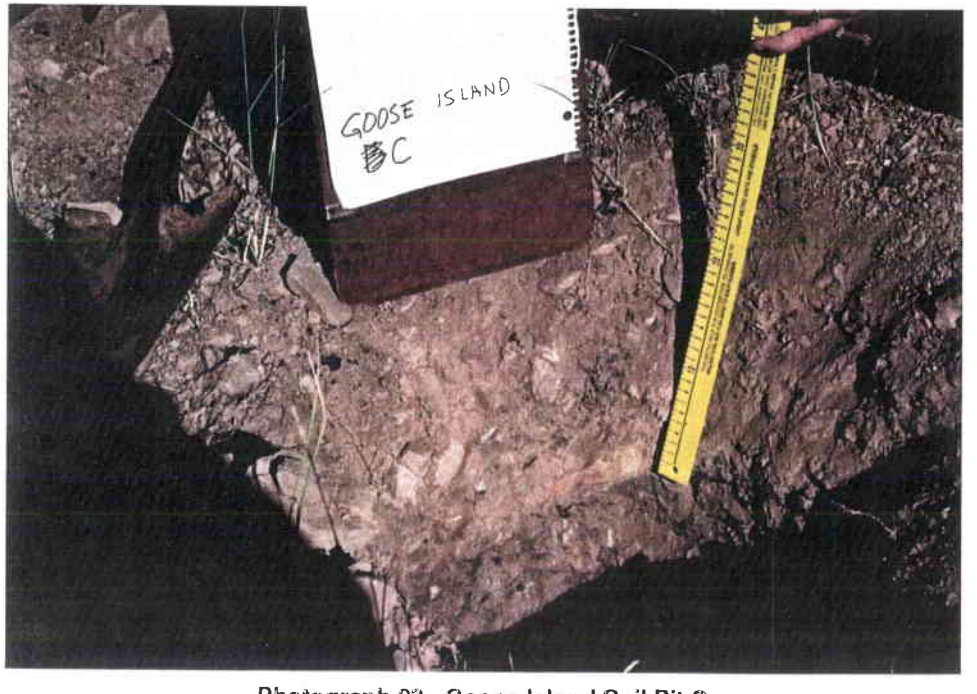
Photograph 21. Goose Island Soil Pit A.

Photograph 22. Goose Island Soil Pit B.



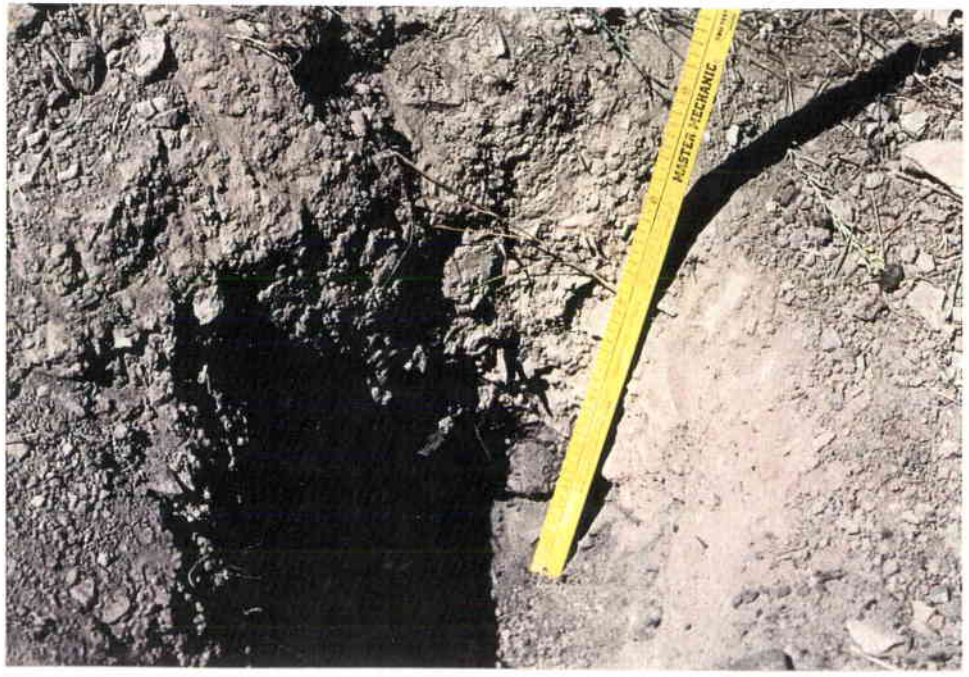
Photograph 23. Goose Island Soil Pit C.

