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3.1 SKYLINE MINING OPERATION PLAN

This section presents, in detail, the rationale underlying the planned system of mine operation and design; coal seam development; determination of recoverable coal reserves; and mitigation of the effects of adverse geological conditions which could reduce the total amount of maximum economically recoverable coal reserves.

The Permittee feels that the mine design and method of coal extraction is the most efficient and productive mine plan consistent with the presently known characteristics of the Skyline area. To assure future efficiency and productivity, the Permittee will re-evaluate by 1991 the state-of-the-art technology in coal development to determine the feasibility of greater coal recovery during mining of thick coal. Resubmittal of the permit for renewal, presently scheduled in five years from approval of this application, will document the re-evaluation results.

3.1.1 Projecting Mine Development

The following investigative processes have been incorporated into the mining plan to ensure maximum coal reserve recovery.

- Engineering/geotechnical studies to aid in the evaluation and determination of portal sites, portal site specifications, and method of access to the individual seams.

- Computer-enhanced seismic surveys for fault identification and structural interpretation.

- Geological interpretation of photolinears to identify possible fault zones.

- Electro-telluric surveys to determine coal seam thickness and depth and aid in prediction of fault displacement.

- Premining analysis of interseam strata to determine site-specific thickness, stratigraphical and chemical characteristics. In establishing the extracting limitation based on coal seam thickness, both conservation of the coal resource and the economy of operation were considered.

- Mining methods involving both longwall and room and pillar extraction have been considered to achieve the maximum safe and economic recovery of the coal resources.

3.1.2 Mine Development Plan

The selected mine portal sites for the Upper O'Conner and Lower O'Conner "A" seams are located at outcrops of coal of mineable thickness.

The outcrops of the Upper O'Conner and Lower O'Conner "A" seams allow access to the two seams through drift entries. This selection of portal location is additionally enhanced by its reasonable proximity to railroad transportation facilities available in Pleasant Valley and the availability of at least some relatively flat acreage adjacent to the outcrop. The Lower O'Conner "B" seam will be reached via underground rock slopes from entries in the Upper O'Conner or Lower O'Conner "A" seams.

Five portals were used at Mine No. 3 drift entry location for the intake of air, the transportation of mining crews and materials, and exhaust air. One additional entry portal in Mine No. 3 is used for the conveyance of coal from the mine. Mine No. 1 has four portals.

The Upper O'Connor seam also utilizes a breakout to improve the ventilation. The Breakout is on a south facing slope in a side canyon of the South Fork of Eccles Creek (see map no. 3.2.11-1). No exhaust fans or permanent activity is planned for this area.

The size of portals vary to conform to the mineable height of the Upper O'Connor seam and the Lower O'Connor "A" seam.

A series of parallel underground openings called entries, separated by blocks of coal providing support, called pillars, are driven from the portal location and are called "main entries", or "mains". These entries are comparable to the main avenues of a city, and allow access for the provision of power, piping, haulage, ventilation, and support services. The design of the mains and the layout of the mines for the Skyline project have been engineered after careful review of the many conditions that can affect the mining operations.

A large number of parallel headings has been determined necessary to maintain air velocities within required acceptable limits (usually less than 800 ft/min. for the 4-6 tons of air required to be circulated through the mine for every ton of coal mined). The final number of developed entries will be based on the requirements of the mine area to be accessed.

Since the Permittee considers five feet to be the minimum seam height which can be economically extracted due to machinery limitation and coal quality, maps show mining areas which are at this time predicted to be greater than five feet in height and have more than 30 feet of interburden to the next mineable seam. As new drill hole data, seismic studies, actual mining conditions, etc., become available, the geologic structure maps will change to reflect this new information. In addition, the mine projections will be modified to incorporate this new information. Further advances in technology may also cause the mine projections to be modified.

The irregular areal extent of the coal seams has been considered in mine planning in order to extract coal in blocks which are not overlain by a successively higher coal seam. This procedure has made it possible to accelerate the development process of the Lower O'Connor "A" seam. Portals were constructed for the Upper O'Connor seam in 1982. Main and submain development mining of this seam began in late 1986. The actual mining of the Lower O'Connor "B" seam will commence about six years after the start of mining in the Upper O'Connor seam.

The sequence of extraction has been planned to allow each panel in a successively lower seam to be extracted at least two years later than the panel above it. This elapsed time should ensure that upper strata have had time to stabilize prior to lower seam mining. This time period may be reduced if actual mining conditions show adequate stabilization occurs sooner. Efforts have also been made to sequence panel extraction so that the natural dip of the seams will facilitate water drainage in a manner which will not adversely affect the mines below or personnel safety.

Development of mine layout relative to sizing and placement of barrier pillars, chain pillars, shafts, mains and submains has been carefully planned so as to minimize the impact of encountered faults and other adverse geological features. The pillars, barriers and panels have been superimposed in the mine design to ensure maximum structural integrity of the overlying seam strata throughout the operating and postmining periods.

Specific efforts have been made to confine identified fault zones to barrier areas and to cross fault zones at as few places as practicable.

In summary, the major factors involved in mine development are:

1. The number of entries are selected to support the air requirements as determined by the targeted production rates, types of equipment, number of panels being worked at one time and sequence of extraction.

2. The barriers have been located to mitigate potential fault influences and have been provided to protect mains, bleeders, worked out panels and property boundaries as required by law.

3. The layout has been carefully planned and sequenced to achieve effective multiple seam mining.

4. The sequence of extraction has been arranged to best utilize the non-mineable areas in the three seams such that uninterrupted mining can continue in all of the three seams.

5. The extraction sequence of successively lower panels is arranged to enable the rock strata to stabilize and to ensure safety of extraction of panels in sequentially lower coal seams.

Entry Development and Specifications

The main entries, driven from the coal outcrops in Eccles Canyon, comprise the principal coal haulage, personnel access, material routes and ventilation courses for the mining operations. The use of a single blowing or exhaust fan achieves proper ventilation for the entire life of each mine. Coal barrier pillars of sufficient width will be left on both sides of all main and submain entries to protect them throughout the advancing life of the mine. Barrier pillars, 200 to 300 feet in width are being maintained on each side of the mains.

Access and ventilation for the Lower O'Connor "B" seam will be accomplished by driving rock entries or shafts from the other two seams.

Main entries in the mines are advanced so that mining panels may be developed on one or both sides. These panels are usually 2,500 to 7,000 feet long and 400 to 800 feet wide. The panels will be mined by driving rooms or by retreat-type operations where coal is mined as Room and Pillar Mining. Where feasible, the coal will be removed by a longwall operation. The panels will then be "pulled" consecutively to the barrier, leaving the main entries intact.

3.1.3 Method of Mining

In order to achieve maximum coal reserve recovery and enhance overall production rates, the mining plan, as developed to date and herein proposed, involves two mining methodologies most appropriate for Skyline's coal reserves. The mines are developed using continuous miners to drive entries which are connected with cross cuts. Continuous miners are also used for retreat room and pillar mining. The room and pillar method of mining is being implemented in particular situations for which longwall mining is inappropriate. The longwall mining system will be used to extract the majority of the Skyline coal.

Longwall Mining

Longwall mining is proposed for the extraction of large uniform blocks of mineable coal, resulting in increased production rates and overall recovery. Mine layouts are based on longwall mining in areas where the panels generally are more than 2,500 feet in length and where a suitable longwall panel can be constituted. Recoverable coal reserves in longwall mining areas are based on mining a maximum thickness of twelve feet.

The longwall mining operation utilizes at least two sizes of equipment in order to mine the variations in seam thickness

locally encountered. Lower equipment will be used for mining down to 5 feet of coal thickness, and larger equipment will be used to mine thicknesses of at least 12 feet.

In areas where coal is thicker than the height capacity of the mining equipment, the unmined coal will be left in the bottom of the bed, unless economic or safety conditions or operation constraints warrant otherwise.

A high overall recovery of reserves can be expected as the longwall unit retreats through a panel. Pillars in developed entries will be left to protect adjacent panels.

Room and Pillar Method

In order to ensure the maximum recovery of reserves safely and economically, it is desired that the room and pillar method of mining be used as follows:

1. To develop the mains, submains and panel entries.

2. To extract panels of shorter lengths, generally limited to 2,500 feet or less. This may be desirable, as longwall mining of small panels becomes economically less feasible because the installation and removal of longwall equipment would be required for a relatively small coal tonnage.

3. To protect the surface features.

4. To extract areas that are not suited for longwall mining because of geological conditions such as extensive faults with significant displacements.

These factors, which affect the proposed mine plan, can be accommodated by the use of room and pillar mining and could not be attained by the longwall mining method. Room and pillar mining will be implemented for the above four mine conditions.

Recovery of reserves will be maximized by longwall mining methodology for other mining areas.

All entry and panel development will be accomplished by continuous miners using the room and pillar method of mining. Panel development will normally be achieved by driving two to three panel entries from the main entries to the designated panel limits. Each mining panel will then be developed from these entries on the retreat.

Diesel-powered, rubber-tired tractors and service vehicles will be used to transport personnel and materials from the portals to the working faces.

The design of roof support will be done to provide stability of roof, floor and rib surfaces.

3.1.4 Proposed Production Rate

The production rate of the room and pillar method using continuous mining units is principally dependant on the height of the coal seam being mined and local mining conditions. The production rate of the longwall system is also dependent on seam height and local mining conditions.

Total Production Rate

The production rates presented are the values the Permittee expects to reasonably achieve if the mining is done as planned.

Yearly production is projected to average 3.5 to 4.0 million tons per year with a peak of nearly 5 million tons per year. Production is estimated to be about 3.5 million tons in calendar year 1989. It is estimated that it will take nearly 3 to 5 years beyond 1989 to reach peak production rates.

3.1.5 Maximum Economic Recovery and Rate Data

The underground mining operations have been planned to yield the maximum economic recovery of the coal reserves consistent with the practice of protection and use of other natural resources, sound economic and mining philosophies and the protection of the environnment. In brief, the Permittee emphasizes that all reserves will be recovered that can be with safe, economic and acceptable practices and technology.

At times it may be necessary to store noncombustible underground wastes, excess surface spoil in underground workings. Wastes will only be permanently stored in areas where the maximum amount of coal has been recovered within safe limits or where the waste can be stored so as not to interfere with future pillar recovery.

As previously discussed, there are three mineable seams occurring within the Skyline permit area. A seam has been considered non-mineable where the thickness of the coal is less than five feet. Only one seam is considered to be mineable where the interburden between two seams becomes less than 30 feet.

These limitations are consistent with present day economics and with safe and logical mining practice. However, as the technological and economic conditions change at Skyline, allowing the mining of less than five feet or more than twelve feet of thickness, the Permittee expects the extraction rate will improve correspondingly.

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COAL QUALITY INFORMATION, page 3-12, has been removed and placed in a confidential folder.

Studies of available core hole analyses indicate that the weighted average in-seam quality for the Skyline coal ranges as follows:

% Moisture	5.64 - 6.67
% Ash	6.23 - 7.49
BTU	12,274 - 12,350

During mining, the coal will be diluted by roof and floor material, material mined during fault crossings, and water added at the face and along beltlines for dust suppression. Adding these three forms of dilution, the following weighted run-mine coal quality ranges can be expected:

% Moisture	9.0 - 11.0
% Ash	7.5 - 9.5
BTU	11,400 - 11,700

It is anticipated that this BTU value of run-of-mine coal is conservative and that with a well monitored quality control program, the coal can be marketed on a run-of-mine basis with no loss of reserves for quality control purposes.

Therefore, at this time, the Permittee believes that a coal preparation plant is not necessary to obtain maximum economic recovery. The need for a preparation plant will be reassessed should conditions change so as to adversely affect maximum economic recovery.

The above coal quality summaries, as well as the discussion of coal reserves in Section 2.2.7, are considered by the Permittee as proprietary and confidential in nature. The Permittee feels that these data could be unfairly utilized by competitors to estimate the Permittee's as-mined coal quality and mining costs.

3.1.6 Multiple Seam Mining - Rationale and Specifications

Rationale

Presently there are a few case examples in the United States where two or more seams of coal are simultaneously mined. The Skyline Mines would be one of the few mines in the western U. S. to involve concurrent mining of multiple seams. It is evident that if the concurrent mining of multiple coal seams is to be practiced successfully, it is extremely important that the extraction of all seams be conducted in a thoroughly planned manner.

Detailed drilling and seismic information indicate the presence of three mineable seams:

Upper O'Connor seam (Skyline Mine No. 1);
Lower O'Connor "B" seam (Skyline Mine No. 2); and
Lower O'Connor "A" seam (Skyline Mine No. 3).

None of these seams occur uniformly or continously mineable throughout the entire permit area. In planning the proposed mining operation, this fact was utilized advantageously in determining the sequence of coal extraction from seam blocks for which an absence of an overlying upper mineable seam had been determined. This sequencing of concurrent coal seam extraction, in combination with standard descending seam order extraction procedures, will allow significantly increased rates of production and resource recovery. Properly planned and conducted, the multiple seam mining operation will not jeopardize personnel safety or environmental values.

Specifications

The extraction of coal from the Lower O'Connor "A" seam has been scheduled to begin first. Since the Lower O'Connor "A" seam is the lowest of the three mineable seams, care has been exercised to ensure that subsidence mining of coal in this seam occurs only

when and where the overlying seams are absent or have already been mined at least two years before.

The accepted procedure of superimposing certain structural features developed during the mining operations will be followed. The mains, submains and barriers will be columnized, as precisely as practical, so that the compressional forces will be transmitted from like bearing to like bearing areas in underlying seams.

The considerable experience of Europeans in multiple seam mining operations and that of U. S. operators in two seam mines has revealed that serious problems involving strata control could result if an attempt is made to extract seams separated by interburden of less than 30 feet. The Permittee will plan therefore to extract only one of the two seams in instances where interburden thickness is less than 30 feet.

Mining Guidelines for Multiple Seam Mining

Generally accepted practices and design criteria and prior industry experience have been incorporated into the operational plan for ground control in the three seams in the Skyline permit area. The following practices will be used as guidelines:

1. When separated by less than 30 feet of interburden, only one coal seam will be mined.

2. Mining in a specific area of the upper seam will be completed two years before mining in the underlying area of the successively lower seam is initiated.

3. Plans for three mines are laid out in a manner where protective barrier pillars for main entries, main haulways, fire barriers, primary air courses, bleeder entries and manways in each mine shall generally be superimposed regardless of vertical separation and quality of rock competency.

4. Verification will be made that major amounts of water will not be released from a mined-out area above before caving is commenced in a lower seam.

3.1.7 Plan for Protecting Oil and Gas Wells

There is no evidence of the presence of any active oil or gas wells except for two abandoned test wells as noted in Section 2.2.8. A detailed investigation has found no record indicating the presence of any gas or oil well which will be affected by the mining operations on the Skyline property at either the Utah State Division of Oil, Gas, and Mining or the American Stratigraphic Company at Denver, Colorado.

The Permittee has protected the abandoned test hole present at the surface facilities site and no mining activity will be undertaken in that area. The Permittee has installed an appropriate marker at the site indicating the presence of the test hole.

Portions of the Skyline permit area, however, are overlain by a natural gas pipeline belonging to Mountain Fuel Supply Company. The gas pipeline will be protected from surface subsidence by reducing reserve extraction such that no subsidence of the pipeline will occur. Because design parameters such as number and width of entries and projected lateral stresses cannot be adequately projected for a given area beneath the pipeline until mining is conducted within a reasonable proximity to that area (within approximately 1500 feet) exact pillar size cannot be projected at this time. In addition, due to the geologic complexity of the leasehold, detailed mining plans for all points beneath the pipeline are not presently feasible.

To ensure that subsidence will not occur along the pipeline, a safety factor of at least 1.5 will be utilized for pillar design when standard room and pillar design is utilized. If a yield pillar/barrier type design is used, it will be designed such that critical area has no influence on the surface.

In the event of encountering unknown bore holes during mining operations which may have the potential of liberating gas or oil, all measures determined necessary by the BLM Mining Supervisor, in consultation with the appropriate BLM Oil and Gas Supervisor, will be implemented.

3.1.8 Mine Maps

Mine maps as required in UMC 783.24-.25 are provided and will be updated annually. Maps 3.1.8-1 and 3.1.8-2 include mining details for mines 1 and 3 respectively. These maps are confidential.

3.2 COMPONENTS OF OPERATION

3.2.1 Ponds, Impoundments, and Dams

Two sedimentation ponds are included in the design of the Skyline Mine plan (Map 3.2.1-2b and 3.2.1-4). Each retention pond was originally designed to provide adequate volume for sediment containment and also adequate volume for a theoretical 24-hour detention of run-off resultant of a 24-hour, 10-year rainstorm. The minesite sedimentation pond also contains additional volume to adequately treat mine water discharge. An engineers certification of proper construction for these ponds may be found on page 3-17A. An engineer's certification to meet requirements of UMC 817.49(h) may be found on page 3-17B. The location and design characteristics for each of these two ponds are described in the following:

The sediment level will be determined by cross sectioning the sediment level through B-B' on Map 3.2.1-2B and through A-A on Map 3.2.1-4 at no greater than 3 year intervals. During sediment clean out the pond may be drained of all water that will meet permit requirements. Water not meeting discharge requirements will be hauled to the other sediment pond. Mine water discharge during cleanout of the mine site sediment pond shall by-pass the pond but shall still meet NPDES Discharge Permit requirements. Sediments will be disposed of as outlined in Section 4.16.

Mine Site Sediment Pond

A detention pond is located at the mine site adjacent to the crushing and truck loading station. It will detain surface run-off from the 34.02 acre disturbed mine site area plus 2.69 acres of undisturbed area, all of which reports to the sedimentation pond shown on Map 3.2.1-1. Precipitation from a 10-year, 24-hour rainstorm is expected to be 2.43 inches. After

Utah Fuel Company
a subsidiary of The Coastal Corporation
P.O. Box 719 • Helper, Utah 84526 • (801) 637-7925
Salt Lake (801) 596-7111

August 22, 1988

I, Douglas E. Johnson, do certify that the sedimentation pond located at the Railroad Loadout area:

1. Has been basically constructed and maintained as designed and in accordance with the approved plan and UMC 817.49(h).

2. Is monitored according to NPDES Permit No. UT-0023540.

3. The average depth of the pond, excluding sediment, is 6.6 feet. Overflow elevation is 7926 feet. The average maximum depth and elevation for the past year are 2.4 feet and 7921.8 feet, respectively.

4. The existing storage capacity is 76,212 cubic feet.

5. No fires have occurred in the construction material.

6. No hazardous conditions or instability of the dam or embankment have been detected.

REGISTERED PROFESSIONAL ENGINEER
No. 5566
DOUGLAS E. JOHNSON
STATE OF UTAH

Douglas E. Johnson
Registered Professional Engineer
Utah Registration No. 5566

ADDITION TO	TEXT
Section 3.2 Page 3-17A	Section 3.2 Page 3-17B Date 10/03/89

infiltration, surface run-off from a storm of this intensity should be 1.32 inches, based on the assumption that the land surface will be similar to gravel and dirt roads with SCS run-off curve numbers of about 88 (Section 7, Volume 5).

The required volume for providing a theoretical detention of the run-off from a 10-year, 24-hour storm is estimated as: 1.32 inches per acre x 34.02 acres = 163,010 cubic feet. The required volume for sediment storage is estimated as 74,052 cubic feet. The combined volumes for 24-hour retention and sediment storage equal 237,062 cubic feet. The pond contains a volume of approximately 391,169 cubic feet from the spillway elevation of 8,579.6 to a depth of 19.6 feet (Map No. 3.2.1-2b and Section 7, Volume 5, page 2). The difference between the total pond volume of 391,169 cubic feet and that required for surface run-off retention of 163,010 cubic feet plus sediment storage of 74,052 cubic feet is 154,107 feet and is for retention and treatment of mine water discharge (See Map 3.2.1-2). The pond volume dedicated to mine water discharge will contain the average inflow from the mine based on a 30-day averaging period. This 30-day period is consistent with reporting conditions of the NPDES Discharge Permit. The pond will be decanted only after retaining the runoff event for the required 24-hour period or in accordance with the NPDES discharge permit conditions.

A minimum of one foot has been added to the pond embankments for freeboard. Slopes are 3h:1v for backwater impoundments (pressure slope) except on the southeast side where solid rock is located. In the area of solid rock, slopes are near vertical.

The combined emergency and principal spillway pipe utilizes an oil skimmer collar. This pipe will safely pass the run-off from a 24-hour, 100-year storm plus mine water discharge (Section 7, Volume 5, page 4). The pipe is sized to pass a one and one half foot head of pressure which will allow a flow of 74.20 cfs (Section 7. Volume 5, page 6). The maximum run-off inflow rate expected from the 34.02 acre portal site during a 24-hour, 100-year storm is 65.32 cfs (Section 7, Volume 5, page 4).

The plan view with contours of the pond is shown on Map 3.2.1-2B. The detailed design of the mine site sedimentation pond and the pond cross-section with detailed construction notes are shown in Map 3.2.1-2. A walkway providing access to the sediment pond dewatering device control valve is shown on Map 3.2.1-1. Detailed design of the spillway pipe and dewatering structure is shown on Map 3.2.1-2A.

Coal Loadout Sediment Pond

A detention pond is located adjacent to the storage silos at the coal loadout site (Map No. 3.2.1-4). It detains surface run-off and associated sediment from the disturbed site. Precipitation from a 24-hour, 10-year rainstorm has been calculated to be 2.43 inches (Section 2, Volume 5, page 5). After infiltration, the surface runoff is estimated at .95 inches (Section 13, Volume 5).

The required volume for providing a theoretical 24-hour detention of the calculated runoff has been estimated as: .95 inches per acre x 12.56 acres (9.27 acres that are disturbed plus 3.29 acres that are undisturbed) = 43,310 cubic feet. The required volume for sediment storage has been estimated by using the universal soil loss equation as 3,050 cubic feet. The combined volumes equal 46,360 cubic feet (Section 13, Volume 5).

The coal load-out sediment pond contains a volume of 56,910 cubic feet (Section 13, Volume 5). Two feet have been added for freeboard. Berm width at the top of the embankments (7,922-foot level) will be eight feet. Embankment slopes were constructed at 2h:1v.

A single pipe, installed with two anti-seep collars, is used for the principal spillway with its inlet at the 7,919.71-foot level, as shown on 3.2.1-4A. This pipe will safely pass any runoff from a 24-hour, 100-year storm. The pipe is sized to pass 13.1 second-feet of water with a two-foot head of pressure (Section 13, Volume 5). An emergency spillway has been constructed in the pond embankment as shown on Map 3.2.1-3. Engineering calculations for this emergency spillway are in section 13 of volume 5.

Functioning as principal spillway, the pipe will release runoff at a rate that will allow a 24-hour detention of the runoff resultant of a 24-hour, 10-year rainstorm if the pond is empty at the time of the event (Section 13, Volume 5). Due to the high velocity of the discharge, a riprap section is needed at the outfall (Section 13, Volume 5).

The plan view of the load-out sediment pond and the pond cross section with detailed construction notes are shown in Map 3.2.1-4. Engineering calculations justifying the 4:1 total slope design are included in Volume 5. The stage volume curve is located in Section 13, Volume 5.

Decant structure and outlet pipe have been modified. The modification is shown on Map 3.2.1-4A.

3.2.2 Overburden and Topsoil Handling

A comprehensive discussion pertaining to this operational

component of the mine plan is presented in Section 4.6 - TOPSOIL AND SUBSOIL HANDLING PLAN.

3.2.3 Coal Processing

Maps 3.2.3-1 and 3.2.3-1A are flow diagrams of the entire coal handling system. Designated capacities represent maximum design capabilities necessary to handle surges in the system. The average throughput, a substantially lower figure, is reflected in the annual production schedule.

Run of Mine (R.O.M.) coal is brought out of the mine by conveyor belts and it is temporarily stored in an 8,000 ton capacity concrete silo or may first be transferred to the open coal storage area, then to the silo. As the coal is needed, it is transported by conveyor belts to a crushing system and then to a truck loadout, where it is loaded on trucks and transported. An overland conveyor is planned in the future to handle increased coal production that will be transported to the railroad loadout facility.

Stoker Coal

A stoker coal circuit is located on the coal storage silos at the train loadout area. A stoker loadout storage tank is located on the south side of these silos. Additional stoker storage is also provided on the northeast side of the main coal storage silos. Trucks hauling stoker coal can be loaded and weighed at this facility.

Overland Conveyor

A definitive design and drawings for the overland conveyor does not exist at this time as several alternative conveyors are being considered. The final design will account for animal crossings, vertical and horizontal alignment, cross sections and other

environmental concerns. The company will complete the design together with final drawings of the overland conveyor and submit this information to DOGM for approval 120 days prior to the start of construction.

This system will have the following features:

- Conveyor belting will be approximately 48 inches wide,
- Belt speed will be approximately 600 ft/min.,
- Carrying capacity will be approximately 1,500 ton/hr.

The Eccles Canyon conveyor alignment permanent boundary and disturbed boundary is shown on Map 3.2.3-3.

Crushed Coal Truck and Train Loading

Two forms of vehicle coal loading are provided: truck loading at the mine site and truck and train loading at the mouth of Eccles Canyon. The truck loading system implemented at the mine site consists of a 200-ton-capacity bin fed by conveyor (BC-7).

The train loading system is designed to load coal into rail cars at a nominal rate of 5,000 ton/hr while the cars are moving at approximately 0.66 mph. The system consists of a 300-ton capacity bin fitted with a hydraulic-operated control gate and a telescopic chute that can be retracted and traversed to one side to permit the locomotives to pass. An automatic sampling system is incorporated at the train loading station to provide an aggregate sample of the loaded coal.

Crushed Coal Storage

The permanent coal storage facility consists of two 15,000 ton capacity concrete silos. Construction of two additional 15,000 ton capacity silos at a later date may be done as additional

storage capacity is needed. The bottom of each silo is furnished with four vibrating feeders at a variable controlled rate of 100 to 1,800 tons/hour. These feeders will deliver loads to an 84 inch wide conveyor transporting coal to the train loading system.

Two ground storage areas at the mine site have been established. (Location shown on Map 3.2.3-4). The North storage area is located in the Middle Fork of Eccles Creek behind the office/maintenance complex. Coal is transported to this area via conveyor belt BC-20 coming from the BC-4 transfer building to the top of a 116' high concrete stacking tube (see Drawing 3.2.1-1 for general arrangement). The stack tube is equipped with hinged steel doors attached in the perimeter of the flow-through windows to reduce potential fugitive emissions (a few of the bottom windows may not have the steel doors installed). Two sets of reclaim feeders are located under the stockpile area. One additional feeder is located underneath the stack tube. The reclaim feeders feed the reclaimed coal back onto BC-21 conveyor belt, which will carry the coal back to the BC-4 transfer building, where the coal again enters the already existing coal handling system. Dust collection is implemented at critical points in the reclaim tunnel. There is approximately 80-100,000 tons of live storage in the stockpile. To help achieve full storage potential of the area, a caterpillar type tractor is used to push coal away from the stack tube and back to the reclaim feed points on an as-needed basis. This system of stacking has replaced the truck haulage and front end loader system previously used. The configuration of the North storage area is such that coal is piled against both the North and South cut slopes in the Middle Fork drainage. A physical barrier of 18"-24" of coal will be left on the slopes while the machinery is removing the coal. This barrier of coal is to help stabilize the slopes and to prevent rocks and soil from contaminating the coal. After machinery has removed the bulk of the coal, the coal left on the slopes will naturally slough off, leaving a thinner layer of

coal. This process will not disturb the existing slopes. Only selected trained operators will operate machinery on the coal pile. The slopes will usually be monitored whenever coal is being removed in close proximity to the slopes. This will be done to insure that the slopes are being protected.

The South storage area will only be used on an emergency basis when a mechanical/electrical condition exists that prevents coal from being stored in the North Coal storage area. Coal in the South Storage area will be on a last in-first out basis. (This does not preclude also removing simultaneously coal from the North storage area as long as coal is being removed from the South storage area at full capacity.) The Company will make a diligent effort to make the necessary repairs so that coal can be removed from the South storage area as soon as possible. Before coal is stored in this area, the Company will notify the Price District Ranger of the U.S. Forest Service of the need to use this area and the plan of use.

The haul route from the truck tipple includes a section of Utah State Highway SR-264. To mitigate potential traffic hazards, the following actions have been taken: 1) Warning signs have been placed along the highway above and below the Truck Loadout tipple; 2) A traffic pattern has been implemented to allow for the best and safest traffic approach to the highway; and 3) Training sessions are required for contract truck drivers hauling coal on safe driving procedures to be followed on the haul route.

Coal hauled by trucks from the mine site permit area creates the possibility of coal spilling and coal being moved onto the non-permitted highway area. To help reduce the possibility of spillage, the Permittee will: 1) Load trucks so as to prevent spills and overloading; 2) apply dust pallative to unpaved haul roads; and 3) Clean up accidental coal spills on SR-264 promptly.

ADDITION TO	TEXT
Section 3.2.3 Page 3-22	Section 3.2.3 Page 3-22A Date 12/20/90

The haul route from the truck tipple to the stockpiles includes a section of Utah State Highway SR-264. To mitigate potential traffic hazards, the following actions have been taken: 1) Warning signs have been placed along the highway above and below the Truck Loadout tipple; 2) A traffic pattern has been implemented to allow for the best and safest traffic approach to the highway; and 3) Training sessions are required for contract truck drivers handling stockpile coal on safe driving procedures to be followed on the haul route.

Coal hauled by trucks from the mine site permit area creates the possibility of coal spilling and coal being moved onto the non-permitted highway area. To help reduce the possibility of spillage, the permittee will: 1) Load trucks so as to prevent spills and overloading; 2) apply dust pallative to unpaved haul roads; and 3) Clean up accidental coal spills on SR-264 promptly.

PLATE 3.2.3-3 HAS BEEN DELETED

DELETION	TEXT
Plate 3.2.3-3 Page 3-23	Plate 3.2.3-3 Page 3-23 Date 07/07/89

Both of the open coal storage areas are located within the Manti-LaSal National Forest. The necessary NPDES and PSD permits have been approved for the permitted area and the Permittee will continue to monitor carefully to prevent the degradation of air and water quality as a result of the coal storage areas. There have been no violations of air and water quality standards to date.

3.2.4 Mine Surface Facilities - General Layout

The location of the major surface facilities components of the loadout area are shown on Map 3.2.1-3. These facilities consist of a coal storage and railroad loadout area located adjacent to Highway 96 and the mine portal facilities located approximately 2.5 miles from the loadout area at the mouth of Eccles Canyon.

The mine surface facilities have been built on three different bench elevations, as shown on Map 3.2.1-1. This arrangement provides optimal utilization of the existing topography while maintaining required areas for storage of materials, operations and access to the mine portals. Facility shapes, sizes, amounts, etc. are subordinate to the characteristic surrounding landscape as viewed from middle ground. Colors of the structures and facilities complement earth tones. The upper level bench, at an elevation of about 8,700 feet, provides access to Mine No. 1 and a storage area. The middle bench, at an elevation of about 8,662 feet, provides the necessary space for operations and the area is used for the maintenance, warehouse, office and changehouse building complex. The lower level bench, at an elevation of about 8,600 feet, provides access to the Mine No. 3 portal. The raw coal storage silo is also located on the 8,600 foot bench next to a sedimentation pond for the collection, retention and treatment of the surface drainage water from the area disturbed by the entire portal facilities area.

Drainage and Diversion Facilities

The three main tributaries to Eccles Creek are diverted under the

bench facilities through a system of large diameter culverts. This system has been designed to handle the runoff from the 100-year, 24-hour precipitation event (Section 3, Volume 5). All of the drainage areas for the watersheds for the minesite railroad loadout and South Fork areas are shown on Map 3.2.4-2.

During early construction, four seep areas were dewatered with french drains and discharged directly into the diversion culverts buried underneath the property. These drains, shown on Map 3.2.1-1, pick up undisturbed water.

Natural water runoff from the surrounding hillsides is intercepted (Map 3.2.1-1) by a system of diversion channels and will handle the 10 year, 24 hour storm event. These channels are lined with mature vegetation to reduce erosion and to provide energy dissipation (Map 3.2.1-1, Section 5, Volume 5). These constructed channels have all been seeded and have well established vegetation in them. No observations have been made of any overland flow entering these ditches since initial construction seven years ago. These observations are further validated by numerous inspections by Utah Fuel Company environmental personnel, Utah Department of Oil, Gas and Mining personnel, and Office of Surface Mining personnel who have observed these channels being lined with grass and forb vegetative litter, conifer needle fall and small twigs from adjacent aspen trees, conifer trees and browse plants. These observations conclude that no perceptive flows have occurred in these channels although there has been significent above average precipitation during the years of 1983 and 1984. The Permittee does commit to continue inspection and to maintain these channels in an operational state.

Except for small areas, all runoff from disturbed areas is directed to the sedimentation pond for settling through a collection system of surface ditches, paved swales and culverts (Map 3.2.1-1). Engineering design calculations for these collection structures are included in the Engineering Calculation section, Sections 4 and 6 in Volume 5. The drainage from the upper pads is collected and directed to a water chute (DD-7) which directs the water down the highwall slope into an energy dissipator, and then into drainage ditch DD-5, which empties into the sedimentation pond. The entrance to this culvert is by the main entrance gate to the mine maintenance complex area and is shown on Map 3.2.1-1. No drainage from the Utah State Highway system enters the mine drainage system.

Due to the severe winter conditions most of the water conveniences become iced up and are not maintained during the winter months. During the spring thaw water is directed back into the water ways as they slowly thaw out.

