



## American Shale Oil, LLC

September 27, 2012

Mr. Kent Walter, Manager  
White River Field Office  
Bureau of Land Management  
220 East Market Street  
Meeker CO 81641

Mr. Travis Marshall,  
Environmental Protection Specialist  
CDRMS  
101 South 3<sup>rd</sup> Street, Suite 301  
Grand Junction CO 81501

**RECEIVED**

SEP 28 2012  
GRAND JUNCTION FIELD OFFICE  
DIVISION OF  
RECLAMATION MINING & SAFETY

RE: Amendment to Plan of Development  
BLM Oil Shale Lease COC69169  
Modification to Existing Notice of Intent  
DRMS NOI No. P-2008-046

Dear Kent and Travis:

AMSO is submitting this amendment to our Plan of Development (POD) and modification to our 'Notice of Intent to Conduct Prospecting' (NOI) for your approvals.

In order to communicate efficiently the substantial amount of data we will generate during our RD&D activities, AMSO would like to install a 40 feet tall communications tower. This tower would be located inside our fenced Test Pad adjacent to our Engineering Trailer. Please see the Figure and design drawing enclosed with this application.

The communications tower will have a concrete base as shown on the enclosed engineering drawing. For reclamation, the tower will be removed and the concrete will be dug up, broken into pieces less than two feet in any dimension, and the concrete pieces incorporated into the overall Test Pad recontouring.

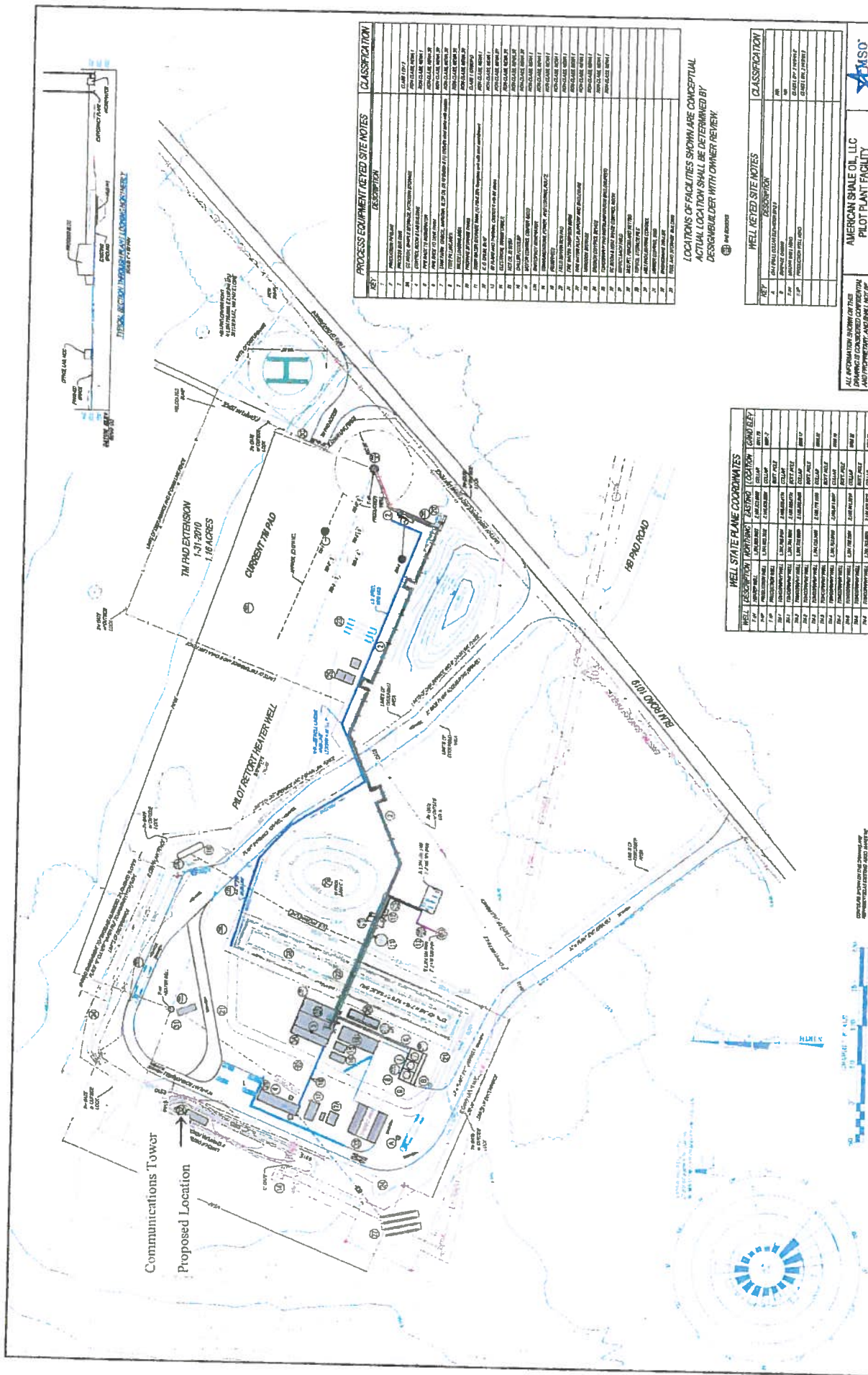
No other changes to our POD or NOI are requested at this time.

Your approvals would be appreciated.

Please contact me if you have any questions or need more information.

Sincerely,

Roger L. Day  
VP of Operations



KEY	PROCESS EQUIPMENT	NOTES	CLASSIFICATION
1	RETORT HEATER		CLASS 1
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LOCATIONS OF FACILITIES SHOWN ARE CONCEPTUAL  
ACTUAL LOCATION SHALL BE DETERMINED BY  
DESIGNER/OWNER WITH OWNERS REVIEW

KEY	WELL SITED SITE NOTES	CLASSIFICATION
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AMERICAN SHALE OIL, LLC  
PILOT PLANT FACILITY  
SITE PLAN AND FACILITIES LAYOUT  
REVISED FIGURE 2.2

ALL INFORMATION SHOWN ON THIS DRAWING IS CONSIDERED CONFIDENTIAL AND PROPRIETARY, AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF AMSO.

AMSO  
AMERICAN SHALE OIL, LLC

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# STATE OF COLORADO

## DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215

Denver, Colorado 80203

Phone: (303) 866-3567

FAX: (303) 832-8106



### FORM 1

#### *All information for DRMS use and confidential filing* **NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS FOR HARD ROCK/METAL MINES**

CHECK ONE:

☐

There is an NOI Number Already Assigned to this Operation

NOI #

P- \_\_\_\_\_ (Please reference the file number assigned to this operation)

☐

New NOI

☒

Modification to an Existing NOI

NOI #

P- 2008-042 (Provide for Modifications to an existing NOI)

#### GENERAL OPERATION INFORMATION

Type or print clearly, in the space provided, ALL information described below.