Photograph 24. Goose Island Soil Pit D.

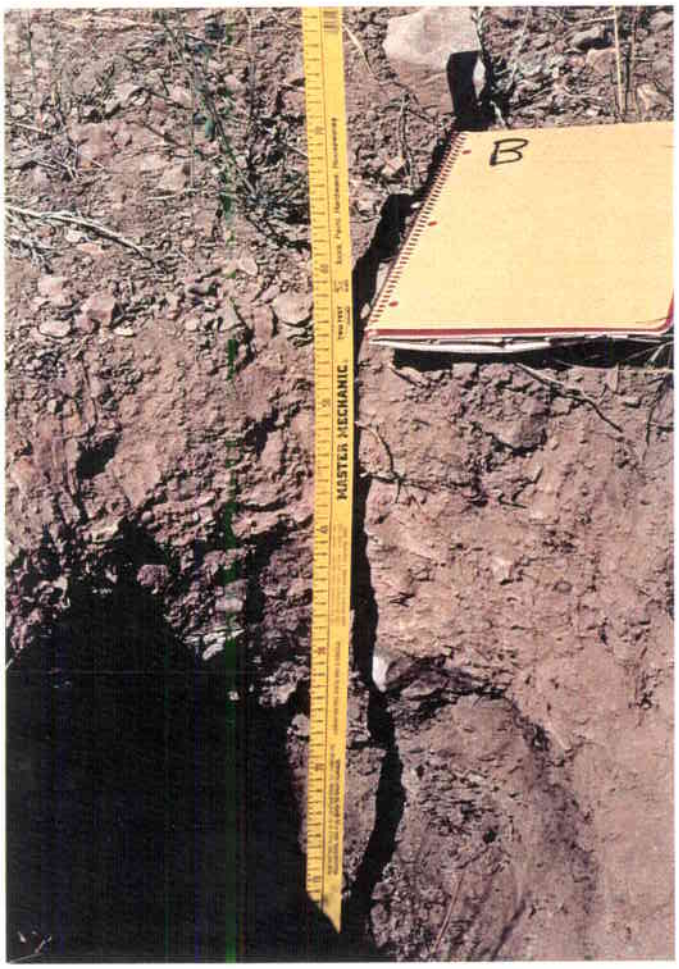
Photograph 25. Gilson Gulch Soil Pit A.

Photograph 26. Gilson Gulch Soil Pit A.

Photograph 27. Gilson Gulch Soil Pit B.



Photograph 28. Gilson Gulch Soil Pit D.



