



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WATER RIGHTS

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Robert L. Morgan  
State Engineer

1594 West North Temple, Suite 220  
Box 146300  
Salt Lake City, Utah 84114-6300  
801-538-7240  
801-538-7467 (Fax)

September 5, 1997

RE: Stream Channel Alteration No. 97-91-12SA  
Jewkes Creek  
Horizon Coal Corporation

*Route to Danon*  
*then file*  
*ACT/007/020 #12*

Attached is a copy of an application to Alter a Natural Stream No. 97-91-12SA. Your comments are requested so we can evaluate any impacts caused by the project.

We are requesting that all comments be returned to me at our office prior to **September 25, 1997**. If we do not receive comments by that date, we will assume you have no input on the proposal outlined in the application.

If you have any questions or comments, feel free to contact Greg Mladenka at 538-7375.

Sincerely,

*Judy Mattson*  
for Greg Mladenka  
Stream Alteration Specialist

GM/jm

- pc: Bob Mairley - EPA
- Mike Schwinn - Corps of Engineers
- Field Supervisor - U. S. Fish & Wildlife
- Mark Page - Regional Engineer
- Bill Bates - Regional Wildlife Habitat Manager
- Bill Bradwisch - Aquatic Habitat Coordinator
- Rick Summers - Department of Environmental Quality, Water Quality Div.
- Ed Storey - State Lands & Forestry
- Carolyn Wright - State Planning & Coordinator's Office
- Terry Green - State Parks & Recreation
- Jim Dykmann - State Office of Historic Preservation
- W. D. Robinson - Department of Agriculture, Env. Quality Section
- Nancy Barr - Comprehensive Emergency Management
- Hidden Splendor Resources - Adjacent Property Owner
- Division of Oil, Gas, & Mining



RECEIVED

SEP 03 1997

# JOINT PERMIT APPLICATION FORM

WATER RIGHTS

SALT LAKE

U. S. ARMY CORPS OF ENGINEERS - FOR SECTIONS 404 AND 401  
UTAH STATE ENGINEER'S OFFICE - FOR NATURAL STREAM CHANNELS

RECEIVED

91-Area

Application Number \_\_\_\_\_ / \_\_\_\_\_  
(Assigned by:)

97-91-12

AUG 22 1997

Corps

State Engineer

|   |                                 |  |
|---|---------------------------------|--|
| Applicant's Name (Last, First M.I.)<br>Horizon Coal Corporation | Authorized Agent<br>Mike Gipson | Telephone Number and Area Code<br>(801) 472-3994 |
|---|---------------------------------|--|

Applicant's Address (Street, RFD, Box Number, City, State, Zip)  
P.O. Box 599, Helper, Utah 84526

### PROJECT LOCATION

|   |               |                 |             |                              |
|---|---------------|-----------------|-------------|------------------------------|
| Quarter Section(s)<br>NE1/4 SE1/4 SW1/4 | Section<br>17 | Township<br>13S | Range<br>8E | Base & Meridian<br>Salt Lake |
|---|---------------|-----------------|-------------|------------------------------|

|                  |   |   |
|------------------|---|---|
| County<br>Carbon | Watercourse to be altered<br>Jewkes Creek | Check one: <input type="checkbox"/> Within city limits <input checked="" type="checkbox"/> Outside city limits<br>List town or nearest town: Helper, Utah |
|------------------|---|---|

Project location or address:  
Jewkes Canyon, adjacent to Consumer's Canyon - 14 miles northwest of Price, Utah

Brief description of project:  
This channel alteration is an extension of Stream Alteration Permit 97-91-06SA. The channel will be extended approximately 300 feet upstream (northward).

Purpose (justification) of project:  
The current channel is undefined due to years of movement by many persons and companies including, logging, mining, and ranchers. The channel was most recently realigned by a week of unusually heavy precipitation. This project will help with the current erosion and sediment control problems.

Is this a single and complete project or is it part of a larger project, continuing project, or other related activities? If so, please describe the larger project or other related activities.  
This project has been determined to be a continuation of Permit 97-91-06SA.

If project includes the discharge of dredged or fill material:  
N/A

Cubic yards of material:

Acreage or square footage of waters of the United States, including wetlands, affected by the project:

Source and type of fill material:

Alternatives (other ways to accomplish the project purpose):

The alternative would be to leave the channel(s) in the current condition.

Names and addresses of adjacent property owners or other individuals who may be affected by this project:

Hidden Splendor Resources, 50 West Liberty Street, Suite 880, Reno, NV 89501  
owns the property upon which this project is proposed.

List other authorizations required by Federal, state or local governments (i.e.; National Flood Insurance Program), and the status of those authorizations.

Estimated starting date of project

August 1997

Estimated completion date

September 1997

(If project has already been partially or totally completed, indicate date of work. Indicate existing work on drawings).

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or am acting as the duly authorized agent of the applicant.

Signature of applicant

Date

*Mike St. John*

*8/22/97*

I hereby certify that \_\_\_\_\_ is acting as my agent for this project.

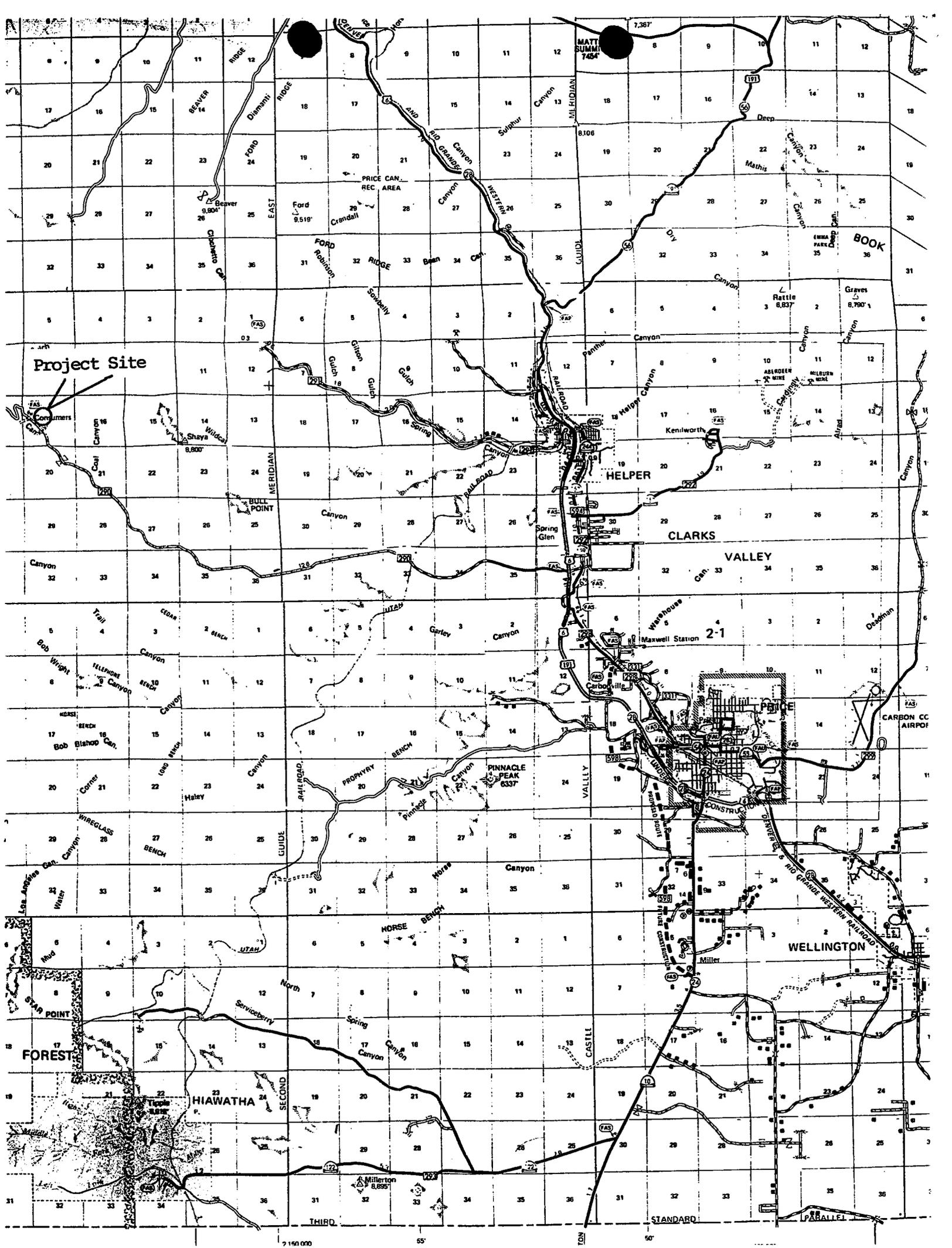
Agent's address and telephone number

## INSTRUCTIONS

Applications which do not include the following will not be processed.

For a complete application, you **MUST** include the following on 8 1/2 by 11 paper (for large projects, multiple sheets with a key may be used). Clear, hand-drawn plans approximately to scale are acceptable.

1. An accurate location map (USGS quadrangle map preferred)
2. A plan view of the proposed activity (as seen from above) including dimensions of work.
3. A cross-section view of the proposed activity (may use typical cross-section for large projects) including dimensions.
4. For projects which include wetlands, an accurate wetland delineation must be prepared in accordance with the current method required by the Corps.