#### **I. GENERAL INFORMATION**

1. **DATE NOI RECEIVED BY THE DIVISION:** \_\_\_\_\_ (office use only)

2. **PROJECT NAME:** AMSO RD&D Oil Shale Project

3. **PROSPECTOR:**

Name: No Change

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

**PERSON MLRB SHOULD CONTACT:**

Name: No Change

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

4. **APPLICATION FEE:** \$86. (NOIs and modifications require an \$86 fee which must accompany this notice or it cannot be processed by the Division).

5. **LOCATION INFORMATION:**

County: \_\_\_\_\_

PRINCIPAL MERIDIAN (check one) ☐ 6<sup>th</sup> (Colorado) ☐ 10<sup>th</sup> (New Mexico) ☐ (Ute)

SECTION (write number):

S \_\_\_\_\_

Office of  
Mined Land Reclamation

Denver • Grand Junction • Durango

Office of  
Active and Inactive Mines

TOWNSHIP (write number and check direction) T ☐ North ☐ South ☐  
 RANGE (write number and check direction) R ☐ East ☐ West ☐  
 QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☐ SW  
 QUARTER/QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☐ SW

GENERAL DESCRIPTION: (the number of miles and direction to the nearest town and the approximate elevation):  
No Change

NOTE: Supply longitude and latitude or UTM coordinates if lands have not been surveyed or as supplemental information to this NOI. GPS measurements will be acceptable for this purpose: \_\_\_\_\_

6. **LAND OWNERSHIP**

Private ☐ Public Domain (BLM) ☐ National Forest (USFS) ☐  
 State ☐ State Sovereign Lands ☐ Other (please describe): \_\_\_\_\_

**If prospecting is located on BLM or USFS land the remaining section must be completed, otherwise go to Section II, Maps & Drawings**

7. **PROSPECTING ON BUREAU OF LAND MANAGEMENT (BLM) LAND AND U.S. FOREST SERVICE (USFS) LAND**

The Division and the BLM/USFS have entered into cooperative agreements that eliminate the need for a prospector to post a financial warranty with each agency and allow them to coordinate the review of the NOI in order to minimize administrative processing time and effort.

A. **CLAIMANT:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax Number: \_\_\_\_\_

B. **SITE/CLAIM INFORMATION:**

List names, serial numbers, and provide legal description to nearest quarter-quarter section of all sites or claims (attach additional page, if necessary).

<u>NAME</u>	<u>SERIAL NUMBER</u>	<u>LEGAL DESCRIPTION</u>

C. **LOCATION MAP:** Attach a USGS 7.5 minute quad, or similar map of adequate scale, which locates the prospecting site(s).

D. Are prospect sites (e.g., drill holes, trench locations, etc...) staked on the ground? Yes ☐ No ☐

E. Specify the Land Management Agency, Address and Telephone Number:

No Change

F. The prospector is required to document that the NOI has been sent to the BLM or the USFS. Processing of the NOI will not begin until the prospector has submitted evidence acceptable to the Division that the NOI was sent to the BLM or USFS. Check one:



Evidence of notification is attached to this NOI for BLM Land



Evidence of notification is attached to this NOI for USFS Land.



Other proof of notice is attached to this NOI

## II. MAPS & DRAWINGS

Accurate topographic base map showing the location of the proposed project must be submitted with this notice. The prospector may submit a U.S.G.S. 7.5 minute quadrangle, or similar map of adequate scale that:

1. Identifies the proposed prospecting site(s) or activity areas involving surface disturbance. Activity areas include all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads, and
2. Includes sufficient detail to identify and locate known prospecting features and facilities that may be affected and those that are not anticipated to be affected. This includes the location of all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads. Color photographs, adequately labeled (including date, orientation and location), of the prospecting site may be used to fulfill this requirement if included with the NOI submittal.

## III. PROJECT DESCRIPTION

1. **Mineral(s) and/or Resource(s) being Investigated:** No Change

2. **Estimated dates of commencement and completion:**

Commencement: \_\_\_\_\_

Completion: \_\_\_\_\_

3. **Amount of material to be extracted, moved or proposed to be moved:** \_\_\_\_\_

4. **Identify the type or method of prospecting proposed and quantity (place an "X")**



Cuts



Pits



Trenches



Declines



Shafts



Tunnels



Adits



Air Drilling



Fluid Drilling



Drilling & Blasting

5. Describe proposed surface excavation or other land disturbance, including roads, pits, trenches, waste piles, drill pads and collar areas of underground workings, ponds, etc...

No Change

6. **Proposed Disturbance** (approximate) Describe the proposed drilling to be conducted, including anticipated number of holes, diameter, depth, location, etc... Submit additional pages if necessary:

- A. Drill Pads: Quantity \_\_\_\_\_ Average Width \_\_\_\_\_ (ft) Average Length \_\_\_\_\_ (ft)  
 B. Drill Holes: Quantity \_\_\_\_\_ Depth \_\_\_\_\_ (ft) Diameter \_\_\_\_\_ (in)  
 C. Mud Pits: Quantity \_\_\_\_\_ Average Width \_\_\_\_\_ (ft) Average Length \_\_\_\_\_ (ft)  
 Average Depth \_\_\_\_\_ (ft)

Describe proposed underground work, including reopening of old workings, advancement of adits or shafts, trenches, pits, cuts, rock dumps, or other types of disturbance, describe type, quantity and general dimensions:

No Change

- D. Other Disturbances (please describe):

No new disturbances, disturbed acreage remains the same.

- E. Indicate Chemicals and Fuels used or stored on site. List type, quantity and method to store.

No Change

- F. New Road(s): Length \_\_\_\_\_ (ft) Width \_\_\_\_\_ (ft)  
 Significantly Upgraded Road(s) Length \_\_\_\_\_ (ft) Width \_\_\_\_\_ (ft)

Are culverts or other crossings proposed? If so, please describe: \_\_\_\_\_

No change to road system

G. Total project area to be disturbed \_\_\_\_\_ (acres)

H. Describe the equipment to be used for the prospecting operations:

No Change

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I. Describe and locate any structures to be constructed (i.e. stockpiles, ponds, impoundments):

New 40 feet tall communications tower to be located adjacent to the Engineering Trailer inside chain link fence on west side of Test Pad.

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Please see enclosed Figure and design drawing.

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J. Describe anticipated relationship to surface water and groundwater (proximity to streams, penetration of ground water aquifers):

No Change

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#### **IV. OPERATION AND RECLAMATION MEASURES:**

1. The Board suggests that a photographic record of the pre-prospecting and post-prospecting conditions be kept by the prospector. These photos should be taken from the same location and by the same method to clearly show the pre-prospecting condition of the land and the reclamation efforts. Upon completion of reclamation and request for bond or surety release, the Board may consider the photos as evidence of adequate reclamation, and thus, be able to act more quickly on the request for release.
2. Provide a description of the native vegetation of the area to be disturbed, including tree, shrub, and grass communities of the area. Color photographs, sufficient to adequately represent the ecology of the site and adequately labeled (including date, orientation and location), may be used in lieu of a written description. Based on the quality of the photographs, the Division may require additional detail.