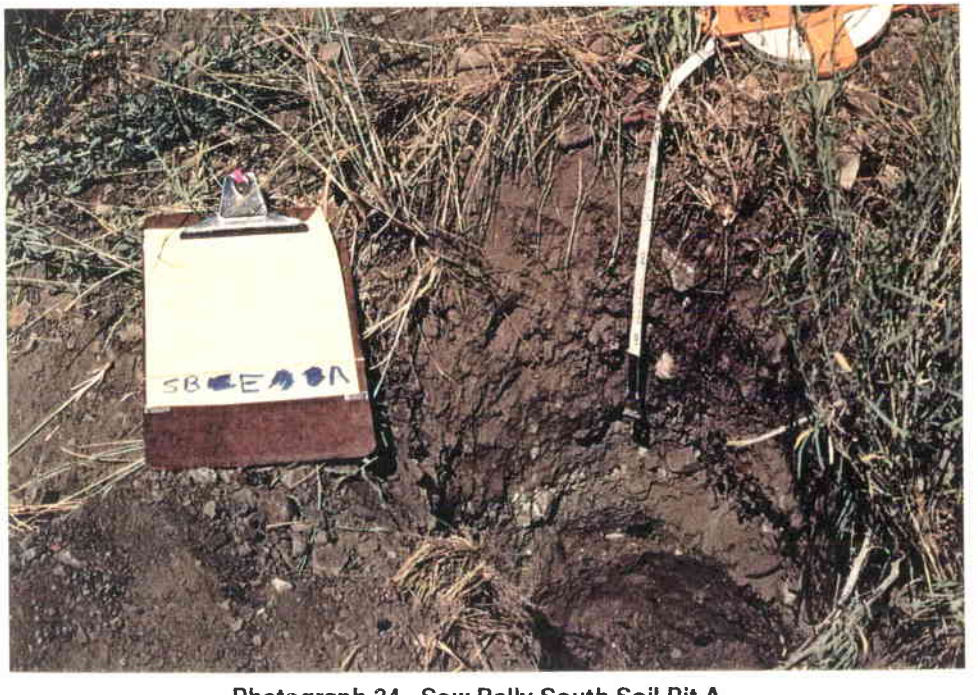
Photograph 29. Gilson Gulch Soil Pit B.

Photograph 30. Gilson Gulch Soil Pit C.

Photograph 31. Gilson Gulch Soil Pit D.

Photograph 32. Sow Belly North Soil Pit A.

Photograph 33. Sow Belly North Soil Pit B.



Photograph 34. Sow Belly South Soil Pit A.

Photograph 35. Sow Belly South Soil Pit B.

APPENDIX A

Topsoil / Refuse Laboratory Analysis Data

(analyses conducted by Colorado State University
Soil Testing Laboratory, Fort Collins)

ESCO Associates Inc.
P.O. Box 18775
Boulder, CO 80308

DATE RECEIVED: 09/21/93

Colorado State University
Soil, Water and Plant Testing Laboratory

Room 6, Vocational Education Building
Fort Collins, CO 80523
303–491–5061
DATE: 10/08/93
BILLING: 515623
Page 1

RESEARCH SOIL ANALYSIS

	Lab #	Sample ID #	pH	mmhos/cm Cond.	Lime Estimate	% O.M.	ppm NO_3–N	P	K	Zn	Fe	Mn	Cu
							NH_4HCO_3–DTPA Extract						
Goose Island	Ts A R1470	AC – 1	8.0	0.5	High	2.5	2	0.8	144	1.2	7.0	2.6	1.7
	Rf A 1471	AC – 2	7.6	2.7	High	4.0	2	4.7	129	6.8	18.4	5.9	2.3
	Ts B 1472	AC – 3	8.0	0.7	High	2.6	3	3.1	122	1.3	5.9	2.6	1.5
	Rf B 1473	AC – 4	7.7	2.8	High	5.5	1	1.7	119	4.5	14.9	2.8	2.1
	Ts C 1474	AC – 5	8.1	0.5	High	2.0	2	4.1	172	1.2	5.9	2.6	1.3
	Rf C 1475	AC – 6	8.2	0.6	High	6.9	2	2.0	140	3.3	10.2	2.3	2.3
	Rf D 1476	AC – 7	7.6	1.8	High	5.5	1	1.7	138	6.1	23.5	1.9	2.4
	Ts E 1477	AC – 8	8.0	0.5	High	2.6	2	6.4	295	4.2	7.8	3.7	3.2
	Rf E 1478	AC – 9	8.0	0.7	High	3.2	1	1.7	184	6.2	10.9	3.1	3.9
Gilson Gulch	Ts A 1479	AC – 10	8.1	0.4	High	2.3	1	9.9	287	1.4	10.7	4.0	1.0
	Ts B 1480	AC – 11	7.8	2.1	High	1.4	2	0.8	166	0.6	10.9	2.9	1.1
	Ts C 1481	AC – 12	7.8	2.5	High	1.4	2	0.3	204	0.6	8.2	2.9	1.0
	Ts C 1482	AC – 13	7.9	3.9	High	1.4	3	0.3	112	0.5	8.7	2.4	1.1
	Ts D 1483	AC – 14	7.8	2.3	High	1.4	1	0.3	162	0.6	8.3	1.4	1.0
Sow Belly North	Ts A 1484	AC – 15	7.6	2.4	High	18.5	2	5.3	181	6.1	17.4	4.6	11.2
	Ts B 1485	AC – 16	8.0	0.4	High	18.2	1	2.3	153	5.8	21.8	4.7	32.1
Sow Belly South	Ts A 1486	AC – 17	7.9	0.6	High	5.8	2	2.0	244	12.0	15.1	4.6	48.3
	Rf A 1487	AC – 18	7.6	1.4	High	17.1	1	0.3	183	9.7	21.4	3.6	14.6
	Ts B 1488	AC – 19	8.1	0.5	High	9.9	2	2.3	276	26.5	13.0	3.7	55.1
	Duplicate R1479d	AC – 10	8.1	0.5	High	2.1	2	10.3	261	1.4	7.8	3.7	1.7