Project Site

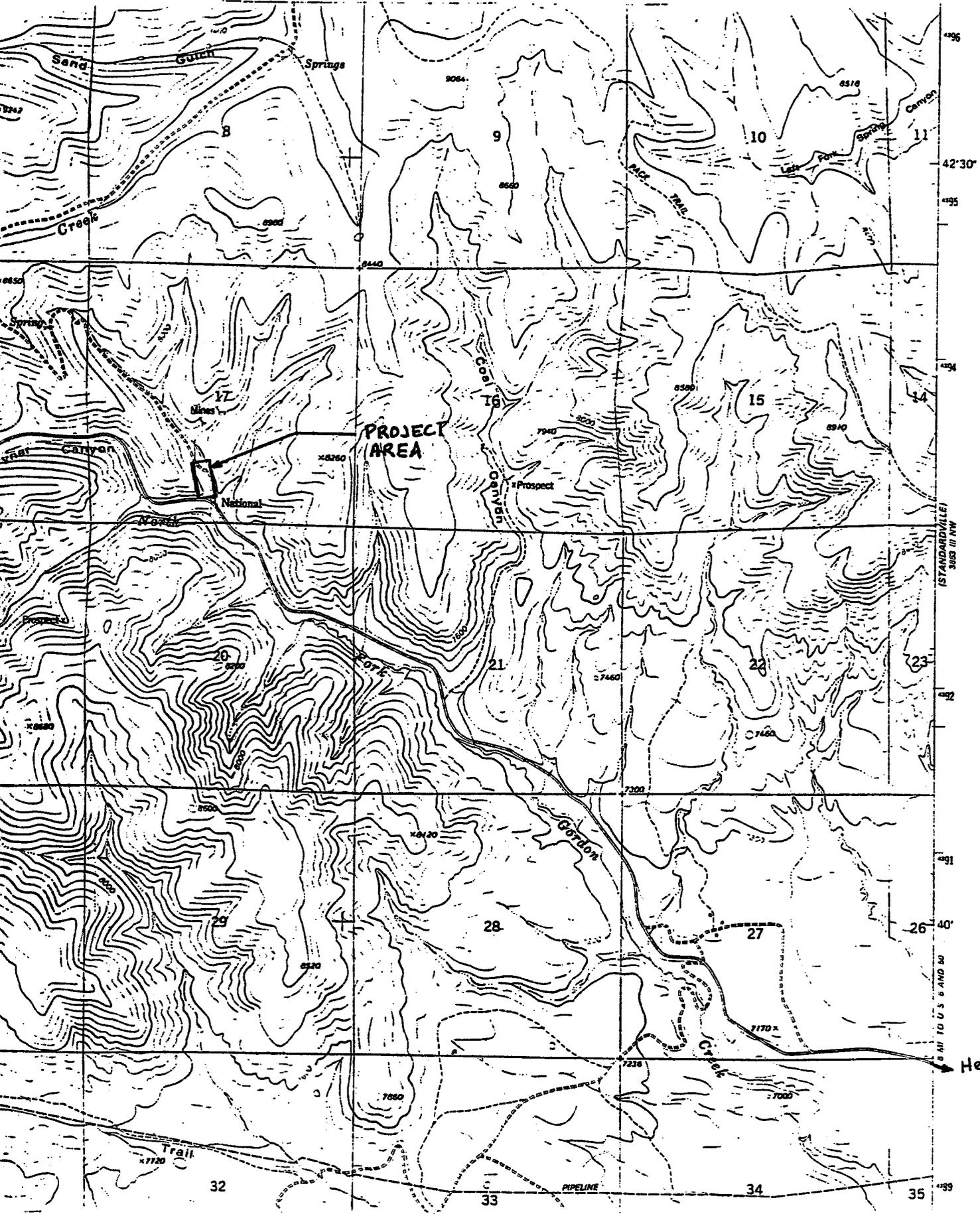
HELPER

CLARKS VALLEY

WELLINGTON

FOREST

HIAWATHA

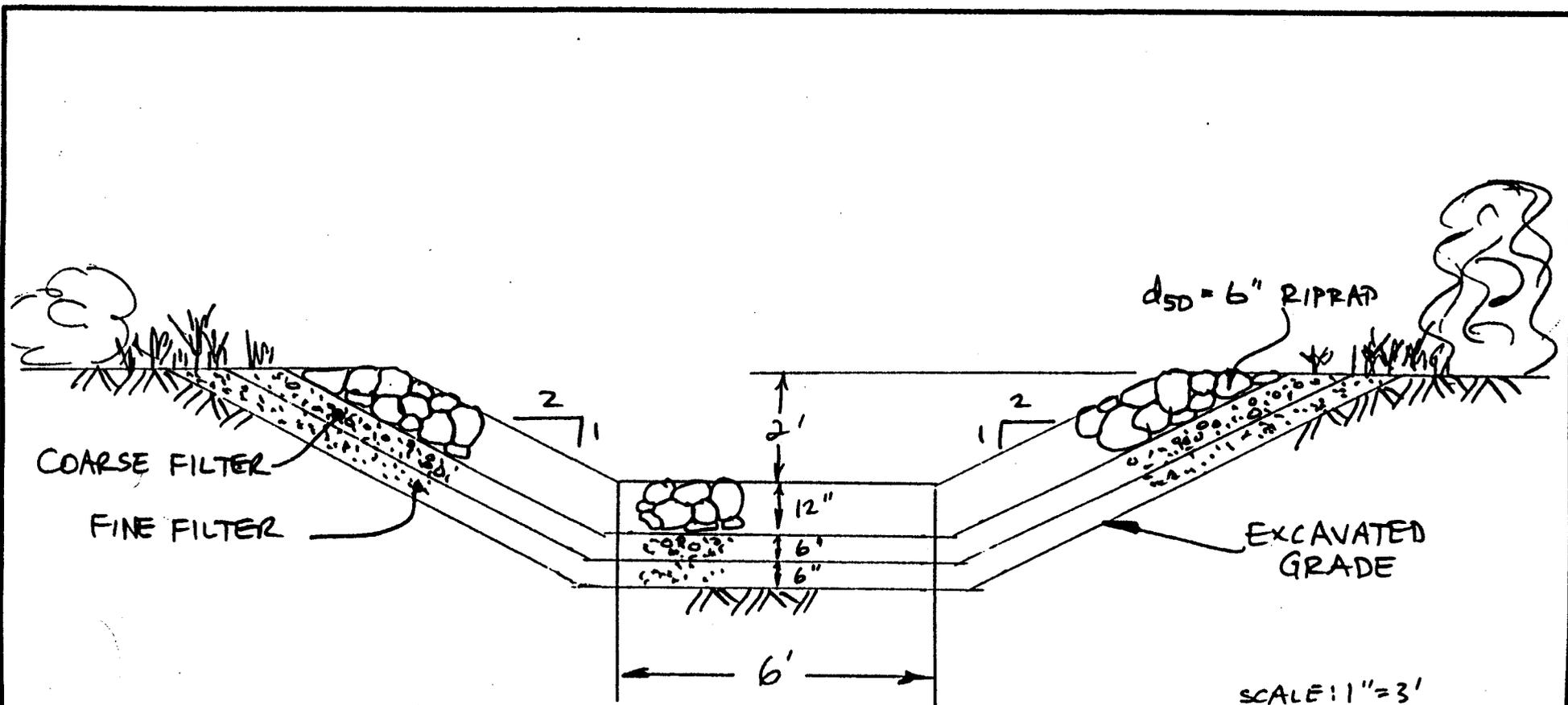


42°30'  
42°35'  
43°00'  
3683 FT. (STANDARDVILLE)  
3685 FT. NW  
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HELPER,  
UTAH

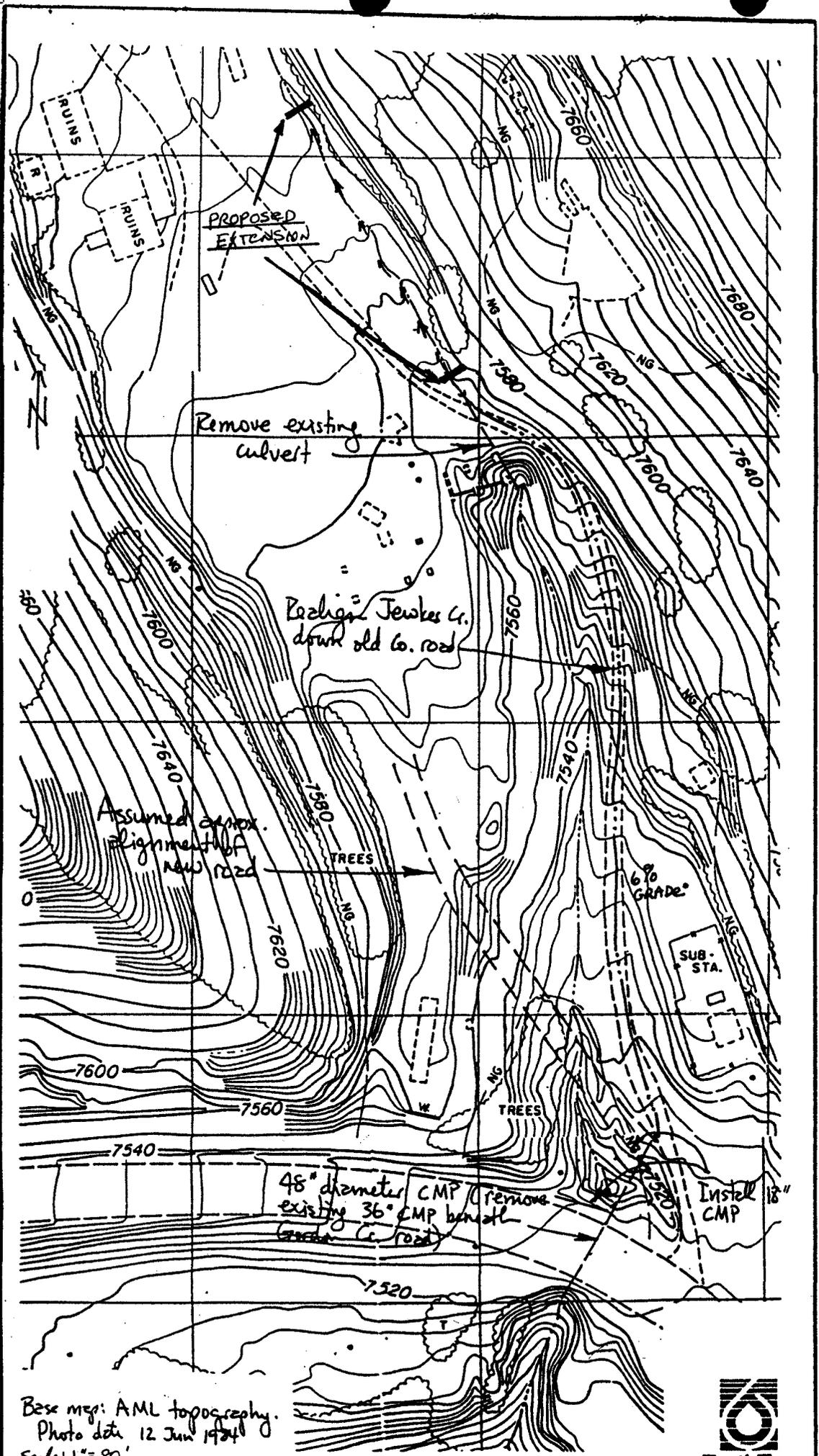
T135, R8E, SEC. 17

JUMP CREEK  
75 MILES



TYPICAL CROSS SECTION  
 JEWKES CR. REALIGNMENT

FIGURE 2. CHANNEL CROSS SECTION



Base map: AML topography.  
 Photo date: 12 Jun 1974  
 Scale: 1" = 80'



**TABLE 1**

**Revegetation Seed Mix**

| <b>SPECIES</b>                                 | <b>PLANT/ACRE</b> |
|--|-------------------|
| <b><u>CONTAINERIZED/ROOT CUTTING STOCK</u></b> |                   |
| Wood Rose ( <i>Rosa woodsii</i> )              | 300               |
| Willow ( <i>Salix</i> )                        | 1,100             |
| Nebraska Sedge ( <i>Carex nevrascensis</i> )   | 200               |
| Beaked Sedge ( <i>Carex rostrata</i> )         | 200               |
| <b>TOTAL</b>                                   | <b>1,800</b>      |

**POUNDS/PLS PER ACRE**

| <b><u>GRASSES</u></b>                                  |             |
|--|-------------|
| Streamband Wheatgrass ( <i>Agropyron riparium</i> )    | 8.0         |
| Bluebunch Wheatgrass ( <i>Agropyron spicatum</i> )     | 4.0         |
| Slender Wheatgrass ( <i>Agropyron trachycaulum</i> )   | 8.0         |
| Pubescent Wheatgrass ( <i>Agropyron trichophorum</i> ) | 6.0         |
| Indian Ricegrass ( <i>Oryzopsis hymenoides</i> )       | 4.0         |
| Idaho Fescue ( <i>Festica idahoensis</i> )             | 4.0         |
| <b>TOTAL</b>   | <b>34.0</b> |

**Planting Locations:**

Willow and Wood Rose  
Sedges and Grasses

Channel banks  
Channel banks, inslopes, and bottom

## **DESIGN OF JEWKES CREEK CHANNEL REALIGNMENT**

### **DESIGN METHODOLOGY**

The realigned stream channel and associated structures were designed to safely convey the peak flow resulting from the 100-year, 6-hour precipitation event. Peak flows were calculated using the curve-number methodology of the U.S. Soil Conservation Service (1972). A computer program developed by Hawkins and Marshall (1979) was used for this calculation.

Channel hydraulics were evaluated using FlowMaster (Haestad Methods, 1996). Required riprap sizing was determined using procedures presented by Searcy (1967). Culvert sizing was evaluated using nomographs prepared by Herr and Bossy (1965).

### **RESULTS**

Calculations supporting the design of the realignment are on file with EarthFax Engineering, Inc. in Midvale, Utah. These calculations can be provided if needed.

The realigned portion of Jewkes Creek will have a bottom width of 6 feet and side slopes of 2H:1V (see Figure 2). The channel will be lined with riprap with a median diameter of 6 inches. This riprap will be installed to a depth of 12 inches, with two 6-inch thick filter layers underlying the riprap. The upper filter blanket will consist of 1-inch minus material (similar to the standard Utah Department of Transportation 1-inch mix). The lower layer of filter material will consist of very-fine to medium-grained sand. The purpose of the filter blankets will be to prevent piping of the soil beneath the riprap.