No Change

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3. Describe the estimated topsoil depth and how topsoil will be salvaged, stockpiled and redistributed for the re-establishment of vegetation. Specify approximate topsoil redistribution depth:

No Change

4. Describe how drill holes will be plugged (refer to Rule 5.4 of the Rules for required abandonment procedures):

No Change

5. Describe how portals, adits, shafts, ponds, excavations, or other disturbances will be reclaimed (refer to Rule 3 and Rule 5 for specific reclamation performance standards). You may wish to contact the Division for closure specifications.

No change to previous approvals. The communications tower will have a concrete base as shown on the enclosed design drawing. The tower will be removed and the concrete base will be dug up, broken up into pieces less than two feet in any dimension, and the concrete pieces incorporated into the overall Test Pad recontouring. The incremental cost of reclamation is estimated to be \$1,000.

6. Describe how roads will be reclaimed or returned to their pre-prospecting (or better) condition:

No Change



7. List the seed mixture to be used in the re-establishment of vegetation. See the attached seed mixture calculation to obtain PLS/acre. For assistance with formulating seed mixtures and rates, contact the local NRCS if on private land, BLM/USFS if on public land or State Land Board if on state land.

A. Provide plant name and seeding rate

Plant Name	Seeding Rate (PLS/acre)
No Change	

B. Describe the method for seed bed preparation, and application method for grass/forb seeding:

No Change

#### **V. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:**

1. Reclamation measures shall be fulfilled in a timely manner and completed within five (5) years of completion of prospecting activities.
2. The prospecting operations described in this Notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 5, precautions to be taken include:
  - A. Confinement of operations to areas near existing roads or trails, where practicable. Existing roads which are to remain as permanent roads after prospecting activities are completed shall be left in a condition equal to or better than the pre-prospecting condition;
  - B. Drilling shall be conducted in such a way as to prevent cuttings and fluids from directly entering any dry or flowing stream channel. Drill cuttings must be spread to a depth no greater than one-half (1/2) inch or buried in an approved disposal pit;

- C. Proper and timely abandonment of drill holes upon completion of drilling;
  - D. Reclamation of affected lands upon completion of operations or phases of an operation,;
  - E. Backfilling and revegetating any pits to blend in with the surrounding land surface;
  - F. Safeguarding mine entries, trenches and excavations from unauthorized entry at all times;
  - G. Disposal of any trash, scrap metal, wood, machinery, and buildings;
  - H. Control of noxious weeds within the area affected by the prospector
3. The prospecting operations shall be conducted in such a manner as to comply with all applicable local, state and federal laws and regulations including applicable state and federal air and water quality laws and regulations.
  4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife to include covering of open drill holes until properly plugged.
  5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to ensure those areas affected by prospecting activities are erosionally and geotechnically stable.
  6. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended (34-32-101 et seq. C.R.S.), and all rules and regulations currently in effect or promulgated pursuant thereto. See 2 CCR 407-1, Mined Land Reclamation Board Hardrock /Metal Mining Rules.

#### **VI. ADDITIONAL TERMS AND CONDITIONS FOR PROSPECTING ON BLM/USFS LANDS**

1. The prospector will supply a copy of this NOI to the appropriate BLM and/or USFS office.
2. The prospector authorizes the MLRB to discuss the information in this Notice of Intent with the BLM and/or USFS.
3. If on BLM land, the prospector will complete reclamation to the standards described in 43 CFR 3809.1-3 (d) and implement reasonable measures to prevent unnecessary or undue degradation of lands during operations.

#### **VII. FINANCIAL WARRANTY**

A financial warranty must be provided for the cost of reclamation of the disturbance described in this Notice. The prospector can either file a "One Site Prospecting Financial Warranty" or a "Statewide Financial Warranty." **The financial warranty must be submitted and approved by the Division prior to entry upon lands for the purpose of prospecting.**

An One-Site Prospecting Financial Warranty is usually filed by individuals or companies where prospecting activities are limited to a single area. It must be filed in the amount of \$2,000 per acre for land to be disturbed, or such other amount as determined by the Division, based on the projected costs of reclamation. A Statewide Financial Warranty is usually filed by companies with multiple prospecting sites. It must be filed in an amount equal to the estimated cost of reclamation per acre of affected land for all anticipated sites statewide. (You may increase the Statewide bond at any time in order to cover additional or expanded prospecting activities.)

**VIII. SIGNATURE REQUIREMENT**

Please place your initials on the line provided:

Day

I hereby verify that the foregoing information is true and accurate and commit to the reclamation of the aforementioned prospecting site as required by the Colorado Mined Reclamation Act and the rules as specified in the Hard Rock/Metal Mining Rules and Regulations and this NOI form.

Day

I have enclosed the required permit fee.

Day

I authorize the Division to contact and copy the BLM and/or USFS on any correspondence related to the prospecting operation, if the prospecting operation is located on federal public land.

Day

I have also enclosed the appropriate reclamation surety amount or will post an amount as determined by the office, based on the projected costs of reclamation.

Day

I understand that I am not authorized to create any surface disturbance until the surety amount is posted and approved in writing from the Division of Reclamation, Mining and Safety.

Day

I accept and agree to comply with the foregoing terms and conditions and with all of the provisions of Rules 3 and 5, and C.R.S. 34-32-101.

Day

I hereby certify that concurrent with submittal of this NOI to the Division, I have sent notice to the Boards of County Commissioners in the Counties where the proposed activities will occur. This notice also indicated that non-confidential information regarding the proposed activities will be available for review at the Division's website.

*This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32-113, C.R.S., of the Mined Land Reclamation Act. Any alteration or modification of this form shall result in voiding any NOI issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a NOI pursuant to section 34-32-123, C.R.S.*

I, the undersigned, being the NOI holder or the person authorized to sign on behalf of the NOI holder, declare that the information given in this NOI form is true and correct.

**SIGNATURES MUST BE IN BLUE INK**

Signed and dated this 27 day of September 2012

Signature of NOI holder or person authorized to sign:

Roger L. Day

Name (typed or print) Roger L. Day

Title/Position: VP Operations AMSO

# STATE OF COLORADO

**DIVISION OF RECLAMATION, MINING AND SAFETY**  
Department of Natural Resources

1313 Sherman St., Room 215  
Denver, Colorado 80203  
Phone: (303) 866-3567  
FAX: (303) 832-8106



## **FORM 2 (Public File)** **NOTICE OF INTENT TO CONDUCT PROSPECTING OPERATIONS** **FOR HARD ROCK/METAL MINES**

**CHECK ONE:** ☐ There is an NOI Number Already Assigned to this Operation  
N# P- - (Please reference the file number assigned to this operation)  
☐ New NOI  
☒ Modification to an Existing NOI  
NOI# P-2008-042 (Provide for Modifications to an existing NOI)

### **GENERAL OPERATION INFORMATION**

Type or print clearly, in the space provided, ALL information described below.

