

**Phase II Bond Release
Plateau Mining Corporation
Star Point Mine
C/007/006**

April 2008

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Refer to Record No. 0003 Date 4/5/2008

In C/007/006, 2008, Incoming

For additional information



State of Utah
 Department of Natural Resources
 Division of Oil, Gas and Mining
Coal Regulatory Program Directive

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|--|
| Directive Number: Tech - 006 |
| Effective Date: Under review/revision as of 8/23/04, see memo dated 10/06/05. |
| Supersedes: N/A |

Subject: **Requirements for Phased Bond Release**

Approved: _____ Lowell P. Braxton, Director, Division of Oil, Gas, and Mining

DISCLAIMER

"This non-binding directive is intended for internal direction for the Utah Coal Regulatory Program to Clarify the implementation of the Utah Coal Rules. It neither confers rights nor imposes obligations on the Division or any other party. In the case where a conflict is perceived to exist between this directive and the Utah Coal Rules, the rules prevail."

ABSTRACT

The objective of this policy is to provide information on the general requirements for bond release in accordance with rules and regulations pertaining to coal mining and reclamation operations in the state of Utah.

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 For additional information

1. Purpose

The purpose of this directive is to clearly present the requirements to request bond release under the Utah Coal Regulatory Program.

2. Regulatory Basis

R645-301-800.
30 CFR 800.40

3. Definitions

There are no additional definitions specific to this directive.

4. Policy

To petition for bond release the permittee must file an application with the Division. The Division will return the bond release application if all elements required by this directive are not provided.

The information supplied in the applicant's plan and bond release package must be adequate to allow the Division to conduct the following evaluations:

1. The degree of difficulty in completing any remaining reclamation and any reclamation that may be needed to bring the site to the premining land use should the proposed post mining land use fail.
2. Whether pollution of surface and subsurface water is occurring and the probability of future occurrence of such pollution, as well as the estimated cost of abating such pollution.

The applicant may obtain conditioned bond release approval, but actual bond release will not occur until all remaining transfers, lease conditions and other legal transactions are completed.

5. Procedure

PRIOR TO BOND RELEASE REQUEST

Prior to request for bond release, the reclamation plan and modifications to the reclamation plan, including changes in

the post mining land use and those changes that result during reclamation, must be approved by the Division and **incorporated into the Mining and Reclamation Plan (MRP)**. This includes the following:

1. Provide certification that reclamation was done according to the designs in the approved plan, or provide as-built plans including designs, reports and drawings of the reclamation work accomplished and any modifications, amendments, or changes to the reclamation plan as a result of the reclamation. **See Appendix 6 of attached Exhibit 880.100a and the Phase I bond release approved by the Division in October of 2004.**
2. Provide the maintenance agreements for structures approved to remain for the postmining land use. The maintenance agreements must state that the facilities will be properly managed and maintained by the land owner or managing agency following bond release and accept full liability for the facility. **See the Introduction in the attached Exhibit 880.100a and the Phase I bond release approved by the Division in October of 2004**
3. Where the postmining land use is changed from the premining land use in accordance with R645-301-412 through R645-301-414, the MRP must address all applicable performance standards for bond release and the criteria by which successful reclamation for the post mining land use will be judged. **Does not apply.**

REQUEST FOR BOND RELEASE

I. GENERAL ADMINISTRATIVE REQUIREMENTS - A request for bond release must contain or reference the following administrative information:

1. NOTARIZED SIGNATURE - A request will contain the notarized signature of a responsible official of the permittee, certifying that the information contained in the request is true and correct to the best of the official's information and

belief; and all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the Regulatory Program,

- B. NOTIFICATION LETTERS - Copies of letters of notification must be submitted to the Division. Notice Letters shall, at a minimum, contain the same information as submitted in the Newspaper Advertisement (see part C below) and shall be sent by the permittee to all parties who have a valid interest in release of the bond. Notice Letters shall identify the intent to seek bond release, and shall be sent to the following: See Appendix 4 of attached Exhibit 880.100a.

1. Surface Owners
2. Subsurface Owners
3. Adjoining Property Owners
4. County Commissioners
5. Mayors
6. Local Planning Agencies
7. Municipal Authorities
1. Sewage and Water Treatment Authorities
2. Water Companies

Depending on land ownership and management, other agencies that may need to be notified include:

1. Utah Division of State History
2. Utah Division of Water Rights
3. Utah Department of Environmental Quality
4. Utah Division of Wildlife Resources
5. Federal Agencies (OSM, BLM, Forest Service, Natural Resources Conservation Service, Fish and Wildlife

and the approved Reclamation Plan. See Appendix 6 of attached Exhibit 880.100a.

Service, Mine Safety and Health Administration, etc.)

- C. NEWSPAPER ADVERTISEMENT - Newspaper advertisements should be approved by the Division PRIOR to publication to ensure completeness. A copy of a newspaper advertisement which is published at least once a week for four consecutive weeks in a newspaper of the locality of the mining operation shall be submitted to the Division within 30 days of filing the bond release application. The advertisement shall contain the following items: See Appendix 3 of the attached Exhibit 880.100a. A notarized statement for the local paper will be submitted as part of the clean copies.

1. The permit number, name of the permittee, and the permit approval date.
2. A description of the precise location of the land affected.
3. The number of acres to be considered for release.
4. The amount and type of bond the Division currently holds.
5. The amount of bond being sought for release.
6. A description of the type of reclamation work performed

and the dates when the work was performed and completed.

7. A description of the results achieved in relation to the mining and reclamation plan (i.e. stability, restoration of drainages, vegetation establishment).
 8. A statement indicating written comments, objections and requests for public hearings or informal conferences may be submitted to the Division of Oil, Gas and Mining.
 9. The closing date for submission of such comments, etc. (At least 30 days AFTER the last publication date).
 10. The address of the Division of Oil, Gas and Mining.
- D. PERMIT CONDITIONS - Demonstrate all outstanding permit conditions have been satisfied. See the Introduction in Exhibit 880.100a and Appendixes 1, 2, 5 and 6.

II. GENERAL TECHNICAL REQUIREMENTS

- A. BOND RELEASE REQUEST (ALL PHASES) - A request for bond release must contain or reference (specific sections or exhibits from the MRP) the following technical information:
4. The specific reclamation treatments, areas, and work accomplished which is to be considered for bond release. Reference the pages or sections where postmining topography, drainage

1. A legal description of the permit area. See Map 112.500a in the MRP.
2. Maps at a scale of 1"=500' or larger (e.g. 1"=50') clearly illustrating the boundaries of lands for which bond release is being requested. The maps shall: See Maps 542.200a, 542.200b, and 542.200c, 542.200g and 542.200h in Volume 2 of the MRP.
 1. Delineate all disturbed areas,
 2. Show the reclamation dates and acreages of each reclaimed area,
 3. Show the operation or reclamation status of each area, such as active; temporary cessation; or phase bond release, and,
 4. Show areas proposed for bond release.
3. Notify the Division 3 months in advance of vegetation sampling for PHASE II and PHASE III bond release to confirm adequacy of sampling methodology and schedule sampling dates. Informed inspector Karl Housekeeper verbally.
 - control, vegetation, intended land use, etc., are contained in the MRP. See attached Appendix 1 and 2 of Exhibit 880.100a and Maps 542.200a through

542.200h in Volume 2 of the MRP as well as annual reports for see mixes used.

5. A brief history of mining and reclamation activities indicating when mining operations began and ended and when earthwork and topsoil distribution began and ended. See the Introduction in the attached Exhibit 880.10a and maps 542.200a through 542.200h in Volume 2 of the MRP.
6. Dates of last seeding, rill and gully repair or other augmentative practices, and references to approval for any husbandry practices occurring during the period of extended responsibility. See the Introduction in the attached Exhibit 880.10a.
7. Remaining sediment control structures (ponds, silt fences, straw bales) and diversions to be removed and any release of refuse piles and impoundments from MSHA requirements. See the Introduction in the attached Exhibit 880.10a.
8. A detailed schedule and cost estimate for the remaining reclamation work to be accomplished. The cost estimate shall include, but not be limited to: cost for remaining reclamation treatments; revegetation; diversion and sediment pond removal; access road removal; vegetative, water,

and other monitoring requirements; surveys or studies to determine reclamation success; maintenance costs; and engineering and contingency costs and any reclamation that may be needed to bring the site to the premining land use should the proposed post mining land use fail. See Appendix 7 of the attached Exhibit 880.100a.

9. A summary of the current bond amount, total disturbed area acreage, and the acreage, locations, dates and amounts of bond released for PHASE I, PHASE II, and PHASE III reclamation. See the Introduction in the attached Exhibit 880.10a.

- B. PHASE I BOND RELEASE - Bond release for PHASE I may be considered only after the applicant demonstrates and the Division is satisfied that all the reclamation requirements for backfilling, regrading and drainage control measures for PHASE I are met. This phase may include topsoil replacement.

For PHASE I bond release, the following information must be included in the bond release package or referenced in the MRP:

1. All applicable information required in: BOND RELEASE REQUEST (ALL PHASES)
2. A map illustrating the "as-built" topography (refer to: PRIOR TO BOND RELEASE REQUEST)

3. Postmining Contour Topographic Maps (no smaller than 1"=500') showing detail including:

- a. Postmining hydrologic features including restoration of natural drainages. It should also show ponds, diversions, wells and monitoring sites to be removed at PHASE II,
- b. Cross sections showing important topographic features including but not necessarily limited to, approximate original contour, roads, etc.,
- c. Dates of backfilling and grading activities,
4. Dates of topsoil replacement, and
- e. Topsoil replacement depths.

4. Overburden chemical analyses results, and discussion on potential adverse affects on plant growth or water quality.

5. Evaluation of topsoil or substitute soil including chemical and physical

2. A detailed analysis showing that vegetation meets the provisions in the approved reclamation plan, Utah Coal Rules and policy, and includes; sampling data on production (for cropland), cover, species composition; and sampling methodology. In the event the area under consideration includes prime farmlands, soil productivity yield must be demonstrated to be returned to the equivalent yield for non-mined land of the same soil type in the surrounding

analyses and replacement depths (if included in this phase of bond release).

6. Evaluation of subsoil including analyses and replacement depths (optional).

C. PHASE II BOND RELEASE - Bond release for PHASE II may be considered only after the applicant demonstrates, and the Division is satisfied that all the reclamation requirements for PHASE I reclamation, and vegetation and water quality requirements for PHASE II reclamation are met in accordance with the MRP.

For PHASE II bond release, the following information must be included in the bond release package or referenced in the MRP:

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1. All information required above in BOND RELEASE REQUEST (ALL PHASES) and completion of PHASE I bond release, including topsoil replacement requirements if not previously met.

area under equivalent management practices, as determined from the soil survey performed pursuant to UCA 40-10-11(4) of the Act and R645-301-200 rules. See Appendix 1 of the attached Exhibit 880.100a.

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3. 3. A demonstration that no part of the land considered for bond release is contributing suspended solids to streamflow or runoff outside the permit area in excess of the

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requirements set by UCA 40-10-17(2)(j) of the Act and by R645-301-751 of the rules. See Appendix 2 of the attached Exhibit 880.100a.

4. Where a sediment pond or impoundment is to be retained as part of the postmining land use, a demonstration that the pond: 1) has a size and configuration adequate for its intended purposes, 2) the impounded water quality is suitable on a permanent basis for its intended use, 3) the pond has a sufficiently stable water level and is capable of supporting the intended use, 4) will meet applicable Utah and federal water quality standards after reclamation including demonstrating discharges from the impoundment will meet applicable effluent limitations and will not degrade the quality of receiving water below applicable Utah and federal water quality standards, and 5) the applicant must also show that there are provisions for sound future maintenance of the sediment pond or impoundment and a valid water right exists to legally allow the water to be put to beneficial use. Not applicable.

- D. PHASE III BOND RELEASE - Bond release for PHASE III may be considered only after the Division is satisfied that all the reclamation requirements for PHASE I and PHASE II

reclamation are complete, the period specified for Permittee responsibility in R645-301-357 is met, and all requirements of the Act and the permit are fully met for PHASE III .

For PHASE III bond release, the following information must be must be included in the bond release package or referenced in the MRP:

1. All information required in the above BOND RELEASE REQUEST (ALL PHASES).
2. A demonstration that the period specified for Permittee responsibility in R645-301-357 is met.
3. A surface and groundwater quality and quantity impact analysis assessing hydrology data relative to the impact projections contained within the Probable Hydrologic Consequences (PHC) and Cumulative Hydrologic Impact Assessment (CHIA.) The analysis must show a) That onsite impacts have been minimized and that offsite impacts have been prevented, b) Water quality demonstrated to be adequate for the post mining land use, and c) Trends.
4. Detailed vegetation information, for the last two years of operator responsibility, including sampling data on woody plant densities, productivity and cover, species composition, and sampling methodology. A detailed demonstration of how all the requirements of

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Exhibit 880.100a

**Phase II Bond Release
Plateau Mining Corporation
Star Point Mine
C/007/006**

April 2008

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Introduction

The Star Point Mine is located on Gentry Mountain approximately 23 miles southwest of Price, Utah on the east side of the Wasatch Plateau Coal Field. The Star Point Mine permit area is 8820.86 acres as shown on map 112.500a in Volume 1 of the MRP. The 93.7 acres within the disturbed area boundary are found on maps 542.200a, 542.200b and 542.200c in Volume 2 of the MRP. An additional 1.54 acres associated with the remote Mud Water and Corner Canyon Fan sites are shown on maps 542.200g and 542.200h in Volume 2 of the MRP. Phase I bond release for the Star Point Mine was approved on October 12, 2004.

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan on the entire acreage within the disturbed area boundary.

A performance bond in the amount of \$3,118,400 is currently held to ensure that reclamation is accomplished. Following the approval of this Phase II bond release the bond will be reduced to \$1,181,000.

Mining operations began in 1916 when the Wattis Brothers and Mr. Browning bought 160 acres from the United States and developed the property for coal production. The Lion Coal Company operated Wattis No.1 and 2 mines until the end of 1963. There were no coal mining activities from 1964 through 1967. Plateau Mining, Ltd. operated the Star Point No.1 mine in the Hiawatha Coal Seam, and the Star Point No.2 Mine in the Wattis Coal Seam, from 1967 through the fall of 1971. United Nuclear Corporation acquired the Star Point Mines in the fall of 1971. Modernization of the coal mine started when the Lion Deck portal area was expanded in October 1977. United Nuclear Corporation operated the mine until July 1980. The current Permittee, Plateau Mining Corporation (PMC) a subsidiary of Foundation American Coal Company, LLC, operated the Star Point Mine from July of 1980 until its closure in February of 2000.

Following the permanent cessation of operations in 2000, PMC began reclamation activities. Reclamation in 2000 dealt with: the demolition of the overland conveyor system and preparation plant; the removal of equipment and machinery from underground; the demolition, backfilling and grading, and reseeding of the 1.54 acres at the Mud Water and the Corner Canyon Fan sites; and the sealing of the portals at the Lion Deck. As a footnote to the backfilling and grading activities at the remote fan sites, PMC earned a 2001 Earth Day Award for outstanding results following applications of innovative environmental technology for backfilling remote locations from within the mine (outside-in).

Reclamation activities continued in 2001 with further demolition, backfilling and grading, and reseeding activities on approximately 45.0 acres, which include: 1) No. 1 Mine Area encompassing 35.0 acres; and 2) Unit Train Loadout and Silo area encompassing 10.0 acres.

During 2002, demolition, backfilling and grading, and revegetation operations were performed on approximately 49.0 acres. The reclaimed acres included 25.5 acres associated with the Lions Deck and Pond 1 Areas and 23.5 acres associated with the Overland Conveyor and Main Channel Areas. (In 2006 PMC received an Earth Day Award for this reclamation identifying outstanding final reclamation of a pre-SMCRA site as the reason for the award). Also, during 2002, PMC demonstrated that mining did not impact the hydrologic balance and through the permit amendment process received approval from DOGM to discontinue further water monitoring, on all but three locations. Two of the three remaining locations deal with the North Fork of the Right Fork of Miller Creek and the other is to monitor for off site contributions of sediment below the reclaimed lands.

In 2003, reclamation related activities were completed with the abandonment of water monitoring wells, boreholes, and minor backfilling and/or fencing of subsidence cracks. During 2003, PMC demonstrated that subsidence has substantially ceased and through the permit amendment process received approval from DOGM to discontinue further subsidence monitoring. Also in 2003, an amendment to discontinue color infrared vegetation monitoring was approved by the Forest Service and DOGM.

No augmented seeding has taken place following the initial seeding dates provided above. In October of 2003, the year following the reclamation of the Main Channel area, two small gullies were repaired on the slope north of the reclaimed Clean Coal Stacking Tube and, since this repair the area has remained stable. Each year since the initial seeding, the reseeded land has been inspected for noxious weeds and those found have been either treated or removed. No other augmentative practices have taken place within the disturbed area boundary.

There are no remaining sediment control structures (ponds, silt fences, straw bales) or diversions to be removed and the refuse pile and associated topsoil stockpile areas were removed from the Star Point Mine Permit in November of 2003, and permitted by Sunnyside Cogeneration Associates under Permit C/007/042 for use as a fuel source for their power generating facility.

The only structure approved to remain for the postmining land use is County Road 290 (Gentry Mountain Road). The roads that once supported the mining operation have been reclaimed, transferred to Sunnyside Cogeneration Associates or in the case of County Road 290, used to support the postmining land uses. The roads are shown on Table 534.200a on pages 500-70 and 71 in Volume 2 of the MRP and discussed in Section 542.600 on pages 500-80 and 81 in Volume 2 of the MRP.

For information on As-Built Topography, Treatment and Cross Sections refer to Maps 542.200a through 542.200h in Volume 2 of the Star Point MRP.

Phase I bond release for the Star Point Mine was approved on October 12, 2004. A performance bond in the amount of \$3,118,400 is held to ensure that reclamation is accomplished.

On July 29, 2004 the Division received a letter from Alice B. Carlton, Forest Supervisor approving the Star Point Mine Phase I bond release in behalf of the Forest Service. This letter,

included in this application in Appendix 4, included the following statement. *“As previously reported to your staff, several subsidence cracks within the Starpoint Mine Permit Area on Castle Valley Ridge pose a hazard to the public and wildlife. Reclamation of these cracks must be completed before we can concur with additional phases of bond release.”* In August of 2007 the subsidence cracks referred to by the Forest Service were repaired and the protective fence surrounding the cracks was removed. In March of 2008 the Permittee contacted the Forest Service concerning the aforementioned subsidence repair and the Forest Service indicated they would inspect these repairs as well as the reclamation of the Mud Water and Corner Canyon Fan sites when weather permits.

In December of 2005 Plateau Mining Corporation reached an agreement with the Huntington Cattle Association and the Huntington-Cleveland Irrigation Company resolving the long standing Citizens Complaint associated with the Star Point Spring. Also in September of 2005 the culverts that were located in the North Fork of the Right Fork of Miller Creek were removed and hauled off the mountain.

In February of 2006 the Bureau of Land Management issued coal lease relinquishments for the Star Point Mine Federal Coal Leases.

With the completion of the year-four vegetation monitoring study performed by Mt. Nebo Scientific, Inc. in 2006 and the Sediment Yield Calculations prepared by EarthFax Engineering in 2007, Plateau Mining Corporation has completed all the necessary reclamation work to justify Phase II bond release for the Star Point Mine.

Vegetation Information

Vegetation sampling (Appendix 1) on the reclaimed and reference areas at the Star Point Mine was conducted during the growing season of 2006 as a means to monitor the success of the revegetation and to determine whether on not Phase II bond release was possible.

The vegetation sampling report presents the methodology and data as required by the mining and reclamation plan. The data show that the revegetation at the Star Point Mine is progressing well and with the statistical, similarity, and diversity comparisons Phase II bond release is warranted.

Comparing background conditions (approved Reference Areas), it is shown that the living cover value, so important to erosion control, of the reclaimed area is not statistically dissimilar that the reference area.

Sediment Yield Information

To demonstrate that the reclaimed area will generate the same amount or less sediment than the undisturbed condition, the revised universal soil loss equation (RUSLE) was used (Appendix 2).

The revised universal soil loss equation takes into several factors in determining the sediment yield for an area. The factors involved are: 1) rainfall-runoff erosivity, 2) soil erodibility, 3) length of slope, 4) cover management, and 5) support practice.

The RUSLE demonstrates that the reclaimed area sediment yield at the Star Point Mine is much less than the sediment yield under undisturbed conditions.

Conclusion

As authorized by R645-301-880.300, Phase II Bond Release should be approved based on the Permittee meeting vegetation and water quality requirements in accordance with the mining and reclamation plan.

Appendix 1

**Vegetation Monitoring
For Phase II Bond Release
Star Point Mine**

**REVEGETATION MONITORING
AT THE STAR POINT MINE**

**YEAR FOUR
2006**

**FOR
PLATEAU MINING CORPORATION**



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March 2007

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**REVEGETATION MONITORING
AT THE STAR POINT MINE, UTAH**

**YEAR FOUR
2006**

INTRODUCTION

The Star Point Mine is located on the east side of the Wasatch Plateau on Gentry Mountain approximately 23 miles southwest of Price, Utah. Historically, coal mining at the Star Point Mine began in 1916. Coal was shipped to the town of Wattis by 1917 when a railroad was completed there. In 1967, a company called Plateau Limited opened a new mine in the area. By 1971, another company, United Nuclear, purchased the mine. Finally, in 1980, Plateau Mining Company bought and mined the properties. The current permittee, Plateau Mining Corporation, began final reclamation of the mine site in 2001, with final seeding for revegetation finalized by 2003. *This document contains the Year 4 sampling results from monitoring the vegetation in the reclaimed areas of the Star Point Mine site.*

The Star Point Mining & Reclamation Plan (MRP) divided the disturbed areas into three main types based on the native plant communities that existed in the area prior to the disturbance by coal mining activities. The three areas were called: 1) **Sagebrush Area**, 2) **Mountain Grassland Area**, and 3) **Saltbush Area**. At final reclamation these areas were seeded with seed mixtures developed specifically for each area. Additionally, **reference areas**, or areas chosen in

undisturbed plant communities to represent final revegetation success standards, were chosen for each disturbed type. *This document also contains the sampling results for the reference areas at the Star Point Mine for 2006; this allows comparisons to be made of the reference areas with their respective disturbance types.*

METHODS

Methodologies used for sampling were performed in accordance with the guidelines provided by the State of Utah, Division of Oil, Gas & Mining (DOGGM). The Sagebrush, Mountain Grassland, and Saltbush areas were sampled; the data were separated so the results could be compared to the appropriate reference area. Additionally, because the reclaimed mine site contained so much acreage, the three types were also further subdivided into smaller areas. This method allows for closer scrutiny of the reclaimed mine site on an smaller, area-by-area basis.

Transect and Quadrat Placement

Random/regular placement of sample quadrats were designed as an attempt to provide unbiased accuracy of the data compiled. This was accomplished by establishing several transect lines along the entire length of each reclaimed area. At regular intervals along the transect lines, random numbers were generated and used to measure distances at right angles from the line to determine sample locations. Whether these random numbers were odd or even determined which side of transect line a given quadrat was placed. The random numbers selected were high enough to

place quadrats to the lateral limits of the reclaimed areas and all areas in-between. This insured that the sample quadrats were placed randomly over the entire study area in an attempt to adequately address and represent the site as a whole.

Cover, Frequency and Composition

Cover estimates were made using ocular methods with meter square quadrats. Species composition and relative frequencies were also assessed from the quadrats. Additional information recorded on the raw data sheets were: slope, exposure, grazing use, animal disturbance and other appropriate notes. Plant nomenclature follows "A Utah Flora" (Welsh et al. 2003).

Sample Size & Adequacy

Sampling adequacy was calculated using formula given below.

$$nMIN = \frac{t^2 s^2}{(dx)^2}$$

where,

nMIN = minimum adequate sample
t = appropriate confidence t-value
s = standard deviation
x = sample mean
d = desired change from mean

However, sample size was also based on the size of each subdivision within each reclaimed type,

resulting in more samples taken in larger areas.

Photographs

Color photographs of the sample areas were taken at the time of sampling and a subset of them have been submitted with this report. A much larger set of photographs taken at specific sample areas have been filed at the offices of *Mt. Nebo Scientific, Inc.* for future reference.

Vegetation Sample Map

The locations of the sample areas were mapped during the field work. These locations were then placed on an "as-built" reclamation maps prepared previously by *Earthfax Engineering*, resulting in three Vegetation Sample Maps that have been submitted in this report. The reference areas were outside the boundaries of these maps.

Raw Data

The raw data for total cover, cover by species, frequency and composition were also submitted in the Appendix of this report which should facilitate future scrutiny of the data and further statistical testing if desired. Specific sample areas and quadrat numbers are included on the raw data sheets.

RESULTS

Reclaimed Areas

As mentioned above, there were three disturbance types delineated. Additionally, these types were further subdivided into smaller areas to allow closer scrutiny of specific sites (see *VEGETATION SAMPLE MAPS* and *COLOR PHOTOGRAPHS OF THE SAMPLE AREAS*).

The following table shows the three types and subdivisions within them.

Table 1: Sample area subdivisions of each reclaimed type.

| Reclaimed Sagebrush | Reclaimed Mtn. Grassland | Reclaimed Saltbush |
|---------------------|--------------------------|--------------------|
| Area A | Area E | Area I |
| Area B | Area F | |
| Area C | Area G | |
| Area D | | |
| Area H | | |

Reference Areas

The three reference areas, or areas chosen to represent standards for revegetation success of the of the three disturbance types, are shown in Table 2 (see also *COLOR PHOTOGRAPHS OF THE SAMPLE AREAS*).

Table 2: Reference areas and their respective reclaimed areas.

| Reference Areas | Reclaimed Areas |
|------------------------|--|
| Sagebrush | Area A Area B Area C Area D Area H |
| Mtn. Grassland | Area E Area F Area G |
| Saltbush | Area I |

Sample Results

Comparisons of the data can be made by reviewing the summary tables that have been provided for the sample results of each reclaimed and reference area (Tables 4 through 39). Table 3 shows the number of the appropriate table for each parameter in all sample areas of the study.

Table 3: Data locator.

| SAMPLE AREA | Sub-Division | Cover by Species | Total Cover | Composition | Woody Species Density |
|--------------------------|---------------------|-------------------------|--------------------|--------------------|------------------------------|
| Reclaimed Sagebrush | A | Table 4 | Table 5 (A) | Table 5 (B) | Table 6 |
| Reclaimed Sagebrush | B | Table 7 | Table 8 (A) | Table 8 (B) | Table 9 |
| Reclaimed Sagebrush | C | Table 10 | Table 11 (A) | Table 11 (B) | Table 12 |
| Reclaimed Sagebrush | D | Table 13 | Table 14 (A) | Table 14 (B) | Table 15 |
| Reclaimed Sagebrush | H | Table 25 | Table 26 (A) | Table 26 (B) | Table 27 |
| Mtn. Grassland | E | Table 16 | Table 17 (A) | Table 17 (B) | Table 18 |
| Mtn. Grassland | F | Table 19 | Table 20 (A) | Table 20 (B) | Table 21 |
| Mtn. Grassland | G | Table 22 | Table 23 (A) | Table 23 (B) | Table 24 |
| Saltbush | I | Table 28 | Table 29 (A) | Table 29 (B) | Table 30 |
| Sagebrush Reference | | Table 31 | Table 32 (A) | Table 32 (B) | Table 33 |
| Mtn. Grassland Reference | | Table 34 | Table 35 (A) | Table 35 (B) | Table 36 |
| Saltbush Reference | | Table 37 | Table 38 (A) | Table 38 (B) | Table 39 |

Figures 1 through 6 have been created to provide an easy method to visually compare the summarized data of each reclaimed area with its respective reference area.

DISCUSSION

Total Living Cover

Total living cover values of the **reclaimed sagebrush** areas were all quite similar to the reference area (Fig. 1). Moreover, by examining the summary tables, many of the plant species that are becoming established were “desirable” species, however, there was also a fair representation of a

few “weedy”, exotic plants in some areas.

Although the total living cover of the **reclaimed mountain grassland** areas have not yet achieved those of its reference area, the values are respectable and are approaching those of the reference area standard (Fig. 2). The summary tables for these areas also indicate that many desirable plant species are becoming established here too.

Finally, the total living cover in the **reclaimed saltbush** areas are doing quite well, especially when considering that the growth medium is composed of a great deal of clay from the Mancos Shale formation. The total living cover values in the reclaimed saltbush areas have exceeded those of its reference area (Fig. 3).

Woody Species Density

Woody species density values for the **reclaimed sagebrush** areas are not nearly as high as those in the reference area (Fig. 4). This, however, may not be as negative of a result as it may first appear. The woody species density of the sagebrush reference area was estimated to be over 8,000 individuals per acre. This high value may be the result of stress from overgrazing and/or drought conditions resulting in fewer the forbs and grasses. Perhaps a standard with fewer woody plants per acre (*i.e.* 2,000 individuals per acre) could be proposed by the land owner for approval by biologists from the regulatory agencies. A lower density of sagebrush plants may allow more forbs and grasses to become established and available for grazing by herbivores, and also provide

more diverse habitat for wildlife.

Woody species density of **reclaimed mountain grassland** areas are approaching (or exceed) the values of the reference area (Fig. 5).

Finally, woody species density values of the **reclaimed saltbush** areas are lower, but approaching those values of its reference area (Fig. 6).