Ts = Topsoil Rf = Refuse

ESCO Associates Inc.
P.O. Box 18775
Boulder, CO 80308

DATE RECEIVED: 09/21/93

Colorado State University
Soil, Water and Plant Testing Laboratory

Room 6, Vocational Education Building
Fort Collins, CO 80523
303-491-5061
DATE: 10/08/93
BILLING:
Page 2

RESEARCH SOIL ANALYSIS

	Lab #	Sample ID #	% Gravel	% Sand	% Silt	% Clay	Texture	meg/l Ca	Mg	Na	K	SAR	% SAT
Goose Island	TsAR1470	AC – 1	45.1	45	33	22	Loam	2.7	1.8	0.5	0.4	0.3	27.7
	RfA1471	AC – 2	68.5	56	26	18	Sandy Loam	26.4	15.6	4.8	0.8	1.1	32.9
	TsB1472	AC – 3	46.1	53	31	16	Sandy Loam	4.7	2.8	1.3	0.4	0.7	28.0
	RfB1473	AC – 4	58.6	62	23	15	Sandy Loam	25.4	15.6	6.9	0.8	1.5	34.0
	TsC1474	AC – 5	69.3	49	33	18	Loam	2.5	2.6	0.7	0.5	0.4	34.5
	RfC1475	AC – 6	62.3	59	26	15	Sandy Loam	2.1	2.3	2.8	0.4	1.9	23.1
	RfD1476	AC – 7	58.1	63	22	15	Sandy Loam	17.5	9.6	2.0	0.6	0.5	27.8
	TsE1477	AC – 8	50.2 58.7	43 53.4	37 29.9	20 17.7	Loam	2.8	2.4	0.5	0.7	0.3	28.0
	RfE1478	AC – 9	70.1	51	29	20	Loam	3.7	4.4	1.4	0.4	0.7	27.2
Gilson Gulch	TsA1479	AC – 10	35.3	65	24	11	Sandy Loam	3.3	1.4	0.4	0.6	0.2	24.7
	TsB1480	AC – 11	55.9	45	37	18	Loam	25.4	7.6	0.8	0.7	0.2	26.3
	TsC1481	AC – 12	59.0	43	39	18	Loam	28.4	12.3	1.0	1.0	0.2	19.7
	TsC1482	AC – 13	76.9	46	37	17	Loam	22.5	28.0	8.3	0.8	1.7	30.6
	TsD1483	AC – 14	59.1	42	39	19	Loam	26.9	9.9	0.6	0.9	0.1	24.7
Sow Belly Pass	TsA1484	AC – 15	64.7	69	21	10	Sandy Loam	26.9	11.5	1.5	0.9	0.3	16.3
	TsA1485	AC – 16	65.8	68	21	11	Sandy Loam	2.8	1.5	0.2	0.3	0.2	20.5
	TsA1486	AC – 17	68.1	68	22	10	Sandy Loam	4.2	1.9	0.4	0.5	0.2	23.0
	RfA1487	AC – 18	68.4	66	23	11	Sandy Loam	15.5	6.2	1.4	0.6	0.4	16.2
	TsB1488	AC – 19	50.7	63	25	12	Sandy Loam	2.9	1.5	0.7	0.6	0.5	27.4
Duplicate	R1479d	AC – 10	35.3	64	25	11	Sandy Loam	4.0	1.6	0.5	0.6	0.3	