#### **I. GENERAL INFORMATION**

1. **DATE NOI RECEIVED BY THE DIVISION:** \_\_\_\_\_ (office use only)

2. **PROJECT NAME:** AMSO RD&D Oil Shale Project

8. **PROSPECTOR:**

No Change

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

**PERSON MLRB SHOULD CONTACT:**

Name: No Change

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

9. **APPLICATION FEE:** \$86. (NOIs and modifications require an \$86 fee which must accompany this notice or it cannot be processed by the Division).

10. **LOCATION INFORMATION:**

County: \_\_\_\_\_

PRINCIPAL MERIDIAN (check one) ☐ 6<sup>th</sup> (Colorado) ☐ 10<sup>th</sup> (New Mexico) ☐ (Ute)

SECTION (write number): S \_\_\_\_\_

TOWNSHIP (write number and check direction) T \_\_\_\_\_ North ☐ South ☐

Office of  
Mined Land Reclamation

Denver • Grand Junction • Durango

Office of  
Active and Inactive Mines

RANGE (write number and check direction)

QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☐ SWQUARTER/QUARTER SECTION (check one): ☐ NE ☐ NW ☐ SE ☐ SW

GENERAL DESCRIPTION: (the number of miles and direction to the nearest town and the approximate elevation):

No Change

NOTE: Supply longitude and latitude or UTM coordinates if lands have not been surveyed or as supplemental information to this NOI. GPS measurements will be acceptable for this purpose: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. **LAND OWNERSHIP**Private ☐State ☐Public Domain (BLM) ☐State Sovereign Lands ☐National Forest (USFS) ☐

Other (please describe): \_\_\_\_\_

**If prospecting is located on BLM or USFS land the remaining section must be completed, otherwise go to section II Maps & Drawings**

12. **PROSPECTING ON BUREAU OF LAND MANAGEMENT (BLM) LAND AND U.S. FOREST SERVICE (USFS) LAND**

The Division and the BLM/USFS have entered into cooperative agreements that eliminate the need for a prospector to post a financial warranty with each agency and allow them to coordinate the review of the NOI in order to minimize administrative processing time and effort.

G. **CLAIMANT:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax Number: \_\_\_\_\_

H. **SITE/CLAIM INFORMATION:**

List names, serial numbers and provide legal description to nearest quarter-quarter section of all sites or claims (attach additional page, if necessary).

NAME	SERIAL NUMBER	LEGAL DESCRIPTION

I. **LOCATION MAP:** Attach a USGS 7.5 minute quad, or similar map of adequate scale, which locates the prospecting site(s).

J. Are prospect sites (e.g., drill holes, trench locations, etc...) staked on the ground? Yes ☐ No ☐

K. Specify the Land Management Agency, Address and Telephone Number:

No Change

L. The prospector is required to document that the NOI has been sent to the BLM or the USFS. Processing of the NOI will not begin until the prospector has submitted evidence acceptable to the Division that the NOI was sent to the BLM or USFS. Check one:

- ☒ Evidence of notification is attached to this NOI for BLM Land  
☐ Evidence of notification is attached to this NOI for USFS Land.  
☐ Other proof of notice is attached to this NOI

## II. MAPS & DRAWINGS

Accurate topographic base map showing the location of the proposed project must be submitted with this notice. The prospector may submit a U.S.G.S. 7.5 minute quadrangle, or similar map of adequate scale that:

3. identifies the proposed prospecting site(s) or activity areas involving surface disturbance. Activity areas include all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads, and
4. includes sufficient detail to identify and locate known prospecting features and facilities that may be affected and those that are not anticipated to be affected. This includes the location of all drill holes, mud pits, excavations, trenches, adits, shafts, tunnels, rock dumps, stockpiles, impoundments and prospecting roads. Color photographs, adequately labeled (including date, orientation and location), of the prospecting site may be used to fulfill this requirement if included with the NOI submittal.

## III. PROJECT DESCRIPTION

7. **Mineral(s) and/or Resource(s) being Investigated:** No Change

8. **Estimated dates of commencement and completion:**

Commencement: \_\_\_\_\_

Completion: \_\_\_\_\_

9. **Amount of material to be extracted, moved or proposed to be moved:** \_\_\_\_\_

10. **Identify the type or method of prospecting proposed and quantity (place an "X")**

<input type="checkbox"/> Cuts	<input type="checkbox"/> Pits	<input type="checkbox"/> Trenches	<input type="checkbox"/> Declines
<input type="checkbox"/> Shafts	<input type="checkbox"/> Tunnels	<input type="checkbox"/> Adits	
<input type="checkbox"/> Air Drilling	<input type="checkbox"/> Fluid Drilling	<input type="checkbox"/> Drilling & Blasting	

11. Describe proposed surface excavation or other land disturbance, including roads, pits, trenches, waste piles, drill pads and collar areas of underground workings, ponds, etc...

No Change

12. **Proposed Disturbance** (approximate) Describe the proposed drilling to be conducted, including anticipated number of holes, diameter, depth, location, etc... Submit additional pages if necessary:

- A. Drill Pads: Quantity \_\_\_\_\_ Average Width \_\_\_\_\_ (ft) Average Length \_\_\_\_\_ (ft)  
B. Drill Holes: Quantity \_\_\_\_\_ Depth \_\_\_\_\_ (ft) Diameter \_\_\_\_\_ (in)  
C. Mud Pits: Quantity \_\_\_\_\_ Average Width \_\_\_\_\_ (ft) Average Length \_\_\_\_\_ (ft)  
Average Depth \_\_\_\_\_ (ft)

Describe proposed underground work, including reopening of old workings, advancement of adits or shafts, trenches, pits, cuts, rock dumps, or other types of disturbance, describe type, quantity and general dimensions:

No Change

- F. Other Disturbances (please describe):

No new disturbances, disturbed acreage remains the same.

- G. Indicate Chemicals and Fuels used or stored on site. List type, quantity and method to store.

No Change

- F. New Road(s): Length \_\_\_\_\_ (ft) Width \_\_\_\_\_ (ft)  
Significantly Upgraded Road(s) Length \_\_\_\_\_ (ft) Width \_\_\_\_\_ (ft)

Are culverts or other crossings proposed? If so, please describe: \_\_\_\_\_

No change to road system

G. Total project area to be disturbed \_\_\_\_\_ (acres)

K. Describe the equipment to be used for the prospecting operations:

No Change

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L. Describe and locate any structures to be constructed (i.e. stockpiles, ponds, impoundments):

New 40 feet tall communications tower to be located adjacent to the Engineering Trailer inside chain link fence on west side of Test Pad.

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Please see enclosed Figure and design drawing.

