe levels of methane (below 3%) are maintained any time work is being done near the shaft openings and during backfilling activities. The methane monitor with a digital readout will be positioned over each of the openings

such that the equipment operators can visually see the readout as they are conducting backfilling activities.

Prior to beginning backfilling or resuming backfilling activities, the environment will be checked to ensure it is below 3% methane. If the ventilation circuit between the two shafts is intact and air flow can be measured, the air that is returning (expected to be from the 26' diameter shaft) will be tested to ensure the methane is less than 3%. If the ventilation circuit is not intact and air flow can not be measured, a sample tube will be lowered into each of the shafts to their lowest point and a sample will be taken and tested. If the methane content is below 3%, backfilling can then commence or resume. This testing protocol will be conducted prior to beginning backfilling and whenever backfilling activities are stopped for a period no longer than one hour.

Backfilling of Shafts

The materials to be used in backfilling the shafts includes the spoil material created when the shafts were sunk (which remains on site adjacent to the shafts), broken concrete from the Crandall Canyon facilities foundations, and bentonite (used to form a 20' water seal above the "D seam" workings). In addition to the broken concrete large diameter rocks will be used if there is not enough volume of broken concrete. The broken concrete and large rocks will be no larger than 4' in diameter to prevent bridging within the shaft (note the cage guide's inside dimensions are 18' x 14.5' looking from a plan view). Also, all of the coal was removed from the spoil during development of the shafts.

Backfilling of the shafts will be done simultaneously with crews working on each shaft. The intention is that once backfilling begins it will be done continuously until the shafts are fully backfilled.

The bottom 50' of the 26' diameter shaft will be backfilled with spoil material to bring the filled level to the "Sub 3" seam floor level. The broken concrete foundations material will then be dumped into the shaft to a level approximately 10' above the "Sub 3" coal seam (approximately 25' of vertical fill with the broken concrete or large diameter rocks). These large pieces of concrete and rock will provide a "plug" within the shaft at the "Sub 3" mine level. The bottom of the 20' shaft will begin with backfilling with the broken concrete and rocks since this is where the shaft intercepts the "Sub 3" mine level. Once the "plugs" are finished in both shafts, they will be backfilled simultaneously with spoil material to the "D" seam floor level. These entries will be "plugged" in the same manner as the "Sub 3" entries. Backfilling will then proceed until the two shafts are filled to an elevation approximately 15' beneath the final reclaimed surface elevation. Track hoes with rams will be

used to break the concrete collars and shaft walls to an elevation of approximately 5' beneath the final reclaimed surface elevation.

When backfilling has reached approximately 15' from the collar of the shafts, trackhoes or similar equipment will reach into the shaft openings and "bend" the metal cage guides and other metal so that it can be covered with backfill material and not protrude through the backfill at the surface. Once the metal cage guides have been removed from the 26' diameter shaft, track hoe rams will be used to break the concrete collar and shaft walls from both shafts and drifts to a level approximately 5' below the final reclaimed surface elevation.

The shaft sites and the surrounding disturbed area will then be re-contoured and re-vegetated as per the approved reclamation plan.

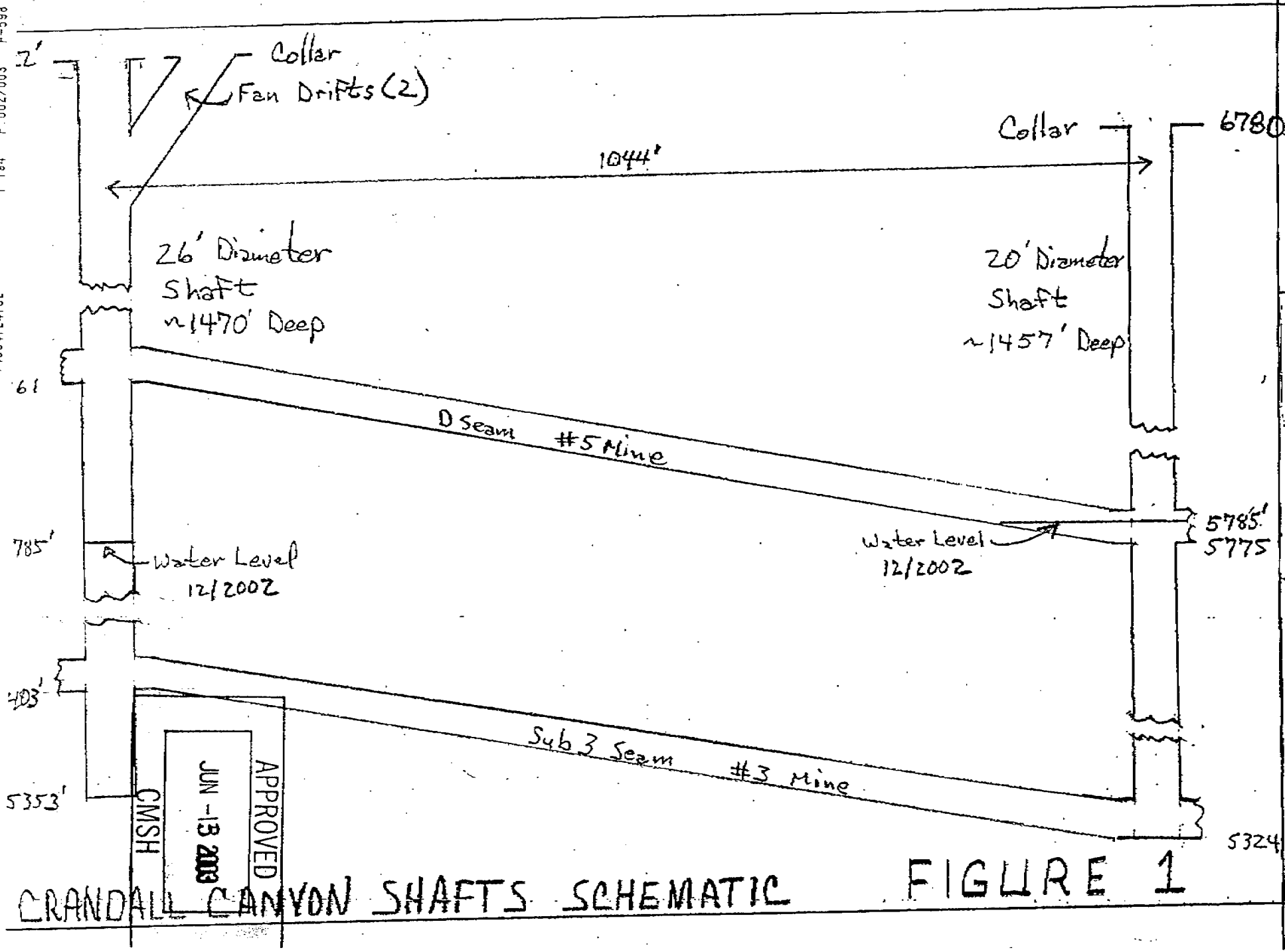
II. GENERAL INFORMATION

All work will be done by a contractor.

The following safety precautions and procedures will be followed and maintained throughout the entire process.

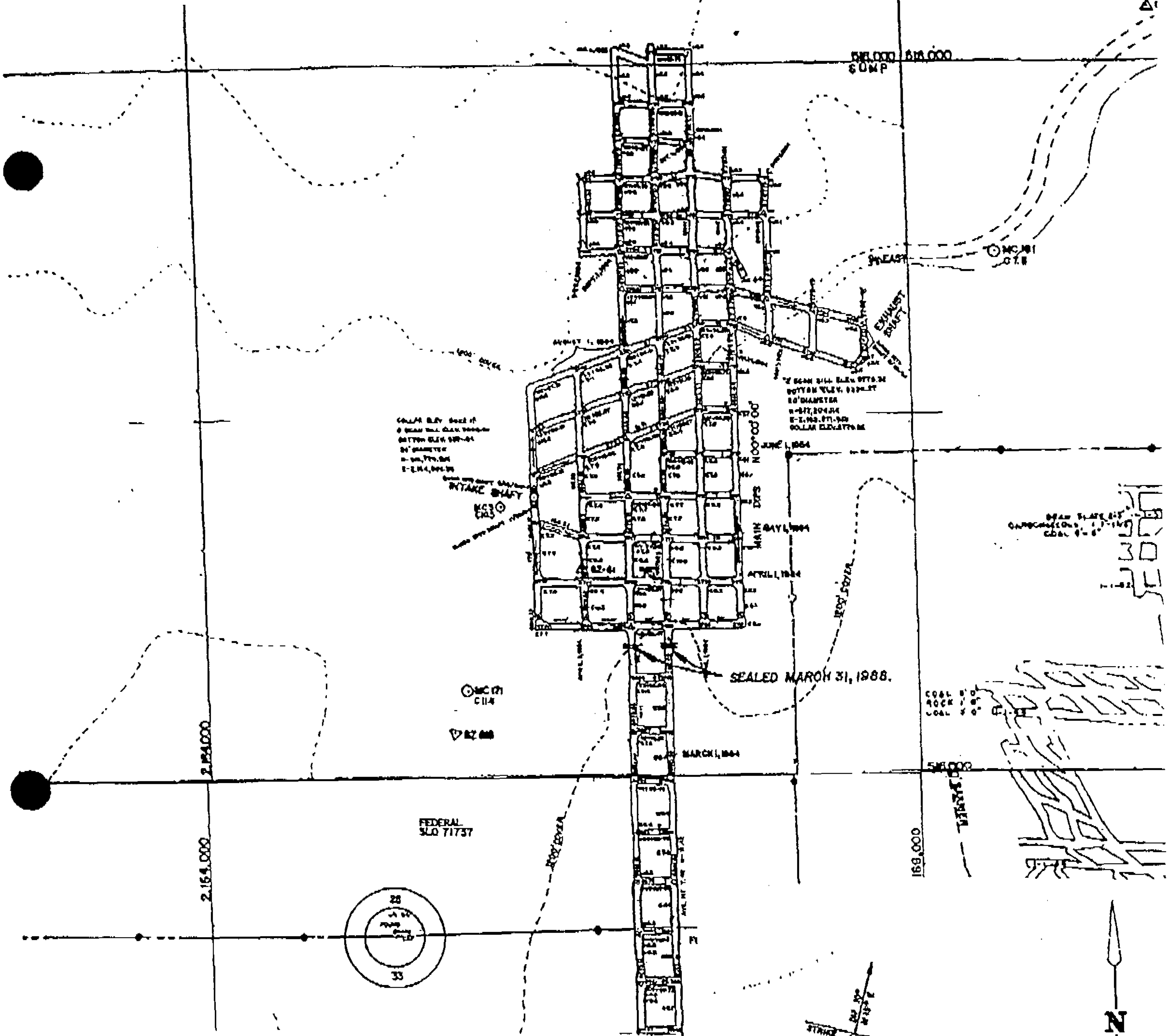
- All personnel working on the project will be trained as per MSHA surface work requirements, the Willow Creek Training Plan, and specifically on this plan.
- Access to Crandall Canyon will be restricted to authorized personnel throughout the entire project and guards will be used to ensure that during critical phases of the project only personnel necessary will be allowed in the canyon.
- During non working shifts and idle work days the Crandall Canyon gate will remain locked.
- At no time will any personnel be allowed to enter the shafts.
- No one will be allowed onto the existing caps without the use of safety harnesses.
- Workers will use safety harnesses and tie offs for any overhead work over 10' during the disassembly of the facilities and when working within the shaft guards.
- No smoking materials will be allowed within 200' from the shafts.

- First Aid equipment will be available near the work site.
- Qualified persons will conduct the methane monitoring.
- Methane checks will be made prior to and during all cutting and welding activities within the buildings above the shafts or within 25'from the shafts.
- Preshifts examinations of the work area will be conducted by a certified person prior to any work beginning each shift. An onshift examaination of the work area will be conducted by a certified person once during each working shift. The results of these examinations will be recorded in a preshift and onshift book.



CRANDALL CANYON SHAFTS SCHEMATIC

FIGURE 1



CASTLE GATE COAL COMPANY

HELPER, UTAH

A MAP OF THE NO. 5 MINE

MINE DEVELOPMENT AND SURFACE IMPROVEMENTS

IN THE CASTLE GATE "D" SEAM

CARBON COUNTY — STATE OF UTAH

SECTIONS 28,32,33 T12S R-9E

SECTIONS 3, 4, 5 T12S R-9E

UTAH STATE PLANE MERIDIAN AND COORDINATE SYSTEM

IDENTIFICATION NO.

47-01202

0 200 400 600

THIS MAP IS ELEV 6400

LEGEND

CHECK SURVEY POINTS
CO-ORDINATE LINES
SECTION & TOWNSHIP LINES
PROPERTY LINES
STOPPING
CANVAS STOPPING
DOOR
BELT
REGULATOR
OVERCAST
INTAKE AIR
RETURN AIR
INTAKE ESCAPEWAY
RETURN ESCAPEWAY
DRILL HOLE
POWER LINE
COVER LINE
OIL & GAS WELLS
BELT STOPPING
SEAL

APPROVED

JUN -13 2003

CMSH

FIGURE