Ts = Topsoil Rf = Refuse

ESCO Associates Inc.
P.O. Box 18775
Boulder, CO 80308

DATE RECEIVED: 09/21/93

Colorado State University
Soil, Water and Plant Testing Laboratory

Room 6, Vocational Education Building
Fort Collins, CO 80523
303-491-5061
DATE: 10/08/93
BILLING:

RESEARCH SOIL ANALYSIS

	Lab #	Sample ID #	------% H_2O------ 1/3 Bar	15 Bar	Available Water Cap	% TOC	--meq/100g-- CEC	Exchange Na	mg/kg Hot Water Se	% TKN	mg/kg Hot Water B	% $CaCO_3$ equivalent	% Total S	% Pyritic S
Goose Island	Ts A R1470	AC – 1	15.2	9.3	5.9	1.28	13.5	0.27	0.02	0.09	0.30	8.2	0.014	0.01
	Rf A 1471	AC – 2	14.5	8.4	6.1	6.72	11.0	0.43	0.02	0.17	0.86	7.1	0.197	0.07
	Ts B 1472	AC – 3	14.1	8.0	6.1	1.37	10.3	0.27	<0.01	0.09	0.26	9.9	0.003	0.02
	Rf B 1473	AC – 4	13.0	7.8	5.2	9.47	10.8	0.49	0.02	0.22	0.49	5.8	0.141	0.05
	Ts C 1474	AC – 5	15.7	9.1	6.6	1.13	12.1	0.19	<0.01	0.09	0.49	8.4	0.007	0.01
	Rf C 1475	AC – 6	13.8	8.0	5.8	10.36	10.5	0.31	<0.01	0.23	0.99	7.5	0.010	0.03
	Rf D 1476	AC – 7	12.3	7.9	4.4	3.94	10.3	0.23	<0.01	0.15	0.73	5.1	0.016	0.07
	Ts E 1477	AC – 8	15.3	9.8	5.5	0.98	10.8	0.13	<0.01	0.08	0.45	10.1	0.006	0.01
	Rf E 1478	AC – 9	13.4	8.6	4.8	2.96	9.1	0.22	<0.01	0.13	0.71	8.4	0.009	0.04
Gilson Gulch	Ts A 1479	AC – 10	10.4	5.5	4.9	0.85	10.8	0.13	<0.01	0.07	0.42	2.5	0.001	0.01
	Ts B 1480	AC – 11	15.4	8.6	6.8	0.62	10.2	0.16	<0.01	0.05	0.70	13.9	0.007	0.02
	Ts C 1481	AC – 12	15.7	8.6	7.1	0.65	9.6	0.15	0.07	0.05	0.75	14.5	0.005	0.02
	Ts C 1482	AC – 13	15.1	8.4	6.7	0.52	9.4	0.46	<0.01	0.05	0.61	14.7	0.004	0.01
	Ts D 1483	AC – 14	14.2	8.4	5.8	0.53	10.2	0.15	<0.01	0.05	0.66	14.8	0.003	0.02
Sow Belly North	Ts A 1484	AC – 15	11.9	7.4	4.5	9.83	13.0	0.17	<0.01	0.25	1.06	6.0	0.158	0.06
	Ts B 1485	AC – 16	12.6	8.2	4.4	6.96	12.2	0.11	0.12	0.26	1.04	8.2	0.060	0.04
South	Ts A 1486	AC – 17	13.2	8.6	4.6	5.08	15.6	0.07	<0.01	0.20	1.26	7.5	0.078	0.04
	Rf A 1487	AC – 18	13.7	9.3	4.4	8.93	14.3	0.12	<0.01	0.25	1.32	8.2	0.115	0.06
	Ts B 1488	AC – 19	12.9	8.8	4.1	3.96	14.8	0.14	0.05	0.15	1.53	6.9	0.002	0.02
Duplicate	R1479d	AC – 10				1.39	9.9	0.09	<0.01	0.07	0.44	2.7	0.004	0.01