M. Describe anticipated relationship to surface water and groundwater (proximity to streams, penetration of ground water aquifers):

No Change

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#### IV. **OPERATION AND RECLAMATION MEASURES:**

1. The Board suggests that a photographic record of the pre-prospecting and post-prospecting conditions be kept by the prospector. These photos should be taken from the same location and by the same method to clearly show the pre-prospecting condition of the land and the reclamation efforts. Upon completion of reclamation and request for bond or surety release, the Board may consider the photos as evidence of adequate reclamation, and thus, be able to act more quickly on the request for release.
2. Provide a description of the native vegetation of the area to be disturbed, including tree, shrub, and grass communities of the area. Color photographs, sufficient to adequately represent the ecology of the site and adequately labeled (including date, orientation and location), may be used in lieu of a written description. Based on the quality of the photographs, the Division may require additional detail.

No Change

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8. Describe the estimated topsoil depth and how topsoil will be salvaged, stockpiled and redistributed for the re-establishment of vegetation. Specify approximate topsoil redistribution depth:

No Change

9. Describe how drill holes will be plugged (refer to Rule 5.4 of the Rules for required abandonment procedures):

No Change

10. Describe how portals, adits, shafts, ponds, excavations, or other disturbances will be reclaimed (refer to Rule 3 and Rule 5 for specific reclamation performance standards). You may wish to contact the Division for closure specifications.

No change to previous approvals. The communications tower will have a concrete base as shown on the enclosed design drawing. The tower will be removed and the concrete base will be dug up, broken up into pieces less than two feet in any dimension, and the concrete pieces incorporated into the overall Test Pad recontouring. The incremental cost of reclamation is estimated to be \$1,000.

11. Describe how roads will be reclaimed or returned to their pre-prospecting (or better) condition:

No Change

12. List the seed mixture to be used in the re-establishment of vegetation. See the attached seed mixture calculation to obtain PLS/acre. For assistance with formulating seed mixtures and rates, contact the local NRCS if on private land, BLM/USFS if on public land or State Land Board if on state land.

A. Provide plant name and seeding rate

Plant Name	Seeding Rate (PLS/acre)
No Change	

B. Describe the method for seed bed preparation, and application method for grass/forb seeding:

No Change

#### **V. TERMS AND CONDITIONS FOR PROSPECTING OPERATIONS:**

3. Reclamation measures shall be fulfilled in a timely manner and completed within five (5) years of completion of prospecting activities.
4. The prospecting operations described in this Notice will be conducted in such a manner as to minimize surface disturbances. In addition to the measures required in Rule 5, precautions to be taken include:
  - A. Confinement of operations to areas near existing roads or trails, where practicable. Existing roads which are to remain as permanent roads after prospecting activities are completed shall be left in a condition equal to or better than the pre-prospecting condition;
  - B. Drilling shall be conducted in such a way as to prevent cuttings and fluids from directly entering any dry or flowing stream channel. Drill cuttings must be spread to a depth no greater than one-half (1/2) inch or buried in an approved disposal pit;

- C. Proper and timely abandonment of drill holes upon completion of drilling;
  - D. Reclamation of affected lands upon completion of operations or phases of an operation,;
  - E. Backfilling and revegetating any pits to blend in with the surrounding land surface;
  - F. Safeguarding mine entries, trenches and excavations from unauthorized entry at all times;
  - G. Disposal of any trash, scrap metal, wood, machinery, and buildings;
  - H. Control of noxious weeds within the area affected by the prospector
- 3. The prospecting operations shall be conducted in such a manner as to comply with all applicable local, state and federal laws and regulations including applicable state and federal air and water quality laws and regulations.
  - 4. The prospecting operations shall be conducted so as to minimize adverse effects upon wildlife to include covering of open drill holes until properly plugged.
  - 5. During the prospecting operations, the operator will perform the necessary stabilization and reclamation work to ensure those areas affected by prospecting activities are erosionally and geotechnically stable.
  - 6. All prospecting operations shall be in compliance with the Colorado Mined Land Reclamation Act, as amended (34-32-101 et seq. C.R.S.), and all rules and regulations currently in effect or promulgated pursuant thereto. See 2 CCR 407-1, Mined Land Reclamation Board Hardrock /Metal Mining Rules.

#### **VI. ADDITIONAL TERMS AND CONDITIONS FOR PROSPECTING ON BLM/USFS LANDS**

- 4. The prospector will supply a copy of this NOI to the appropriate BLM and/or USFS office.
- 5. The prospector authorizes the MLRB to discuss the information in this Notice of Intent with the BLM and/or USFS.
- 6. If on BLM land, the prospector will complete reclamation to the standards described in 43 CFR 3809.1-3 (d) and implement reasonable measures to prevent unnecessary or undue degradation of lands during operations.

#### **VII. FINANCIAL WARRANTY**

A financial warranty must be provided for the cost of reclamation of the disturbance described in this Notice. The prospector can either file a "One Site Prospecting Financial Warranty" or a "Statewide Financial Warranty." **The financial warranty must be submitted and approved by the Division prior to entry upon lands for the purpose of prospecting.**

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**VIII. SIGNATURE REQUIREMENT**

Please place your initials on the line provided:

Day

I hereby verify that the foregoing information is true and accurate and commit to the reclamation of the aforementioned prospecting site as required by the Colorado Mined Reclamation Act and the rules as specified in the Hard Rock/Metal Mining Rules and Regulations and this NOI form.

Day

I have enclosed the required permit fee.

Day

I authorize the Division to contact and copy the BLM and/or USFS on any correspondence related to the prospecting operation, if the prospecting operation is located on federal public land.

Day

I have also enclosed the appropriate reclamation surety amount or will post an amount as determined by the office, based on the projected costs of reclamation.

Day

I understand that I am not authorized to create any surface disturbance until the surety amount is posted and approved in writing from the Division of Reclamation, Mining and Safety.

Day

I accept and agree to comply with the foregoing terms and conditions and with all of the provisions of Rules 3 and 5, and C.R.S. 34-32-101.

Day

Day

I hereby certify that concurrent with submittal of this NOI to the Division, I have sent notice to the Boards of County Commissioners in the Counties where the proposed activities will occur. This notice also indicated that non-confidential information regarding the proposed activities will be available for review at the Division's website.

***This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32-113, C.R.S., of the Mined Land Reclamation Act. Any alteration or modification of this form shall result in voiding any NOI issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a NOI pursuant to section 34-32-123, C.R.S.***

I, the undersigned, being the NOI holder or the person authorized to sign on behalf of the NOI holder, declare that the information given in this NOI form is true and correct.

**SIGNATURES MUST BE IN BLUE INK**

Signed and dated this 27 day of September 2012.

Signature of NOI holder or person authorized to sign:

Roger L. Day

Name (typed or print) Roger L. Day

Title/Position: VP Operations AMSO



# DT Lightweight Towers

## Rosenberger

Rosenberger Site Solutions

### Description

The DT Lightweight Tower is designed for a number of communication applications. Built with 1" solid round legs and ½" solid rod bracing, this pre-engineered tower provides strength and efficiency.

