HIDDEN VALLEY MINE
REFERENCE AREA VEGETATION SURVEY

OCTOBER 13, 1992

November 20, 1992

submitted to:

Calmat Company
1801 University Drive
Phoenix, Arizona 85034

submitted by:

JBR Consultants Group
8160 South Highland Drive, A-4
Sandy, Utah 84093

Hidden Valley Mine
Reference Area Vegetation Survey
October 13, 1992

Introduction

This report is a follow-up to the vegetation analysis made of the Hidden Valley Mine vegetation reference area on May 8, 1986. It should be used in conjunction with the original report which is appended to the Hidden Valley Reclamation Plan. The purpose of the re-analysis was to determine if the vegetation conditions at the reference area have changed significantly in the past six years. A severe drought has been in effect throughout much of this time period.

The reference area, established in 1986, is immediately northwest of the reclaimed area. It has the same aspect, elevation, etc. as the reclaimed site.

In addition to the re-analysis, a discussion of the condition of the adjacent reclaimed area is also included.

Sampling Methods

Sampling methodology used in the original, 1986 survey was followed for this analysis. Forty, one-yard square quadrats were selected randomly within the reference area. Using the same observer as performed the original, 1986 survey, ocular estimates of percent cover by species, litter, rock and bare ground were made for each quadrat.

Observation of the reference area indicates that the steep hillside is difficult to sample, and there is great variability in the amount of surface rock, etc. Vegetation is generally sparse. Therefore, a third sampling event within the reference area would likely vary from either of the two sampling events thus far. Statistical adequacy criteria established by the Division were not met for either this sample set or the original set. The number of

Hidden Valley Mine
1992 Vegetal Study
JBR

(B)

samples required for statistical adequacy would be very large. The purpose of the analysis is to set goals for establishing permanent vegetation cover on the reclaimed area.

Data Summary

A tabulation of the data from the 40 quadrats is attached to this report. Species found in the quadrats are listed below:

Shrubs
Atriplex confertifolia - shadscale saltbush
Artemisia nova - black sagebrush
Sarcobatus vermiculatus - greasewood
Gutierrezia sarothrae - broom snakeweed
Ceratoides lanata - winterfat
Chrysothamnus nauseosus - rubber rabbitbrush
Atriplex canescens - fourwing saltbush

Grasses
Hilaria jamesii - galleta
Oryzopsis hymenoides - Indian ricegrass

The 40 sampled quadrats averaged 5.6 percent vegetative ground cover. Of this, 38 percent are grasses and 62 percent are shrubs. Litter covers 2.4 percent of the ground, rock 30 percent and pavement and bare ground covers 62 percent.

The original reference area survey showed a vegetation cover of 6.5 percent. These data show that little change in vegetation conditions has occurred during the past six years, in spite of severe drought conditions. Therefore, the revegetation goal of 6.5 percent permanent vegetative ground cover is still valid for the reclaimed area.

Shrub density calculations indicate that there were 16 shrubs in the 40 quadrats, or 0.4 shrubs per square yard (1856 shrubs per acre).

Production is very low on this arid site, with only about 100 lbs of air dry matter produced each year.

B

Reclaimed Site Observations

Permanent vegetation consisting of crested wheatgrass, Russian wildrye, four-wing saltbush and shadscale are now established over the reclaimed area. These plants will now provide a seed source that can fill any niches that still may be available on this very arid area.

The observer, Frank R. Jensen, revegetation specialist, was surprised and pleased with the degree of revegetation that has been achieved considering the drought and harsh site conditions. He does not believe that it would be beneficial to re-disturb the reclaimed area at this time.

PHOTOGRAPHS

Photo No. 1. Reference Area, October 13, 1992.

Photo No. 2. Typical ground cover conditions on the reference area.

Photo No. 3. View of part of the reclaimed area - October 13, 1992. The mine entrance has been obliterated, the channel stabilized, and permanent vegetation established on the reclaimed site.

Photo No. 4. Close-up of revegetation on the reclaimed area - October 13, 1992.

DATA TABLE

Hidden Valley Mine Reference Area
October 13, 1992
Ocular Estimation, Random Quadrats

Quadrat	Vegetation	Plant Species	Litter	Rock	Pavement/ Bare ground
1	12	Hija 12	5	40	43
2	12	Atco 10 Cela 2	2	20	66
3	10	Save 10	3	15	72
4	0	0	0	45	55
5	5	Orhy 5	2	35	58
6	7	Gusa 5 Orhy 2	2	15	76
7	0	0	2	25	75
8	0	0	0	35	65
9	8	Haja 8	5	45	42
10	0	0	0	10	90
11	3	Haja 3	2	35	60
12	10	Cela 10	5	55	30
13	0	0	0	10	90
14	0	0	0	15	85
15	7	Arno 7	2	11	80
16	12	Atca 12	3	10	75
17	10	Orhy 10	5	45	40
18	0	0	0	20	80
19	5	Hija 5	2	38	55
20	7	Atcp 7	3	30	60

DATA TABLE (cont.)

Hidden Valley Mine Reference Area
October 13, 1992
Ocular Estimation, Random Quadrats

Quadrat	Vegetation	Plant Species	Litter	Rock	Pavement/ Bare ground
21	0	0	0	20	80
22	10	Arno 10	5	35	50
23	0	0	0	40	60
24	8	Orhy 8	3	25	64
25	10	Sava 10	5	25	60
26	0	0	0	35	65
27	0	0	0	40	60
28	15	Chna 15	5	25	60
29	0	0	0	20	80
30	8	Orhy 8	4	25	63
31	7	Arno 7	5	25	63
32	8	Hija 8	5	40	52
33	9	Chan 9	3	25	63
34	0	0	0	25	75
35	0	0	0	35	65
36	6	Arno 6	3	20	71
37	10	Sava 10	4	41	45
38	12	Hija 5 Arno 7	5	40	43
39	0	0	0	65	35
40	12	Orhy 12	5	40	43
Avg	5.6		2.4	30.0	62.0

HIDDEN VALLEY MONITORING

February, 1992

The Hidden Valley site was visited by JBR on February 27, 1992. Most of the site is free of snow, with the exception of the less exposed, north-facing slopes. Soil moisture is good over much of the site, but no seed germination was evident at this time. Negligible runoff occurred from the site as a result of snowmelt, consequently no erosion problems surfaced.

Maintenance work that will be needed this season include repair of the livestock fences crossing Ivie Creek, and replacement of stream buffer zone signs that are becoming weathered. Fence repair will be done once the stream is ice-free and runoff conditions allow access. Sign replacement will be done after the issue regarding the perimeter markers has been resolved by the Division.

HIDDEN VALLEY MONITORING
April. 1992

The Hidden Valley site was visited by JBR on April 28, 1992. The Division did not contact us to accompany them on an inspection this month. nor has an April inspection report been received.

The site is in very good condition at this time. Growth of grasses, mat salt bush and fourwing salt bush is occuring on the road surfaces; these plants, plus winter fat, are growing well on the fill slopes and pad areas adjacent to the main diversion channel. Plants appear healthier and better established than at any time since reclamation work was done. There is also substantial cover of annual forbs including kochia, mustards, and loco-weed.

However, soil moisture is becoming depleted, so additional spring rains are needed to maintain the good growing conditions.

No runoff or erosion problems were noted at the site. Some rerouting of water in the area adjacent to the A-seam matting was done as had been recommended by the Division during the March inspection.

Maintenance work performed included re-attachment of some silt fence fabric that had been separated from the fence backing.

HIDDEN VALLEY MONITORING
May, 1992

The Hidden Valley site was visited by JBR on May 6 and May 12, 1992. On the first visit, Division inspectors Hugh Cline and Henry Sauer were performing the monthly inspection. On the second visit, water monitoring at the Ivie Creek sites was done.

The site is in very good condition. Growth is continuing, and evidence of new grass germination was seen. Some of the more established grasses and salt bushes have begun to produce seed. Division inspectors made notes on plant species seen at the site and considered the site to be in better condition than in past spring seasons.

Precipitation had occurred at the site in between the two visits so soil moisture conditions were good. No evidence of runoff was seen. Ivie Creek has apparently peaked for the snowmelt season; flows were down to a base level condition during the monitoring.

Fences, silt fences, erosion matting, signs and structures are in good repair. The matting has lost most of its straw, as expected for its third season in place, however the coconut fibers and netting are still providing some benefit to the slopes.

HIDDEN VALLEY MONITORING
July, 1992

The Hidden Valley site was visited by JBR on July 31, 1992. JBR was not contacted to accompany the Divison inspector again this month.

A significant storm runoff event had occurred at the site, presumably subsequent to the Division inspection on July 17, 1992. This event resulted in the need for significant maintenance to water bars, some water bar outfalls, the A-seam diversion, the sediment pond location silt fence, the main riprapped channel, and the cross silt fences adjacent to the main channel. Some of these areas may represent sites for future NOV's during the next inspection. Minor maintenance is needed in additional isolated spots. Plans to accomplish this maintenance work are being made at this time. The fill slopes held up remarkably well during the event; evidently the vegetation and what remains of the erosion control matting were effective in reducing runoff velocities.

The vegetation at the site is still in good condition. Halogeton, as noted in the Division inspection report is present on the roadway, but seeded species are present as well.

The new mine identification site was installed during the site visit.

HIDDEN VALLEY MONITORING
August. 1992

The Hidden Valley site was visited by JBR on August 20, 1992. JBR was in the company of Divison inspectors who were performing a complete inspection.

A storm runoff event had occurred at the site subsequent to the maintenance work done earlier in the month. No major damage resulted. although a need for further maintenance was noted by the Division. This maintenance, including work on the main riprapped channel. small gulley areas, water bars, and the roadway diversion was accomplished the week following the inspection.

Most vegetation on site has produced seed; annual weeds including the halogeton are beginning to dry up.

Fences and signs are all in working order, with the exception of the livestock drift fences crossing Ivie Creek. Replacement of those still needs to be done.

HIDDEN VALLEY MONITORING

September. 1992

The Hidden Valley site was visited by JBR Consultants Group on several different occasions this month. On September 9. JBR was in the company of Division and OSM inspectors who were performing a complete inspection. The site was in good condition at the time of the visit. Some ongoing maintenance needs were pointed out. and maintenance done in August was noted as sufficient at this time. The issue of the wells and water rights associated with them was brought up during this inspection.

At least one small runoff event occurred at the site this month. No major damage resulted: routine maintenance work will be done to alleviate any potential problem areas. The areas associated with the pending NOVs have not noticeably changed during the past month.

Water sampling was done this month. as was replacement of the livestock drift fences crossing Ivie Creek. Additional work on those will be done later this month. The mine identification sign has been shot with bullet holes again. but is still functional.

The vegetation survey got underway on the 25th of the month. and is ongoing.

HIDDEN VALLEY MONITORING

October. 1992

The Hidden Valley site was visited by JBR Consultants Group on several different occasions this month. The vegetation survey was completed early in October. with field work ending on the 6th. The following week. maintenance to slopes and check dams was performed over a several-day period. On October 20. JBR accompanied the Division during a routine. complete inspection. No NOV's or major problem areas were identified during the inspection. Areas that are the focus of ongoing appeal were examined. but any site work will not be done at this time.

In general. the site was in good condition at the time of the inspection. At least one small runoff event had occurred at the site subsequent to the maintenance work. but little additional work will be needed. Vegetative growth has slowed for the season: no frost has yet occurred. Soil moisture conditions were favorable.

Signs. silt fences. and other structures were functioning. The mine identification sign is still legible in spite of recent shootings. The stream buffer zone signs need replacement. but this task will be delayed until the buffer zone/perimeter marker issue has been resolved.

HIDDEN VALLEY MONITORING

November. 1992

The Hidden Valley site was visited by JBR Consultants Group on November 24th. At that visit. JBR was accompanied by the Division Inspector who was performing a routine. complete inspection. No NOV's or major problem areas were identified during the inspection: one area on the lower road where check dams had filled with sediment were mentioned as in need of more maintenance.

Otherwise. the site was in good condition at the time of the inspection. At least one recent snow storm had occurred at the site. but a negligible accumulation of snow was visible. The ground was not frozen at the time of the inspection. but soil moisture was fairly high.

Signs. silt fences. and other structures were functioning.

HIDDEN VALLEY MONITORING

December. 1992

The Hidden Valley site was visited by JBR Consultants Group on December 21st for a monthly monitoring inspection. No Division personnel were present. Prior to the visit on the 21st. work had been done by JBR on the livestock drift fences crossing Ivie Creek and on the lower road where check dams were in need of more maintenance.

A recent snow storm had occurred at the site. and site condition was difficult to assess under the snow cover: however no problems were evident.

Signs. silt fences. and other structures were in place as required.

HIDDEN VALLEY MINE
WATER MONITORING SUMMARY
FIELD MEASUREMENT SHEET

Date Sampled	May 12, 1992
Time Sampled	Site #1: 1430
	Site #2: 1330
Sampler	Karla D. Knoop

Location	Flow (cfs)	Temperature degrees C	pH	Conductivity (micromhos)	Dissolved Oxygen (mg/l)
#1 Ivie Ck (upper)	1.3	15	8.5	>1500*	7.8
#2 Ivie Ck (lower)	1.3	15	8.4	>1500*	7.6

*Conductivity values were greater than the upper measurement limit of the meter used; conductivity will be measured at the lab.