TEXT ON PAGE 3-26A HAS BEEN RELOCATED

TO SECTION 3.2.12

SEE PAGE 3-64D

REPLACES	TEXT
Section 3.2.4 Page 3-26A	Section 3.2.4 Page 3-26A Date 10/02/89

PAGE 3-26B

MOVED TO

PAGE 3-64F

REPLACES	TEXT
Section 3.2.4 Page 3-26B	Section 3.2.4 Page 3-26B Date 10/02/89

PAGE 3-26C

MOVED TO

PAGE 3-64J

REPLACES	TEXT
Section 3.2.4 Page 3-26C	Section 3.2.4 Page 3-26C Date 10/02/89

Coal Storage and Load out Facilities

The enclosed coal storage and rail load-out facilities are shown in plan view on Map 3.2.1-3.

Facilities within this area consist of two 15,000-ton coal storage silos (discussed in subsection 3.2.3) and a railcar load-out for unit trains. A sedimentation pond has been provided for the treatment of runoff water from the disturbed areas. A diversion channel is used to intercept runoff from the undisturbed hillside and route this water around the facilities into Eccles Creek. Due to space limitations in this area, it was necessary to divert the creek from its existing channel. This diversion was accomplished in such a manner as to mitigate any damage to the surrounding environment.

Access Road Improvements

Approximately 2.5 miles of improvements were necessary to the existing access road paralleling Eccles Creek. Improvements to this road resulted in a paved width of 34 feet designed to criteria set forth by the UDOT which has been designated Utah State Highway No. SR-264.

The road improvements generally follow the alignment of the previously existing road. Grading and maintenance operations along the previously existing road had rechanneled Eccles Creek in some areas for considerable distances. The improvements to the access road also resulted in improvements to Eccles Creek since the past practice of pushing dirt from grading operations into the creek was eliminated. The new public road was constructed to bypass the mine portals and facility area.

Embankments

Construction areas were generally overlain with 10 to 15 feet of colluvial materials. Geotechnical investigations indicated that this material is stable for cut slopes of one foot horizontal to one foot vertical (1h:1v) and at a depth not to exceed 10 feet (Volume A-3). Fill slopes are stable at 1.5 feet horizontal to 1 foot vertical (1.5h:1v).

3.2.5 Water Pollution Control Facilities

Water pollution control facilities provided for:

- Storm water runoff and snow melt from the disturbed area passes through a sedimentation pond (described in Section 4.13).

- Treatment of sanitary sewage effluent is done at an off-site treatment facility. Sewage is removed by truck.

- Oil and water separators are used for areas where maintenance operations and equipment cleaning takes place.

Map 3.2.5-1 illustrates the water and wastewater flow diagram.

Sanitary sewage from the mine surface facility is routed through a system of gravity pipes below grade to the collection tank. The sewage is removed by truck for disposal at a municipal facility. No sewage effluent will be discharged into Eccles Creek. Oil and water separators are used within the maintenance complex building for separation of oils from wash-down water. Skimmed oil is then discharged to the waste oil storage tank for disposal. Waste oil is pumped from the tank and sold to a waste oil dealer for refining. The remaining water is discharged to the sedimentation pond.

As mining progresses, underground storage sumps are developed for storage of mine drainage water. This water is pumped to these underground sumps for later reuse within the mine as process water. Quantities in excess of that necessary for this purpose will be discharged to the sedimentation pond for further clarification prior to discharge. Oil skimmers have been installed to remove oil and grease residue from mine discharge water. Should the mine water drainage be either high or low in the pH reading or high in concentrations of regulated constituents, treatment will be provided to bring these values to acceptable levels prior to discharge from the permit area. Monthly and/or quarterly reports as specified by the NPDES permit conditions are submitted to the appropriate regulatory authority.

TABLE 3.2-2

HAS BEEN DELETED

REPLACES	TEXT
Table 3.2-2 Page 3-30	Table 3.2-2 Page 3-30 Date 5/9/89

Water pollution control facilities for the railroad load-out and coal storage area at the mouth of Eccles Canyon consist of a septic tank for sewage effluent and a sedimentation pond. All storm water from the disturbed area will pass through the sediment pond except for some small areas of exemption which are shown on Map 3.2.1-3.

3.2.6 Procedures for Construction Through Removal of Major Structures and Facilities

Mine Site Benches and Cut Slopes

Vegetation and topsoil was removed prior to any earth work (see Section 4.6 - TOPSOIL AND SUBSOIL HANDLING PLAN). The two types of vegetation occurring at the mine site are: 1) trees and, 2) grasses and bushes. The trees were harvested, trimmed and placed in a location predescribed by the U.S. Forest Service. The bushes were piled in a location and burned according to directions given by the U.S. Forest Service. As required by state law, the Permittee obtained a valid State of Utah burning permit before burning to dispose of vegetation and other debris from clearing operations at the mine site. Once the vegetation was cleared, the topsoil was removed using rubber-tired scrapers, bulldozers, front-end loaders and haulage trucks. The topsoil was stored in the areas immediately north of the substation (Map 3.2.1-1). Following topsoil removal, based on the geotechnical investigation, selected areas within the mine site were either ripped by a dozer or blasted to obtain suitable material for placement in the compacted fills.

The cut slopes that resulted from obtaining the material required for the compacted fills were engineered so that they did not endanger wildlife and did not make additional contributions to the

total suspended solids in stream flows. The overall slope of the cut banks is one horizontal to one vertical (1h:1v). This slope factor is based upon the geotechnical design recommendations (Volume A-3).

The benches that are made of compacted fill were constructed such that each lift was of sufficient height to ensure that maximum compaction occurred. When the benches reached the proper elevation, each bench was tested to ensure that compaction was adequate for building foundations and other structures and met the local and state building codes. Special geotechnical investigations were done on the Middle Fork Bench to insure that adequate design to support the stack tube occurred, and that the Middle Fork 48 inch bypass culvert was adequately protected (see Vol. A-3).

Upon abandonment of the mine site, the benches will be ripped, topsoiled and revegetated. The cut slopes will be reduced to a more gradual grade and will be topsoiled and revegetated as described in the topsoil and revegetation plans in Sections 4.6 and 4.7. This will allow a return of the mine site to the desired wildlife/grazing (rangeland) habitat.

Changehouse and Shop Complex

The interior of the building consists of office-training-safety areas, changeroom areas, analytical laboratory, warehouse storage area, shops and maintenance bays. The building was designed to meet all applicable local and state codes and regulations. The exterior siding is of a material that requires little maintenance throughout the life of the mine.

Once the cap was cured, belt drives, gear reducers, coal sampling equipment and head pulleys were put in place. A building was constructed to house this equipment. The equipment house is constructed of structural steel and is covered with an exterior metal siding. Due to concrete silo construction, little maintenance is required.

On completion of mining, the above-ground portion of the silo will be demolished and used as backfill material or will be hauled away.

North Coal Storage Stack Tube and Reclaim Facility

This system consists of transferring the coal off of existing conveyor at the BC-4 transfer building onto a conveyor that carries the coal to a 116 foot high stacking tube. The coal is reclaimed through an underground system of five feeders which feed the coal onto a conveyor that carries the coal back to the BC-4 transfer building, where it re-enters the normal coal flow handling system.

Excavation was done for the foundations of the stack tube, reclaim tunnel, and drive house. Excavated material was temporarily stored. The foundation for the stack tube is substantial due to the large size of the tube and extends to bedrock with a number of drill piers. Once the excavation was completed, the foundations were poured and the stack tube and reclaim tunnel were formed and poured. When the concrete work was completed, the BC-4 transfer building was modified and the drive house was constructed. Material that was originally excavated was used as backfill material. Excess material that was not used as backfill was kept on the site and used as berms, to level storage areas, to improve

drainage control, and to improve other small sites within the permit area. Machinery was then installed and the conveyor covered with colored metal that matched the other conveyors at the mine.

On completion of mining, the machinery will be removed, and then the concrete stack tube and reclaim tunnel will be demolished and used as backfill in the portal entrances. Due to the depth of cover over them, the foundation for the stack tube and some of the foundations for the stack tube and reclaim tunnel will be left in place, where they don't interfere with final reclamation requirements.

Mine Surface Conveyors

Foundations for the conveyor bents were constructed on compacted fill. Once the foundations had cured, the bents were placed upon them. Both the bents and spans are made of welded structural steel. Interior to each span, a walkway is placed for maintenance of the belt and idlers. Each conveyor is covered on the top and along both sides with a baked enamel exterior metal. Once the spans for each conveyor belt were erected, the conveyor belt was pulled over the idlers and vulcanized, thus completing the construction of each conveyor belt.

The bents and spans are painted and repainted periodically as required. The exterior metal siding needs little maintenance during the life of the mine. After mining is completed, the bents and spans will be removed and salvaged.

Crusher Building

The foundation for the crusher building was constructed upon bedrock. After the concrete foundation had cured, steel erection began. Once the steel erection was completed, the floors and stairs for the different levels were installed. As soon as the stairs and floors were installed, the chutes, crusher, magnet, belt drive motors, gear reducers, head pulley and the dust collector system were installed. When the equipment installation

was nearly completed, an exterior metal siding was placed on the steel structure.

All structural steel was painted and will be periodically repainted as necessary to maintain it. As for the metal siding, little maintenance is required throughout the life of the mine.

Truck Load-out

The foundation for the load-out tower was built upon compacted fill. As soon as the concrete foundation was cured, steel support columns were erected. Once in place, a 200-ton capacity storage bin was installed. After bin installation was completed, the top floor was installed. With completion of the floor, the belt drive motor, gear reducer, head pulley and dust collector system were installed. The top of the structure is completely enclosed with exterior siding. All structural steel was painted and will be periodically repainted to maintain it. The metal siding needs little maintenance throughout the life of the mine.

Mine Portals

A total of thirteen mine portals for the three mines are constructed for the mine: four on the upper bench, one on the middle bench, five on the lower bench and three at the South Fork

Breakout. The upper portals will consist of one belt portal and three air portals. The lower five portals are all air portals. The middle bench portal is the conveyor portal for Mines 2 and 3.

The mine portals require little maintenance throughout the life of the mine. When mining is completed, the portals will be broken up and used as backfill material. The fans and motors will be salvaged.

Substation

The substation is located on the middle bench and isolated from other surface structures. The foundation for the transformers was poured and, once cured, the transformers were set. A dead-head structure was erected to which the fuse disconnect is attached. The steel structure is galvanized. Oil circuit breakers were also installed in proximity to the transformers. With the completion of the steel erection and the transformer and oil circuit breaker placement, a ground mat was constructed in accordance with MSHA standards. As soon as the ground mat was constructed, crushed rock was spread over the ground areas of the transformers and oil circuit breakers. A security fence was then constructed.

Overland Conveyor

The conveyor route will be located on the north slope of Eccles Canyon. Topsoil was removed before an alignment route was cut. The cut is approximately 30 feet wide. At the time the production schedule dictates, foundations for the conveyor supports and transfer points will be formed and poured.

Once the concrete is cured, the conveyor support structures will be erected along with the structures used to support the conveyor cover. These support structures for the transfer points will be erected simultaneously with those for the conveyor. The intermediate section supports will then be installed. With the completion of the intermediate section support installation, the conveyor idlers will be installed. The next construction step will be to install the belt drive motors, gear reducers and pulleys, as well as the devices used for inverting the conveyor belt. When the drive motors have been installed; they will be wired for electrical power and tested. With wiring completed, the conveyor belt will be placed on the idlers and vulcanized. With the completion of the vulcanizing, exterior metal siding will be installed to enclose the conveyor belt and walkway.

Routine maintenance will be performed on the conveyor to ensure that the components are working properly. The exterior of the conveyor will require little maintenance because of the type of siding selected.

The overland conveyor will be completely removed when mining is completed. The structural steel, exterior siding and conveyor equipment will be salvaged. Regrading and revegetation of the conveyor route will be performed as discussed in Part 4 of this Renewal Application.

15,000 Ton Storage Silos

Topsoil was removed and stockpiled as discussed in Section 4.6. Following completion of the topsoil removal procedures, the first two storage silos were built. The foundations for the silos were poured and when the concrete was cured, the reclaim tunnel under the silos was formed and poured. Upon completion of the reclaim tunnel construction, the draw points were formed and poured. As soon as the draw points had cured, slip forms were erected and the

silos were constructed. The top of the silos were formed and poured once the slip forms had been removed. When the concrete had cured, the conveyor equipment used to fill the silos was installed at the same time as the feeders and reclaim belt.

At a later date, two additional storage silos may be constructed in the same manner described above.

The conveyor equipment and feeders may be maintained in a routine manner to ensure proper function. The silos will require little maintenance because of the concrete construction.

The silos and associated equipment will be removed once mining is completed. The equipment will be salvaged. The silos will be dynamited and used in areas which require backfilling.

Reclaim Belt

Construction of the reclaim belt began as the foundation for the conveyor bents were formed and poured. The bents and spans are made of welded structural steel. The walkway was constructed inside each span. Additional structural steel supports were added for the conveyor belt idlers. After the bents and spans were erected, the conveyor belt was placed on the idlers and vulcanized. Exterior siding was placed on all sides of the spans. The conveyor and associated support equipment will be adequately maintained throughout the life of the project. The bents and spans are painted and will be repainted as necessary for maintainance. The exterior siding will require little maintenance.

Following cessation of mining operations, the conveyor and support equipment will be removed and salvaged. The bents and spans will be dismantled and salvaged. The bench foundations will be broken up and removed. Regrading and revegetation of the bench slopes will be performed as discussed in Part 4 of this Renewal Application.

Load-out Structure

Initial construction of the load-out structure involved the forming and pouring of foundations. Structural steel support members were erected when the concrete was cured. Upon completion of the steel erection activities, the floors and stairs in the structure were added. Once the floor and stairs were added, a 300-ton capacity storage bin was installed. After the storage bin had been erected, the top floor, sampling system, dust collection system, conveyor belt drive motors, gear reducers and head pulley were installed. Following equipment installation, exterior metal siding was installed.

All equipment and structural entities will be maintained in a routine manner. The structural steel was painted and repainted periodically to maintain it. The exterior siding will require little maintenance throughout the life of the mine.

Utah SR-264

Vegetation and topsoil was removed prior to any extensive earth work. The road subgrade was cut using bulldozers, motor graders, front-end loaders and haul trucks. A culvert was added at the minesite to ensure hydrological system protection and will divert surface (disturbed area) runoff to the mine sedimentation pond. The culvert inlet is protected by a trash rack as shown on drawing 3.2.6-1D. Following completion of the subgrade cut and culvert addition, a road base was constructed to UDOT specifications. This road, designated as SR-264 is not part of the permit area.

Mine Site Culverts

The major culverts and inlets were constructed at the mine site as shown as a plan view in Map 3.2.1-1. The culverts were constructed in the early summer during the high runoff periods so that the temporary increase in the sedimentation load did not unnecessarily impact the aquatic biota of the stream.

The first step in construction was to form and pour the inlet structures. At that time, the stream was diverted from the work area. When the inlet structure was completed, the culverts were placed in trenches (excavated during inlet construction) as

sections (10-foot length/section) and fastened together. When each culvert diversion was completed, it was backfilled and compacted to ensure culvert stability during subsequent mine bench construction.

The culvert inlet in the North Fork was reconstructed in 1984 after being plugged by debris flows (see map 3.2.6-1B). A new culvert inlet in the Middle Fork was also constructed in 1984, and then in 1990 it was relocated approximately 100 feet upstream to accommodate the expanded North coal storage area. Calculations for the Middle Fork inlet structure and bypass 48" CMP are in Volume 5, Section 3. Since the Middle Fork has a past history of debris flow events, a special inlet structure and trash rack were designed (see map 3.2.6-1c). An area above the inlet structure approximately 50 feet by 50 feet has been leveled off. This area slopes about 1-2% towards the inlet structure and is approximately 6 inches above the lip of inlet. Down the middle of this area is a channel which will handle the 2 year 24 hour storm event (see Volume 5 Section 5 for calculations). The area on either side of the channel was seeded with the approved seed mixture in the fall of 1990. Willow cuttings will be planted on the area in the spring of 1991. This area serves as a flood plain for storm events greater than the 2 year 24 hour event. In the event that the trash rack should become plugged and the inlet becomes non-functional, another 48 inch CMP with trash rack has been installed approximately six feet in elevation above the primary inlet to handle the emergency overflow. This culvert is directed back into the main 48" culvert 100' downstream from the main inlet structure to handle the water flow (see map 3.2.1-1). During the spring runoff season, machinery will be kept available at the minesite, which could build an emergency access road off of the stockpile so that in case of an emergency, equipment could re-establish the culvert inlets within a short period of time. The culvert in the south west fork was extended by UDOT in 1986 approximately 300 feet off of the permit area and the inlet is now within their jurisdiction.

The culvert system was designed to allow easy maintenance access. Manholes were placed at each directional change point as additional access points (Map 3.2.1-1). The culverts were constructed of plastic coated galvanized metal to ensure that the culverts do not rust. Culverts will be inspected periodically throughout the life of the mines.

Eccles Canyon Road

The Eccles Canyon road is part of the State Road collector system.

Mine Site Sediment Pond

The initial construction phase of the mine site sediment pond structure involved the removal of topsoil and vegetation. As the pond was being constructed, lift heights were maintained to ensure maximum compaction. The final lift, which achieved the proposed elevation of the pond bottom, is of an impermeable material, capable of preventing seepage. Following this construction operation, the bank and spillway pipe construction was begun. The bank was constructed in lift heights to ensure maximum compaction and was constructed of impermeable material to prevent seepage. A spillway pipe was added during construction

of the bank. The pond is shown in plan view (Map 3.2.1-1) and in cross section (Map 3.2.1-2).

Surface runoff will enter the pond via gravitational flow.

Other than sediment removal when 60 percent of the design sediment storage volume is exceeded, only limited maintenance of the pond will be required. Past experience has shown that it takes a minimum of five years to achieve the 60% design storage level. Based on this, the pond will be surveyed three years after clean out, at which time a time table will be determined for subsequent surveys. Sediments will be tested for toxicity before being disposed of. They may be disposed of at the waste rock disposal area or pumped back into the mine.

Coal Load-out Sediment Pond

Prior to construction of the coal load-out sediment pond, topsoil and vegetation were removed from the pond site area. The pond was excavated to the proposed bottom elevation and the excavated material used to construct the dam. The dam was constructed in lifts of heights which ensured maximum compaction. A spillway pipe was added during the construction of the dam. After the dam was completed, a principal emergency spillway was constructed. The pond is shown in plan view and in cross section on (Map 3.2.1-4). The pond requires only limited maintenance, i.e., sediment removal to an approved disposal site when 60% of the design sediment storage volume is exceeded.

3.2.7 Signs and Markers

The Permittee has posted all signs and markers required by State of Utah and Federal requirements. Signs are constructed of durable material and are uniformly designed for high visibility and readability. All signs and markers will be maintained during operations to which they pertain and will conform to local ordinances and codes.

Mine and Permit Identification Signs

The Permittee has posted identification signs at the points of access to the permit area from public roads and highways. The signs state the name, business address and telephone number of the Permittee, the identification numbers of current mining and reclamation permits and other authorizations to operate in a color that will provide significant contrast to the color of the sign board and can easily be seen and read. The identification signs will be maintained in place until after release of all bonds.

Perimeter Markers

The perimeter of the areas affected by surface operations or mining facilities has been posted with easily identifiable markers with blue steel fence posts.

Topsoil Markers

The topsoil signs are posted at all topsoil stockpile areas. The topsoil stockpiles are clearly marked. The signs can easily be seen and read. The signs will be maintained in place until the topsoil is redistributed during final reclamation.

Stream Buffer Zone Markers

Signs requiring protection of the environment have been placed at those points of the operation where public or employee access to perennial and intermittent streams is possible. Those points include the portal area on the southwest and middle forks of upper Eccles Creek, the pump houses along Eccles Creek and at the loadout facility near Eccles and Pleasant Valley Creeks and South Fork Breakout area.

3.2.8 Plan for Disposal of Rock Waste

Coastal States Energy Company ("Coastal") has developed a rock waste disposal site at a location southeast of Scofield, Utah and approximately 3.6 air miles from the Skyline mine site (Map 4.16.1-1A). The rock waste disposal site is an abandoned strip mine pit which is accessed by an upgraded existing road (see Maps 4.16.1-1A and 3.2.8-1). The facility is required for the disposal of rock wastes to be generated from the Skyline Mines during mine's developmental and operational phases. Additional discussion on this disposal site can be found in Section 4.16.

Coastal hauls the rock wastes by truck from the Skyline mine site (portal area) and the unit train loadout facility to the waste disposal area. An operation plan has been developed to establish proper techniques for disposal of the rock waste. A reclamation plan provides for satisfactory final reclamation. The disposal site has been designed to facilitate proper management and operation of the overall disposal process as well as successful reclamation and revegetation. Only waste rock and coal gob will be disposed of at the site.

The rock disposal site and access road are located upon land owned by the Estate of George Telonis. The legal right of access and use of the lands for the disposal of rock waste has been granted to Coastal by the heirs of the Estate in a lease effective January 1, 1982 and expiring, unless renewed, on December 31, 2011 (See Exhibit A for photocopy of lease). The lands referred to in

EXHIBIT A, PAGES 3-43 THROUGH 3-50, HAS BEEN MOVED

TO PAGES 3-55 THROUGH 3-60B

REPLACES	TEXT
Exhibit A Page 3-43	Notice of Move Page 3-43 Date 07/07/89

the lease include a 7.00 acre right of way for the disposal site access road and a 17.83 acre tract of land containing the rock waste disposal site. The legal description of the leased lands is:

A. Access Road

A right-of-way for the purpose of maintaining a road over a strip of land 100 feet wide over a portion of the East half of Section 5, Township 13 South, Range 7 East, and a portion of the West half of Section 4, Township 13 South, Range 7 East, Salt Lake Base and Meridian, in the County of Carbon, State of Utah, the center line of which is described as follows:

> Commencing at the found stone of the Northeast corner of Section 5; thence South 582.76 feet and West 1228.10 feet to the point of beginning; thence North 37° 25' 46" East 350.00 feet; thence North 79° 06' 42" East 100.00 feet; thence South 16° 40' 44" East 100.00 feet; thence South 40° 19' 44" East 500.00 feet; thence South 29° 23' 14" East 600.00 feet; thence South 14° 29' 44" East 100.00 feet; thence South 29° 11' 14" East 311.76 feet; thence South 84° 53' 29" East 100.00 feet; thence North 79° 55' 31" East 500.00 feet. The side lines of said right-of-way to be prolonged or shortened to meet at angle point intersections and at the East line of Section 5.

The bearings in the above description are based on the Utah State Plane Coordinate system, Central Zone.

B. Disposal Site

A tract of land located in Section 4, Township 13 South, Range 7 East, Salt Lake Base and meridian, Carbon County, Utah, being further described as follows:

Commencing as the Northwest corner of said section; thence South 0° 00' 04" East (basis of bearing taken from Utah State Plane Coordinate System) a distance of 1603.39 feet along the West line of said section to the Northerly Right-of Way line of a road; thence South 39° 22' 14" East a distance of 337.81 feet along said North Right-of-Way line to the point of beginning; thence North 79° 18' 09" East a distance of 320.00 feet; thence South 41° 33' 38" West a distance of 1273.99 feet; thence North 19° 32' West a distance of 1060.85 feet to the Southerly Right-of-Way line of said road; thence the following 6 courses along said Right-of-Way line, South 84° 53' 29" East a distance of 127.64 feet; thence North 79° 55' 31" East a distance of 506.66 feet; thence North 10° 04' 29" West a distance of 100.00 feet; thence South 79° 55' 31" West a distance of 493.34 feet; thence North 39° 22' 14" West a distance of 13.76 feet to the point of beginning.

The site and access road are part of a larger area previously disturbed by surface and underground mining and never reclaimed. Coastal believes that operations will not further degradate the environmental state of the area, but rather will, by way of backfilling the abandoned strip pit, grading, seeding and other reclamation techniques, greatly improve a portion of the previously disturbed area.

Reports have been prepared for Coastal (presented in Appendix Volume A-1) detailing the existing vegetation and soils of the area to be affected by disposal. The premining land use of the disposal site area is assumed to have been for native rangeland. Since the previous mining activity left the area in very poor condition, the existing baseline information is of little use in establishing reclamation goals for determining the success of reclamation efforts. Portions of the surface to be affected have

been used for grazing after abandonment of the strip pit, although the pre-existing conditions (lack of reclamation and underground coal fires) have greatly reduced the area's potential for grazing or for any other use.

No aquatic resource inventories have been prepared due to the intermittent flows of water in the study area. Water is present only for the very brief periods during and immediately following precipitation events and/or during spring runoff.

The climate of the study area is similar to that described for the lower elevations of the Skyline permit area. No additional monitoring is proposed.

Description of Site

The general location of the waste disposal site is shown on the USGS 7-1/2 minute Scofield quadrangle map (Map 3.2.8-1). The land affected by the disposal of rock waste is located in the SW 1/4 of the NW 1/4 of Section 4, Township 13 South, Range 7 East, Carbon County, Utah. The Estate of George Telonis owns the surface of the lands to be affected and the Western Reserve Coal Company owns the minerals in the subject lands and adjacent areas. A copy of the Telonis lease agreement is appended to this Section as Exhibit A. Mining in the coal seams beneath and adjacent to the abandoned strip pit is extremely unlikely due to variable seam thickness, seam pinchouts, and coal fires in one of the abandoned underground mines adjacent to the site. In addition, the coal seams are terminated to the East by large displacement faulting and terminated to the West by faulting and erosion. The above factors effectively sterilize any unmined coal beneath or adjacent to the site.

The Permittee uses the rock disposal site to dispose of underground rock waste produced during mining operations which cannot be permanently stored underground due to either the lack of adequate storage room or the content of coal exceeding the limits specified in 30 CFR:75.400 through 30 CFR:75.403 which require that combustible content of the dust on the roof, ribs or floor of an underground coal mine not exceed 35 percent in intake air and 20 percent in return air. The volume of material which must be disposed of at a surface disposal site will be limited to a very small fraction of the total rock waste produced because of the large volume of potential underground rock waste storage areas which result from mining coal. The economics of loading, hauling, and disposing of rock waste at any point other than underground effectively mitigate against the extensive use of a surface rock waste storage site.

The most likely sources of rock disposed of at the site include rock produced during fault crossing and igneous dike rock encountered during mining. Portal face-up work is essentially completed and would not be a likely source of material to be stored at the site. Ancient stream channels are infrequently of sufficient magnitude that they cannot be stored underground adjacent to the place they are encountered.

The roof and floor rock for the three mineable Skyline coal seams is estimated to be comprised of 60 percent sandstone, 30 percent shale, and 10 percent claystone. The igneous dike rock varies in composition but is essentially comprised of 100 percent ferromagnesian minerals. The majority of dike rock which would require surface disposal appears very similar to basalt and is very durable being extremely resistant to weathering. The volumetric swell factor for the igneous and sedimentary rock is estimated to be 30 percent.

The site is estimated to have a storage volume of 131,000 cubic yards which the Permittee considers adequate to contain the rock waste requiring outside disposal during the life of the operation. Alternate storage sites have not been considered.

The Permittee estimates that approximately 1600 tons or 1,077 cubic yards (at 110 lb./cubic feet density) per year of rock will be disposed of at the site.

The rock waste disposal site is unique in that it is an abandoned strip pit which, as can be seen in Map No. 4.16.1-1B, has a narrower entrance than the main body of the pit. The configuration of the pit and the requirements of 30 CFR:77.215(h) which requires that refuse be disposed of in compacted layers not exceeding two feet in thickness, will, in combination with the operational necessity of operating heavy vehicles on the fill, lead to a very stable fill.

No hydrologic information is available for the quality and quantity of the ground water of the area due to the existence of coal fires. Coastal believes that the proper sealing of the rock waste containment area, as outlined in the Development and Operations Plan, Section 3.2.8, will prevent the communication of any accidental ignitions of the rock/coal waste into the adjacent coal seams, thereby eliminating degradation of the ground water resources beyond the effects of the existing underground coal fires.

No surface water information is presented herein due to the intermittent surface water flows in the disposal site area. Coastal redirected any surface runoff waters around the site into the original pre-strip mining drainage system in order to prevent contamination of the surface runoff by the disposal activities. Coastal will also contain all runoff water from

within the area to be affected in a catchment basin. Therefore, no surface water will discharge from within the disposal site. The catchment basin contains 31,000 cubic feet (Section 15, Volume 5) and will retain the normal 10 year, 24 hour storm event. This basin will remain in place until Phase II of final reclamation.

Site Development

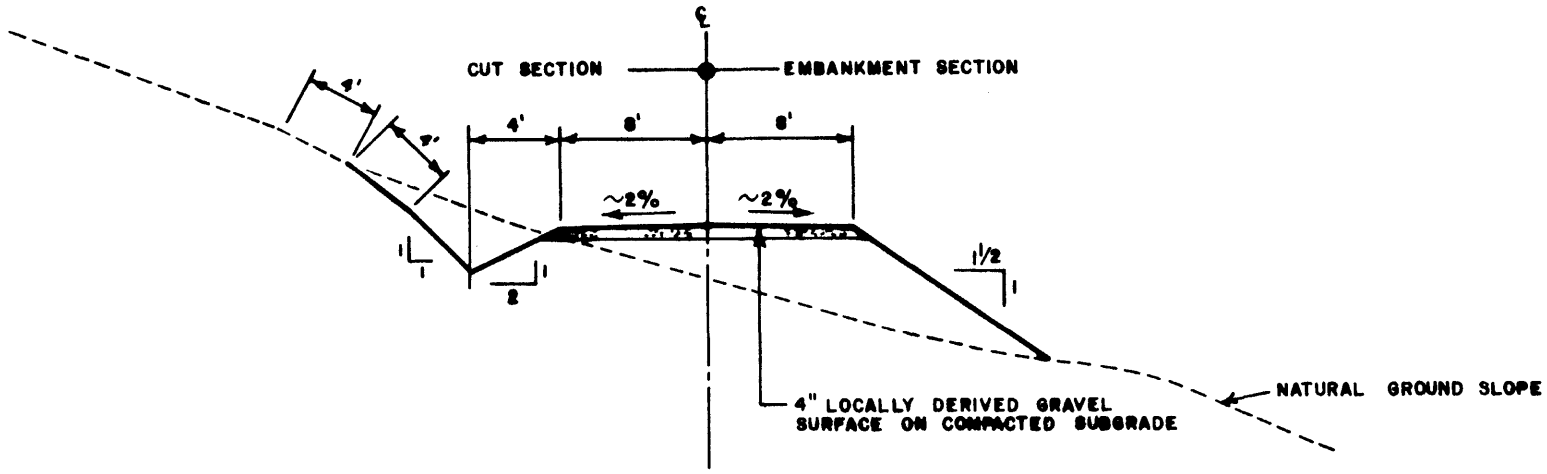
The development of the rock disposal site required upgrading the existing unpaved access road to the abandoned pit as well as the development work required to convert the abandoned strip pit into a disposal site.

Access Road

The access road to the disposal site follows the alignment of an existing unimproved access road shown on Map 3.2.8-1. Approximately 3,158 feet of the unimproved pre-existing road were upgraded to comply with the standards set forth for Class II roads in UMC 817.160 to 817.164, inclusive. The gravelled surface road is approximately 16 feet wide (see Figure 3.2.8-A).

Near-surface portions of the UP coal seams which were mined and then burned have subsided at the intersection of entries. Other areas have developed subsidence cracks which transfer the coal fire combustion products to the surface, generally leaving coal-like condensates which are readily apparent in field examinations. No evidence of subsidence or of coal fires has been observed under or within ten or more feet from either side of the existing road. The anticipated infrequent need to use the rock waste disposal site once there is sufficient underground development for the material to be permanently stored underground will minimize the potential for subsidence due to truck traffic over the road. Truck drivers have been trained to look for the

ACCESS ROAD - TYPICAL SECTION



ROCK DISPOSAL SITE ACCESS ROAD
TYPICAL SECTION

REGISTERED PROFESSIONAL ENGINEER
No. 5566
DOUGLAS E.
JOHNSON
STATE OF UTAH

UTAH FUEL CO.		
ROAD TYPICAL SECTION		
DESIGNED BY: G. KENZY	DATE: 8 - 82	Figure 3.2. 8-A
DRAWN BY: B. R. PETERSON	SCALE: 1" = 8'	

surface evidence of subsidence and, should subsidence occur, good engineering practices will be employed in backfilling depressions and compacting the subsided area. A subsidence monitoring program is not needed due to the absence of current mining and the inferred low density of underground development beneath the access road alignment.

Disposal Site Preparation

The preparation of the disposal site entailed:

1. Emplacment of drainage controls to redirect surface waters around the site and into the original, pre-strip mining drainage system.

2. The emplacement of a minimum of four feet of non-combustible fill material to form a barrier across the floor and along the walls of the abandoned strip pit where coal seams were exposed during prior mining activities and where cracks or fissures are venting from adjacent coal fires.

3. The construction of a fence and gate to control access to the disposal site.

4. Some shrubs will be removed from near the top of the north side of the pit just prior to the time the area they occupy will be covered with waste rock. The sparse grass and weeds will not be removed.

The previous course of the drainage from the canyon to the east of the abandoned strip pit was rerouted around the abandoned strip pit in order to redirect the flow into the original stream

course, and therefore, around rather than into the disposal site. An open channel and dip are used to redirect the water flow (Maps 3.2.8-1 and 4.16.1-1B).

After careful investigation by both the Company and the Division, it was determined that an undisturbed ditch would not be constructed above the site. This decision was based upon the following facts:

1. The existing highwall is unstable and therefore would prevent building a drainage ditch except at a considerable distance from the edge of the highwall.

2. The topography of the area above the highwall (see Map 3.2.8-3) is such that only a small area is actually tributary to the disposal pit.

3. The area above the highwall is a well vegetated slope supporting a heavy stand of mixed Aspen and conifer trees.

Due to the slope of this area, the construction of a drainage ditch would destroy a considerable portion of this stand of timber and would create more of an erosion hazard than it would solve. Since a by-pass ditch is impractical, the sedimentation pond in the pit will be used to treat any additional surface run-off that may enter the pit.

The dip to redirect the drainage across the access road and into the original stream channel was constructed of concrete and located so that water is directed into the original stream channel to the south of the road.

The compacted non-combustible fill is being emplaced along the floor and walls of the pit in order to isolate the coal seams and venting cracks or fissures in the highwall from the material

disposed of in the pit. Approximately four feet of compacted material was placed on the floor and along the wall. The material to isolate exposed coal and venting cracks or fissures along the walls is being built up and compacted in lifts during normal rock disposal operations after an initial 4 foot high barrier is constructed. Any new venting cracks or fissures will be reported. Drainage onto the floor of the pit is directed to a pre-existing sump at the east end of the abandoned strip pit (Map 4.16.1-1B). Cross sections through the pit and sump are shown in Maps 3.2.8-2 and 4.16.1-1B. A fence and gate were installed in order to prevent unauthorized access to the rock disposal site (Map 3.2.8-1).

There are two locations in the pit where coal is exposed. These exposures of the coal seam are shown in Map 4.16.1-1B. The exposure in the west end of the pit required sealing before any dumping of waste was undertaken. The initial 3 to 4 feet high barrier was built-up of incombustible material and was obtained from the slope detritus along the highwall. The material was dumped alongside and on top of the coal and compacted to form the barrier between the exposed coal and material being dumped.

The second location where coal is exposed is in the extreme east end of the pit in the highwall. This location will probably never require sealing since the pit will not reach the location upon attaining final fill configuration (Maps 4.16.1-1B and 3.2.8-2).

Waste Rock Disposal Operational Plan

A. Access Road

During operations, the access road will be maintained using a road grader and any other equipment which may be necessary to ensure compliance with the pertinent requirements. Drainage

ditches and cross drains will be maintained to ensure proper functioning. The outfall of the cross drains are rip rapped to control erosion and sediment. Additional gravel will be selectively placed as required to ensure approximately four inches of road base gravel on the road. Map 3.2.8-1 shows the boundary and location of the access road. A guard rail has been installed along portions of the road as required by MSHA along with other MSHA requirements.

Accidental spillage of rock waste during haulage from the minesite to the disposal site will be minimized by not overloading the haulage trucks. Accidental spills, if they occur, will be cleaned up by and transported to the disposal site within 24 hours after the accidental spill occurs.

B. Disposal Site

The underground development waste rock and excess fill material from the unit train loadout area will be emplaced and compacted in layers not exceeding two feet in thickness. As layers of compacted material are added to the floor of the pit, the three-feet thick noncombustible barrier, where required to isolate any exposed coal seams and venting cracks and fissures, will be added.

The compacted layers of fill will be sloped at an minimum angle of 2-3 percent to the east in order to direct any drainage from the pit floor into the sump at the east end of the pit. The sump will be pumped out if filled and the water will be hauled to the loadout sedimentation pond.

Shrubs that are along the north side of the pit will be removed just prior to the time the area they occupy will be covered with waste rock.

The spreading and compaction of the rock waste will be accomplished through the use of a dozer/loader and dump trucks. The dozer/loader will be used to spread and level the material and both the dozer/loader and the dump truck will be used to compact the material. Repeated, long-term operation of the equipment on each lift of material will ensure adequate compaction of the fill.

The Permittee cannot commit to the size of the dozer or the number of trucks to be used during the infrequent use of the pit. The Permittee will use its 10-ton capacity truck that may be supplemented by others which, in addition to the dozer, will be used as the need occurs.

The rock waste disposal site will be inspected at least quarterly during active disposal operations.

The Permittee's registered engineer or other qualified professional specialist will provide the Division a certified report within two weeks after each quarterly inspection and after the completion of construction. The reports will describe the activities during the reporting period and will certify that the site has been constructed and operated as specified in the design approved by the Division.

Acid and Toxic-Forming Material

The potential for encountering acid or toxic-forming materials is discussed earlier in this section. Based on these tests, these materials are not expected to be present. If encountered, a handling and disposal plan will be formulated as outlined in Section 4.4.5.

EXHIBIT A

LEASE AGREEMENT

This Lease ("Lease") made and entered into this 10th day of June, 1982, but effective as of January 1, 1982, by and among FOTINI TELONIS, ANGELO G. TELONIS, THOMAS G. TELONIS and JOHN G. TELONIS, by and through their attorneys-in-fact, ANGELO GEORGEDES, STEVE J. DIAMANTI and LUKE G. PAPPAS, P. O. Box AD, Price, Utah 84501 ("Lessors"), and COASTAL STATES ENERGY COMPANY ("Coastal"), a Texas corporation, with offices at Nine Greenway Plaza, Houston,Texas 77046, and GETTY MINING COMPANY ("Getty"), a Delaware corporation with offices at 5250 South 300 West, Salt Lake City, Utah 84107, as tenants in common (Coastal and Getty are the "Lessee"),

WITNESSETH:

1. GRANT. Lessors for and in consideration of the rents, covenants, and promises hereinafter mentioned and reserved to be paid, kept and performed by Lessee, its successors and assigns, have demised, leased and let, and by these presents do hereby demise, lease and let unto Lessee, and Lessee does hereby rent and accept from Lessors, all those certain premises ("the leased premises") situate, lying and being in the County of Carbon, State of Utah, designated and particularly described on Schedule A hereunto attached and by this reference made a part hereof. Reserving, however, unto the Lessors, all of the oil, gas and other minerals, in and under the leased premises, but releasing and waiving all rights of ingress and egress over and upon the leased premises for the purpose of exploring, developing, mining, drilling or extracting the same.

2. TERM. This Lease shall be for a term of thirty (30) consecutive years from January 1, 1982 through December 31, 2011, and continuing for each year thereafter so long as Lessee, or its assigns, has need for use of the leased premises.

3. RENTAL. Lessee agrees to pay to Lessors as rental for the use and occupancy of the leased premises the sum of Two Thousand Dollars ($2,000.00) per year, the payment for the first year upon execution of this Lease by Lessors, and thereafter payable annually in advance. All rents herein reserved shall be tendered to Angelo Georgedes at the address set forth in Section 18, or at any other place designated by Lessors pursuant to Section 18 and tender of payment to Angelo Georgedes shall constitute full payment of rent hereunder and relieve Lessee of any liability for ownership or distribution of such rental among Lessors.

4. ESCALATION. On January 1, 1985, and each two (2) years thereafter that this Lease is in effect, the annual rental rate specified herein shall be adjusted in the same proportion that the "Consumer Price Index", as published by the United States Department of Labor (1967 = 100), has changed for the month of September in the previous calendar year from such index for the month of January, 1982, which latter index is the "Base Index", and such adjusted rental rate shall apply for the following two (2) years; provided, however, that the rental rate specified herein shall never be less than $2,000.00 per year.

5. USE OF PREMISES. Lessee shall have the right to use the leased premises for the purpose of disposing of rock, materials, ordinary trash and any other waste or refuse by landfill or any other disposal methods. Lessee agrees to dispose of all such waste and refuse in accordance with applicable rules and regulations imposed by county, state and federal regulatory agencies.

6. LESSEE MAY FENCE. Lessee may fence the leased premises and construct gates or, at Lessee's option, may install cattleguards where necessary for crossing fenced land in connection with Lessee's operations conducted thereon and shall thereafter keep such gates, fences and/or cattleguards in good repair and all gates closed at all times. The cost and expense of constructing and maintaining the fence, gates and/or cattleguards shall be borne by Lessee.

7. QUIET ENJOYMENT. Lessors covenant and agree that Lessee, on paying the rent and other charges herein reserved and upon observing and keeping the covenants, conditions and terms of this Lease on Lessee's part to be kept or performed, shall lawfully and quietly hold, occupy and enjoy the leased premises during the term of this Lease without hindrance or molestation of Lessors or any persons claiming by or under Lessors, except such portion of the leased premises, if any, as may, in the future, be taken under the power of eminent domain.

8. ACCESS ROAD. Lessors grant unto Lessee a right-of-way for purposes of ingress and egress to and from the leased premises across the lands described in Schedule B hereunto attached and by this reference made a part hereof. Lessee shall have the right, at all times hereunder, to construct, maintain and use access roads on the right-of-way as required to travel to and from the leased premises.

9. SURRENDER OF PREMISES. Lesee shall, at the termination of this Lease, for whatever cause, vacate the leased premises in a reasonably good condition and state of repair, except for reasonable use and wear thereof, acts of God, or damage by casualty beyond the control of Lessee. All rock, materials, waste and refuse deposited on the leased premises

shall remain on the leased premises. Lessors hereby agree to accept the leased premises with such rock, materials, waste and refuse and hereby grant Lessee rights of ingress and egress and such other rights as Lessee may need after termination of this Lease to satisfy its reclamation obligations arising before or after termination of this Lease under its applicable federal, state or local permits.

10. LIMIT ON LIABILITY. Lessee shall have no obligation, responsibility or liability with respect to the existing highwall or with respect to fires in or upon the leased premises. Upon termination of this Lease, Lessee shall have no further duty to make annual rental payments to Lessors.

11. DEFAULT. If the rent herein reserved, or any part thereof, is not paid when due and shall remain unpaid for a period of thirty (30) consecutive days after notice thereof in writing, or if Lessee shall fail, in good faith, to promptly perform any other covenant, condition or agreement by it to be performed hereunder and such failure shall continue for a period of ninety (90) consecutive days after such notice in writing, specifying the nature of such failure, or if Lessee abandons the leased premises, then, in any such event, Lessee shall be deemed to be in default, and Lessors, without further notice, may, at their option, re-enter and take possession of the leased premises and pursue all remedies available to them under the law, including the re-letting thereof, and Lessee shall be responsible for and pay any deficiency.

12. RIGHT TO TERMINATE. Lessors, in addition to their rights under paragraph 11, may terminate on December 31, 2011, or on any December 31 thereafter upon the giving of not less than twelve (12) months prior written notice. Lessee may terminate on December 31, 2011, or on any December 31 thereafter, or at such earlier time as the leased premises have been used and reclaimed to the extent allowed by governmental permits issued with respect to Lessee's use of the leased premises, or at such time as Lessee permanently terminates its mining operations at its Skyline Mine, provided that Lessee gives Lessors not less than twelve (12) months prior written notice. Lessee, at its option, shall also have the right to terminate this Lease at any time prior to June 30, 1983, unless prior to such time it has received all permits from governmental agencies necessary for it to use the leased premises for the purposes above set forth in paragraph 5, provided however, that all rental theretofore paid to Lessors shall be retained by Lessors.

13. AMENDMENTS TO BE IN WRITING. This Lease may be modified or amended only by a writing duly authorized and executed by Lessors and Lessee and may not be amended or modified by oral agreements or understandings between the parties.

14. LEASE BINDING ON SUCCESSORS AND ASSIGNS. The covenants and agreements contained in this Lease shall be binding on the parties hereto and on their respective heirs, successors, executors, administrators and assigns, provided, however, that no assignment by Lessee of its interests hereunder shall operate to relieve Lessee from its primary obligations to Lessors hereunder unless Lessors shall, in writing, expressly release Lessee from its obligations and covenants hereunder.

15. ASSIGNMENT. Either party hereto shall have the right to assign this Lease in whole or in part, subject however the provisions of paragraph 14.

16. APPLICABLE LAW. Utah law shall be used in interpreting this Lease and in determining the rights of the respective parties hereto.

17. HEADINGS FOR CONVENIENCE ONLY. The headings used herein are for convenience and shall not be resorted to for purposes of interpretation or construction hereof.

18. PAYMENTS AND NOTICES. Lessors hereby designate Angelo Georgedes as their representative hereunder, and Lessee hereby designates Coastal as its representative hereunder, for all purposes including, but not limited to, the giving and receiving of notices and payments hereunder. The address of Lessors' representative is P.O. Box AD, Price, Utah 84501, and the address of Lessee's representative is Nine Greenway Plaza, Houston, Texas 77046. Lessors may change their representative by notice to Lessee signed by all of the persons or their legal representatives and Lessee may change its representative by notice to Lessors signed by Coastal and Getty. Notwithstanding the death of any of Lessors and/or their representative, the tender of payment and/or notices to Lessors' representative shall be binding upon the successors, heirs, devisees, executors, and administrators of such persons. Changes in addresses and/or representatives shall not become effective until fifteen (15) days after the party to be notified receives such notice. All notices shall be in writing and shall be either personally delivered or sent by certified mail, postage prepaid, return receipt requested.

19. ENTIRE AGREEMENT. This Lease constitutes the entire agreement between the parties and supersedes any other written or oral agreements or understanding between the parties concerning the subject matter hereof.

LESSORS:
By their attorneys-in-fact

ANGELO GEORGEDES

STEVE J. DIAMANTI

LUKE G. PAPPAS

ATTEST:

Robert Klimett

Asst. Secretary

ATTEST:

D/83-S/4

LESSEE:

COASTAL STATES ENERGY COMPANY

BY

Vice President

Approved as to Form
Legal Dept.

GETTY MINING COMPANY

BY

THE STATE OF UTAH :

COUNTY OF CARBON :

On the [illegible] day of [illegible], A.D., 1982, personally appeared befoe me ANGELO GEORGEDES, and LUKE G. PAPPAS, two of the signers of the above instrument, who duly acknowledged to me that they executed the same as attorneys-in-fact.

My Commission Expires:

10-19-83

Notary Public
Residing at Price (Utah)

THE STATE OF ARIZONA :

COUNTY OF COCONINO:

On the 30 day of [illegible], A.D., 1982, personally appeared before me STEVE J. DIAMANTI, the signer of the above instrument, who duly acknowledged to me that he executed the same as attorney-in-fact.

My Commission Expires:

My Commission Expires Jan. 5, 1986

Notary Public
Residing at [illegible]

THE STATE OF TEXAS :

COUNTY OF HARRIS :

On the 17th day of August, A.D., 1982, personally appeared before me Joseph A. Williams, who being by me duly sworn, did say that he is Vice President of COASTAL STATES ENERGY COMPANY, and that above instrument was signed in behalf of the corporation by authority of its Board of Directors, and he further acknowledged to me that the corporation executed the same.

Witness my hand and official seal.

Barbara J. Hickson
Notary Public for the State of Texas
Residing at: Cypress, Texas
My commission expires:
My Commission Expires
July 17, 1985

THE STATE OF UTAH :

COUNTY OF SALT LAKE :

On the 24th day of September, A.D., 1982, personally appeared before me J. D. Spaulding, who being by my duly sworn, did say that he is Vice President of GETTY MINING COMPANY, a Delaware corporation, and that the above instrument was signed in behalf of the corporation by authority of its Board of Directors, and he further acknowledged to me that the corporation executed the same.

Witenss my hand and official seal.

Notary Public for the State of Utah
Residing at: Salt Lake City, Utah
My commission expires: 11/6/84

D/83-S/4

SCHEDULE "A"

A tract of land located in Section 4, Township 13 South, Range 7 East, Salt Lake Base and Meridian, Carbon County, Utah, being further described as follows: Commencing at the Northwest corner of said section;

thence South 0 degrees 00' 4" East (basis of bearing taken from Utah State Plane Coordinate System), a distance of 1603.39 feet along the West line of said section to the Northerly right-of-way line of a road;

thence South 39 degrees 22' 14" East a distance of 337.81 feet along said North right-of-way line to the point of beginning;

thence North 79 degrees 55' 31" East a distance of 834.50 feet;

thence South 76 degrees 16' 09" East a distance of 320.00 feet;

thence South 6 degrees 30' 20" East a distance of 224.51 feet;

thence South 41 degrees 33' 38" West a distance of 1273.99 feet;

thence North 19 degrees 32' West a distance of 1060.85 feet to the Southerly right-of-way line of said road;

thence the following 6 courses along said right-of-way line South 84 degrees 53' 29" East a distance of 127.64 feet;

thence North 79 derees 55' 31" East a distance of 506.66 feet;

thence North 10 degrees 04' 29" West of a distance of 100.00 feet;

thence South 79 degrees 55' 31" West a distance of 493.34 feet;

thence North 84 degrees 53' 29" West a distance of 72.36 feet;

thence North 39 degrees 22' 14" West a distance of 13.76 feet to the point of beginning, containing 17.83 acres.

D-83/S-6

SCHEDULE "B"

A right-of-way for the purpose of maintaining a road over a strip of land 100 feet wide over a portion of the East half of Section 5, Township 13 South, Range 7 East and a portion of the West half of Section 4, Township 13 South, Range 7 East, Salt Lake Base and Meridian, in the County of Carbon, State of Utah, the center line which is described as follows:

Commencing at the found stone of the Northeast corner of Section 5:
thence South 582.76 feet and West 1228.10 feet to the point of beginning;
thence North 37 degrees 15' 46" East 350.00 feet;
thence North 79 degrees 06' 31" East 100.00 feet;
thence South 16 degrees 40' 44" East 100.00 feet;
thence South 40 degrees 19' 44" East 500.00 feet;
thence South 29 degrees 23' 14" East 600.00 feet;
thence South 14 degrees 29' 44" East 100.00 feet;
thence South 39 degrees 22' 14" East 388.24 feet to a point on the East line of Section 5 from which point the Northeast corner of said Section bears North 0 degrees 00' 04" West 1682.02 feet;
thence South 39 degrees 22' 14" East 311.76 feet;
thence South 84 degrees 53' 29" East 100 feet;
thence North 79 degrees 55' 31" East 500 feet. The side lines of said right-of-way to be prolonged or shortened to meet at angle-point intersections, and at the East line of Section 5.
Contains 7.00 acres.

3.2.9 Blasting

Surface blasting within the permitted area is not routine and in any event will be minimal. Any surface blasting will be done by a certified blaster as outlined in 30CFR850 and will meet all applicable regulations of UMC 817.61-68.

3.2.10 Electrical Power

The original utility corridor design located the power line immediately adjacent to the conveyor system in Eccles Canyon. A subsequent decision placed the power lines further up on the north side of the canyon above the permit area.

Utah Power and Light Company policy dictated that the separation of responsibility would be at the connection to the electrical sub-station which means that the power line corridor was established by Utah Power and Light and the line construction and maintenance remains their responsibility. Consequently, the Permittee was not in position to require a particular power line construction technique. The Permittee did, however, relay the Division request to provide raptor protection to Utah Power and Light. (See Division correspondence dated June 19, 1981, James W. Smith Jr. to Vernal J. Mortensen; Re: Guidelines on Perimeter Markers and Raptor Protection on Power Lines - Exhibit 1.) Utah Power and Light responded that it is their standard procedure to adhere to raptor protection practices. A copy of the Utah Power and Light correspondence is attached. (See Exhibit 2.)

EXHIBIT 1

SCOTT M. MATHESON
Governor

GORDON E. HARMSTON
Executive Director, NATURAL RESOURCES

CLEON B. FEIGHT
Director

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

OIL, GAS, AND MINING BOARD

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MAXILIAN A. FARBMAN
EDWARD T. BECK
E. STEELE McINTYRE

June 19, 1981

Mr. Vernal J. Mortensen
Utah Fuel Company
411 West 7200 South
Midvale, Utah 84047

RE: Guidelines on Perimeter Markers and Raptor Protection on Power Lines

Dear Mr. Mortensen:

As you know, on January 23, 1981, Utah's partial or conditional approval under the permanent program appeared in the Federal Register.

Some of the regulations in the permanent program are supplemental to those enforced under the Interim Program. More specifically, these regulations deal with perimeter markers and electrical power line design and construction. Because of their relative newness there exists some ambiguity concerning what the Division is actually looking for, particularly from the inspection viewpoint.

This letter, then, is to inform you of the Division's policy with regard to the enforcement of UMC 817.11(b) (Perimeter Markers) and UMC 817.97(c) (Raptor Protection on Power Lines).

Perimeter Marker Guidelines

1. The perimeter markers should be durable and should be visible enough to allow easy detection by the public, the mine equipment operator and the inspector under a wide range of weather conditions.

2. The perimeter markers should extend along the entire boundary of the permit area as indicated on maps submitted to the Division pursuant to the Mining and Reclamation Plan. At a minimum, all areas which are currently, or will be, affected by any surface effects of underground mining during the permit term shall be so marked.

Special attention is due in any and all areas of the minesite where the public, an equipment operator, or any individual associated in any way with the mining operation, or any authorized representative of the Division or other concerned agency will be aided by their presence.

Any mine which does not have adequate perimeter markers as of July 1, 1981, shall be considered in violation and subject to enforcement action.

Raptor Protection on Power Lines

You should also be aware of UMC 817.97(c) requiring that operators ensure that the design and construction of electric power lines and other transmission features used for, or incidental to, the underground mining activities on the permit area be designed and constructed in accordance with the guidelines set forth in Environmental Criteria for Electric Transmission Systems (USPI, USDA 1970). Power lines should be designed and constructed in accordance with REA Bulletin 61-10, Power Line Contacts by Eagles and Other Large Birds. These and other guidelines, including diagrams of inexpensive pole modifications are available from the Division, the Office of Surface Mining and the Department of Interior. The Division requires that this regulation be addressed by July 1, 1981, or enforcement action will be warranted.

If you have any questions concerning these or other regulations in the permanent program please contact the Division.

Sincerely,

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/TLP/te

EXHIBIT 2

UTAH POWER & LIGHT COMPANY

51 EAST MAIN STREET
P. O. BOX 277
AMERICAN FORK, UTAH 84003
801-756-7611

SOUTHERN DIVISION

March 19, 1982

Mr. Roland Heath
Utah Fuel Company
PO Box 719
Helper, UT 84526

Dear Mr. Heath:

This letter will confirm our discussion in meeting March 18, 1982 regarding raptor protection of the 46 KV facilities which have been installed to serve your Skyline Mine operation.

For several years Utah Power & Light Company has had an active program to protect birds of prey from power line electrocution. Upon detailed research into the possible solutions of the problem and following documentation of raptor electrocution, Utah Power & Light began formulating the procedures and developing designs and methods which would eliminate raptor electrocution on our power line structures.

At present, we adhere to such practices for raptor protection on power lines and such practices were incorporated into a design and construction of all electrical facilities which were recently installed to provide service to you. You will be receiving shortly from Ron Devenish information pertinent to our design which he will be resubmitting to you in reference to your letter dated July 2, 1982, concerning the matter.

If we may provide further information, please advise us accordingly.

Sincerely,

G. Robert Thompson
Special Representative

GRT/sh

cc Ron Devenish
Bill Patterson

3.2.11 South Fork Breakout Area

The Upper O'Connor seam required a breakout to improve ventilation. The breakout is on a south facing slope in a side canyon of the South Fork of Eccles Creek (see map 3.2.11-1).

Access to the breakout area is via an existing road up the South Fork of Eccles Creek to the Manti-LaSal National Forest boundary. From the Forest boundary on, the road had been water barred and was reopened. Where the road leaves the main South Fork tributary, it crosses two side drainages. Temporary 18" culverts were installed in these drainages during the construction period. The Forest Service road then continues up the side drainage. Approximately 600 feet up the side drainage a new class III life of project road was constructed for a distance of 75' across the drainage to the breakout area (see map 3.2.11-1). During installation of the culverts silt fence and/or straw bales, dikes were placed downstream to control sediment in the stream.

As construction started on the project, the trees and brush were cleared from the road location. The topsoil was then stripped from the road location and stored on the abandoned temporary Forest Service road above the construction area and on the small opening at the mouth of the canyon where the knob was removed. All of the topsoil was stored in lifts not to exceed 2' deep, and then seeded to the approved seed mixture and fertilized. After the topsoil from the road location was removed, a 36" culvert was placed in the stream bed to provide a life of project crossing. The initial fill material over the culvert was hauled in from the mouth of the side canyon where a small knob was partially removed to help dress up an area. This also created a safe open area to burn slash created by the breakout construction. After the slash has been burned, the area will be dressed up and seeded with the approved seed mixture and fertilized. No further activity is planned for this

area unless there is fill material that was not used and is needed for final reclamation. The fill slopes of the fill covering the 36" culvert were seeded, fertilized, and covered with excelsior mats to help prevent erosion until the vegetation is established. A flared inlet and a trash rack were installed on the culvert. The fill slope was rocked up to the high water line to also help protect the inlet and outlet. The culvert was bedded in washed gravel at the slope of the natural channel of 14.3%.

A track hoe removed the topsoil from the breakout area so it could be stored in the storage area. As the subsoils were encountered, they were used to bring the new road up to grade. The new road was built with a 1-2% adverse grade from the existing road to the breakout area. Subsoil not used as road fill was stored on the small opening at the mouth of the canyon where the knob was removed. All of the stored soil was then seeded with the approved seed mix, and then a layer of straw mulch was applied.

The new road and the breakout area disturbed .42 acres, and the area where the knob was partially removed disturbed .19 acres, for a total new disturbance of .61 acres. The road that was reopened for access and to provide topsoil storage disturbed an additional .35 acres, making a total disturbed area of .96 acres.

The breakout pad was constructed so that the surface drainage is directed into the mine where it enters the normal mine drainage and will eventually enter the portal area sedimentation pond. A small seep was encountered during construction. A French drain was constructed to drain this seep into the creek drainage system.

A combination of silt fences and strawbales was used to treat the surface run-off from the disturbed area of the new road, the breakout pad and the topsoil and subsoil storage areas. The silt

fences and strawbales were located as needed between the disturbed and undisturbed areas to treat run-off from the disturbed area. These silt fences and strawbales will be maintained until adequate vegetation is established.

The breakout portals are screened to prevent humans or animals from entering the mine. No exhaust fans or permanent activity is planned for this area once construction is finished.

Once the breakout portals were established, all of the disturbed areas were seeded and all of the roads on National Forest land were water barred and seeded. All seeding was done with the approved seed mixtures and then fertilized. One of the temporary 18" culverts was removed but left on site in case emergency access is needed back into the breakout area.

All slash created by the project was piled so it can be burned at a later date. All brush disposal will be in accordance with standard U.S. Forest Service requirements.

Once the breakout area has been faced up and the portals established, no further activities are planned or anticipated at the area until final reclamation begins, except for periodic inspections. The culvert trash rack and portal high wall will be inspected at a minimum of three times a year: (1) early spring; (2) mid-summer at the beginning of the thunderstorm season, and (3) late fall before freeze-up.

3.2.12 Areas Not Reporting to Sedimentation Ponds and Special Exempt Areas

There are 20 areas that do not report to any sedimentation pond, and 5 special exempt areas. There are also small areas in front of portals 2, 3 & 4 of both Mine #1 and Mine #3 which drain back into the mines. This water enters the normal mine drainage system and is pumped back into the sedimentation pond.

Area 1. The Water Tank area is shown on Map No. 4.4.2-1F. It contains .19 acres and is classified as an "Alternative Sediment Control Area." This area has been reseeded and has a well established cover of grass, forbs and trees. In addition to the vegetative cover, any runoff leaving the area is also filtered through strawbales.

Area 2. The South Fork of Eccles Creek area is shown on Map No. 3.2.1-1. It contains .23 acres and is classified as an "Alternative Sediment Control Area." This area has been reseeded, but as of 1989 does not have a well established cover of vegetation. All runoff leaving this area is treated with strawbales and/or silt fences.

Area 3. The Middle Fork of Eccles Creek area is shown on Map No. 3.2.1-1. It contains .29 acres and is classified as an "Alternative Sediment Control Area." This area has been reseeded but is not well established. Strawbales and/or silt fences are being used to treat the runoff water until adequate vegetation is established.

Area 4. The North Fork of Eccles Creek area is shown on Map No. 3.2.1-1. It contains 1.0 acre and is classified as an "Alternative Sediment Control Area." The area has been reseeded and most of the area has a well established cover of grass and forbs. Areas that do not have adequate vegetative cover treat the runoff water with strawbales and/or silt fences.

Area 5. This area is highway approach area to the main mine office maintenance complex and Mine No. 1 portal area and is shown on Map No. 3.2.1-1. This area contains .18 acres and has been classified as a "Special Exempt area." The area extends from the shoulder of SR-264 to the entrance gates of the mine area. This road approach is paved and is part of the permitted area and will be reclaimed during final reclamation; however, this area falls within the rights-of-way of SR-264 (refer to UDOT letter dated 4-14-89 from L. Archie Hamilton, District Four Pre/Construction Engineer, page 3-64F). The Permittee has no control over the activities of UDOT or the public who utilize this approach; therefore, the Permittee is not responsible for the activities (other than his own) which occur on this approach. 2.17

Area 6. This area is the highway approach area to the Mine No. 3 portal area and is shown on Map No. 3.2.1-1. This area contains .07 acres and has been classified as a "Special Exempt Area." This area extends from the shoulder of SR-264 to the entrance gates to the mine area. This road approach is paved and is part of the permitted area and will be reclaimed during final reclamation; however, this area falls within the rights-of-way of SR-264 (refer to UDOT letter of 4-14-89 from L. Archie Hamilton, District Four Pre/Construction Engineer, page 3-64F). The Permittee has no control over the activities of UDOT or the public who utilize this approach; therefore, the Permittee is not responsible for activities (other than his own) which occur on this approach.

Area 7. This area is above the conveyor bench and is shown on Map No. 3.2.1-1. It contains .58 acres and has been classified as an "Alternative Sediment Control Area." The area contains both reseeded areas and areas that are undisturbed and support the native vegetation. The small amount of runoff that leaves this area is treated by natural and reseeded vegetation as well as strawbales and/or silt fences. 0.57

State of Utah
UTAH DEPARTMENT OF TRANSPORTATION

Eugene H. Findlay, C.P.A.
Director
Gene Sturzenegger, P.E.
Assistant Director
Dyke LeFevre, P.E.
District Four Director

Route #3 Box 75C5
940 South Carbon Avenue
Price, Utah 84501
(801) 637-1100

TRANSPORTATION COMMISSION
Samuel J. Taylor
Chairman
Wayne S. Winters
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R. Lavaun Cox
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James G. Larkin
Elva H. Anderson
Secretary

April 14, 1989

Mr. John Garr
Community Affairs & Public Relations Director
175 East 400 South #3
Suite 800
Salt Lake City, UT 84111

Dear Mr. Garr:

During our recent conversation you asked me the official status of the approach to your property from our highway SR-264.

I have checked our records and find these approaches were pre-approved in our Right-of-Way from the United States Forest Service and, therefore, they would automatically be permitted by UDOT to Coastal States Energy.

Sincerely,

L. Archie Hamilton
District Four Pre/Construction Engineer

bt

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Areas 8, 9, & 10. These areas make up the conveyor bench that goes down Eccles Canyon and is shown on Map No. 3.2.3-3. These areas contain 1.8 acres, .7 acres and 3.5 acres, respectively, and have been classified as an "Alternative Sediment Control Area." The conveyor drainage system entails outsloping where feasible and insloping above fragile or unvegetated areas, thereby directing runoff to pre-determined cross drains which direct the water to well established vegetated slopes, rocky slopes, and in selected locations to strawbales and/or silt fences. This system has worked very well since its inception and no observed sediment has left the conveyor bench.

The Permittee recognizes that the scale of Map No. 3.2.3-3 is not a very workable scale. However, it is all that is available at this point in time. The Permittee commits to submitting a better scale map showing the conveyor bench at least 120 days prior to the start of construction of the overland conveyor.

Area 11. This area is the upper well house area and is shown on Map No. 3.2.3-3. This area contains approximately .02 acres and has been classified as an "Alternative Sediment Control Area." The area is basically a roadway to the well house and, therefore, the area has not been reseeded. The area is lined with strawbales and/or silt fences to treat the runoff water. The Permittee recognizes that the scale of Map No. 3.2.3-3 is not a very workable scale and does commit to submitting a more workable scale map of this well to the Division by September 1, 1990.

Area 12. This area is the lower well house area and is shown on Map No. 3.2.3-3. This area contains approximately .04 acres and has been classified as an "Alternative Sediment Control Area." This area is also basically a roadway to the well house and has not been reseeded. The area is lined with strawbales and/or silt fences to treat the runoff water.

The Permittee recognizes that the scale of Map No. 3.2.3-3 is not a very workable scale and commits to submitting a more workable scale map of this well house to the Division by September 1, 1990.

Area 13. This area is the Railroad Loadout well house area and is shown on Map No. 3.2.3-3. This area contains approximately .01 acres of area and has been classified as an "Alternative Sediment Control Area." This area has a row of strawbales around it to treat any surface runoff water.

The Permittee recognizes that the scale of Map No. 3.2.3-3 is not a very workable scale and commits to submitting a more workable scale map of this well house to the Division by September 1, 1990.

Area 14. This area is the highway approach to the truck dump area at the Railroad Loadout area and is shown on Map No. 3.2.1-3. This area contains .31 acres and has been classified as a "Special Exempt Area." The area extends from the shoulder of SR-264 to the entrance gates of the Railroad Loadout area. This road approach is paved and is part of the permitted area and will be reclaimed during final reclamation; however, this area falls within the rights-of-way of SR-264 (refer to UDOT letter dated 4-14-89 from L. Archie Hamilton, District Four Pre/Construction Engineer, page 3-64F). The Permittee has no control over the activity of UDOT or the public who utilize this approach. Therefore, the Permittee is not responsible for activities (other than his own) which occur on this approach.

Area 15. This area is just north of the truck dump and is shown on Map No. 3.2.1-3. This area contains 2.95 acres and has been classified as an "Alternative Sediment Control Area." This area has been reseeded and has a well established cover of grass and forbs. Where needed, the toe of the slope is lined with strawbales to treat any runoff. Part of the area also has a collection ditch below the strawbales. Where needed, this ditch has a series of strawbales across the

drainage at 15-20 feet intervals. Much of the ditch has become well grassed-in and is almost indistinguishable from the adjacent undisturbed areas and does not need any additional silt control devices.

Area 16. This area is south of the truck dump and is shown on Map No. 3.2.1-3. This area contains .51 acres and has been classified as an "Alternative Sediment Control Area." The area is basically the fill slope of the access road. The slope has been reseeded and basically has a well established cover of vegetation. The ditch at the toe of the slope has a series of strawbales to treat any surface runoff water.

Area 17. This area is adjacent to the sediment pond and south of the pond and is shown on Map No. 3.2.1-3. This area contains .48 acres and has been classified as an "Alternative Sediment Control Area." Much of this area has been reseeded. Some of the area has been paved. There are strawbales and/or silt fences and three small catch basins to treat any runoff water. One of these basins is on the UDOT rights-of-way of SR-96. This treatment basin location has been approved by UDOT (refer to UDOT letter dated 7-18-89 from L. Archie Hamilton, District Four Pre/Construction Engineer, page 3-64J).

Areas 18 and 19. These areas are adjacent to the Railroad Loadout structure and are shown on Map No. 3.2.1-3. These two areas together contain .2 acres and have been classified as "Alternative Sediment Control Areas." The two areas have been covered with approximately 4 inches of clean 2-inch rock material to treat any surface runoff water.

Areas 20, 21, and 22. These areas are the highway approaches from SR-96 to the Railroad Loadout area itself (two approaches), and the area south of the loadout structure. These areas are shown on Map 3.2.1-3. These areas contain .1 acre and have been classified as "Special Exempt Areas." These road approaches are

State of Utah
UTAH DEPARTMENT OF TRANSPORTATION

Eugene H. Findlay, C.P.A.
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Gene Sturzenegger, P.E.
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District Four Director

Route #3 Box 75C5
940 South Carbon Avenue
Price, Utah 84501
(801) 637-1100

TRANSPORTATION COMMISSION
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Vice Chairman
R. Lavaun Cox
Todd G. Weston
James G. Larkin
Elva H. Anderson
Secretary

July 18, 1989

Mr. John M. Garr
Coastal States Energy Company
175 East 400 South
Suite 800 Box 3
Salt Lake City, Ut 84111

Dear John:

In your letter dated June 21, 1989 you made reference to a DOGM requirement for UDOT authority to use approaches to SR-96 and SR-264. As you are aware these approaches were constructed for the purpose of Coastal States Energy (Utah Fuel Company) to ingress and egress the state highway system in your general mining operations in Eccles Canyon; therefore, the authority for usage was pre-approved prior to highway construction. No additional approvals are necessary.

Concerning the silt retention fence in the drainage ditch within the right-of-way along US-96 in the train loadout area; we do not object to this installation because it would aid in the elimination of silt entering into Eccles Creek/Pleasant Valley Creek drainage. This effort on your part is a positive mitigation for both Utah Department of Transportation and Coastal States Energy.

If you have any further questions, please call.

Sincerely,

L. Archie Hamilton
District Pre/Construction Engineer

bt

pc: Dyke LeFevre, P.E., District Director

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paved. Area 20 also contains a small catch basin to treat water from the area that is not paved and additional treatment for water leaving the paved area. All of these areas are part of the permitted area and will be reclaimed during final reclamation; however, these areas fall within the rights-of-way of SR-96 (refer to UDOT letter dated 7-18-89 from L. Archie Hamilton, District Four Pre/Construction Engineer, page 3-64J). The Permittee has no control over the activities of UDOT or the public who utilize these approaches; therefore, the Permittee is not responsible for the activities (other than his own) which occur on these approaches.

Area 23. This area is the South Fork Breakout Area and is shown on Map No. 3.2.11-1. This area contains .96 acres and has been classified as an "Alternative Sediment Control Area." This entire area was reseeded in the Fall of 1988. The runoff water is treated with strawbales and/or silt fences and excelsior mats. The small pad area in front of the portals drains into the mine and then is pumped back to the surface for treatment in the sedimentation pond.

Area 24. The access road to the Disposal Site is shown on Map No. 3.2.8-1. It contains 3.3 acres and is classified as an "Alternative Sediment Control Area". A small area of .1 acre was newly disturbed. This area has been reseeded and is covered with excelsior matting. Any runoff water leaving this entire area enters the road drainage and is then filtered through natural vegetative cover.

Area 25. The waste rock disposal site is shown on Map No. 3.2.8-1. It contains 1.57 acres and is classified as an "Alternative Sediment Control Area". The runoff from the entire area drains into the collection pit. This pit, designed to contain the 25 year, 24 hour storm runoff, will be maintained for the life of the mine and during reclamation.

On all areas not reporting to a sediment pond, the alternate sediment control measure such as strawbales, silt fences, catch basins, excelsior mats, etc. will be maintained until there is adequate vegetative cover to properly filter any surface runoff. When this occurs, the alternate control measures will be removed and not maintained.

Maintenance is done on all structures (straw bales, silt fences and catch basins) a minimum of three times a year. It is done first in the spring as soon as they are accessible after snow melt, second during mid-summer, and third in late fall just before snow fall. All areas are observed for effectiveness almost daily by trained mine personnel and if deficiencies are seen, corrective action is taken.

3.3 TIMING OF OPERATION

The construction phase of the Skyline Mines project commenced in the summer of 1980. The construction phase included the dirtwork and installation of surface facilities and premining activities such as portal conveyor slope drivage. The construction phase continued during 1982 with the installation of surface facilities and portals. Construction is expected to continue throughout the life of the mines to support and maintain the operation.

No. 3 mine commenced coal production in October 1981. The total period of coal production is expected to be 33 years: life of Mine No.1, 30 years; life of Mine No.2, 27 years; and life of Mine No. 3, 33 years. Maps 3.3-1 and 3.3-2 show the five year projection for mining activity in both the Upper O'Connor and Lower O'Connor seams respectively.

Cessation of Operation

Prior to any temporary cessation of the Skyline mining operations for a period of 30 days or more, or as soon as it is determined that a temporary cessation will extend beyond 30 days, the Permittee will submit to the appropriate regulatory authority a notice of its intent to cease or abandon operations.

The Permittee's notice will state the exact number of surface acres and extent of subsurface strata which had been affected by underground or surface developments in the permit area prior to cessation or abandonment of mining. The cessation notice will also state the extent and kind of surface reclamation completed to date and the backfilling, regrading, revegetation, environmental monitoring, underground opening closures completed. It will also state water treatment activities the Permittee plans to continue during the temporary cessation period. During periods of temporary cessation, the Permittee

will effectively support and maintain all surface access openings to underground operations, and secure surface facilities in areas in which there are no current operations, but operations are to be resumed under an approved permit. The Permittee acknowledges that temporary abandonment shall not relieve the obligation to comply with any provisions of the approved permit.

Following a decision to permanently cease mining operations at the Skyline Mines, all affected areas will be permanently reclaimed in accordance with the approved permit. Unless approved as suitable for postmining landuse purposes or environmental monitoring, the surface equipment, structures, and other facilities no longer required for mining activity and monitoring will be removed and affected lands reclaimed.

3.4 AREA AFFECTED BY EACH PHASE OF OPERATIONS

The area affected by the Skyline Mines project can be divided into two major categories:

(a) Surface acreage disturbed by construction/installation of coal handling and associated facilities, and
(b) Surface acreage overlying underground mine workings.

Disturbed Surface Acreage

The offices, bathhouse, workshop, portal, fans, and other necessary facilities utilize a site of 36.40 acres. Approximately .26 acres is used for water tank and well pads. The coal loading and handling facility at the mouth of Eccles Canyon utilizes approximately 13.82 acres, of which a sedimentation pond requires 0.6 acres. The covered conveyor belt, transporting material from the mine portals to loading points, disturbs 6.00 acres. The waste rock disposal site utilizes 1.67 acres and the access road to the disposal site utilizes 3.30 acres. The South Fork breakout area has disturbed .96 acre. In total, the surface acres disturbed and permitted is 62.41 acres. The disturbed and permitted area and bonded area for the mine portal loadout area, Waste Rock Disposal area, and miscellaneous areas are shown on Maps 3.2.1-1, 3.2.1-3, 3.2.8-1 and 3.2.3-3, respectively.

The pre-mining phase of earth work and dirt removal commenced in the spring of 1980 and was completed in 1981. The actual construction and installation of facilities necessary for coal mining and handling began in early 1981.

Area Overlying Underground Mining

Interpretation of the available geological data and bore holes information indicates that certain portions of all three seams within the leasehold are non-mineable. Total acreage values for mineable acreage do not include such areas. Surface area to be affected by underground mining is shown in Section 4.17 Subsidence Control Plan.

3.5 MAJOR EQUIPMENT LIST

The proposed mine plan will utilize up to 13 mining units. Up to eight units will be continuous miners and up to five will be longwalls.

Table 3.5-1 is a current (April, 1986) Equipment List by Section. This list is continuously updated and a current list is available at the mine.

TABLE 3.5-1

EQUIPMENT LIST BY SECTION

2 NORTH SUBMAINS PRODUCTION SECTION

MACHINE	MAKE	MODEL	SERIAL
CM-001	Joy Continuous Miner	12CM	3237
RB-004	Fletcher Roof Bolter	HDDR-13-A	82064
CH-001	Jeffrey Coal Hauler	4114	37967
CH-002	Jeffrey Coal Hauler	4114	37968
CH-003	Jeffrey Coal Hauler	4114	37966
FB-001	Stamler Feeder Breaker	BF-14B-2-4C	12089
UV-001	Eimco Utility vehicle	975	975-0644
UT-001	Eimco Utility Tractor	936	143
PW-005	Lincoln Portable Welder	SA25003-152	A-1054616
BP-003	Jeffrey Booster Pump	Kobe	764033
LU-003	Lunch Unit	SUFCo	
FT-003	Fuel Trailer	SUFCo	
LT-003	Wagner Lube Truck	UT45AS	14779
MT-002	Ranger Mantrip	R200	82-256
RB-013	Kubota Boss Buggy	L2250	10875
FF-002	Face Fan	AMF-170-30	
FF-003	Face Fan	AMF-170-30	
MS-002	Maintenance Station	Aurora	
PC-003	Power Center Line Power	1000PC	7749
SP-004	100HP Tank Pump		
SP-001	40HP Tank Pump		

TABLE 3.5-1 (Continued)

EQUIPMENT LIST BY SECTION

1ST RIGHT - 1ST WEST PRODUCTION PANEL

MACHINE	MAKE	MODEL	SERIAL
CM-003	Joy Continuous Miner	12CM	JM2266
RB-002	Fletcher Roof Bolter	HDDR-13	85078
CH-213	Wagner Coal Hauler	MTT F20-18S	138-76
CH-008	Jeffrey Coal Hauler	4114	38449
CH-009	Jeffrey Coal Hauler	4114	38450
FB-002	Stamler Feeder Breaker	BF-L4B-2-7C	12223
LT-002	Getman Lube Truck	200	5154
MT-001	Ranger Mantrip	R200	81-251
BB-006	John Deere Boss Buggy	750	3599
FT-002	Fuel Trailer	Aurora	
PC-002	PDP Power Center	1000 KVA	129B2B203-01
HT-001	Hydraulic Trailer	NA	
GT-001	Garbage Trailer	NA	
ST-001	Supply Trailer Lubics	L-1000M	9811059
LU-002	Lunch Unit	NA	
BP-001	Jeffrey Booster Pump	9050-P-2AGH	821144627
FF-007	Spendrup Face Fan	AMF170/P50	20531-205411
FF-00	Face Fan (Spendrup)	AMF170-P50	3075-2G2973A-
3TT-004	Tool Trailer	NA	
PT-002	Cable Power Trailer	NA	
ST-009	Supply Trailer Aurora	NA	
UT-003	Wagner Utility Tractor	LST 5S	472-P1
PW-002	Lincoln Portable Welder	SA-250-D3 152	A-98678
ST-002	Supply Trailer Lubics	L-1000M	38211135
SD-001	Long Airdox Slinger Duster	MD5D	MD5-D20

TABLE 3.5-1 (Continued)

EQUIPMENT LIST BY SECTION

2ND RIGHT - 1ST WEST DEVELOPMENT SECTION

MACHINE	MAKE	MODEL	SERIAL
CM-002	Marietta Continuous Miner	3080 LP	7817
RB-001	Fletcher Roof Bolter	HDDR-13-A	81129
CH-004	Jeffrey Coal Hauler	4114	38007
CH-005	Jeffrey Coal Hauler	4114	3808
CH-006	Wagner Coal Hauler	LMTT410S	218-82
FB-003	Stamler Feeder Breaker	BE14B-7C	12222
UV-002	Eimco Utility Vehicle	975	975-0648
MT-003	Getman Mantrip	R-62-11 PC	4751
BB-012	Kubota Boss Buggy	L2250	10874
BP-002	Jeffrey Booster Pump	617-2	81144388
GT-001	Garbage Trailer	NA	
PT-001	Cable Trailer	NA	
Ht-002	Hydraulic Hose Trailer	NA	
ST-004	Lubics Supply Trailer	L1000M	38211137
PC-005	Power Center-Linepower	1000PC	7752
FT001	Fuel Trailer	NA	
ST-003	Lubics Supply Trailer		
ST-00	Lubics Supply Trailer		
LT-001	Getman Lube Truck	200	5153
UT-002	Wagner Utility Tractor	LST 5S	470081
PW-001	Lincoln Portable Welder	SA250-D3-152	1-975930
FF-001	Spendrup Face Fan	MAF270H1	1533-1534
FF-006	Jeffrey Face Fan	12CBW	2G-3329A-0 27670
MS-001	Maintenance Section	NA	
LU-001	Lunch Unit	NA	
SP-002	40HP Tank Pump	Duron	286362
ST-006	Supply Trailer Lubics	L-1000M	9811058
ST-010	Supply Trailer		

TABLE 3.5-1 (Continued)

EQUIPMENT LIST

OUTBY

MACHINE	MAKE	MODEL	SERIAL
BB-015	Ford Boss Buggy	A1012T	110353
BB-001	John Deere Boss Buggy	750	212
BB-007	Allis Chalmers Boss Buggy	A6 50201	5935-81
BB-010	Kubota Boss Buggy	L2250	L2250-10912
BB-011	Kubota Boss Buggy	L2250	L2250-10923
FB-004	Stamler Feeder Breaker		
PW-004	Lincoln Portable Welder	SA250D3-152	A1054614
UT-004	Eimco Utility Tractor	911	911-0645
UT-005	Wagner Scoop Tractor	ST-2DS	245-80
UL-010	Eimco Scoop	915E	915-0160
UL-011	Eimco Scoop	915E	915-1059
RB-003	Secoma Roof Bolter	PEC-22M	2D18
RD-001	Secoma Rock Drill	PEC-22M	
RG-002	Arnold Road Grader	UG/620	
CH-007	Wagner Coal Hauler	LMT-410S	221-82
CH-212	Wagner Coal Hauler	MTT-F20-18S	419-75
SD-002	Long Airdox Slinger Duster	MD5D	MD5-D23
AC-001	Ingersol Rand Compressor	IR-P-375-W-P	127369U82942
AC-002	Ingersol Rand Compressor	P-175-WD	139220U84953
BW-001	Dover Belt Winder	24-48	
PD-001	Pod Duster		
PD-002	Pod Duster		
PD-003	Pod Duster		
PD-004	Pod Duster		
PM-001	Portable Mixer	Stone 6CM	234037
PP-001	Permanent Sump	Ing.Rand GTB	0784/804
PP-002	Permanent Sump	Ing.Rand GTB	0784/805
RT-001	Retreiver Trailer	Skyline	
TT-003	Tool Trailer	AV Compressor	
ST-005	Lubics Supply Trailer	L-1000M	9811060
TT-008	Tool Trailer	NA	

TABLE 3.5-1 (Continued)

EQUIPMENT LIST

OUTBY - (Continued)

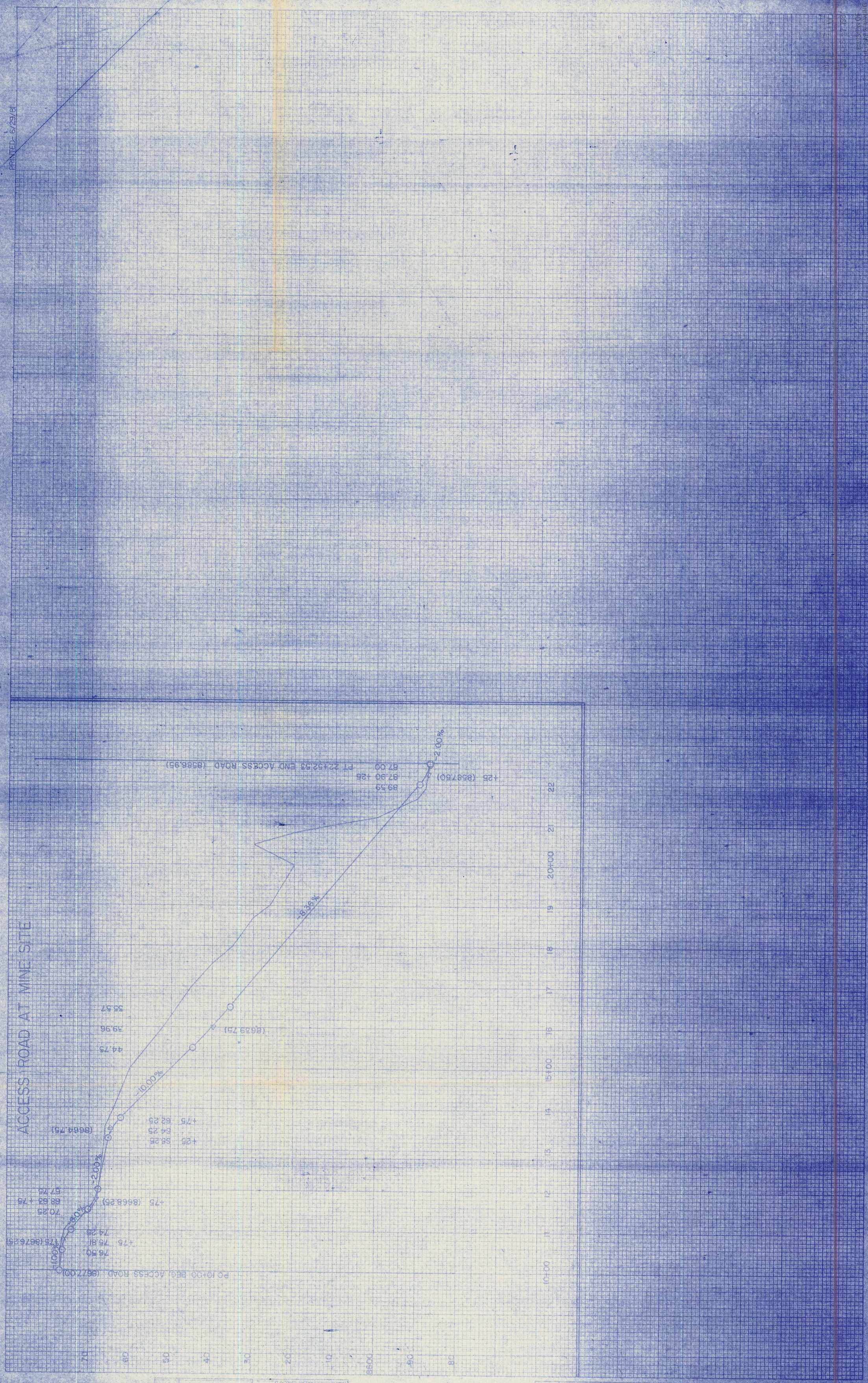
MACHINE	MAKE	MODEL	SERIAL
TT-006	Tool Trailer	(Plumbing Tools)	Belt Move
SV-001	Ranger Electrician Veh.	RA-100	RA-100-81-24
3BT-001	Getman Boom Truck	A-64	5458
BB-002	Allis Chalmers Boss Buggy	5030	3339
BB-003	Allis Chalmers Boss Buggy	5030	3332
BB-004	John Deere Boss Buggy	750	4366
BB-009	Kubota Boss Buggy	L2250	L2250-10914

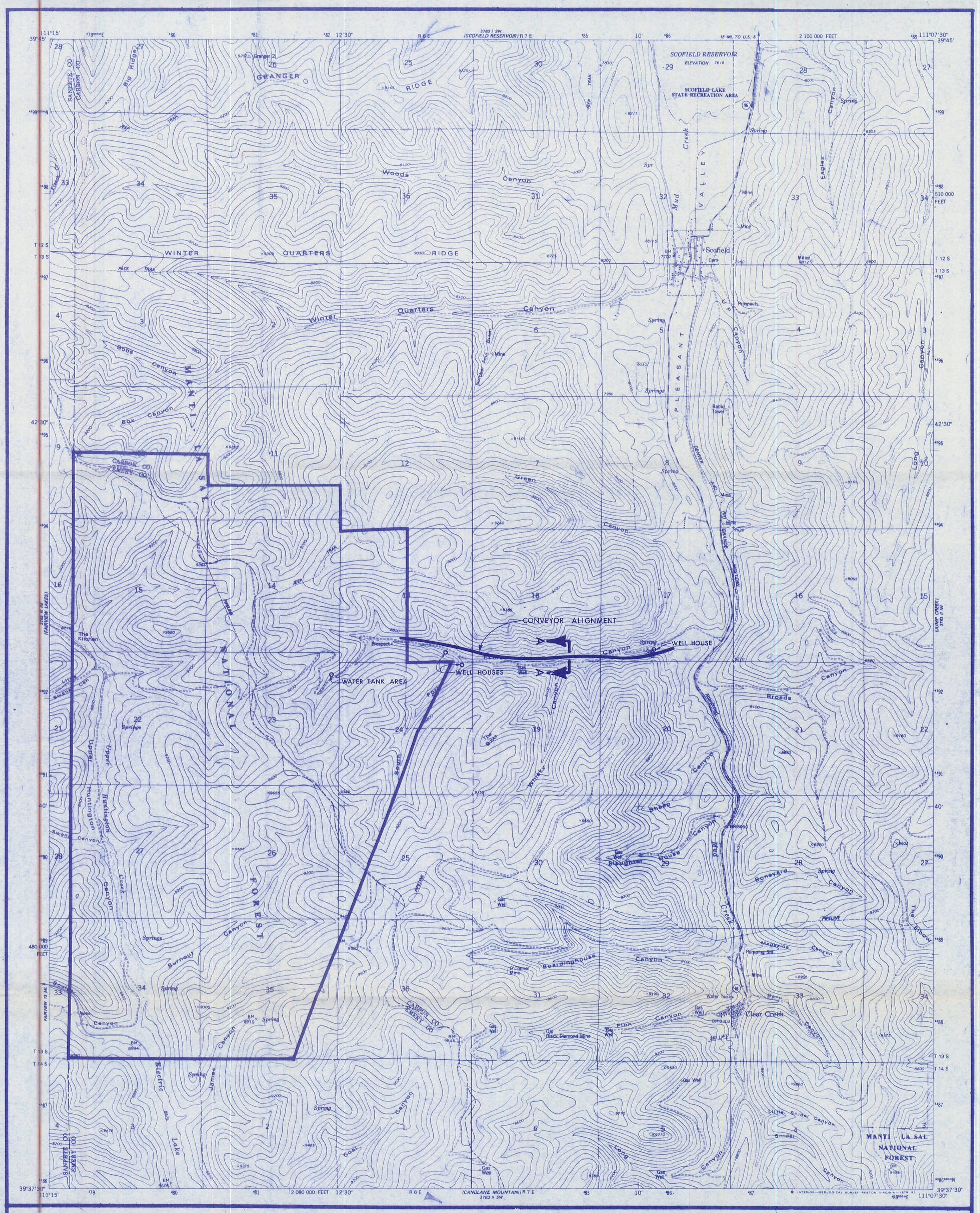
EMPLOYEE TRANSPORTATION

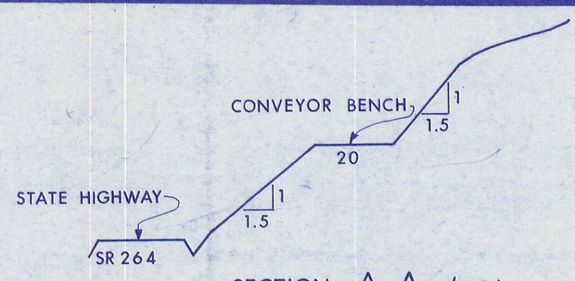
	MAKE	VEHICLE YEAR
BB008	Jeep CV8 MCJ 8 84075	1985
BU-3122	International Bus	1981
BU-3125	Blue Bird Two-Wheel Bus	1982
BU-3126	Blue Bird Four-Wheel Bus	1982
999	Ford Van, Price, Rental	1985
RV-3134	Dodge Van - Blue	1985
PU-3131	Chev. 3/4 Ton PU	1984
PU-3132	Chev. 3/4 Ton PU	1984
PU-3364	Chev. 1/2 Ton PU - Brown	1982
RV-3141	Jeep	1986
RV-3119	Chev. Suburban - White	1981
RV-3130	Chev. Impala	1984
RV-3136	Chev. Blazer	1985
PU-3140	Chev. Crew Cab	1985
PU-3143	Chev. Crew Cab	1986
RB-3124	Ford Ambulance - Surface	1978
RB-3129	Chev. Ambulance - Underground	1984

3.6 EXISTING STRUCTURES TO BE USED IN THE OPERATION

There are no pre-existing structures within the permit area which have been or will be used in conjunction with the mining operation.


UTAH FUEL CO.
ACCESS ROAD
PROFILE
3.2
PRINTED- 6/29/81
ACCESS ROAD AT MINE SITE
PLATE 3, CROSS SECTION
K+E
10+00
11
12
13
14
15+00
16
17
18
19
20+00
21
22
PC 10+00 BEG. ACCESS ROAD (8677.00)
76.50
+75 75.81
74.25
+75 (8676.25)
70.25
+75 (8668.25)
68.63 + 75
67.75
-2.00%
-10.00%
+25 56.25
64.25
+75 62.25
(8664.75)
-10.00%
44.75
(8659.75)
29.96
55.57
-8.36%
+25 (8587.50)
89.59
87.30 +25
87.00 FT 22+52.53 END ACCESS ROAD (8586.95)
-2.00%
70
60
50
40
30
20
10
0+00
90
80
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE





SECTION A-A (TYP.)
NO SCALE

(1) THIS DRG ILLUSTRATES ONLY A CONCEPTUAL LOCATION FOR THE OVERLAND CONVEYOR

(2) REFERENCE IS MADE TO SECTIONS 3.2.3 AND 3.2.12 OF THE MINING & RECLAMATION PERMIT: THE PERMITTEE RECOGNIZES THAT THIS MAP IS NOT A VERY WORKABLE SCALE. HOWEVER, IT IS ALL THAT IS AVAILABLE AT THIS TIME. THE PERMITTEE COMMITS TO SUBMITING A MAP AT A BETTER SCALE SHOWING THE CONVEYOR BENCH AT LEAST 120 DAYS PRIOR TO THE START OF CONSTRUCTION OF THE OVERLAND CONVEYOR

NO.	DATE	REVISION	DRW.	CHK.	APP.

	DATE
DESIGNED BY:	
DRAWN BY: B. Guzman	6/86
CHECKED BY: WWS	9/89
APPROVED BY:	
APPROVED BY:	
REFERENCE DWGS.	

PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER 8632 WILLIAM W. SHRIVER STATE OF UTAH
W. W. Shriver 9-26-89

UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 719
HELPER, UTAH 84526

TITLE
TYPICAL CONVEYOR ALIGNMENT & CROSS SECTION

REV. NO.	LOCATION		MAP NO.
	SHEET 1 OF 1	SCALE 1" = 2,000'	DWG. NO. PLATE 3.2.3-2

Received 10.1.90

THE COORDINATES ON THIS MAP ARE BASED ON UTAH STATE PLANE COORDINATES (CENTRAL ZONE) USING A C.F.A.=1.000325546

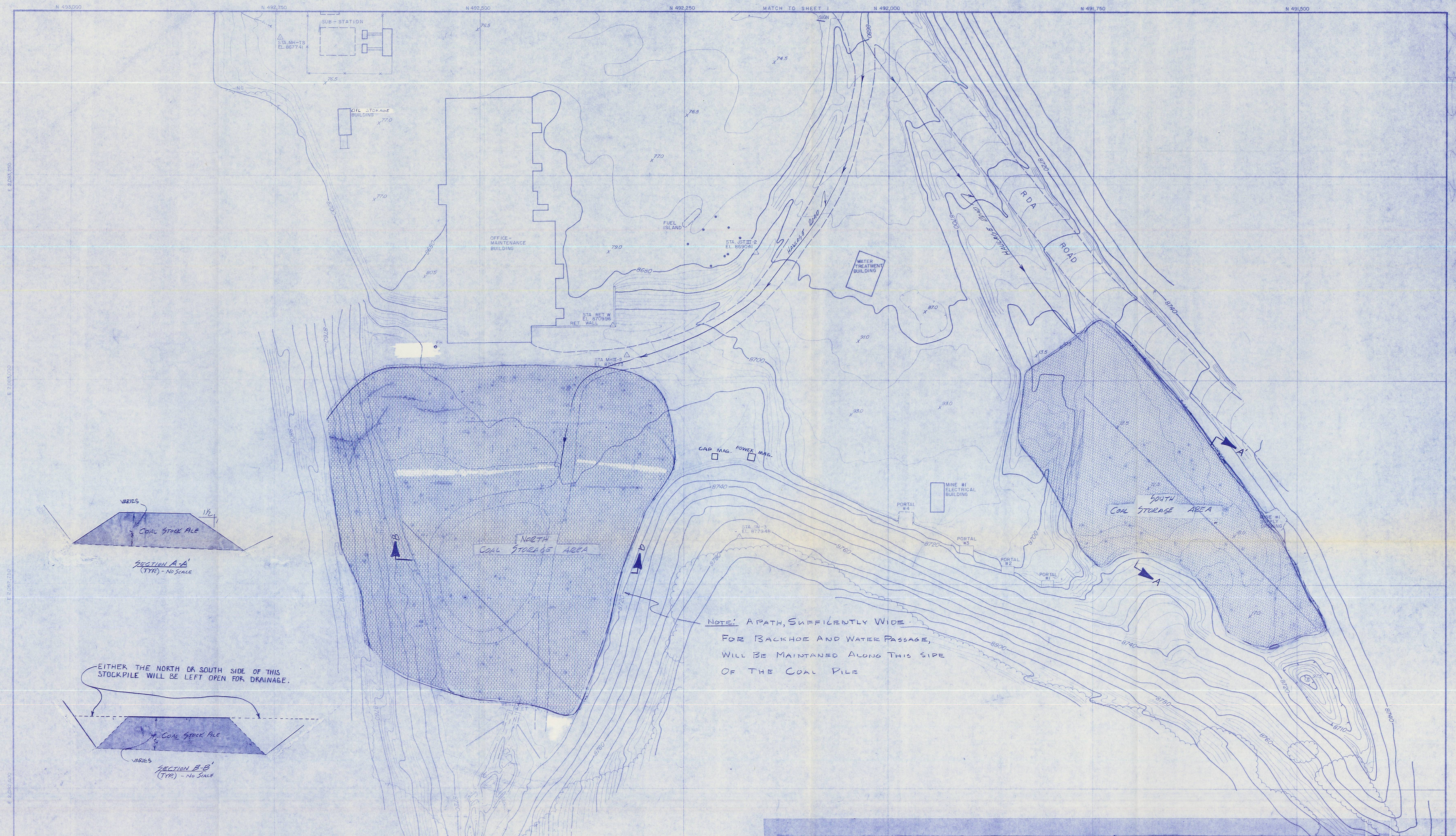
50 0 50 100 150

INFORMATION ON THIS DRAWING OBTAINED FROM TOPOGRAPHIC MAP OF ECCLES CANYON SHEET ONE OF TEN CARBON & EMERY COUNTY FOR UTAH FUEL COMPANY DATE OF PHOTOGRAPHY 07 OCTOBER, 1987 ORIGINAL CONTOUR INTERVAL 2' SCALE: 1" = 50'

RECEIVED APR 10 1991 DIVISION OF OIL GAS & MINING

Revisions			
Description	No. By Chkd Date	Description	

Scale: 1" = 50'	Date: 12/89	Dept Initial Date	Project: UTAH FUEL COMPANY SKYLINE MINES
Drawn: ACADIS		Civil	SCOFIELD, UTAH — ECCLES CANYON
Design:		Struct	Drawing Title: SUPPLEMENTAL SURFACE STORAGE FACILITY
Checked:		Mech	Project Number
APPROVALS		Elec	Drawing Number



APPROVAL	DATE	SCALE: 1" = 50'	DATE
W. Shinn	7-9-89	DESIGNED BY: Keith Zobell	12/84
K. Dodd	7-10-89	DRAWN BY: K.E. Vanderen	12/84
		CHECKED BY: Keith Zobell 7/89	12/84
		APPROVED BY: [illegible]	12/84
		APPROVED BY: Douglas E. Johnson	2/85

REV 1: REMOVE 2-18" CMP MINOR DRAINAGE & COAL PILES
REV 2: REMOVE DITCHES AROUND PILES W. Shinn 7-7-89
REV 3: REMOVE DITCHES ON SECTIONS W. Shinn 11-20-89

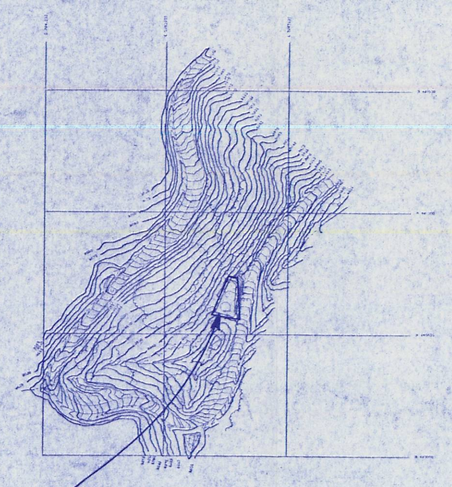
PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER No. 5665 DOUGLAS E. JOHNSON STATE OF UTAH
Douglas E. Johnson

UTAH FUEL COMPANY
SKYLINE MINE

NORTH - SOUTH
OPEN COAL STORAGE AREAS

Recorded 10-1-90

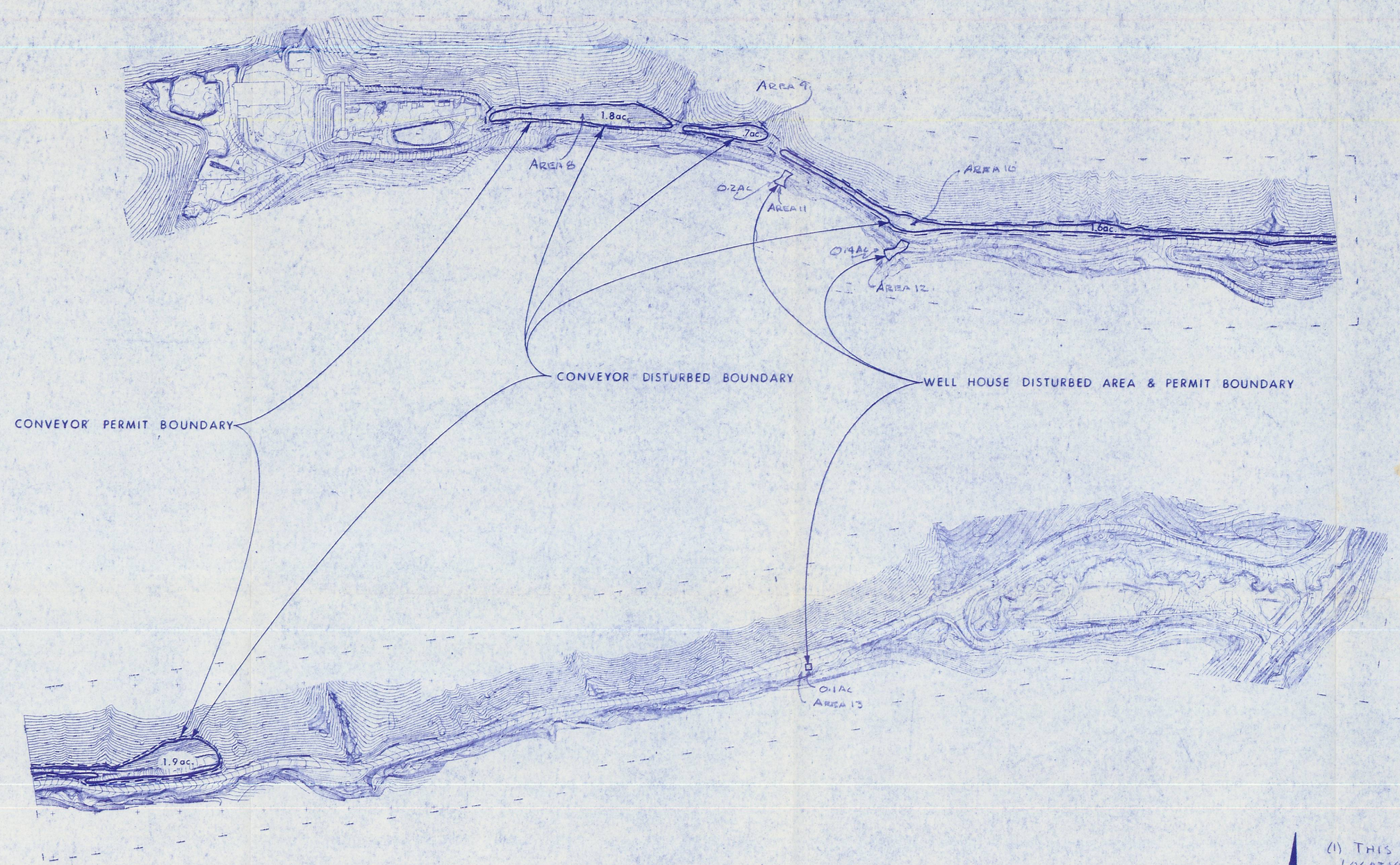
JOB NO.
DWG. NO. 70-40-004 R-1
MAP OR FIGURE NO. 3.2.3-4



WATER TANK AREA

DISTURBED AND PERMIT BOUNDARY

SCALE 1" = 400'



CONVEYOR DISTURBED BOUNDARY

WELL HOUSE DISTURBED AREA & PERMIT BOUNDARY

CONVEYOR PERMIT BOUNDARY

400' 0 400' 800' 1200'

SCALE 1" = 400'

CONTOUR INTERVAL 2'

(1) THIS DRG. ILLUSTRATES ONLY A CONCEPTUAL LOCATION FOR THE OVERLAND CONVEYOR.

(2) REFERENCE IS MADE TO SECTIONS 3.2.3 AND 3.2.12 OF THE MINING & RECLAMATION PLAN. THE PERMITTEE RECOGNIZES THAT THIS MAP IS NOT A VERY WORKABLE SCALE. HOWEVER, IT IS ALL THAT IS AVAILABLE AT THIS TIME. THE PERMITTEE COMMITS TO SUBMITTING A MAP AT A BETTER SCALE SHOWING THE CONVEYOR BENCH AND WELL HOUSES AT LEAST 120 DAYS PRIOR TO THE START OF CONSTRUCTION OF THE OVERLAND CONVEYOR

Received 10.1.90

NO.	DATE	REVISION	DRW	CHK	APP.
3	11-89	Areas Notations Added			
2	9-89	Notes And Acreages Added Labels			
1	4-89	Add Watertank and Well House Areas			

		DATE
DESIGNED BY:	K. ZOBELL	10-88
DRAWN BY:	B. GUYMON	10-88
CHECKED BY:		
APPROVED BY:		
APPROVED BY:		
REFERENCE DWGS.		

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER 2832 WILLIAM W. SHRIVER STATE OF UTAH

W. W. Shriver 9-26-89

UTAH FUEL COMPANY
SKYLINE MINES

P.O. BOX 719
HELPER, UTAH, 84526

TITLE

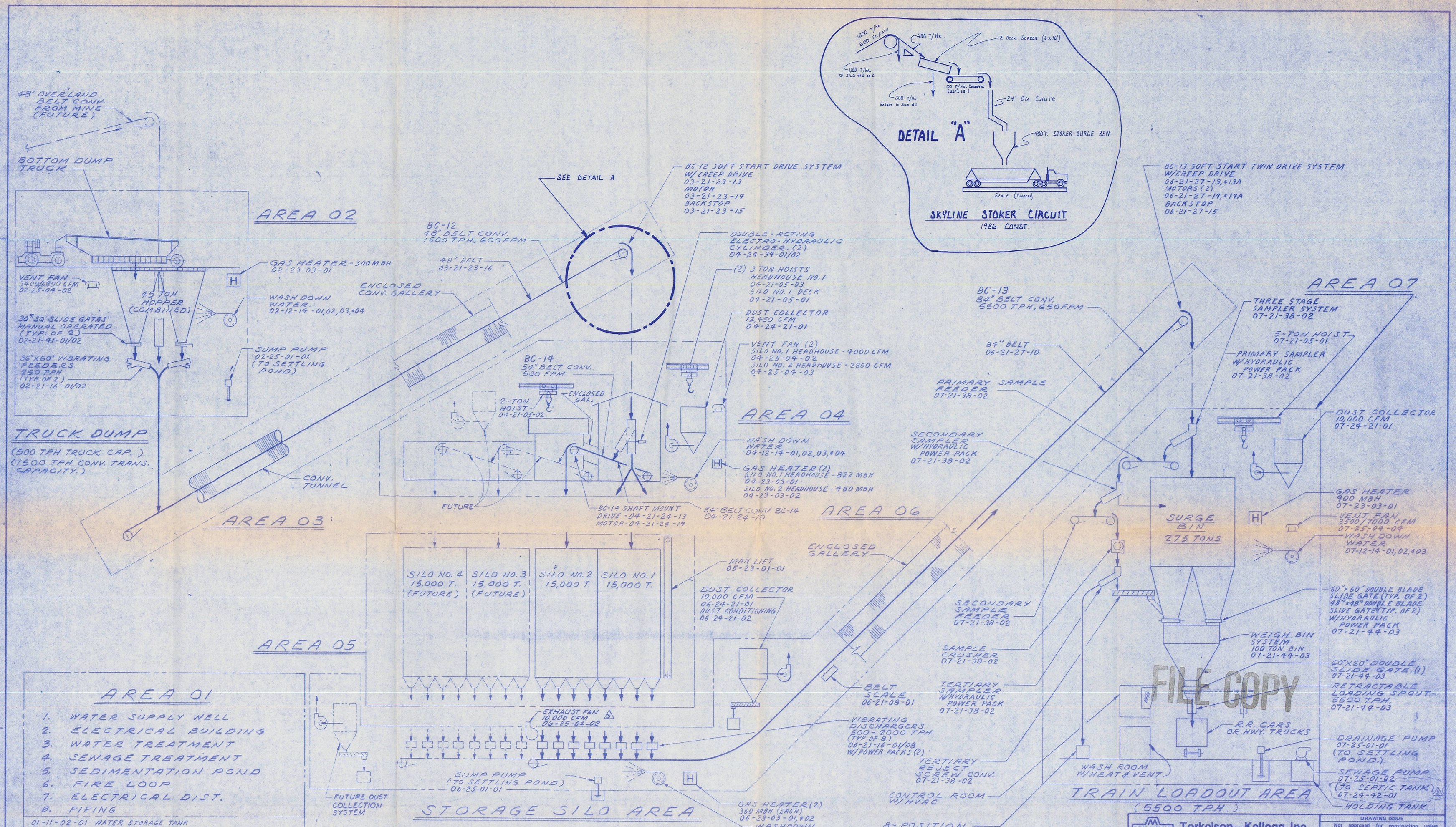
ECCLES CANYON

MISCELLANEOUS PERMIT AND DISTURBED BOUNDARY AREAS

REV. NO.	LOCATION		MAP NO. 3. 2. 3 - 3
	SHEET OF	SCALE 1" = 400'	DWG. NO.

Topography Compiled By Photogrammetric Methods - INTERMOUNTAIN AERIAL SURVEYS, Salt Lake City, Utah - Oct 19[illegible]-8761

MOSER ENGINEERING CO.



REFERENCE DWG. NO.	DESCRIPTION
01-G-004	MINE LOADOUT FACILITY - ELEV.
02-G-001	TRUCK DUMP - G.A.
05-G-001	STORAGE SILO - G.A.
06-G-001	SILO RECLAIM TUNNEL - G.A.
07-G-001	LOADOUT FLD. - G.A.

REFERENCE DWG. NO.	DESCRIPTION

	DATE	REVISIONS	BY	CKD	AP'D
3	6-2-82	"EXHAUST FAN" W/HS VENT FAN - MOVED	H.R.		

	DATE	REVISIONS	BY	CKD	AP'D
A	8-21-81	ISSUED FOR CLIENT APPROVAL	JKH		
B	9-30-81	CUSTOMERS COMMENTS	JKH	H.F.C.	
0	10-12-81	ISSUED FOR CONSTRUCTION	JKH	H.F.C.	
1	3-7-82	ADD EQUIP. NO'S, DELETED HP CALLOUTS.	H.F.C.	CH	
2	4-30-82	CHG. SEPTIC TANK FROM AREA 01 TO 07	H.F.C.	J.C.	

	BY	DATE
APPROVED		
APPROVED		
APPROVED		
APPROVED		
APPROVED		

DATE PRINTED

	BY	DATE
DESIGN	JKH	7-31-81
DRAWN	JKH	8-3-81
CKD	H.F.C.	8-11-81
CKD		

ISSUED FOR CONSTRUCTION
DATE JUN 08 1982

Torkelson—Kellogg Inc.
ENGINEERS - CONSTRUCTORS
SALT LAKE CITY - UTAH

COASTAL STATES ENERGY CO.
SKYLINE MINE PROJECT
STORAGE & LOADOUT FACILITY

RECEIVED
AUG 29 1986
DIVISION OF OIL, GAS & MINING

FLOW SHEET

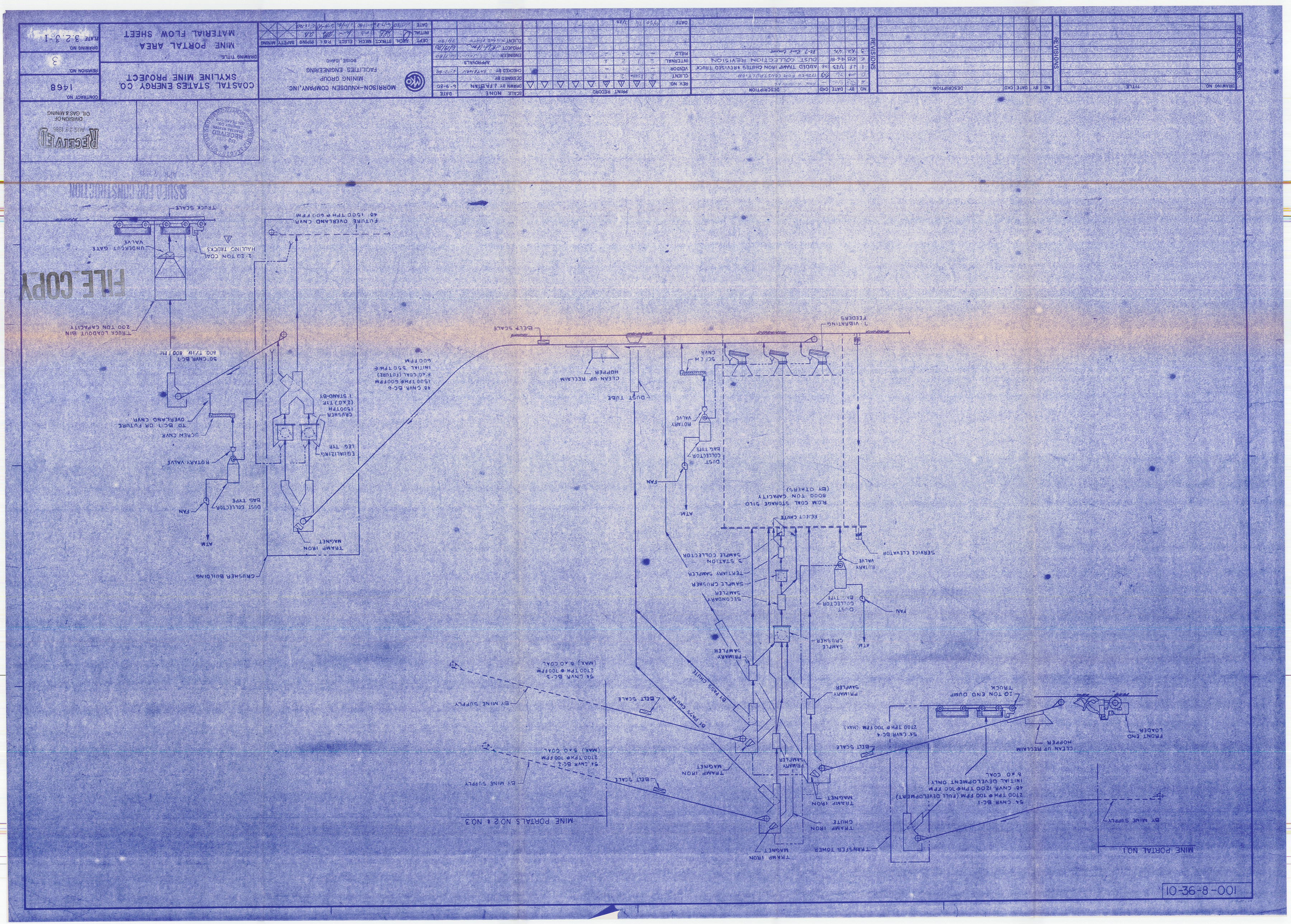
DRAWING ISSUE
Not approved for construction unless signed and dated. Destroy all prints bearing earlier date and/or revision.

ISSUED FOR	BY	DATE
PRELIMINARY		
COMMENT		
FINAL REVIEW		
APPROVAL		
CONSTRUCTION		

DRAWING CONTROL NO. | JOB NO. 3046

SCALE: —

DRAWING NO. PLATE 3.2.3-1A | REV. 3



REVISIONS				
NO.	BY	DATE	CKD	DESCRIPTION
A	RCS	7/11	CCS	ISSUE NOT COMPLETE
0	JHM	7/11	CCS	ISSUED FOR CONSTRUCTION
1	JLF	7/23	JHG	ADDED TRAMP IRON CHUTES & REVISED TRUCK
2	EGB	4-6-81		DUST COLLECTION REVISION
3	KA	4/14		80-7 Gate Change

REVISIONS				
NO.	BY	DATE	CKD	DESCRIPTION

REFERENCE DWGS.

DRAWING NO.	TITLE

REV. NO.	0	1	2	3						
DATE	6/15/80	7/11	7/23							

PRINT RECORD

SCALE NONE	DATE	
DRAWN BY J. FLATMAN	6-9-80	
DESIGNED BY		
CHECKED BY J. BATEMAN	6/19/80	
APPROVALS		
PROJECT MANAGER	6/19/80	
ENGINEER	6/19/80	
FIELD		
INTERNAL		
VENDOR		
CLIENT		
CLIENT MANAGER	7/11/80	

MRO
MORRISON-KNUDSEN COMPANY, INC.
MINING GROUP
FACILITIES ENGINEERING
BOISE, IDAHO

DEPT.	MECH.	STRUCT.	MECH.	ELECT.	P&I.	PIPING	SAFETY	MINING
INITIAL								
DATE	6/18/80	6-27-80	6-27-80	6/19/80	6-27-80	6-27-80	6-27-80	

COASTAL STATES ENERGY CO.
SKYLINE MINE PROJECT

DRAWING TITLE
MINE PORTAL AREA
MATERIAL FLOW SHEET

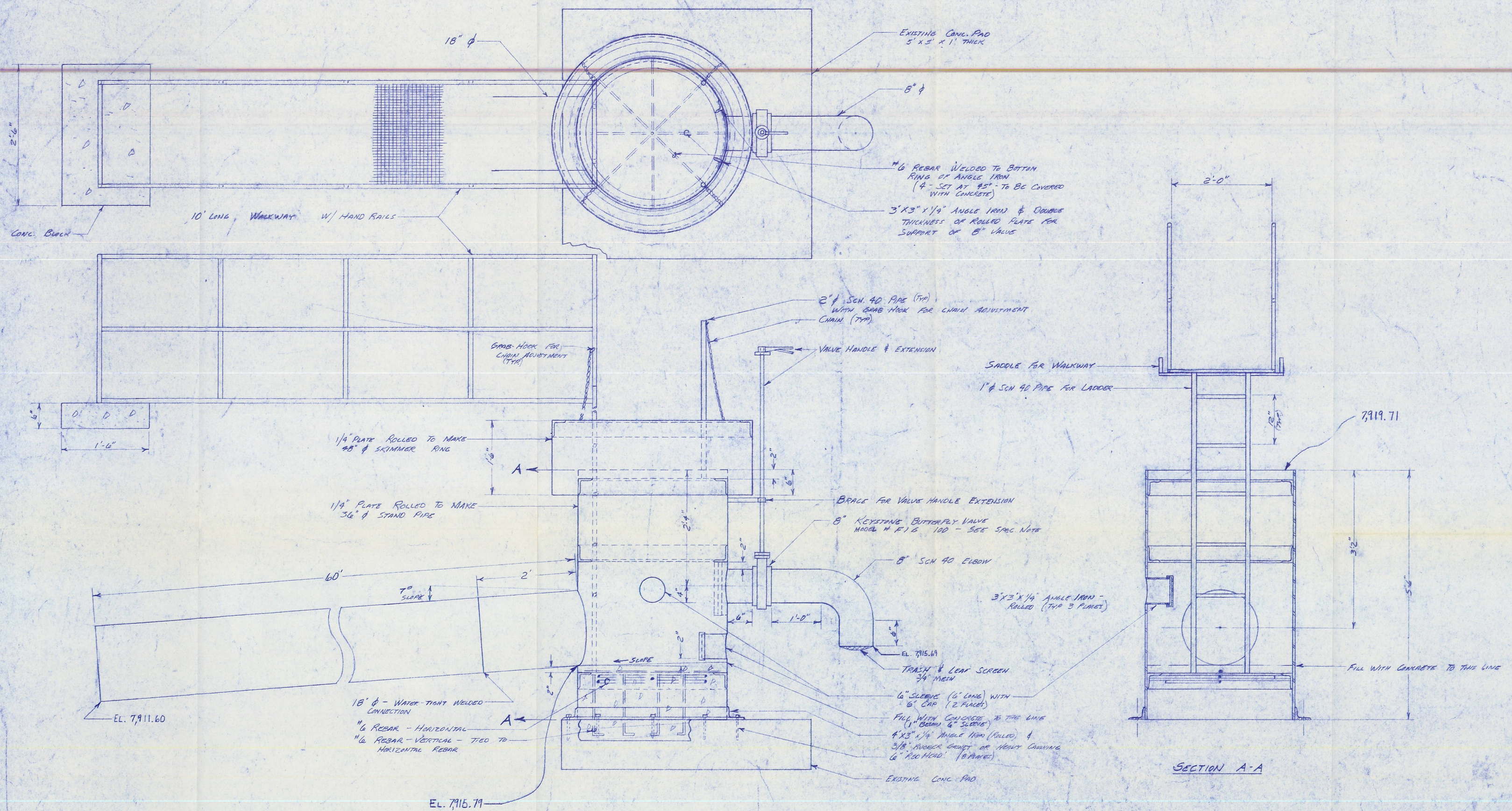
COMPANY NO. 1468
REVISION NO. 3
DRAWING NO. PLATE 3.2.3-1

RECEIVED
AUG 29 1986
DIVISION OF
OIL, GAS & MINING

ISSUED FOR CONSTRUCTION

FILE COPY

100-8-96-01



RECEIVED 10·1·90

8" VALVE SPECIFICATIONS — NO SUBSTITUTES
1) 8" KEYSTONE BUTTERFLY VALVE MODEL # F16 100
2) CAST IRON BODY
3) DISK - 316 STAINLESS STEEL
4) STEM - 18-8 - STAINLESS STEEL
5) RESILIENT SEAL - EPDM
6) NOTCHED PLATE HANDLE

NOTE:
1) COAT ALL OUTSIDE SURFACES WITH REL-TON ACTIVATED EPOXY PRIMER - 3 MIL. DFT. AND CORVAI-KOTE 505 POLYESTER EPOXY - 2MIL DFT. OR EQUIVALENTS.
2) COAT ALL INSIDE SURFACES WITH COAL TAR EPOXY
3) SEE DWG. 3.9.14 FOR SEDIMENTATION POND DETAILS

REV	DATE	APPROVAL	BY	SCALE: 1" = 1'-0"	DATE
1	6-15-87	ADDED ELEVATIONS	CAK / EEC	DESIGNED BY: KEITH ZOBELL	4-84
2	11-22-88	CHANGED ELEV. IN SECT A-A	EC	DRAWN BY: K.E. Weakland	4-18-84
3	1/89	ADDED ELEVATION TO DEWATER SYSTEM AND OUTLET	EC	CHECKED BY: Keenan / RCH 1/89	4/19/84
4	7/89	HOLD OUTLET RESTRICTION	WWS	APPROVED BY: D.E. Johnson / KEN 7-87	4-19-84
				APPROVED BY: W. Sluring	9-26-89

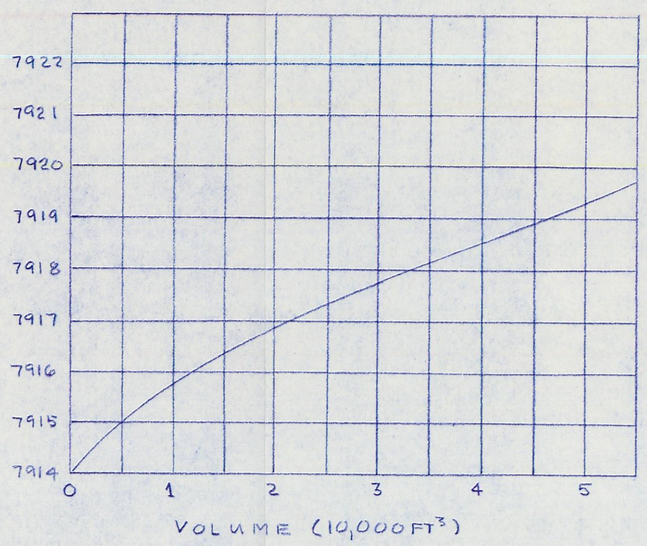
REV. 1 Hold Removed 9-26-89 WWS

PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER No. 5868 DOUGLAS E. JOHNSON STATE OF UTAH
Douglas E. Johnson

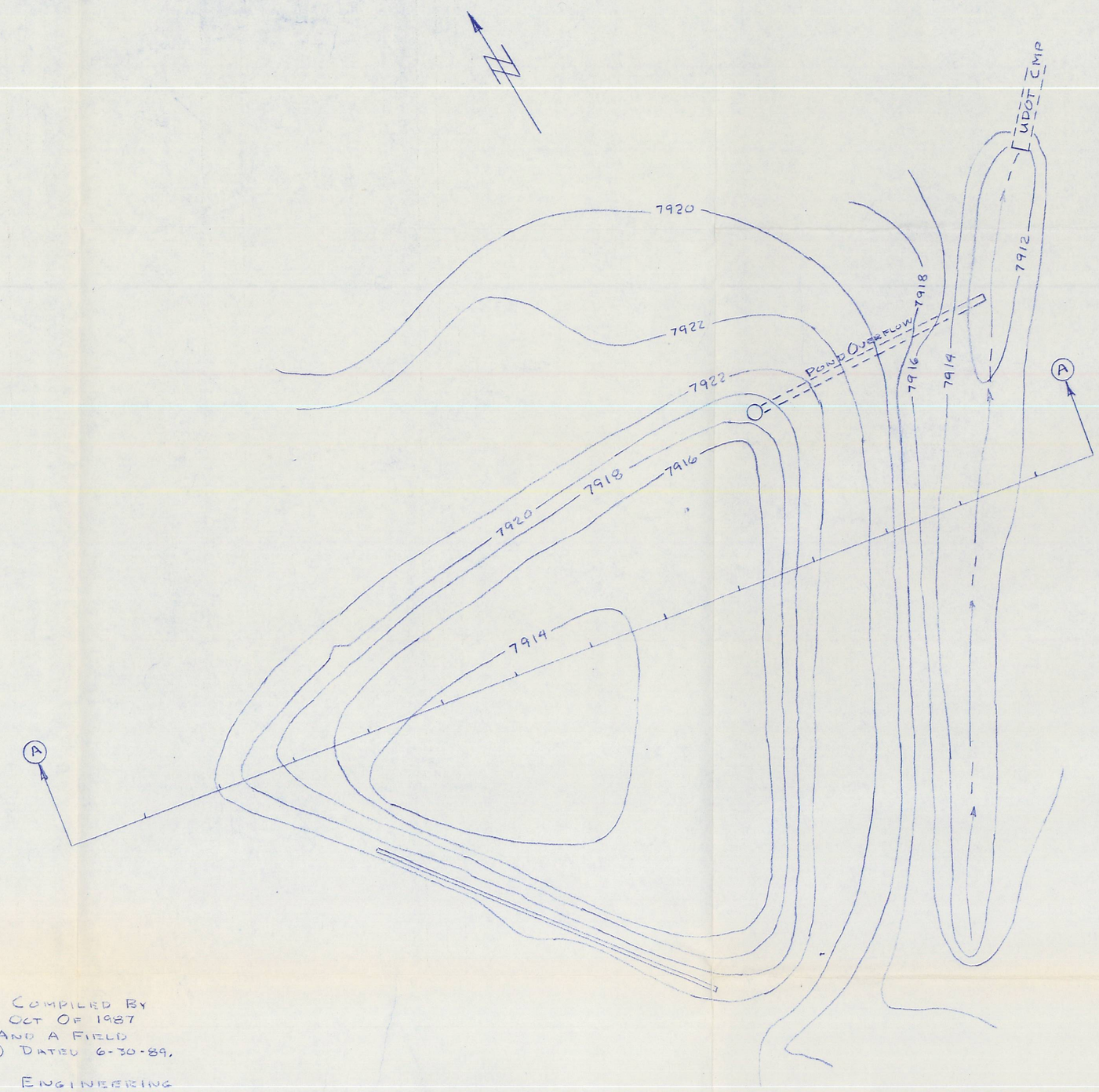
UTAH FUEL COMPANY
SKYLINE MINE

NEW INLET STRUCTURE FOR TRAIN LOADOUT SEDIMENTATION POND

JOB NO.
DWG. NO. ST 4 D 012 R-3
MAP OR FIGURE NO. Pg 1 of 1 3.2.1-4A



LOADOUT AREA SEDIMENTATION POND
DEPTH-CAPACITY CURVE

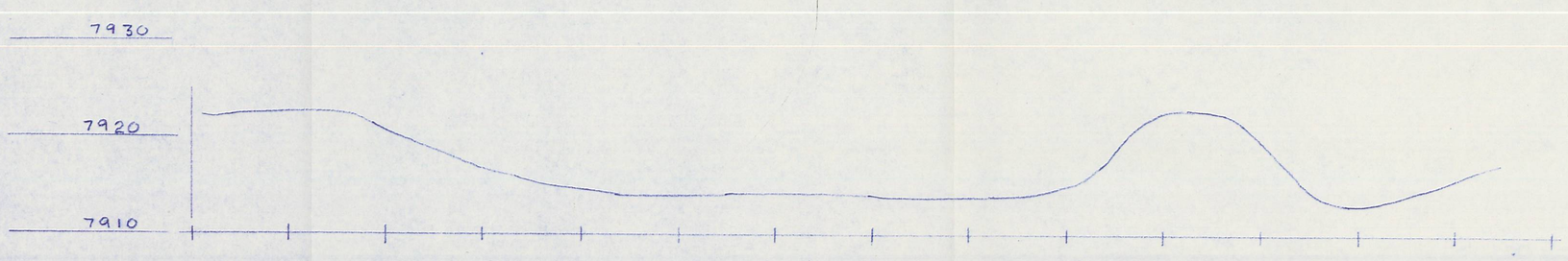


SEDIMENTATION POND
SCALE: 1" = 20'

(1) TOPOGRAPHY FOR THIS PLAN WAS COMPILED BY INTERMOUNTAIN AERIAL SURVEY IN OCT OF 1987 USING PHOTOGRAMMETRIC METHODS AND A FIELD SURVEY BY BRUCE WARR (L.S. 4502) DATED 6-30-89.

(2) SEE THE SEPT. 1989 EARTH FAX ENGINEERING STUDY FOR SIZING OF THE SEDIMENTATION POND AND ITS STAGE-DISCHARGE RELATIONSHIP.

(3) SEE DRAWING 3.2.1-3 FOR THE SEDIMENTATION POND DRAINAGE AREAS USED BY EARTH FAX TO SIZE THE POND AND DRAWING 3.2.1-9A FOR THE INLET STRUCTURE TO THE POND OVERFLOW.



SECTION A-A THROUGH POND
HORIZ. SCALE 1" = 20'
VERT SCALE 1" = 10'

Received 10-1-90

"As Built" Dwg 1-10-90 Wm Shriver

NO.	DATE	REVISION	DRW.	CHK.	APP.
2	9-89	NOTES ADDED 9-30-89 WWS			
1	9-89	HOLD REMOVED 9-26-89 WWS			

		DATE
DESIGNED BY:	TAYLOR & SHRIVER	7-7-89
DRAWN BY:	SHRIVER	7-10-89
CHECKED BY:	LCH 7/89	
APPROVED BY:	KW 7/89	
APPROVED BY:	Wm Shriver	
REFERENCE DWGS.		

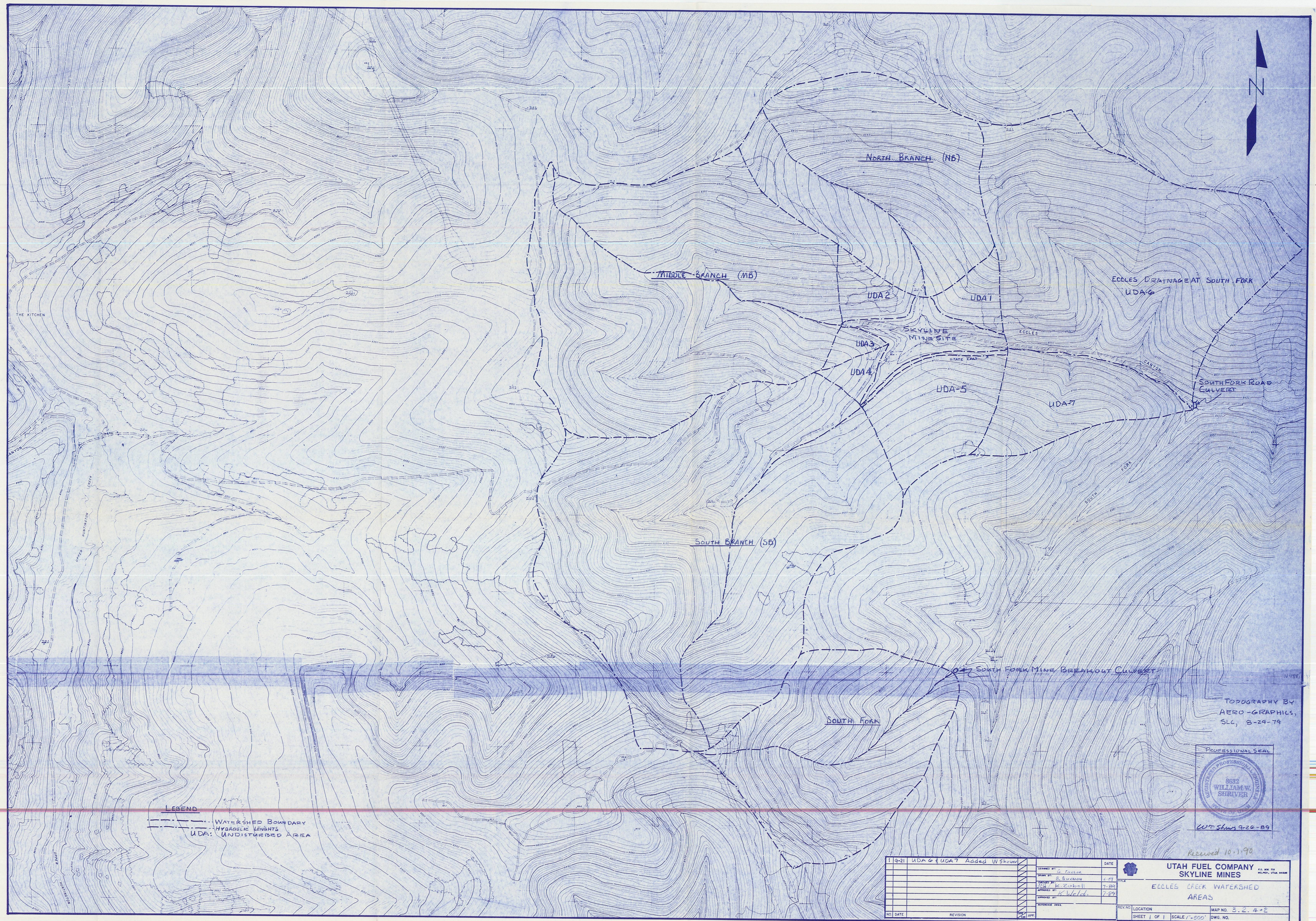
PROFESSIONAL SEAL
5532 WILLIAM W. SHRIVER
REGISTERED PROFESSIONAL ENGINEER
STATE OF UTAH
Wm Shriver 9-30-89

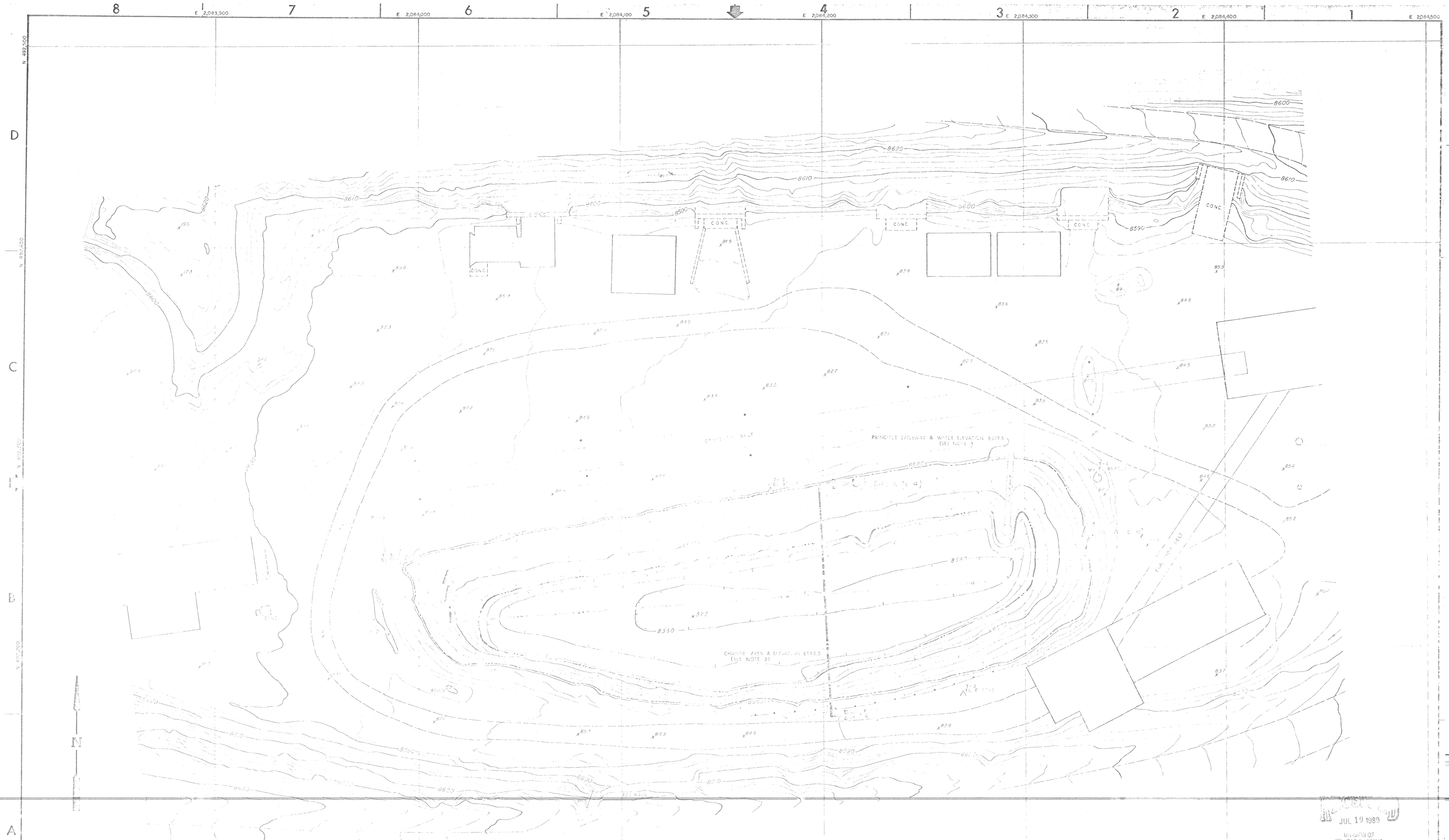
UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 719
HELPER, UTAH. 84526

TITLE
SEDIMENTATION POND SECTIONS & DETAILS
CIVIL
(RAILROAD LOAD OUT SEDIMENTATION POND)

REV. NO.	LOCATION		MAP NO.
	SHEET OF	SCALE AS NOTED	DWG. NO. 3.2.1-4

MONSEN ENGINEERING CO.
108764


N
NORTH BRANCH (NB)
MIDDLE BRANCH (MB)
SOUTH BRANCH (SB)
SOUTH FORK
UDA 1
UDA 2
UDA 3
UDA 4
UDA-5
UDA-6
UDA-7
SKYLINE MINE SITE
ECCLES DRAINAGE AT SOUTH FORK
UDA-6
SOUTH FORK ROAD CULVERT
SOUTH FORK MINE BREAKOUT CULVERT
THE KITCHEN
ECCLES
CANYON
STATE ROAD
SOUTH FORK
UPPER HUNTINGTON CREEK
LEGEND
WATERSHED BOUNDARY
HYDRAULIC LENGHTS
UDA: UNDISTURBED AREA
TOPOGRAPHY BY AERO-GRAPHICS, SLC, 8-24-79
PROFESSIONAL SEAL
ARCHITECT AND PROFESSIONAL ENGINEER
8632
WILLIAM W. SHRIVER
STATE OF UTAH
Wm Shriver 9-26-89
Received 10-1-90
1 9-21 UDA 6 & UDA 7 Added W Shriver
DRAWN BY: B. Guvanon 6-89
CHECKED BY: K. Zobell 7-89
APPROVED BY: K. Weld 7-89
UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 719
HELPER, UTAH 84526
ECCLES CREEK WATERSHED
AREAS
MAP NO. 3.2.4-2
SCALE 1"=500'
SHEET 1 OF 1



NOTES:

1. CONTROL PROVIDED BY UTAH FUEL COMPANY.
2. AREA WITHIN BORDER IS WORK DONE BY UTAH FUEL CO. (—·—·—·—)
3. POND ELEVATION AT OVERFLOW LEVEL. (————————)
4. TYPICAL CROSS-SECTION SHOWN ON MAP 3.2.1-2 (3-43).

PHOTOGRAPHY DATE; SEPT. 5, 1985
CONTOUR INTERVAL 2'

RECEIVED
JUL 19 1989
DIVISION OF
OIL, GAS & MINING

NO.	DATE	REVISION	DRN.	CHK.	APP.
1	10-8-87	Zone C-4 Area [illegible] "Principle Spillway"			

		DATE
DESIGNED BY	K. ZOBELL	11/6/85
DRAWN BY	B. GUYMON	11/6/85
CHECKED BY	K. WASHBURN	11/6/85
APPROVED BY	[illegible]	11/6/85
APPROVED BY	[illegible]	
REFERENCE DWGS.		

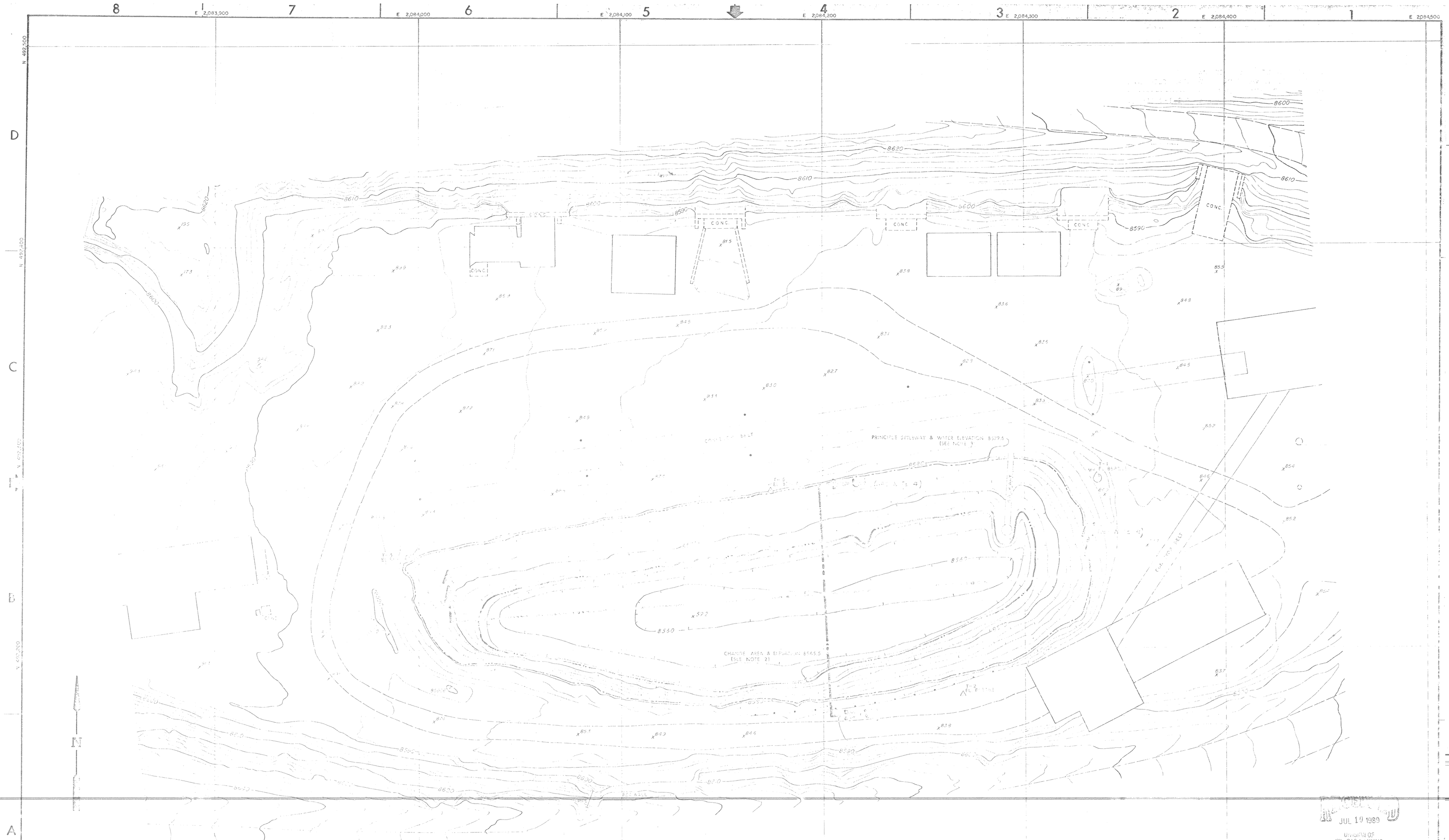
PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER
NO. [illegible]
DOUGLAS E. [illegible]
STATE OF UTAH

UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 71
HELPER, UTAH 84526

TITLE
MINE PORTAL SEDIMENTATION POND
- CONTOUR MAP -

REV. NO.	LOCATION		MAP NO. 3.2.1-2B 3-95B
	SHEET 1 OF 1	SCALE 1" = 20'	DWG. NO. TO-4-D-001

Olympus AERIAL SURVEYS INC. 50 West 2950 South Salt Lake City, Utah 84115-5812



NOTES:

1. CONTROL PROVIDED BY UTAH FUEL COMPANY.
2. AREA WITHIN BORDER IS WORK DONE BY UTAH FUEL CO. (—·—·—·—)
3. POND ELEVATION AT OVERFLOW LEVEL. (————————)
4. TYPICAL CROSS-SECTION SHOWN ON MAP 3.2.1-2 (3-43).

PHOTOGRAPHY DATE; SEPT. 5, 1985
CONTOUR INTERVAL 2'

RECEIVED
JUL 19 1989
DIVISION OF
OIL, GAS & MINING

NO.	DATE	REVISION	DRN.	CHK.	APP.
1	10-8-87	Zone C-4 Area [illegible] "Principle Spillway"			

		DATE
DESIGNED BY	K. ZOBELL	11/6/85
DRAWN BY	B. GUYMON	11/6/85
CHECKED BY	K. WASHBURN	11/6/85
APPROVED BY	[illegible]	11/6/85
APPROVED BY	[illegible]	
REFERENCE DWGS.		

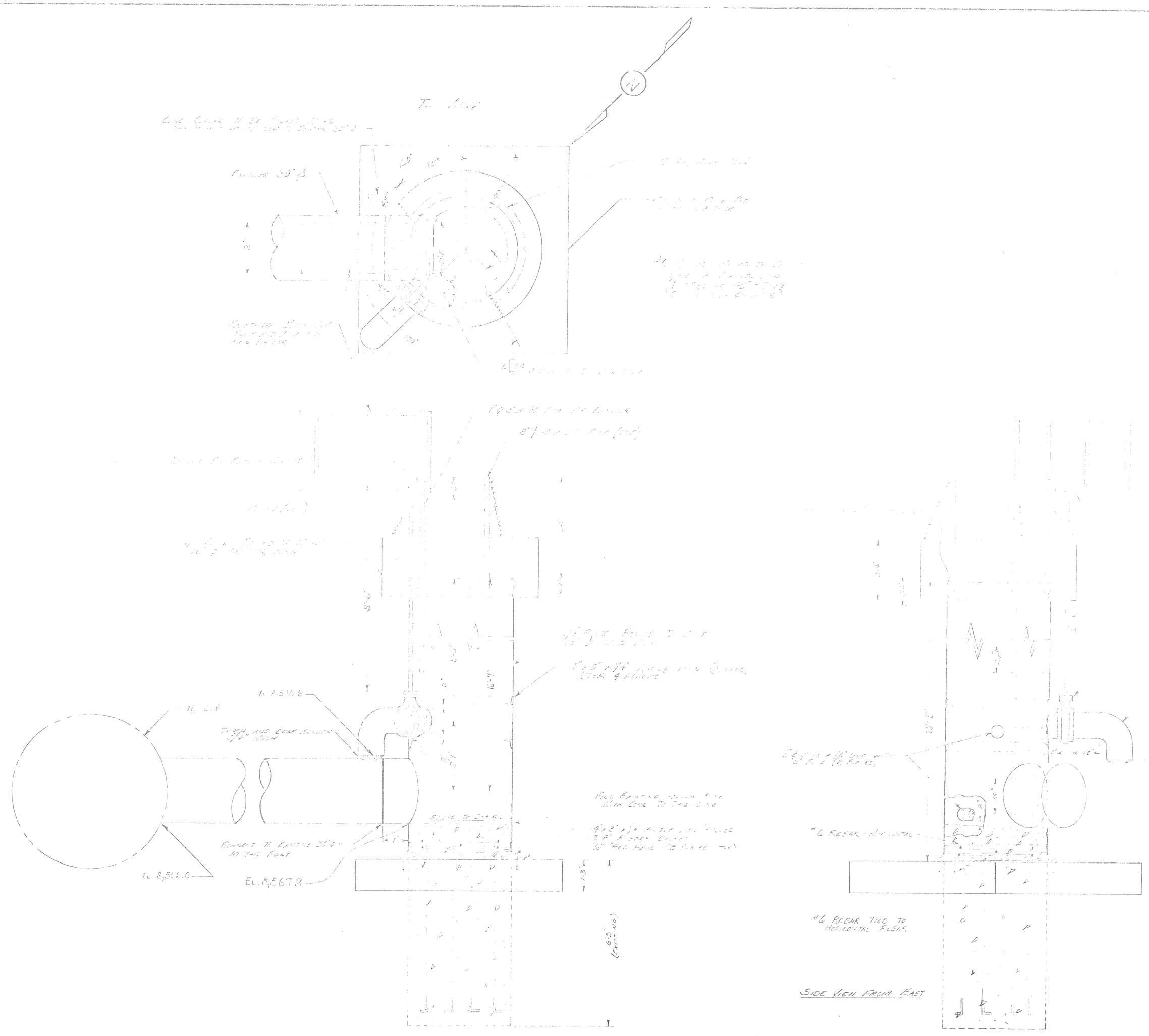
PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER
NO. [illegible]
DOUGLAS E. [illegible]
STATE OF UTAH

UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 71
HELPER, UTAH 84526

TITLE
MINE PORTAL SEDIMENTATION POND
- CONTOUR MAP -

REV. NO.	LOCATION		MAP NO. 3.2.1-2B 3-95B
	SHEET 1 OF 1	SCALE 1" = 20'	DWG. NO. TO-4-D-001

Olympus AERIAL SURVEYS INC. 50 West 2950 South Salt Lake City, Utah 84115-5812



SIDE VIEW FROM NORTH-WEST

NO	DATE	REVISION	BY	CHK	APP.
6	6-20-89	Added Elevation To Drawing Structure & Outlet			
5	11-15-88	Changed Elevation Elev. To 8,567.9 ft			
4	6-15-87	Added Elevation To Drain Pipe (8,566.9)			
3	3-27-87	Added Trash Rack			
2	1-27-87	Increase Structure Height 1.0 Ft.			
1	7-18-85	Increase Structure Height .9 Ft.			

SCALE 1/8" = 1'-0"
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
APPROVED BY
DATE 3/6/84 3/6/84 3/6/84 7-1-89

REGISTERED PROFESSIONAL ENGINEER No. 5556 DOUGLAS E. JOHNSON STATE OF UTAH

UTAH FUEL COMPANY
SKYLINE MINE

NEW INLET STRUCTURE FOR MINESITE SEDIMENTATION POND

JOB NO.
DWG. NO. ST 4 D 010
R- 6
MAP OR FIGURE NO. 3.2.1-2A

FILE COPY
RECEIVED JUL 14 1989 DIVISION OF

Mapped, edited, and published by the Geological Survey

Control by USGS, NOS/NOAA and U. S. Forest Service

Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1974. Map edited 1979

Projection and 10,000-foot grid ticks: Utah coordinate system, central zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1972 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 80 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Primary Highway, hard surface — Light-duty road, hard or improved surface

Secondary Highway, hard surface — Unimproved road

Interstate Route — U. S. Route — State Route

QUADRANGLE LOCATION

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SCOFIELD UTAH
NW/4 SCOFIELD 15' QUADRANGLE
N3937.5 W11107.5/7.5
1979
DMA 3763 II NW SERIES V892

NO.	DATE	REVISION	DRW	CHK	APP.
1	8-4-88	DRAINAGE AREA ADDED	BJG	RWH	

		DATE
DESIGNED BY:	MB	7/88
DRAWN BY:	MB	7/88
CHECKED BY:	[illegible]	7/88
APPROVED BY:	[illegible]	7/88
APPROVED BY:	Douglas E. Johnson	7/88
REFERENCE DWGS.		

PROFESSIONAL SEAL

REGISTERED DOUGLAS E. JOHNSON STATE OF UTAH

UTAH FUEL COMPANY
SKYLINE MINES

P.O. BOX 7 HELPER, UTAH 84526

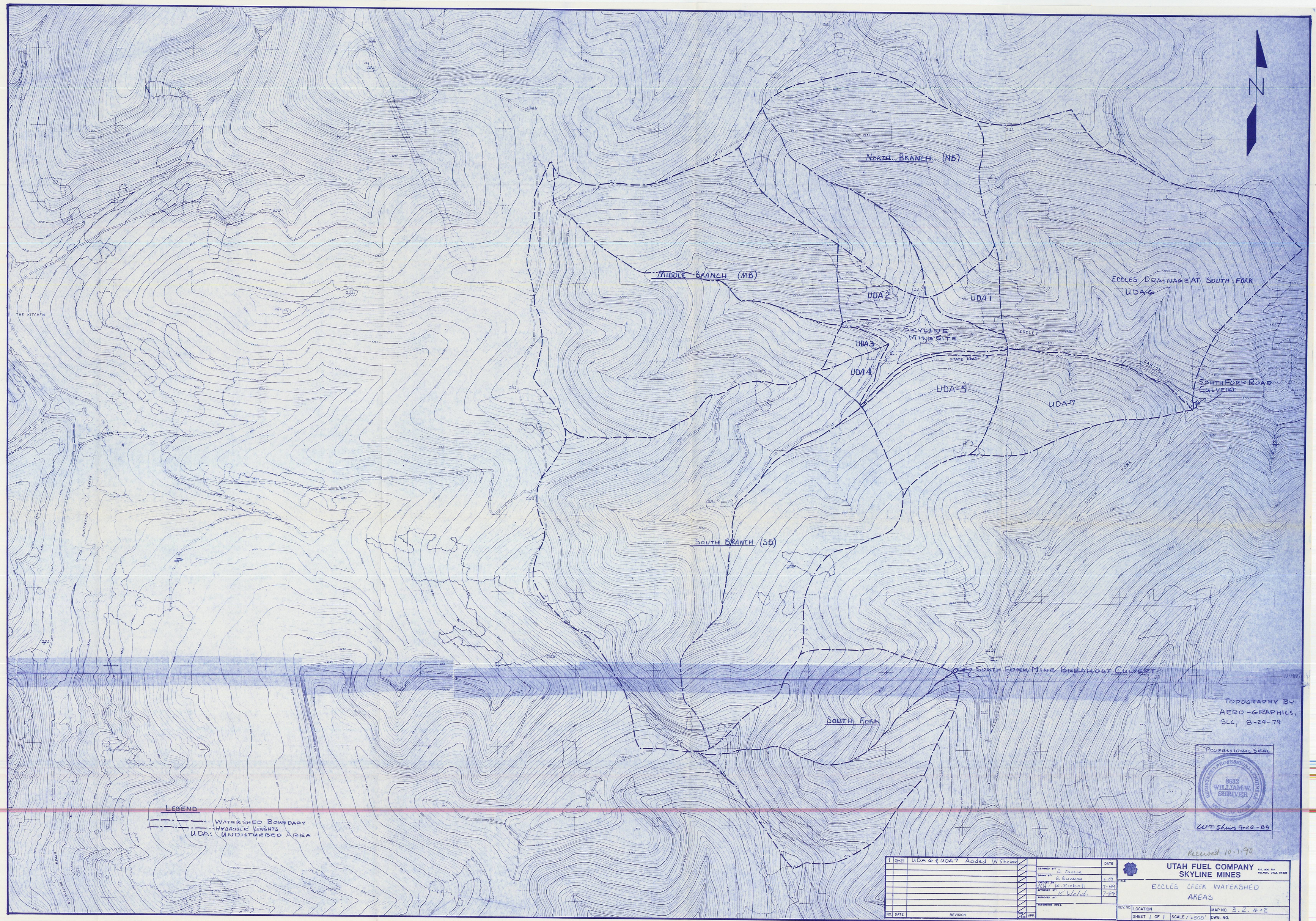
TITLE

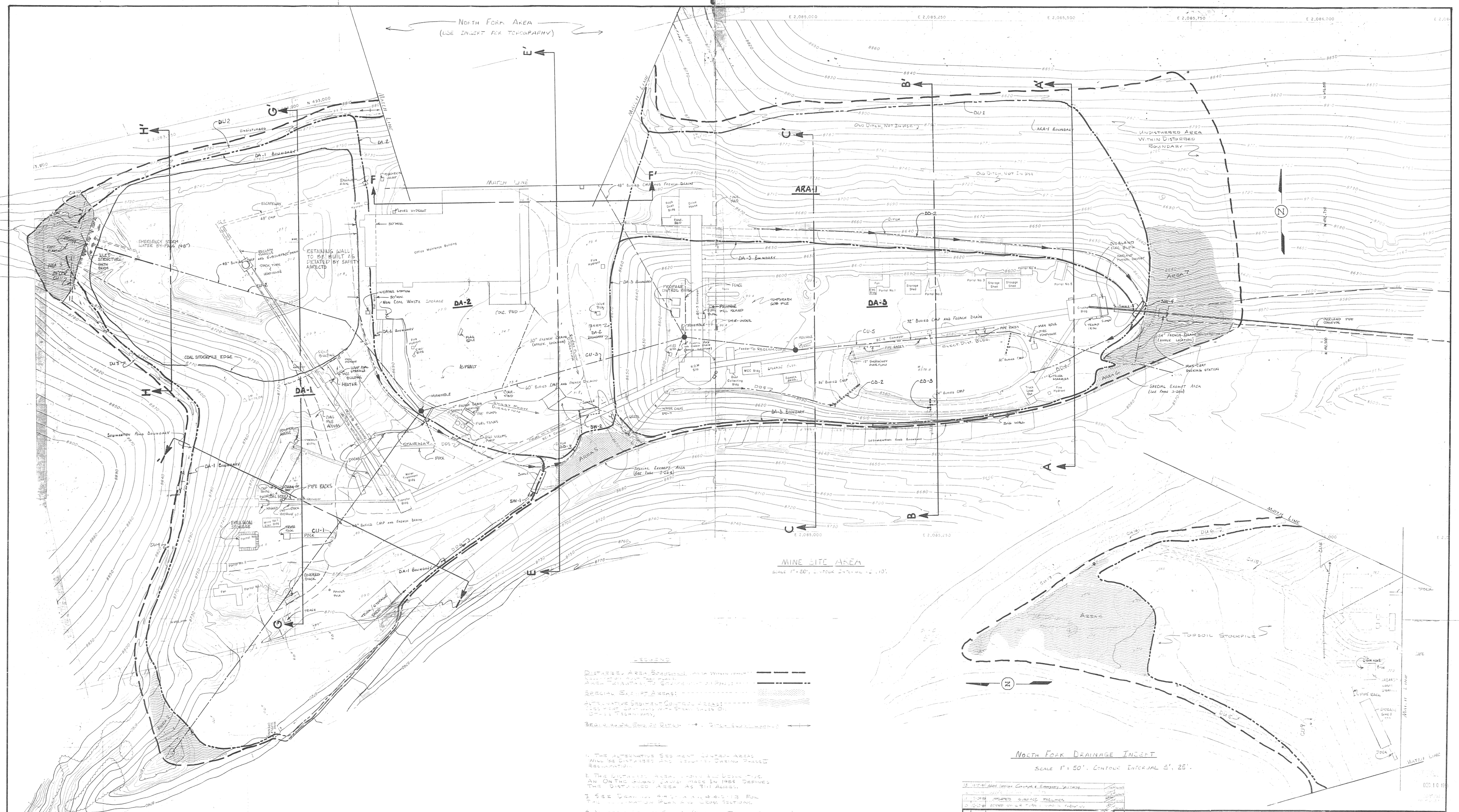
South Fork Breakout Vicinity Map

REV. NO.	LOCATION	MAP NO. 3.1.2-1
1	SHEET OF / SCALE	DWG. NO.

RECEIVED APR 27 1989 DIVISION OF OIL, GAS & MINING

FILE COPY


N
NORTH BRANCH (NB)
MIDDLE BRANCH (MB)
SOUTH BRANCH (SB)
SOUTH FORK
UDA 1
UDA 2
UDA 3
UDA 4
UDA-5
UDA-6
UDA-7
SKYLINE MINE SITE
ECCLES DRAINAGE AT SOUTH FORK
UDA-6
SOUTH FORK ROAD CULVERT
SOUTH FORK MINE BREAKOUT CULVERT
THE KITCHEN
ECCLES
CANYON
STATE ROAD
SOUTH FORK
UPPER HUNTINGTON CREEK
LEGEND
WATERSHED BOUNDARY
HYDRAULIC LENGHTS
UDA: UNDISTURBED AREA
TOPOGRAPHY BY AERO-GRAPHICS, SLC, 8-24-79
PROFESSIONAL SEAL
ARCHITECT AND PROFESSIONAL ENGINEER
8632
WILLIAM W. SHRIVER
STATE OF UTAH
Wm Shriver 9-26-89
Received 10-1-90
1 9-21 UDA 6 & UDA 7 Added W Shriver
DRAWN BY: B. Guvanon 6-89
CHECKED BY: K. Zobell 7-89
APPROVED BY: K. Weld 7-89
UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 719
HELPER, UTAH 84526
ECCLES CREEK WATERSHED
AREAS
MAP NO. 3.2.4-2
SCALE 1"=500'
SHEET 1 OF 1



NO.	DATE	REVISION	DR.	CHK.	APP.

	DATE
DESIGNED BY:	7-13
DRAWN BY: E. GUIDNON	7-13
CHECKED BY:	
APPROVED BY:	
SUPERVISED BY:	
REFERENCE DWGS.	

PROFESSIONAL SEAL

UTAH FUEL COMPANY
SKYLINE MINES
P.O. BOX 719 HELPER, UTAH 84526

TITLE
MINE SURFACE FACILITIES
PLOT PLAN

REV. NO.	LOCATION	MAP NO.
	SHEET 1 OF 1 SCALE 1" = 50'	DWG. NO. 3.2 1-1

MANTI LA SAL NATIONAL FOREST

ROAD WATER-BARRED

18" CULVERT

SILT FENCE

KNOB THAT MAY BE USED AS FILL MATERIAL IF NEEDED.

TOPSOIL STORAGE

SUBSOIL STORAGE

SEEPS

ROAD WATER-BARRED & OUTSLOPED

MINE WORKINGS

COAL OUTCROP BENCH

PAD 1-2% INSLOPE

BERM

SILT FENCE

RIPRAP

24" CULVERT

AREA 2.5

HIGHWALL

RIPRAP

TRASH RACK

SUBSOIL STORAGE

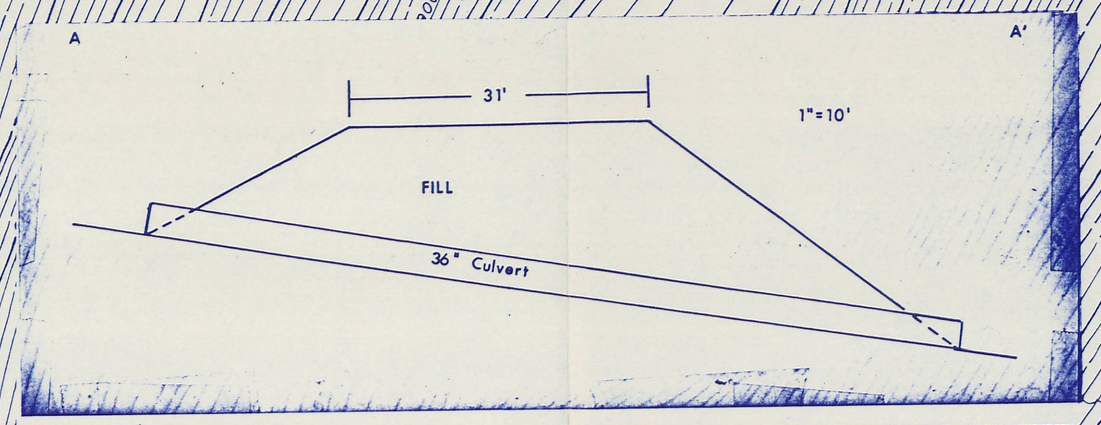
SEEPS

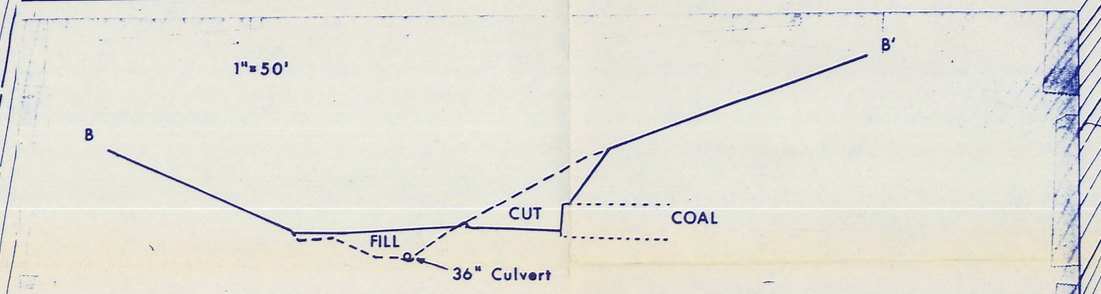
TOPSOIL STORAGE

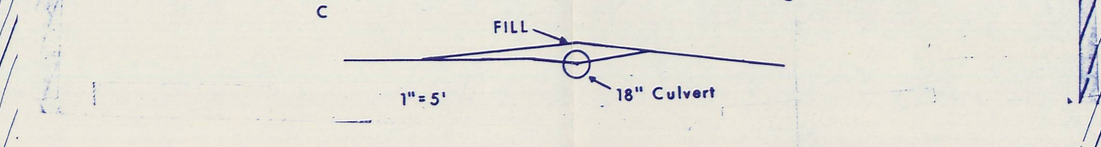
SILT FENCE

DISTURBED AND PERMIT AREA BOUNDARIES

(0.96 acres)







NOTE: THE ENTIRE DISTURBED AREA IS CONSIDERED TO BE AN ALTERNATIVE SEDIMENT CONTROL AREA

SHEET INDEX

LEGEND

CONTOUR INTERVAL: 5' W/ 2.5' SUPPLEMENTS

PHOTO DATE: 8-24-79

100 0 100 200 300

Topography Compiled By Photogrammetric Methods, AERO-GRAPHICS INC., SALT LAKE CITY, UTAN - 79428

APPROVAL	DATE	SCALE: 1" = 100'	DATE
REV. 1: NOTE ADDED WWS	9-26-89	DESIGNED BY MB KZ GT	7/88
REV. 2: AREA NOTE ADDED WWS	11-20-89	DRAWN BY MB	7/89
		CHECKED BY	11/89
		APPROVED BY	11/89
		APPROVED BY	1/89

PROFESSIONAL SEAL: No. 5566 DOUGLAS E. JOHNSON STATE OF UTAH

COASTAL STATES ENERGY COMPANY
SKYLINE PROJECT

SKYLINE MINE No. 1
PORTAL BREAKOUT AREA

Received 10-1-90

DWG. No. 8 OF 21 | REVISION R- | MAP OR FIGURE NO. 3.2.11-1

NO.	DATE	REVISION	DRW	CHK	APP.
2	11-27-89	SCALE CORRECTED			
1	11-14-89	NOTES ADDED			

		DATE
DESIGNED BY:		
DRAWN BY:	B. GUYMON	7-89
CHECKED BY:	KD 7/89 KD 7-89	
APPROVED BY:	KD 7-89	
APPROVED BY:		
REFERENCE DWGS.		

PROFESSIONAL SEAL

UT Sky - 9-26-89

UTAH FUEL COMPANY
SKYLINE MINES

P.O. BOX 719
HELPER, UTAH 84526

TITLE

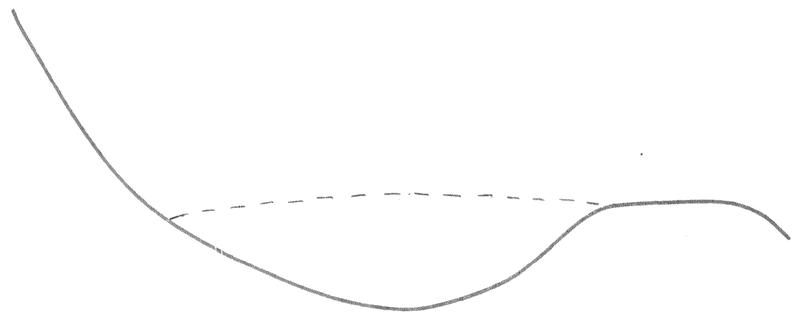
WATERSHED AREAS FOR DRAINAGE DESIGN

Received 10.1.90

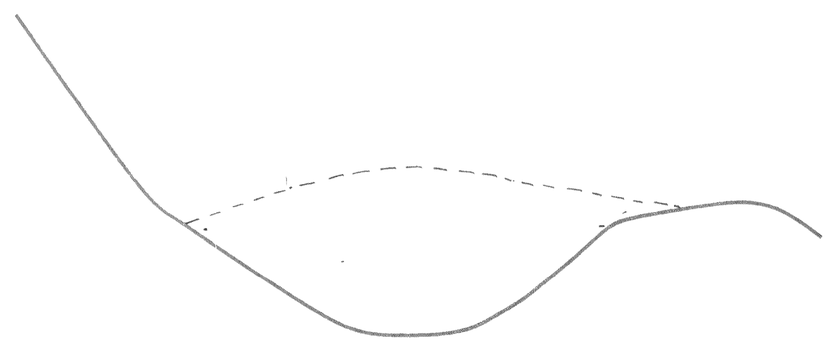
REV. NO.	LOCATION	MAP NO. 3. 2. 8-3
	SHEET 1 OF 1 SCALE 1"=1000'	DWG. NO.

1-E

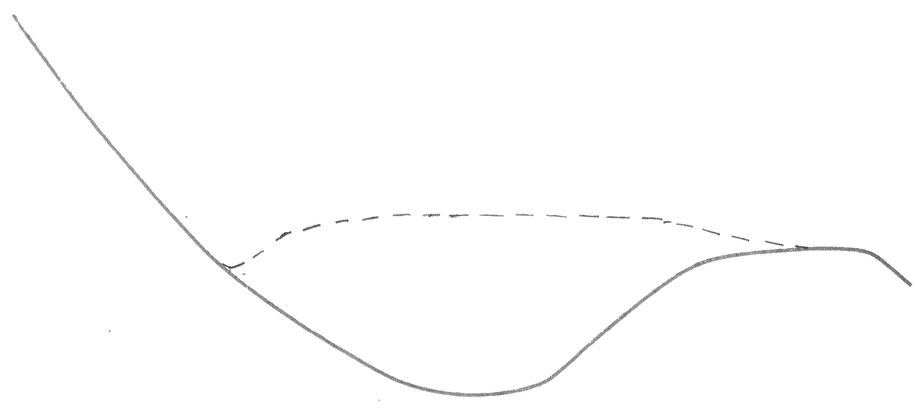
2-E



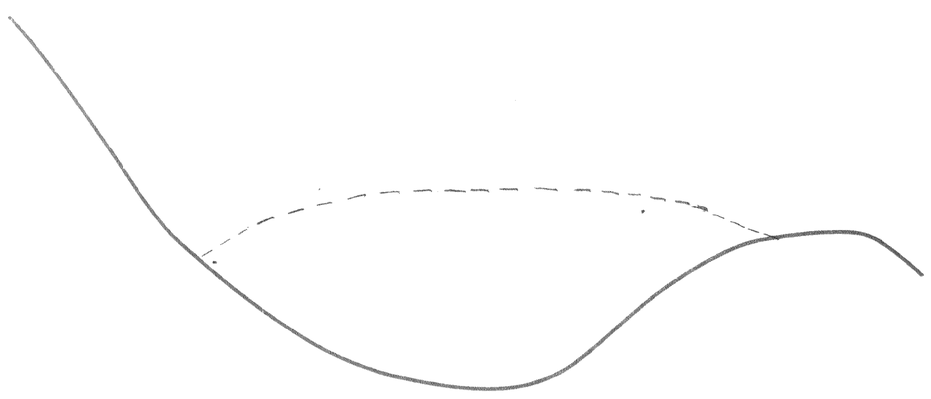
3-E



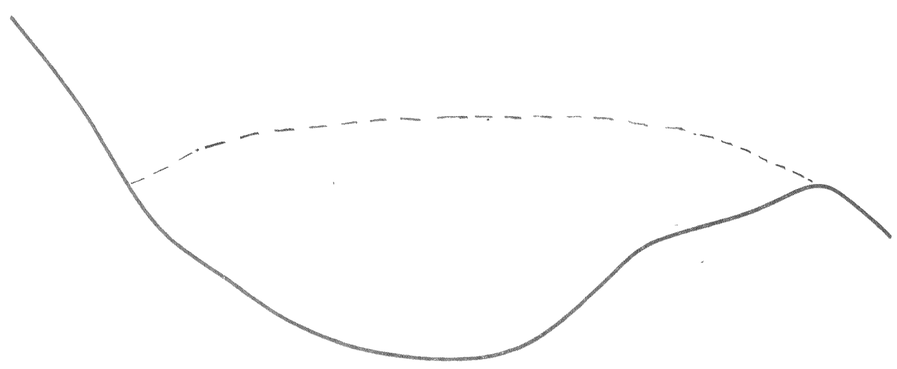
4-E



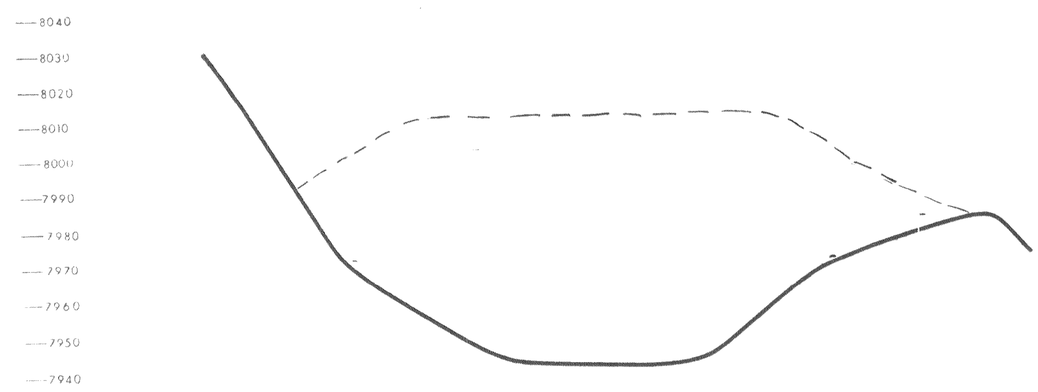
5-E



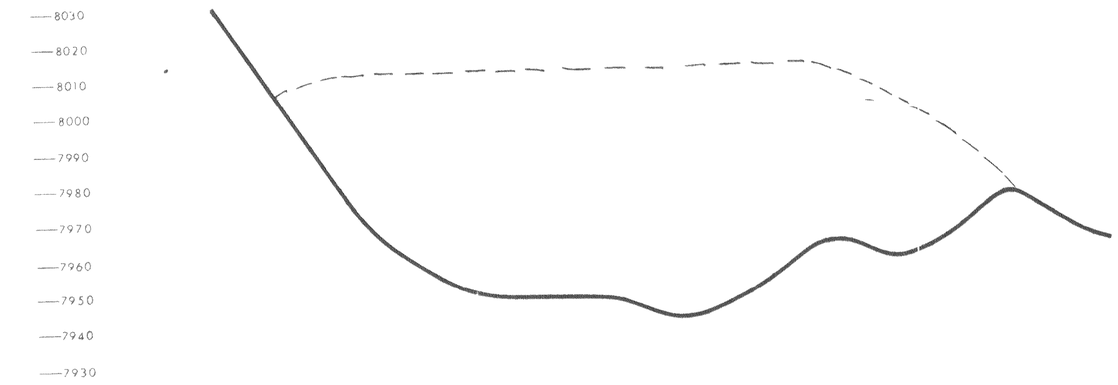
6-E



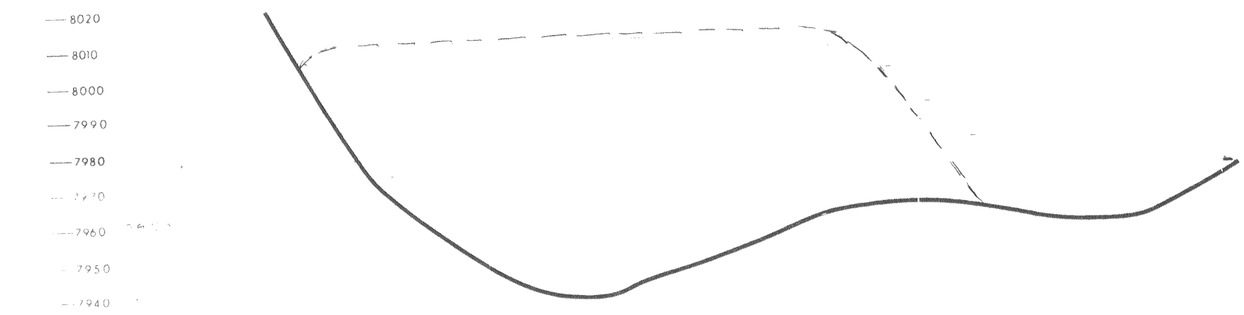
7-E



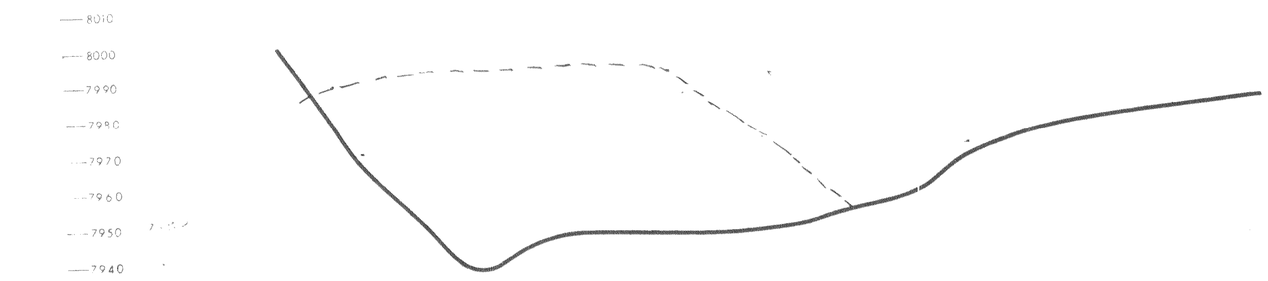
8-E



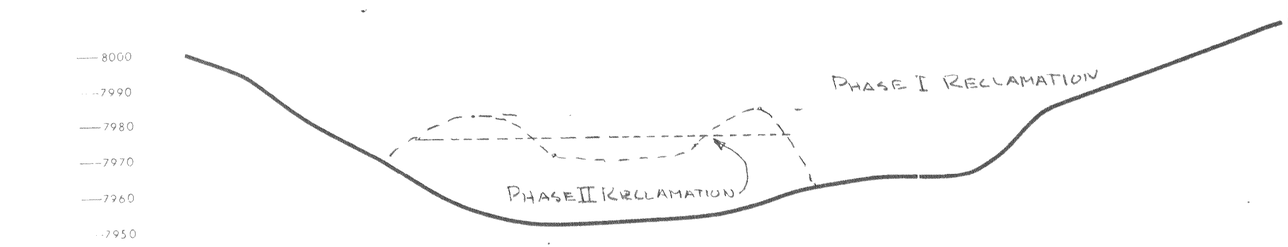
9-E



10-E



11-E



12-E

13-E

NOTE

(1) SEE DRAWING 4.16.1-1B FOR RECLAMATION PLOT PLAN OF THIS SITE

SCALE VERT. & HORIZ. SCALE: 1" = 30'		DATE
DESIGNED BY	G. KENZY & J. HARR	10/81
DRAWN BY	H	10/81
CHECKED BY	Kathy Bell	3/85
APPROVED BY	D E Johnson	4/85
APPROVED BY		

Rev. 1 FILL LINE CORRECTED 9/89

PROFESSIONAL SEAL

9-26-89 W. Shim

COASTAL STATES ENERGY COMPANY
SKYLINE PROJECT

SE-NE CROSS SECTIONS
ROCK WASTE DISPOSAL AREA

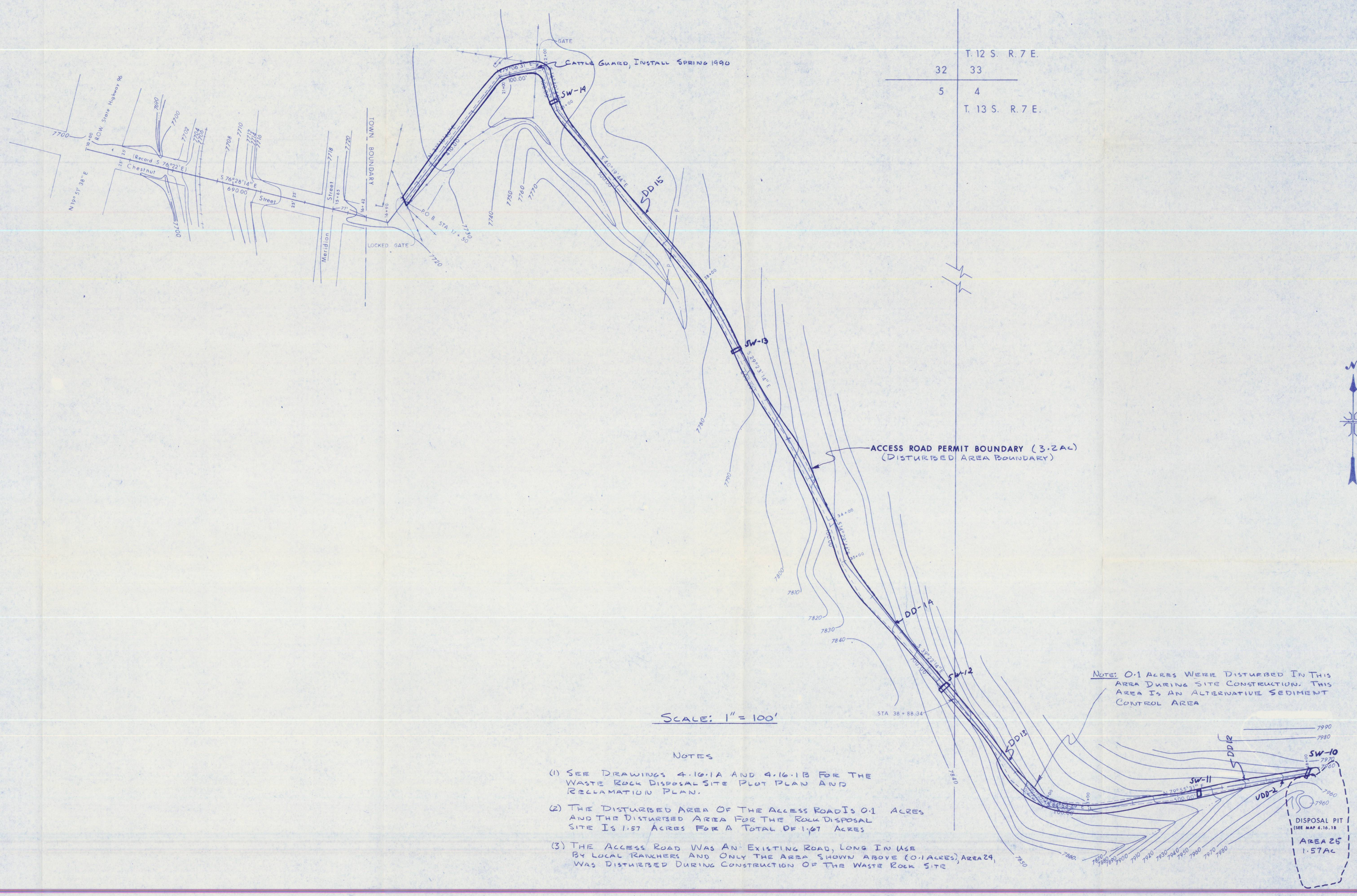
Received 10.1.90

JOB No.

DWG. No. CIHD005

REVISION R-

MAP OR FIGURE NO. 3.2.8-2



SCALE: 1" = 100'

NOTES

(1) SEE DRAWINGS 4.16.1A AND 4.16.1B FOR THE WASTE ROCK DISPOSAL SITE PLOT PLAN AND RECLAMATION PLAN.

(2) THE DISTURBED AREA OF THE ACCESS ROAD IS 0.1 ACRES AND THE DISTURBED AREA FOR THE ROCK DISPOSAL SITE IS 1.57 ACRES FOR A TOTAL OF 1.67 ACRES

(3) THE ACCESS ROAD WAS AN EXISTING ROAD, LONG IN USE BY LOCAL RANCHERS AND ONLY THE AREA SHOWN ABOVE (0.1 ACRES), AREA 24, WAS DISTURBED DURING CONSTRUCTION OF THE WASTE ROCK SITE

REV. NO.	REVISION	DATE
3	Ditch No.'s Changed WS	9-20-89
2	Note Added WWS	9-26-89
1	Added Swales & Ditch	7-89

		DATE
SCALE	1" = 100'	
DESIGNED BY	K. ZOBELL	10-88
DRAWN BY	B. GUYMON	10-88
CHECKED BY	G. TAYLOR	10-88
APPROVED BY	D.E. Johnson	10-88
APPROVED BY	W. Shinn 7-11-89	

PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER
No. 5586
DOUGLAS E. JOHNSON
STATE OF UTAH

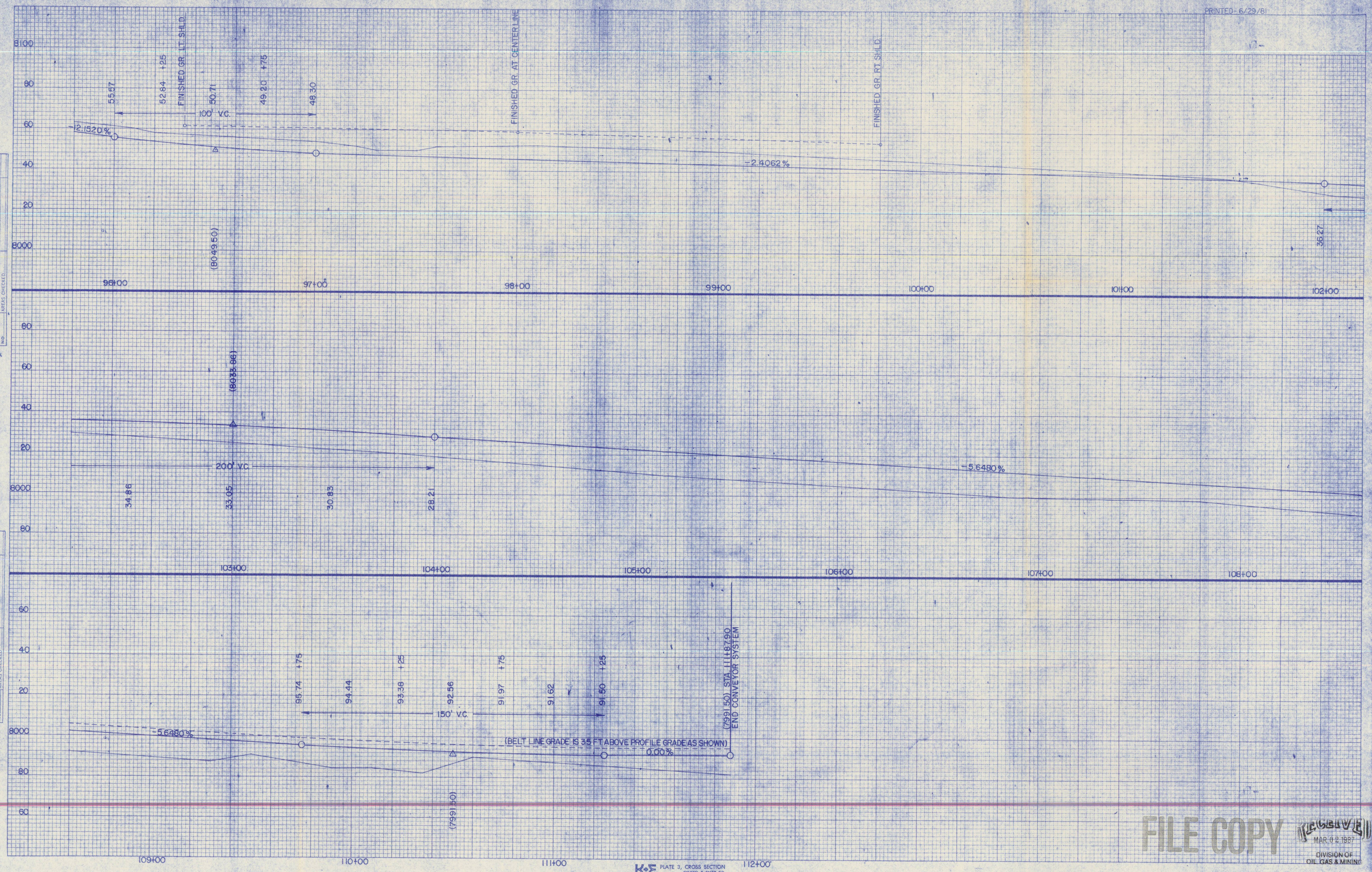
COASTAL STATES ENERGY COMPANY
SKYLINE PROJECT

Received 10-1-90

ACCESS ROAD TO ROCK WASTE DISPOSAL

JOB No.
DWG. No.
REVISION R-1
MAP OR FIGURE NO. 3.2.8-1

PRINTED: 6/29/81



FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

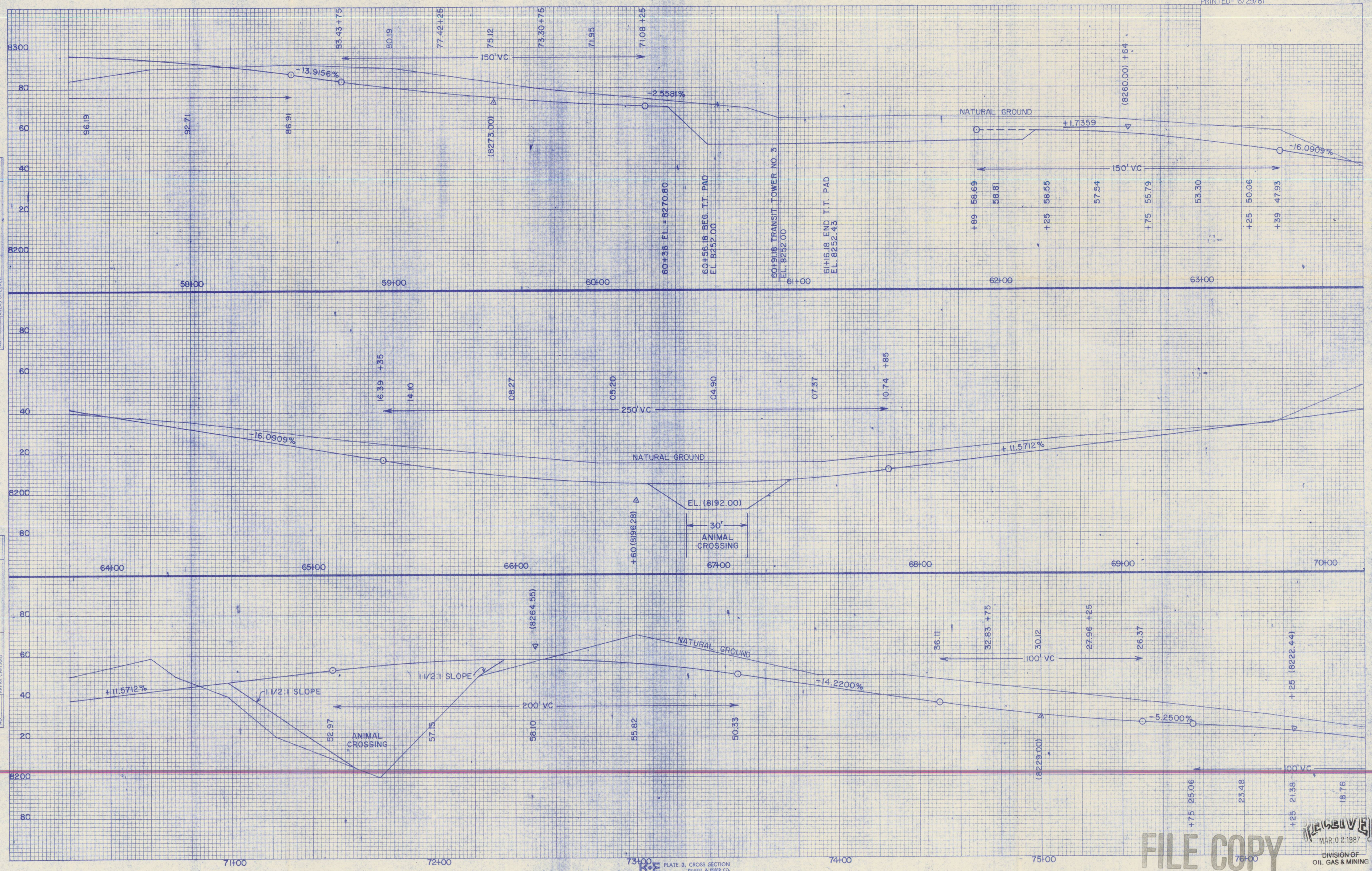
K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.
46 7072 HERCULENE® DRAFTING FILM
MADE IN U.S.A.

FILE COPY

RECEIVED
MAR 02 1987
DIVISION OF
OIL, GAS & MINING

UTAH FUEL CO.
TITLE: OVERLAND CONVEYOR PROFILE
DESIGNED BY: DATE: DWG. NO.
DRAWN BY: SCALE: 3.2 -2G

PRINTED- 6/29/81



FINAL SURVEY — SURVEYED, PLOTTED, TRIANGULATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRIANGULATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

48 7072 HERCULENE® DRAFTING FILM MADE IN U.S.A.

RECEIVED MAR 02 1987 DIVISION OF OIL, GAS & MINING

FILE COPY

UTAH FUEL CO.