The DT Lightweight tower is designed per /TIA 222 rev. G code and is rated for 90mph wind speed.

By using 10' increments, this tower can achieve an overall height of 60 feet.

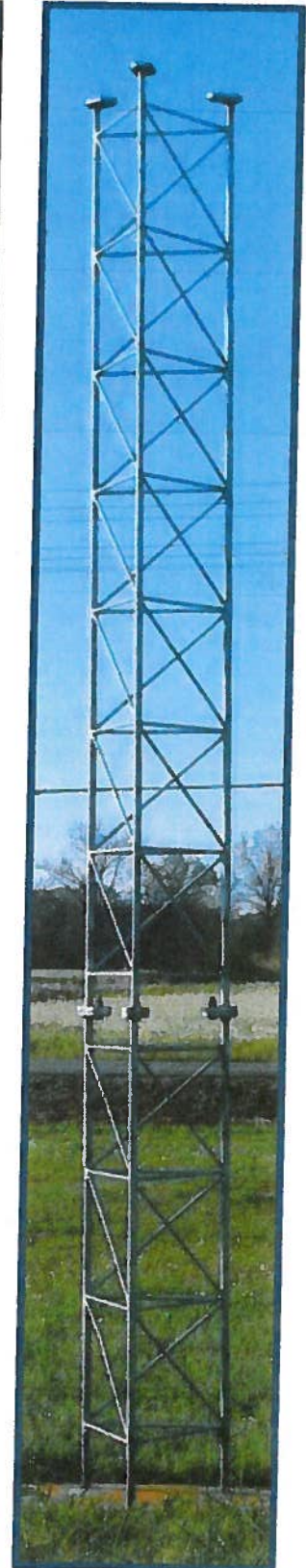
### Tower Profile

<b>Load Location</b>	Top
<b>Maximum Height</b>	60' Freestanding / 70' Bracketed*
<b>Minimum Height</b>	10' Freestanding / 20' Bracketed*
<b>Standard 10' Section Weight</b>	157 lbs
<b>5' Base Section Weight</b>	78.5 lbs
<b>Leg Size</b>	1"
<b>Leg Type</b>	Solid Round
<b>Leg Connection</b>	One Hole Bolted Flange
<b>Bracing Type/Size</b>	½" Solid Rod
<b>Bracing Connection</b>	100% Welded
<b>Engineering</b>	Pre-Engineered

### EPA Load Range

<b>Design/ Length</b>	<b>Load</b>
<b>60 Feet</b>	5.4 square feet w/ 4- ½" coax cables
<b>50 Feet</b>	11.6 square feet w/ 4- ½" coax cables
<b>40 Feet</b>	19.9 square feet w/ 4- ½" coax cables
<b>30 Feet</b>	33.5 square feet w/ 4- ½" coax cables

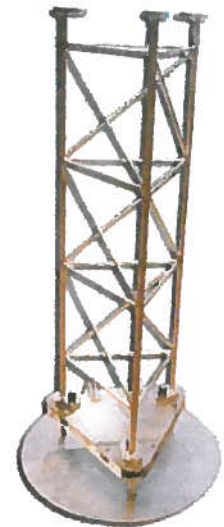
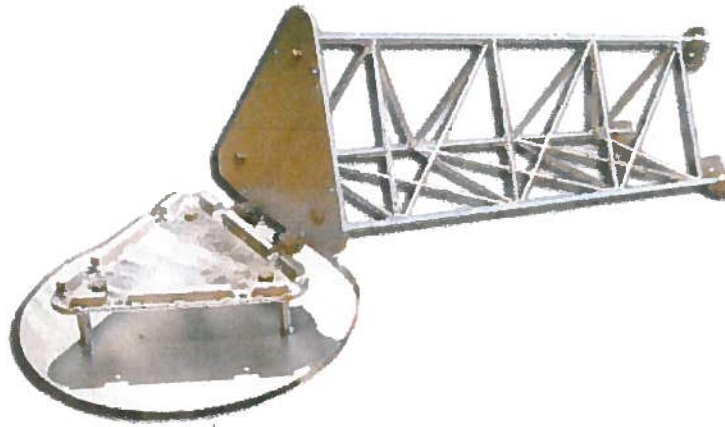
\* Note: With proper wall bracketing between 15' to 20' elevations can go up to 70'



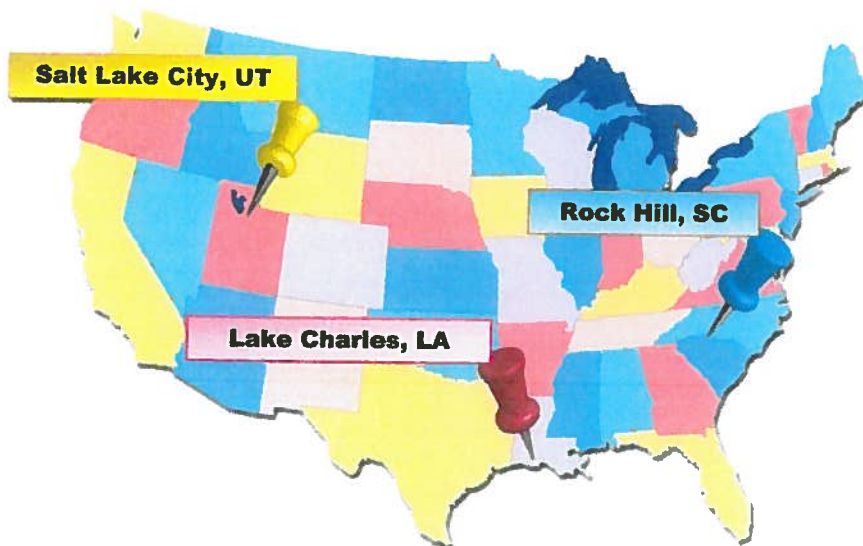
Rosenberger Site Solutions, LLC. Call 1.866.598.5250 or visit [www.RLSS.us](http://www.RLSS.us)



### Light Duty Tower with Hinged Base Plate & Standoff Frame



Part Number	Description
DTM10DSST	Lightweight Tower 10' Section 1" Solid Round Legs with 1/2" Solid Rod Bracing (157 lbs)
DTM5LDSSTB	Lightweight Tower Base 5' Section 1" Solid Round Legs with 1/2" Solid Rod Bracing (78.5 lbs)
DTM-LD-HDG	Light Duty Tower Hinged Base Plate
DT99560	Tower Mount Standoff Frame