DATA SUMMARY TABLES

Table 4: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Sagebrush Area A | | | |
|--------------------------------|--------------|--------------------|-------------------|
| | | | n=70 |
| TREES & SHRUBS | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Acer grabrum</i> | 0.64 | 4.20 | 5.71 |
| <i>Amelanchier utahensis</i> | 0.41 | 1.97 | 7.14 |
| <i>Artemisia tridentata</i> | 0.07 | 0.59 | 1.43 |
| <i>Atriplex canescens</i> | 2.19 | 11.59 | 10.00 |
| <i>Atriplex confertifolia</i> | 1.24 | 7.21 | 8.57 |
| <i>Ceratoides lanata</i> | 2.29 | 7.21 | 14.29 |
| <i>Chrysothamnus nauseosus</i> | 4.09 | 8.59 | 28.57 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.29 | 1.16 | 5.71 |
| <i>Artemisia ludoviciana</i> | 0.66 | 3.38 | 5.71 |
| <i>Bassia hyssopifolia</i> | 9.21 | 18.93 | 31.43 |
| <i>Grindelia squarrosa</i> | 0.19 | 0.90 | 4.29 |
| <i>Halogeton glomeratus</i> | 0.11 | 0.69 | 2.86 |
| <i>Hedysarum boreale</i> | 0.97 | 4.05 | 7.14 |
| <i>Linum lewisii</i> | 5.34 | 7.86 | 51.43 |
| <i>Mellilotus officinalis</i> | 0.60 | 2.67 | 7.14 |
| <i>Penstemon palmeri</i> | 2.73 | 4.05 | 37.14 |
| <i>Salsola tragus</i> | 1.36 | 6.54 | 5.71 |
| <i>Sphaeralcea coccinea</i> | 0.07 | 0.59 | 1.43 |
| <i>Viguiera multiflora</i> | 0.29 | 1.87 | 2.86 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 5.36 | 8.42 | 42.86 |
| <i>Bromus carinatus</i> | 0.21 | 1.78 | 1.43 |
| <i>Bromus tectorum</i> | 0.14 | 1.19 | 1.43 |
| <i>Elymus elymoides</i> | 0.14 | 0.83 | 1.43 |
| <i>Elymus lanceolatus</i> | 4.93 | 7.10 | 32.86 |
| <i>Elymus spicatus</i> | 3.47 | 7.99 | 28.57 |
| <i>Stipa comata</i> | 0.10 | 0.83 | 1.43 |
| <i>Stipa hymenoides</i> | 1.69 | 4.33 | 21.43 |

| Table 5: Star Point Mine. Total Cover and Composition (2006). | | |
|---|--------------|--------------------|
| Reclaimed Sagebrush Area A | | n=70 |
| A. TOTAL COVER | Mean Percent | Standard Deviation |
| Total Living Cover | 48.79 | 16.93 |
| Litter | 9.19 | 6.87 |
| Bareground | 17.59 | 10.46 |
| Rock | 24.44 | 15.34 |
| B. % COMPOSITION | | |
| Shrubs | 22.57 | 26.83 |
| Forbs | 44.35 | 28.05 |
| Grasses | 33.08 | 24.59 |

Table 6: Star Point Mine . Woody Species Density (2006).

| Reclaimed Sagebrush Area A | | n=70 |
|----------------------------------|----------------------|------|
| SPECIES | Individuals Per Acre | |
| <i>Acer glabrum</i> | 36.22 | |
| <i>Amelanchier utahensis</i> | 36.22 | |
| <i>Artemisia tridentata</i> | 67.27 | |
| <i>Atriplex confertifolia</i> | 150.07 | |
| <i>Atriplex canescens</i> | 212.17 | |
| <i>Ceratoides lanata</i> | 388.12 | |
| <i>Cercocarpus ledifolius</i> | 5.17 | |
| <i>Chrysothamnus nauseosus</i> | 548.55 | |
| <i>Symphoricarpos oreophilus</i> | 5.17 | |
| TOTAL | 1448.99 | |

Table 7: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Sagebrush Area B | | | |
|--------------------------------|--------------|--------------------|-------------------|
| | | | n=15 |
| TREES & SHRUBS | | | |
| | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Atriplex confertifolia</i> | 2.33 | 4.78 | 20.00 |
| <i>Chrysothamnus nauseosus</i> | 8.67 | 15.65 | 46.67 |
| FORBS | | | |
| <i>Aster chilensis</i> | 0.67 | 2.49 | 6.67 |
| <i>Bassia hyssopifolia</i> | 1.33 | 3.86 | 13.33 |
| <i>Grindelia squarrosa</i> | 0.33 | 1.25 | 6.67 |
| <i>Linum lewisii</i> | 9.00 | 8.60 | 66.67 |
| <i>Penstemon palmeri</i> | 1.00 | 2.00 | 20.00 |
| <i>Salsola tragus</i> | 7.00 | 15.58 | 26.67 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 0.33 | 1.25 | 6.67 |
| <i>Elymus lanceolatus</i> | 1.67 | 2.98 | 56.67 |
| <i>Elymus salinus</i> | 4.67 | 17.46 | 6.67 |
| <i>Elymus spicatus</i> | 0.33 | 1.25 | 6.67 |
| <i>Stipa comata</i> | 0.33 | 1.25 | 6.67 |
| <i>Stipa hymenoides</i> | 7.67 | 7.93 | 60.00 |

Table 8: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Sagebrush Area B | | |
|----------------------------|--------------|--------------------|
| | | n=15 |
| A. TOTAL COVER | | |
| | Mean Percent | Standard Deviation |
| Total Living Cover | 45.33 | 16.98 |
| Litter | 7.87 | 5.68 |
| Bareground | 36.93 | 19.76 |
| Rock | 9.87 | 7.61 |
| B. % COMPOSITION | | |
| Shrubs | 21.85 | 26.01 |
| Forbs | 45.59 | 31.88 |
| Grasses | 32.56 | 25.41 |

Table 9: Star Point Mine . Woody Species Density (2006).

| Reclaimed Sagebrush Area B | |
|--------------------------------|----------------------|
| | n=15 |
| SPECIES | Individuals Per Acre |
| <i>Artemisia tridentata</i> | 19.20 |
| <i>Atriplex canescens</i> | 96.01 |
| <i>Atriplex corrugata</i> | 288.02 |
| <i>Ceratoides lanata</i> | 115.21 |
| <i>Chrysothamnus nauseosus</i> | 614.45 |
| <i>Eriogonum corymbosum</i> | 19.20 |
| TOTAL | 1152.09 |

Table 10: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Sagebrush Area C | | | n=15 |
|--------------------------------|--------------|--------------------|-------------------|
| TREES & SHRUBS | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Atriplex confertifolia</i> | 1.67 | 6.24 | 6.67 |
| <i>Ceratoides lanata</i> | 8.33 | 11.79 | 53.33 |
| <i>Chrysothamnus nauseosus</i> | 2.00 | 4.00 | 20.00 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.33 | 1.25 | 6.67 |
| <i>Bassia hyssopifolia</i> | 3.67 | 13.72 | 6.67 |
| <i>Linum lewisii</i> | 10.00 | 13.17 | 60.00 |
| <i>Melilotus officinalis</i> | 4.33 | 11.23 | 26.67 |
| <i>Penstemon palmeri</i> | 1.13 | 2.94 | 13.33 |
| <i>Viguiera multiflora</i> | 2.00 | 4.40 | 20.00 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 4.00 | 6.38 | 46.67 |
| <i>Bromus carinatus</i> | 1.33 | 3.40 | 13.33 |
| <i>Elymus lanceolatus</i> | 5.67 | 9.10 | 46.67 |
| <i>Elymus spicatus</i> | 6.20 | 11.14 | 46.67 |
| <i>Stipa comata</i> | 0.33 | 1.25 | 6.67 |
| <i>Stipa hymenoides</i> | 2.00 | 3.06 | 33.33 |

Table 11: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Sagebrush Area C | | | n=15 |
|----------------------------|--------------|--------------------|------|
| A. TOTAL COVER | Mean Percent | Standard Deviation | |
| Total Living Cover | 53.00 | 11.22 | |
| Litter | 8.33 | 2.36 | |
| Bareground | 21.00 | 10.20 | |
| Rock | 17.67 | 8.73 | |
| B. % COMPOSITION | | | |
| Shrubs | 22.94 | 23.39 | |
| Forbs | 39.37 | 30.46 | |
| Grasses | 37.70 | 22.31 | |

Table 12: Star Point Mine . Woody Species Density (2006).

| Reclaimed Sagebrush Area C | | n=15 |
|--------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Artemisia tridentata</i> | | 37.06 |
| <i>Atriplex confertifolia</i> | | 148.23 |
| <i>Atriplex canescens</i> | | 148.23 |
| <i>Ceratoides lanata</i> | | 1148.77 |
| <i>Chrysothamnus nauseosus</i> | | 741.14 |
| TOTAL | | 2223.43 |

Table 13: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Sagebrush Area D | | | |
|--------------------------------|--------------|--------------------|-------------------|
| | | | n=15 |
| TREES & SHRUBS | | | |
| | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Atriplex canescens</i> | 1.00 | 2.71 | 13.33 |
| <i>Atriplex confertifolia</i> | 0.67 | 2.49 | 6.67 |
| <i>Chrysothamnus nauseosus</i> | 1.67 | 6.24 | 6.67 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.67 | 2.49 | 6.67 |
| <i>Bassia hyssopifolia</i> | 3.33 | 6.99 | 20.00 |
| <i>Grindelia squarrosa</i> | 1.67 | 2.98 | 26.67 |
| <i>Linum lewisii</i> | 1.00 | 3.74 | 6.67 |
| <i>Mellilotus officinalis</i> | 2.00 | 3.56 | 26.67 |
| <i>Penstemon palmeri</i> | 0.67 | 2.49 | 6.67 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 13.00 | 9.63 | 80.00 |
| <i>Bromus carinatus</i> | 0.67 | 2.49 | 6.67 |
| <i>Elymus lanceolatus</i> | 20.00 | 13.90 | 86.67 |
| <i>Elymus spicatus</i> | 7.67 | 7.72 | 60.00 |
| <i>Stipa hymenoides</i> | 2.33 | 6.55 | 13.33 |

Table 14: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Sagebrush Area D | | |
|----------------------------|--------------|--------------------|
| | | n=15 |
| A. TOTAL COVER | | |
| | Mean Percent | Standard Deviation |
| Total Living Cover | 56.33 | 13.47 |
| Litter | 11.00 | 5.83 |
| Bareground | 14.33 | 7.50 |
| Rock | 18.33 | 9.94 |
| B. % COMPOSITION | | |
| Shrubs | 5.40 | 10.42 |
| Forbs | 17.21 | 16.04 |
| Grasses | 77.39 | 14.54 |

Table 15: Star Point Mine . Woody Species Density (2006).

| Reclaimed Sagebrush Area D | | n=15 |
|--------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Artemisia tridentata</i> | | 3.27 |
| <i>Atriplex confertifolia</i> | | 26.15 |
| <i>Atriplex canescens</i> | | 19.61 |
| <i>Ceratoides lanata</i> | | 13.07 |
| <i>Chrysothamnus nauseosus</i> | | 134.01 |
| TOTAL | | 196.11 |

Table 16: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Mtn./Grass Area E | | | |
|--------------------------------|-----------------|-----------------------|----------------------|
| | | | n=60 |
| TREES & SHRUBS | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Artemisia tridentata</i> | 1.92 | 5.71 | 15.00 |
| <i>Chrysothamnus nauseosus</i> | 1.83 | 4.65 | 18.33 |
| <i>Eriogonum corymbosum</i> | 0.08 | 0.64 | 1.67 |
| <i>Purshia tridentata</i> | 0.33 | 1.25 | 6.67 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 1.00 | 3.14 | 13.33 |
| <i>Artemisia ludoviciana</i> | 0.50 | 2.69 | 3.33 |
| <i>Aster engelmannii</i> | 0.75 | 2.55 | 10.00 |
| <i>Halogeton glomeratus</i> | 0.17 | 0.90 | 3.33 |
| <i>Hymenoxys acaulis</i> | 0.17 | 1.28 | 1.67 |
| <i>Lepidium montanum</i> | 0.08 | 0.64 | 1.67 |
| <i>Linum lewisii</i> | 8.22 | 10.16 | 53.33 |
| <i>Mellilotus officinalis</i> | 0.33 | 2.01 | 3.33 |
| <i>Penstemon palmeri</i> | 1.00 | 3.27 | 10.00 |
| <i>Salsola tragus</i> | 0.33 | 1.80 | 3.33 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 2.08 | 7.97 | 10.00 |
| <i>Bromus carinatus</i> | 4.17 | 7.43 | 33.33 |
| <i>Elymus cinereus</i> | 5.78 | 9.78 | 36.67 |
| <i>Elymus lanceolatus</i> | 11.53 | 13.54 | 66.67 |
| <i>Elymus spicatus</i> | 9.42 | 10.73 | 61.67 |
| <i>Poa secunda</i> | 0.63 | 2.08 | 10.00 |
| <i>Stipa hymenoides</i> | 0.92 | 2.81 | 11.67 |
| <i>Stipa lettermanii</i> | 0.25 | 1.42 | 3.33 |

Table 17: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Mtn./Grass Area E | | |
|-----------------------------|--------------|--------------------|
| | n=60 | |
| A. TOTAL COVER | Mean Percent | Standard Deviation |
| Total Living Cover | 51.50 | 17.52 |
| Litter | 8.35 | 3.68 |
| Bareground | 16.92 | 12.55 |
| Rock | 23.23 | 12.81 |
| | | |
| B. % COMPOSITION | | |
| Shrubs | 7.55 | 12.79 |
| Forbs | 25.41 | 22.09 |
| Grasses | 67.05 | 22.35 |

Table 18: Star Point Mine . Woody Species Density (2006).

| Reclaimed Mtn/Grass Area E | | n=60 |
|------------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Amelanchier utahensis</i> | | 7.47 |
| <i>Artemisia tridentata</i> | | 171.87 |
| <i>Cercocarpus ledifolius</i> | | 9.34 |
| <i>Chrysothamnus viscidiflorus</i> | | 3.74 |
| <i>Chrysothamnus nauseosus</i> | | 173.74 |
| <i>Eriogonum corymbosum</i> | | 46.70 |
| <i>Gutierrezia sarothrae</i> | | 1.87 |
| <i>Purshia tridentata</i> | | 26.15 |
| <i>Symphoricarpos oreophilus</i> | | 7.47 |
| TOTAL | | 448.36 |

Table 19: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Mtn./Grass Area F | | | |
|--------------------------------|--------------|--------------------|-------------------|
| | | | n=20 |
| TREES & SHRUBS | | | |
| | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Artemisia tridentata</i> | 0.50 | 2.18 | 5.00 |
| <i>Chrysothamnus nauseosus</i> | 5.00 | 8.37 | 30.00 |
| <i>Purshia tridentata</i> | 0.25 | 1.09 | 5.00 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.50 | 2.18 | 5.00 |
| <i>Artemisia ludoviciana</i> | 0.75 | 1.79 | 15.00 |
| <i>Aster engelmannii</i> | 0.75 | 3.27 | 5.00 |
| <i>Hedysarum boreale</i> | 0.25 | 1.09 | 5.00 |
| <i>Linum lewisii</i> | 7.00 | 8.72 | 50.00 |
| <i>Mellilotus officinalis</i> | 3.00 | 3.32 | 50.00 |
| <i>Penstemon palmeri</i> | 3.25 | 5.31 | 35.00 |
| <i>Viguiera multiflora</i> | 0.25 | 1.09 | 5.00 |
| GRASSES | | | |
| <i>Bromus carinatus</i> | 5.00 | 7.58 | 40.00 |
| <i>Elymus cinereus</i> | 9.75 | 17.21 | 35.00 |
| <i>Elymus lanceolatus</i> | 7.75 | 7.33 | 70.00 |
| <i>Elymus smithii</i> | 2.25 | 6.80 | 10.00 |
| <i>Elymus spicatus</i> | 2.50 | 3.71 | 35.00 |
| <i>Stipa hymenoides</i> | 1.25 | 3.83 | 10.00 |

Table 20: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Mtn./Grass Area F | | |
|-----------------------------|--------------|--------------------|
| | | n=20 |
| A. TOTAL COVER | | |
| | Mean Percent | Standard Deviation |
| Total Living Cover | 50.00 | 14.58 |
| Litter | 9.25 | 4.26 |
| Bareground | 21.00 | 11.02 |
| Rock | 19.75 | 10.78 |
| B. % COMPOSITION | | |
| Shrubs | 8.50 | 16.28 |
| Forbs | 34.98 | 19.75 |
| Grasses | 56.53 | 24.71 |

Table 21: Star Point Mine . Woody Species Density (2006).

| Reclaimed Mtn./Grass Area F | |
|----------------------------------|----------------------|
| | n=20 |
| SPECIES | Individuals Per Acre |
| <i>Artemisia tridentata</i> | 170.22 |
| <i>Cercocarpus ledifolius</i> | 59.58 |
| <i>Chrysothamnus nauseosus</i> | 391.51 |
| <i>Eriogonum corymbosum</i> | 8.51 |
| <i>Picea pungens</i> | 8.51 |
| <i>Purshia tridentata</i> | 34.04 |
| <i>Symphoricarpos oreophilus</i> | 8.51 |
| TOTAL | 680.8 |

Table 22: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Mtn/Grass Area G | Mean Percent | Standard Deviation | n=40 Percent Frequency |
|--------------------------------|--------------|--------------------|---------------------------|
| TREES & SHRUBS | | | |
| <i>Artemisia tridentata</i> | 0.50 | 2.18 | 5.00 |
| <i>Cercocarpus ledifolius</i> | 1.20 | 3.56 | 12.50 |
| <i>Chrysothamnus nauseosus</i> | 0.13 | 0.78 | 2.50 |
| <i>Purshia tridentata</i> | 0.55 | 1.67 | 10.00 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.38 | 1.73 | 5.00 |
| <i>Cirsium sp.</i> | 0.13 | 0.78 | 2.50 |
| <i>Halogeton glomeratus</i> | 0.25 | 1.56 | 2.50 |
| <i>Hedysarum boreale</i> | 1.38 | 4.47 | 12.50 |
| <i>Linum lewisii</i> | 9.38 | 7.35 | 82.50 |
| <i>Penstemon palmeri</i> | 6.75 | 9.26 | 55.00 |
| GRASSES | | | |
| <i>Bromus carinatus</i> | 1.13 | 3.79 | 10.00 |
| <i>Elymus cinereus</i> | 11.00 | 11.41 | 77.50 |
| <i>Elymus lanceolatus</i> | 10.00 | 10.00 | 65.00 |
| <i>Elymus spicatus</i> | 6.75 | 8.41 | 57.50 |
| <i>Poa secunda</i> | 0.75 | 3.27 | 5.00 |
| <i>Stipa hymenoides</i> | 1.38 | 5.24 | 10.00 |
| <i>Stipa lettermanii</i> | 0.63 | 3.90 | 2.50 |

Table 23: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Mtn/Grass Area G | Mean Percent | n=40 Standard Deviation |
|----------------------------|--------------|----------------------------|
| A. TOTAL COVER | | |
| Total Living Cover | 52.25 | 13.74 |
| Litter | 9.13 | 4.73 |
| Bareground | 13.13 | 8.27 |
| Rock | 25.50 | 11.98 |
| B. % COMPOSITION | | |
| Shrubs | 4.43 | 9.40 |
| Forbs | 36.02 | 21.46 |
| Grasses | 59.55 | 21.67 |

Table 24: Star Point Mine . Woody Species Density (2006).

| Reclaimed Mtn/Grass Area G | n=40 |
|--------------------------------|----------------------|
| SPECIES | Individuals Per Acre |
| <i>Amelanchier utahensis</i> | 2.15 |
| <i>Artemisia tridentata</i> | 114.04 |
| <i>Cercocarpus ledifolius</i> | 62.40 |
| <i>Chrysothamnus nauseosus</i> | 92.53 |
| <i>Eriogonum corymbosum</i> | 2.15 |
| <i>Purshia tridentata</i> | 68.86 |
| <i>Rosa woodsii</i> | 2.15 |
| TOTAL | 344.29 |

Table 25: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Sagebrush Area H | Mean Percent | Standard Deviation | Percent Frequency n=7 |
|--------------------------------|--------------|--------------------|--------------------------|
| TREES & SHRUBS | | | |
| <i>Atriplex canescens</i> | 9.00 | 12.43 | 42.86 |
| <i>Ceratoides lanata</i> | 1.71 | 2.76 | 28.57 |
| <i>Chrysothamnus nauseosus</i> | 6.43 | 7.89 | 42.86 |
| FORBS | | | |
| <i>Artemisia ludoviciana</i> | 1.43 | 3.50 | 14.29 |
| <i>Bassia hyssopifolia</i> | 28.57 | 23.26 | 71.43 |
| <i>Salsola tragus</i> | 12.14 | 19.25 | 28.57 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 1.43 | 3.50 | 14.29 |
| <i>Elymus lanceolatus</i> | 1.43 | 3.50 | 14.29 |
| <i>Elymus spicatus</i> | 4.29 | 7.28 | 28.57 |
| <i>Stipa hymenoides</i> | 3.57 | 5.80 | 28.57 |

Table 26: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Sagebrush Area H | n=7 | |
|----------------------------|--------------|--------------------|
| A. TOTAL COVER | Mean Percent | Standard Deviation |
| Total Living Cover | 70.00 | 9.64 |
| Litter | 7.86 | 2.47 |
| Bareground | 13.57 | 5.15 |
| Rock | 8.57 | 6.93 |
| B. % COMPOSITION | | |
| Shrubs | 23.95 | 11.40 |
| Forbs | 59.77 | 17.28 |
| Grasses | 16.28 | 16.74 |

Table 27: Star Point Mine . Woody Species Density (2006).

| Reclaimed Sagebrush Area H | n=7 |
|--------------------------------|----------------------|
| SPECIES | Individuals Per Acre |
| <i>Atriplex confertifolia</i> | 257.96 |
| <i>Atriplex canescens</i> | 687.89 |
| <i>Ceratoides lanata</i> | 429.93 |
| <i>Chrysothamnus nauseosus</i> | 1031.84 |
| TOTAL | 2407.62 |

Table 28: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Reclaimed Saltbush Area I | | | n=10 |
|--------------------------------|--------------|--------------------|-------------------|
| TREES & SHRUBS | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Amelanchier utahensis</i> | 0.50 | 1.50 | 10.00 |
| <i>Atriplex confertifolia</i> | 0.70 | 2.10 | 10.00 |
| <i>Atriplex corrugata</i> | 5.50 | 12.34 | 20.00 |
| <i>Atriplex gardneri</i> | 13.80 | 13.26 | 70.00 |
| <i>Chrysothamnus nauseosus</i> | 4.00 | 7.68 | 30.00 |
| <i>Eriogonum corymbosum</i> | 1.00 | 3.00 | 10.00 |
| FORBS | | | |
| <i>Linum lewisii</i> | 1.50 | 3.20 | 20.00 |
| <i>Malcomia africana</i> | 5.00 | 8.06 | 40.00 |
| <i>Tragopogon dubius</i> | 0.50 | 1.50 | 10.00 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 3.50 | 5.50 | 30.00 |
| <i>Elymus elymoides</i> | 1.00 | 3.00 | 10.00 |
| <i>Elymus lanceolatus</i> | 5.00 | 6.32 | 50.00 |
| <i>Elymus trachycaulus</i> | 11.50 | 12.85 | 60.00 |
| <i>Stipa hymenoides</i> | 1.00 | 3.00 | 10.00 |

Table 29: Star Point Mine. Total Cover and Composition (2006).

| Reclaimed Saltbush Area I | | | n=10 |
|---------------------------|--------------|--------------------|------|
| A. TOTAL COVER | Mean Percent | Standard Deviation | |
| Total Living Cover | 54.50 | 12.74 | |
| Litter | 8.00 | 2.45 | |
| Bareground | 32.50 | 13.83 | |
| Rock | 5.00 | 0.00 | |
| B. % COMPOSITION | | | |
| Shrubs | 45.90 | 35.15 | |
| Forbs | 12.08 | 12.82 | |
| Grasses | 42.02 | 32.56 | |

Table 30: Star Point Mine . Woody Species Density (2006).

| Reclaimed Saltbush Area I | | n=10 |
|--------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Acer glabrum</i> | | |
| <i>Amelanchier utahensis</i> | | 56.25 |
| <i>Artemisia nova</i> | | 112.50 |
| <i>Atriplex confertifolia</i> | | 787.47 |
| <i>Atriplex gardneri</i> | | 1574.94 |
| <i>Atriplex canescens</i> | | 168.74 |
| <i>Atriplex corrugata</i> | | 309.36 |
| <i>Chrysothamnus nauseosus</i> | | 196.87 |
| <i>Eriogonum corymbosum</i> | | 168.74 |
| TOTAL | | 3374.88 |

Table 31: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Sagebrush Reference Area | | | n=20 |
|-------------------------------------|--------------|--------------------|-------------------|
| | Mean Percent | Standard Deviation | Percent Frequency |
| TREES & SHRUBS | | | |
| <i>Artemisia tridentata</i> | 21.00 | 9.70 | 95.00 |
| <i>Gutierrezia sarothrae</i> | 6.50 | 8.08 | 55.00 |
| FORBS | | | |
| <i>Cryptantha sp.</i> | 0.25 | 1.09 | 5.00 |
| <i>Machaeranthera grindelioides</i> | 0.50 | 2.18 | 5.00 |
| <i>Penstemon sp.</i> | 0.50 | 1.50 | 10.00 |
| GRASSES | | | |
| <i>Agropyron cristatum</i> | 1.75 | 3.63 | 20.00 |
| <i>Bromus tectorum</i> | 4.00 | 7.84 | 30.00 |
| <i>Elymus salinus</i> | 6.75 | 12.58 | 30.00 |
| <i>Stipa hymenoides</i> | 12.37 | 13.02 | 60.00 |

Table 32: Star Point Mine. Total Cover and Composition (2006).

| Sagebrush Reference Area | | | n=20 |
|--------------------------|--------------|--------------------|------|
| A. TOTAL COVER | | | |
| | Mean Percent | Standard Deviation | |
| Total Living Cover | 53.00 | 14.27 | |
| Litter | 12.70 | 5.83 | |
| Bareground | 31.50 | 15.01 | |
| Rock | 2.80 | 1.99 | |
| B. % COMPOSITION | | | |
| Shrubs | 50.90 | 14.95 | |
| Forbs | 2.90 | 4.95 | |
| Grasses | 46.20 | 16.70 | |

Table 33: Star Point Mine . Woody Species Density (2006).

| Sagebrush Reference Area | | n=20 |
|--------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Artemisia tridentata</i> | | 5924.06 |
| <i>Chrysothamnus nauseosus</i> | | 102.14 |
| <i>Gutierrezia sarothrae</i> | | 2144.92 |
| TOTAL | | 8171.12 |

Table 34: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Mtn/Grass Reference Area | | | n=10 |
|------------------------------------|--------------|--------------------|-------------------|
| TREES & SHRUBS | | | |
| | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Chrysothamnus viscidiflorus</i> | 3.50 | 5.94 | 30.00 |
| <i>Eriogonum corymbosum</i> | 13.00 | 21.12 | 30.00 |
| FORBS | | | |
| <i>Achillea millefolium</i> | 0.50 | 1.50 | 10.00 |
| GRASSES | | | |
| <i>Elymus salinus</i> | 48.00 | 25.22 | 80.00 |

Table 35: Star Point Mine. Total Cover and Composition (2006).

| Mtn/Grass Reference Area | | n=10 |
|--------------------------|--------------|--------------------|
| A. TOTAL COVER | | |
| | Mean Percent | Standard Deviation |
| Total Living Cover | 65.00 | 4.47 |
| Litter | 18.50 | 7.43 |
| Bareground | 5.50 | 1.50 |
| Rock | 11.00 | 7.35 |
| B. % COMPOSITION | | |
| Shrubs | 25.11 | 37.45 |
| Forbs | 0.77 | 2.31 |
| Grasses | 74.12 | 38.87 |

Table 36: Star Point Mine . Woody Species Density (2006).

| Mtn/Grass Reference Area | n=10 |
|------------------------------------|----------------------|
| SPECIES | Individuals Per Acre |
| <i>Artemisia tridentata</i> | 21.51 |
| <i>Chrysothamnus viscidiflorus</i> | 161.29 |
| <i>Chrysothamnus nauseosus</i> | 10.75 |
| <i>Eriogonum corymbosum</i> | 236.56 |
| TOTAL | 430.11 |

Table 37: Star Point Mine. Living Cover and Frequency by Plant Species (2006).

| Saltbush Reference Area | | | n=20 |
|-------------------------------|--------------|--------------------|-------------------|
| TREES & SHRUBS | | | |
| | Mean Percent | Standard Deviation | Percent Frequency |
| <i>Artemisia nova</i> | 1.00 | 3.39 | 10.00 |
| <i>Atriplex confertifolia</i> | 1.85 | 3.88 | 20.00 |
| <i>Atriplex gardneri</i> | 11.80 | 12.05 | 60.00 |
| <i>Eriogonum corymbosum</i> | 1.00 | 4.36 | 5.00 |
| <i>Pinus edulis</i> | 0.25 | 1.09 | 5.00 |
| FORBS | | | |
| GRASSES | | | |
| <i>Elymus salinus</i> | 9.35 | 10.05 | 55.00 |

Table 38: Star Point Mine. Total Cover and Composition (2006).

| Saltbush Reference Area | | | n=20 |
|-------------------------|--------------|--------------------|------|
| A. TOTAL COVER | | | |
| | Mean Percent | Standard Deviation | |
| Total Living Cover | 25.25 | 8.14 | |
| Litter | 9.35 | 14.08 | |
| Bareground | 53.45 | 21.51 | |
| Rock | 11.95 | 13.73 | |
| B. % COMPOSITION | | | |
| Shrubs | 60.94 | 37.47 | |
| Forbs | 0.00 | 0.00 | |
| Grasses | 39.06 | 37.47 | |

Table 39: Star Point Mine . Woody Species Density (2006).

| Saltbush Reference Area | | n=20 |
|--------------------------------|--|----------------------|
| SPECIES | | Individuals Per Acre |
| <i>Artemisia nova</i> | | 722.23 |
| <i>Atriplex confertifolia</i> | | 1023.16 |
| <i>Atriplex gardneri</i> | | 2768.56 |
| <i>Ephedra viridis</i> | | 60.19 |
| <i>Chrysothamnus nauseosus</i> | | 60.19 |
| <i>Eriogonum corymbosum</i> | | 120.37 |
| <i>Pinus edulis</i> | | 60.19 |
| TOTAL | | 4814.89 |

FIGURES

FIG. 1: LIVING COVER: RECLAIMED VS REFERENCE AREAS
STAR POINT MINE SITE (2006)

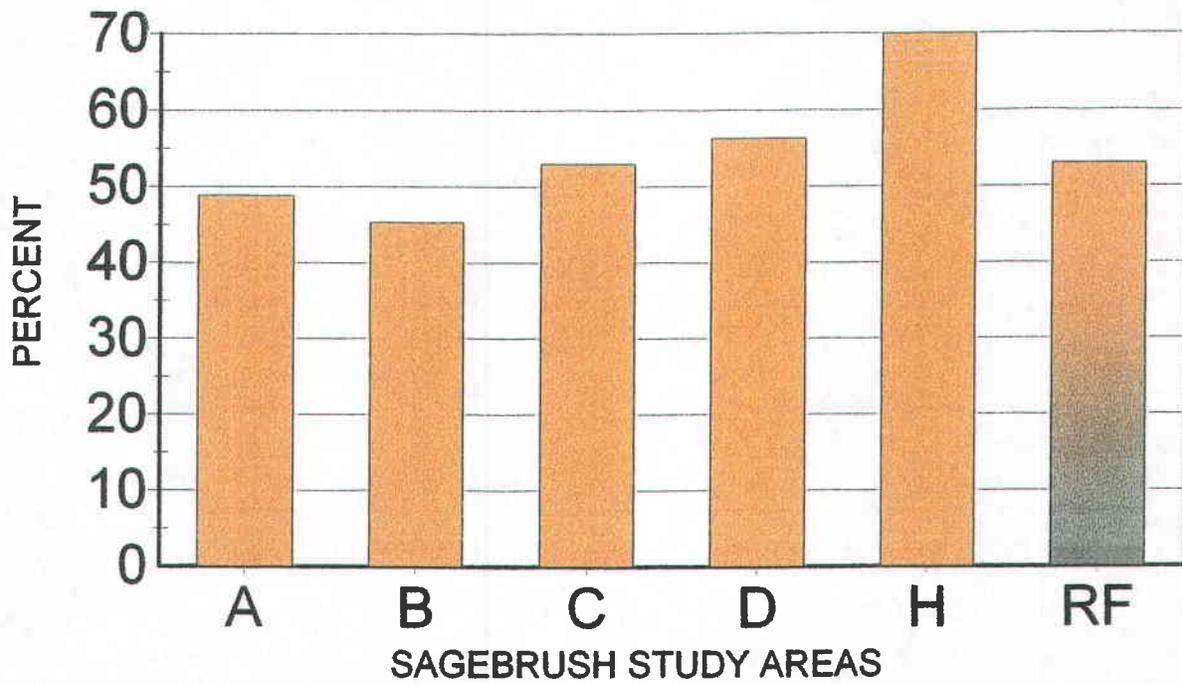
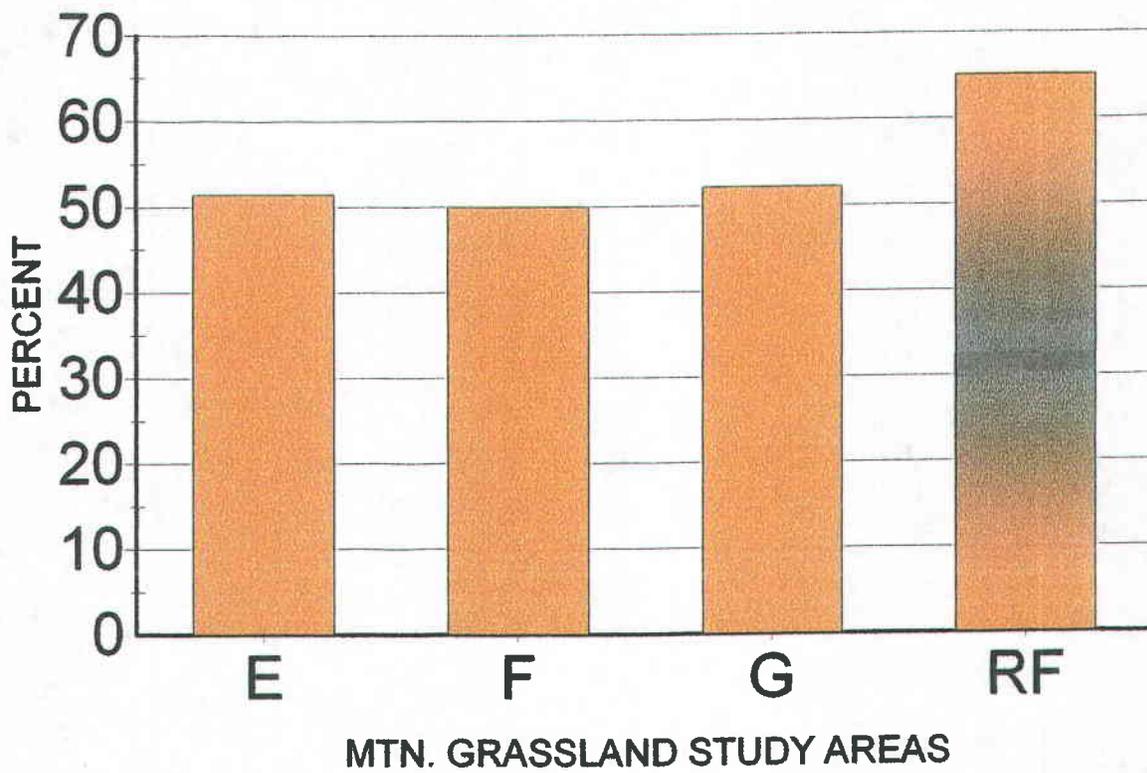