TITLE: OVERLAND CONVEYOR PROFILE

DESIGNED BY: DATE: DWN. BY: SCALE: DWG. NO. 3.2.6-2E

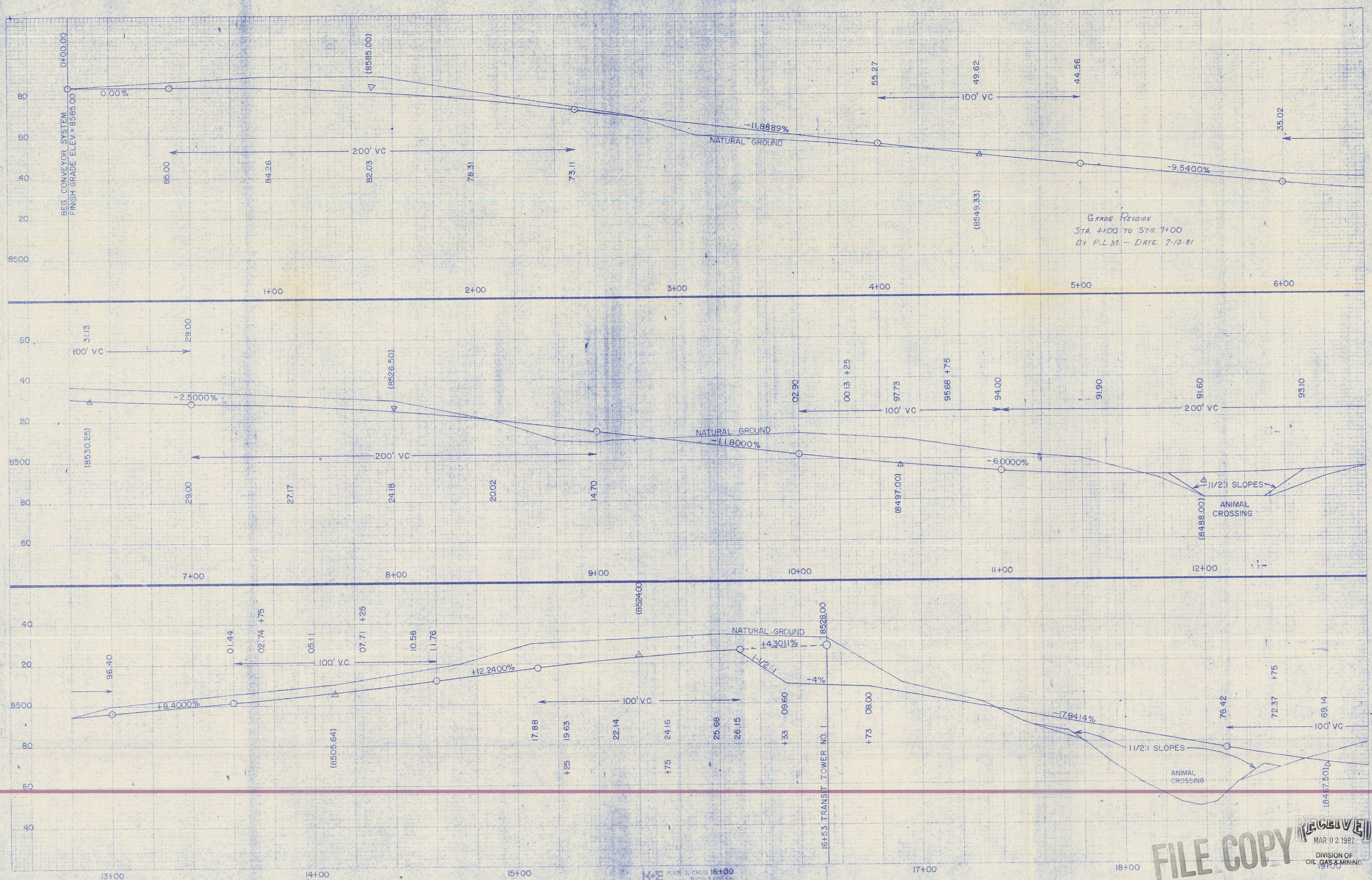
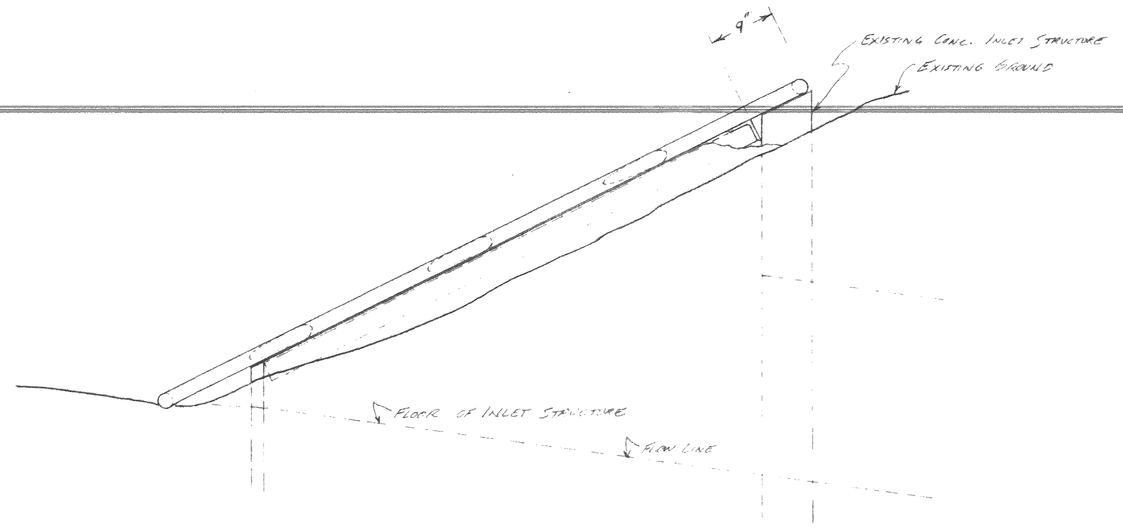


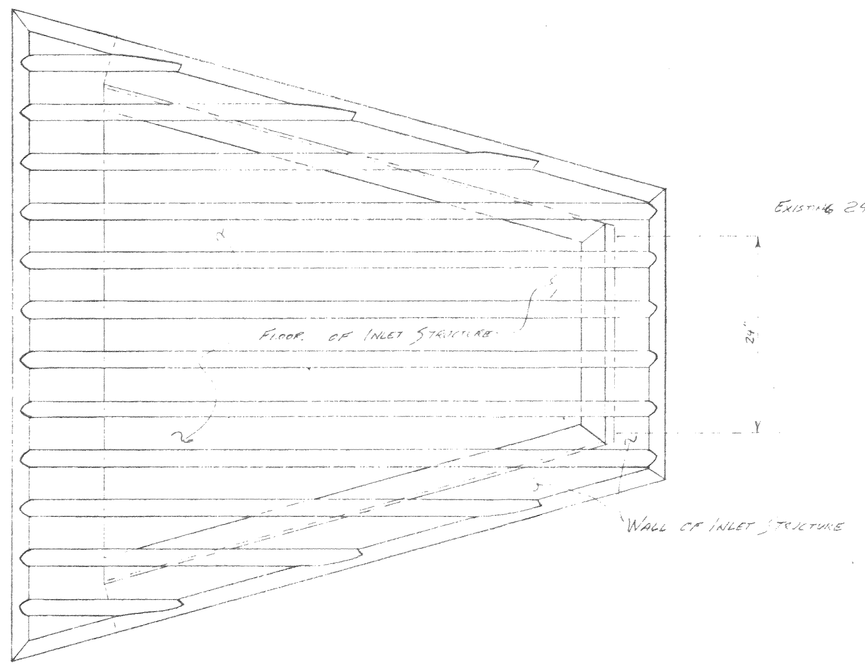
PLATE 3, CROSS SECTIONS
KEUFFEL & ESSER CO.
42-0072 HERCULENE

FILE COPY
RECEIVED
MAR 02 1987
DIVISION OF
OIL, GAS & MINING

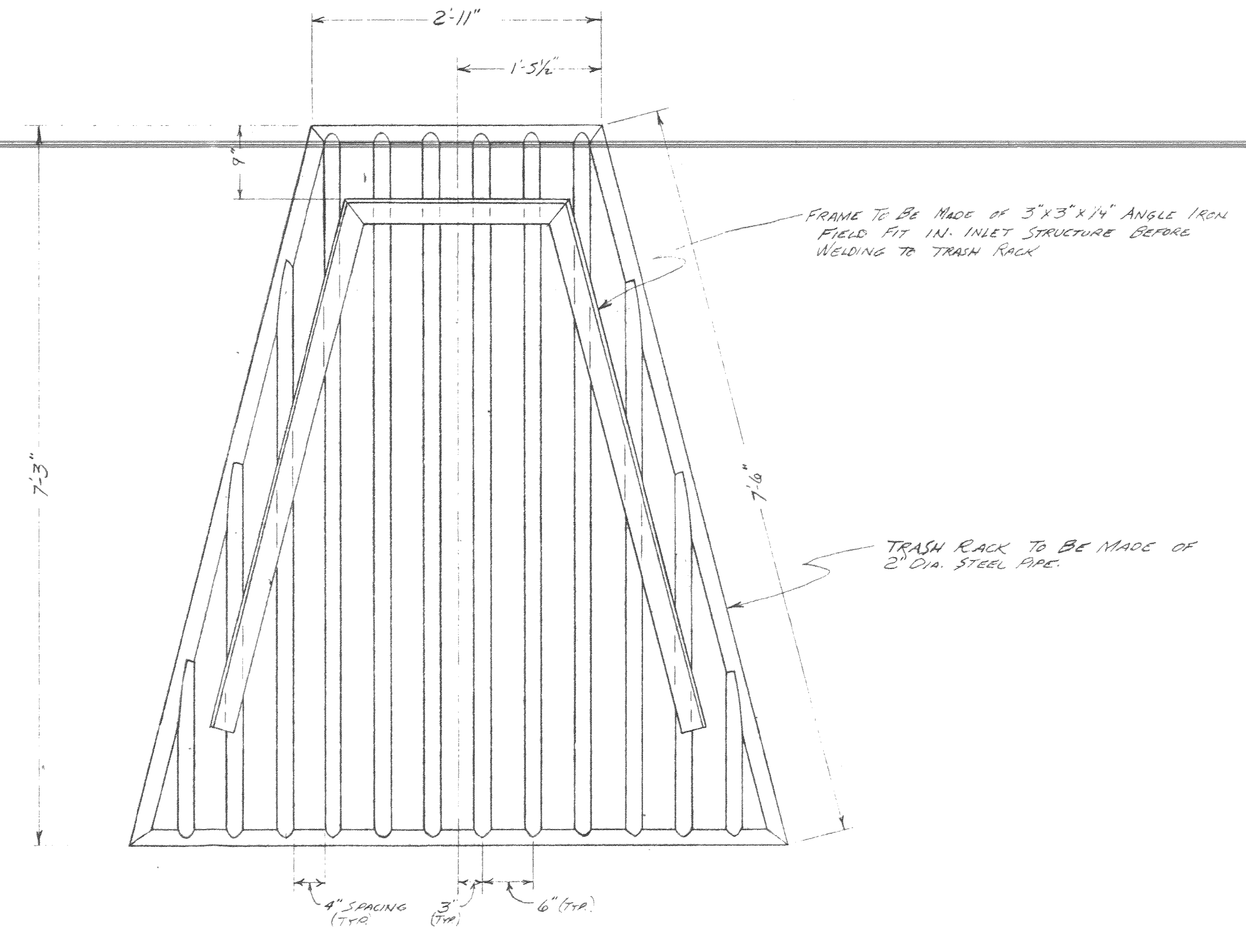
UTAH FUEL CO.	
TITLE OVERLAND CONVEYOR PROFILE	
DESIGNED BY: DATE:	DWG. NO. 3.2.6-2B
DRAWN BY: SCALE:	



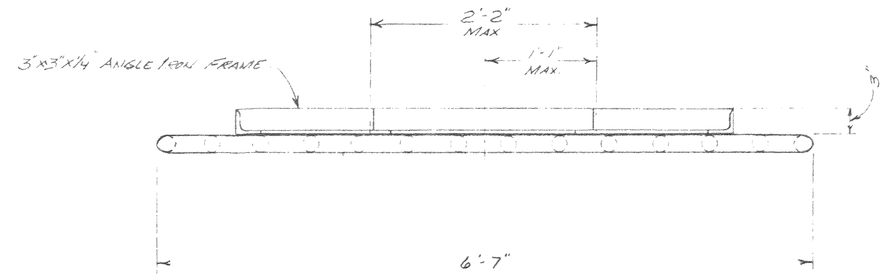
SIDE VIEW



TOP VIEW
(WITH TRASH RACK ON NATURAL SLOPE)



BOTTOM VIEW OF RACK



END VIEW OF RACK
(BOTTOM UP)

NOTE: THIS TRASH RACK HAS BEEN USED ON CULVERT CU-2 AT THE MIDDLE FORK OF BIGGS CREEK ABOVE THE MINE SITE

APPROVAL	DATE	SCALE: 1" = 1'-0"	DATE	PROFESSIONAL SEAL
		DESIGNED BY: Keith Cedell	3-84	
		DRAWN BY: HE Dathan	3-16-84	
		CHECKED BY:		
		APPROVED BY: W. Adams	9-26-84	
		APPROVED BY:		

Rev. 1 Note Added, WWS 9-26-84

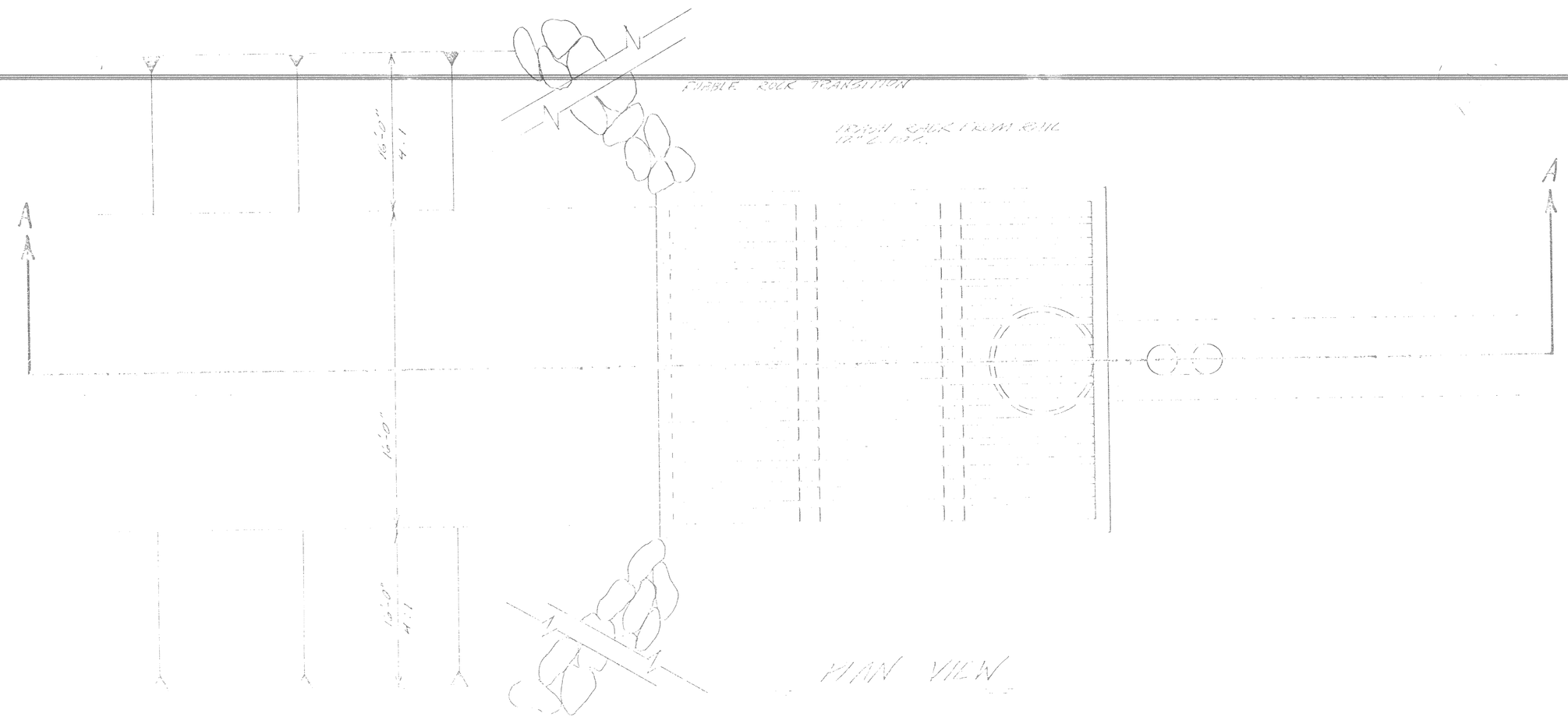
UTAH FUEL COMPANY
SKYLINE MINE

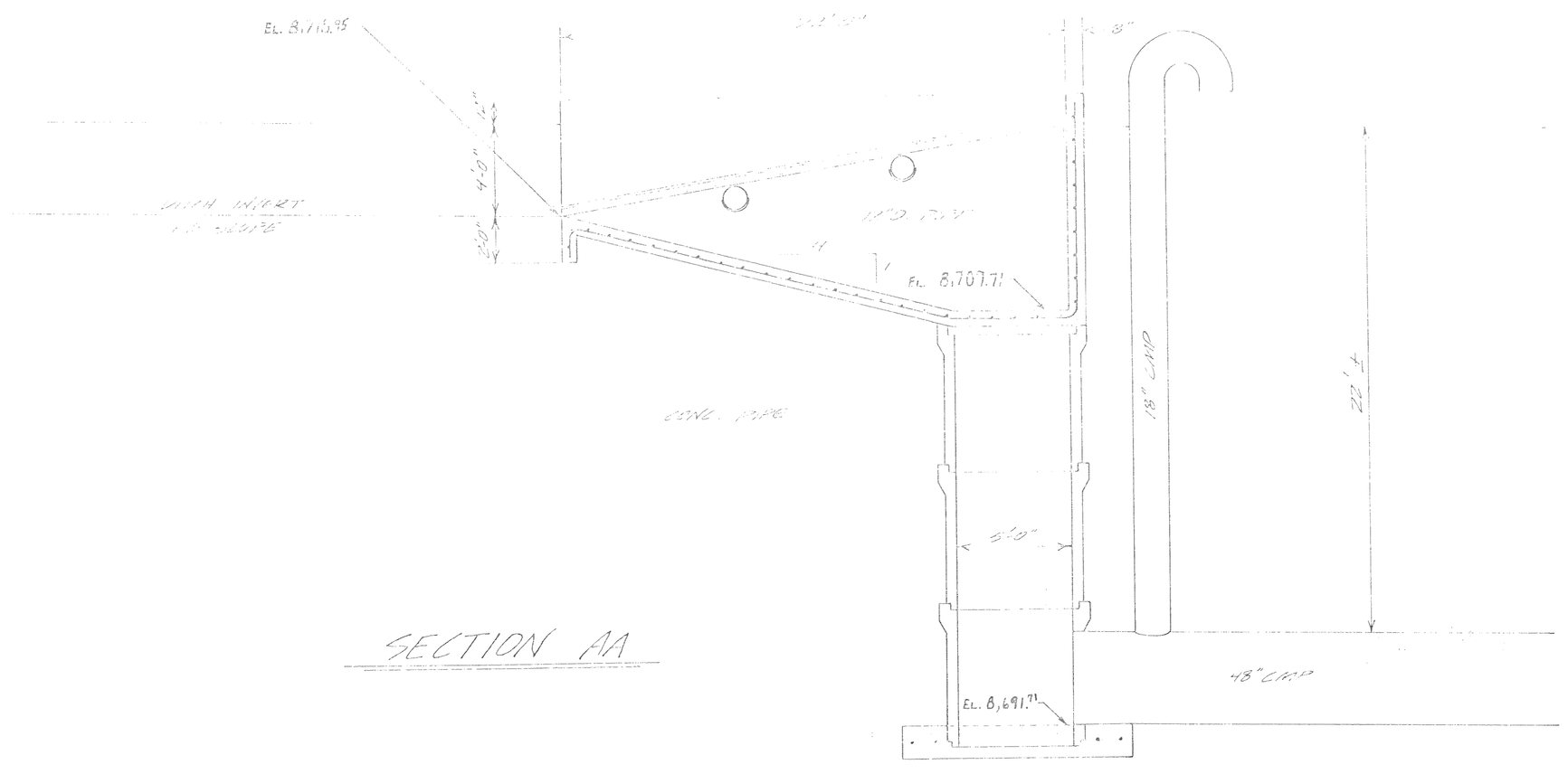
TYPICAL TRASH RACK FOR INLET STRUCTURE

JOB NO.

DWG. NO. R-

MAP OR FIGURE NO. 3.2.6-10





SECTION AA

FILE COPY

RECEIVED
JUL 14 1989
DIVISION OF
OIL, GAS & MINING

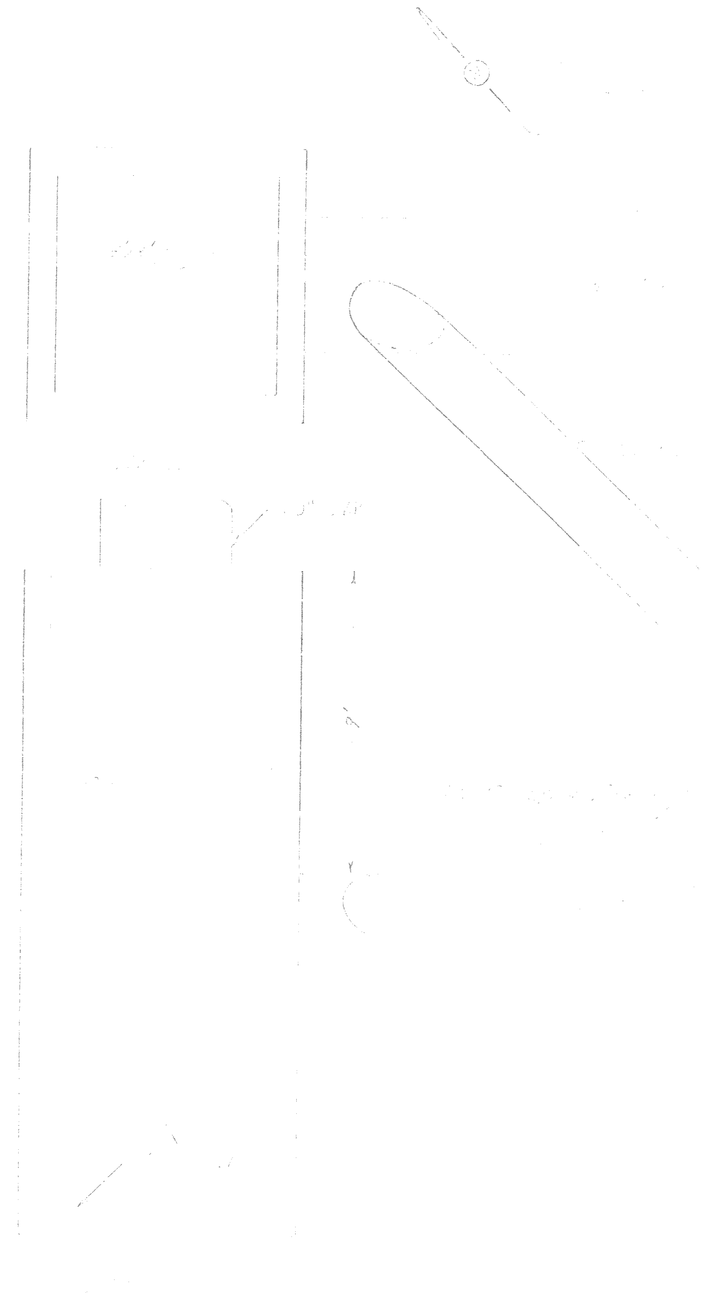
REVISIONS	DATE	SCALE: 1/4" = 1'-0"	DATE	PROFESSIONAL SEAL
1 2/2/89 ADDED ELEVATIONS TO FLOW POINTS	6/89	DESIGNED BY: B. SHRIVER	8-83	
		DRAWN BY: G.R. PETERSON	8-83	
		CHECKED BY: SCH JAH 6/21/89		
		APPROVED BY:		
		APPROVED BY:		

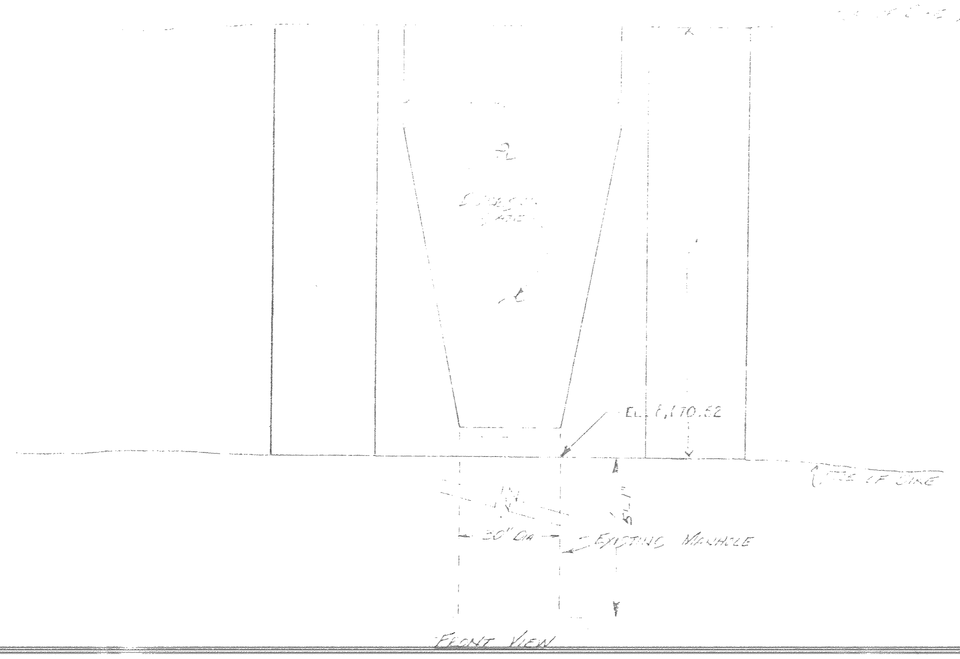
W.M. Stokes 7-1-89

UTAH FUEL COMPANY
SKYLINE MINE

INLET STRUCTURE - MIDDLE FORK

JOB NO.		MAP OR FIGURE NO. 3.2.6-1C
DWG. NO. CIHD014	R- 1	





DETAIL #2 — EMERGENCY DIVERSION STRUCTURE
No Scale

RIGHT SIDE
TYPICAL CROSS-SECTION A
No Scale
(See Drawing No. [illegible])

FILE COPY

RECEIVED
JUL 1 1980
OIL, GAS & MINING

REVISION	DATE
Added Elevations A	6/89

SCALE: AS SHOWN	DATE
DESIGNED BY: [illegible]	8-7-84
DRAWN BY: K.E. Hutchins	8-16-84
CHECKED BY: [illegible]	8-20-84
APPROVED BY: [illegible]	5/20/89
APPROVED BY: [illegible] 7-1-89	7-1-89

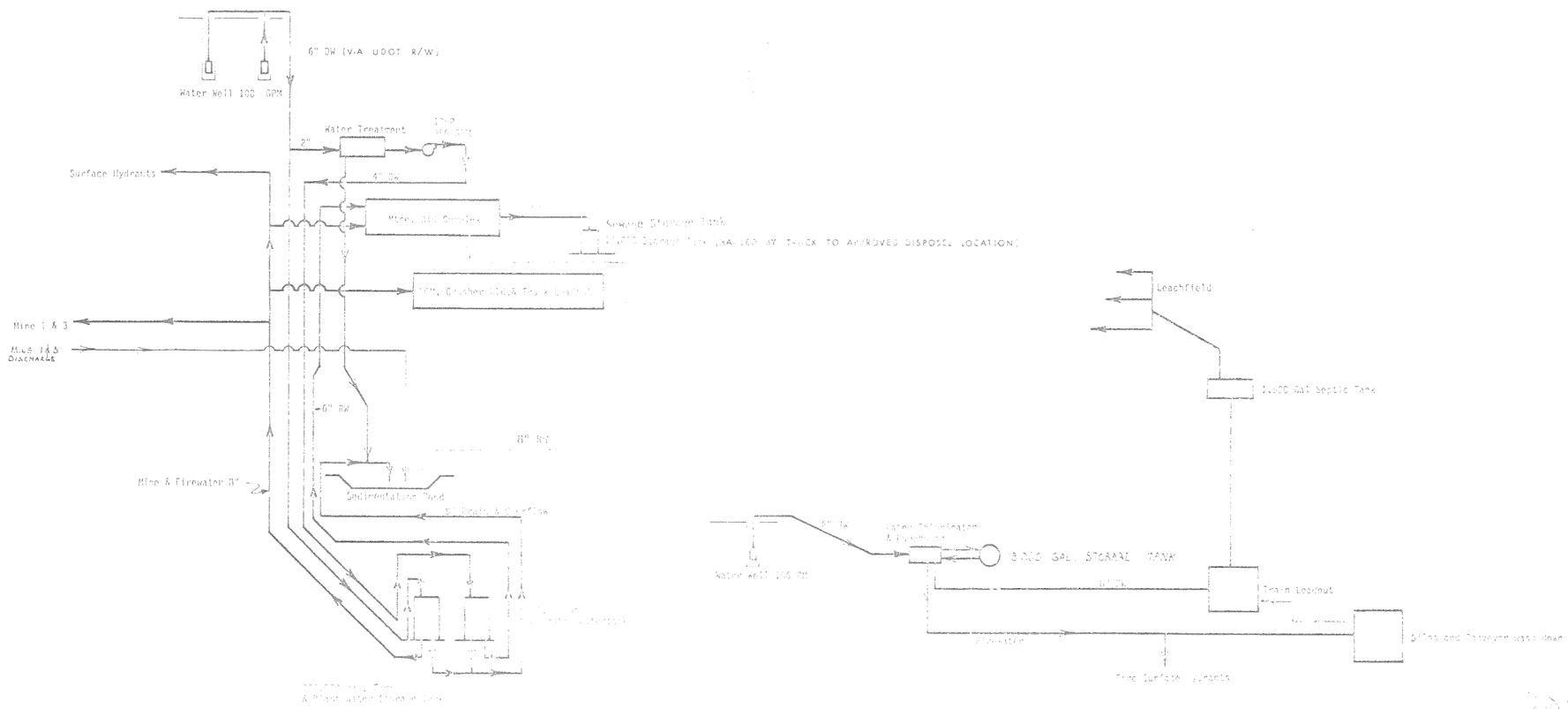
PROFESSIONAL SEAL
REGISTERED PROFESSIONAL ENGINEER
No. 5566
DOUGLAS E. JOHNSON
STATE OF UTAH

UTAH FUEL COMPANY
SKYLINE MINE

NORTH FORK DRAINAGE DESIGN
DETAILS SHEET

JOB NO.
DWG. NO. CI 40 026 R-1
MAP OR FIGURE NO. 3.2.6-18

REF DWG. 3.2.6-1A



Portal Facilities

Loadout Facilities

FILE COPY

LEGEND :

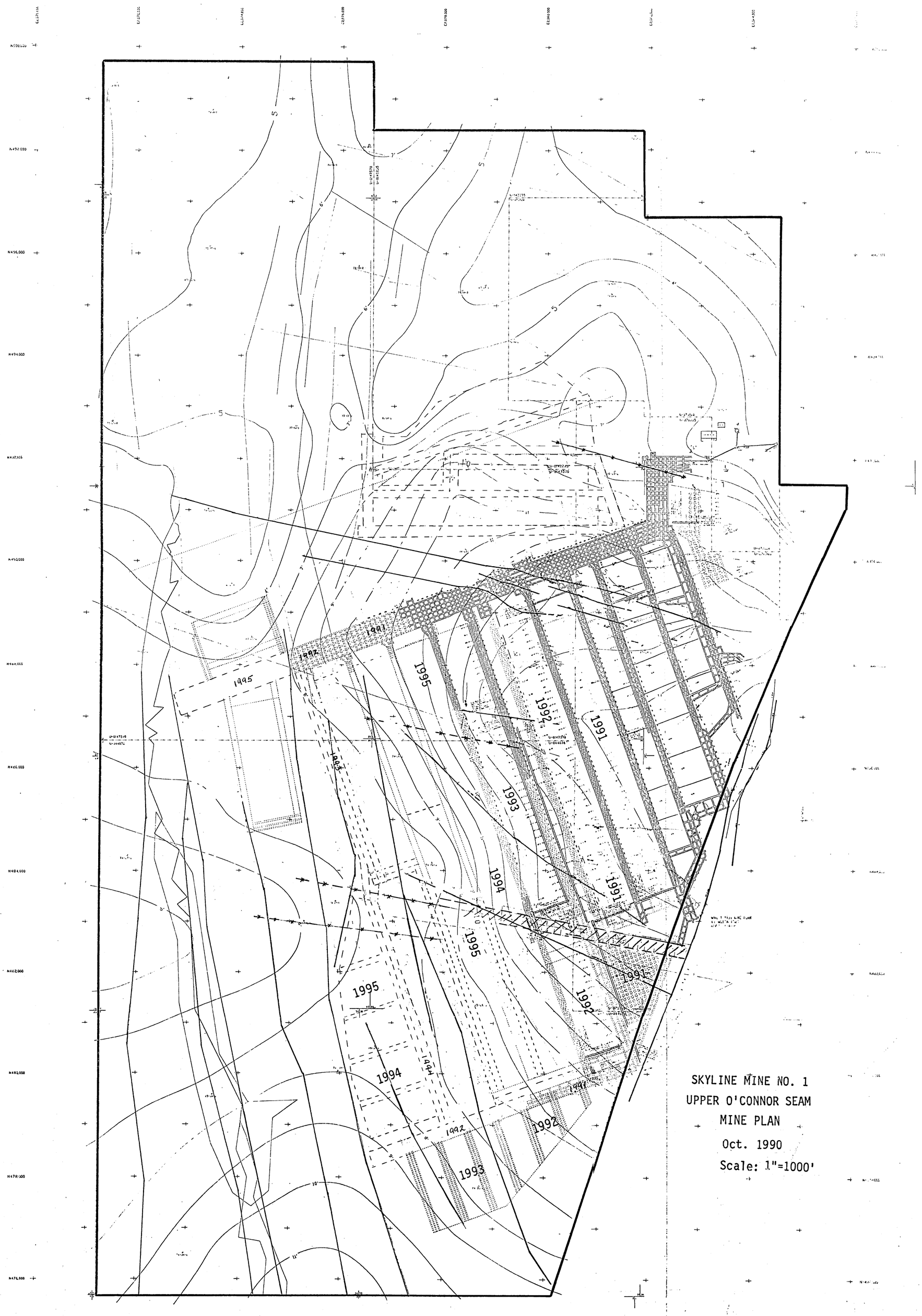
DW – DOMESTIC WATER

RW – RAW WATER

SS – SANITARY SEWER

RECEIVED
JUL 19 1989
DIVISION OF
OIL, GAS & MINING

DRAWN BY R. Zobell	DATE 6/13/	UTAH FUEL COMPANY SKYLINE MINES	
CHECKED BY P. Guymon	6/13/		
		WATER AND WASTE WATER FLOW SHEET	
REV. NO. 1	SCALE N/S	SHEET 1 OF 1	DWG. NO. 3.2.5-1



SKYLINE MINE NO. 1
UPPER O'CONNOR SEAM
MINE PLAN
Oct. 1990
Scale: 1"=1000'

REGISTERED PROFESSIONAL ENGINEER
8632
WILLIAM W. SHRIVER
STATE OF UTAH

Wm. W. Shriver
12-13-90

APPROVAL	DATE	SCALE: 1" = 1000'	DATE
		DESIGNED BY M BUNNELL	10-90
		DRAWN BY KB LAKE	10-90
		CHECKED BY LC HILTON	12-90
		APPROVED BY	
		APPROVED BY	

PROFESSIONAL SEAL

COASTAL STATES ENERGY COMPANY
SKYLINE PROJECT

UPPER O'CONNOR SEAM (No. 1)
FIVE YEAR PROJECTION

JOB No.
DWG. No.
REVISION R-
MAP OR FIGURE NO. 3.3-1

DEC 17 1990
OIL, GAS & MINING

REGISTERED PROFESSIONAL ENGINEER
8632
WILLIAM W. SHRIVER
STATE OF UTAH
Wm W. Shriver
12-13-90

DEC 17 1990
OIL, GAS & MINING

APPROVAL	DATE	SCALE: 1"=1000'	DATE	PROFESSIONAL SEAL	COASTAL STATES ENERGY COMPANY SKYLINE PROJECT
		DESIGNED BY M BUNNELL	10-90		LOWER O'CONNOR A COAL SEAM (No. 3)
		DRAWN BY KB LAKE	10-90		FIVE YEAR PROJECTION
		CHECKED BY LC HILTON	12-90		JOB No.
		APPROVED BY			DWG. No. REVISION R-
		APPROVED BY			MAP OR FIGURE NO. 3.3-2