#### **Central Location**

**Headquarters**  
102 Dupont Drive  
Lake Charles LA 70606  
Phone: 337.598.5250  
Fax: 337.598.5290

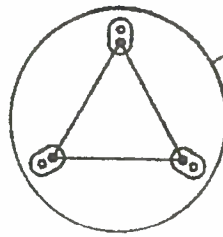
#### **East Coast Location**

**Charlotte Metro Area**  
205 Quantz Dr.  
Rock Hill, SC 29730  
Phone: 803.233.3208  
Fax: 803.233.2698

#### **West Coast Location**

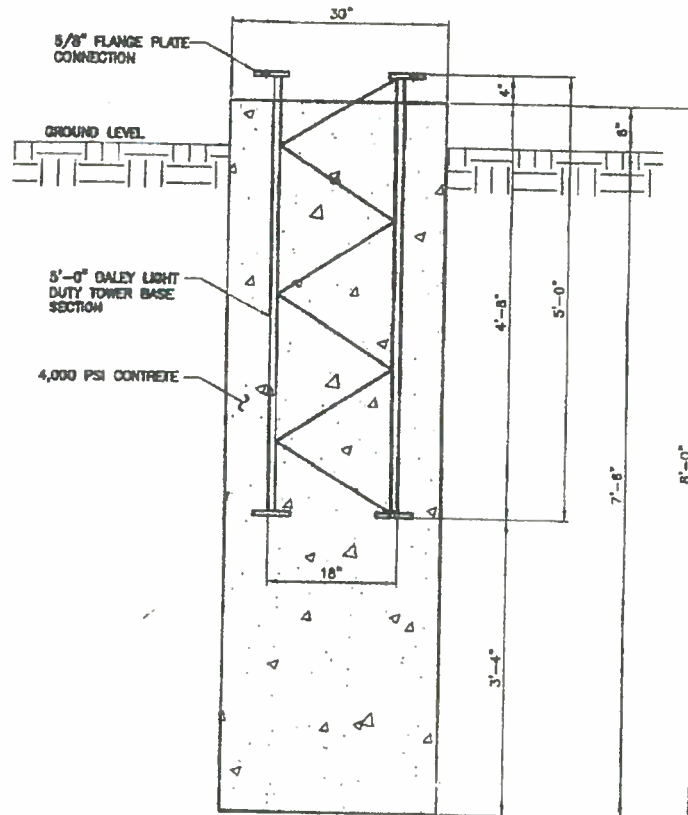
1250 S. 3600 W.  
Salt Lake City,  
UT 84104  
Phone: 801.972.3525  
Fax: 801.886.3215

### Light Duty Tower Foundation



30° CONCRETE  
DRILLED PIER

TOP VIEW  
SCALE: 1/2" = 1'-0"



SIDE VIEW  
SCALE: 1/2" = 1'-0"

#### CONCRETE NOTES

ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 310 (LATEST EDITION).

ALL CONCRETE SHALL BE MADE WITH STONE AGGREGATE & SHALL DEVELOP 4000 PSI COMPRESSIVE STRENGTH IN 28 DAYS. 6"-8" MAXIMUM SLUMP, 3/4" MAXIMUM AGGREGATE. USE TYPE I OR II CEMENT.

ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS, GRADE 60, ASTM 61-70, WITH 60,000 PSI MINIMUM YIELD POINT; EXCEPT NO. 4 THRS WHICH MAY BE GRADE 40.

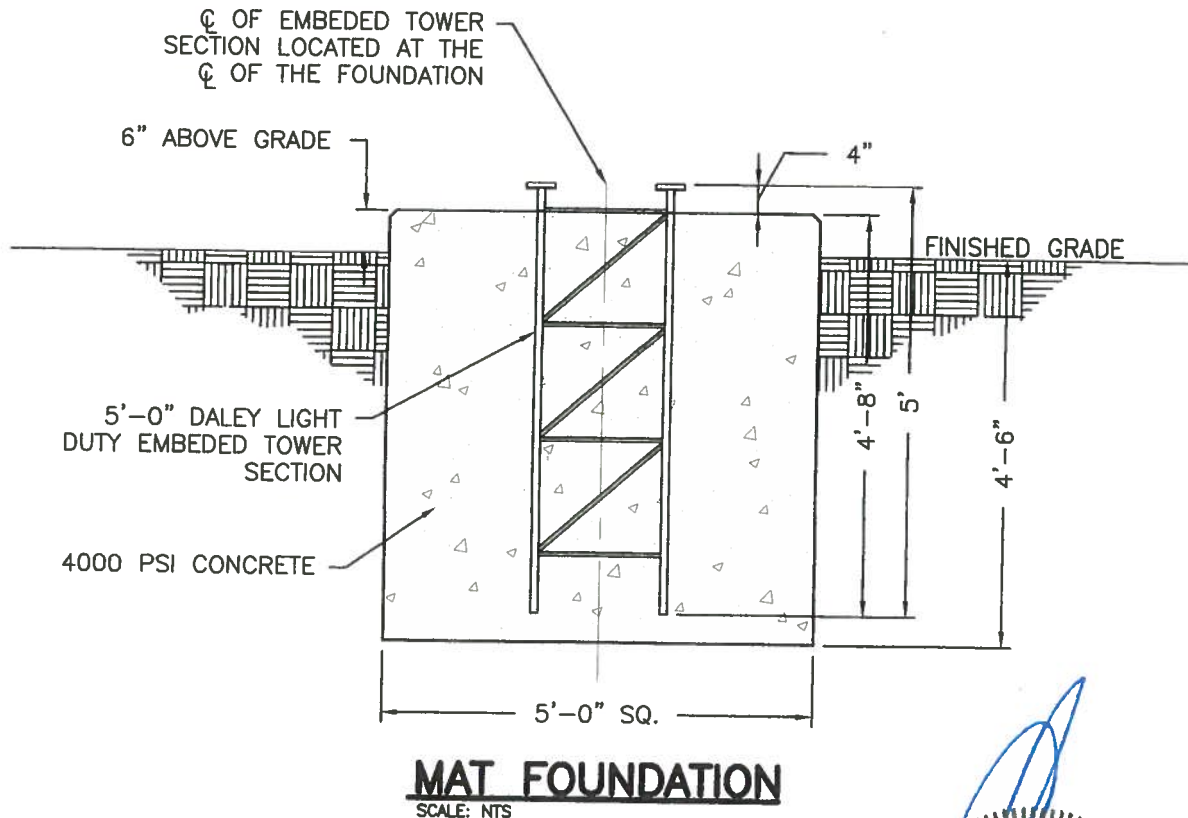
#### REINFORCEMENT PROTECTION:

1. CONCRETE POURED AGAINST EARTH - 3"
2. CONCRETE POURED IN FORMS BUT EXPOSED TO WEATHER OR EARTH
  - A. IF BARS ARE LARGER THAN NO. 5 - 2"
  - B. IF BARS ARE NO. 5 OR SMALLER - 1-1/2"