FIG. 2: LIVING COVER: RECLAIMED VS REFERENCE AREA
STAR POINT MINE SITE (2006)



**FIG. 3: LIVING COVER: RECLAIMED VS REFERENCE AREAS
STAR POINT MINE SITE (2006)**

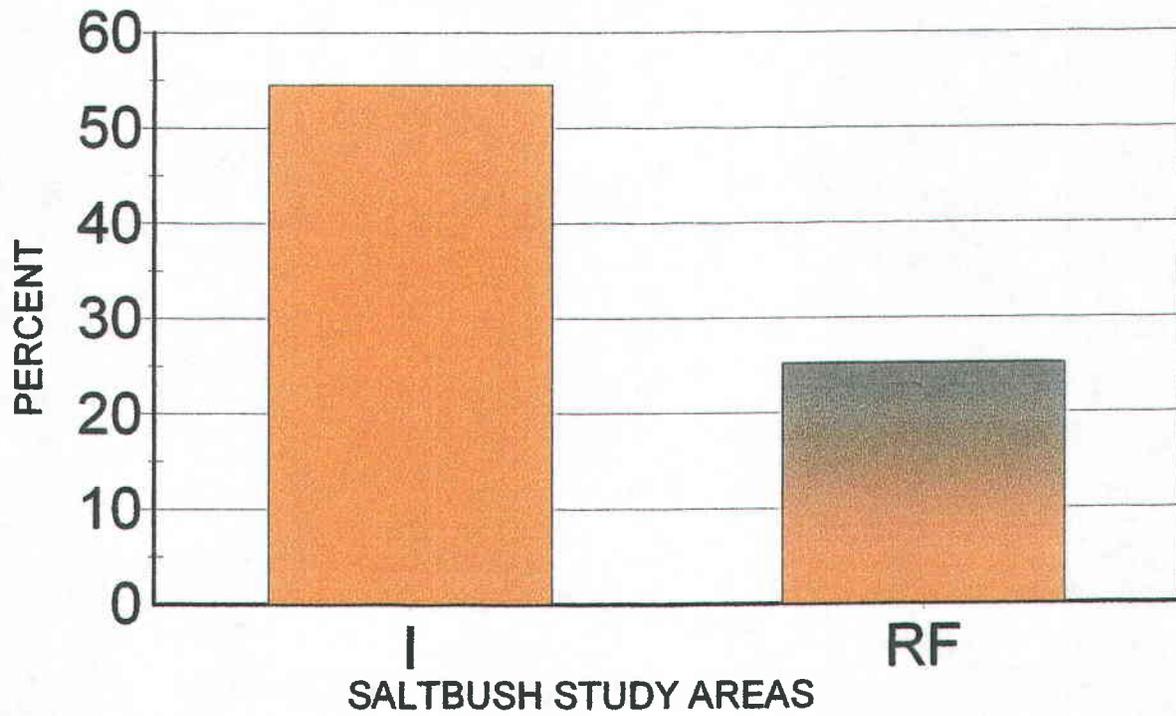


FIG. 4: DENSITY: RECLAIMED VS REFERENCE AREAS
STAR POINT MINE SITE (2006)

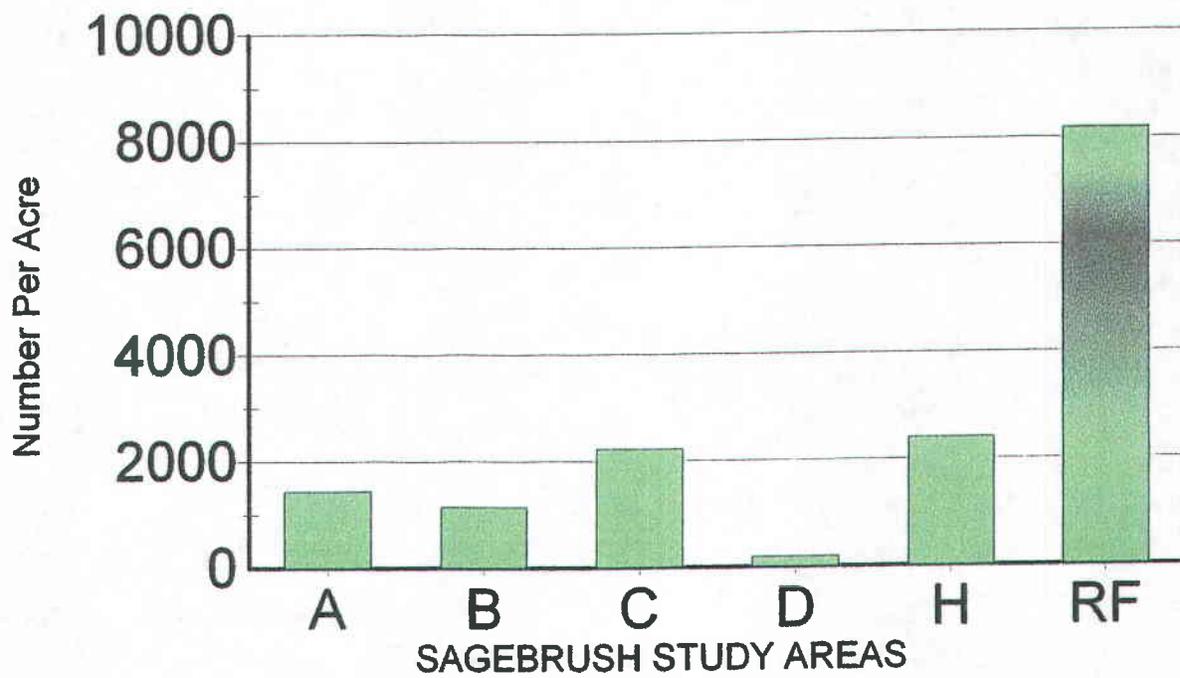
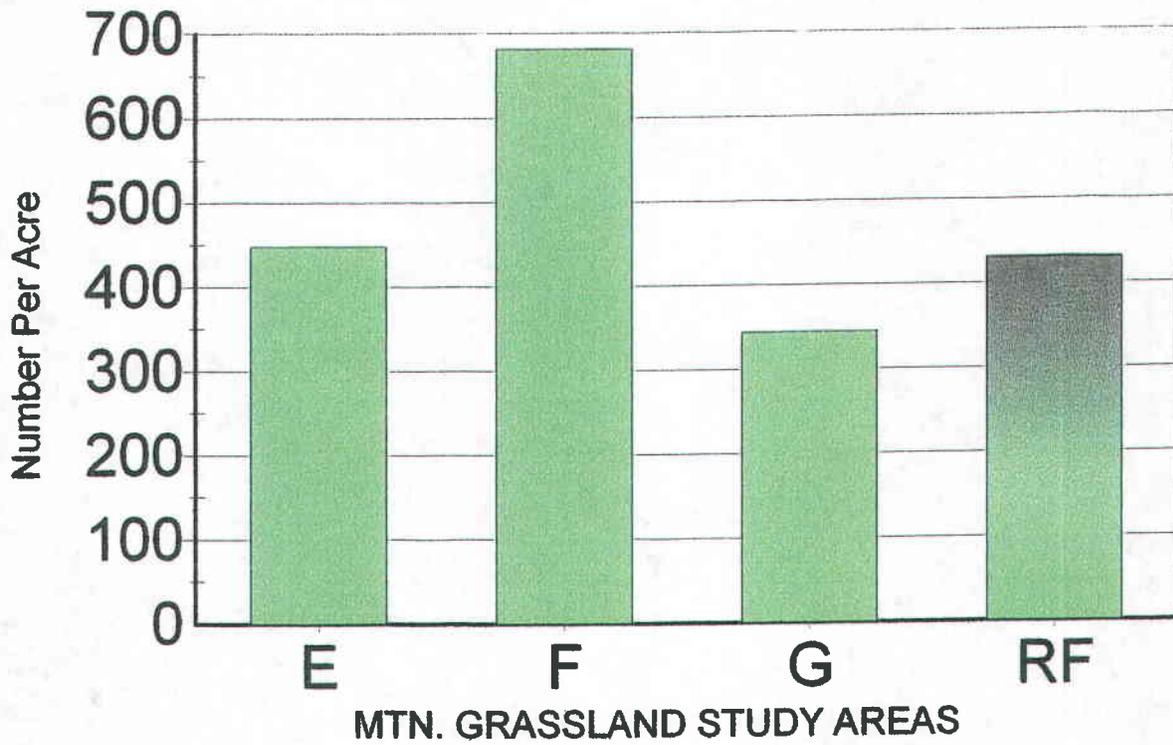
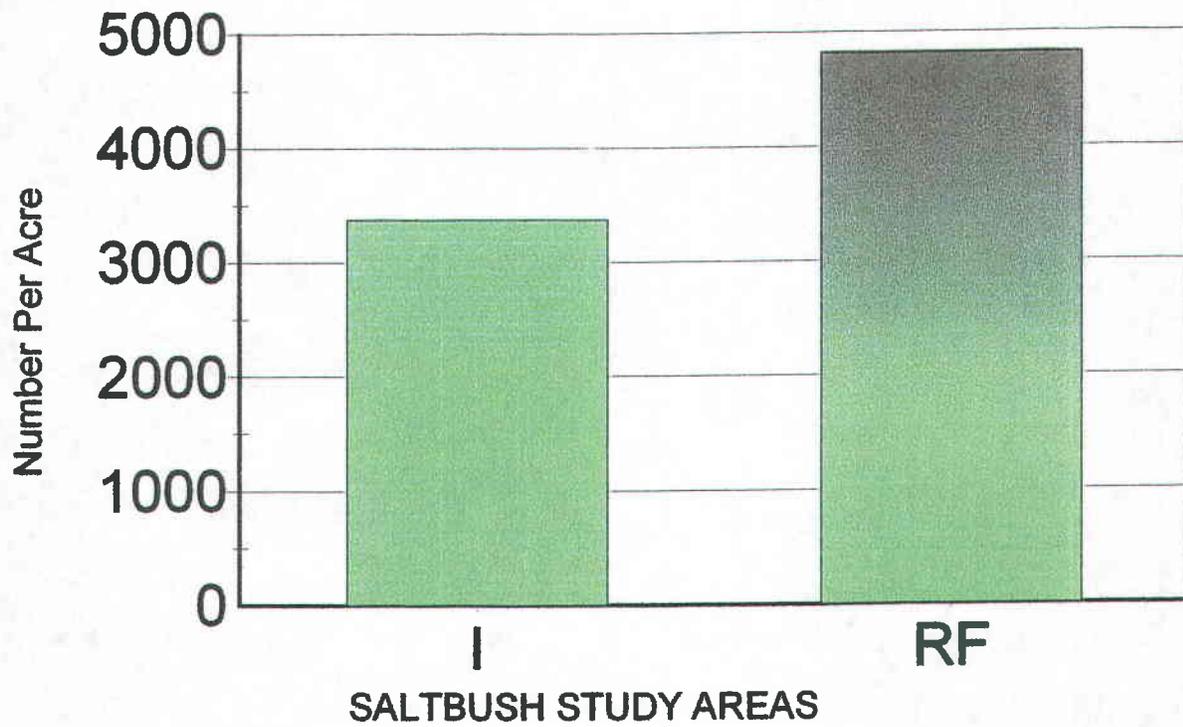


FIG. 5: DENSITY: RECLAIMED VS REFERENCE AREA
STAR POINT MINE SITE (2006)



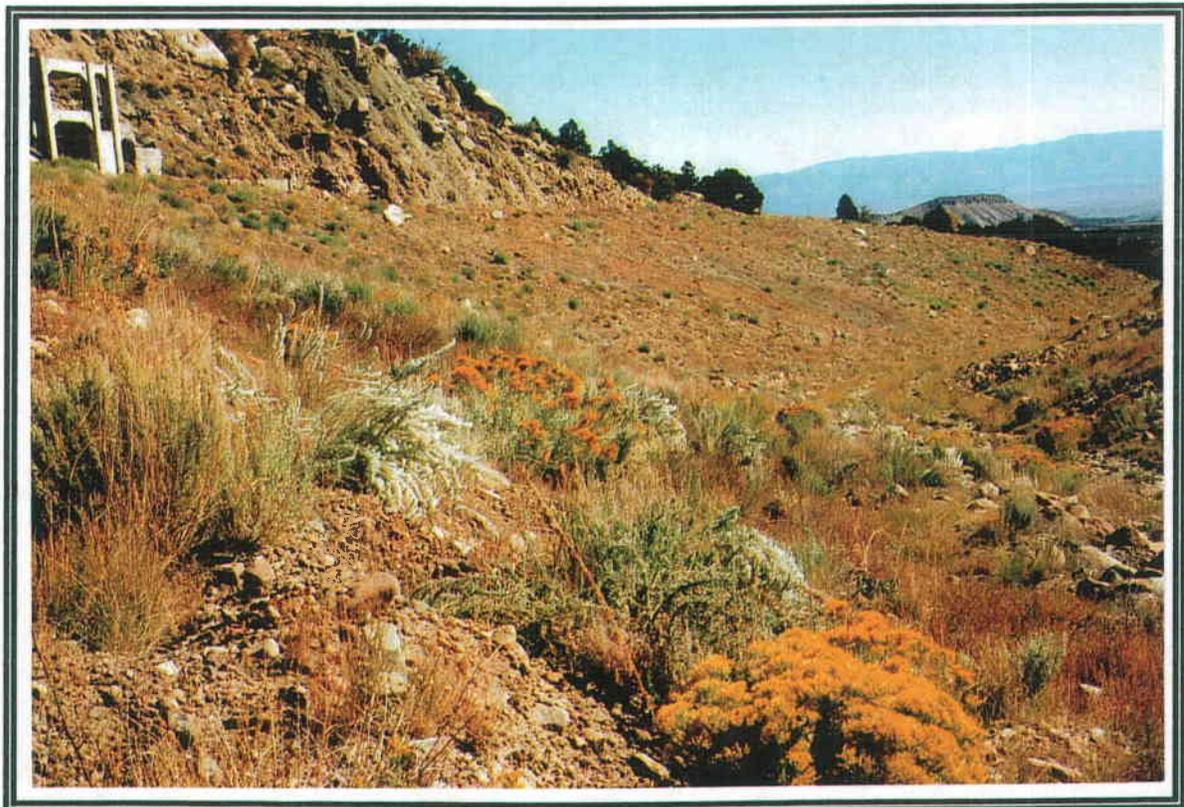
**FIG. 6: DENSITY: RECLAIMED VS REFERENCE AREAS
STAR POINT MINE SITE (2006)**



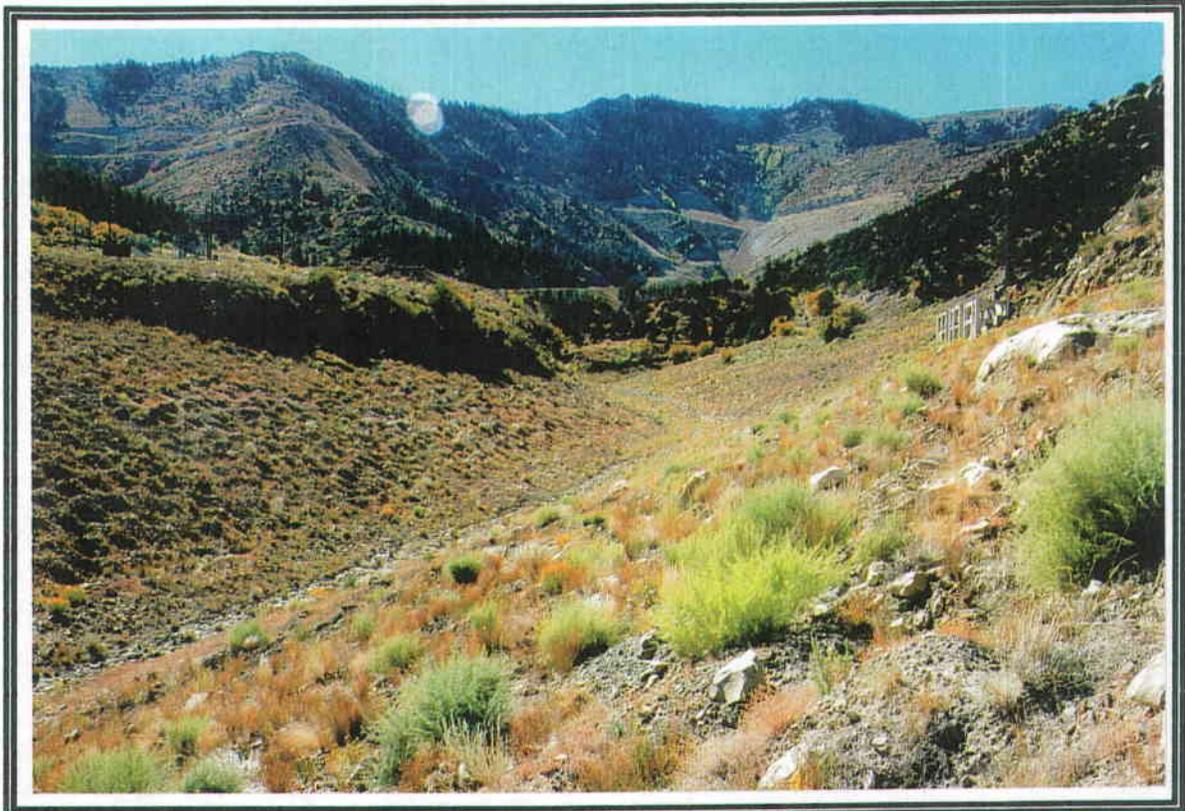
**COLOR PHOTOGRAPHS
OF THE
SAMPLE AREAS**



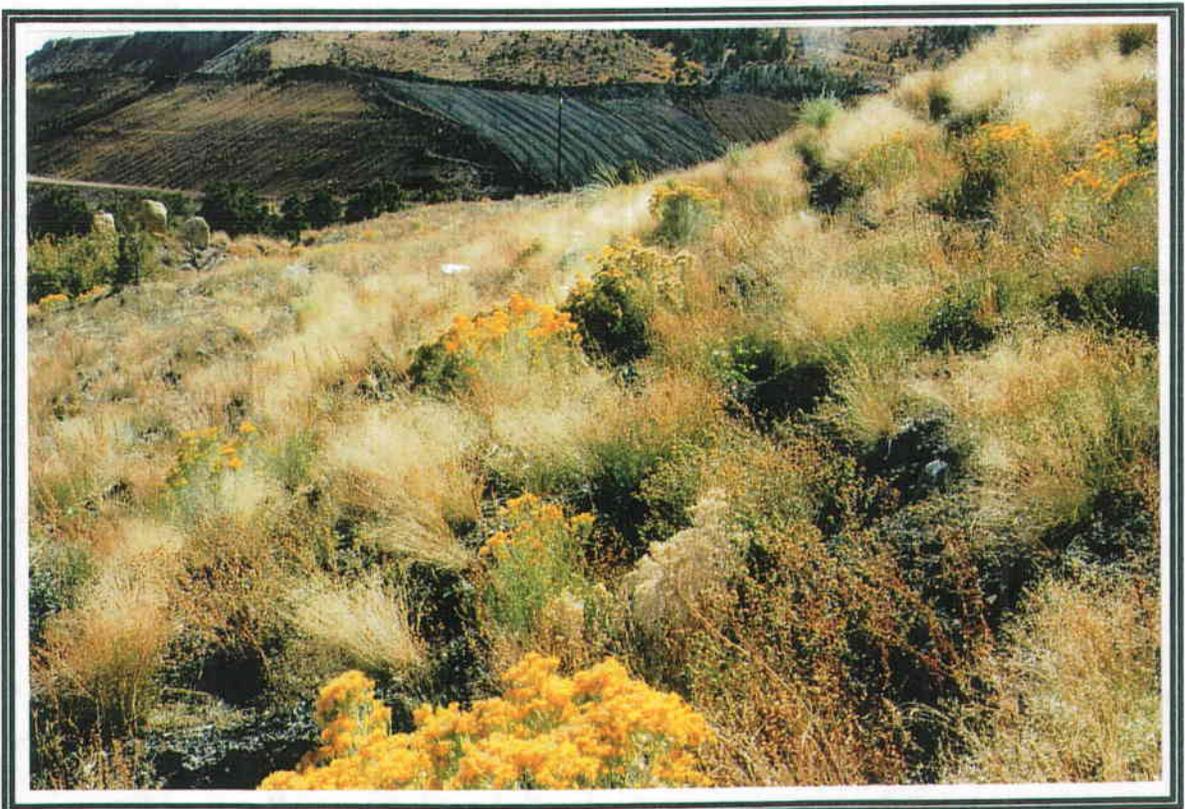
Photograph 1: Sample Area A



Photograph 2: Sample Area A



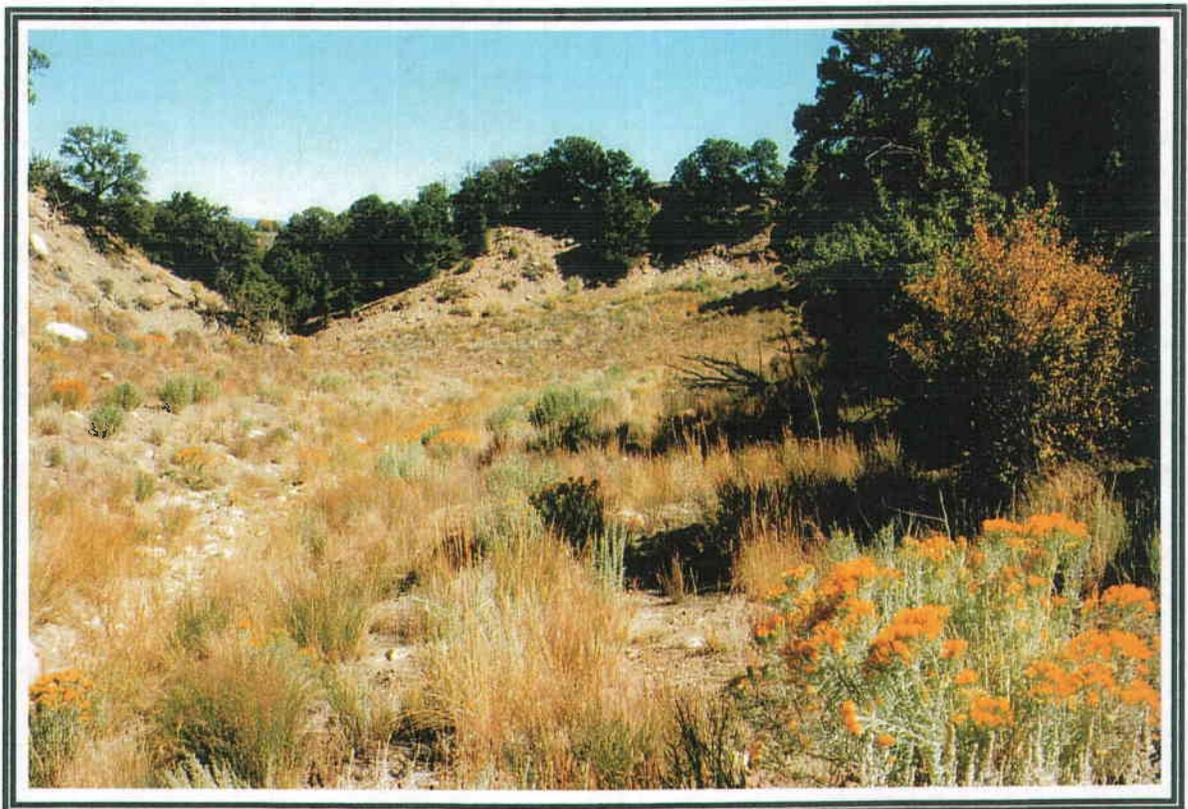
Photograph 3: Sample Area A



Photograph 4: Sample Area B



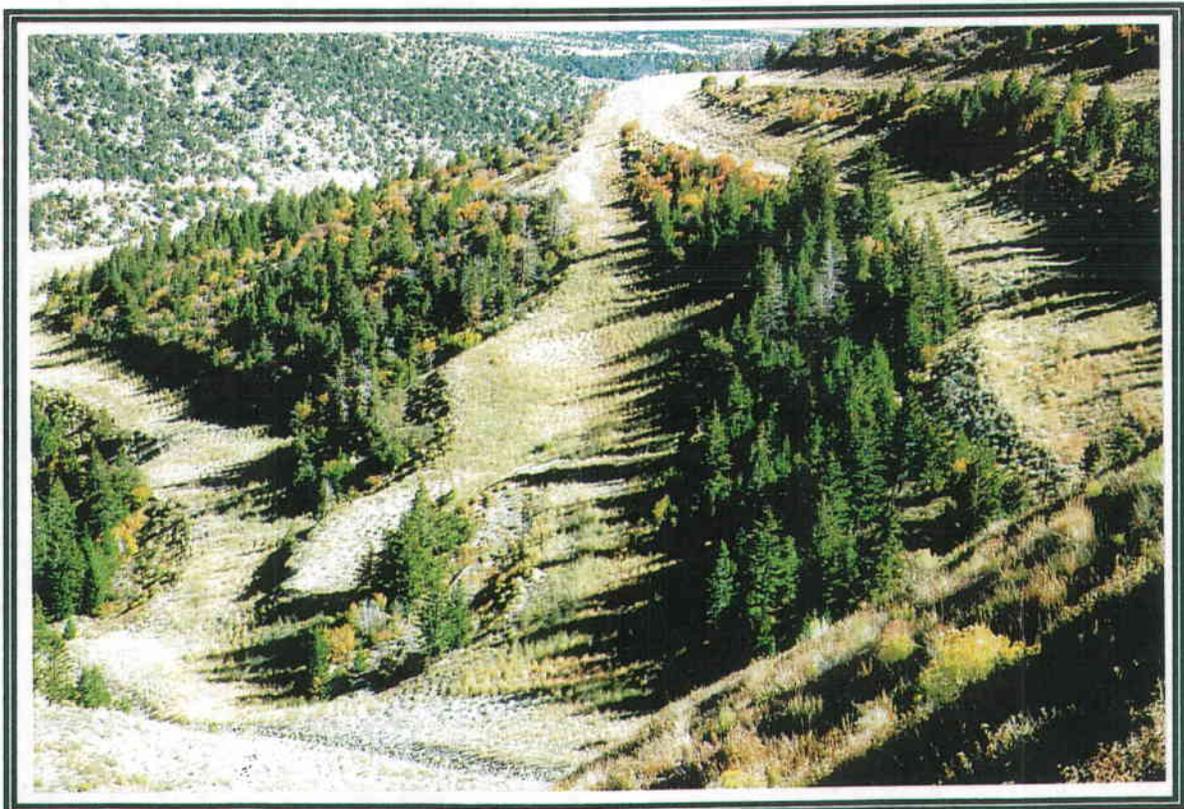
Photograph 5: Sample Area B



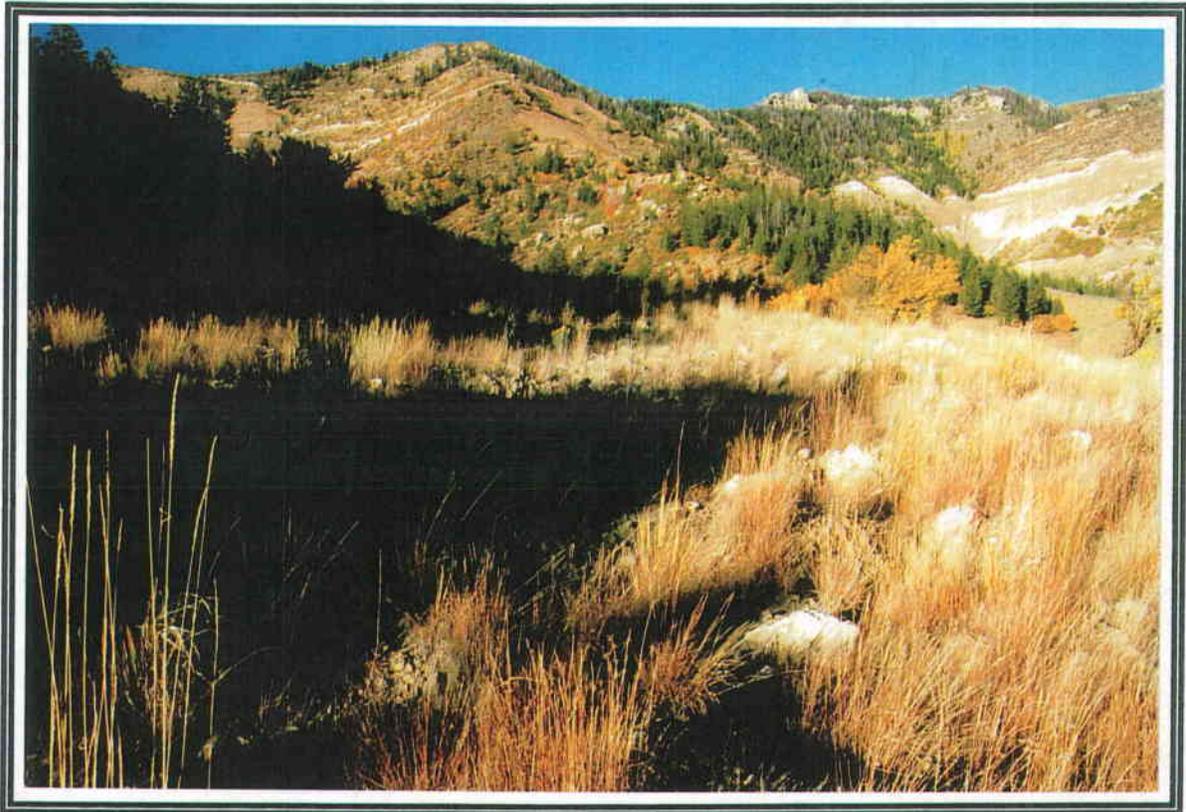
Photograph 6: Sample Area C



Photograph 7: Sample Area D



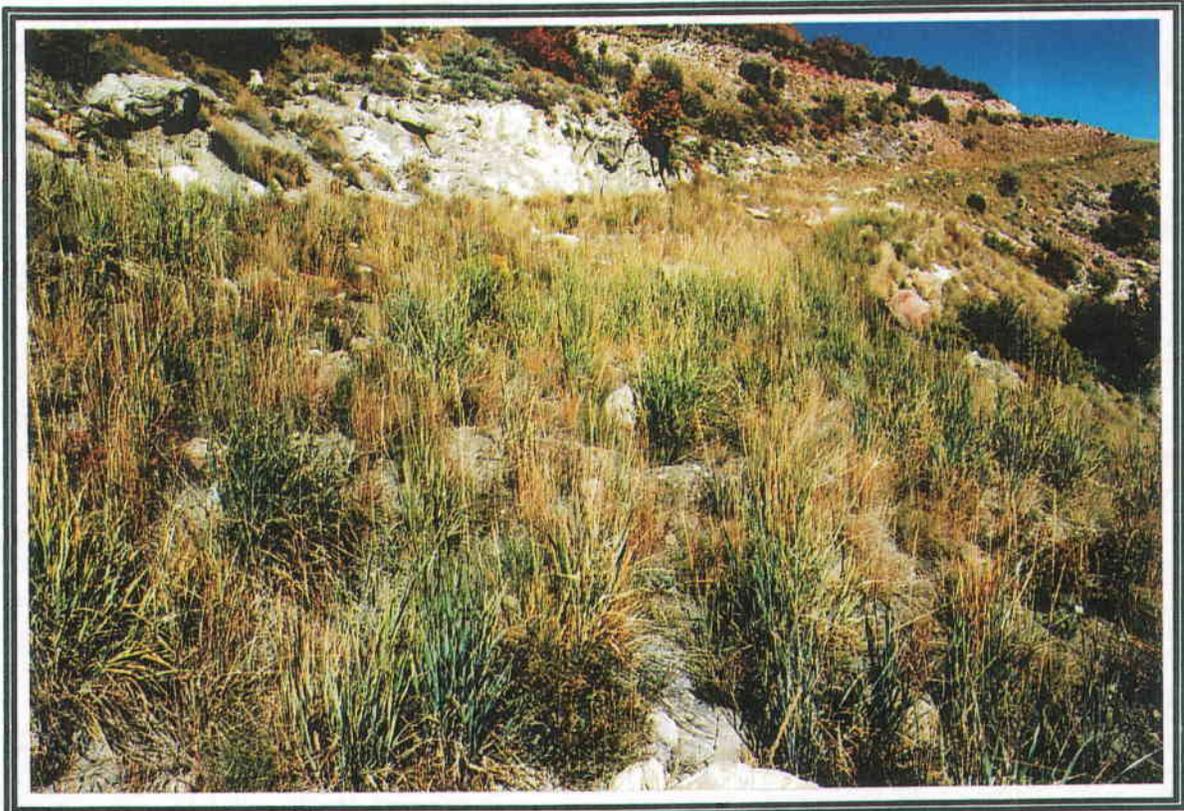
Photograph 8: Sample Area E



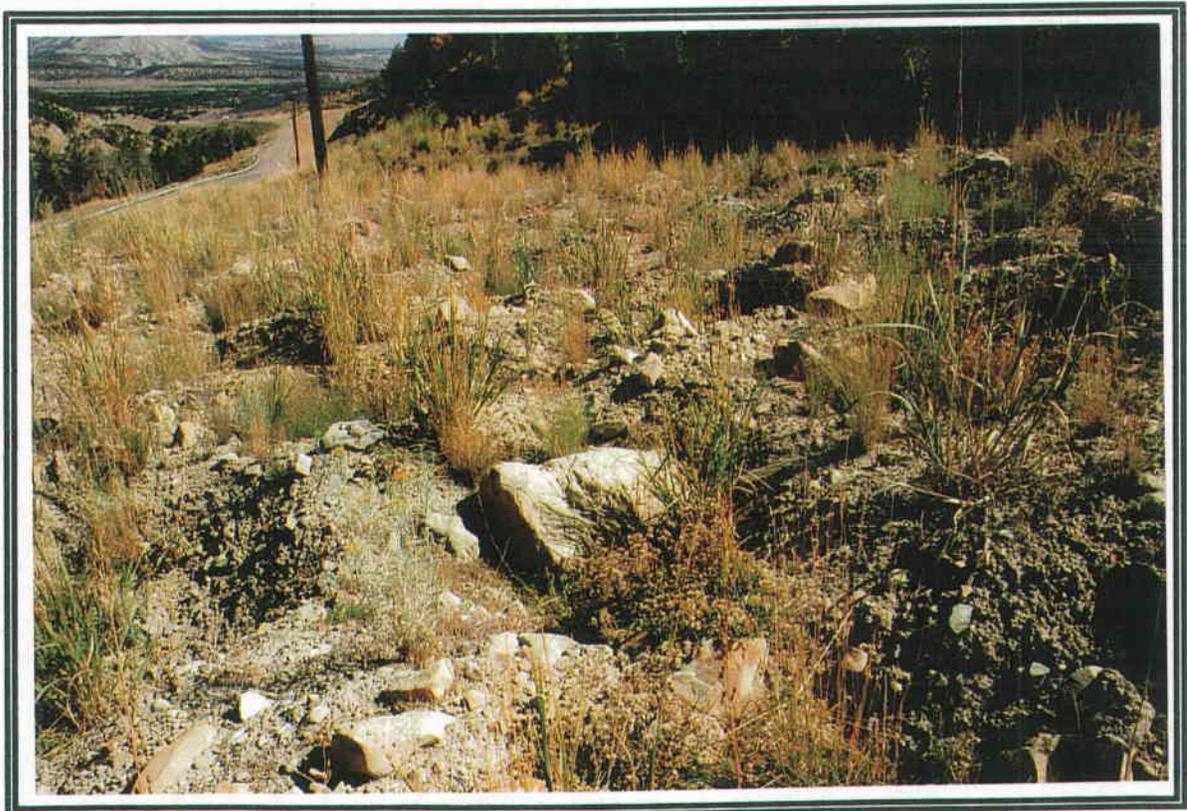
Photograph 9: Sample Area E



Photograph 10: Sample Area E



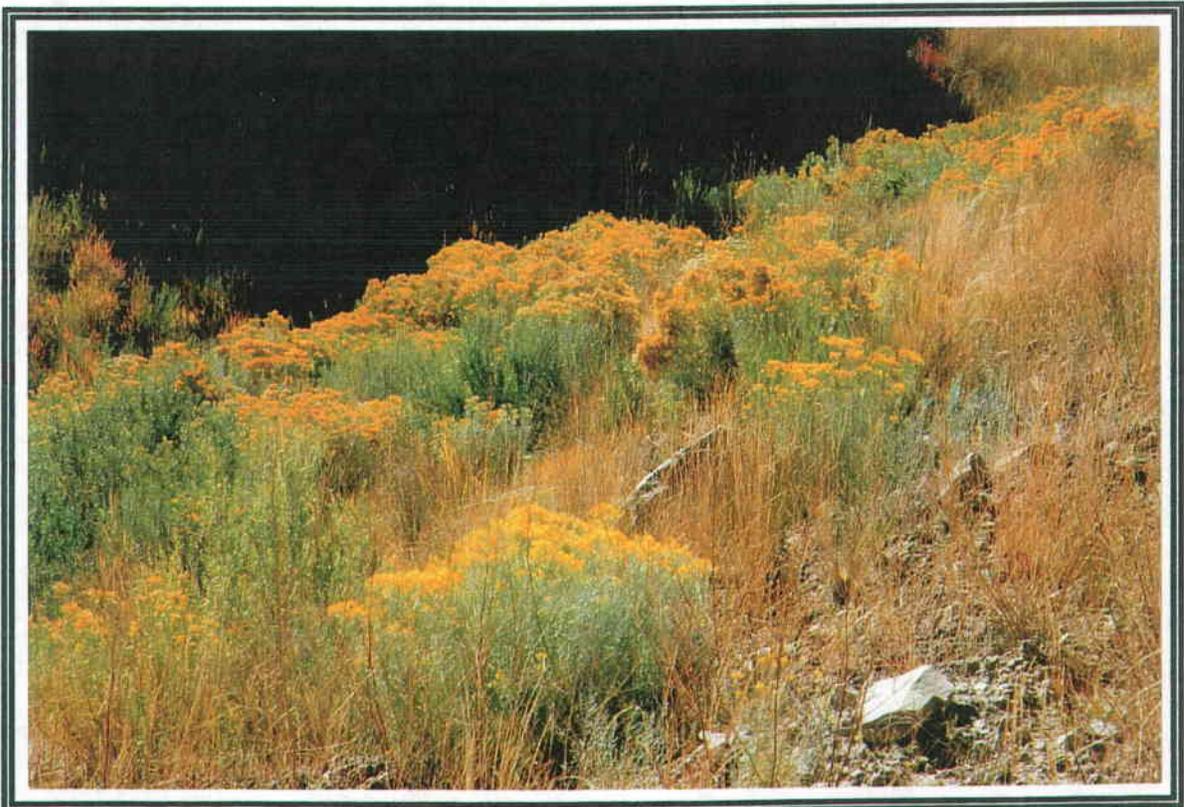
Photograph 11: Sample Area E



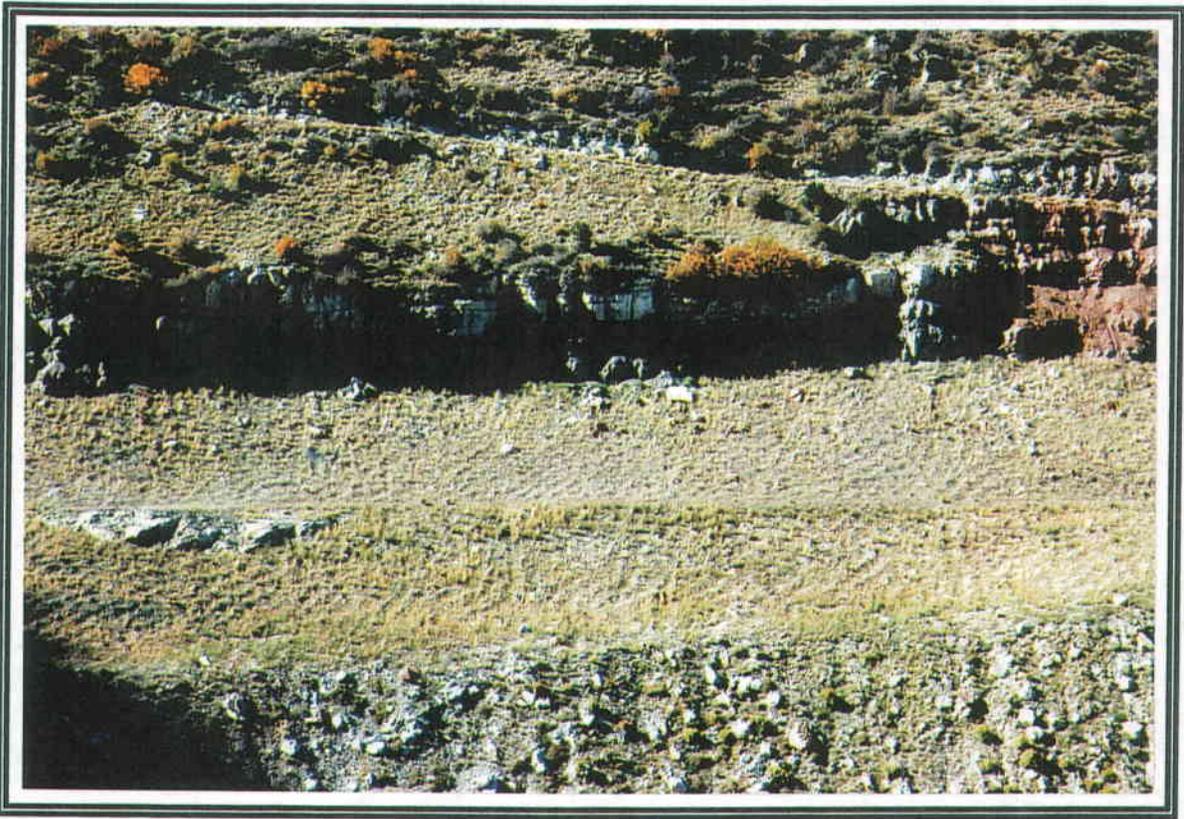
Photograph 12: Sample Area F



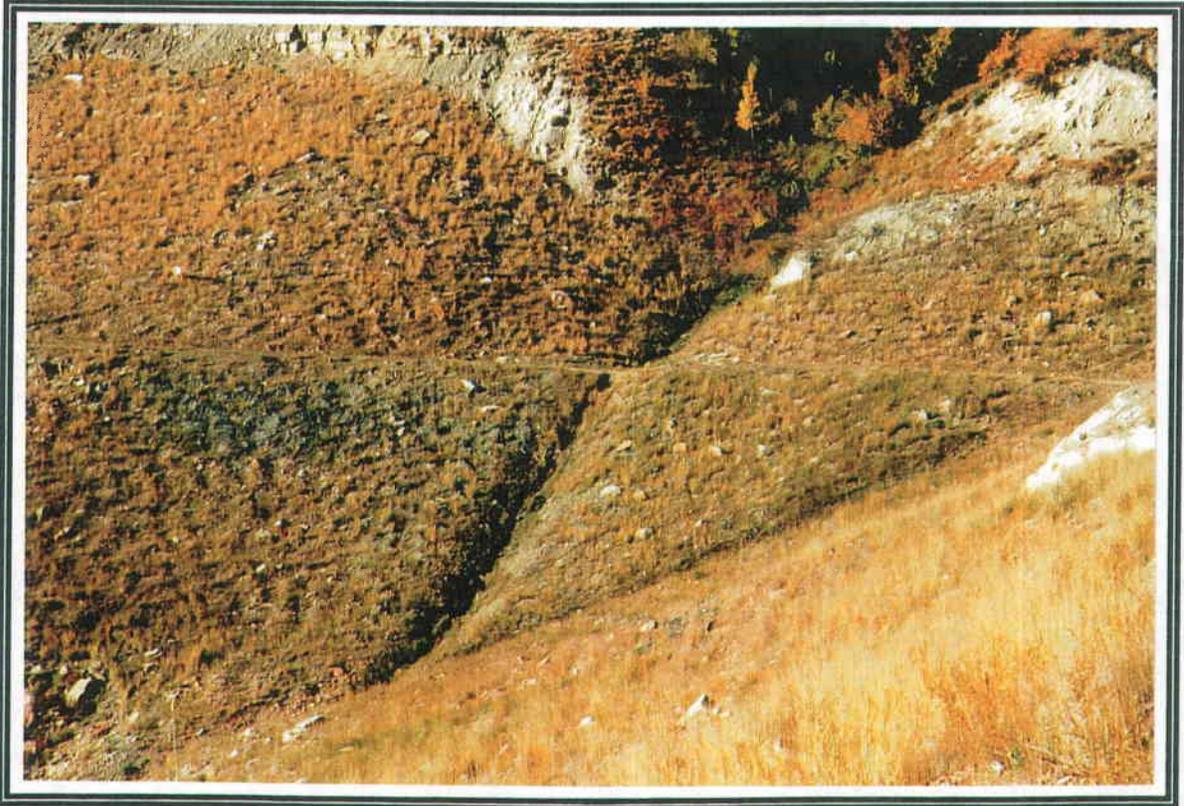
Photograph 13: Sample Area F



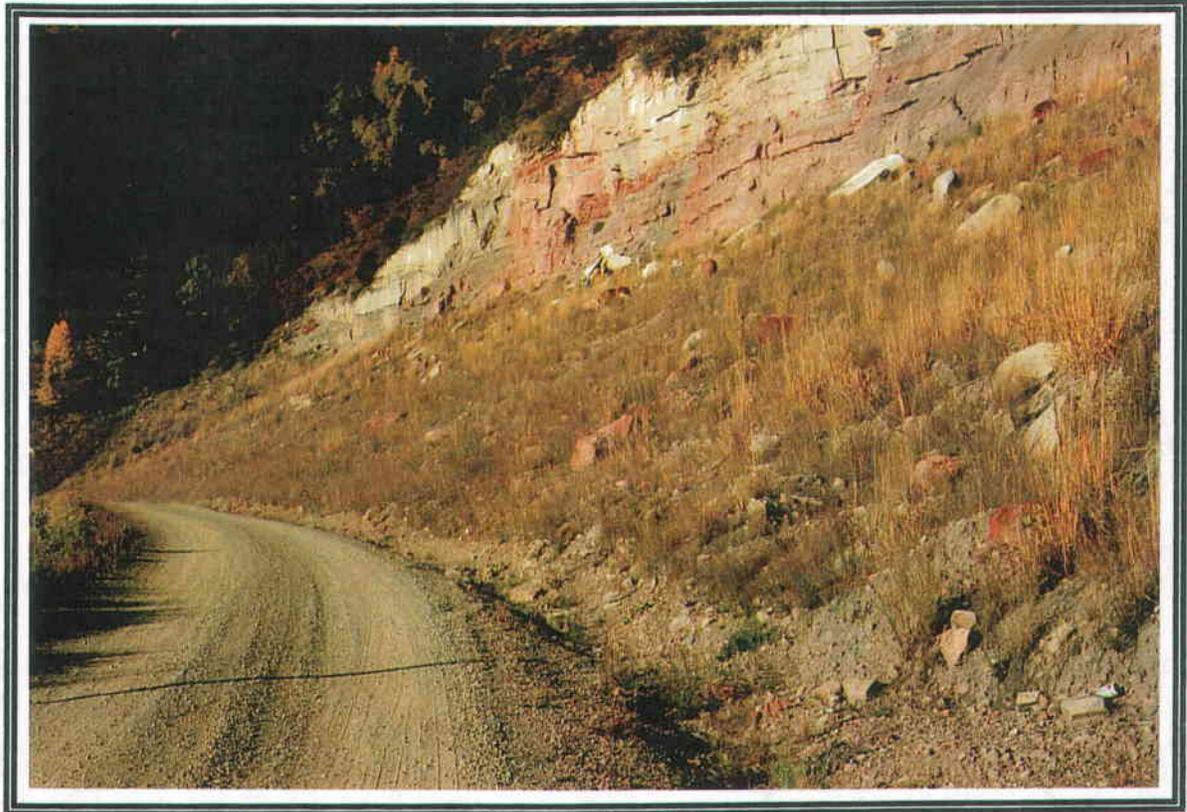
Photograph 14: Sample Area F



Photograph 15: Sample Area G



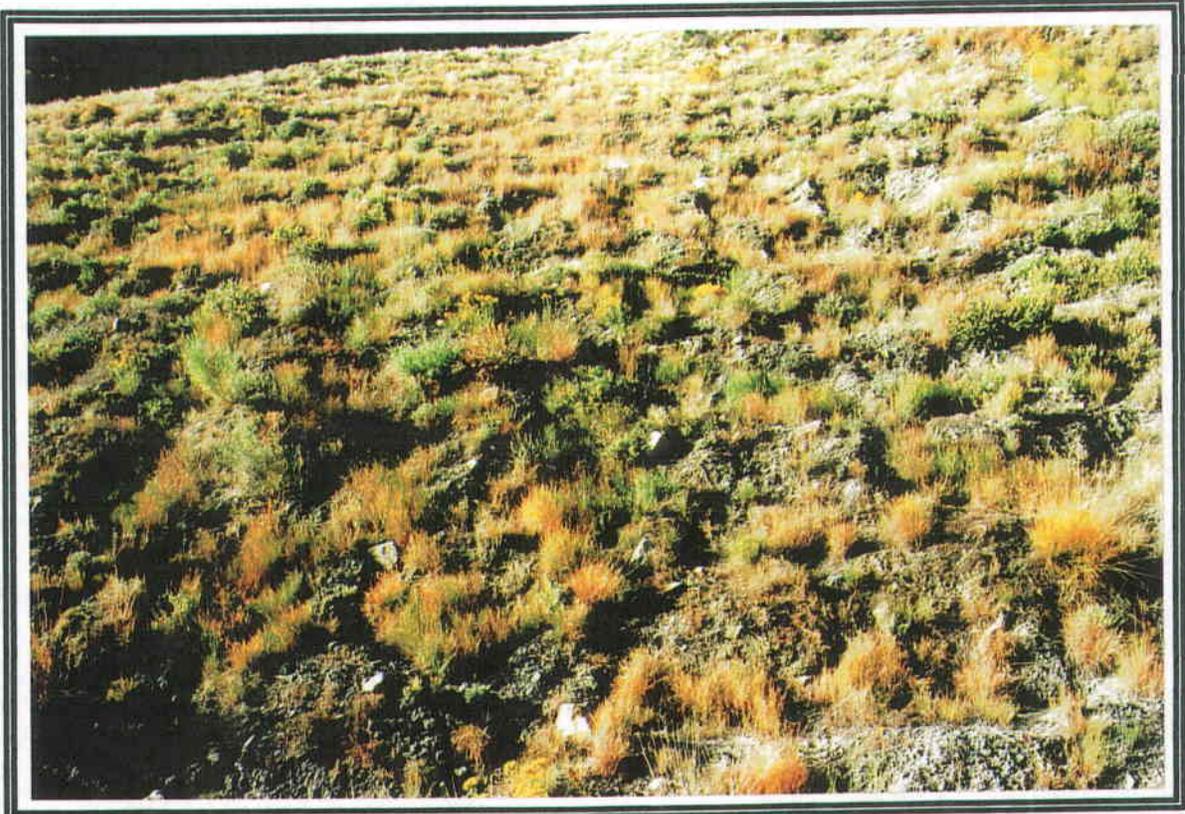
Photograph 16: Sample Area G



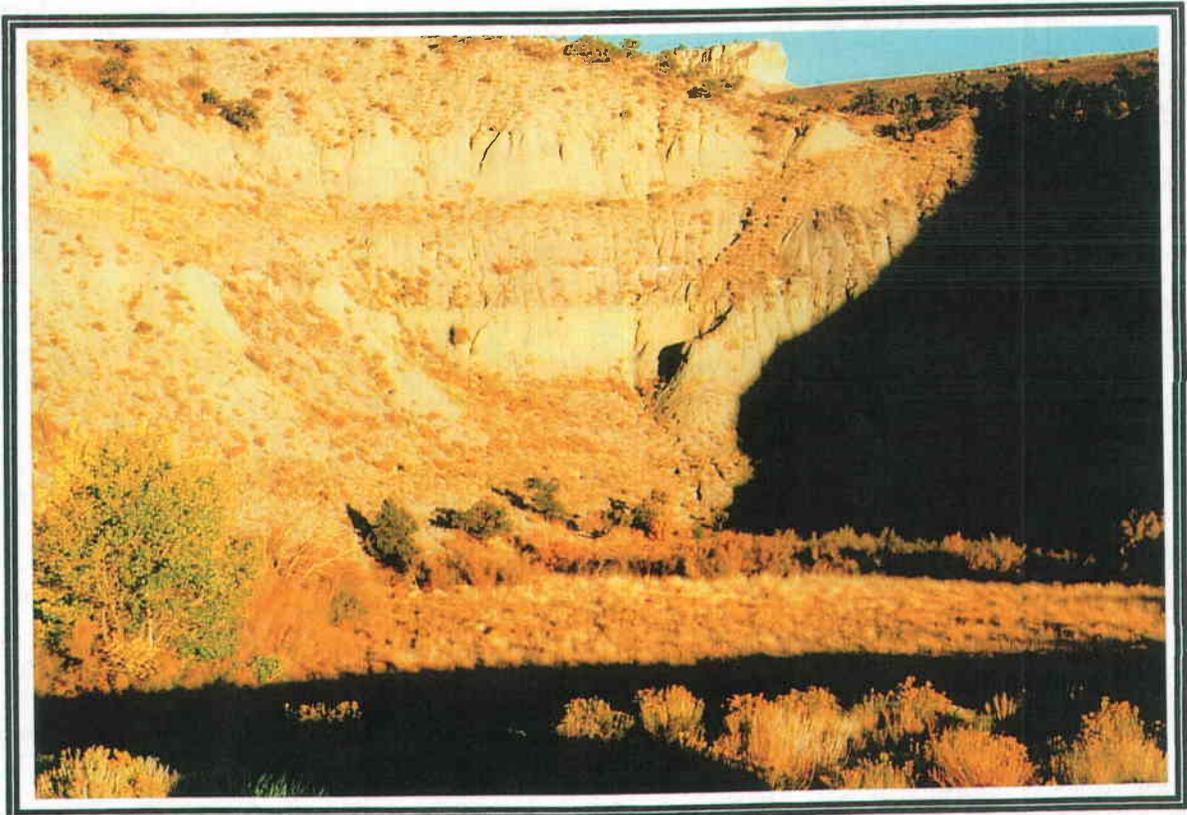
Photograph 17: Sample Area G



Photograph 18: Sample Area H



Photograph 19: Sample Area I



Photograph 20: Sample Area I



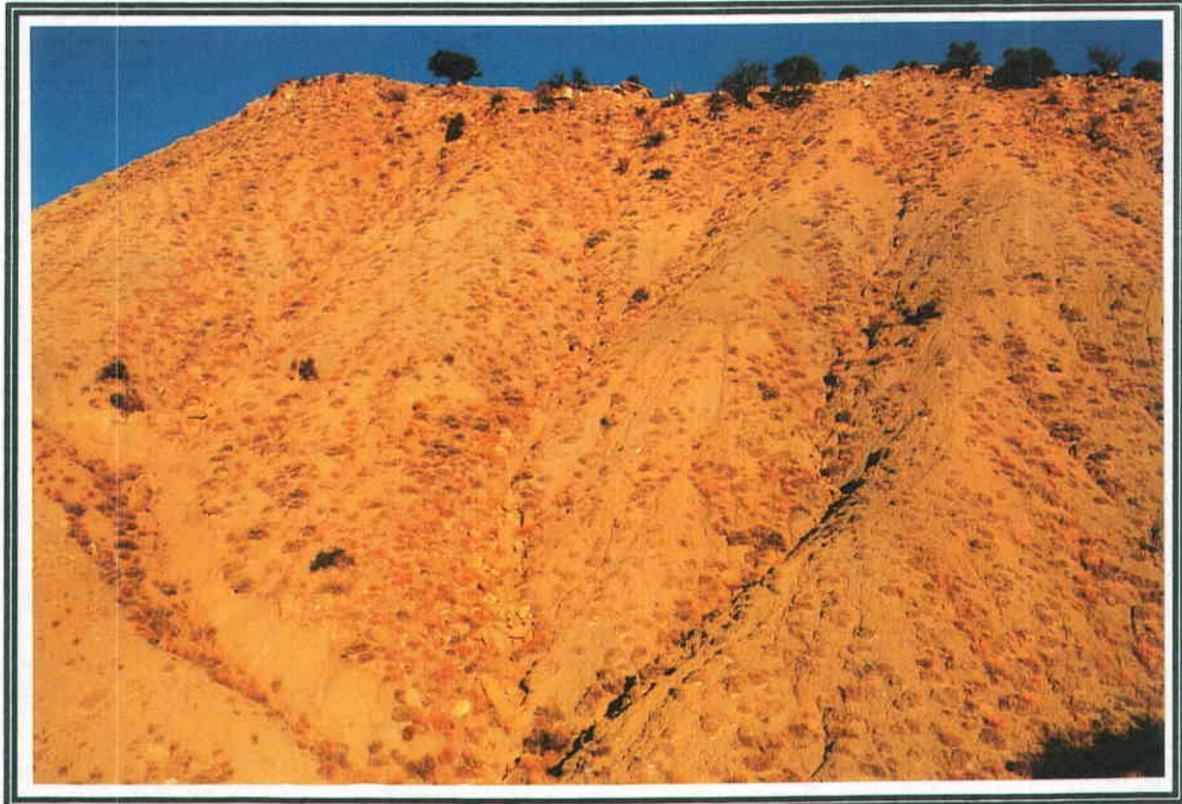
Photograph 21: Sample Area I



Photograph 22: Sagebrush Reference Area

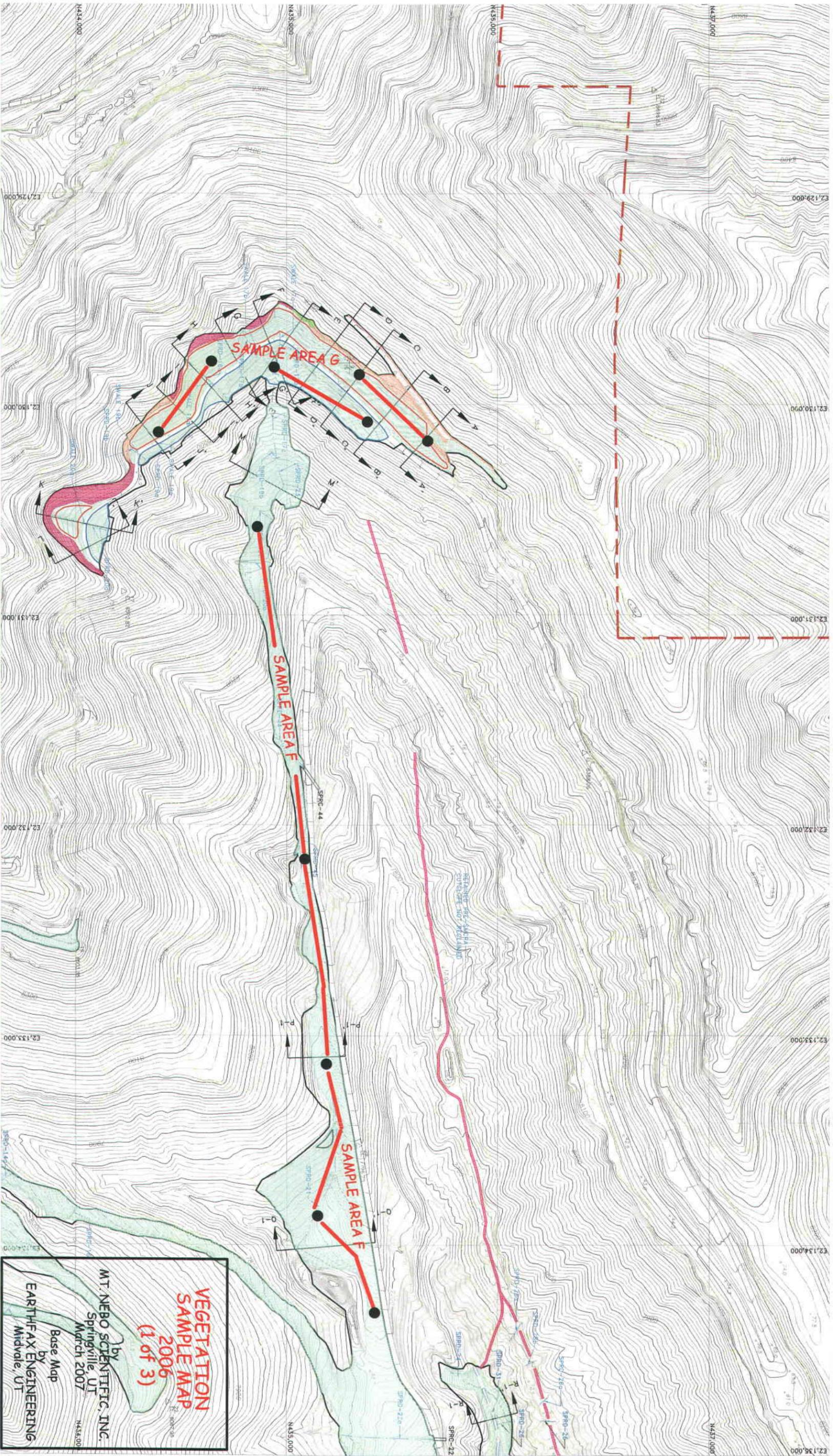


Photograph 23: Mountain Grassland Reference Area



Photograph 24: Saltbush Reference Area

VEGETATION SAMPLE MAPS

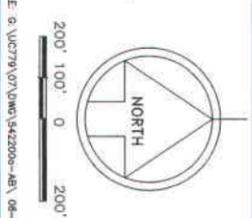


LEGEND

- PRIMARY ROAD
 - SECONDARY ROAD
 - TRAIL
 - BROOK, CULVERT
 - RAILROAD
 - BUILDINGS, STRUCTURES
 - LAKE, POND
 - RIVER, STREAM
 - FENCE
 - ASBUILT CONTOURS
 - TREE LINES
 - RECLAMATION DISTURBED AREA BOUNDARY
-
- CROSS SECTION
 - PERMIT BOUNDARY
 - PARTIALLY BACKFILLED PRE-SMCA HIGHWALL
 - PARTIALLY BACKFILLED PRE-SMCA OUTSLOPE
 - PARTIALLY BACKFILLED POST-SMCA OUTSLOPE
 - RECLAMATION CHANNEL
 - DEEP GOUNDED SURFACE (LAY AND STRAW MULCH)
 - LAST ADJUSTED SECTION FALL 2002
-
- SECTION CORNER
 - AREA OF COAL REFUSE BURL, COAL REFUSE BURIED WITH A MIN. OF 4" OF COVER MATERIAL (APPROX. 113,555 CY MAILED TO THE LION'S DECK)
 - AREA PROVIDING COVER MATERIAL FOR COAL REFUSE WAS USED TO FILL THE STONE HOLE AND 54,502 CY WAS USED TO COVER THE COAL REFUSE)
 - Sample Traversed Lines

NOTES

1. PHASE 1 BOND RELEASE FOR 93.77 ACRES.
2. BACKFILL, GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT FOR THE LINE #1 AND LINE #2 AREAS BEGAN IN AUGUST, 2001 AND PLACEMENT OCCURRED CONCURRENTLY WITH BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
3. BACKFILL, GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT FOR THE LION'S DECK, POND 1 AND 2, AND THE LOWER FACILITIES AREAS BEGAN IN APRIL, 2002 AND WERE COMPLETED IN NOVEMBER, 2002. BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
4. TOWNSHIP 13 SOUTH, RANGE 8 EAST.



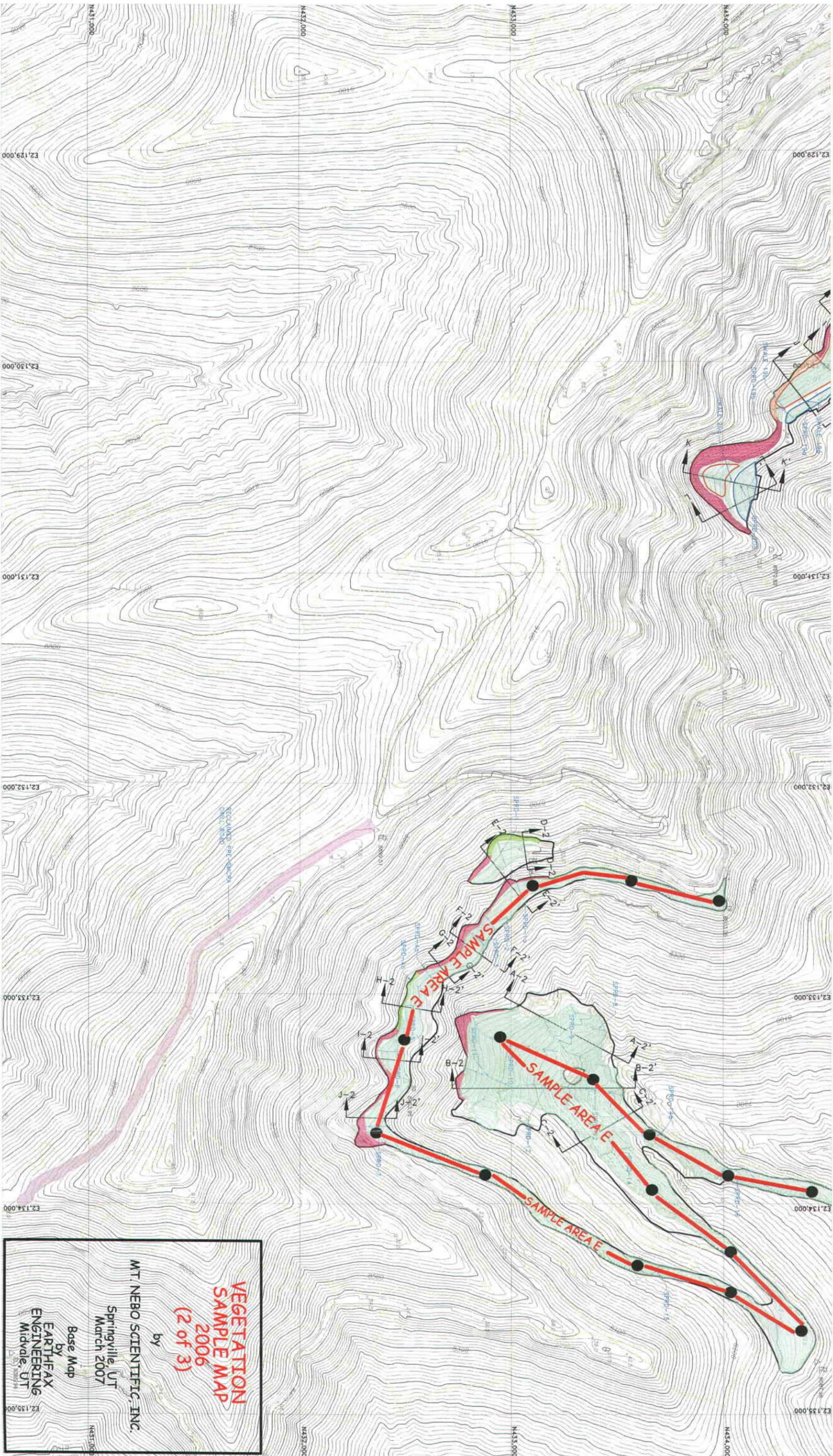
| BY | DATE | DESCRIPTION |
|----|----------|---|
| LD | 08-03-02 | RESPOND TO TA |
| LD | 10-10-03 | AS-BUILT |
| LD | 02-05-04 | RESPOND TO TA |
| LD | 03-23-07 | COMMENTS: VEGETATION SAMPLE LOCATIONS ADDED |

STARPOINT MINE
AS-BUILT RECLAMATION TOPOGRAPHY
AND TREATMENT MAP
 SHEET 1
PLATEAU MINING CORPORATION
 847 NW HIGHWAY 191 HELPER, UTAH 84528
 PHONE: (435) 472-0475

VEGETATION SAMPLE MAP
2006
(1 of 3)

Base Map by
EARTHFAK ENGINEERING
 Midvale, UT

by
MT. NEBO SCIENTIFIC, INC.
 Springville, UT
 March 2007



LEGEND

| | | |
|--|---|---|
| <ul style="list-style-type: none"> PRIMARY ROAD SECONDARY ROAD TRAIL BRIDGE, CULVERT BUILDING STRUCTURES LAKE, POND WATER, STREAM ASPHALT CONTOURS TREELINES RECLAMATION RESTORED AREA BOUNDARY | <ul style="list-style-type: none"> CROSS SECTION PERMIT BOUNDARY PARTIALLY BACKFILLED PRE-SMCLA HIGHWALL PARTIALLY BACKFILLED PRE-SMCLA OUTSLOPE PARTIALLY BACKFILLED POST-SMCLA OUTSLOPE RECLAMATION CHANNEL DEEP GOUNDED SURFACE (MAY AND STRAW MULCH) LAST AUGMENTED SEEDING FALL 2003 | <ul style="list-style-type: none"> DEEP GOUNDED SURFACE LAST AUGMENTED SEEDING FALL 2003 SAMPLE TRANSECT LINES SECTION CORNER AREA OF COAL REFUSE BURIAL, COAL REFUSE BURIED PLACED ON THE LOW'S DECK (APPROX. 1,4700 CT WAS USED TO COVER THE LOW'S DECK) AND 54,500 CT WAS USED TO COVER THE SLOPE (APPROX. 113,550 CT MAILED TO THE LOW'S DECK) |
|--|---|---|

- NOTES:**
1. PHASE 1 BOND RELEASE FOR 93.77 ACRES
 2. BACKFILL GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT FOR THE LOW'S DECK AND SLOPE GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT OCCURRED CONCURRENTLY WITH BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
 3. BACKFILL GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT FOR AREAS BEYOND THE LOW'S DECK AND SLOPE GRADING AND GROWTH MEDIA/TOPSOIL PLACEMENT OCCURRED CONCURRENTLY WITH BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
 4. TOWNSHIP 13 SOUTH, RANGE 8 EAST.

200' 100' 0 100' 200'

NORTH

REGISTERED PROFESSIONAL ENGINEER
LAVINE D. JENSEN
STATE OF UTAH

RAG

FILE: G:\UT\78\07\DWG\5422008-AR\08-08-03

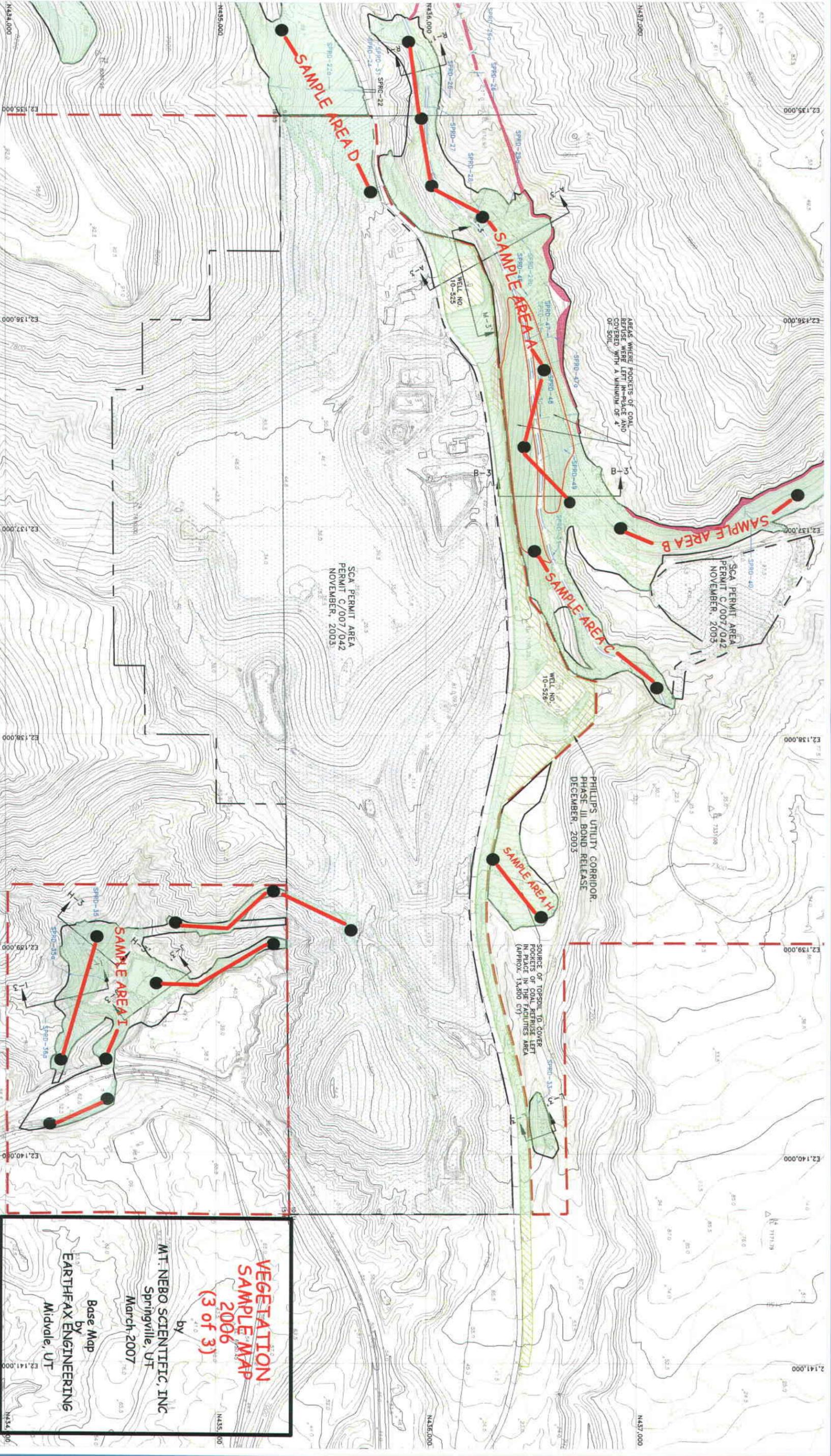
| REV | DATE | DESCRIPTION |
|-----|----------|-----------------------------------|
| 1 | 10-29 | RESPOND TO 1A COMMENTS |
| 2 | 10-10-03 | AS-BUILT |
| 3 | 10-02-04 | RESPOND TO 1A COMMENTS |
| 4 | 03-27-07 | REVISION BASED ON REVISION NUMBER |

STARPOINT MINE
AS-BUILT RECLAMATION TOPOGRAPHY
AND TREATMENT MAP
SHEET 2
PLATEAU MINING CORPORATION
2 of 3
847 NW HIGHWAY 191 HELPER, UTAH 84556
PHONE: (435) 472-0475
MAP 542.200b

VEGETATION SAMPLE MAP
2006
(2 of 3)

by
MT NEBO SCIENTIFIC, INC.
Springville, UT
March 2007

Base Map
by
EARTHFAK ENGINEERING
Midvale, UT

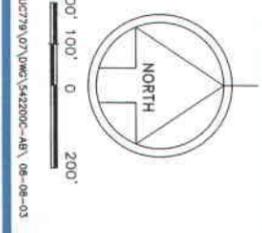


LEGEND

| | |
|--|-------------------------------------|
| | PLANAR ROAD |
| | SECONDARY ROAD |
| | BRIDGE |
| | CULVERT |
| | RAILROAD |
| | BUILDINGS/STRUCTURES |
| | LAKE/POND |
| | RIVER/STREAM |
| | FENCE |
| | ASBUILT CONTOURS |
| | TREE LINES |
| | RECLAMATION DISTURBED AREA BOUNDARY |

| | |
|--|---|
| | CROSS SECTION |
| | PERMIT BOUNDARY |
| | PHASE C/007/042 |
| | CORRIDOR (11.27 ACRES POST MINING LAND USE CHANGE AND PHASE III BOND RELEASED IN DECEMBER 2003) |
| | SECTION CORNER |
| | SCA PERMIT BOUNDARY AND PERMIT C/007/042 |
| | RECLAMATION CHANNEL |
| | DEEP GRADED SURFACE (HAY AND STRAW MULCH) |
| | LAST GRADED SURFACE (FALL 2002) |
| | SAMPLE TRANSECT LINES |

- NOTES**
1. PHASE I BOND RELEASE FOR 93.77 ACRES.
 2. BACKFILL, GRADING AND GROWTH MEDIA/TOPSOIL, PLACEMENT FOR THE LINE #1 AND WINE #2 AREAS BEGAN IN AUGUST, 2001 AND PROGRESS CONTINUED CONCURRENTLY WITH BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
 3. BACKFILL, GRADING AND GROWTH MEDIA/TOPSOIL, PLACEMENT FOR AREAS 3 AND 4 BEGAN IN AUGUST, 2001 AND PROGRESS CONTINUED CONCURRENTLY WITH BACKFILLING AND GRADING AS AREAS ACHIEVED FINAL GRADE.
 4. ALL EXCESS COAL RETRIEVED FROM THE MAIN CHANNEL, AREA, NOT USED AS BACKFILL, WAS PLACED ON THE RETRIEVE PILE.
 5. TOWNSHIP 15 SOUTH, RANGE 8 EAST.



REVISION/HISTORY

| BY | DATE | DESCRIPTION |
|----------|----------|-----------------------------------|
| AS-BUILT | 10-10-03 | |
| AS-BUILT | 02-05-04 | |
| AS-BUILT | 08-27-07 | VEGETATION SAMPLE LOCATIONS ADDED |

STARPOINT MINE
AS-BUILT RECLAMATION TOPOGRAPHY
AND TREATMENT MAP

SHEET 3
3 OF 3

MAP 542.200C

PLATEAU MINING CORPORATION
847 NW HIGHWAY 191 HELPER, UTAH 84626
PHONE: (435) 472-0475

VEGETATION SAMPLE MAP (3 of 3)

2006

by
MT NEBO SCIENTIFIC, INC
Springville, UT
March 2007

Base Map
by
EARTHFAK ENGINEERING
Midvale, UT

APPENDIX

Raw Data

PLATEAU MINING
 STAR POINT
 Sagebrush Area A

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|
| TREES & SHRUBS | | | | | | | |
| <i>Acer grabrum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Amelanchier utahensis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Artemisia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex canescens</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex confertifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Ceratoides lanata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 15.00 | 10.00 | 5.00 | 30.00 | 0.00 | 0.00 | 0.00 |
| FORBS | | | | | | | |
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Artemisia ludoviciana</i> | 0.00 | 0.00 | 25.00 | 0.00 | 3.00 | 13.00 | 0.00 |
| <i>Bassia hyssopifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Grindelia squarrosa</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Halogeton glomeratus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Hedysarum boreale</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Linum lewisii</i> | 20.00 | 0.00 | 25.00 | 10.00 | 10.00 | 20.00 | 10.00 |
| <i>Mellilotus officinalis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.00 | 0.00 |
| <i>Penstemon palmeri</i> | 0.00 | 10.00 | 0.00 | 0.00 | 2.00 | 0.00 | 5.00 |
| <i>Salsola tragus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Sphaeralcea coccinea</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Viguiera multiflora</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| GRASSES | | | | | | | |
| <i>Agropyron cristatum</i> | 0.00 | 0.00 | 5.00 | 10.00 | 0.00 | 0.00 | 0.00 |
| <i>Bromus carinatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Bromus tectorum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus elymoides</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 5.00 |
| <i>Elymus spicatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 5.00 |
| <i>Stipa comata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| COVER | | | | | | | |
| Total Living Cover | 35.00 | 25.00 | 65.00 | 55.00 | 30.00 | 45.00 | 25.00 |
| Litter | 10.00 | 10.00 | 5.00 | 5.00 | 5.00 | 40.00 | 5.00 |
| Bareground | 15.00 | 30.00 | 15.00 | 20.00 | 25.00 | 5.00 | 10.00 |
| Rock | 40.00 | 35.00 | 15.00 | 20.00 | 40.00 | 10.00 | 60.00 |
| % COMPOSITION | | | | | | | |
| Shrubs | 42.86 | 40.00 | 7.69 | 54.55 | 0.00 | 0.00 | 0.00 |
| Forbs | 57.14 | 40.00 | 76.92 | 18.18 | 50.00 | 88.89 | 60.00 |
| Grasses | 0.00 | 20.00 | 15.38 | 27.27 | 50.00 | 11.11 | 40.00 |

| 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 7.00 | 0.00 | 0.00 | 5.00 | 0.00 | 25.00 | 0.00 | 10.00 | 25.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 5.00 | 5.00 | 10.00 | 5.00 | 5.00 | 5.00 | 10.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 5.00 | 5.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 5.00 | 15.00 | 0.00 | 5.00 | 10.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 5.00 | 5.00 | 0.00 |
| 5.00 | 5.00 | 0.00 | 0.00 | 3.00 | 0.00 | 5.00 | 5.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 35.00 | 15.00 | 55.00 | 20.00 | 50.00 | 60.00 | 25.00 | 40.00 | 25.00 |
| 10.00 | 10.00 | 10.00 | 5.00 | 10.00 | 5.00 | 5.00 | 5.00 | 10.00 | 10.00 |
| 20.00 | 5.00 | 55.00 | 20.00 | 25.00 | 15.00 | 15.00 | 15.00 | 10.00 | 15.00 |
| 15.00 | 50.00 | 20.00 | 20.00 | 45.00 | 30.00 | 20.00 | 55.00 | 40.00 | 50.00 |
| 18.18 | 20.00 | 0.00 | 9.09 | 60.00 | 4.00 | 50.00 | 0.00 | 37.50 | 100.00 |
| 9.09 | 37.14 | 66.67 | 45.45 | 25.00 | 16.00 | 25.00 | 60.00 | 25.00 | 0.00 |
| 72.73 | 42.86 | 33.33 | 45.45 | 15.00 | 80.00 | 25.00 | 40.00 | 37.50 | 0.00 |

| 18.00 | 19.00 | 20.00 | 21.00 | 22.00 | 23.00 | 24.00 | 25.00 | 26.00 | 27.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 35.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 25.00 | 15.00 | 2.00 | 15.00 | 2.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 10.00 | 0.00 | 10.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 20.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 8.00 | 10.00 | 8.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 20.00 | 10.00 | 30.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 15.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 5.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 45.00 | 40.00 | 55.00 | 35.00 | 40.00 | 20.00 | 65.00 | 35.00 | 50.00 |
| 35.00 | 10.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 10.00 | 5.00 |
| 10.00 | 20.00 | 5.00 | 25.00 | 5.00 | 35.00 | 15.00 | 10.00 | 30.00 | 10.00 |
| 20.00 | 25.00 | 50.00 | 15.00 | 55.00 | 20.00 | 60.00 | 20.00 | 25.00 | 35.00 |
| 51.43 | 0.00 | 62.50 | 0.00 | 71.43 | 37.50 | 10.00 | 23.08 | 11.43 | 70.00 |
| 28.57 | 33.33 | 0.00 | 18.18 | 14.29 | 25.00 | 65.00 | 53.85 | 88.57 | 20.00 |
| 20.00 | 66.67 | 37.50 | 81.82 | 14.29 | 37.50 | 25.00 | 23.08 | 0.00 | 10.00 |

| 28.00 | 29.00 | 30.00 | 31.00 | 32.00 | 33.00 | 34.00 | 35.00 | 36.00 | 37.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 10.00 | 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 5.00 | 0.00 | 5.00 | 20.00 | 0.00 | 0.00 | 0.00 | 65.00 | 55.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 10.00 | 2.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 20.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 10.00 | 5.00 | 5.00 | 8.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 10.00 | 10.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 5.00 | 30.00 | 7.00 | 0.00 | 10.00 | 10.00 | 0.00 | 10.00 |
| 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 8.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 40.00 | 70.00 | 65.00 | 50.00 | 75.00 | 35.00 | 25.00 | 65.00 | 65.00 |
| 5.00 | 10.00 | 5.00 | 10.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 10.00 |
| 15.00 | 25.00 | 10.00 | 10.00 | 30.00 | 15.00 | 30.00 | 35.00 | 20.00 | 15.00 |
| 10.00 | 25.00 | 15.00 | 15.00 | 15.00 | 5.00 | 30.00 | 35.00 | 10.00 | 10.00 |
| 71.43 | 25.00 | 64.29 | 0.00 | 0.00 | 80.00 | 0.00 | 20.00 | 0.00 | 0.00 |
| 28.57 | 37.50 | 0.00 | 38.46 | 70.00 | 6.67 | 42.86 | 40.00 | 100.00 | 84.62 |
| 0.00 | 37.50 | 35.71 | 61.54 | 30.00 | 13.33 | 57.14 | 40.00 | 0.00 | 15.38 |

| 38.00 | 39.00 | 40.00 | 41.00 | 42.00 | 43.00 | 44.00 | 45.00 | 46.00 | 47.00 |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 65.00 | 15.00 | 75.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 10.00 | 15.00 | 0.00 | 0.00 | 5.00 | 15.00 | 30.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 25.00 | 10.00 | 10.00 | 20.00 | 10.00 |
| 0.00 | 0.00 | 10.00 | 0.00 | 45.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| 50.00 | 75.00 | 50.00 | 75.00 | 65.00 | 45.00 | 40.00 | 50.00 | 50.00 | 40.00 |
| 5.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 25.00 | 25.00 | 15.00 |
| 35.00 | 10.00 | 5.00 | 5.00 | 20.00 | 10.00 | 25.00 | 15.00 | 20.00 | 30.00 |
| 10.00 | 5.00 | 35.00 | 10.00 | 5.00 | 35.00 | 25.00 | 10.00 | 5.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 15.38 | 33.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90.00 | 86.67 | 30.00 | 100.00 | 15.38 | 0.00 | 37.50 | 20.00 | 40.00 | 37.50 |
| 10.00 | 13.33 | 70.00 | 0.00 | 69.23 | 66.67 | 62.50 | 80.00 | 60.00 | 62.50 |

| 48.00 | 49.00 | 50.00 | 51.00 | 52.00 | 53.00 | 54.00 | 55.00 | 56.00 | 57.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 20.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 10.00 | 0.00 | 25.00 | 5.00 | 0.00 | 7.00 | 45.00 | 10.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 5.00 | 0.00 | 10.00 | 0.00 | 0.00 | 5.00 | 0.00 | 10.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 5.00 | 0.00 | 0.00 | 5.00 | 3.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| 0.00 | 0.00 | 0.00 | 35.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 50.00 | 40.00 | 60.00 | 50.00 | 30.00 | 55.00 | 25.00 | 50.00 | 70.00 |
| 10.00 | 10.00 | 5.00 | 5.00 | 10.00 | 5.00 | 5.00 | 25.00 | 10.00 | 10.00 |
| 20.00 | 15.00 | 40.00 | 10.00 | 15.00 | 40.00 | 25.00 | 10.00 | 10.00 | 10.00 |
| 20.00 | 25.00 | 15.00 | 25.00 | 25.00 | 25.00 | 15.00 | 40.00 | 30.00 | 10.00 |
| 0.00 | 30.00 | 37.50 | 16.67 | 20.00 | 66.67 | 9.09 | 20.00 | 10.00 | 0.00 |
| 80.00 | 60.00 | 62.50 | 25.00 | 60.00 | 23.33 | 90.91 | 80.00 | 40.00 | 71.43 |
| 20.00 | 10.00 | 0.00 | 58.33 | 20.00 | 10.00 | 0.00 | 0.00 | 50.00 | 28.57 |

| 58.00 | 59.00 | 60.00 | 61.00 | 62.00 | 63.00 | 64.00 | 65.00 | 66.00 | 67.00 |
|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 10.00 | 0.00 | 0.00 | 95.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 10.00 | 15.00 | 0.00 | 0.00 | 35.00 | 25.00 | 10.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 15.00 | 10.00 | 0.00 | 0.00 | 0.00 | 15.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 15.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 40.00 | 75.00 | 70.00 | 95.00 | 70.00 | 70.00 | 70.00 | 50.00 | 20.00 |
| 5.00 | 20.00 | 10.00 | 20.00 | 3.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 20.00 | 25.00 | 5.00 | 5.00 | 1.00 | 5.00 | 5.00 | 20.00 | 25.00 | 10.00 |
| 10.00 | 15.00 | 10.00 | 5.00 | 1.00 | 20.00 | 20.00 | 5.00 | 20.00 | 65.00 |
| 15.38 | 37.50 | 20.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 10.00 | 25.00 |
| 46.15 | 25.00 | 53.33 | 78.57 | 0.00 | 100.00 | 21.43 | 57.14 | 40.00 | 75.00 |
| 38.46 | 37.50 | 26.67 | 21.43 | 0.00 | 0.00 | 78.57 | 42.86 | 50.00 | 0.00 |

PLATEAU MINING
 Starpoint
 Sagebrush Area A
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| 68.00 | 69.00 | 70.00 | Mean | SDev | Freq | |
|---------------------------|-------|-------|-------|-------|-------|--------------------------------|
| TREES & SHRUBS | | | | | | |
| 0.00 | 0.00 | 0.00 | 0.64 | 4.20 | 5.71 | <i>Acer grabrum</i> |
| 0.00 | 0.00 | 0.00 | 0.41 | 1.97 | 7.14 | <i>Amelanchier utahensis</i> |
| 0.00 | 0.00 | 0.00 | 0.07 | 0.59 | 1.43 | <i>Artemisia tridentata</i> |
| 0.00 | 0.00 | 0.00 | 2.19 | 11.59 | 10.00 | <i>Atriplex canescens</i> |
| 0.00 | 0.00 | 0.00 | 1.24 | 7.21 | 8.57 | <i>Atriplex confertifolia</i> |
| 5.00 | 0.00 | 25.00 | 2.29 | 7.21 | 14.29 | <i>Ceratoides lanata</i> |
| 0.00 | 0.00 | 5.00 | 4.09 | 8.59 | 28.57 | <i>Chrysothamnus nauseosus</i> |
| FORBS | | | | | | |
| 0.00 | 0.00 | 0.00 | 0.29 | 1.16 | 5.71 | <i>Achillea millefolium</i> |
| 0.00 | 0.00 | 0.00 | 0.66 | 3.38 | 5.71 | <i>Artemisia ludoviciana</i> |
| 0.00 | 0.00 | 0.00 | 9.21 | 18.93 | 31.43 | <i>Bassia hyssopifolia</i> |
| 0.00 | 0.00 | 0.00 | 0.19 | 0.90 | 4.29 | <i>Grindelia squarrosa</i> |
| 0.00 | 0.00 | 0.00 | 0.11 | 0.69 | 2.86 | <i>Halogeton glomeratus</i> |
| 0.00 | 0.00 | 0.00 | 0.97 | 4.05 | 7.14 | <i>Hedysarum boreale</i> |
| 0.00 | 5.00 | 0.00 | 5.34 | 7.86 | 51.43 | <i>Linum lewisii</i> |
| 0.00 | 5.00 | 0.00 | 0.60 | 2.67 | 7.14 | <i>Mellilotus officinalis</i> |
| 15.00 | 0.00 | 0.00 | 2.73 | 4.05 | 37.14 | <i>Penstemon palmeri</i> |
| 0.00 | 0.00 | 0.00 | 1.36 | 6.54 | 5.71 | <i>Salsola tragus</i> |
| 0.00 | 0.00 | 0.00 | 0.07 | 0.59 | 1.43 | <i>Sphaeralcea coccinea</i> |
| 0.00 | 0.00 | 0.00 | 0.29 | 1.87 | 2.86 | <i>Viguiera multiflora</i> |
| GRASSES | | | | | | |
| 0.00 | 15.00 | 5.00 | 5.36 | 8.42 | 42.86 | <i>Agropyron cristatum</i> |
| 0.00 | 0.00 | 0.00 | 0.21 | 1.78 | 1.43 | <i>Bromus carinatus</i> |
| 0.00 | 0.00 | 0.00 | 0.14 | 1.19 | 1.43 | <i>Bromus tectorum</i> |
| 0.00 | 0.00 | 0.00 | 0.14 | 0.83 | 1.43 | <i>Elymus elymoides</i> |
| 0.00 | 0.00 | 10.00 | 4.93 | 7.10 | 32.86 | <i>Elymus lanceolatus</i> |
| 25.00 | 0.00 | 5.00 | 3.47 | 7.99 | 28.57 | <i>Elymus spicatus</i> |
| 0.00 | 0.00 | 0.00 | 0.10 | 0.83 | 1.43 | <i>Stipa comata</i> |
| 0.00 | 10.00 | 0.00 | 1.69 | 4.33 | 21.43 | <i>Stipa hymenoides</i> |
| COVER | | | | | | |
| 45.00 | 35.00 | 50.00 | 48.79 | 16.93 | | Total Living Cover |
| 5.00 | 10.00 | 5.00 | 9.19 | 6.87 | | Litter |
| 5.00 | 30.00 | 20.00 | 17.59 | 10.46 | | Bareground |
| 45.00 | 25.00 | 25.00 | 24.44 | 15.34 | | Rock |
| % COMPOSITION | | | | | | |
| 11.11 | 0.00 | 60.00 | 22.57 | 26.83 | | Shrubs |
| 33.33 | 28.57 | 0.00 | 44.35 | 28.05 | | Forbs |
| 55.56 | 71.43 | 40.00 | 33.08 | 24.59 | | Grasses |

PLATEAU MINING
 STAR POINT
 Sagebrush Area B

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
|--|------|------|------|------|------|------|
|--|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | |
|--------------------------------|-------|-------|-------|------|-------|------|
| <i>Atriplex confertifolia</i> | 0.00 | 10.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 60.00 | 5.00 | 20.00 | 0.00 | 5.00 | 5.00 |

FORBS

| | | | | | | |
|----------------------------|------|-------|-------|-------|------|------|
| <i>Aster chilensis</i> | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Bassia hyssopifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Grindelia squarrosa</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| <i>Linum lewisii</i> | 0.00 | 30.00 | 15.00 | 15.00 | 5.00 | 5.00 |
| <i>Penstemon palmeri</i> | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| <i>Salsola tragus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

GRASSES

| | | | | | | |
|----------------------------|------|------|-------|-------|-------|------|
| <i>Agropyron cristatum</i> | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 5.00 | 10.00 | 0.00 | 0.00 | 5.00 |
| <i>Elymus salinus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus spicatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa comata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 0.00 | 20.00 | 25.00 | 5.00 |

COVER

| | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 65.00 | 60.00 | 45.00 | 40.00 | 50.00 | 20.00 |
| Litter | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Bareground | 25.00 | 20.00 | 45.00 | 45.00 | 25.00 | 65.00 |
| Rock | 5.00 | 15.00 | 5.00 | 10.00 | 20.00 | 10.00 |

% COMPOSITION

| | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|
| Shrubs | 92.31 | 25.00 | 44.44 | 0.00 | 30.00 | 25.00 |
| Forbs | 0.00 | 66.67 | 33.33 | 50.00 | 20.00 | 25.00 |
| Grasses | 7.69 | 8.33 | 22.22 | 50.00 | 50.00 | 50.00 |

| 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 |
|-------|-------|-------|-------|--------|--------|--------|-------|-------|
| 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 10.00 | 10.00 | 10.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 | 55.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| 10.00 | 5.00 | 10.00 | 15.00 | 0.00 | 0.00 | 0.00 | 10.00 | 15.00 |
| 55.00 | 25.00 | 35.00 | 30.00 | 15.00 | 70.00 | 50.00 | 70.00 | 50.00 |
| 10.00 | 5.00 | 5.00 | 5.00 | 4.00 | 25.00 | 14.00 | 5.00 | 15.00 |
| 25.00 | 40.00 | 50.00 | 55.00 | 80.00 | 4.00 | 35.00 | 10.00 | 30.00 |
| 10.00 | 30.00 | 10.00 | 10.00 | 1.00 | 1.00 | 1.00 | 15.00 | 5.00 |
| 18.18 | 0.00 | 42.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 |
| 54.55 | 60.00 | 28.57 | 50.00 | 100.00 | 0.00 | 100.00 | 85.71 | 10.00 |
| 27.27 | 40.00 | 28.57 | 50.00 | 0.00 | 100.00 | 0.00 | 14.29 | 40.00 |

PLATEAU MINING
 Starpoint
 Sagebrush Area B
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| Mean | SDev | Freq | |
|-------|-------|-------|--------------------------------|
| <hr/> | | | |
| | | | TREES & SHRUBS |
| 2.33 | 4.78 | 20.00 | <i>Atriplex confertifolia</i> |
| 8.67 | 15.65 | 46.67 | <i>Chrysothamnus nauseosus</i> |
| | | | |
| | | | FORBS |
| 0.67 | 2.49 | 6.67 | <i>Aster chilensis</i> |
| 1.33 | 3.86 | 13.33 | <i>Bassia hyssopifolia</i> |
| 0.33 | 1.25 | 6.67 | <i>Grindelia squarrosa</i> |
| 9.00 | 8.60 | 66.67 | <i>Linum lewisii</i> |
| 1.00 | 2.00 | 20.00 | <i>Penstemon palmeri</i> |
| 7.00 | 15.58 | 26.67 | <i>Salsola tragus</i> |
| | | | |
| | | | GRASSES |
| 0.33 | 1.25 | 6.67 | <i>Agropyron cristatum</i> |
| 1.67 | 2.98 | 56.67 | <i>Elymus lanceolatus</i> |
| 4.67 | 17.46 | 6.67 | <i>Elymus salinus</i> |
| 0.33 | 1.25 | 6.67 | <i>Elymus spicatus</i> |
| 0.33 | 1.25 | 6.67 | <i>Stipa comata</i> |
| 7.67 | 7.93 | 60.00 | <i>Stipa hymenoides</i> |
| | | | |
| <hr/> | | | |
| | | | COVER |
| 45.33 | 16.98 | | Total Living Cover |
| 7.87 | 5.68 | | Litter |
| 36.93 | 19.76 | | Bareground |
| 9.87 | 7.61 | | Rock |
| | | | |
| <hr/> | | | |
| | | | % COMPOSITION |
| 21.85 | 26.01 | | Shrubs |
| 45.59 | 31.88 | | Forbs |
| 32.56 | 25.41 | | Grasses |
| <hr/> | | | |

PLATEAU MINING
 STAR POINT
 Sagebrush Area C

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
|--|------|------|------|------|------|------|
|--|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | |
|--------------------------------|-------|-------|-------|------|------|-------|
| <i>Atriplex confertifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Ceratoides lanata</i> | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| <i>Chrysothamnus nauseosus</i> | 10.00 | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 |

FORBS

| | | | | | | |
|-------------------------------|------|-------|-------|-------|-------|------|
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| <i>Bassia hyssopifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Linum lewisii</i> | 5.00 | 15.00 | 15.00 | 10.00 | 0.00 | 0.00 |
| <i>Mellilotus officinalis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Penstemon palmeri</i> | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Viguiera multiflora</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |

GRASSES

| | | | | | | |
|----------------------------|------|-------|-------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 |
| <i>Bromus carinatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 5.00 | 10.00 | 0.00 | 35.00 | 0.00 | 0.00 |
| <i>Elymus spicatus</i> | 0.00 | 0.00 | 45.00 | 10.00 | 0.00 | 10.00 |
| <i>Stipa comata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 5.00 | 5.00 | 0.00 | 0.00 | 10.00 | 0.00 |

COVER

| | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 35.00 | 45.00 | 70.00 | 55.00 | 40.00 | 45.00 |
| Litter | 5.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| Bareground | 50.00 | 25.00 | 10.00 | 10.00 | 25.00 | 30.00 |
| Rock | 10.00 | 20.00 | 10.00 | 25.00 | 25.00 | 15.00 |

% COMPOSITION

| | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|
| Shrubs | 42.86 | 33.33 | 14.29 | 0.00 | 0.00 | 22.22 |
| Forbs | 14.29 | 33.33 | 21.43 | 18.18 | 75.00 | 0.00 |
| Grasses | 42.86 | 33.33 | 64.29 | 81.82 | 25.00 | 77.78 |

| 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 10.00 | 20.00 | 0.00 | 35.00 | 35.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 15.00 | 45.00 | 0.00 | 5.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 45.00 |
| 0.00 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 10.00 |
| 5.00 | 5.00 | 0.00 | 10.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 |
| 0.00 | 10.00 | 0.00 | 15.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 5.00 | 8.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 |
| 50.00 | 40.00 | 60.00 | 65.00 | 40.00 | 65.00 | 65.00 | 55.00 | 65.00 |
| 10.00 | 10.00 | 5.00 | 10.00 | 5.00 | 10.00 | 5.00 | 10.00 | 5.00 |
| 15.00 | 15.00 | 15.00 | 20.00 | 30.00 | 20.00 | 10.00 | 15.00 | 25.00 |
| 25.00 | 35.00 | 20.00 | 5.00 | 25.00 | 5.00 | 20.00 | 20.00 | 5.00 |
| 10.00 | 0.00 | 0.00 | 53.85 | 50.00 | 0.00 | 53.85 | 63.64 | 0.00 |
| 70.00 | 37.50 | 86.67 | 7.69 | 25.00 | 84.62 | 23.08 | 9.09 | 84.62 |
| 20.00 | 62.50 | 13.33 | 38.46 | 25.00 | 15.38 | 23.08 | 27.27 | 15.38 |

PLATEAU MINING
 Starpoint
 Sagebrush Area C
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| Mean | SDev | Freq | |
|-------|-------|-------|--------------------------------|
| <hr/> | | | |
| | | | TREES & SHRUBS |
| 1.67 | 6.24 | 6.67 | <i>Atriplex confertifolia</i> |
| 8.33 | 11.79 | 53.33 | <i>Ceratoides lanata</i> |
| 2.00 | 4.00 | 20.00 | <i>Chrysothamnus nauseosus</i> |
| | | | |
| | | | FORBS |
| 0.33 | 1.25 | 6.67 | <i>Achillea millefolium</i> |
| 3.67 | 13.72 | 6.67 | <i>Bassia hyssopifolia</i> |
| 10.00 | 13.17 | 60.00 | <i>Linum lewisii</i> |
| 4.33 | 11.23 | 26.67 | <i>Melilotus officinalis</i> |
| 1.13 | 2.94 | 13.33 | <i>Penstemon palmeri</i> |
| 2.00 | 4.40 | 20.00 | <i>Viguiera multiflora</i> |
| | | | |
| | | | GRASSES |
| 4.00 | 6.38 | 46.67 | <i>Agropyron cristatum</i> |
| 1.33 | 3.40 | 13.33 | <i>Bromus carinatus</i> |
| 5.67 | 9.10 | 46.67 | <i>Elymus lanceolatus</i> |
| 6.20 | 11.14 | 46.67 | <i>Elymus spicatus</i> |
| 0.33 | 1.25 | 6.67 | <i>Stipa comata</i> |
| 2.00 | 3.06 | 33.33 | <i>Stipa hymenoides</i> |
| | | | |
| | | | COVER |
| 53.00 | 11.22 | | Total Living Cover |
| 8.33 | 2.36 | | Litter |
| 21.00 | 10.20 | | Bareground |
| 17.67 | 8.73 | | Rock |
| <hr/> | | | |
| | | | % COMPOSITION |
| 22.94 | 23.39 | | Shrubs |
| 39.37 | 30.46 | | Forbs |
| 37.70 | 22.31 | | Grasses |
| <hr/> | | | |

PLATEAU MINING
 STAR POINT
 Reveg Sagebrush Area D

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

1.00 2.00 3.00 4.00 5.00 6.00

TREES & SHRUBS

| | | | | | | |
|--------------------------------|------|-------|------|------|-------|------|
| <i>Atriplex canescens</i> | 5.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex confertifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

FORBS

| | | | | | | |
|------------------------------|------|-------|-------|------|------|-------|
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Bassia hyssopifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Grindelia squarrosa</i> | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Linum lewisii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Melilotus officinalis</i> | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 |
| <i>Penstemon palmeri</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |

GRASSES

| | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 15.00 | 25.00 | 20.00 | 0.00 | 0.00 | 10.00 |
| <i>Bromus carinatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 10.00 | 10.00 | 0.00 | 20.00 | 25.00 | 40.00 |
| <i>Elymus spicatus</i> | 10.00 | 10.00 | 10.00 | 0.00 | 10.00 | 0.00 |
| <i>Stipa hymenoides</i> | 25.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |

COVER

| | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 65.00 | 65.00 | 40.00 | 30.00 | 45.00 | 65.00 |
| Litter | 5.00 | 10.00 | 10.00 | 5.00 | 10.00 | 5.00 |
| Bareground | 10.00 | 10.00 | 25.00 | 20.00 | 25.00 | 10.00 |
| Rock | 20.00 | 15.00 | 25.00 | 45.00 | 20.00 | 20.00 |

% COMPOSITION

| | | | | | | |
|---------|-------|-------|-------|--------|-------|-------|
| Shrubs | 7.69 | 15.38 | 0.00 | 0.00 | 22.22 | 0.00 |
| Forbs | 0.00 | 15.38 | 25.00 | 0.00 | 0.00 | 23.08 |
| Grasses | 92.31 | 69.23 | 75.00 | 100.00 | 77.78 | 76.92 |

| 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 |
| 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 20.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 10.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 10.00 | 30.00 | 10.00 | 30.00 | 0.00 | 10.00 | 15.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| 0.00 | 30.00 | 10.00 | 15.00 | 10.00 | 45.00 | 15.00 | 30.00 | 40.00 |
| 15.00 | 25.00 | 20.00 | 0.00 | 5.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 65.00 | 80.00 | 50.00 | 50.00 | 60.00 | 40.00 | 70.00 | 70.00 |
| 10.00 | 10.00 | 10.00 | 20.00 | 25.00 | 20.00 | 10.00 | 10.00 | 5.00 |
| 10.00 | 20.00 | 5.00 | 10.00 | 15.00 | 10.00 | 30.00 | 10.00 | 5.00 |
| 30.00 | 5.00 | 5.00 | 20.00 | 10.00 | 10.00 | 20.00 | 10.00 | 20.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.71 |
| 40.00 | 0.00 | 25.00 | 50.00 | 10.00 | 25.00 | 37.50 | 7.14 | 0.00 |
| 60.00 | 100.00 | 75.00 | 50.00 | 90.00 | 75.00 | 62.50 | 92.86 | 64.29 |

PLATEAU MINING
 Starpoint
 Reveg Sagebrush Area D
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| Mean | SDev | Freq | |
|----------------|-------|-------|--------------------------------|
| <hr/> | | | |
| TREES & SHRUBS | | | |
| 1.00 | 2.71 | 13.33 | <i>Atriplex canescens</i> |
| 0.67 | 2.49 | 6.67 | <i>Atriplex confertifolia</i> |
| 1.67 | 6.24 | 6.67 | <i>Chrysothamnus nauseosus</i> |
| | | | |
| FORBS | | | |
| 0.67 | 2.49 | 6.67 | <i>Achillea millefolium</i> |
| 3.33 | 6.99 | 20.00 | <i>Bassia hyssopifolia</i> |
| 1.67 | 2.98 | 26.67 | <i>Grindelia squarrosa</i> |
| 1.00 | 3.74 | 6.67 | <i>Linum lewisii</i> |
| 2.00 | 3.56 | 26.67 | <i>Mellilotus officinalis</i> |
| 0.67 | 2.49 | 6.67 | <i>Penstemon palmeri</i> |
| | | | |
| GRASSES | | | |
| 13.00 | 9.63 | 80.00 | <i>Agropyron cristatum</i> |
| 0.67 | 2.49 | 6.67 | <i>Bromus carinatus</i> |
| 20.00 | 13.90 | 86.67 | <i>Elymus lanceolatus</i> |
| 7.67 | 7.72 | 60.00 | <i>Elymus spicatus</i> |
| 2.33 | 6.55 | 13.33 | <i>Stipa hymenoides</i> |
| | | | |
| COVER | | | |
| 56.33 | 13.47 | | Total Living Cover |
| 11.00 | 5.83 | | Litter |
| 14.33 | 7.50 | | Bareground |
| 18.33 | 9.94 | | Rock |
| | | | |
| % COMPOSITION | | | |
| 5.40 | 10.42 | | Shrubs |
| 17.21 | 16.04 | | Forbs |
| 77.39 | 14.54 | | Grasses |

PLATEAU MINING
 STAR POINT
 Reclaimed Mtn/Grass Area E

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
|--|------|------|------|------|------|------|
|--|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | |
|--------------------------------|------|------|------|------|------|------|
| <i>Artemisia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Eriogonum corymbosum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Purshia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

FORBS

| | | | | | | |
|-------------------------------|-------|------|------|------|-------|------|
| <i>Achillea millefolium</i> | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Artemisia ludoviciana</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Aster engelmannii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Halogeton glomeratus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| <i>Hymenoxys acaulis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Lepidium montanum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Linum lewisii</i> | 0.00 | 0.00 | 5.00 | 0.00 | 15.00 | 5.00 |
| <i>Mellilotus officinalis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Penstemon palmeri</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Salsola tragus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

GRASSES

| | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Bromus carinatus</i> | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Elymus cinereus</i> | 5.00 | 15.00 | 0.00 | 25.00 | 30.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 25.00 | 20.00 | 0.00 | 10.00 | 15.00 | 30.00 |
| <i>Elymus spicatus</i> | 0.00 | 0.00 | 25.00 | 5.00 | 10.00 | 0.00 |
| <i>Poa secunda</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa lettermanii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

COVER

| | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 45.00 | 35.00 | 35.00 | 40.00 | 75.00 | 50.00 |
| Litter | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 10.00 |
| Bareground | 30.00 | 30.00 | 35.00 | 25.00 | 10.00 | 15.00 |
| Rock | 20.00 | 30.00 | 25.00 | 30.00 | 10.00 | 25.00 |

% COMPOSITION

| | | | | | | |
|---------|-------|--------|-------|--------|-------|-------|
| Shrubs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forbs | 22.22 | 0.00 | 14.29 | 0.00 | 26.67 | 20.00 |
| Grasses | 77.78 | 100.00 | 85.71 | 100.00 | 73.33 | 80.00 |

| 34.00 | 35.00 | 36.00 | 37.00 | 38.00 | 39.00 | 40.00 | 41.00 | 42.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 10.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 20.00 | 45.00 | 0.00 | 0.00 | 15.00 | 5.00 | 5.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.00 | 0.00 | 40.00 | 0.00 |
| 0.00 | 60.00 | 5.00 | 10.00 | 5.00 | 0.00 | 20.00 | 0.00 | 20.00 |
| 20.00 | 0.00 | 10.00 | 10.00 | 0.00 | 25.00 | 5.00 | 15.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 70.00 | 40.00 | 65.00 | 20.00 | 85.00 | 60.00 | 65.00 | 45.00 |
| 5.00 | 10.00 | 5.00 | 10.00 | 5.00 | 5.00 | 20.00 | 10.00 | 15.00 |
| 5.00 | 15.00 | 30.00 | 10.00 | 45.00 | 5.00 | 10.00 | 10.00 | 25.00 |
| 45.00 | 5.00 | 25.00 | 15.00 | 30.00 | 5.00 | 10.00 | 15.00 | 15.00 |
| 22.22 | 7.14 | 12.50 | 0.00 | 0.00 | 0.00 | 0.00 | 7.69 | 0.00 |
| 33.33 | 7.14 | 50.00 | 69.23 | 75.00 | 11.76 | 41.67 | 7.69 | 11.11 |
| 44.44 | 85.71 | 37.50 | 30.77 | 25.00 | 88.24 | 58.33 | 84.62 | 88.89 |

| 43.00 | 44.00 | 45.00 | 46.00 | 47.00 | 48.00 | 49.00 | 50.00 | 51.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 20.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 15.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 10.00 | 25.00 | 10.00 | 15.00 | 10.00 | 25.00 | 0.00 | 25.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 10.00 | 15.00 | 45.00 | 10.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 10.00 | 20.00 |
| 10.00 | 0.00 | 10.00 | 5.00 | 15.00 | 0.00 | 0.00 | 30.00 | 0.00 |
| 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 10.00 | 10.00 |
| 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 65.00 | 35.00 | 65.00 | 55.00 | 65.00 | 45.00 | 65.00 | 65.00 |
| 10.00 | 20.00 | 5.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 15.00 |
| 5.00 | 10.00 | 25.00 | 10.00 | 10.00 | 10.00 | 20.00 | 5.00 | 5.00 |
| 20.00 | 5.00 | 35.00 | 15.00 | 25.00 | 15.00 | 25.00 | 20.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 15.38 | 18.18 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.15 | 38.46 | 71.43 | 46.15 | 27.27 | 30.77 | 55.56 | 23.08 | 53.85 |
| 53.85 | 61.54 | 28.57 | 38.46 | 54.55 | 69.23 | 44.44 | 76.92 | 46.15 |

| 52.00 | 53.00 | 54.00 | 55.00 | 56.00 | 57.00 | 58.00 | 59.00 | 60.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 25.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 10.00 | 0.00 | 25.00 | 25.00 | 10.00 | 15.00 | 20.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 10.00 | 55.00 | 20.00 | 10.00 | 15.00 | 0.00 | 15.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 10.00 | 0.00 | 15.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 15.00 | 0.00 | 0.00 |
| 15.00 | 25.00 | 0.00 | 25.00 | 0.00 | 10.00 | 15.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 45.00 | 65.00 | 70.00 | 55.00 | 65.00 | 70.00 | 50.00 | 45.00 |
| 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| 10.00 | 25.00 | 5.00 | 10.00 | 15.00 | 10.00 | 5.00 | 5.00 | 5.00 |
| 15.00 | 20.00 | 20.00 | 10.00 | 20.00 | 15.00 | 15.00 | 40.00 | 45.00 |
| 38.46 | 0.00 | 15.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.08 | 22.22 | 0.00 | 35.71 | 63.64 | 15.38 | 42.86 | 70.00 | 33.33 |
| 38.46 | 77.78 | 84.62 | 64.29 | 36.36 | 84.62 | 57.14 | 30.00 | 66.67 |

PLATEAU MINING
 Starpoint
 Reclaimed Mtn/Grass Area E
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| Mean | SDev | Freq | |
|----------------|-------|-------|--------------------------------|
| <hr/> | | | |
| TREES & SHRUBS | | | |
| 1.92 | 5.71 | 15.00 | <i>Artemisia tridentata</i> |
| 1.83 | 4.65 | 18.33 | <i>Chrysothamnus nauseosus</i> |
| 0.08 | 0.64 | 1.67 | <i>Eriogonum corymbosum</i> |
| 0.33 | 1.25 | 6.67 | <i>Purshia tridentata</i> |
| | | | |
| FORBS | | | |
| 1.00 | 3.14 | 13.33 | <i>Achillea millefolium</i> |
| 0.50 | 2.69 | 3.33 | <i>Artemisia ludoviciana</i> |
| 0.75 | 2.55 | 10.00 | <i>Aster engelmannii</i> |
| 0.17 | 0.90 | 3.33 | <i>Halogeton glomeratus</i> |
| 0.17 | 1.28 | 1.67 | <i>Hymenoxys acaulis</i> |
| 0.08 | 0.64 | 1.67 | <i>Lepidium montanum</i> |
| 8.22 | 10.16 | 53.33 | <i>Linum lewisii</i> |
| 0.33 | 2.01 | 3.33 | <i>Mellilotus officinalis</i> |
| 1.00 | 3.27 | 10.00 | <i>Penstemon palmeri</i> |
| 0.33 | 1.80 | 3.33 | <i>Salsola tragus</i> |
| | | | |
| GRASSES | | | |
| 2.08 | 7.97 | 10.00 | <i>Agropyron cristatum</i> |
| 4.17 | 7.43 | 33.33 | <i>Bromus carinatus</i> |
| 5.78 | 9.78 | 36.67 | <i>Elymus cinereus</i> |
| 11.53 | 13.54 | 66.67 | <i>Elymus lanceolatus</i> |
| 9.42 | 10.73 | 61.67 | <i>Elymus spicatus</i> |
| 0.63 | 2.08 | 10.00 | <i>Poa secunda</i> |
| 0.92 | 2.81 | 11.67 | <i>Stipa hymenoides</i> |
| 0.25 | 1.42 | 3.33 | <i>Stipa lettermanii</i> |
| | | | |
| <hr/> | | | |
| COVER | | | |
| 51.50 | 17.52 | | Total Living Cover |
| 8.35 | 3.68 | | Litter |
| 16.92 | 12.55 | | Bareground |
| 23.23 | 12.81 | | Rock |
| | | | |
| <hr/> | | | |
| % COMPOSITION | | | |
| 7.55 | 12.79 | | Shrubs |
| 25.41 | 22.09 | | Forbs |
| 67.05 | 22.35 | | Grasses |
| <hr/> | | | |

PLATEAU MINING
 STAR POINT
 Reveg Mtn/Grass Area F

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
|--|------|------|------|------|------|------|------|
|--|------|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | | |
|--------------------------------|------|------|------|------|------|------|------|
| <i>Artemisia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Purshia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |

FORBS

| | | | | | | | |
|------------------------------|-------|------|------|-------|------|-------|-------|
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Artemisia ludoviciana</i> | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 |
| <i>Aster engelmannii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Hedysarum boreale</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Linum lewisii</i> | 10.00 | 5.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Melilotus officinalis</i> | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Penstemon palmeri</i> | 5.00 | 0.00 | 0.00 | 15.00 | 0.00 | 5.00 | 15.00 |
| <i>Viguiera multiflora</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |

GRASSES

| | | | | | | | |
|---------------------------|-------|-------|-------|------|-------|-------|------|
| <i>Bromus carinatus</i> | 0.00 | 20.00 | 0.00 | 5.00 | 15.00 | 15.00 | 5.00 |
| <i>Elymus cinereus</i> | 20.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 0.00 | 0.00 | 5.00 | 20.00 | 5.00 | 5.00 |
| <i>Elymus smithii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus spicatus</i> | 5.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 40.00 | 30.00 | 40.00 | 30.00 | 35.00 | 35.00 | 45.00 |
| Litter | 10.00 | 10.00 | 10.00 | 5.00 | 10.00 | 5.00 | 10.00 |
| Bareground | 20.00 | 35.00 | 40.00 | 45.00 | 20.00 | 15.00 | 15.00 |
| Rock | 30.00 | 25.00 | 10.00 | 20.00 | 35.00 | 45.00 | 30.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|-------|-------|-------|--------|-------|-------|
| Shrubs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.11 |
| Forbs | 37.50 | 33.33 | 12.50 | 66.67 | 0.00 | 42.86 | 55.56 |
| Grasses | 62.50 | 66.67 | 87.50 | 33.33 | 100.00 | 57.14 | 33.33 |

| 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 15.00 | 0.00 | 0.00 | 10.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 20.00 | 0.00 | 25.00 | 10.00 | 10.00 | 25.00 | 0.00 |
| 5.00 | 5.00 | 5.00 | 0.00 | 10.00 | 0.00 | 0.00 | 5.00 | 5.00 | 5.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 5.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 25.00 | 5.00 | 0.00 | 0.00 | 0.00 | 25.00 | 0.00 | 70.00 |
| 5.00 | 0.00 | 5.00 | 15.00 | 15.00 | 15.00 | 0.00 | 10.00 | 10.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 10.00 | 0.00 | 10.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 15.00 | 0.00 | 0.00 |
| 50.00 | 50.00 | 45.00 | 45.00 | 65.00 | 50.00 | 45.00 | 65.00 | 40.00 | 80.00 |
| 5.00 | 5.00 | 10.00 | 10.00 | 10.00 | 20.00 | 5.00 | 20.00 | 10.00 | 10.00 |
| 10.00 | 25.00 | 25.00 | 25.00 | 10.00 | 20.00 | 35.00 | 10.00 | 30.00 | 5.00 |
| 35.00 | 20.00 | 20.00 | 20.00 | 15.00 | 10.00 | 15.00 | 5.00 | 20.00 | 5.00 |
| 0.00 | 30.00 | 0.00 | 0.00 | 30.77 | 0.00 | 55.56 | 0.00 | 0.00 | 0.00 |
| 40.00 | 60.00 | 11.11 | 44.44 | 15.38 | 60.00 | 22.22 | 23.08 | 75.00 | 6.25 |
| 60.00 | 10.00 | 88.89 | 55.56 | 53.85 | 40.00 | 22.22 | 76.92 | 25.00 | 93.75 |

PLATEAU MINING
 Starpoint
 Reveg Mtn/Grass Area
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 21

| 18.00 | 19.00 | 20.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|-------|-------|--------------------------------|
| <hr/> | | | | | | TREES & SHRUBS |
| 0.00 | 0.00 | 0.00 | 0.50 | 2.18 | 5.00 | <i>Artemisia tridentata</i> |
| 15.00 | 25.00 | 10.00 | 5.00 | 8.37 | 30.00 | <i>Chrysothamnus nauseosus</i> |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.09 | 5.00 | <i>Purshia tridentata</i> |
| | | | | | | FORBS |
| 0.00 | 0.00 | 0.00 | 0.50 | 2.18 | 5.00 | <i>Achillea millefolium</i> |
| 0.00 | 0.00 | 0.00 | 0.75 | 1.79 | 15.00 | <i>Artemisia ludoviciana</i> |
| 0.00 | 0.00 | 0.00 | 0.75 | 3.27 | 5.00 | <i>Aster engelmannii</i> |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.09 | 5.00 | <i>Hedysarum boreale</i> |
| 20.00 | 0.00 | 0.00 | 7.00 | 8.72 | 50.00 | <i>Linum lewisii</i> |
| 0.00 | 0.00 | 10.00 | 3.00 | 3.32 | 50.00 | <i>Melilotus officinalis</i> |
| 5.00 | 0.00 | 15.00 | 3.25 | 5.31 | 35.00 | <i>Penstemon palmeri</i> |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.09 | 5.00 | <i>Viguiera multiflora</i> |
| | | | | | | GRASSES |
| 0.00 | 0.00 | 0.00 | 5.00 | 7.58 | 40.00 | <i>Bromus carinatus</i> |
| 25.00 | 0.00 | 0.00 | 9.75 | 17.21 | 35.00 | <i>Elymus cinereus</i> |
| 0.00 | 25.00 | 15.00 | 7.75 | 7.33 | 70.00 | <i>Elymus lanceolatus</i> |
| 0.00 | 25.00 | 20.00 | 2.25 | 6.80 | 10.00 | <i>Elymus smithii</i> |
| 0.00 | 0.00 | 0.00 | 2.50 | 3.71 | 35.00 | <i>Elymus spicatus</i> |
| 0.00 | 0.00 | 0.00 | 1.25 | 3.83 | 10.00 | <i>Stipa hymenoides</i> |
| <hr/> | | | | | | COVER |
| 65.00 | 75.00 | 70.00 | 50.00 | 14.58 | | Total Living Cover |
| 5.00 | 5.00 | 10.00 | 9.25 | 4.26 | | Litter |
| 10.00 | 15.00 | 10.00 | 21.00 | 11.02 | | Bareground |
| 20.00 | 5.00 | 10.00 | 19.75 | 10.78 | | Rock |
| <hr/> | | | | | | % COMPOSITION |
| 23.08 | 33.33 | 14.29 | 8.50 | 16.28 | | Shrubs |
| 38.46 | 0.00 | 35.71 | 34.98 | 19.75 | | Forbs |
| 38.46 | 66.67 | 50.00 | 56.53 | 24.71 | | Grasses |

PLATEAU MINING
 STAR POINT
 Reveg Mtn/Grass Area G

Exposure: E,NE,SE

Slope: 23 deg

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
|--|------|------|------|------|------|------|------|
|--|------|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | | |
|--------------------------------|------|-------|------|------|------|-------|------|
| <i>Artemisia tridentata</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Cercocarpus ledifolium</i> | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Purshia tridentata</i> | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |

FORBS

| | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|------|
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Cirsium sp.</i> | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 |
| <i>Halogeton glomeratus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Hedysarum boreale</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Linum lewisii</i> | 15.00 | 10.00 | 0.00 | 0.00 | 10.00 | 10.00 | 5.00 |
| <i>Penstemon palmeri</i> | 15.00 | 0.00 | 30.00 | 25.00 | 10.00 | 0.00 | 5.00 |

GRASSES

| | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|
| <i>Bromus carinatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus cinereus</i> | 10.00 | 10.00 | 0.00 | 5.00 | 10.00 | 10.00 | 5.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 15.00 | 15.00 | 0.00 | 30.00 | 15.00 | 15.00 |
| <i>Elymus spicatus</i> | 30.00 | 10.00 | 0.00 | 20.00 | 0.00 | 10.00 | 0.00 |
| <i>Poa secunda</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa lettermanii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 70.00 | 65.00 | 45.00 | 50.00 | 65.00 | 65.00 | 30.00 |
| Litter | 10.00 | 15.00 | 5.00 | 10.00 | 5.00 | 15.00 | 5.00 |
| Bareground | 10.00 | 5.00 | 15.00 | 10.00 | 10.00 | 5.00 | 15.00 |
| Rock | 10.00 | 15.00 | 35.00 | 30.00 | 20.00 | 15.00 | 50.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|
| Shrubs | 0.00 | 30.77 | 0.00 | 0.00 | 0.00 | 30.77 | 0.00 |
| Forbs | 42.86 | 15.38 | 66.67 | 50.00 | 38.46 | 15.38 | 33.33 |
| Grasses | 57.14 | 53.85 | 33.33 | 50.00 | 61.54 | 53.85 | 66.67 |

| 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 5.00 | 0.00 |
| 15.00 | 10.00 | 10.00 | 0.00 | 20.00 | 15.00 | 20.00 | 5.00 | 5.00 | 5.00 |
| 0.00 | 0.00 | 10.00 | 30.00 | 0.00 | 0.00 | 5.00 | 5.00 | 15.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 20.00 | 15.00 | 0.00 | 5.00 | 5.00 | 10.00 | 0.00 | 30.00 | 10.00 |
| 0.00 | 10.00 | 0.00 | 15.00 | 0.00 | 15.00 | 0.00 | 15.00 | 5.00 | 30.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 10.00 | 0.00 | 5.00 | 5.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 40.00 | 35.00 | 45.00 | 40.00 | 55.00 | 65.00 | 40.00 | 65.00 | 65.00 |
| 5.00 | 10.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 | 10.00 | 10.00 |
| 45.00 | 30.00 | 25.00 | 15.00 | 15.00 | 15.00 | 15.00 | 5.00 | 15.00 | 10.00 |
| 25.00 | 20.00 | 30.00 | 35.00 | 35.00 | 20.00 | 15.00 | 50.00 | 10.00 | 15.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 25.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 25.00 | 57.14 | 66.67 | 50.00 | 45.45 | 38.46 | 50.00 | 38.46 | 7.69 |
| 40.00 | 75.00 | 42.86 | 33.33 | 25.00 | 54.55 | 61.54 | 50.00 | 61.54 | 92.31 |

| 28.00 | 29.00 | 30.00 | 31.00 | 32.00 | 33.00 | 34.00 | 35.00 | 36.00 | 37.00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 10.00 | 10.00 | 10.00 | 15.00 | 20.00 | 5.00 | 5.00 | 5.00 | 30.00 |
| 0.00 | 10.00 | 10.00 | 5.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 5.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 5.00 | 25.00 | 10.00 | 10.00 | 0.00 | 25.00 | 10.00 | 55.00 | 10.00 |
| 20.00 | 35.00 | 20.00 | 25.00 | 0.00 | 5.00 | 10.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 5.00 | 10.00 | 5.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 |
| 35.00 | 65.00 | 65.00 | 55.00 | 45.00 | 35.00 | 45.00 | 35.00 | 70.00 | 75.00 |
| 5.00 | 20.00 | 20.00 | 20.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| 20.00 | 10.00 | 5.00 | 10.00 | 15.00 | 15.00 | 5.00 | 10.00 | 5.00 | 5.00 |
| 40.00 | 5.00 | 10.00 | 15.00 | 30.00 | 45.00 | 40.00 | 45.00 | 20.00 | 15.00 |
| 14.29 | 7.69 | 0.00 | 0.00 | 33.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 30.77 | 30.77 | 36.36 | 33.33 | 57.14 | 11.11 | 28.57 | 7.14 | 46.67 |
| 85.71 | 61.54 | 69.23 | 63.64 | 33.33 | 42.86 | 88.89 | 71.43 | 92.86 | 53.33 |

PLATEAU MINING
 Starpoint
 Reveg Mtn/Grass Arc
 Exposure: E,NE,SE
 Slope: 23 deg
 Sample Date: 25-30 Sept 21

| 38.00 | 39.00 | 40.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|-------|-------|--------------------------------|
| <hr/> | | | | | | TREES & SHRUBS |
| 0.00 | 0.00 | 0.00 | 0.50 | 2.18 | 5.00 | <i>Artemisia tridentata</i> |
| 0.00 | 0.00 | 0.00 | 1.20 | 3.56 | 12.50 | <i>Cercocarpus ledifolius</i> |
| 0.00 | 0.00 | 0.00 | 0.13 | 0.78 | 2.50 | <i>Chrysothamnus nauseosus</i> |
| 0.00 | 0.00 | 0.00 | 0.55 | 1.67 | 10.00 | <i>Purshia tridentata</i> |
| | | | | | | FORBS |
| 0.00 | 0.00 | 0.00 | 0.38 | 1.73 | 5.00 | <i>Achillea millefolium</i> |
| 0.00 | 0.00 | 0.00 | 0.13 | 0.78 | 2.50 | <i>Cirsium sp.</i> |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.56 | 2.50 | <i>Halogeton glomeratus</i> |
| 0.00 | 0.00 | 0.00 | 1.38 | 4.47 | 12.50 | <i>Hedysarum boreale</i> |
| 10.00 | 0.00 | 5.00 | 9.38 | 7.35 | 82.50 | <i>Linum lewisii</i> |
| 0.00 | 35.00 | 0.00 | 6.75 | 9.26 | 55.00 | <i>Penstemon palmeri</i> |
| | | | | | | GRASSES |
| 0.00 | 0.00 | 0.00 | 1.13 | 3.79 | 10.00 | <i>Bromus carinatus</i> |
| 30.00 | 10.00 | 15.00 | 11.00 | 11.41 | 77.50 | <i>Elymus cinereus</i> |
| 10.00 | 0.00 | 15.00 | 10.00 | 10.00 | 65.00 | <i>Elymus lanceolatus</i> |
| 20.00 | 25.00 | 15.00 | 6.75 | 8.41 | 57.50 | <i>Elymus spicatus</i> |
| 0.00 | 0.00 | 0.00 | 0.75 | 3.27 | 5.00 | <i>Poa secunda</i> |
| 0.00 | 0.00 | 0.00 | 1.38 | 5.24 | 10.00 | <i>Stipa hymenoides</i> |
| 0.00 | 0.00 | 0.00 | 0.63 | 3.90 | 2.50 | <i>Stipa lettermanii</i> |
| <hr/> | | | | | | COVER |
| 70.00 | 70.00 | 50.00 | 52.25 | 13.74 | | Total Living Cover |
| 5.00 | 20.00 | 5.00 | 9.13 | 4.73 | | Litter |
| 10.00 | 5.00 | 5.00 | 13.13 | 8.27 | | Bareground |
| 15.00 | 5.00 | 40.00 | 25.50 | 11.98 | | Rock |
| <hr/> | | | | | | % COMPOSITION |
| 0.00 | 0.00 | 0.00 | 4.43 | 9.40 | | Shrubs |
| 14.29 | 50.00 | 10.00 | 36.02 | 21.46 | | Forbs |
| 85.71 | 50.00 | 90.00 | 59.55 | 21.67 | | Grasses |

PLATEAU MINING
 STAR POINT
 Sagebrush Area H

Exposure: Variable

Slope: Variable

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
|--------------------------------|-------|-------|------|-------|-------|-------|
| TREES & SHRUBS | | | | | | |
| <i>Atriplex canescens</i> | 0.00 | 0.00 | 0.00 | 10.00 | 35.00 | 18.00 |
| <i>Ceratoides lanata</i> | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 7.00 |
| <i>Chrysothamnus nauseosus</i> | 15.00 | 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |

FORBS

| | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|
| <i>Artemisia ludoviciana</i> | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Bassia hyssopifolia</i> | 0.00 | 0.00 | 65.00 | 35.00 | 25.00 | 55.00 |
| <i>Salsola tragus</i> | 40.00 | 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |

GRASSES

| | | | | | | |
|----------------------------|-------|------|------|-------|-------|------|
| <i>Agropyron cristatum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus spicatus</i> | 0.00 | 0.00 | 0.00 | 20.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 15.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |

COVER

| | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 70.00 | 65.00 | 70.00 | 75.00 | 80.00 | 80.00 |
| Litter | 10.00 | 10.00 | 5.00 | 5.00 | 5.00 | 10.00 |
| Bareground | 10.00 | 20.00 | 20.00 | 15.00 | 10.00 | 5.00 |
| Rock | 10.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

% COMPOSITION

| | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|
| Shrubs | 21.43 | 30.77 | 7.14 | 13.33 | 43.75 | 31.25 |
| Forbs | 57.14 | 69.23 | 92.86 | 46.67 | 43.75 | 68.75 |
| Grasses | 21.43 | 0.00 | 0.00 | 40.00 | 12.50 | 0.00 |

PLATEAU MINING
 Starpoint
 Sagebrush Area H
 Exposure: Variable
 Slope: Variable
 Sample Date: 25-30 Sept 2006

| 7.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|--------------------------------|
| <hr/> | | | | |
| | | | | TREES & SHRUBS |
| 0.00 | 9.00 | 12.43 | 42.86 | <i>Atriplex canescens</i> |
| 0.00 | 1.71 | 2.76 | 28.57 | <i>Ceratoides lanata</i> |
| 10.00 | 6.43 | 7.89 | 42.86 | <i>Chrysothamnus nauseosus</i> |
| | | | | |
| | | | | FORBS |
| 0.00 | 1.43 | 3.50 | 14.29 | <i>Artemisia ludoviciana</i> |
| 20.00 | 28.57 | 23.26 | 71.43 | <i>Bassia hyssopifolia</i> |
| 0.00 | 12.14 | 19.25 | 28.57 | <i>Salsola tragus</i> |
| | | | | |
| | | | | GRASSES |
| 0.00 | 1.43 | 3.50 | 14.29 | <i>Agropyron cristatum</i> |
| 10.00 | 1.43 | 3.50 | 14.29 | <i>Elymus lanceolatus</i> |
| 10.00 | 4.29 | 7.28 | 28.57 | <i>Elymus spicatus</i> |
| 0.00 | 3.57 | 5.80 | 28.57 | <i>Stipa hymenoides</i> |
| | | | | |
| <hr/> | | | | |
| | | | | COVER |
| 50.00 | 70.00 | 9.64 | | Total Living Cover |
| 10.00 | 7.86 | 2.47 | | Litter |
| 15.00 | 13.57 | 5.15 | | Bareground |
| 25.00 | 8.57 | 6.93 | | Rock |
| | | | | |
| <hr/> | | | | |
| | | | | % COMPOSITION |
| 20.00 | 23.95 | 11.40 | | Shrubs |
| 40.00 | 59.77 | 17.28 | | Forbs |
| 40.00 | 16.28 | 16.74 | | Grasses |
| <hr/> | | | | |

PLATEAU MINING
 STAR POINT
 Reveg Saltbush Area I

Exposure:

Lower Road

Slope:

Sample Date: 25-30 Sept 2006

1.00 2.00 3.00 4.00 5.00 6.00 7.00

TREES & SHRUBS

| | | | | | | | |
|--------------------------------|-------|-------|------|------|-------|-------|------|
| <i>Amelanchier utahensis</i> | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex confertifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex corrugata</i> | 15.00 | 40.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex gardneri</i> | 25.00 | 25.00 | 0.00 | 5.00 | 25.00 | 40.00 | 0.00 |
| <i>Chrysothamnus nauseosus</i> | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| <i>Eriogonum corymbosum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

FORBS

| | | | | | | | |
|--------------------------|------|------|-------|------|-------|------|-------|
| <i>Linum lewisii</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| <i>Malcomia africana</i> | 5.00 | 0.00 | 15.00 | 0.00 | 25.00 | 5.00 | 0.00 |
| <i>Tragopogon dubius</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |

GRASSES

| | | | | | | | |
|----------------------------|------|------|-------|-------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| <i>Elymus elymoides</i> | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus lanceolatus</i> | 5.00 | 0.00 | 0.00 | 10.00 | 20.00 | 0.00 | 0.00 |
| <i>Elymus trachycaulus</i> | 0.00 | 0.00 | 25.00 | 20.00 | 0.00 | 15.00 | 40.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 |

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 65.00 | 65.00 | 50.00 | 45.00 | 70.00 | 65.00 | 65.00 |
| Litter | 10.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 10.00 |
| Bareground | 20.00 | 20.00 | 40.00 | 40.00 | 15.00 | 25.00 | 20.00 |
| Rock | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|--------|-------|-------|-------|-------|-------|
| Shrubs | 84.62 | 100.00 | 0.00 | 11.11 | 35.71 | 69.23 | 0.00 |
| Forbs | 7.69 | 0.00 | 30.00 | 0.00 | 35.71 | 7.69 | 23.08 |
| Grasses | 7.69 | 0.00 | 70.00 | 88.89 | 28.57 | 23.08 | 76.92 |

PLATEAU MINING
 Starpoint
 Reveg Saltbush Area I
 Exposure:
 Slope:
 Sample Date: 25-30 Sept 2006

| 8.00 | 9.00 | 10.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|-------|-------|--------------------------------|
| <hr/> | | | | | | TREES & SHRUBS |
| 0.00 | 0.00 | 0.00 | 0.50 | 1.50 | 10.00 | <i>Amelanchier utahensis</i> |
| 0.00 | 7.00 | 0.00 | 0.70 | 2.10 | 10.00 | <i>Atriplex confertifolia</i> |
| 0.00 | 0.00 | 0.00 | 5.50 | 12.34 | 20.00 | <i>Atriplex corrugata</i> |
| 0.00 | 8.00 | 10.00 | 13.80 | 13.26 | 70.00 | <i>Atriplex gardneri</i> |
| 25.00 | 0.00 | 0.00 | 4.00 | 7.68 | 30.00 | <i>Chrysothamnus nauseosus</i> |
| 0.00 | 10.00 | 0.00 | 1.00 | 3.00 | 10.00 | <i>Eriogonum corymbosum</i> |
| | | | | | | FORBS |
| 5.00 | 0.00 | 0.00 | 1.50 | 3.20 | 20.00 | <i>Linum lewisii</i> |
| 0.00 | 0.00 | 0.00 | 5.00 | 8.06 | 40.00 | <i>Malcomia africana</i> |
| 0.00 | 0.00 | 0.00 | 0.50 | 1.50 | 10.00 | <i>Tragopogon dubius</i> |
| | | | | | | GRASSES |
| 0.00 | 10.00 | 15.00 | 3.50 | 5.50 | 30.00 | <i>Agropyron cristatum</i> |
| 0.00 | 0.00 | 0.00 | 1.00 | 3.00 | 10.00 | <i>Elymus elymoides</i> |
| 0.00 | 5.00 | 10.00 | 5.00 | 6.32 | 50.00 | <i>Elymus lanceolatus</i> |
| 0.00 | 10.00 | 5.00 | 11.50 | 12.85 | 60.00 | <i>Elymus trachycaulus</i> |
| 0.00 | 0.00 | 0.00 | 1.00 | 3.00 | 10.00 | <i>Stipa hymenoides</i> |
| <hr/> | | | | | | COVER |
| 30.00 | 50.00 | 40.00 | 54.50 | 12.74 | | Total Living Cover |
| 5.00 | 5.00 | 10.00 | 8.00 | 2.45 | | Litter |
| 60.00 | 40.00 | 45.00 | 32.50 | 13.83 | | Bareground |
| 5.00 | 5.00 | 5.00 | 5.00 | 0.00 | | Rock |
| <hr/> | | | | | | % COMPOSITION |
| 83.33 | 50.00 | 25.00 | 45.90 | 35.15 | | Shrubs |
| 16.67 | 0.00 | 0.00 | 12.08 | 12.82 | | Forbs |
| 0.00 | 50.00 | 75.00 | 42.02 | 32.56 | | Grasses |

PLATEAU MINING
 STAR POINT
 Sagebrush Reference Area

Exposure: E

Slope: 3 deg

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
|--|------|------|------|------|------|------|------|
|--|------|------|------|------|------|------|------|

TREES & SHRUBS

| | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|
| <i>Artemisia tridentata</i> | 30.00 | 15.00 | 35.00 | 15.00 | 35.00 | 15.00 | 0.00 |
| <i>Gutierrezia sarothrae</i> | 0.00 | 0.00 | 10.00 | 5.00 | 5.00 | 10.00 | 25.00 |

FORBS

| | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|------|
| <i>Cryptantha sp.</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 |
| <i>Machaeranthera grindelioides</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Penstemon sp.</i> | 5.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |

GRASSES

| | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| <i>Agropyron cristatum</i> | 10.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 |
| <i>Bromus tectorum</i> | 5.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Elymus salinus</i> | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| <i>Stipa hymenoides</i> | 0.00 | 0.00 | 10.00 | 5.00 | 35.00 | 25.00 | 0.00 |

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 50.00 | 25.00 | 65.00 | 40.00 | 75.00 | 50.00 | 40.00 |
| Litter | 10.00 | 10.00 | 15.00 | 10.00 | 9.00 | 10.00 | 5.00 |
| Bareground | 35.00 | 60.00 | 15.00 | 45.00 | 15.00 | 35.00 | 50.00 |
| Rock | 5.00 | 5.00 | 5.00 | 5.00 | 1.00 | 5.00 | 5.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|
| Shrubs | 60.00 | 60.00 | 69.23 | 50.00 | 53.33 | 50.00 | 62.50 |
| Forbs | 10.00 | 0.00 | 7.69 | 0.00 | 0.00 | 0.00 | 12.50 |
| Grasses | 30.00 | 40.00 | 23.08 | 50.00 | 46.67 | 50.00 | 25.00 |

| 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|

| | | | | | | | | | |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 25.00 | 5.00 | 30.00 | 25.00 | 10.00 | 20.00 | 30.00 | 15.00 | 20.00 | 15.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 20.00 | 0.00 | 0.00 | 10.00 | 5.00 | 10.00 |

| | | | | | | | | | |
|------|------|-------|------|------|------|------|------|------|------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 45.00 | 35.00 | 20.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |
| 15.00 | | 0.00 | 0.00 | 35.00 | 25.00 | 10.00 | 5.00 | 10.00 | 35.00 |

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 45.00 | 50.00 | 75.00 | 50.00 | 65.00 | 70.00 | 55.00 | 40.00 | 35.00 | 60.00 |
| 5.00 | 19.00 | 5.00 | 9.00 | 14.00 | 19.00 | 5.00 | 14.00 | 14.00 | 24.00 |
| 45.00 | 30.00 | 15.00 | 40.00 | 20.00 | 10.00 | 35.00 | 45.00 | 50.00 | 15.00 |
| 5.00 | 1.00 | 5.00 | 1.00 | 1.00 | 1.00 | 5.00 | 1.00 | 1.00 | 1.00 |

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 66.67 | 10.00 | 40.00 | 50.00 | 46.15 | 28.57 | 54.55 | 62.50 | 71.43 | 41.67 |
| 0.00 | 0.00 | 13.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.33 | 90.00 | 46.67 | 50.00 | 53.85 | 71.43 | 45.45 | 37.50 | 28.57 | 58.33 |

PLATEAU MINING
 Starpoint
 Sagebrush Reference Area
 Exposure: E
 Slope: 3 deg
 Sample Date: 25-30 Sept 2006

| 18.00 | 19.00 | 20.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|-------|-------|-------------------------------------|
| <hr/> | | | | | | TREES & SHRUBS |
| 25.00 | 35.00 | 20.00 | 21.00 | 9.70 | 95.00 | <i>Artemisia tridentata</i> |
| 0.00 | 0.00 | 25.00 | 6.50 | 8.08 | 55.00 | <i>Gutierrezia sarothrae</i> |
| | | | | | | FORBS |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.09 | 5.00 | <i>Cryptantha sp.</i> |
| 0.00 | 0.00 | 0.00 | 0.50 | 2.18 | 5.00 | <i>Machaeranthera grindelioides</i> |
| 0.00 | 0.00 | 0.00 | 0.50 | 1.50 | 10.00 | <i>Penstemon sp.</i> |
| | | | | | | GRASSES |
| 0.00 | 0.00 | 0.00 | 1.75 | 3.63 | 20.00 | <i>Agropyron cristatum</i> |
| 0.00 | 5.00 | 25.00 | 4.00 | 7.84 | 30.00 | <i>Bromus tectorum</i> |
| 10.00 | 0.00 | 0.00 | 6.75 | 12.58 | 30.00 | <i>Elymus salinus</i> |
| 0.00 | 25.00 | 0.00 | 12.37 | 13.02 | 60.00 | <i>Stipa hymenoides</i> |
| <hr/> | | | | | | COVER |
| 35.00 | 65.00 | 70.00 | 53.00 | 14.27 | | Total Living Cover |
| 24.00 | 14.00 | 19.00 | 12.70 | 5.83 | | Litter |
| 40.00 | 20.00 | 10.00 | 31.50 | 15.01 | | Bareground |
| 1.00 | 1.00 | 1.00 | 2.80 | 1.99 | | Rock |
| <hr/> | | | | | | % COMPOSITION |
| 71.43 | 53.85 | 64.29 | 50.90 | 14.95 | | Shrubs |
| 0.00 | 0.00 | 0.00 | 2.90 | 4.95 | | Forbs |
| 28.57 | 46.15 | 35.71 | 46.20 | 16.70 | | Grasses |

PLATEAU MINING
 STAR POINT
 Mtn/Grass Reference Area

Exposure: NE

Slope: 37 deg

Sample Date: 25-30 Sept 2006

1.00 2.00 3.00 4.00 5.00 6.00 7.00

TREES & SHRUBS

| | | | | | | | |
|------------------------------------|------|------|-------|-------|-------|------|------|
| <i>Chrysothamnus viscidiflorus</i> | 0.00 | 0.00 | 15.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| <i>Eriogonum corymbosum</i> | 0.00 | 0.00 | 50.00 | 0.00 | 25.00 | 0.00 | 0.00 |

FORBS

| | | | | | | | |
|-----------------------------|------|------|------|------|------|------|------|
| <i>Achillea millefolium</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|-----------------------------|------|------|------|------|------|------|------|

GRASSES

| | | | | | | | |
|-----------------------|-------|-------|------|-------|-------|-------|-------|
| <i>Elymus salinus</i> | 65.00 | 70.00 | 0.00 | 50.00 | 45.00 | 55.00 | 70.00 |
|-----------------------|-------|-------|------|-------|-------|-------|-------|

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 65.00 | 70.00 | 65.00 | 65.00 | 70.00 | 55.00 | 70.00 |
| Litter | 25.00 | 5.00 | 5.00 | 20.00 | 20.00 | 15.00 | 20.00 |
| Bareground | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 10.00 | 5.00 |
| Rock | 5.00 | 20.00 | 25.00 | 10.00 | 5.00 | 20.00 | 5.00 |

% COMPOSITION

| | | | | | | | |
|---------|--------|--------|--------|-------|-------|--------|--------|
| Shrubs | 0.00 | 0.00 | 100.00 | 23.08 | 35.71 | 0.00 | 0.00 |
| Forbs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Grasses | 100.00 | 100.00 | 0.00 | 76.92 | 64.29 | 100.00 | 100.00 |

PLATEAU MINING
 Starpoint
 Mtn/Grass Reference Area
 Exposure: NE
 Slope: 37 deg
 Sample Date: 25-30 Sept 2006

| 8.00 | 9.00 | 10.00 | Mean | SDev | Freq | |
|--------|--------|-------|-------|-------|-------|------------------------------------|
| <hr/> | | | | | | TREES & SHRUBS |
| 0.00 | 0.00 | 5.00 | 3.50 | 5.94 | 30.00 | <i>Chrysothamnus viscidiflorus</i> |
| 0.00 | 0.00 | 55.00 | 13.00 | 21.12 | 30.00 | <i>Eriogonum corymbosum</i> |
| | | | | | | FORBS |
| 0.00 | 0.00 | 5.00 | 0.50 | 1.50 | 10.00 | <i>Achillea millefolium</i> |
| | | | | | | GRASSES |
| 65.00 | 60.00 | 0.00 | 48.00 | 25.22 | 80.00 | <i>Elymus salinus</i> |
| | | | | | | COVER |
| 65.00 | 60.00 | 65.00 | 65.00 | 4.47 | | Total Living Cover |
| 25.00 | 25.00 | 25.00 | 18.50 | 7.43 | | Litter |
| 5.00 | 5.00 | 5.00 | 5.50 | 1.50 | | Bareground |
| 5.00 | 10.00 | 5.00 | 11.00 | 7.35 | | Rock |
| | | | | | | % COMPOSITION |
| 0.00 | 0.00 | 92.31 | 25.11 | 37.45 | | Shrubs |
| 0.00 | 0.00 | 7.69 | 0.77 | 2.31 | | Forbs |
| 100.00 | 100.00 | 0.00 | 74.12 | 38.87 | | Grasses |

PLATEAU MINING
 STAR POINT
 Saltbush Reference Area

Exposure: E

Slope: 35-37 deg

Sample Date: 25-30 Sept 2006

| | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
|-------------------------------|-------|-------|-------|-------|------|-------|-------|
| TREES & SHRUBS | | | | | | | |
| <i>Artemisia nova</i> | 0.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex confertifolia</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Atriplex gardneri</i> | 15.00 | 25.00 | 25.00 | 0.00 | 0.00 | 20.00 | 40.00 |
| <i>Eriogonum corymbosum</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Pinus edulis</i> | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

FORBS

GRASSES

| | | | | | | | |
|-----------------------|-------|------|------|-------|-------|------|------|
| <i>Elymus salinus</i> | 20.00 | 0.00 | 0.00 | 15.00 | 15.00 | 0.00 | 0.00 |
|-----------------------|-------|------|------|-------|-------|------|------|

COVER

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Total Living Cover | 35.00 | 25.00 | 25.00 | 30.00 | 15.00 | 20.00 | 40.00 |
| Litter | 10.00 | 4.00 | 70.00 | 5.00 | 9.00 | 5.00 | 5.00 |
| Bareground | 50.00 | 70.00 | 4.00 | 60.00 | 75.00 | 70.00 | 50.00 |
| Rock | 5.00 | 1.00 | 1.00 | 5.00 | 1.00 | 5.00 | 5.00 |

% COMPOSITION

| | | | | | | | |
|---------|-------|--------|--------|-------|--------|--------|--------|
| Shrubs | 42.86 | 100.00 | 100.00 | 50.00 | 0.00 | 100.00 | 100.00 |
| Forbs | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Grasses | 57.14 | 0.00 | 0.00 | 50.00 | 100.00 | 0.00 | 0.00 |

| 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 |
| 0.00 | 0.00 | 0.00 | 0.00 | 12.00 | 0.00 | 0.00 | 5.00 | 10.00 | 10.00 |
| 0.00 | 0.00 | 0.00 | 13.00 | 13.00 | 10.00 | 15.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 20.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | |
|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| 30.00 | 5.00 | 30.00 | 12.00 | 0.00 | 0.00 | 15.00 | 15.00 | 10.00 | 20.00 |
|-------|------|-------|-------|------|------|-------|-------|-------|-------|

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30.00 | 25.00 | 35.00 | 25.00 | 25.00 | 10.00 | 30.00 | 20.00 | 25.00 | 30.00 |
| 10.00 | 5.00 | 5.00 | 10.00 | 5.00 | 4.00 | 5.00 | 5.00 | 10.00 | 5.00 |
| 10.00 | 45.00 | 20.00 | 40.00 | 65.00 | 85.00 | 60.00 | 50.00 | 45.00 | 60.00 |
| 50.00 | 25.00 | 40.00 | 25.00 | 5.00 | 1.00 | 5.00 | 25.00 | 20.00 | 5.00 |

| | | | | | | | | | |
|--------|-------|-------|-------|--------|--------|-------|-------|-------|-------|
| 0.00 | 80.00 | 14.29 | 52.00 | 100.00 | 100.00 | 50.00 | 25.00 | 60.00 | 33.33 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 20.00 | 85.71 | 48.00 | 0.00 | 0.00 | 50.00 | 75.00 | 40.00 | 66.67 |

PLATEAU MINING
 Starpoint
 Saltbush Reference Area
 Exposure: E
 Slope: 35-37 deg
 Sample Date: 25-30 Sept 2006

| 18.00 | 19.00 | 20.00 | Mean | SDev | Freq | |
|-------|-------|-------|-------|-------|-------|-------------------------------|
| 0.00 | 0.00 | 0.00 | 1.00 | 3.39 | 10.00 | TREES & SHRUBS |
| 0.00 | 0.00 | 0.00 | 1.85 | 3.88 | 20.00 | <i>Artemisia nova</i> |
| 10.00 | 15.00 | 35.00 | 11.80 | 12.05 | 60.00 | <i>Atriplex confertifolia</i> |
| 0.00 | 0.00 | 0.00 | 1.00 | 4.36 | 5.00 | <i>Atriplex gardneri</i> |
| 0.00 | 0.00 | 0.00 | 0.25 | 1.09 | 5.00 | <i>Eriogonum corymbosum</i> |
| | | | | | | <i>Pinus edulis</i> |

FORBS

| | | | | | | |
|------|------|------|------|-------|-------|-----------------------|
| 0.00 | 0.00 | 0.00 | 9.35 | 10.05 | 55.00 | GRASSES |
| | | | | | | <i>Elymus salinus</i> |

| | | | | | | |
|-------|-------|-------|-------|-------|--|--------------------|
| 10.00 | 15.00 | 35.00 | 25.25 | 8.14 | | COVER |
| 5.00 | 5.00 | 5.00 | 9.35 | 14.08 | | Total Living Cover |
| 80.00 | 75.00 | 55.00 | 53.45 | 21.51 | | Litter |
| 5.00 | 5.00 | 5.00 | 11.95 | 13.73 | | Bareground |
| | | | | | | Rock |

| | | | | | | |
|--------|--------|--------|-------|-------|--|---------------|
| 100.00 | 100.00 | 100.00 | 60.94 | 37.47 | | % COMPOSITION |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | Shrubs |
| 0.00 | 0.00 | 0.00 | 39.06 | 37.47 | | Forbs |
| | | | | | | Grasses |

Appendix 2

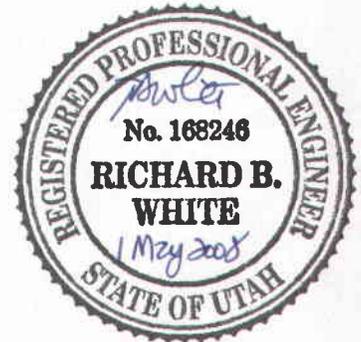
**Phase II Bond Release
Sediment Yield Calculations
Star Point Mine**

**Sediment Yield Calculations
Year Four Post-Reclamation Condition
Star Point Mine
Plateau Mining Corporation**

April 2008

submitted by

EarthFax Engineering, Inc.
7324 South Union Park Avenue
Midvale, Utah 84047



**Sediment Yield Calculations
Post-Reclamation Condition
Star Point Mine
Plateau Mining Corporation**

Summary

The Revised Universal Soil Loss Equation (RUSLE) was used to calculate sediment yields from the area of the Star Point Mine under both pre-disturbance and post-reclamation conditions. Details regarding this methodology and the associated references are provided on the following pages. Under the pre-disturbance condition, slopes were taken as 100 feet long. Deep gouging was used in reclaimed areas, thereby limiting the post-reclamation slope length to approximately 3 feet. The changes in sediment yields resulting from revegetation of the site were also accounted for by comparing plant growth in several plots in reclaimed areas to the growth in undisturbed reference areas. The following calculations indicate that, depending on the vegetative community, sediment yields for the reclaimed condition range from 0.2 to 0.7 ton/acre/year, while those from the same areas under the pre-mining condition range from 2.0 to 4.3 tons/acre/year. Hence, sediment yields are estimated to be less after reclamation than before the area was disturbed by mining.

Sediment Yield Calculation

| Vegetative Community | R | K | LS | C | P | A (t/ac/yr) |
|----------------------|----|------|-------|-------|---|-------------|
| Pre-Disturbance | | | | | | |
| Sagebrush | 18 | 0.15 | 21.63 | 0.061 | 1 | 3.6 |
| Mtn Grassland | 18 | 0.15 | 21.63 | 0.035 | 1 | 2.0 |
| Saltbush | 18 | 0.05 | 21.63 | 0.22 | 1 | 4.3 |
| Post-Reclamation | | | | | | |
| Sagebrush | 18 | 0.15 | 3.75 | 0.057 | 1 | 0.6 |
| Mtn Grassland | 18 | 0.15 | 3.75 | 0.067 | 1 | 0.7 |
| Saltbush | 18 | 0.05 | 3.75 | 0.052 | 1 | 0.2 |

Notes:

1. $A = R K L S C P$, where A is the annual sediment yield (tons/acre/year). This is the Revised Universal Soil Loss Equation (RUSLE). Each of the coefficients is explained below.
2. R = Rainfall-Runoff Erosivity Factor (unitless) = 18 from Map 7 (Israelsen et al., 1984). R is identical for both the pre-disturbed and post-reclamation conditions.
3. K = Soil Erodibility Factor (unitless) = 0.15 for Doney-Toze Families Complex, 0.05 for the Pathead extremely bouldery fine sandy loam, 0.05 for the Cabba family, and 0.05 for the Badland-Rubbleland-Rock outcrop complex as stated in the published NRCS soil survey for this area (Jensen and Borchert, 1988). As a conservative measure, the highest K value (0.15) was used, except for at the loadout area, where only the Badland-Rubbleland-Rock outcrop complex is present. Since onsite topsoil was redistributed during reclamation, this value is the same for both the pre-disturbance and post-reclamation conditions.
4. LS = Length-Slope Factor (unitless), taken from the following LS Calculation Table
5. C = Cover Management Factor (unitless), taken from the following Determination of C Factor
6. P = Support Practice Factor (unitless). Since during both the pre-disturbance and reclamation conditions the site is left undisturbed, this factor does not apply. Thus, it will be taken as 1.

References:

1. Israelsen, C. Earl, Joel E. Fletcher, Frank W. Haws, and Eugene K. Israelsen, 1984. *Erosion and Sedimentation in Utah: A Guide for Control*. Hydraulics and Hydrology Series UWRL/H-84/03. Utah Water Research Laboratory, College of Engineering, Utah State University, Logan, Utah.
2. Jensen, E.H. and J.W. Borchert, 1988. *Soil Survey of Carbon Area, Utah*. U.S. Natural Resources Conservation Service, Salt Lake City, Utah.

LS Calculation Table

| Location | s | l | m | LS |
|---|-------|-----|-----|-------|
| Pre-Disturbance (All Vegetative Communities) | 57.14 | 100 | 0.5 | 21.63 |
| Post-Reclamation (All Vegetative Communities) | 57.14 | 3 | 0.5 | 3.75 |

Notes:

1. s = slope angle (%). The steepest reclaimed slopes at the site (1.75H:1V) were used as a conservative measure. Since the site is pre-SMCRA, pre-disturbance topography was not available. The same slopes were used for both the pre- and post-reclamation conditions. This is considered conservative since reclamation slopes are often flatter than natural slopes at this site.
2. l = slope length (ft). This value is defined as the distance from the origin of overland flow to the point of deposition or channelized flow. Slope lengths rarely exceed 400 feet, and in this case, the presence of rocks, trees, and roads are conservatively estimated to limit the pre-disturbance slope length to 100 feet. Post-reclamation slope lengths are taken as 3 feet, which is the average distance from the top to the bottom of a deep gouge.
3. m = a factor in the LS equation which is 0.5 for slopes steeper than 5%.
4. $LS = ((65.41s^2/(s^2+10,000)) + 4.56s/(s^2+10,000)^{0.5} + 0.065) / (1/72.6)^m$ (Israelsen et al., 1984)

References:

1. Israelsen, C. Earl, Joel E. Fletcher, Frank W. Haws, and Eugene K. Israelsen, 1984. *Erosion and Sedimentation in Utah: A Guide for Control*. Hydraulics and Hydrology Series UWRL/H-84/03. Utah Water Research Laboratory, College of Engineering, Utah State University, Logan, Utah.

Determination of C Factor

The cover and management factor (C) was determined using tabulated values provided by Haan et al. (1994). The vegetative cover at the site was taken from Tables 4 through 39 of a recent vegetation monitoring report for the site performed by Mt. Nebo Scientific, Inc. (2007). These tables present the percentages of vegetative growth in both reference areas (pre-disturbance) and reclaimed areas for the three vegetative communities used to revegetate the site. The pertinent data within these tables are shown in the following Summary of Vegetation Monitoring Report table. The total ground cover at each area was taken as the sum of the percentages covered by trees, shrubs, forbs, and grasses. Note that litter was not included in the ground cover calculation, since its presence is implicit in the tabulations provided by Haan et al. (1994). The C values were determined as shown below.

| Vegetative Community | Reference Area | | | | | Reclamation Area | | | | |
|----------------------|-------------------|--------------------|---------|------------------|-------|-------------------|--------------------|---------|------------------|-------|
| | %Shrubs/ Trees | %Forbs/ Grasses | %Litter | %Ground Cover | C | %Shrubs/ Trees | %Forbs/ Grasses | %Litter | %Ground Cover | C |
| Sagebrush | 27.50 | 26.12 | 12.70 | 53.62 | 0.061 | 10.92 | 43.85 | 8.85 | 54.77 | 0.057 |
| Mtn Grassland | 16.50 | 48.50 | 18.50 | 65.00 | 0.035 | 4.10 | 47.16 | 8.91 | 51.26 | 0.067 |
| Saltbush | 15.90 | 9.35 | 9.35 | 25.25 | 0.22 | 25.50 | 29.00 | 8.00 | 54.50 | 0.052 |

References:

1. Haan, C.T., B.J. Barfield, and J.C. Hayes. 1994. *Design Hydrology and Sedimentology for Small Catchments*. Academic Press, San Diego, California.
2. Mt. Nebo Scientific, Inc., 2007, *Revegetation Monitoring at the Star Point Mine, Year 4, 2006*. prepared by Patrick Collins, Ph.D. for Plateau Mining Corporation.

Summary of Vegetation Monitoring Report

Sagebrush Area

| | Reclaimed A | Reclaimed B | Reclaimed C | Reclaimed D | Reclaimed H | Reclaimed Avg. | Reference |
|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-----------|
| Trees/Shubs | 10.93 | 11.2 | 12 | 3.34 | 17.14 | 10.92 | 27.5 |
| Forbs | 21.82 | 19.33 | 21.46 | 9.34 | 42.14 | 22.82 | 1.25 |
| Grasses | 16.04 | 15.2 | 19.53 | 43.67 | 10.72 | 21.03 | 24.87 |
| Forb+Grass | 37.86 | 34.53 | 40.99 | 53.01 | 52.86 | 43.85 | 26.12 |
| Total | 48.79 | 45.73 | 52.99 | 56.35 | 70 | 54.77 | 53.62 |
| Litter | 9.19 | 7.87 | 8.33 | 11 | 7.88 | 8.85 | 12.7 |

Mtn./Grass Area

| | Reclaimed E | Reclaimed F | Reclaimed G | Reclaimed Avg. | Reference |
|-------------|-------------|-------------|-------------|----------------|-----------|
| Trees/Shubs | 4.16 | 5.75 | 2.38 | 4.10 | 16.5 |
| Forbs | 12.55 | 15.75 | 18.27 | 15.52 | 0.5 |
| Grasses | 34.78 | 28.5 | 31.64 | 31.64 | 48 |
| Forb+Grass | 47.33 | 44.25 | 49.91 | 47.16 | 48.5 |
| Total | 51.49 | 50 | 52.29 | 51.26 | 65 |
| Litter | 8.35 | 9.25 | 9.13 | 8.91 | 18.5 |

Saltbush Area

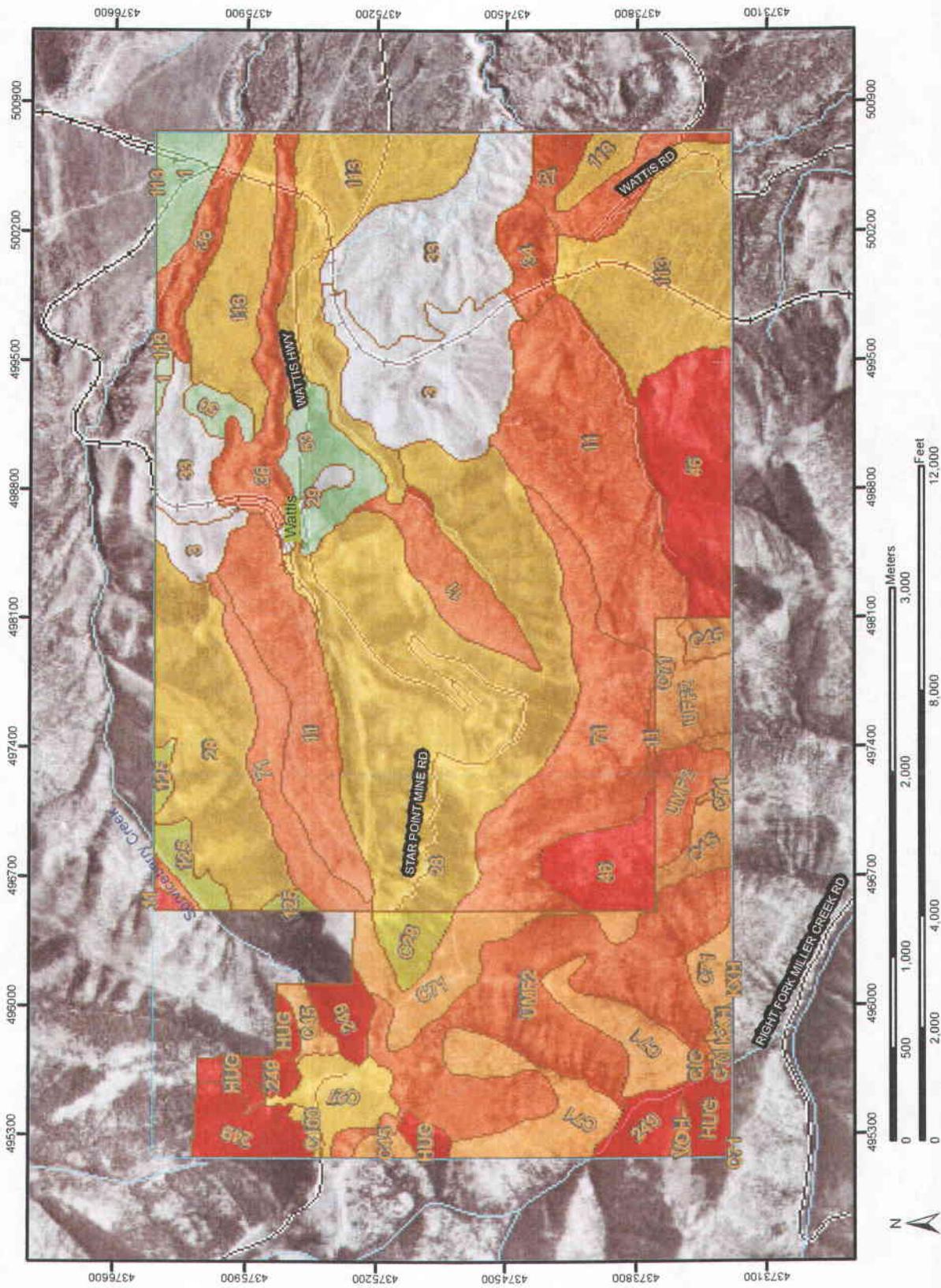
| | Reclaimed I | Reference |
|-------------|-------------|-----------|
| Trees/Shubs | 25.5 | 15.9 |
| Forbs | 7 | 0 |
| Grasses | 22 | 9.35 |
| Forb+Grass | 29 | 9.35 |
| Total | 54.5 | 25.25 |
| Litter | 8 | 9.35 |

Data is presented as percentages found in each reclaimed area plot (identified with letters A - I) and each reference plot (one for each vegetative community).

Reference

1. Mt. Nebo Scientific, Inc., 2007, Revegetation Monitoring at the Star Point Mine, Year 4, 2006. prepared by Patrick Collins, Ph.D. for Plateau Mining Corporation.

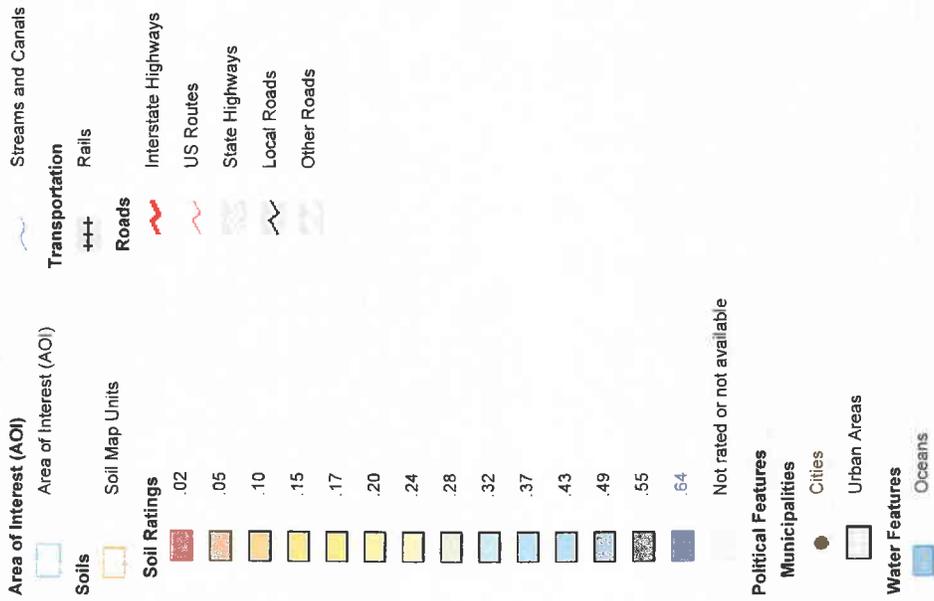
K Factor, Whole Soil-Carbon Area, Utah, Parts of Carbon and Emery Counties; and Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties



Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

MAP LEGEND



MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 12N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carbon Area, Utah, Parts of Carbon and Emery Counties
 Survey Area Data: Version 3, Dec 14, 2006

Soil Survey Area: Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
 Survey Area Data: Version 1, Sep 21, 2007

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 9/30/1997; 10/5/1997; 9/19/1998

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

K Factor, Whole Soil

| K Factor, Whole Soil— Summary by Map Unit — Carbon Area, Utah, Parts of Carbon and Emery Counties | | | | |
|---|---|--------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 1 | Atrac very fine sandy loam, 1 to 6 percent slopes | .28 | 51.5 | 1.2% |
| 3 | Badland-Rubbleland-Rock outcrop complex | | 181.4 | 4.2% |
| 11 | Cabba family, 40 to 70 percent slopes | .05 | 477.1 | 11.2% |
| 28 | Doney-Toze families complex | .15 | 767.4 | 18.0% |
| 29 | Dumps,mine | | 13.6 | 0.3% |
| 33 | Gerst-Badland-Rubbleland complex, 15 to 50 percent slopes | | 228.2 | 5.3% |
| 34 | Gerst-Badland-Rubbleland complex, 50 to 70 percent slopes | .05 | 37.7 | 0.9% |
| 36 | Gerst-Strych-Badland complex, 3 to 50 percent slopes | .05 | 137.2 | 3.2% |
| 37 | Gerst-Strych-Badland complex, 50 to 70 percent slopes | .05 | 65.5 | 1.5% |
| 46 | Guben-Pathead extremely stony loams | .02 | 210.3 | 4.9% |
| 50 | Haverdad loam, moist, 1 to 5 percent slopes | .28 | 17.3 | 0.4% |
| 53 | Hernandez family, moist, 1 to 6 percent slopes | .28 | 61.8 | 1.4% |
| 71 | Pathead extremely bouldery fine sandy loam, 40 to 70 percent slopes | .05 | 287.3 | 6.7% |
| 113 | Strych very stony loam, 3 to 15 percent slopes | .15 | 509.2 | 11.9% |
| 125 | Uinta-Toze families complex | .20 | 36.0 | 0.8% |

| K Factor, Whole Soil— Summary by Map Unit — Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties | | | | |
|--|--|--------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 249 | Kingmine-Northorn-Angostura complex, 30 to 80 percent slopes | .02 | 116.5 | 2.7% |

| K Factor, Whole Soil— Summary by Map Unit — Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties | | | | |
|--|---|--------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres In AOI | Percent of AOI |
| C27 | Doney-Modo complex, 8 to 40 percent slopes | .15 | 49.1 | 1.2% |
| C28 | Doney-Toze complex, 50 to 90 percent slopes | .17 | 28.5 | 0.7% |
| C45 | Tosca-Doney-Datino complex, 30 to 70 percent slopes | .10 | 75.0 | 1.8% |
| C71 | Pathead-Tosca complex, 40 to 70 percent slopes | .10 | 236.4 | 5.5% |
| C100 | Senchert fine sandy loam, 3 to 15 percent slopes | .15 | 5.6 | 0.1% |
| CIC | Shupert-Winetti complex, 1 to 8 percent slopes | .28 | 1.3 | 0.0% |
| HUG | Midfork-Comodore-Northorn complex, 40 to 70 percent slopes | .02 | 60.9 | 1.4% |
| KXH | Podo-Rock outcrop complex, 40 to 70 percent slopes | .10 | 6.0 | 0.1% |
| UFF2 | Wiggler-Podo complex, 20 to 50 percent slopes | .10 | 51.6 | 1.2% |
| UMF2 | Tosca-Minnimaud-Pathead complex, 12 to 50 percent slopes | .05 | 355.5 | 8.3% |
| VOH | Tosca-Rock outcrop-Paunsaugunt complex, 45 to 80 percent slopes | .05 | 5.3 | 0.1% |
| Totals for Area of Interest (AOI) | | | 4,271.5 | 100.0% |

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options: Surface Layer

Table 8B.2 C Factors for Permanent Pasture, Rangeland, Idle Land, and Grazed Woodlands (after Wischmeier and Smith, 1978)^a

| Vegetal canopy | | | Cover that contacts the surface Percentage ground cover | | | | | |
|---|------------------|-------------------|--|------|-------|-------|-------|--------|
| Type and height of raised canopy ^b | Canopy cover (%) | Type ^d | 0 | 20 | 40 | 60 | 80 | 95-100 |
| No appreciable canopy | | G | 0.45 | 0.20 | 0.10 | 0.042 | 0.013 | 0.003 |
| | | W | 0.45 | 0.24 | 0.15 | 0.090 | 0.043 | 0.011 |
| Canopy of tall weeds or short brush (0.5-m fall height) | 25 | G | 0.36 | 0.17 | 0.09 | 0.038 | 0.012 | 0.003 |
| | | W | 0.36 | 0.20 | 0.13 | 0.082 | 0.041 | 0.011 |
| | 50 | G | 0.26 | 0.13 | 0.07 | 0.035 | 0.012 | 0.003 |
| | | W | 0.26 | 0.16 | 0.11 | 0.075 | 0.039 | 0.011 |
| | 75 | G | 0.17 | 0.10 | 0.06 | 0.031 | 0.011 | 0.003 |
| | | W | 0.17 | 0.12 | 0.09 | 0.067 | 0.038 | 0.011 |
| Appreciable brush or bushes (2-m fall height) | 25 | G | 0.40 | 0.18 | 0.09 | 0.040 | 0.013 | 0.003 |
| | | W | 0.40 | 0.22 | 0.14 | 0.085 | 0.042 | 0.011 |
| | 50 | G | 0.34 | 0.16 | 0.085 | 0.038 | 0.012 | 0.003 |
| | | W | 0.34 | 0.19 | 0.13 | 0.081 | 0.041 | 0.011 |
| | 75 | G | 0.28 | 0.14 | 0.08 | 0.036 | 0.012 | 0.003 |
| | | W | 0.28 | 0.17 | 0.12 | 0.077 | 0.040 | 0.011 |
| Trees, but no appreciable low brush (4-m fall height) | 25 | G | 0.42 | 0.19 | 0.10 | 0.041 | 0.013 | 0.003 |
| | | W | 0.42 | 0.23 | 0.14 | 0.087 | 0.042 | 0.011 |
| | 50 | G | 0.39 | 0.18 | 0.09 | 0.040 | 0.013 | 0.003 |
| | | W | 0.39 | 0.21 | 0.14 | 0.085 | 0.042 | 0.011 |
| | 75 | G | 0.36 | 0.17 | 0.09 | 0.039 | 0.012 | 0.003 |
| | | W | 0.36 | 0.20 | 0.13 | 0.083 | 0.041 | 0.011 |

^aAll values shown assume: (1) random distribution of mulch or vegetation and (2) mulch of appreciable depth where it exists. Idle land refers to land with undisturbed profiles for at least a period of 3 consecutive years. Also to be used for burned forest land and forest land that has been harvested less than 3 years ago.

^bAverage fall height of waterdrops from canopy to soil surface in meters.

^cPortion of total surface area that would be hidden from view by canopy in a vertical projection (a bird's-eye view).

^dG, cover at surface is grass, grasslike plants, decaying compacted duff, or litter at least 2 in. deep. W, cover at surface is mostly broadleaf herbaceous plants (as weeds with little lateral root network near the surface) and/or undecayed residue.

Reference

Barfield, B.J., R.C. Werner, and C.T. Haan, 1983. *Applied Hydrology and Sedimentology for Disturbed Areas*. Oklahoma Technical Press, Stillwater, Oklahoma.

Appendix 3

**Phase II Bond Release
Public Notice
Star Point Mine**

Public Notice
Application for Phase II Bond Release
Star Point Mine
Plateau Mining Corporation
Permit C/007/006, Approved 01/28/2007
Carbon County, Utah

Notice is hereby given that Plateau Mining Corporation, P.O. Box 30, 847 Northwest Highway 191, Helper, Utah 84526, a subsidiary of Foundation Coal Corporation, 999 Corporate Blvd., Linthicum Heights, MD 21090, has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining pursuant to R645-301-880 for Phase II bond release for the Star Point Mine, Permit C/007/006. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

The reclamation of the Star Point mine began in 2000 and was completed in 2002. Phase I bond release for the 95.3 acres of disturbed land was approved in October of 2004.

In accordance with the provision of R645-301-880, of the State of Utah R645 Coal Mining Rules, notice is hereby given that Plateau Mining Corporation is applying for partial release of the performance bond posted for this property. The surety bond posted for the Star Point Mine is \$3,118,400; Plateau Mining Corporation is seeking release of \$1,937,200 which will reduce the bond to \$1,181,200.

The portion of the permit area that is affected is located in Carbon County, Utah as follows:

Township 15 South, Range 7 East, SLB&M

Section 12: Portion of the NE1/4NW1/4

Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

The Utah Division of Oil, Gas and Mining will now evaluate the proposal to determine whether it meets all the criteria of the Permanent Program Performance Standards according to the requirements of the Utah Coal Mining Rules.

Written comments, objections and requests for public hearings or informal conferences on this proposal may be submitted to:

**Utah Coal Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801**

Closing date for submission of such comments, objections and requests for public hearing or information conference on the proposal must be submitted by June 06, 2008.

Published in the Sun Advocate April 15, 22, 29 and May 6, 2008.

Appendix 4

**Phase II Bond Release
Landowner and Government Agency Letters
Star Point Mine**

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. Ted Farmer
Area Field Office Manager
MSHA
215 East Main Street
Price, Utah 84501

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Farmer:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

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An affiliate of
FOUNDATION COAL

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. Eric Larson
Regional Supervisor
Utah Division of Wildlife Resources
319 North Carbonville Road, Suite A
Price, Utah 84501

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Larson:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

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FOUNDATION COAL

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. James Fulton
Office of Surface Mining
P.O. Box 46667
Denver, Colorado 80201-6667

Re: **Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah**

Dear Mr. Fulton:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

1

An affiliate of
FOUNDATION COAL

Phone: 435.472.4737 Fax: 435.472.4782 Mobile: 435.650.2951 Email: dware@foundationcoal.com

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. Howard Sargent
Forest Supervisor
Manti-La Sal National Forest
599 West Price River Road
Price, Utah 84501

Re: **Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah**

Dear Mr. Sargent:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

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FOUNDATION COAL

Phone: 435.472.4737 Fax: 435.472.4782 Mobile: 435.650.2951 Email: dware@foundationcoal.com

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4
Section 10: Portion of the S1/2 North of County Road 290
Section 15: Portion of the NE1/4NE1/4
Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. James Kohler
Bureau of Land Management
Solid Minerals Group Mgr.
440 West 200 South, Suite 500
Salt Lake City, Utah 84145-0155

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Kohler:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Section 12: Portion of the NE1/4NW1/4

Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

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An affiliate of
FOUNDATION COAL

Phone: 435.472.4737 Fax: 435.472.4782 Mobile: 435.650.2951 Email: dware@foundationcoal.com

- Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4**
- Section 10: Portion of the S1/2 North of County Road 290**
- Section 15: Portion of the NE1/4NE1/4**
- Section 16: Portion of the N1/2; SE1/4**

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. William D. Krompel
Carbon County Commission
120 East Main Street
Price, Utah 84501

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Krompel:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 7 East, SLB&M

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. Kevin S. Carter
Director
School and Institutional Trust Land Administration
675 East 500 South, Suite 500
Salt Lake City, Utah 84102-2818

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Carter:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 7 East, SLB&M

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Township 15 South, Range 8 East, SLB&M

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Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

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An affiliate of
FOUNDATION COAL

Phone: 435.472.4737 Fax: 435.472.4782 Mobile: 435.650.2951 Email: dware@foundationcoal.com

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

PLATEAU MINING CORPORATION

P.O. Box 30
Helper, UT 84526

Dennis N. Ware
Controller and
Administrative Manager

April 7, 2008

Mr. Randy Scott
General Manager
Sunnyside Cogeneration Associates
#1 Power Plant Road
Sunnyside, Utah 84539

Re: Notification of Application for Phase II Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Carbon County, Utah

Dear Mr. Scott:

Plateau Mining Corporation has completed Phase II of the approved reclamation plan for the Star Point Mine. This is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan.

In accordance with the provisions of R645-301-880 of the State of Utah R645 Coal Mining Rules, this letter will serve as notification that Plateau Mining Corporation intends to file an application with the Utah Division of Oil, Gas and Mining for partial release of the performance bond posted for this operation.

The surety bond posted for the Star Point Mine is \$3,118,400 from which Plateau Mining Corporation is seeking release of \$1,937,200. The Phase II bond release applies to 95.3 acres of disturbed land, including the Corner Canyon and Mudwater Fan sites. This bond release application is based on meeting the vegetation and water quality requirements for Phase II reclamation in accordance with the approved reclamation plan pursuant to the Utah Coal Program Regulations.

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Township 15 South, Range 8 East, SLB&M

Section 8: Portion of the SW1/4NW1/4

Section 9: Portion of the SE1/4SE1/4; SW1/4SW1/4

1

An affiliate of
FOUNDATION COAL

Section 10: Portion of the S1/2 North of County Road 290

Section 15: Portion of the NE1/4NE1/4

Section 16: Portion of the N1/2; SE1/4

The permit area is shown on the Wattis U.S. Geological Survey 7.5-minute map.

Comments concerning Phase II bond release from the legal or equitable owner of record of the surface areas to be affected and from the Federal, Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation should be mailed to: Plateau Mining Corporation, Attention: Dennis N. Ware, PO Box 30, Helper, Utah 84526.

If you have any questions or need additional information, please do not hesitate to contact me at (435) 472-4737.

Sincerely,

Dennis N. Ware
Controller and Administrative Manager

Env: Star Point, Permit Actions, Star Point Phase II

Appendix 5

**Phase II Bond Release
Forest Service Letter
Star Point Mine**



United States
Department of
Agriculture

Forest
Service

Manti-La Sal
National Forest

Supervisor's Office
599 West Price River Drive
Price, UT 84501
Phone # (435) 637-2817
Fax # (435) 637-4940

File Code: 2820-4
Date: July 27, 2004

RECEIVED
JUL 29 2004

DIV. OF OIL, GAS & MINING

*Jeaning
C/007/0006
Cory P. Am*

Mary Ann Wright
Associate Director
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84501

Dear Ms. Wright:

We concur that reclamation of the Corner and Mudwater Breakouts and the Vent hole on Gentry Mountain for the Plateau Mining Company Starpoint Mine has been completed satisfactorily, consistent with Phase I bond release criteria. Additionally, water-monitoring wells on Gentry Mountain have been plugged and reclaimed, however, these sites need to be monitored until re-vegetation has been determined to be in conformance with established ground cover standards.

As previously reported to your staff, several subsidence cracks within the Starpoint Mine Permit Area on Castle Valley Ridge pose a hazard to the public and wildlife. Reclamation of these cracks must be completed before we can concur with additional phases of bond release.

If you have any questions, please contact Tom Lloyd (435-636-3596) or Carter Reed (435-636-3547).

Sincerely,

Alice B. Carlton

ALICE B. CARLTON
Forest Supervisor

cc:
D-2/3



Appendix 6

**Phase II Bond Release
Reclamation Certification
Star Point Mine**

Plateau Mining Corporation
Star Point Mine
C/007/006

Phase II Bond Release on 95.3 acres of disturbed land at the
Star Point Mine

I hereby certify to the best of my information and belief all the information contained in this request for Phase II Bond Release for Plateau Mining Corporation's Star Point Mine is true and correct to the best of my information and belief, and that Plateau Mining Corporation has completed all applicable reclamation activities in accordance with the requirements of the Act, the regulatory program, and the approved reclamation plan as required for Phase II bond release at the Star Point Mine. This reclamation includes successful revegetation on the reclaimed land and meeting the water quality requirements pursuant to the Utah Coal Program Regulations and that the reclaimed land is not contributing suspended solids to the stream flow or runoff outside the permit area in excess of the requirements set by UCA 40-10-17(j) of the Act.

Dennis N. Wark [Signature] Controller 04-14-08
Print Name Signature, Position, Date

Subscribed and sworn to before me this 14 day of April, 2008

Notary Public Connie Jensen

My Commission Expires: April 15, 2009

Attest: State of Utah

County of Emery



Appendix 7

**Phase II Bond Release
Bond Release Calculation
Star Point Mine**

**PLATEAU MINING CORPORATION
 STAR POINT MINE C/007/006
 PHASE II BOND RELEASE CALCULATION**

| SUMMARY OF BOND COSTS | <u>Bond Before Phase I Release</u> | <u>Cost of Re-Vegetation</u> |
|---|---|---|
| Direct Costs | | |
| Demolition | \$1,715,253.00 | |
| Backfilling and Grading | \$2,670,828.00 | |
| Revegetation | \$783,322.00 | \$783,322.00 |
| Total Direct Costs | \$5,169,403.00 | \$783,322.00 |
| Indirect Costs | | |
| Startup @ 10.0% | \$516,940.30 | \$78,332.00 |
| Contingency @ 10.0% | \$516,940.30 | \$78,332.00 |
| Engineering Redesign @ 5.0% | \$258,470.15 | \$39,166.00 |
| Project Management Fee @ 5.0% | \$258,470.15 | \$39,166.00 |
| Main Office Expense @5.0% | \$258,470.15 | \$39,166.00 |
| Total Indirect Costs | \$1,809,291.05 | \$274,162.00 |
| Total Reclamation Costs | \$6,978,694.05 | \$1,057,484.00 |
| Escalation | \$817,422.11 | \$123,864.00 |
| Reclamation Cost 2007 | \$7,796,116.16 | \$1,181,348.00 |
| Bond Amount (nearest \$1,000) | <u>\$7,796,000.00</u> | <u>\$1,181,000.00</u> |
| <u>Summary Bond Data</u> | | |
| Bond before Phase I Bond Release | \$7,796,000.00 | |
| Phase I Bond Release (October 2004) | <u>-\$4,677,600.00</u> | |
| Current Bond before Phase II Bond Release | \$3,118,400.00 | |
| Phase II Bond Release | <u>-\$1,937,400.00</u> | |
| Bond after Phase II Bond Release | <u>\$1,181,000.00</u> | |