Ts = Topsoil Rf = Refuse

APPENDIX B

Erosion Condition Classification Field Data Sheets

(data collected using techniques set forth in Humphrey 1990)

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castelgate

LOCATION: Goose Island - Area 1

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm).		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	9	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles.	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles.	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles.	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area.	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm)		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	—	0
PEDESTAL-LING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft.	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft.	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft.	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft.	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	10	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter.	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals.	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft.	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	6	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area.	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area.	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area.	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area.	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	0	15

TOTAL SSF 43 / 86 X10 =50

(Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate

LOCATION: Goose Island Area 2

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED	TOTALS POTENTIAL
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 2 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). (4) 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). 13 14	4	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 3	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. (4) 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 11 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	—	0
PEDESTALLING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. (4) 5 6	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. 7 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. 10 11 12	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	4	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 11 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. 4 5 6	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 (9)	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 11 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 14	9	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. (0) or 1 2 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	0	15

TOTAL SSF 35 / 86 X10 = 40.7
(Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

POSTMINE LAND USE: ____________

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate

LOCATION: Goose Island Area 3

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 (2) 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). 4 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). 13 14	2 / 14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 (3)	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. 4 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 11 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	3 / 14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	— / 0
PEDESTALING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. 4 5 (6)	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. 7 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. 10 11 12	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	6 / 14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 (11) 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 14 15	11 / 15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. 4 5 (6)	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 9	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 11 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 14	6 / 14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. (0) or 1 2 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	0 / 15

TOTAL SSF 28 / 86 = 32.6 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate

LOCATION: Goose Island Area 4

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm).		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 (14)	14	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles.	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles.	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles.	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area.	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area.		
	0 or 1 2 3	(4) 5 6	7 8 9	10 11 12	13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm)		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	—	0
PEDESTALING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft.	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft.	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft.	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft.	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft.		
	0 or (1) 2 3	4 5 6	7 8 9	10 11 12	13 14	1	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter.	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals.	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft.	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft.		
	0 or (1) 2 3	4 5 6	7 8 9	10 11 12	13 14	1	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area.	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area.	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area.	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area.	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area.		
	(0) or 1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	0	15

TOTAL SSF 34 / 86 = 39.5 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate

LOCATION: Goose Island Area 5

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm).		
	0 or 1 2 3	(4) 5 6	7 8 9	10 11 12	13 14	4	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles.	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles.	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles.	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area.	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area.		
	0 or 1 2 3	(4) 5 6	7 8 9	10 11 12	13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm)		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	—	0
PEDESTALING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft.	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft.	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft.	Pedestals are mostly between .6 and .1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft.	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 (12)	13 14	12	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter.	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals.	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft.	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft.		
	0 or 1 2 3	(4) 5 6	7 8 9	10 11 12	13 14	4	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area.	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area.	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area.	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area.	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area.		
	(0) or 1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	0	15

TOTAL SSF 38 / 86 x
= 44.2
(Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE:

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate
LOCATION: Goose Island Area 6

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED	TOTALS POTENTIAL
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 2 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). (4) 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). 13 14	4	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 3	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. (4) 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 11 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	—	0
PEDESTALLING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. 4 5 6	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. 7 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. (10) 11 12	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	10	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 11 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. 4 5 (6)	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 9	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 11 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 14	6	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. 0 or (1) 2 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	1	15

TOTAL SSF 39 / 86 = 45.3
(Observed/Potential x100)

<u>EROSION CONDITION CLASSES:</u>
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

POSTMINE LAND USE: ________

<u>SSF's DISRUPTIVE TO POSTMINING LAND USES:</u> Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate

LOCATION: Goose Island Area 7

EROSION FACTORS

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 (2) 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). 4 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). 13 14	2	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 3	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. (4) 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 11 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	—	0
PEDESTALLING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. 4 5 6	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. (7) 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. 10 11 12	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	7	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 (11) 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 14 15	11	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. (4) 5 6	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 9	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 11 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 14	4	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. (0) or 1 2 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	0	15

TOTAL SSF 28 , 86 , = 32.6 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate Area AML sites

LOCATION: Gilson Gulch Area 1 (Upper bench)

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS

						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 (2) 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). 4 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). 13 14	2	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 3	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. (4) 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 11 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	4	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	—	0
PEDESTALING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. 4 5 6	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. 7 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. 10 11 (12)	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	12	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 11 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. 4 5 6	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 9	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 (11) 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 14	11	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. (0) or 1 2 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	0	15

TOTAL SSF 43 / 86 = 50 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate Area AML sites

LOCATION: Gilson Gulch Area 2 (Outslopes)

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm).	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm).		
	0 or 1 2 3	4 (5) 6	7 8 9	10 11 12	13 14	5	14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles.	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles.	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles.	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area.	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area.		
	0 or 1 2 3	4 5 6	7 (8) 9	10 11 12	13 14	8	14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm).	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm)		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 14	—	0
PEDESTALING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft.	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft.	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft.	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft.	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	(13) 14	13	14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter.	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	13 (14) 15	14	15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft.	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals.	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft.	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft.		
	0 or 1 2 3	4 5 6	7 8 9	10 11 12	(13) 14	13	14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area.	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area.	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area.	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area.	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area.		
	0 or 1 2 3	(4) 6	7 8 9	10 11 12	13 14 15	4	15

TOTAL SSF 57 / 86 = 66.2 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: _____

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate Area AML sites

LOCATION: Sowbelly North

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS						TOTALS OBSERVED/POTENTIAL
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm). 0 or 1 2 3	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm). 4 5 6	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm). (13) 14	13 / 14
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles. 0 or 1 2 3	Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles. 4 5 6	Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles. 7 8 9	Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area. 10 (11) 12	More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area. 13 14	11 / 14
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm). 0 or 1 2 3	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm). 4 5 6	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm). 7 8 9	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm). 10 11 12	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm) 13 14	— / 0
PEDESTAL-LING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft. 0 or 1 2 3	Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft. 4 5 6	Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft. 7 8 9	Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft. 10 11 (12)	Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft. 13 14	12 / 14
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter. 0 or 1 2 3	Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 4 5 6	Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 7 8 9	Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 10 11 12	Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter. 13 (14) 15	14 / 15
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft. 0 or 1 2 3	Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft. 4 5 6	Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals. 7 8 9	Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft. 10 11 12	Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft. 13 (14)	14 / 14
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area. 0 or 1 (2) 3	Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area. 4 5 6	Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area. 7 8 9	Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area. 10 11 12	Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area. 13 14 15	2 / 15

TOTAL SSF 66 / 86 x =76.7
(Observed/Potential x100)

POSTMINE LAND USE: ______

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

OBSERVER: Buckner DATE: 9/15/93 MINE: Castlegate Area AML sites

LOCATION: SouBelly South

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
DETERMINATION OF EROSION CONDITION
SOIL SURFACE FACTOR (SSF)