#### CONCRETE VOLUME

1.45 CU. YDS. PER FOUNDATION

### Light Duty Tower Foundation



#### TYPICAL FOUNDATION NOTES:

1. FOUNDATION DESIGN IS BASED ON THE FOLLOWING ASSUMED SOIL VALUES:  
UNIT WEIGHT OF SOIL: 100 PCF  
ALLOWABLE BEARING CAPACITY: 2000 PSF  
ALLOWABLE LATERAL LOAD: 200 PSF/FT DEPTH  
GROUND WATER BELOW THE DEPTH OF THE CAISSON

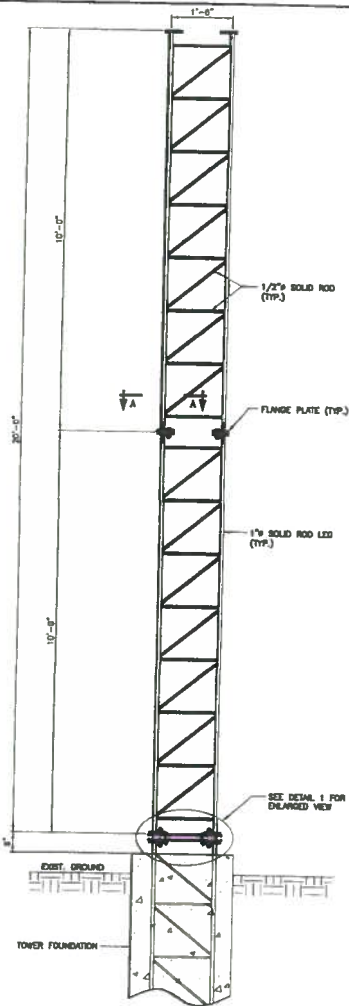
2. ALL FOUNDATION CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI WITHIN 28 DAYS OF PLACEMENT. PROPORTIONING OF THE CONCRETE MIX SHALL BE DESIGNED BY AN APPROVED LABORATORY. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION. CEMENT SHALL BE TYPE II, LOW ALKALI, CONFORMING TO ASTM C-150. ALL AGGREGATE USED IN THE CONCRETE SHALL CONFORM TO ASTM C-33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE.

3. ESTIMATED CONCRETE VOLUME = 4.7 CUBIC YARDS.

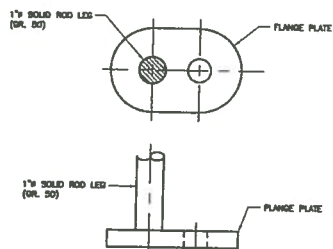
4. THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS:  
OVERTURNING MOMENT: 26,000 FT\*LBS; SHEAR: 750 LBS; AXIAL: 1200 LBS.



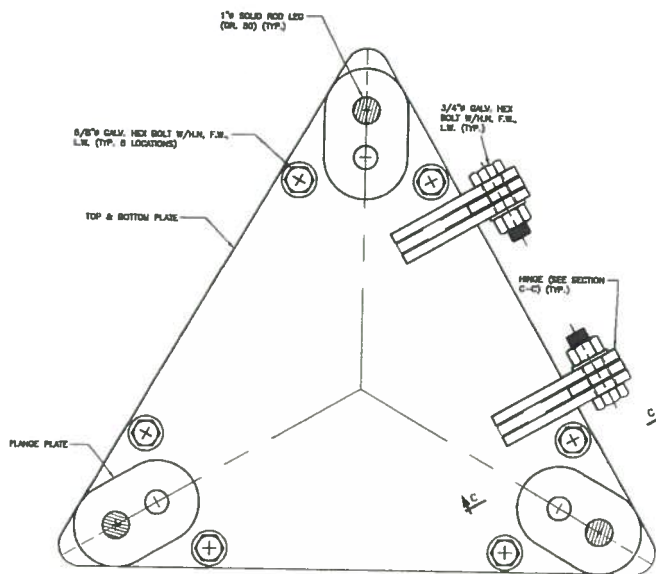




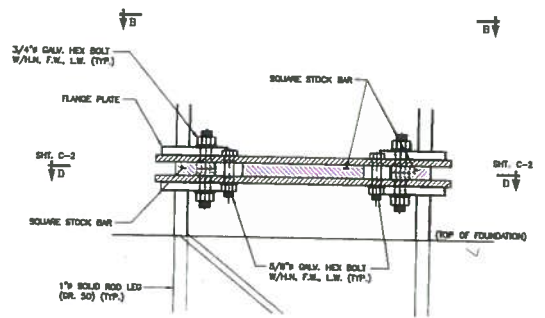
**TOWER ELEVATION**  
SCALE: 3/16" = 1'-0"



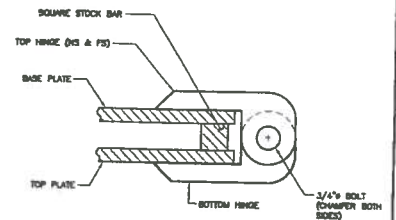
**SECTION A-A**  
SCALE: 3/4" = 1'-0"



**SECTION B-B**  
SCALE: 3/4" = 1'-0"



**DETAIL 1**  
SCALE: 1 1/2" = 1'-0"

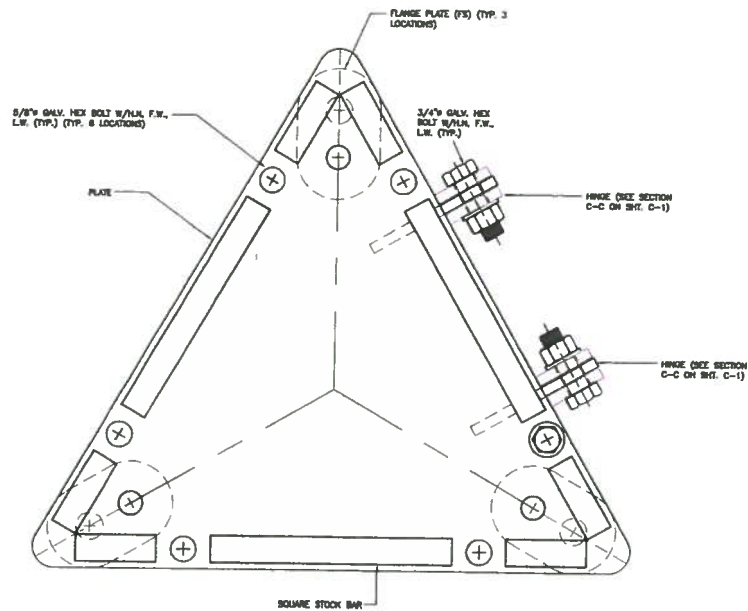


**SECTION C-C**  
SCALE: 3/4" = 1'-0"

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**NOTES:**

1. TOWER RUN PER TH-222-G, BOMPH STRUCTURE CLASS 1, EXPOSURE B, TOPD CATEGORY 1.
2. ALL STRUCTURE MEMBERS SHALL BE GALVANIZED PER ASTM A123.
3. ALL GALVANIZED BOLTS TO BE ASTM A325 UNLESS OTHERWISE NOTED.



SECTION D-D  
SCALE: 3"=1'-0"

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