CHEMTECH
ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 6-02-92

TO: JBR Consultants
8160 So. Highland Dr. STE A-4
Sandy, Utah 84093

DATE SUBMITTED: 5-14-92 - JBR/Calmat Hidden Valley Mine

DATE SAMPLED: 5-12-92 @ 1330 by Karla Knoop

CERTIFICATE OF ANALYSIS

SAMPLE ID: Site #2
Lower Ivie

LAB: U077690

PARAMETER		ANALYST/DATE/TIME/METHOD/MDL			
Acidity as HCO_3, mg/l	<10	RG	5-26-92	@1200 EPA 310.1	10
Bicarbonate as HCO_3, mg/l	326	RG	5-15-92	@0800 EPA 310.1	10
Carbonate as CO_3, mg/l	6.9	RG	5-15-92	@0800 EPA 310.1	0.1
Calcium as Ca, mg/l	206	AR	5-18-92	@1030 EPA 215.1	0.1
Chloride as Cl, mg/l	177	TM	5-15-92	@0910 EPA 325.3	0.5
Conductivity, umhos/cm	3,664	TM	5-18-92	@1015 EPA 120.1	0.5
Hardness as $CaCO_3$, mg/l	1,490	TM	5-18-92	@0850 EPA 130.2	0.5
Magnesium as Mg, mg/l	227	AR	5-18-92	@0920 EPA 242.1	0.1
Potassium as K, mg/l	12.2	AR	5-20-92	@1020 EPA 258.1	0.1
Sodium as Na, mg/l	393	AR	5-20-92	@1210 EPA 273.1	0.1
Sulfate as SO_4, mg/l	1,897	TM	5-15-92	@0815 EPA 375.4	0.5
TDS, mg/l	3,304	RG	5-14-92	@1030 EPA 160.1	10
Iron as Fe (D), mg/l	0.112	AR	5-27-92	@1500 EPA 236.1	0.01
Manganese as Mn (T), mg/l	0.02	AR	5-27-92	@1500 EPA 243.1	0.01
Oil & Grease, mg/l	<.5	RG	5-15-92	@1030 EPA 413.1	0.5
Settleable Solids, ml/l	<.1	RG	5-14-92	@1105 EPA 160.5	0.1
TSS, mg/l	24	RG	5-14-92	@1105 EPA 160.2	1.0
Cation, meq/l	46.37				
Anion, meq/l	50.08				

Rex Henderson

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PHONE: (801) 262-7299
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RECEIVED JUN 0 4 1992

DATE: 6-02-92

TO: JBR Consultants
8160 So. Highland Dr. STE A-4
Sandy, Utah 84093

DATE SUBMITTED: 5-14-92 - JBR/Calmat Hidden Valley Mine

DATE SAMPLED: 5-12-92 @ 1430 by Karla Knoop

CERTIFICATE OF ANALYSIS

SAMPLE ID: Site #1 Upper Ivie

LAB: U077689

PARAMETER		ANALYST/DATE/TIME/METHOD/MDL			
Acidity as HCO_3, mg/l	<10	RG	5-26-92	@1200 EPA 310.1	10
Bicarbonate as HCO_3, mg/l	314	RG	5-15-92	@0800 EPA 310.1	10
Carbonate as CO_3, mg/l	9.2	RG	5-15-92	@0800 EPA 310.1	0.1
Calcium as Ca, mg/l	204	AR	5-18-92	@1030 EPA 215.1	0.1
Chloride as Cl, mg/l	170	TM	5-15-92	@0910 EPA 325.3	0.5
Conductivity, umhos/cm	3,609	TM	5-18-92	@1015 EPA 120.1	0.5
Hardness as $CaCO_3$, mg/l	1,480	TM	5-18-92	@0850 EPA 130.2	0.5
Magnesium as Mg, mg/l	235	AR	5-18-92	@0920 EPA 242.1	0.1
Potassium as K, mg/l	12.4	AR	5-20-92	@1020 EPA 258.1	0.1
Sodium as Na, mg/l	393	AR	5-20-92	@1210 EPA 273.1	0.1
Sulfate as SO_4, mg/l	1,860	TM	5-15-92	@0815 EPA 375.4	0.5
TDS, mg/l	3,236	RG	5-14-92	@1030 EPA 160.1	10
Iron as Fe (D), mg/l	0.085	AR	5-27-92	@1500 EPA 236.1	0.01
Manganese as Mn (T), mg/l	0.02	AR	5-27-92	@1500 EPA 243.1	0.01
Oil & Grease, mg/l	<.5	RG	5-15-92	@1030 EPA 413.1	0.5
Settleable Solids, ml/l	<.1	RG	5-14-92	@1105 EPA 160.5	0.1
TSS, mg/l	32	RG	5-14-92	@1105 EPA 160.2	1.0
Cation, meq/l	46.93				
Anion, meq/l	48.99				

Rex Henderson

HIDDEN VALLEY MINE
WATER MONITORING SUMMARY
FIELD MEASUREMENT SHEET

Date Sampled	September 24. 1992
Time Sampled	Site #1: 1200
	Site #2: 1000
Sampler	Karla D. Knoop

Location	Flow (cfs)	Temperature degrees C	pH	Conductivity (micromhos)	Dissolved Oxygen (mg/l)
#1 Ivie Ck (upper)	0.8	18	8.7	>1900*	7.8
#2 Ivie Ck (lower)	0.8	16	8.5	>1900*	7.7

*Conductivity values were greater than the upper measurement limit of the meter used.

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
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DATE: 10-21-92

TO: JBR Consultants
8160 So. Highland Dr. STE A-4
Sandy, Utah 84093

SAMPLE ID: Lab #U082195 - Calm't Hidden Valley, Site 1 Upper A @1200, 9-24-92
Sampled by Karla Knoop

DATE SUBMITTED: 9-25-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	ANALYST/DATE/TIME/METHOD/MDL			
TDS, mg/l	3,266	RG	9-29-92	1300	160.1	10.0
TSS, mg/l	113	RG	9-28-92	1330	160.2	1.0
Settleable Solids, ml/l	<.1	RH	9-28-92	1400	160.5	0.1
Hardness as $CaCO_3$, mg/l	1,418	TM	9-28-92	1240	130.2	5.0
Acidity as $CaCO_3$, mg/l	<10	RG	9-29-92	1030	130.2	10
Bicarbonate as HCO_3, mg/l	313	RG	9-29-92	0930	310.1	1.0
Carbonate as CO_3, mg/l	0	RG	9-29-92	0930	310.1	1.0
Sulfate as SO_4, mg/l	1,811	TM	10-2-92	0900	375.4	0.5
Chloride as Cl, mg/l	142	TM	9-28-92	1315	325.1	0.5

Rex Henderson

CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
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PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 10-21-92

TO: JBR Consultants
8160 So. Highland Dr. STE A-4
Sandy, Utah 84093

SAMPLE ID: Lab #U082196 - Calm't Hidden Valley, Site 1 Upper B @1200, 9-24-92
Sampled by Karla Knoop

DATE SUBMITTED: 9-25-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	ANALYST/DATE/TIME/METHOD/MDL			
TDS, mg/l	3,254	RG	9-29-92	1300	160.1	10.0
TSS, mg/l	134	RG	9-28-92	1330	160.2	1.0
Settleable Solids, ml/l	<.1	RH	9-28-92	1400	160.5	0.1
Hardness as $CaCO_3$, mg/l	1,439	TM	9-28-92	1240	130.2	5.0
Acidity as $CaCO_3$, mg/l	<10	RG	9-29-92	1030	130.2	10
Bicarbonate as HCO_3, mg/l	314	RG	9-29-92	0930	310.1	1.0
Carbonate as CO_3, mg/l	0	RG	9-29-92	0930	310.1	1.0
Sulfate as SO_4, mg/l	1,852	TM	10-2-92	0900	375.4	0.5
Chloride as Cl, mg/l	144	TM	9-28-92	1315	325.1	0.5

Rex Henderson

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6100 S. STRATLER
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PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 10-21-92

TO: JBR Consultants
S160 So. Highland Dr. STE A-4
Sandy, Utah 84093

SAMPLE ID: Lab #U0821S3 - Calm't Hidden Valley, Site 1 Upper @ 1200, 9-24-92
Sampled by Karla Knoop

DATE SUBMITTED: 9-25-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	ANALYST/DATE/TIME/METHOD/MDL
Oil & Grease, mg/l	<.5	RG 10-05-92 0900 413.1 0.5
Calcium as Ca (D), mg/l	201	AR 10-14-92 0800 215.1 0.1
Iron as Fe (D), mg/l	0.072	AR 10-15-92 1210 236.1 0.01
Magnesium as Mg (D), mg/l	213	AR 10-14-92 0900 242.1 0.1
Manganese as Mn (D), mg/l	0.065	AR 10-16-92 1030 243.1 0.01
Potassium as K (D), mg/l	11.9	AR 10-08-92 1000 258.1 0.1
Sodium as Na (D), mg/l	395	AR 10-08-92 1200 273.1 0.1

Rex Henderson

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6100 S. STRATLER
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PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 10-21-92

TO: JBR Consultants
8160 So. Highland Dr. STE A-4
Sandy, Utah 84093

SAMPLE ID: Lab #U082184 - Calm't Hidden Valley, Site 2 Lower @ 1000, 9-24-92
Sampled by Karla Knoop

DATE SUBMITTED: 9-25-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED	ANALYST/DATE/TIME/METHOD/MDL			
Oil & Grease, mg/l	<.5	RG 10-05-92	0900	413.1	0.5
Calcium as Ca (D), mg/l	202	AR 10-14-92	0800	215.1	0.1
Iron as Fe (D), mg/l	0.308	AR 10-15-92	1210	236.1	0.01
Magnesium as Mg (D), mg/l	201	AR 10-14-92	0900	242.1	0.1
Manganese as Mn (D), mg/l	0.072	AR 10-16-92	1030	243.1	0.01
Potassium as K (D), mg/l	11.8	AR 10-08-92	1000	258.1	0.1
Sodium as Na (D), mg/l	392	AR 10-08-92	1200	273.1	0.1

Rex Henderson

Hidden Valley Mine Photos / Overflight Inspection
Roads / Vegetation

5/4/94

Hidden Valley Mine Photos/Overnight Inspection.
Sediment & Erosion Control/Runoff Control

Return to
Bill

5/4/94 MK

Hidden Valley Mine Photos/Oversight Inspection:
Sediment & Erosion Control/Runoff Control

5/4/94

2 copies

HIDDEN VALLEY BRIEFING

I. WHY

*AS OF APRIL AGAIN ASSIGNED HIDDEN VALLEY MINE/LAST 1991.

*CONCERNED ABOUT WHAT THE PERMITTEE/CONSULTANT HAS & HAS NOT DONE.

*CONCERNED ABOUT WHAT THE DIVISION HAS & HAS NOT DONE

*CONCERNED ABOUT POSSIBLE MISCONCEPTIONS ON THE PART OF BOTH PARTIES. HOW TO GROUND TRUTH THESE FOR RESOLUTION BEFORE THEY BECOME CONFLICTS OR DELAYED WHERE BOTH PARTIES REALIZE SOME BETTER PREPARATION AND MEETING OF THE MINDS COULD HAVE AVOIDED SUCH PROBLEMS. COULD GO ON BUT -- NUFF SAID.

*SHOULD DIVISION & OPERATOR CONTINUE BUSINESS AS USUAL OR CONSIDER SOME NEW INITIATIVES? THAT'S ONE OF THE MAIN PURPOSES OF THIS MEETING

II. BACKGROUND

A. ENVIRONMENT DESCRIPTION

- HARSH SITE
- PHYSIOGRAPHY
- CLIMATE
- SOIL
- VEGETATION
- LAND USE

B. MINE

- **STARTED** - PLAN SUBMITTED 9/79, APPROVED 2/80, SITE PREPARATION 4/80
- **SHUT DOWN** - 8/80 - NO COMMERCIAL PRODUCTION TOOK PLACE
- **RECLAMATION** - FALL 1986 - 7 ACRES OF DISTURBANCE/WILDLIFE/LIVESTOCK POST-MINING LAND USE
  - -ROAD (½ MILE)
    - ·PULLED ROAD CULVERTS
    - ·RIPPED ROAD, LEFT ROAD BED 45' - 50'
    - ·CONSTRUCTED 13 WATER BARS
    - ·DISTURBED AND UNDISTURBED APPROVED TO BE DISCHARGED OVER ROAD OUTSLOPE
  - -A & B SEAM
    - ·COVERED MOST OF HIGHWALL
  - -SEDIMENT POND REMOVED
    - ·SILT FENCES PROVIDED SEDIMENT CONTROL
  - -DISTURBED AREA
    - ·SEEDED AND MULCHED EXCEPT FOR ROAD OUTSLOPE AND TWO BUFFER ZONE AREAS
  - -PROTECTION FENCE CONSTRUCTED
    - ·COVERED MOST OF THE MINE EXCEPT UPPER AREA
  - -CONDUCTING, MONITORING, WATER/VEGETATION
- **RECONSTRUCTION/MAINTENANCE**
  - -ROAD BED RESEEDED
  - -A & B SLOPED RESEEDED AND MULCH NETTING APPLIED
  - -UNDISTURBED CHANNEL RECONSTRUCTED
  - -MINOR MAINTENANCE/ROCK CHECK DAMS, SILT FENCES REPAIRED, ADDITIONS, VEHICLE BARRIERS INSTALLED AND LATEST EROSION CONTROL ON SEVEN EROSION AREAS-FIVE IN TDN.

OPERATOR HAS BEEN VERY COOPERATIVE. 1991 NOV ON SEEDING ROAD OUTSLOPES, EROSION CONTROL, AND MARKERS GO INTERWOVEN INTO A BOND CLOCK ISSUE. NOV WENT THROUGH ADMINISTRATIVE APPEALS PROCEDURE AND COURTS. NOV WAS UPHELD UNTIL THE APPELATE COURT REVERSED THE DECISION OF DISTRICT COURT. THE NOV THEREAFTER WAS VACATED BY THE DIVISION.

DOCUMENTS IN FOLDER

I. AGENDA FOR JULY 21, 1994 MEETING

II. DOGM ISSUES

III. BOND RELEASE - MAJOR STEPS

IV. PROPOSAL ON CLASSIFYING ISSUES

V. ISSUE ANALYSIS

CONSENSUS ISSUES

NON-CONSENSUS ISSUES

VI. ACTION PLAN

CONSENSUS ISSUES

NON-CONSENSUS ISSUES

VII. REFERENCES

A. VEGETATION STUDY - JUNE DIVISION INSPECTION

B. VEGETAL STUDY - 1992 JBR

C. IBLA DECISION/VEGETATION AND SEDIMENT CONTROL

D. HUSBANDRY PRACTICES

III

SOME MAJOR STEPS IN COAL MINE RECLAMATION BOND RELEASE

PHASE I - RECLAIMING MINE UNDER AN APPROVED RECLAMATION PLAN

*REMOVAL/DEMOLITION OF BUILDINGS, CULVERTS, ET. AL.

*BACKFILLING AND GRADING

*RUNOFF/SEDIMENT CONTROL MEASURES

*TOPSOILING

*SEEDBED PREPARATION AND SEEDING

*PROTECTION - PERMIT SITE

PHASE II - MEETING VEGETATION & SEDIMENTATION STANDARDS, ET. AL.

*PUBLIC COMMENTS & CONCERN

*SEDIMENTATION STANDARDS

*EROSION

*VEGETATION

*POST-MINING LAND USE

*IF VEGETATION & SOIL/SEDIMENT YIELDS/EROSION CONDITIONS MEETS REGULATORY STANDARDS AND UPON APPROVAL ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT PONDS ARE REMOVED.

PHASE III - MINIMUM TIME FRAME REQUIREMENTS PLUS SPILLOVERS

+ 25" PRECIPITATION - 5 YEARS

- 25" PRECIPITATION - 10 YEARS

NOTE SOME ITEMS MAY SPILL OVER, EVEN THOUGH APPROVED IN A PRIOR STEP IE., FROM PHASE I TO PHASE II AND FROM PHASE II TO PHASE III.

IV

HIDDEN VALLEY MINE MEETING
JULY 21, 1994
AGENDA ITEM #3

CLASSIFICATION OF ISSUES

1. THOSE ISSUES THAT HAVE GONE THROUGH A PRIOR APPROVAL PROCESS.

2. THOSE ISSUES THAT WERE THE SUBJECT OF NOV'S AND NOT UPHELD IN THE COURTS/VACATED.

3. THOSE ISSUES WHERE MINING AND RECLAMATION PLAN COMMITTMENTS HAVE NOT BEEN FULLY MET.

4. THOSE ISSUES DISCUSSED WITH PERMITTEE/CONSULTANT AND CORRECTIVE ACTION INITIATED BY OPERATOR:

    1. THOSE REQUIRING NO FURTHER ACTION AT THIS TIME.

    2. THOSE REQUIRING FOLLOWUP ACTION AT THIS TIME.

5. THOSE ISSUES THAT MAY EVOLVE AND BECOME COMPLIANCE PROBLEMS.

6. THOSE ISSUES THAT ARE PARAMOUNT TO PHASE II BOND RELEASE.

    1. WHERE DATA IS AVAILABLE.

    2. WHERE DATA VOIDS EXIST.

7. THOSE ISSUES THAT ARE INTERWOVEN WITH METHODOLOGY AND DATA GATHERING.

8. THOSE ISSUES THAT RELATE TO THE BOND CLOCK.

V

ISSUE ANALYSIS

CONSENSUS ISSUES

NON-CONSENSUS ISSUES

VI

ACTION PLAN

CONSENSUS ISSUES

NON-CONSENSUS ISSUES

2 copies

HIDDEN VALLEY BRIEFING

I. WHY

*AS OF APRIL AGAIN ASSIGNED HIDDEN VALLEY MINE/LAST 1991.

*CONCERNED ABOUT WHAT THE PERMITTEE/CONSULTANT HAS & HAS NOT DONE.

*CONCERNED ABOUT WHAT THE DIVISION HAS & HAS NOT DONE

*CONCERNED ABOUT POSSIBLE MISCONCEPTIONS ON THE PART OF BOTH PARTIES. HOW TO GROUND TRUTH THESE FOR RESOLUTION BEFORE THEY BECOME CONFLICTS OR DELAYED WHERE BOTH PARTIES REALIZE SOME BETTER PREPARATION AND MEETING OF THE MINDS COULD HAVE AVOIDED SUCH PROBLEMS. COULD GO ON BUT -- NUFF SAID.

*SHOULD DIVISION & OPERATOR CONTINUE BUSINESS AS USUAL OR CONSIDER SOME NEW INITIATIVES? THAT'S ONE OF THE MAIN PURPOSES OF THIS MEETING

II. BACKGROUND

A. ENVIRONMENT DESCRIPTION

- HARSH SITE
- PHYSIOGRAPHY
- CLIMATE
- SOIL
- VEGETATION
- LAND USE

B. MINE

- STARTED - PLAN SUBMITTED 9/79, APPROVED 2/80, SITE PREPARATION 4/80
- SHUT DOWN - 8/80 - NO COMMERCIAL PRODUCTION TOOK PLACE
- RECLAMATION - FALL 1986 - 7 ACRES OF DISTURBANCE/WILDLIFE/LIVESTOCK POST-MINING LAND USE
  - -ROAD (½ MILE)
    - ·PULLED ROAD CULVERTS
    - ·RIPPED ROAD, LEFT ROAD BED 45' - 50'
    - ·CONSTRUCTED 13 WATER BARS
    - ·DISTURBED AND UNDISTURBED APPROVED TO BE DISCHARGED OVER ROAD OUTSLOPE
  - -A & B SEAM
    - ·COVERED MOST OF HIGHWALL
  - -SEDIMENT POND REMOVED
    - ·SILT FENCES PROVIDED SEDIMENT CONTROL
  - -DISTURBED AREA
    - ·SEEDED AND MULCHED EXCEPT FOR ROAD OUTSLOPE AND TWO BUFFER ZONE AREAS
  - -PROTECTION FENCE CONSTRUCTED
    - ·COVERED MOST OF THE MINE EXCEPT UPPER AREA
  - -CONDUCTING, MONITORING, WATER/VEGETATION
- RECONSTRUCTION/MAINTENANCE
  - -ROAD BED RESEEDED
  - -A & B SLOPED RESEEDED AND MULCH NETTING APPLIED
  - -UNDISTURBED CHANNEL RECONSTRUCTED
  - -MINOR MAINTENANCE/ROCK CHECK DAMS, SILT FENCES REPAIRED, ADDITIONS, VEHICLE BARRIERS INSTALLED AND LATEST EROSION CONTROL ON SEVEN EROSION AREAS-FIVE IN TDN.

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Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

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DIVISION OF
GAS & MINING

UTAH DIVISION OF OIL, GAS AND MINING
FACSIMILE COVER SHEET

DATE: 7/12/94

FAX # 637-~~5340~~ 4102

ATTN: Bill Malencik

COMPANY: DOGM

FROM: Susan White

DEPARTMENT: _____

NUMBER OF PAGES BEING SENT (INCLUDING THIS ONE): 5

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DIVISION OF OIL GAS & MINING

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

INSPECTION REPORT

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

Partial: X Complete:__ Exploration:__

Inspection Date & Time: 6/9, 1-5pm; 6/10, 7-3pm and 6/16, 9-2pm 1994

Date of Last Inspection: 5/4/94

Mine Name: Hidden Valley County: Emery Permit Number: ACT/015/007

Permittee and/or Operator's Name: CALMAT Co. (Hidden Valley Coal Company)

Business Address: 1801 University Drive, Phoenix, Arizona 85034

Type of Mining Activity: Underground X Surface__ Prep. Plant__ Other__

State Officials(s): Susan White

Company Official(s):__

Federal Official(s): None

Weather Conditions: Hot and buggy

Existing Acreage: Permitted-950 Disturbed-7 Regraded-7 Seeded-7 Bonded-7

Increased/Decreased: Permitted-__ Disturbed-___ Regraded-___ Seeded-___ Bonded-___

Status: __Exploration/__Active/__Inactive/__Temporary Cessation/__Bond Forfeiture

Reclamation (X Phase I/__Phase II/__Final Bond Release/__Liability___Year)

REVIEW OF PERMIT, PERFORMANCE STANDARDS & PERMIT CONDITION REQUIREMENTS

Instructions

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
   a. For complete inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check N/A.
   b. For partial inspections check only the elements evaluated.
2. Document any noncompliance situation by referencing the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performance standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Division Orders, and amendments.

	EVALUATED	N/A	COMMENTS	NOV/ENF
1. PERMITS, CHANGE, TRANSFER, RENEWAL, SALE	[ ]	[ ]	[ ]	[ ]
2. SIGNS AND MARKERS	[X]	[ ]	[X]	[ ]
3. TOPSOIL	[ ]	[ ]	[ ]	[ ]
4. HYDROLOGIC BALANCE:				
a. DIVERSIONS	[ ]	[ ]	[ ]	[ ]
b. SEDIMENT PONDS AND IMPOUNDMENTS	[ ]	[ ]	[ ]	[ ]
c. OTHER SEDIMENT CONTROL MEASURES	[ ]	[ ]	[ ]	[ ]
d. WATER MONITORING	[ ]	[ ]	[ ]	[ ]
e. EFFLUENT LIMITATIONS	[ ]	[ ]	[ ]	[ ]
5. EXPLOSIVES	[ ]	[ ]	[ ]	[ ]
6. DISPOSAL OF EXCESS SPOIL/FILLS/BENCHES	[ ]	[ ]	[ ]	[ ]
7. COAL MINE WASTE/REFUSE PILES/IMPOUNDMENTS	[ ]	[ ]	[ ]	[ ]
8. NONCOAL WASTE	[ ]	[ ]	[ ]	[ ]
9. PROTECTION OF FISH, WILDLIFE AND RELATED ENVIRONMENTAL VALUES	[ ]	[ ]	[ ]	[ ]
10. SLIDES AND OTHER DAMAGE	[ ]	[ ]	[ ]	[ ]
11. CONTEMPORANEOUS RECLAMATION	[ ]	[ ]	[ ]	[ ]
12. BACKFILLING AND GRADING	[ ]	[ ]	[ ]	[ ]
13. REVEGETATION	[X]	[ ]	[X]	[ ]
14. SUBSIDENCE CONTROL	[ ]	[ ]	[ ]	[ ]
15. CESSATION OF OPERATIONS	[ ]	[ ]	[ ]	[ ]
16. ROADS:				
a. CONSTRUCTION/MAINTENANCE/SURFACING	[ ]	[ ]	[ ]	[ ]
b. DRAINAGE CONTROLS	[ ]	[ ]	[ ]	[ ]
17. OTHER TRANSPORTATION FACILITIES	[ ]	[ ]	[ ]	[ ]
18. SUPPORT FACILITIES/UTILITY INSTALLATIONS	[ ]	[ ]	[ ]	[ ]
19. AVS CHECK (4th Quarter-April, May, June)_____(date)	[ ]	[ ]	[ ]	[ ]
20. AIR QUALITY PERMIT	[ ]	[ ]	[ ]	[ ]
21. BONDING & INSURANCE	[ ]	[ ]	[ ]	[ ]

A

INSPECTION REPORT

VEGETATION SURVEY

(Continuation sheet) Page 2 of 2

DOGM JUNE INSPECTION

PERMIT NUMBER: ACT/015/007 DATE OF INSPECTION: 6/9/94

(Comments are Numbered to Correspond with Topics Listed Above)

2. SIGNS AND MARKERS

The permit sign was in place and had the correct information at the entrance to the disturbed area.

13. REVEGETATION

During this inspection an intensive vegetation survey was conducted. The site was stratified into 7 different areas and based on the acreage seeded a proportional amount of random samples were taken. Living vegetative cover was estimated by ocular methods using a four meter square quadrate. A total of 223 samples were taken from the seeded area and 42 samples were taken from the reference area. The results are as follow.

	Mean total non-weedy cover (%)	Median total non-weedy cover (%)
Reference Area	16.3	14.5
Disturbed Seeded Area	7.1	3.0

Other information from the data have not been analyzed. Non-weedy cover was reported because on this site that was the only vegetation that could be considered to meet the performance standards of R645-301-353.100. Weedy species were defined as introduced annual plants such as Halogeton, Kochia and Russian thistle.

The 1992 JBR study found the mean perennial cover for the main mine area to be 10.1% and the roadway 4.8%. The reference area in this 1992 survey had 5.8% basal area vegetative cover.

The Division data indicate that this site is not close to meeting Phase II bond release standards. Because the operator has taken no action to improve the condition of the site this inspector cannot make a finding that the site is in compliance with the Utah Coal Mining Rules. No enforcement action was taken at this time because the Division has not discussed the results of this survey with the operator.

Copy of this Report:
Mailed to: Bernie Freeman (OSM), Lee Edmonson (CALMAT)
Given to: Joe Helfrich (DOGM)

Inspector's Signature: #35 Date: _____

Failure to Meet Revegetation Requirements

OSMRE's inspection report simply noted that "[t]he last planting of vegetation on some areas was unsuccessful" (Exh. 6). The NOV was issued because there were several bare areas, especially those having steeper slopes and western and northwestern exposure (Exhs. 4 and 8; Tr. 12). The inspector testified that there was always a little problem getting vegetation to "hold" at this site, because the soil is toxic (Tr. 12). Due to the acidity of the soil, the inspector testified that it is always going to be "an extremely hard situation" (Tr. 17, 18). The inspector noted that Coal Energy had been trying to revegetate the site (Tr. 15) and that he thought that, in view of drought conditions in the area, the NOV was going to be modified to give more time to comply (Tr. 16). The NOV cited Coal Energy with a violation of 30 CFR 715.20(a)(2), and directed it to take soil samples from the locations where vegetation had not been successful and submit the results to OSMRE and then to reseed, lime, fertilize, and mulch all areas where vegetation had been unsuccessful (Exh. 7; Tr. 15).

[3] The regulation, 30 CFR 715.20(a)(1), establishes the requirement that a permittee shall establish on all land that has been disturbed a diverse, effective, and permanent vegetative cover. The evidence presented by OSMRE adequately shows that Coal Energy failed to meet this requirement, and this showing was unrebutted by Lowe, who testified that, despite reseeding the minesite repeatedly in years previous to 1986, there were areas that did not come up at all (Tr. 35).

However, Lowe argued at the hearing and on appeal that he made every effort to establish ground cover in the spring of 1986, but was thwarted by drought conditions prevalent in Tennessee at that time. Lowe testified that he had placed 200 pounds of patch seed, 2 tons of lime, and a ton of fertilizer in the spring of 1986, which was the driest spring in history, which is why the seed did not "take" (Tr. 20). Lowe placed into evidence an affidavit further reciting the details of his spring planting, along with receipts corroborating that he purchased reseeding materials in the spring of 1986 (Exh. A). He also presented copies of telephone messages suggesting that OSMRE recognized in August 1986 that drought conditions in Tennessee had rendered reseeding ineffective (Exh. A). 3/

In effect, Lowe argues that its failure to comply with 30 CFR 715.20(a)(1) should be excused because he took adequate steps to comply and that, but for drought conditions beyond his control, would have achieved compliance. However, Coal Energy failed to establish, as a matter of fact, that it would have achieved compliance but for the drought. Coal Energy admitted that previous efforts to reseed had been inadequate, and the OSMRE inspector testified that he believed these efforts may have failed because of poor, acidic soil conditions at the site (Tr. 15-17).

3/ It appears from this affidavit and Lowe's testimony that OSMRE extended the time for compliance for revegetation until Aug. 15, 1986, and that OSMRE had indicated that NOV's written for "seeding would probably be vacated due to the drought" (Exh. A; Tr. 34). The NOV was evidently not vacated.

In any event, the terms of 30 CFR 715.20(a)(1) are mandatory: the permittee is required to establish vegetative cover on disturbed areas. If proven, allegations that compliance was impossible may, in some circumstances, mitigate the amount of the civil penalty assessed for a violation or reduce the duration of a suspension of a mining permit. 30 CFR 722.17(c), 723.13(b)(3)(A). 4/ However, the fact that circumstances beyond the operator's control contributed to a failure to revegetate a site as required does not justify a finding that no violation occurred. Lone Star Steel Co. v. OSMRE, 98 IBLA 56, 62 (1987).f An NOV may not be vacated because of the operator's inability to comply. 30 CFR 722.17(a); Coal Energy, Inc. v. OSMRE, 104 IBLA 24, 26 (1988).g

Inadequate Sediment Control Measures

OSMRE's inspection report states: "Diversion ditch #004 has filled in with soil. The ditch has been blocked and run-off cannot reach sediment pond #002 on Area #3A" (Exh. 6). As noted above, the inspector testified that the ditch was filled with soil that washed in from the rills and gullies, adding that the blockage prevented drainage from entering Sediment Pond No. 2 (Tr. 11). He added that water was not running through the ditch into the pond on the day he made his inspection (Tr. 18). OSMRE also presented a photograph of the ditch showing it nearly full of sediment, with drainage water standing in it (Exh. 2).

[4] The NOV cited Coal Energy with a violation of 30 CFR 715.17(c)(3):

> Diversions shall be designed, constructed, and maintained in a manner to prevent additional contributions of suspended solids to streamflow or to runoff outside the permit area to the extent possible, using the best technology currently available. In no event shall such contributions be in excess of requirements set by applicable State or Federal law. Appropriate sediment control measures for these diversions shall include, but not be limited to, maintenances of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins. [Emphasis supplied.]

In Turner Brothers, Inc. v. OSMRE, 102 IBLA 299, 305, 95 I.D. 75, 79 (1988),hwe dealt with a situation comparable to the present matter, where the OSMRE inspector cited the operator with a failure to pass all surface drainage from areas disturbed by mining through a sedimentation pond or a siltation structure before the drainage left the permit area. The regulation in question in that case was an Oklahoma State provision identical to 30 CFR 717.17(a)(1), which provides in part: "All surface drainage from the disturbed area * * * shall be passed through a sedimentation pond or a series of sedimentation ponds prior to leaving the permit area." (Emphasis supplied.)

4/ Lowe testified that he was concerned about the imposition of civil penalties for these violations (Tr. 36). However, Coal Energy lost its right to dispute the correctness of the civil penalty assessed for this violation by failing to prepay the amount of the proposed civil penalty.

f) GFS(MIN) 59(1987)
g) GFS(MIN) 95(1988)
h) GFS(MIN) 67(1988)

State of Utah
DEPARTMENT OF NATURAL RESOURCES
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Susan

April 25, 1994

Robert H. Hagen, Director
Office of Surface Mining
Albuquerque Field Office
505 Marquette, N.W.
Albuquerque, New Mexico 87102

Re: Informal Submittal of the Utah Husbandry Practices

Dear Mr. Hagen:

This letter and its enclosures constitute the informal submittal of an amendment to the Utah Coal Regulatory Program. There are two documents enclosed for your review and consideration as amendments to Utah's program, proposed rules R. 645-301-357.300 et seq. and draft Appendix "C" to the already existing Vegetation Information Guidelines.

Neither the rules nor the appendix to the guidelines will be finalized until Utah receives your comments and/or suggestions on this draft language. Thank you for your consideration of this informal submittal. If there are any questions, please let me know.

Very truly yours,

James W. Carter
Director

jbe
Enclosures: Draft rules (underlined)
Draft Appendix "C"
cc/enc: R. Lowrie, OSM, Denver
R. Daniels, DOGM
J. Brown, DOGM
P:HUSBANDR.LET

R645. Natural Resources; Oil, Gas and Mining; Coal.
R645-301. Coal Mine Permitting: Permit Application Requirements.
R645-301-300. Biology.

310. Introduction. Each permit application will include descriptions of the:

311. Vegetative, fish, and wildlife resources of the permit area and adjacent areas as described under R645-301-320;

312. Potential impacts to vegetative, fish and wildlife resources and methods proposed to minimize these impacts during coal mining and reclamation operations as described under R645-301-330 and R645-301-340; and

313. Proposed reclamation designed to restore or enhance vegetative, fish, and wildlife resources to a condition suitable for the designated postmining land use as described under R645-301-340.

320. Environmental Description.

321. Vegetation Information. The permit application will contain descriptions as follows:

321.100. If required by the Division, plant communities within the proposed permit area and any reference area for SURFACE COAL MINING AND RECLAMATION ACTIVITIES and areas affected by surface operations incident to an underground mine for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES. This description will include information adequate to predict the potential for reestablishing vegetation; and

321.200. The productivity of the land before mining within the proposed permit area for SURFACE COAL MINING AND RECLAMATION ACTIVITIES and areas affected by surface operations incident to an underground mine for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The productivity will be determined by yield data or estimates for similar sites based on current data from the U. S. Department of Agriculture, state agricultural universities, or appropriate state natural resource or agricultural agencies.

322. Fish and Wildlife Information. Each application will include fish and wildlife resource information for the permit area and adjacent areas.

322.100. The scope and level of detail for such information will be determined by the Division in consultation with state and federal agencies with responsibilities for fish and wildlife and will be sufficient to design the protection and enhancement plan required under R645-301-333.

322.200. Site-specific resource information necessary to address the respective species or habitats will be required when the permit area or adjacent area is likely to include:

322.210. Listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), or those species or habitats protected by similar state statutes;

322.220. Habitats of unusually high value for fish and wildlife such as important streams, wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protection, migration routes, or reproduction and wintering areas; or

322.230. Other species or habitats identified through agency consultation as requiring special protection under state or federal law.

322.300. Fish and Wildlife Service review. Upon request, the Division will provide the resource information required under R645-301-322 and the protection and enhancement plan required under R645-301-333 to the U.S. Fish and Wildlife Service Regional or Field Office for their review. This information will be provided within 10 days of receipt of the request from the Service.

323. Maps and Aerial Photographs. Maps or aerial photographs of the permit area and adjacent areas will be provided which delineate:

323.100. The location and boundary of any proposed reference area for determining the success of revegetation;

323.200. Elevations and locations of monitoring stations used to gather data for fish and wildlife, and any special habitat features;

323.300. Each facility to be used to protect and enhance fish and wildlife and related environmental values; and

323.400. If required, each vegetative type and plant community, including sample locations. Sufficient adjacent areas will be included to allow evaluation of vegetation as important habitat for fish and wildlife for those species identified under R645-301-322.

330. Operation Plan. Each application will contain a plan for protection of vegetation, fish, and wildlife resources throughout the life of the mine. The plan will provide:

331. A description of the measures taken to disturb the smallest practicable area at any one time and through prompt establishment and maintenance of vegetation for interim stabilization of disturbed areas to minimize surface erosion. This may include part or all of the plan for final revegetation as described in R645-301-341.100 and R645-301-341.200;

332. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES a description of the anticipated impacts of subsidence on renewable resource lands identified in R645-301-320, and how such impact will be mitigated;

333. A description of how, to the extent possible, using the best technology currently available, the operator will minimize disturbances and adverse impacts to fish and wildlife and related environmental values during coal mining and reclamation operations, including compliance with the Endangered Species Act of 1973 during coal mining and reclamation operations, including the location and operation of haul and access roads and support facilities so as to avoid or minimize impacts on important fish and wildlife species or other species protected by state or federal law; and how enhancement of these resources will be achieved, where practicable. This Description will:

333.100. Be consistent with the requirements of R645-301-358;

333.200. Apply, at a minimum, to species and habitats identified under R645-301-322; and

333.300. Include protective measures that will be used during the active mining phase of operation. Such measures may include the establishment of buffer zones, the selective location and special design of haul roads and powerlines, and the monitoring of surface water quality and quantity.

340. Reclamation Plan.

341. Revegetation. Each application will contain a reclamation plan for final revegetation of all lands disturbed by coal mining and reclamation operations, except water areas and the surface of roads approved as part of the postmining land use, as required in R645-301-353 through R645-301-357, showing how the applicant will comply with the biological protection performance standards of the State Program. The plan will include, at a minimum:

341.100. A detailed schedule and timetable for the completion of each major step in the revegetation plan;

341.200. Descriptions of the following:

341.210. Species and amounts per acre of seeds and/or seedlings to be used. If fish and wildlife habitat will be a postmining land use, the criteria of R645-301-342.300 apply.

341.220. Methods to be used in planting and seeding;

341.230. Mulching techniques, including type of mulch and rate of application;

341.240. Irrigation, if appropriate, and pest and disease control measures, if any; and

341.250. Measures proposed to be used to determine the success of revegetation as required in R645-301-356.

341.300. The Division may require greenhouse studies, field trials, or equivalent methods of testing proposed or potential revegetation materials and methods to demonstrate that revegetation is feasible pursuant to R645-300-133.710.

342. Fish and Wildlife. Each application will contain a fish and wildlife plan for the reclamation and postmining phase of operation consistent with R645-301-330, the performance standards of R645-301-358 and include the following:

342.100. Enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. Such measures may include restoration of streams and other wetlands, retention of ponds and impoundments, establishment of vegetation for wildlife food and cover, and the replacement of perches and nest boxes. Where the plan does not include enhancement measures, a statement will be given explaining why enhancement is not practicable.

342.200. Where fish and wildlife habitat is to be a postmining land use, the plant species to be used on reclaimed areas will be selected on the basis of the following criteria:

342.210. Their proven nutritional value for fish or wildlife;

342.220. Their use as cover for fish or wildlife; and

342.230. Their ability to support and enhance fish or wildlife habitat after the release of performance bonds. The selected plants will be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits to fish and wildlife.

342.300. Where cropland is to be the postmining land use, and where appropriate for wildlife- and crop-management practices, the operator will intersperse the fields with trees, hedges, or fence rows throughout the harvested area to break up large blocks of monoculture and to diversify habitat types for birds and other animals.

342.400. Where residential, public service, or industrial uses are to be the postmining land use, and where consistent with the approved postmining land use, the operator will intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs, and trees useful as food and cover for wildlife.

350. Performance Standards.

351. General Requirements. All coal mining and reclamation operations will be carried out according to plans provided under R645-301-330 through R645-301-340.

352. Contemporaneous Reclamation. Revegetation on all land that is disturbed by coal mining and reclamation operations, will occur as contemporaneously as practicable with mining operations, except when such mining operations are conducted in accordance with a variance for combined SURFACE and UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES issued under R645-302-280. The Division may establish schedules that define contemporaneous reclamation.

353. Revegetation: General Requirements. The permittee will establish on regraded areas and on all other disturbed areas, except water areas and surface areas of roads that are approved as part of the postmining land use, a vegetative cover that is in accordance with the approved permit and reclamation plan.

353.100. The vegetative cover will be:

353.110. Diverse, effective, and permanent;

353.120. Comprised of species native to the area, or of introduced species where desirable and necessary to achieve the approved postmining land use and approved by the Division;

353.130. At least equal in extent of cover to the natural vegetation of the area; and

353.140. Capable of stabilizing the soil surface from erosion.

353.200. The reestablished plant species will:

353.210. Be compatible with the approved postmining land use;

353.220. Have the same seasonal characteristics of growth as the original vegetation;

353.230. Be capable of self-regeneration and plant succession;

353.240. Be compatible with the plant and animal species of the area; and

353.250. Meet the requirements of applicable Utah and federal seed, poisonous and noxious plant; and introduced species laws or regulations.

353.300. The Division may grant exception to the requirements of R645-301-353.220 and R645-301-353.230 when the species are necessary to achieve a quick-growing,

temporary, stabilizing cover, and measures to establish permanent vegetation are included in the approved permit and reclamation plan.

353.400. When the approved postmining land use is cropland, the Division may grant exceptions to the requirements of R645-301-353.110, R645-301-353.130, R645-301-353.220 and R645-301-353.230. The requirements of R645-302-317 apply to areas identified as prime farmland.

354. Revegetation: Timing. Disturbed areas will be planted during the first normal period for favorable planting conditions after replacement of the plant-growth medium. The normal period for favorable planting is that planting time generally accepted locally for the type of plant materials selected.

355. Revegetation: Mulching and Other Soil Stabilizing Practices. Suitable mulch and other soil stabilizing practices will be used on all areas that have been regraded and covered by topsoil or topsoil substitutes. The Division may waive this requirement if seasonal, soil, or slope factors result in a condition where mulch and other soil stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetative cover.

356. Revegetation: Standards for Success.

356.100. Success of revegetation will be judged on the effectiveness of the vegetation for the approved postmining land use, the extent of cover compared to the extent of cover of the reference area or other approved success standard, and the general requirements of R645-301-353.

356.110. Standards for success, statistically valid sampling techniques for measuring success, and approved methods are identified in the Division's "Vegetation Information Guidelines, Appendix A."

356.120. Standards for success will include criteria representative of unmined lands in the area being reclaimed to evaluate the appropriate vegetation parameters of ground cover, production, or stocking. Ground cover, production, or stocking will be considered equal to the approved success standard when they are not less than 90 percent of the success standard. The sampling techniques for measuring success will use a 90-percent statistical confidence interval (i.e., one-sided test with a 0.10 alpha error).

356.200. Standards for success will be applied in accordance with the approved postmining land use and, at a minimum, the following conditions:

356.210. For areas developed for use as grazing land or pasture land, the ground cover and production of living plants on the revegetated area will be at least equal to that of a reference area or such other success standards approved by the Division.

356.220. For areas developed for use as cropland, crop production on the revegetated area will be at least equal to that of a reference area or such other success standards approved by the Division. The requirements of R645-302-310 through R645-302-317 apply to areas identified as prime farmland.

356.230. For areas to be developed for fish and wildlife habitat, recreation, shelter belts, or forest products, success of vegetation will be determined on the basis of tree and shrub stocking and vegetative ground cover. Such parameters are described as follows:

356.231. Minimum stocking and planting arrangements will be specified by the Division on the basis of local and regional conditions and after consultation with and approval by Utah agencies responsible for the administration of forestry and wildlife programs. Consultation and approval will be on a permit specific basis and will be performed in accordance with the "Vegetation Information Guidelines" of the division.

356.232. Trees and shrubs that will be used in determining the success of stocking and the adequacy of plant arrangement will have utility for the approved postmining land use. At the time of bond release, such trees and shrubs will be healthy, and at least 80 percent will have been in place for at least 60 percent of the applicable minimum period of responsibility. No trees and shrubs in place for less than two growing seasons will be counted in determining stocking adequacy.

356.233. Vegetative ground cover will not be less than that required to achieve the approved postmining land use.

356.240. For areas to be developed for industrial, commercial, or residential use less than two years after regrading is completed, the vegetative ground cover will not be less than that required to control erosion.

356.250. For areas previously disturbed by mining that were not reclaimed to the requirements of R645-200 through R645-203 and R645-301 through R645-302 and that are remined or otherwise redisturbed by coal mining and reclamation operations, at a minimum, the vegetative ground cover will be not less than the ground cover existing before redisturbance and will be adequate to control erosion.

356.300. Siltation structures will be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.

356.400. When a siltation structure is removed, the land on which the siltation structure was located will be revegetated in accordance with the reclamation plan and R645-301-353 through R645-301-357.

357. Revegetation: Extended Responsibility Period.

357.100. The period of extended responsibility for successful vegetation will begin after the last year of augmented seeding, fertilization, irrigation, or other work, excluding husbandry practices that are approved by the Division in accordance with paragraph R645-301-357.300.

357.200. Vegetation parameters identified in R645-301-356.200 will equal or exceed the approved success standard during the growing seasons for the last two years of the responsibility period. The period of extended responsibility will continue for five or ten years based on precipitation data reported pursuant to R645-301-724.411, as follows:

357.210. In areas of more than 26.0 inches average annual precipitation, the period of responsibility will continue for a period of not less than five full years.

357.220. In areas of 26.0 inches or less average annual precipitation, the period of responsibility will continue for a period of not less than ten full years.

~~[357.300. The Division may approve selective husbandry practices, such as weed and brush control, fencing, and water developments or other practices once they have been incorporated into the Utah program, in accordance with 30 CFR 732.17 as being normal husbandry practices, excluding augmented seeding, fertilization, or irrigation, without extending the period of responsibility for revegetation success and bond liability, if such practices can be expected to continue as part of the postmining land use or if discontinuance of the practices after the liability period expires will not reduce the probability of permanent revegetation success. Approved practices will be normal conservation practices within the region for unmined lands having land uses similar to the approved postmining land use of the disturbed area, including such practices as disease, pest, and vermin control; and any pruning, reseeding and/or transplanting specifically necessitated by such actions.]~~

357.300. Husbandry Practices - General Information

357.301. The Division may approve certain selective husbandry practices without lengthening the extended responsibility period. Any practices used will first be incorporated into the mining and reclamation plan and approved in writing by the Division. Approved practices are normal conservation practices for unmined lands within the region which have land uses similar to the approved postmining land use of the disturbed area. Approved practices may continue as part of the postmining land use, but discontinuance of the practices after the end of the bond liability period will not jeopardize permanent revegetation success. Augmented seeding, fertilization, or irrigation will not be approved without extending the period of responsibility for revegetation success and bond liability.

357.302. The Permittee will demonstrate that husbandry practices proposed for a reclaimed area are not necessitated by inadequate grading practices, adverse soil conditions, or poor reclamation procedures.

357.303. The Division will consider the entire area that is bonded within the same increment, as defined in R645-301-820.110, when calculating the extent of area that may be treated by husbandry practices.

357.304. If it is necessary to seed or plant in excess of the limits set forth under R645-301-357.300, the Division may allow a separate extended responsibility period for these reseeded or replanted areas in accordance with R645-301-820.330.

357.310. Reestablishing trees and shrubs

357.311. Transplanting. Trees or shrubs may be replanted at a rate of up to a cumulative total of 20% of the required stocking rate through 60% of the extended responsibility period.

357.312. Seeding. If shrubs are to be established by seed in areas of established vegetation, small areas will be scalped. The cumulative number of scalped areas where seed is to be planted may not exceed 20% of the required stocking rate.

357.320. Weed Control and Associated Revegetation. Weed control through chemical, mechanical, and biological means discussed in R645-301-357.321 through R645-301-357.323 is allowed through the entire extended responsibility period for noxious weeds and through the first 20% of the responsibility period for other weeds. Any revegetation necessitated by the following weed control methods will be performed according to the seeding and transplanting parameters set forth in R645-301-357.324.

357.321. Chemical Weed Control. Weed control through chemical means, following the current Weed Control Handbook (published annually or biannually by the Utah State University Cooperative Extension Service) and herbicide labels, is allowed.

357.322. Mechanical Weed Control. Mechanical practices that may be approved include hand roguing, grubbing and mowing.

357.323. Biological Weed Control. Selective grazing by domestic livestock is allowed. Biological control of weeds through disease, insects, or other biological weed control agents is allowed but will be approved on a case-by-case basis by the Division, and other appropriate agency or agencies which have the authority to regulate the introduction and/or use of biological control agents.

357.324. Vegetation Establishment and Competition. To control weeds and potential invasion, bare or weedy areas up to a cumulative total of 15% of a reclaimed area may be reseeded or replanted during the first 20% of the extended responsibility period without restarting the responsibility period. After the first 20% of the responsibility period, no more than 3% of the reclaimed area may be reseeded in any single year without restarting the responsibility period, and no continuous reseeded area may be larger than one acre. Furthermore, no seeding is allowed after the first 60% of the responsibility period or Phase II bond release, whichever comes first. Any seeding outside these parameters is considered to be "augmentative seeding," and will restart the extended responsibility period. The Permittee will meet the requirements of R645-301-357.301 for any areas seeded or planted for weed control.

357.330. Control of Other Pests.

357.331. Control of big game (deer, elk, moose, antelope) may be used only during the first 60% of the extended responsibility period or until Phase II bond release, whichever comes first. Any methods used will first be approved by the Division and, as appropriate, the land management agency and the Utah Division of Wildlife Resources. Methods that may be used include fencing and other barriers, repellents, scaring, shooting, and trapping and relocation. Trapping and special hunts or shooting will be approved by the Division of Wildlife Resources. Other control techniques may be allowed but will be considered on a case-by-case basis by the Division and by the Utah Division of Wildlife Resources.

Appendix C of the Division's "Vegetation Information Guidelines" includes a non-exhaustive list of publications containing big game control methods.

357.332. Control of small mammals and insects will be approved on a case-by-case basis by the Utah Division of Wildlife Resources and/or the Utah Department of Agriculture. The recommendations of these agencies will also be approved by the appropriate land management agency or agencies. Small mammal control will be allowed only during the first 60% of the extended responsibility period or until Phase II bond release, whichever comes first. Insect control will be allowed through the entire extended responsibility period if it is determined, through consultation with the Utah Department of Agriculture or Cooperative Extension Service, that a specific practice is being performed on adjacent unmined lands.

357.340. Wildfires and Other Disasters Occurring After Phase II Bond Release. Where necessitated by wildfire or some other disaster which is not caused by any lack of planning, design, or implementation on the part of the Permittee, the seeding and planting of the entire area which is significantly affected by the disaster will be allowed as an accepted husbandry practice and thus will not restart the extended responsibility period.

357.341. The extent of the area where seeding and planting will be allowed will be determined by the Division in cooperation with the Permittee.

357.342. All applicable revegetation success standards will be achieved on areas reseeded following a disaster, including R645-301-356.232 for areas with a designated postmining land use of forestry or wildlife.

357.343. Seeding and planting after wildfires or other disasters will only be allowed in areas where Phase II bond release has been granted.

357.350. Irrigation. The irrigation of transplants, but not of general areas, is allowed through the first 20% of the extended responsibility period. Irrigation may be by such methods as, but not limited to, drip irrigation, hand watering, or sprinkling.

357.360. Highly Erodible Area and Rill and Gully Repair. The repair of highly erodible areas and rills and gullies will not be considered an augmentative practice, and will thus not restart the extended responsibility period, if the affected area as defined in R645-301-357.363 comprises no more than 15% of the disturbed area for the first 20% of the extended responsibility period and if no continuous area to be repaired is larger than one acre.

357.361. After the first 20% of the extended responsibility period but prior to the end of the first 60% of the responsibility period or until Phase II bond release, whichever comes first, highly erodible area and rill and gully repair will be considered augmentative, and will thus restart the responsibility period, if the area to be repaired is greater than 3% of the total disturbed area or if a continuous area is larger than one acre.

357.362. The extent of the affected area will be determined by the Division in cooperation with the Permittee.

357.363. The area affected by the repair of highly erodible areas and rills and gullies is defined as any area that is reseeded as a result of the repair. Also included in the affected

areas are interspacial areas of thirty feet or less between repaired rills and gullies. Highly erodible areas are those areas which cannot usually be stabilized by ordinary conservation treatments and if left untreated can cause severe erosion or sediment damage.

357.364. The repair and/or treatment of rills and gullies which result from a deficient surface water control or grading plan, as defined by the recurrence of rills and gullies, will be considered an augmentative practice and will thus restart the extended responsibility period.

357.365. The Permittee shall demonstrate by specific plans and designs the methods to be used for the treatment of highly erodible areas and rills and gullies. These will be based on a combination of treatments recommended in the Soil Conservation Service Critical Area Planting recommendations, literature recommendations including those found in Appendix C of the Division's "Vegetation Information Guidelines", and other successful practices used at other reclamation sites in the State of Utah. Any treatment practices used will be approved by the Division.

Proposed for Inclusion as Appendix "C"
to the Existing
Vegetation Information Guidelines
April 25, 1994

Pest Control:

Plummer, A.P., D.R. Christensen, and S.B. Monsen. 1968. Restoring big-game range in Utah. Utah Division of Fish and Game Publication No. 68-3. p. 1-183.

USDA Forest Service. 1988. Fences. Missoula Technology and Development Center, Richard Karsky (Project Leader). U.S. Government Printing Office: 1988-594-194/80139. p. 1-210.

Vallentine, J.F. 1977. Range development and improvements. Brigham Young University Press, Provo, Utah. p. 1-516.

Wildlife Society, The. 1980. Wildlife management techniques manual, fourth edition: revised. S.D. Schemnitz (ed.). The Wildlife Society, Washington, D.C. p. 1-686.

Rill and Gully Repair:

Israelsen, C.E., J.E. Fletcher, F.W. Haws, and E.K. Israelsen. 1984. Erosion and sedimentation in Utah: a guide for control. Utah Water Research Laboratory, Logan, Utah. Hydraulics and Hydrology Series UWRL/H-84/03. p. 1-90.

Transportation Research Board. 1980. Erosion control during highway construction: manual on principles and practices. National Research Council, Washington, D.C. National Cooperative Highway Research Program Report 221. p. 1-23.

Utah State University Agricultural Experiment Station and Cooperative Extension Service. 1989. Interagency forage and conservation planting guide for Utah. Howard Horton (ed.). Extension Circular EC433. p. 1-67.

Vallentine, J.F. 1977. Range development and improvements. Brigham Young University Press, Provo, Utah. p. 1-516.

Seeding and Planting:

Bureau of Land Management. 1987. Renewable resource improvement and treatment guidelines and procedures. Bureau of Land Management Handbook H-1740-1. p. IV-1 to IV-10.

Ferguson, R.B., and N.C. Frischknecht. 1981. Shrub establishment on reconstructed soils in semiarid areas. Proc. Shrub establishment on disturbed arid and semi-arid lands. Wyoming Game and Fish Dept. p. 1-154.

Plummer, A.P., D.R. Christensen, and S.B. Monsen. 1968. Restoring big-game range in Utah. Utah Division of Fish and Game Publication No. 68-3. p. 1-183.

Utah State University Agricultural Experiment Station and Cooperative Extension Service. 1989. Interagency forage and conservation planting guide for Utah. Howard Horton (ed.). Extension Circular EC433. p. 1-67.

Vallentine, J.F. 1977. Range development and improvements. Brigham Young University Press, Provo, Utah. p. 1-516.

Weed Control:

Bureau of Land Management. 1991. Final environmental impact statement, vegetation treatment on BLM lands in thirteen western states. U.S. Government Printing Office: 1991-573-071/44014.

Montana State University, Utah State University, and University of Wyoming Cooperative Extension Services. 1993. 1993-94 Montana - Utah - Wyoming weed control handbook. Tom D. Whitson, Steven A. Dewey, and Peter K. Fay (editors). p. 1-210.

Ask Single Questions.

~~Are~~ new uninitiatives needed in order to get away from business as usual on some long term pressing problems that have application to two or more mines?

Would like to explore with you today those problems that DOGM/OPERATORS ARE TRYING TO SOLVE WHERE WE CANT SEEM TO TURN THE CORNER.

LIKE - EROSION ON MANCOS SHALE

- SAME STDS OPERATING/RECLAIMED MINE
- VEGETATION - ARTIFICIAL - Prep Areas 5"-19" on mancos shale.

~~We can~~

Some of these can be batched up for study - or solved through a demonstration area, applicable to two or more mines. If this is feasible who would be the best third party to tackle this other than DOGM/Operator who have too many irons in the fire.

What About Utah Colleges & Universities

- Work through approved grad. program with problem solving objective
- How could it be organized
  - Δ Committee/DOGM ~~make~~ identify long standing or complex future ant. problems
  - Δ ~~DOGM~~/Operator - Small Group To Screen Problems &
  - Δ Expose problems to Ut/Colleges & Univ. for interest expertise to solve/cost it any.

13-782 500 SHEETS, FILLER 5 SQUARE
42-381 50 SHEETS EYE-EASE® 5 SQUARE
42-382 100 SHEETS EYE-EASE® 5 SQUARE
42-383 200 SHEETS EYE-EASE® 5 SQUARE
42-389 100 RECYCLED WHITE 5 SQUARE
42-392 400 RECYCLED WHITE 5 SQUARE
42-399 200 RECYCLED WHITE 5 SQUARE
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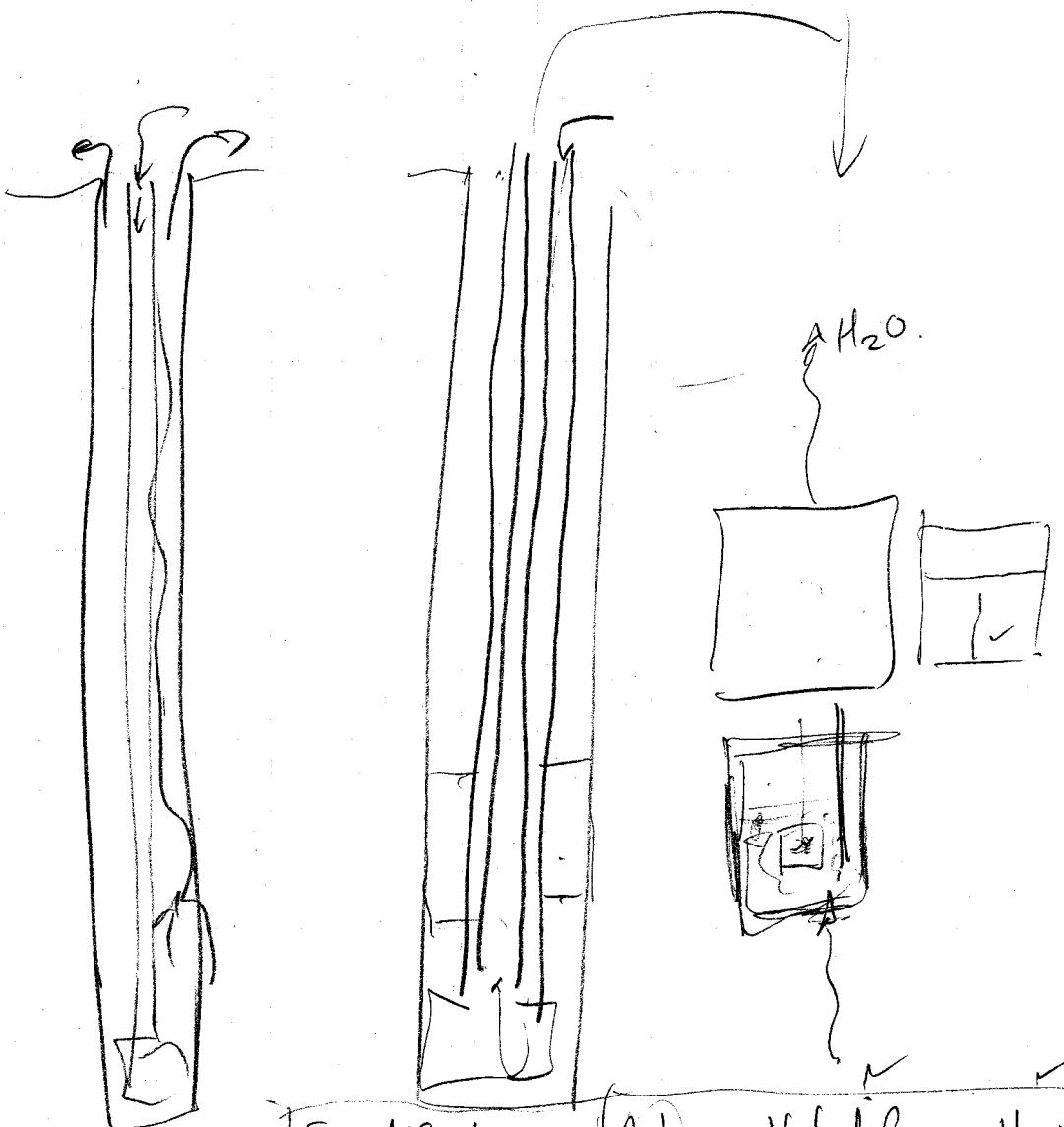


		Fixed Carbon	Ash	Volatile	H_2O.
				↓	↓
	Lignite			High	35-40.
3000	Peat				
	Lignite ✓	Low.			
6000	Sub-bitum. →	7500 - 10,500.			
	Bituminous	10,500 - 13,500			
	Meta Anthracite				
15,000	Anthracite.	~~98%~~			0

May 31, 1994
* Pending

COAL REGULATORY PROGRAM
1994 WORK STATUS
MINE BY MINE

BELINA MINES COMPLEX - ACT/007/001

No Number - Permit transfer for White Oak received 9/27/93; corrected submittal received 11/9/93; transfer approved pending receipt of bond 11/23/93,

* Division Order DO-94A sent 1/7/94 (who is operator?); response received 2/7/94; review due 3/7/94...~~will be~~ resolved 5/27 with transfer, ~~but write~~ MEMO 5/31.

* Violation N94-43-1-1 issued 5/13 for not submitting permit renewal 120 days in advance.

CASTLE GATE MINES - ACT/007/004

* Global Division Order issued 12/18/91; Settlement Agreement 1/30/92; Division Order on Crandall Canyon (pending); Complete Revised Technical Analysis by 3/18/94.Revised Permit with AOC variance 3/18/94....to Pat Winmill....on Jim's desk..

94A, Chapter 8 - Soils, received 2/1/94, approved 2/15/94.

94B, Merger with Legal and Financial Information, letter sent 2/16/94; response sent 3/1/94, put into AVS.

* Mini TA needs to terminate N91-28-2-1.....Schedule? (due 5/27?)

SKYLINE MINE - ACT/007/005

93D, Loadout Expansion, received 4/26/93; partially approved 1/21/94; response received 12/20/93; review completed 2/14/, deficiency sent 2/23, due from operator 3/23/94, received 3/16, approved 3/25, copies due 4/25.

* 93H, Waste Rock Expansion, received 8/19/93; deficiency sent 10/18/93; response due ? pending - deny? Deny week of 5/23

93K, Surface Facilities, received 12/1/93; deficiency sent 1/20/94;, response received 2/18, review due 3/18/94, approved 3/17, copies received 4/18.

* 93M, ASCA-NOV abatement received 11/17/93, deficiency sent 1/4/94; response due 3/31/94, extended to 4/29/94, submitted 5/3/94, approved 5/25 to implement, conditions, response due 6/24

93N, Corporate Structure, (DO-93A), received 11/24/93; deficiency sent 12/17/93; response received 2/16/94, AVS update 4/4, approval letter 5/6, ~~copies due 5/27~~ transmitted 5/26

93O, Subsidence mitigation, received 10/20/93; deficiency sent 12/8/93; response received 12/27/93, approved 3/1/94, transmitted 3/1.

Revised CHIA, completed 3/4/94

94A, Stoker conveyor received 2/18/94, initial review sent 2/25/94, review due 3/18/94, approved 3/8, copies sent 4/8, transmitted 4/8.

STAR POINT MINE - ACT/007/006

93C, IBC #2, received 6/7/93; DOGM approved 11/22/93; OSM approved 1/13/94.

93D, Revised water monitoring schedule, received 6/9/93; confusion, received 3/11/94, approved 3/11/94, copies received 4/1,transmitted.

93E, Access Road, received 8/4, review sent 8/10; approved 1/25/94,transmitted

94A, Revised Bond Amount, received 1/25/94, approved amount 2/10/94, no bond change yet!

Transfer

94B, Merger - Legal and Financial info, due 2/25/94 per letter sent 2/18/94, received 3/1, AVS incorporated

94C, CEP, Minor Coal Exploration Application, received 2/17/94, review due 3/17/94, recommendation for approval to BLM 4/11, FS EA letter received 5/18 for comments, comment?.

* Castle Valley Ridge Lease.....letter from BLM sent to FS on 5/2, preparing info for OSM, Denver.....

94D, Slide Mitigation Plan, Received —, follow-up... clean up slack stuff.

SUNNYSIDE MINE - ACT/007/007 - Chapter 11 Bankruptcy filed 3/25/94

93B, Significant Revision, Bond Reduction, received 3/16/93, not determined complete. Resubmitted 2/15/94. CHANGED!!!!!

93L, Power Lines in a Disturbed Area, received 7/16 and 11/22/93, new map submittal, (also part of DO-93B), approved 3/16

93P, Ancillary Road Status, commitment due 8/26

93CC, Redesign of No. 3 Hoist House pond (N93-32-3-8, 2 of 8), received 11/;22, denied 1/5/94. Resubmitted 1/28/94, approved 2/10/94, abatement due 5/11/94.

93DD, Abatement of violations N93-32-2-5, 2 of 5 (terminated) and N93-32-3-8, 8 of 8, (changed to reclamation hydrology?) received 11/22, ground truthed 2/9 and 2/10/94.

? 94A, Contemporaneous Reclamation of Unused Mine Site Areas, received 2/11/94; review due 3/11

94B, Twin Tank Overflow, received 2/28/94, review due 3/28, approved 3/3.

? 94C, Dewatering Borehole, received 3/9/94, review due 4/9, send letter re: no applicable

Reclamation Review by Randy and ? Weekly meetings.

GPS - Jeff, downloading

JWC memo to staff 5/2/94.....all through Lowell.....
GPS done with Wayne and Jeff on 5/10 and 5/11
Ground-truthing of maps by Pete and Scott week of 5/16, will write memo week of 5/23 — approved 5/31.... then terminate violation.
Settlement Agreement, Jim said he is waiting for draft from Denise Dragoo on 5/23

HIAWATHA MINE - ACT/007/011

* DO-92A, Roads, issued 3/13/92, response 11/13/92, deficiency sent 1/28/93, response received 6/9/93, 2nd deficiency sent 1/7/94, response due 2/7/94, extended to 4/7/94, review to be sent week of 5/23
* 93B, Alternate Borrow Area, received 9/10/93, deficiency sent 12/16/93, response due 1/17/94, response received 3/4, review due 4/4. Conditionally approved 5/27, submit copies by 6/24.

WELLINGTON - ACT/007/012

92B, Pond Mondification, received ?, approved 4/7/94, copies due 5/6
Midterm review sent 9/30/92, responses received as amendments
93A, received 2/12/93, First Installment
93B, received 3/26/93, Second Installment
93D, received 6/25/93, Third Installment
93E, received 9/24/93, Fourth Installment
93G, received 12/10/93, Fifth Installment
Sixth Installment received 4/22
Midterm responses due 1/10/94, review sent 2/22/94, response due 5/2/94, received 5/2, review by 6/15
93H, Transfer to NEICO, received 10/14/93, revised transfer application received 11/5/93, deficiency sent 11/18/93, response received 1/4/94, 2nd deficiency sent 1/19/94, response received 2/11/94, review due 3/11/94, approved ?
94A, Amended Air Quality approval Order, submitted 5/4/94, approved 5/4/, transmitted 5/4
94B, Resident Agent Update, submitted 5/9, approved 5/10, transmitted 5/10

HORSE CANYON MINE - ACT/007/013

93D, Sed pond updates, received 12/17/93, review sent 1/5/94, response 2/15/94, Henry needs to review during June inspection
93E, Midterm review, letter sent 11/10/93, response 12/17/93, review sent

1/25/94, response 2/15/94, approved 3/3/94

94A, Phase I Bond Release, received 4/12/, response to operator 5/31, denied until repairs have been accomplished.

GORDON CREEK #2, #7, AND #8 - ACT/007/016

94A, Water Monitoring Program, revised 1/26/94, approved 1/31/94

* Revised Reclamation Plan to be Reviewed, meeting held at the Division on 3/14, AOC directive signed 4/6, 8/6/93 plan to be reviewed by 6/10

* 94B, Permit Renewal received 4/7, Permit renewal 8/28

GORDON CREEK #3 and #6 - ACT/007/017

* 93B, Application for Phase II Bond Release received 12/13/93, Phase II bond release inspection scheduled 5/18...

94A, Review of N94-26-1-1, received 4/13, review due 4/28, approved 4/29.

SOLDIER CANYON - ACT/007/18

93A, Legal and Financial, received 11/12/93, deficiency sent 12/15/93, response received 2/22/94, AVS updated 4/4, approval letter 5/6, ~~copies due 5/27~~ transmitted 5/26.

93B, Diesel storage tank, received 12/23/93, approved 2/3/94, copies due 3/3/94, transmitted..

94A, Coal Handling Facilities, received 3/3, review due 4/3, approved 3/9, copies due 4/8, transmitted.

* Waste Rock Disposal Site.....pending

CENTENNIAL PROJECT - ACT/007/019

93E, Diversion Designs, received 11/16/93, deficiency sent 12/9/93, response received 1/24/94, review due 2/7/94, additional submittal 3/1/94, review extended to 3/4/94, approved 3/7, copies due 4/7

93F, Overflow Culverts, received 11/18/93, approved 12/9/93, copies due with 93E submittal 3/4/94, approved 3/7, copies due 4/7.

* 93G, Ownership update, received 12/22/93, AVS being updated,

94A, Material Storage , received 1/24/94, approved 1/25/94, copies sent 2/7/94

* 94B, Addition of Aberdeen Seam, Significant Revision, received 3/4/94, transmitted 3/15, review due 4/4.....received BLM's R2P2 and lease assignment, DOC sent 5/24

94C, Power lines, received 3/17, approved 3/17, copies due 4/17

BLUE BLAZE MINE - PRO/007/020

Stipulation Review letter sent 3/17/94.
Letter regarding permit "transfer" info sent 5/12/94

BLAZON MINE - ACT/007/021

Reclamation work assigned to AML on 2/9/94, per LPB..
Notice of Intent to reclaim sent 3/22/94

C.V. SPUR - ACT/007/022

93E, Permit Description change, received 11/24, review sent 12/22, response 1/24, review sent 2/14, received 3/15, reviewed 4/27, approved 4/29,.

* 94A, Permit renewal application submitted 4/7/94, Permit renewal date 8/7.
* 94B, Permit Transfer Application submitted 5/13 by Savage Industries

WILDCAT LOADOUT FACILITY - ACT/007/033

93C, Ownership Update, received 12/22/93, AVS due ?
Permit Renewal Application received 1/6/94. Permit renewed 5/5/94.
94A, Updated Plates 1, 2, 5 resulting from complete inspection, received 3/24/94,approved 5/13, certified copies due 6/14

* 94B, Expansion, received 3/31/94, review due 5/6, more info received 5/16, to be reviewed by 6/2
* 94C, N94-34-1-3 # 1 and #2, mitigation plans received 4/21, more info received 5/16, review due 5/25.

BANNING LOADOUT - ACT/007/034

93B, Ownership change as a result of transfer, received 9/14/93, changed to 94A.

94A, Updated ownership and control information, received 3/7, AVS updated 4/4, approval letter 5/6, ~~copies due 5/27.~~ transmitted 5/26.

* Newly formatted Plan received 1/18/94, review due 3/18, completed?

SUNNYSIDE REFUSE AND SLURRY - ACT/007/035

Amendments incorporated 1/13/94, ...

94A, Address change, received 1/6/94, AVS updated 3/10

* 94B, Seven Point Proposal (New Access Road Drainage, Revised Road Classification, Riparian Vegetation Description, Vegetation Resource Map, Revised Drilling Plan, Conceptual plan for Worst Case "Scenario Reclamation, Hydrologic Calculations for the 36" culvert under the railroad tracks north of the Coarse Refuse Toe Pond, received 3/1. Cursory review of access road drainage, revised drilling plan, review sent 4/18 and 36" culvert due 3/18. (All incorporated into plan for draft TA)

* 94C, Five Point Proposal, (Final disturbed Area Maps, Inspection Schedule for Excess Spoil (noncombustible) pile, Coarse refuse Pile and Impoundments, Flow Measuring Devises (Weir designs), Hydrologic calculations for the berm of the storage area #1 topsoil stockpile, and preliminary analysis of acid/toxic forming material. Bill will review maps in March inspection. Part 1, 2 and 3 approved on 3/24. All incorporated into plan for draft TA

* 94D, Refuse Road Reclamation, received 3/11/94, review sent 3/24, resubmitted 4/24, denial sent 5/26

94E, Weir Installation, received 4/5/, approved 4/6, copies due 5/6

94F, Replacement bond request on 4/13 to Surety Bond, approved 4/25

* N93-13-2-1, Global Permit NOV, draft TA edited 5/19

* 94G, Addition of Crusher Facility, received 5/16/94, more information received 5/20, to be reviewed by 5/27,

BLACKHAWK EXPLORATION PROJECT - EXP/007/038

Originally approved in 1992.

Modified with submittal of 4/22/94 (EXP/007/038-94A). Approved 5/5/94. No information tranmitted to other agencies.

WILLOW CREEK - PRO/007/038

Cyprus Plateau Mining Corporation to submit a PAP. Meeting on 5/19 with LPB.

J.B. KING MINE - ACT/015/002

* 94A, Reconfiguration plan, received 2/18/94, see J.B. King chronology

Meeting on 4/12, review sent 4/14, violations N91-32-6-1 and 93-25-3-1, and 93-25-5-1 extended tp 5/19/94. (Request for extension to 7/5 on 4/28)

HUNTINGTON #4 MINE - ACT/015/004

* 93D, Phase II Bond release application, received 12/13/93, Phase II Bond release inspection on 5/18....

94A, Remove Parshall Flume, received 1/24/94, review due 2/28/94, approved 4/11

HIDDEN VALLEY MINE - ACT/015/007

from 12/92 approval.

TDN received 5/10, Erosion work started 5/16. TDN response 5/20.

What can/can't agree w/ bond clock; - BOND CLOCK

Attorneys, JIM/LOWELL/BARON/JOE/BILL

TRAIL MOUNTAIN MINE - ACT/015/009

* 93A, Ten Drill Holes Inside Permit Area, received 12/16/93, letter prepared 1/13/94 to JWC, review sent 3/16

94A, Relocate ROM Conveyor, Electrical Box, etc., received 3/14/94, approved 4/20, copies due 5/13

EMERY DEEP - ACT/015/015

DO-93B, midterm issued 11/9/93, response received 12/15/93 deficiency sent 1/24/94, response due 2/22/94, withdrew 12/93 response on 2/22--became 94A

* Amendment 94A - Midterm response II of DO-93B, received 2/22, approved 3/1/94, copies due 4/1/94

DES-BEE-DOVE MINE - ACT/015/017

94A, Amend Subsidence Monitoring Plans, received 2/22/94, denied 2/25

DEER CREEK MINE - ACT/015/018

93J, Lower Terrace disturbance, #N93-7-1-3, received 12/3/93, denied 1/4/94.

* 94A, Rilda Canyon Lease Extension (significant revision), received 1/26/94, review due 3/28, Completeness? published?

94B, Amend Subsidence Monitoring Plan, received 2/22/94, denied 2/25

94C, Sediment Containment Box, received 3/14/94, review due 4/22, denied 4/5

94D, Tire Dock Storage, received 4/8. Rejected 4/11, resubmitted 4/25, review due 5/25, approved 5/5. Requested copies within 15 days of completion..

* 94E, Surface Facilities for Rilda Canyon (significant revision), received 3/29, accepted for review 4/20, review due 6/3

COTTONWOOD/WILBERG MINE - ACT/015/019

94A, Amend Subsidence monitoring plan, received 2/22/94, denied 2/25
* 94B, Permit Renewal, received 3/7/94, (Renewal date 7/6)
94C, Pond Cleanout, received 3/17, approved 3/30

TRAIL CANYON MINE - ACT/015/021

93A, Phase I bond Release, received 1/25/93, delayed due to federal violation and court hearing held 12/22/93.

94A, Renewal application received 1/31/94, received publication on 4/5, okay to renew on 5/30.

BEAR CANYON MINE - ACT/015/025

CEP 94A, Exploration outside permit area, 3 truck-mounted holes, 1 helicopter, received 1/24/94, deficiencies sent to BLM 2/10/94.

* 93D, Tank Seam, resubmitted 3/9, meeting on 4/13 and onsite meeting on 4/26, letter sent 5/5, more info received 5/23 (no cover letter).

CRANDALL CANYON MINE - ACT/015/032

93G, Hydrologic changes, received 10/1993, deficiency sent 11/12/93, response 12/1/93, 2nd deficiency sent 1/27/94, response received 2/24/94, review due 3/24/94, approved 3/25, transmitted.

* 93-1, Lease by Application, received 12/1/93, initial review due 3/1, TA due 4/15, CHIA due 4/15, DOC sent 5/23, ...Applications transmitted to agencies 5/12 - 5/23 for their review due by 6/28.....

94A, Updated chapter 1, received 1/18/94, approved 1/19/94

* 94B, IBC (UTU-68082), received 2/11/94, review due 3/11/94, review sent 3/3, response received 3/10, 2nd review due 3/18, Decision Document sent to Denver 3/31. Approved by Secretary 5/23.

94C, Change of Plate 5-3 to Reflect C-5 and 4" pipe, received 5/2, approved 5/2, transmitted 5/3

DAVIES COAL MINE - PRO/017/001

* Initial review letter sent 9/30/93.

BLACKJACK #1 MINE - CEP 019/001

Reclamation evaluation during field season 1994.

SMOKY HOLLOW MINE - PRO/025/002

* PAP received 2/11/91, ICR-not complete 1/24/92, received revised PAP 5/15/92, determined administratively complete 6/26/92, TD sent 2/26/93, 2nd TD sent 9/9/93, submittal received 1/11/94, technical review due 3/11/94---review of 1/1194 submittal sent 5/23/94, draft TA due 7/11/94 (?), coordinate EIS (ongoing)

CONVULSION CANYON MINE - ACT/041/002

93B, Officer and director, received 8/27/93, changed to 93F,
* 93C, Exploration Project inside permit area, received 8/30/93, deficiency sent 1/4/94, response received 1/31/, review sent 3/10 (proposal sent to BLM and FS)
93F, Updated Ownership and Control, received 11/10/93, response sent 12/17/93, response received 2/15/94, review due 3/15/95, AVS done 4/4, approval letter 5/6, copies due 5/27.

KNIGHT MINE - ACT/041/005

* 92?, Phase I bond release, received 5/26/92, inspection 10/29/92, Division issues findings 12/16/92, OSM issued TDN 1/15/93, Division responded to TDN 3/2/93, OSM determined State response inappropriate 3/24/93, Division appealed to Washington 4/2/93, OSM ordered federal inspection 5/27/93, OSM issued Federal Violation 6/8/93, Federal Hearing held 11/30 - 12/2/93. Decision 4/94?
94A, Legal and Financial Update, received 1/12/94, AVS-Joe?
94B, Landslide Mitigation Plan, received 1/31/94, approved 1/31/94.
* 94C, Technical Revision to Landslide Mitigation, received 5/13, conditional approval 5/27, submit copies in proper format by 6/27

SUMMIT MINERALS #1 - CEP/043/001

* Reclamation assigned to AML on 2/9/94., per LPB.

BOYER MINE - ACT/043/008 (CEP/043/002)

* Formulate Reclamation Plan . Randy/Wayne to do engineering specification for reclamation work, autocad maps by 5/31 . Will go to AML. Need to bid July, work mid-September.

HIGH ALTITUDE REVEGETATION
SUMMER FIELD TOUR
JULY 28th and 29th 1994

This year's free field tour will be in central Utah where we will visit several mines, a reservoir, reclamation test plots and reclaimed disturbances in this coal mining region. Our tour will be headquartered from the old historic town of Price which has served as the center of Utah's coal industry for over a hundred years. We hope you and your friends and family - including children - can join us on this interesting and educational tour. As always, the tour is free and the Thursday evening barbecue will have a nominal charge. Transportation by bus (on Thursday only) and the Thursday lunch will be provided for us. In order for us to make plans, we ask you to mail in the attached reservation form by July 15th. If you think you will attend but are not absolutely sure, go ahead and send in the form now.

The tour will begin with registration and sale of barbecue tickets (less than $10) in the lot behind the Days Inn Motel (see Price city map) from 8:00 to 8:30 AM on Thursday July 28th. Any further information and/or maps will be handed out then. We hope to be back in Price by about 4:30 on Thursday afternoon for the social hour at 6:00 PM and the barbecue at 7:00 PM. On Friday the 29th, we will again meet in the lot behind the Days Inn at 8:30 AM. Plan to drive your own vehicle (we can form carpools) and provide your own sack lunch (or late restaurant meal since the tour will conclude at mid-afternoon). Drive safely - see you there Thursday!

ITINERARY AND INFORMATION ABOUT STOPS

THURSDAY, JULY 28. 8:00 AM. Meet in the parking lot behind the Days Inn Motel on the west side of Price, Utah (consult attached map of Price) to register, purchase barbecue tickets and board the buses. Please be there no later than 8:30 AM.

STOP 1 - SKYLINE MINES

The Skyline Mines started production in 1981 and now produces approximately 5 million tons of coal annually. It is the largest underground coal mine west of the Mississippi River. Total disturbance is approximately 62 acres. They have recently constructed a 2.2 mile Overland Conveyor adjacent to Highway 264 which conveys the coal in an 18" diameter tube so as to prevent any spillage.

STOP 2 - BURNOUT CANYON STOP

In order to make about 15,000,000 tons of Federal coal available for mining, Questar Pipeline Company (Mountain Fuel) rerouted about 4.25 miles of their existing 18" high-pressure gas pipeline through lower Burnout Canyon and under the east lane of State route 264 in 1990. The pipeline serves about 70,000 customers from the Provo/Orem area south to St. George which may have been damaged from induced subsidence caused by mining up to 4 seams of coal with an expected drop of the ground surface by at least 20 feet. During construction of the reroute, topsoil was preserved/protected, and after surface disturbance was completed; subsoil was used to recontour, topsoil was replaced in a roughened fashion and then hydro-seeded/tackified/fertilized/mulched. Since the upper Huntington Canyon drainage is considered to be the sole source of disease-free yellowstone cutthroat trout spawning habitat in the state, it was critical that sediment be controlled during the three stream crossings for the reroute in upper Huntington Canyon.

STOP 3 - HUNTINGTON RESERVOIR STOP (LUNCH WILL BE PROVIDED)

In 1988, a backhoe operator working on reconstruction of the dam accidentally uncovered the skeleton of a huge Ice Age beast. In the days following this discovery, paleontologists and archaeologists arrived and carefully excavated the bones of an almost complete Columbian Mammoth. Now extinct, Columbian Mammoths roamed North America for thousands of years during the Ice Age. The Huntington Mammoth was one of the very last to exist on the continent dying at an unheard of elevation of 9,000 feet about 11,000 years ago. Were these mountains a last holdout for these giant beasts? Did early humans have a role in its death? These are a few of the items along with glaciation, the reservoir's conservation and post-construction reclamation that you'll find on your luncheon fare at this stop.

STOP 4 - DES-BEE-DOVE TEST PLOT STUDIES

The Mancos shale slopes associated with the Des-Bee-Dove Mine operated by Energy West Mining Company are very challenging for reclamation. Two separate test plots have been implemented to gather information which may prove helpful in the reclamation of the mancos. The first plot area, started in 1989, is testing sulfur addition, soil master tackifier and land tech addition (an Irish peat) on smooth slopes. The second test plot area, started in 1992 is testing 5 different soil additives and native seed, on roughened soil with variable slopes.

6:00 PM Meet in Washington Park in Price (consult map) for social hour and barbecue.

FRIDAY, JULY 29. 8:30 AM Meet in lot behind Days Inn Motel to form carpools and proceed to stop 5 in our own vehicles.

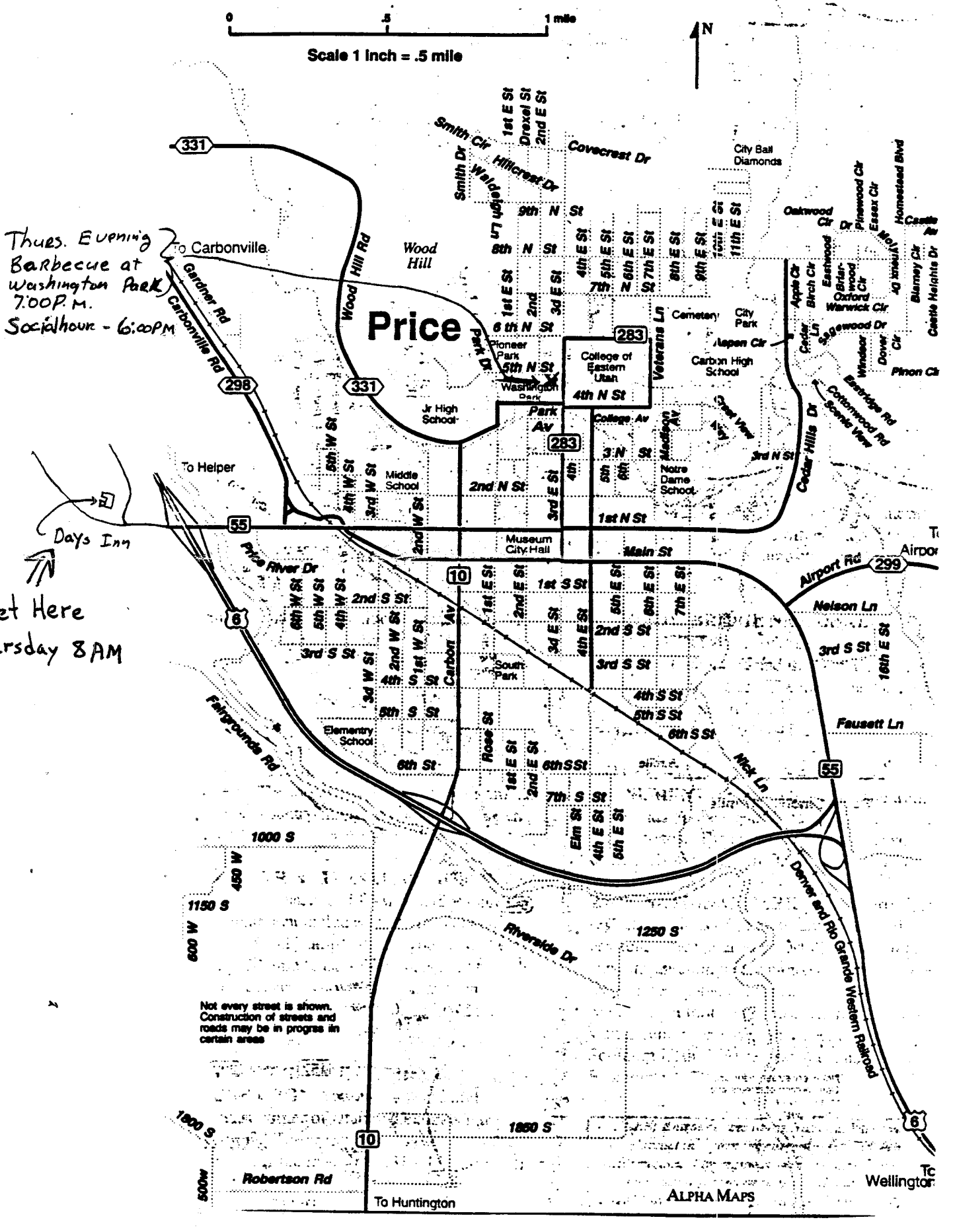
STOP 5 - HARDSCRABBLE MINESITE

Mining was begun in Hardscrabble Canyon in the 1880's with no consideration for future reclamation. An old refuse pile was reclaimed in 1984 and has had little shrub establishment, but other methods are being tried on areas currently being reclaimed. Other issues that have been and will be addressed in reclamation of this site include restoration and enhancement of wildlife habitat, variances from approximate original contour restoration requirements and noxious weed control.

STOP 6 - ROYAL COAL PILE

Reclamation work on the Royal Coal Pile began in October 1989 and was completed in January 1990. It was comprised of approximately 200,000 cubic yards of coal refuse. The coal pile was regraded and specifically shaped to visually blend with the existing slope along the canyon side. A dozer distributed and compacted the cover material across the coal pile and barrow area to an average depth of 18 inches. The final seed bed was prepared using a track hoe excavator that roughened the surface material to create relief (catchment basins) and loosened the top foot of cover to facilitate water and plant root penetration. Two thousand lbs/acre of straw mulch, 200 lbs/acre of a 16:16:8 N, P, K fertilizer, and 60 lbs/acre of a mixed shrub/herbaceous seed mix were hand broadcast across the site.

Continued on page 5


0
.5
1 mile
Scale 1 inch = .5 mile
N
Thurs. Evening Barbecue at Washington Park 7:00 P.M.
Social hour - 6:00 PM
Days Inn
Meet Here Thursday 8 AM
Price
Wood Hill
To Carbonville
To Helper
To Huntington
To Wellington
Wood Hill Rd
Gardner Rd
Carbonville Rd
Smith Cir
Smith Dr
Waldeigh Ln
Hillcrest Dr
Covecrest Dr
City Ball Diamonds
Pioneer Park
Washington Park
College of Eastern Utah
Jr High School
Park Av
College Av
Veterans Ln
Cemetery
City Park
Aspen Cir
Carbon High School
Cedar Hills Dr
Cottonwood Rd
Scenic View
Eastridge Rd
Middle School
Notre Dame School
Museum City Hall
Main St
Airport Rd
Nelson Ln
Fausett Ln
Nick Ln
Price River Dr
Fairgrounds Rd
South Park
Elementary School
Carbon Av
Rose St
Riverside Dr
Denver and Rio Grande Western Railroad
Robertson Rd
Not every street is shown. Construction of streets and roads may be in progrss in certain areas
ALPHA MAPS

MOTELS AND CAMPING NEAR PRICE, UTAH
MAKE RESERVATIONS EARLY AS SUMMER IS A BUSY TIME

Carriage House Inn
590 East Main St.
Price, Utah
801-637-5660
Single: $28
Double: $35

El Rancho Motel
& R.V. Park
145 North Carbonville Rd.
Price, Utah
801-637-2424
Single: $30
Double: $5 add'l per person

Greenwell Inn
655 East Main
Price, Utah
801-637-3520
1-800-666-3520
Flat Rate: $32

Days Inn
838 Westwood Blvd.
Price, Utah
801-637-8880
Single: $43
Double: $49

National 9 Inn
US 6 Between Price and Wellington
801-637-7980
Single: $30
Double: $34-38

CAMPING

State Parks:

Huntington State Park
1 mile North of Huntington
Picnic or overnight
Lake/Showers/Boat ramp
Overnight: $8.00
Day rate: $3.00
801-687-2491

Dead Horse Point State Park
Breathtaking view of Colorado
River from dizzying heights

Scofield State Park
801-484-9449
Lake
Camping/Showers

Green River State Park
Green River
Fishing--Grassy areas
Dump Station/Fire Pits
801-564-3633

Goblin Valley State Park
Unusual rock formations cover
Camping is primitive and isolated
Showers/Dump Station

Price Canyon Picnic/Camping Area
Restrooms/Tables/Grills
$5.00 overnight

Camping on National Forest and BLM Lands:

Camping is available at many other locations on U.S. Forest and B.L.M. lands in the surrounding area. Two improved Campgrounds are located in the Manti La-Sal National Forest in Huntington Canyon approximately 40 miles south of Price. In addition many areas are open to camping in unimproved areas on the Forest and B.L.M. For information, call Manti La-Sal National Forest 801-637-2817 or the B.L.M. 801-637-4584.

NATIONAL PARKS:

Arches National Park	801-259-8161	
Canyonlands National Park	801-259-7164	
Bryce Canyon National Park	801-834-5322	Lodge and Cabins $73-$85
Natural Bridges National Park	801-259-5174	
Lake Powell--Glen Canyon National Recreation Area	602-645-2471	

STOP 7 - HORSE CANYON MINESITE (PROVIDE YOUR OWN LUNCH)

Horse Canyon Mine is an inactive underground coal mine. The mine was initially opened by the Defense Plant Corporation in 1942 as the source of metallurgical grade coal for the Geneva Steel Works in Orem, Utah. The mine was sold to U.S. Steel in 1946, who operated the mine until January 1984, when all mining was permanently suspended. Intermountain Power Agency acquired the Horse Canyon Mine in April, 1990. In 1990, all facilities were demolished except those which may be used when mining the South Lease. Surface grading and revegetation was conducted on 59 of the 71 acres of disturbance in 1991. The mine is anticipated to reopen in 1995.

ADJOURN BY MID-AFTERNOON

Questions???? contact Gary Thor at 303 - 491-7296.

— cut here — cut here — cut here — cut here —

Because we need to plan for meals and buses, please mail this information sheet by July 15th.

If you hope to attend but are not absolutely sure you will, sign up anyway and check this line:_____

Name: _____

Address: _____

_____

Daytime Phone Number with Area Code:_____

NUMBER IN PARTY

Thursday July 28: bus transportation & free lunch _____

barbecue (send no money now) _____

mail by July 15th to:

Gary Thor, Soil & Crop Science Department
Colorado State University, Fort Collins, CO 80523

Please plan to attend
this exciting and educational
free tour of several
High Altitude
Revegetation Projects

High Altitude Revegetation
Gary L. Thor - Secretary
Agronomy Department
Colorado State University
200 W. Lake Street
Fort Collins, CO 80523

NONPROFIT
ORGANIZATION
U.S. POSTAGE
PAID
Ft. Collins, CO 80523
Permit No. 19

ADDRESS CORRECTION REQUESTED

Joe

BRIEFING

(1) Preliminary step to finding pathways to resolve issues

(2) Believe we can't do ~~together~~ alone what we can't ~~alone~~ accomplish together. ~~The key is to go through a process where we achieve joint goals.~~

(3) Permittees must recognize at times what we would like to do vs what we can do is different. Division is often times constrained by non-discretionary regulatory language and by the OSM oversight process

Road To Recovery Better times may not be around corner but if we keep in mind Goals/Bond release it will carry com - vice ver.

AGENDA - REVIEW

- Revisions/Suggestions

Issue Overview

Issue Classification -- Point some of these issues appear in several catagories

42-381 50 SHEETS EYE-EASE® 5 SQUARE
42-382 100 SHEETS EYE-EASE® 5 SQUARE
42-389 200 SHEETS EYE-EASE® 5 SQUARE
42-392 RECYCLED WHITE 5 SQUARE
Made in U. S. A.
National® Brand

2 copies

HIDDEN VALLEY BRIEFING

I. WHY

*AS OF APRIL AGAIN ASSIGNED HIDDEN VALLEY MINE/LAST 1991.

*CONCERNED ABOUT WHAT THE PERMITTEE/CONSULTANT HAS & HAS NOT DONE.

*CONCERNED ABOUT WHAT THE DIVISION HAS & HAS NOT DONE

*CONCERNED ABOUT POSSIBLE MISCONCEPTIONS ON THE PART OF BOTH PARTIES. HOW TO GROUND TRUTH THESE FOR RESOLUTION BEFORE THEY BECOME CONFLICTS OR DELAYED WHERE BOTH PARTIES REALIZE SOME BETTER PREPARATION AND MEETING OF THE MINDS COULD HAVE AVOIDED SUCH PROBLEMS. COULD GO ON BUT -- NUFF SAID.

- ~~DAN'T DO ALONE~~ — Instead of Compliance driving to achieve bond release
- NEW INITIATIVES — Inspections with goals/milepostes to the driving force & it will carry comp

WHAT WE WOULD LIKE TO DO CONSTRAINS

*SHOULD DIVISION & OPERATOR CONTINUE BUSINESS AS USUAL OR CONSIDER SOME NEW INITIATIVES? THAT'S ONE OF THE MAIN PURPOSES OF THIS MEETING

II. BACKGROUND

A. ENVIRONMENT DESCRIPTION

- HARSH SITE
- PHYSIOGRAPHY
- CLIMATE
- SOIL
- VEGETATION
- LAND USE

B. MINE

STARTED - PLAN SUBMITTED 9/79, APPROVED 2/80, SITE PREPARATION 4/80

SHUT DOWN - 8/80 - NO COMMERCIAL PRODUCTION TOOK PLACE

RECLAMATION - FALL 1986 - 7 ACRES OF DISTURBANCE/WILDLIFE/LIVESTOCK POST-MINING LAND USE

-ROAD (½ MILE)

·PULLED ROAD CULVERTS

·RIPPED ROAD, LEFT ROAD BED 45' - 50'

·CONSTRUCTED 13 WATER BARS

·DISTURBED AND UNDISTURBED APPROVED TO BE DISCHARGED OVER ROAD OUTSLOPE

-A & B SEAM

·COVERED MOST OF HIGHWALL

-SEDIMENT POND REMOVED

·SILT FENCES PROVIDED SEDIMENT CONTROL

-DISTURBED AREA

·SEEDED AND MULCHED EXCEPT FOR ROAD OUTSLOPE AND TWO BUFFER ZONE AREAS

-PROTECTION FENCE CONSTRUCTED

·COVERED MOST OF THE MINE EXCEPT UPPER AREA

-CONDUCTING, MONITORING, WATER/VEGETATION

RECONSTRUCTION/MAINTENANCE

-ROAD BED RESEEDED

-A & B SLOPED RESEEDED AND MULCH NETTING APPLIED

-UNDISTURBED CHANNEL RECONSTRUCTED

-MINOR MAINTENANCE/ROCK CHECK DAMS, SILT FENCES REPAIRED, ADDITIONS, VEHICLE BARRIERS INSTALLED AND LATEST EROSION CONTROL ON SEVEN EROSION AREAS-FIVE IN TDN.

OPERATOR HAS BEEN VERY COOPERATIVE. 1991 NOV ON SEEDING ROAD OUTSLOPES, EROSION CONTROL, AND MARKERS GO INTERWOVEN INTO A BOND CLOCK ISSUE. NOV WENT THROUGH ADMINISTRATIVE APPEALS PROCEDURE AND COURTS. NOV WAS UPHELD UNTIL THE APPELATE COURT REVERSED THE DECISION OF DISTRICT COURT. THE NOV THEREAFTER WAS VACATED BY THE DIVISION.

PHOTOS/SLIDES

SLIDES

1 SIGN

2 GENERAL VIEW - BROWSE TYPE VEG COMMUNITY

3 A SEAM HIGHWALL + UNDISTURBED

4 A SEAM, ROADBED, OUTSLOPE - UNDISTURBED

5 EROSION GULLEY ROAD OUTSLOPE

6 ROAD BED - OUTSLOPE - WATER BAR

7 WELLS (3)

8 STREAM BUFFER ZONE SIGN
(DISTURBED ROAD OUTSLOPE/TOE)

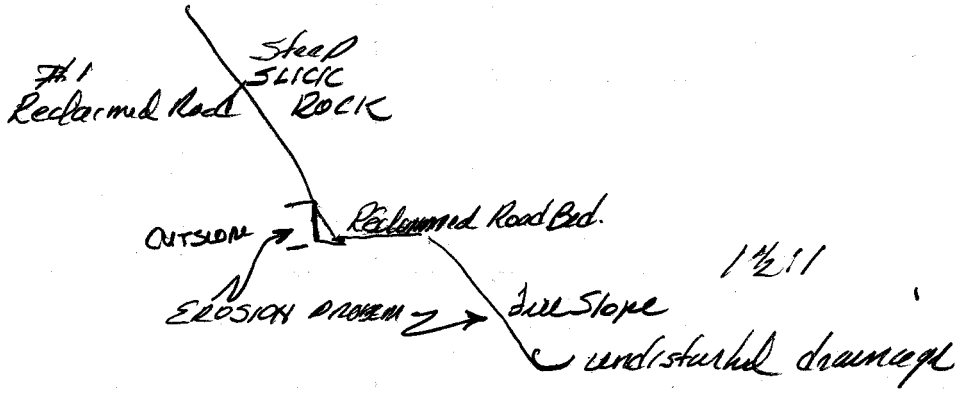
9 STREAM BUFFER ZONE/ROCKS - SOIL

21 UPPER ROAD

42-381 50 SHEETS EYE-EASE® 5 SQUARE
42-382 100 SHEETS EYE-EASE® 5 SQUARE
42-389 200 SHEETS EYE-EASE® 5 SQUARE
42-392 RECYCLED WHITE 5 SQUARE
Made in U.S.A.
National® Brand

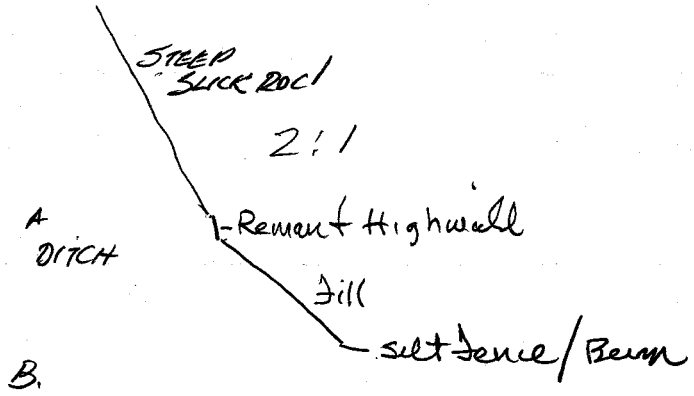
EROSION/SEDIMENTATION ISSUE

SKETCH. PHASE II BOND RELEASE/COMPLIANCE



#2 A&B Seam Coal Highwall

EROSION PROCESS



CONTROL RUNOFF/KEY TO CONTROLLING EROSION/MEETING SEDIMENTATION STDS PHASE II BOND RELEASE

. MY OPINION ~~VEGETATION ON STEEP SLOPES WILL NOT CONTROL EROSION~~ over 5:1 and in areas where precip./soils are such that vegetation is at best spare/difficult to control erosion – high intensity storms come and eat your lunch and bonus if the problem runoff is the higher undisturbed area.