DESCRIPTIONS OF DIFFERENT DEGREES EACH OF THE EROSION FACTORS

EROSION FACTORS															TOTALS OBSERVED/POTENTIAL	
SOIL MOVEMENT	Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between 0 and .1 in. (0 to 2.5 mm).		Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated area, is between .1 and .2 in. (2. to 5 mm).		Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .2 and .4 in. (5 to 10 mm).		Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas, is between .4 and .8 in. (10 to 20 mm).		Depth of recent deposits around obstacles, or in microterraces; and/or depth of truncated areas is over .8 in. (20 mm).						2	14
	0 or 1 (2)		4 5 6		7 8 9		10 11 12		13 14							
SURFACE LITTER & MULCH	No movement, or if present, less than 2 percent of the litter has been translocated and redeposited against obstacles.		Between 2 and 10 percent of the litter has been translocated and redeposited against obstacles.		Between 10 and 25 percent of the litter has been translocated and redeposited against obstacles.		Between 25 and 50 percent of the litter has been translocated and redeposited against obstacles or removed from that area.		More than 50 percent of the litter has been translocated and redeposited against obstacles or removed from the area.						5	14
	0 or 1 2 3		4 (5) 6		7 8 9		10 11 12		13 14							
SURFACE ROCK FRAGMENT	Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is less than .1 in. (2.5 mm).		Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .1 and .2 in. (2.5 to 5 mm).		Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is between .2 and .4 in. (5 to 10 mm).		Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments, is between .4 and .8 in. (10 to 20 mm).		Depth of soil removal around the fragments, and/or depth of recent deposits around the fragments is over .8 in. (20 mm)						—	0
	0 or 1 2 3		4 5 6		7 8 9		10 11 12		13 14							
PEDESTAL-LING	Pedestals are mostly less than .1 in. (2.5 mm) high and/or less frequent than 2 pedestals per 100 sq. ft.		Pedestals are mostly between .1 to .3 in. (2.5 to 8 mm) high and/or have a frequency of 2 to 5 pedestals per 100 sq. ft.		Pedestals are mostly between .3 to .6 in. (8 to 15 mm) high, and/or have a frequency of 5 to 7 pedestals per 100 sq. ft.		Pedestals are mostly between .6 and 1 in. (15 to 25 mm) high, and/or have a frequency of 7 to 10 pedestals per 100 sq. ft.		Pedestals are mostly over 1 in. (25 mm) high, and/or have a frequency of over 10 pedestals per 100 sq. ft.						12	14
	0 or 1 2 3		4 5 6		7 8 9		10 11 (12)		13 14							
FLOW PATTERNS	None, or if present, less than 2 percent of the surface area shows evidence of recent trans - location and deposition of soil and litter.		Between 2 and 10 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		Between 10 and 25 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		Between 25 and 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.		Over 50 percent of the surface area shows evidence of recent translocation and deposition of soil and litter.						12	15
	0 or 1 2 3		4 5 6		7 8 9		10 11 (12)		13 14 15							
RILLS	Rills, if present, are mostly less than .5 in. (13 mm) deep, and generally at infrequent intervals over 10 ft.		Rills are mostly .5 to 1 in. (13 to 25 mm) deep, and generally at infrequent intervals over 10 ft.		Rills are mostly 1 to 1.5 in. (25 to 38 mm) deep, and generally at 10 ft. intervals.		Rills are mostly 1.5 to 3 in. (38 to 76 mm) deep, and at intervals of 5 to 10 ft.		Rills are mostly 3 to 6 in. (76 to 152 mm) deep, and at intervals of less than 5 ft.						12	14
	0 or 1 2 3		4 5 6		7 8 9		10 11 (12)		13 14							
GULLIES	No gullies, or if present, less than 2 percent of the channel bed and walls show active erosion (are not vegetated), gullies make up less than 2 percent of the total area.		Between 2 and 5 percent of the channel-bed and walls show active erosion (are not vegetated), or gullies make up between 2 and 5 percent of the total area.		Between 5 and 10 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 5 and 10 percent of the total area.		Between 10 and 50 percent of the channel bed and walls show active erosion (are not vegetated), or gullies make up between 10 and 50 percent of the total area.		Over 50 percent of the channel bed and walls show active erosion (are not vegetated) along their length, or gullies make up over 50 percent of the total area.						0	15
	(0) or 1 2 3		4 5 6		7 8 9		10 11 12		13 14 15							

TOTAL SSF 43 / 86 x 100 = 50 (Observed/Potential x100)

EROSION CONDITION CLASSES:
STABLE 0-20 SSF, SLIGHT 21-40 SSF, MODERATE 41-60 SSF, CRITICAL 61-80 SSF, SEVERE 81-100 SSF

SSF's DISRUPTIVE TO POSTMINING LAND USES: Cropland and Forestry 41-100 SSF, All Other Uses 61-100 SSF

POSTMINE LAND USE: