



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Barstow Resource Area
831 Barstow Road
Barstow, CA 92311
(714) 256-3591

IN REPLY REFER TO
CA MC-2123
3809 (C-068.25)

AUG 6 1981

Inyo County Planning Department
Attn: Roger De Hart
Drawer "L"
Independence, CA 93526

Dear Mr. De Hart:

Enclosed is a copy of a Plan of Operations we received from Anaconda Copper on June 22, 1981. The plan is for proposed expansion of a zeolite pit between Death Valley Junction and Ash Meadows. We approved the plan on July 21, 1981. Enclosed is a copy of our environmental checklist.

If you have any questions, feel free to call our Geologist, Ken Schulte, at (714) 256-3595.

Sincerely,

Alden Sievers

Alden Sievers
Area Manager
Barstow Resource Area

Enclosures

RECEIVED

AUG 10 1981

INYO CO. PLANNING DEPT.

☒	Planning Dir.	☒
☒	Roger DeHart	
	Gerry Rudlong	
	Mary Sue Sweet	
☒	FILE CUP#79-18	
	Other	

CA MC-2123

3309 (C-068.25)

California Desert District
1695 Spruce Street
Riverside, California 92507

Schulte 7-15-81
DeKeyser 7-16-81
AS Lewis 16 July 81
et 7/21

JUL 21 1981

Anaconda Copper Co.
Attn: W. C. Norem
P. O. Box 1000
Yerington, NV 89447

Dear Mr. Norem:

Your plan of operations for expansion of a zeolite pit near Ash Meadows is approved with the stipulations stated below. A bond will not be required.

1. Sign the access road (at turn off point in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 9, T. 25 N., R. 6 E.) as "Mining Access Only" to discourage additional vehicular use.
2. Post a 25 M. P. H. speed limit sign at the above-designated location to reduce the potential for wildlife mortality.
3. Upon completion of mining activities remove all trash, equipment and toxic wastes, if used.
4. Upon completion of mining activities, scarify access roads to discourage use and encourage the reestablishment of native vegetation.
5. Leave pockets of native vegetation wherever possible to encourage reestablishment of native vegetation.
6. Backfill and/or contour all test pits and trenches and portions of the pit that are no longer in use as quickly as possible to reduce entrapment and mortality of wildlife.
7. Wherever possible, leave intact any vegetation found containing bird nests, whether active or inactive.

Thank you for your cooperation. If you have any questions, feel free to call the Barstow Area Geologist, Ken Schulte, at (714) 256-3595.

Sincerely,

BRUCE OTTERFIELD

Gerald E. Hillier
ACTING District Manager

Barstow Resource Area
JUL 24 1981
RECEIVED

 U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
BARSTOW RESOURCE AREA

KEN SCHULTE
GEOLOGIST

(760) 252-6027
(760) 252-6099 (FAX)

2601 Barstow Road
Barstow, CA. 92311
kshulte@ca.blm.gov

CASE COPY

598-6011

ANACONDA Copper Company

P.O. Box 1000
Weed Heights, Nevada 89443
Telephone 702 463-2222
Darwin Project

RECEIVED
BUR OF LAND MGMT
JUN 22 10 00 AM '81
DISTRICT OFFICE
RIVERSIDE, CA.



June 16, 1981

U. S. Bureau of Land Management
California Desert District Office
1695 Spruce Street
Riverside, California
92507

Attention: Gerald E. Hillier,
District Manager

Subject: Anaconda Copper Company - Plan of Operations,
Ash Meadows, California

Rout- ing	Date	Intls.
TO:		
DM		
ADM		
P&EC		
PA		
ADMIN		
OPS		
RES		
Action By: <i>Peter Blum</i>		
Return To:		

Dear Mr. Hillier:

Attached, please find our Plan of Operations for the Ash Meadows zeolite mine located approximately five miles east of Death Valley Junction, California. We are sending a copy of this plan to the manager of the Barstow Area Office.

If you have any questions concerning the plan, please don't hesitate to contact me.

Yours truly,

W.C. Norem
W. C. Norem,
Project Manager

WCN/cjh

cc: w/encl Ken Schulte
Harvey Bershrader
cc: wo/encl Dave Arnolds
Steve Dole

PLAN OF OPERATIONS

ASH MEADOWS ZEOLITE MINE
ANACONDA COPPER COMPANY
INYO COUNTY, CALIFORNIA

The following is a Plan of Operations submitted by Anaconda Copper Company, a Division of the Anaconda Company, for the existing Ash Meadows Zeolite Mine. The mine is presently operational on unpatented lode and placer claims in Inyo County, California. This Plan of Operations is submitted pursuant to the Surface Management Regulations (43CFR 3809 et seq.) U. S. Department of Interior.

NAME AND MAILING ADDRESS OF OPERATOR

ANACONDA COPPER COMPANY
P. O. BOX 1000
YERINGTON, NEVADA 89447

Mr. W. C. Norem,
Project Manager

THE NAME OF THE MINING CLAIMS INVOLVED AND THE BLM SERIAL NUMBERS
ASSIGNED TO THEM.

<u>CLAIM NAME AND NUMBER</u>	<u>BLM SERIAL NUMBER</u>
G.A. No. 17	CAMC 2123
G.A. No. 18	CAMC 2124
G.A. No. 20	CAMC 2125
G.A. No. 21	CAMC 2126
G.A. No. 22 not	CAMC 2127
G.A. No. 36	CAMC 8703
G.A. No. 85	CAMC 8717
GAP No. 11	CAMC 2151
GAP No. 12	CAMC 2152
GAP No. 13	CAMC 2153
GAP No. 14	CAMC 2154
GAP No. 71	CAMC 8732
GAP No. 72	CAMC 8733

DESCRIBE OR IDENTIFY THE TYPE OF OPERATIONS PROPOSED, HOW THEY WILL
BE CONDUCTED AND THE PERIOD DURING WHICH THE PROPOSED ACTIVITY WILL
TAKE PLACE.

Anaconda is currently performing intermittent mining operations at the
Ash Meadows Zeolite Property located five miles east of Death Valley
Junction, Inyo County, California. (See Figure 1). The activities are
currently being conducted under an approved Conditional Use Permit, dated
August 3, 1979 issued by Inyo County. To date, approximately 20,000 tons
of zeolite has been mined.

Cont'd

Cont'd

The project involves the establishment of a 25 acre open pit zeolite mine on a 40 acre site along with required haulage and access roads. The operation is presently being performed on an intermittent basis: however, as markets improve, the mine will be upgraded to a daily operation. At full production, the mine will produce as much as 1,000,000 tons per year of zeolite. The current projected mine life is 10 to 15 years. Development of the mine is shown in three phases on Figures 2 - 4.

*existing or
proposed?*

Mining operations at the pit are accomplished by drilling and blasting. Loading is accomplished within the pit by front end loaders and the material is transported by haulage trucks.

The existing pit will be expanded approximately 5 acres in size during Phase 1. Waste material produced during Phase 1 will be stockpiled on the western side of the pit as shown in Figure 2. Approximately 150,000 tons of waste material will be diverted to the stockpile during this phase of the operations.

As markets increase for zeolite, the pit will be further expanded to allow increased production rates. This Phase 2 period (see Figure 3) of the mine will expand the pit in the southerly direction as well as expanding the pit width. Any waste material produced during this period will be used as backfill in the Phase 1 pit.

Phase 3 of the mine will continue the expansion of the pit in a southerly direction as shown in Figure 4. Waste material produced during this phase will be backfilled in the Phase 2 pit.

Cont'd

Cont'd

At the completion of mining operations, the ^{waste} stockpile produced during Phase 1 will be hauled back to the remaining Phase 3 pit and used to reduce the pit walls to approximately 3:1 slopes. A description of the final post mining pit configuration is shown in Figure 5.

IDENTIFY THE MEASURES TO BE TAKEN TO PREVENT UNNECESSARY OR UNDUE DEGRADATION AND MEASURES TO RECLAIM DISTURBED AREAS RESULTING FROM THE PROPOSED OPERATIONS.

The mine site is located in relatively flat topography covered by desert pavement. Vegetation communities of the area include both Creosote Bush and Saltbush types.

The zeolite deposit is an altered volcanic ash flow tuff approximately 150 feet thick that has been altered principally to clinoptilolite. The deposit strikes northerly and dips easterly from 5° to 30° and is bound on the west by a steep fault. The mineable portion of the bed ranges up to 500 feet horizontally as indicated by surface exposures and drill intercepts.

Two specific studies have been completed by Anaconda regarding potential impacts the mine will have on the hydrologic conditions and archaeological values of the mining area. The hydrological study indicates that only minimal amounts of groundwater will be encountered during mining, thereby reducing the need to dewater the pit. A copy of the hydrologic report is attached. (See Attachment 1). According to the archaeological report prepared by Dr. Richard Brooks, no prehistoric materials are present. A copy of this report is included as Attachment 2.

Cont'd

Cont'd

The mine is designed to reduce the potential affects of the operation on the environment by reducing the total area disturbed. The mining sequence chosen for this deposit disturbs less area at the early phases of the mine than other possible mining methods. The mining sequence will also allow for concurrent backfilling and reclamation while mining activities are being conducted in other portions of the pit. This practice allows Anaconda to perfect reclamation procedures while still actively involved with the zeolite mining.

The pit walls will be recontoured after cessation of mining operations within the area. The final slope of these walls will be approximately 3:1. All finished surfaces including the Phase 3 pit floor will be covered with at least six inches of overburden and reseeded with native plant species.

The surface runoff pattern of the area is maintained by the existing diversion ditch located on the northern side of the mining area. As the mine is expanded an additional diversion ditch will be progressively constructed to maintain natural runoff around the southern portion of the pit. The location of these two diversion ditches is identified in Figure 5.

The waste dump developed during Phase 1 activities will have slopes of approximately 1:1 to reduce the total area disturbed by the dump. The top surface of the dump will be constructed in such a manner as to eliminate surface runoff down the dump slopes and thus reduce erosion potential.

Fugitive dust from haul roads and the waste dump will be controlled by use of water or chemical stabilizers if dust supression is found to be

Cont'd

Cont'd

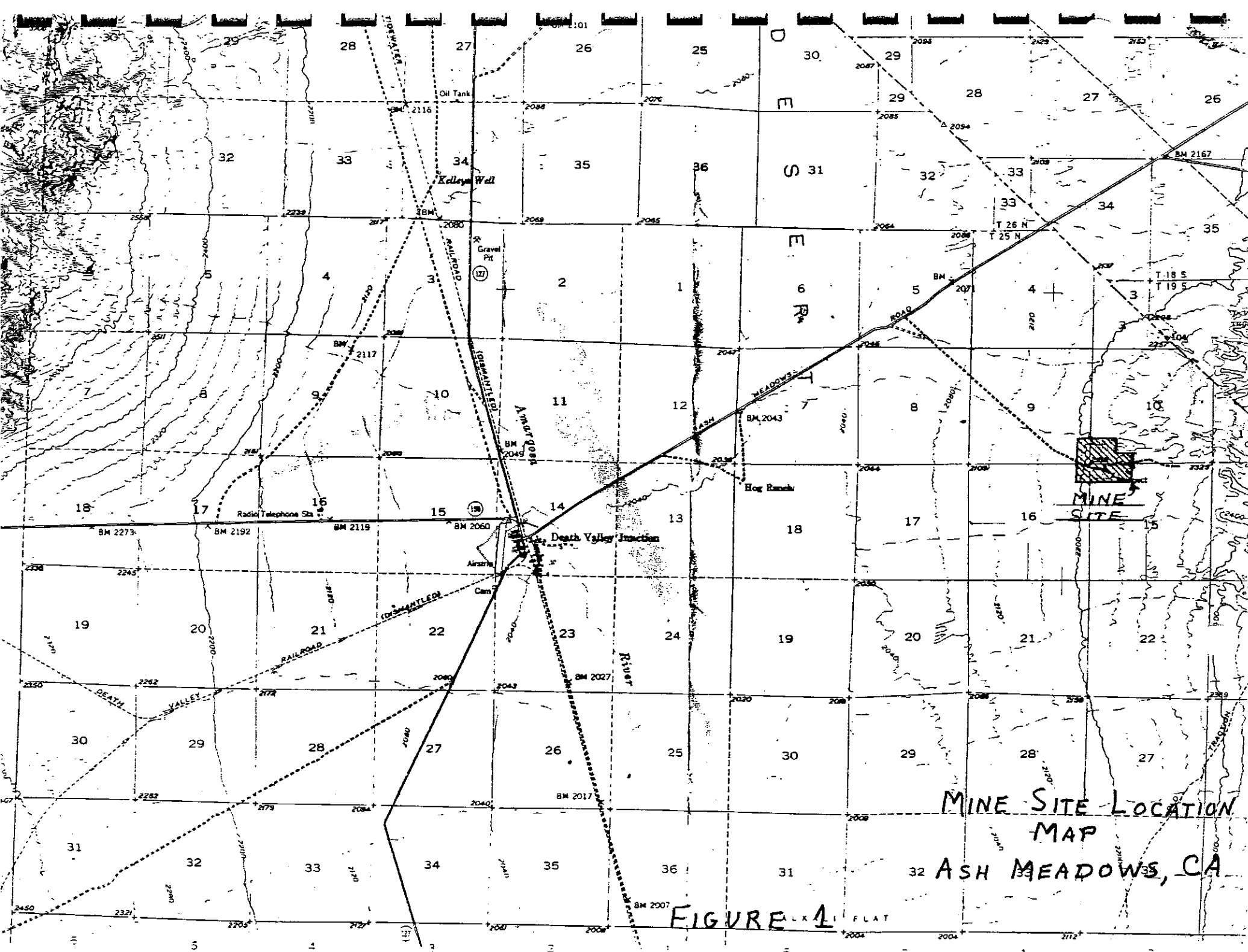
necessary. Water for this purpose will be obtained from the mine pit.

Any storage of equipment, fuel and/or explosives at the site will be in compliance with federal and state regulations.

At the completion of the mining operations, haulage and access roads will be scarified and reseeded. All access routes leading into the site will be blocked after permanent cessation of operations.

MEASURES TO BE TAKEN DURING EXTENDED PERIODS OF NONOPERATION.

The mine has been developed to allow periodic operation and minimal maintenance. However, during periods of extended nonoperation, the mine and surrounding area will be periodically inspected. Indications of severe erosion, slope instability, and improper surface water drainage will be identified and necessary corrective measures will be taken at the earliest practicable time.



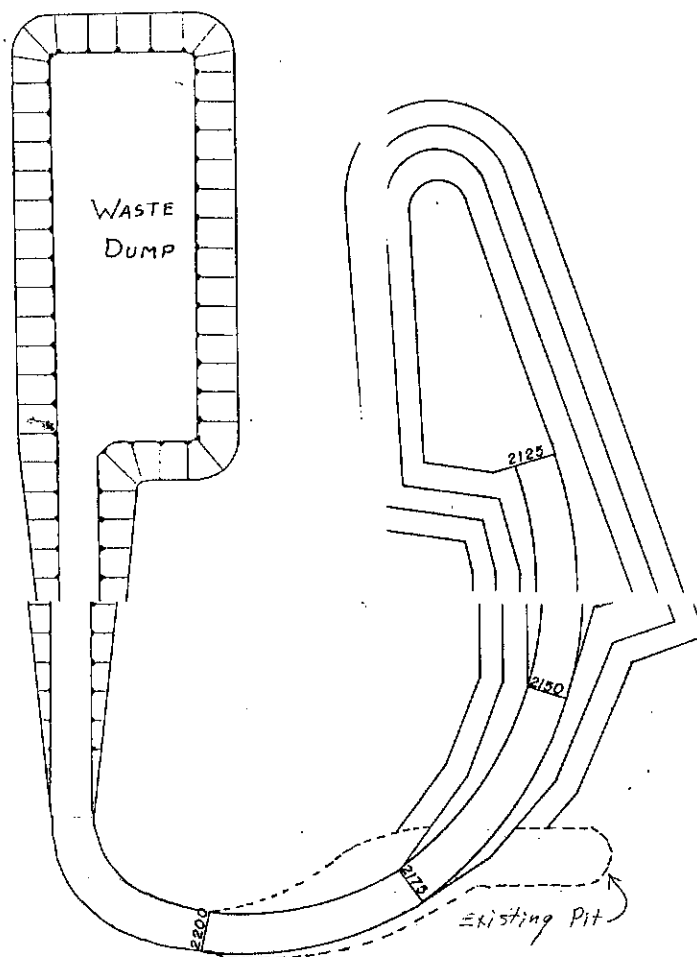


FIGURE 2
PHASE 1
1"=100'

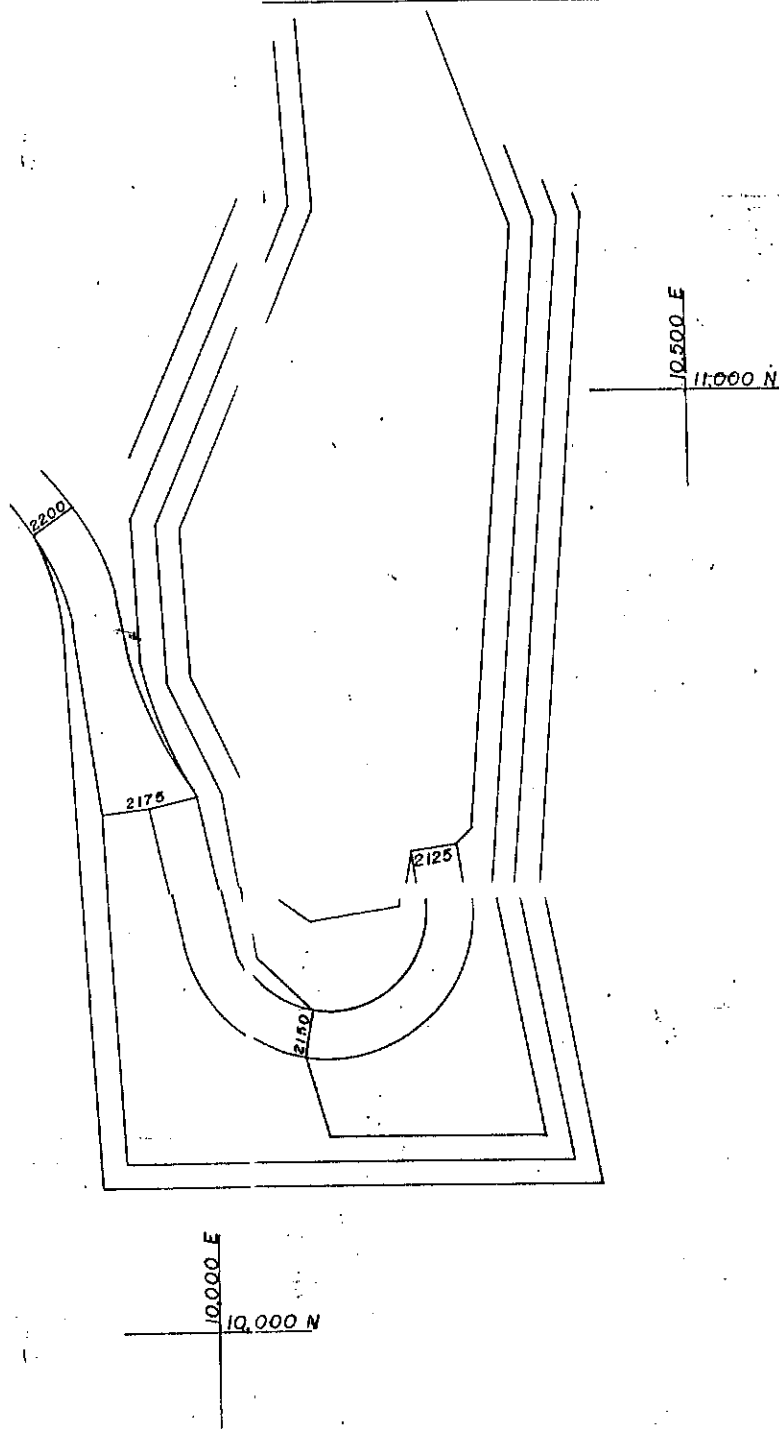


FIGURE 3
PHASE 2
1"=100'

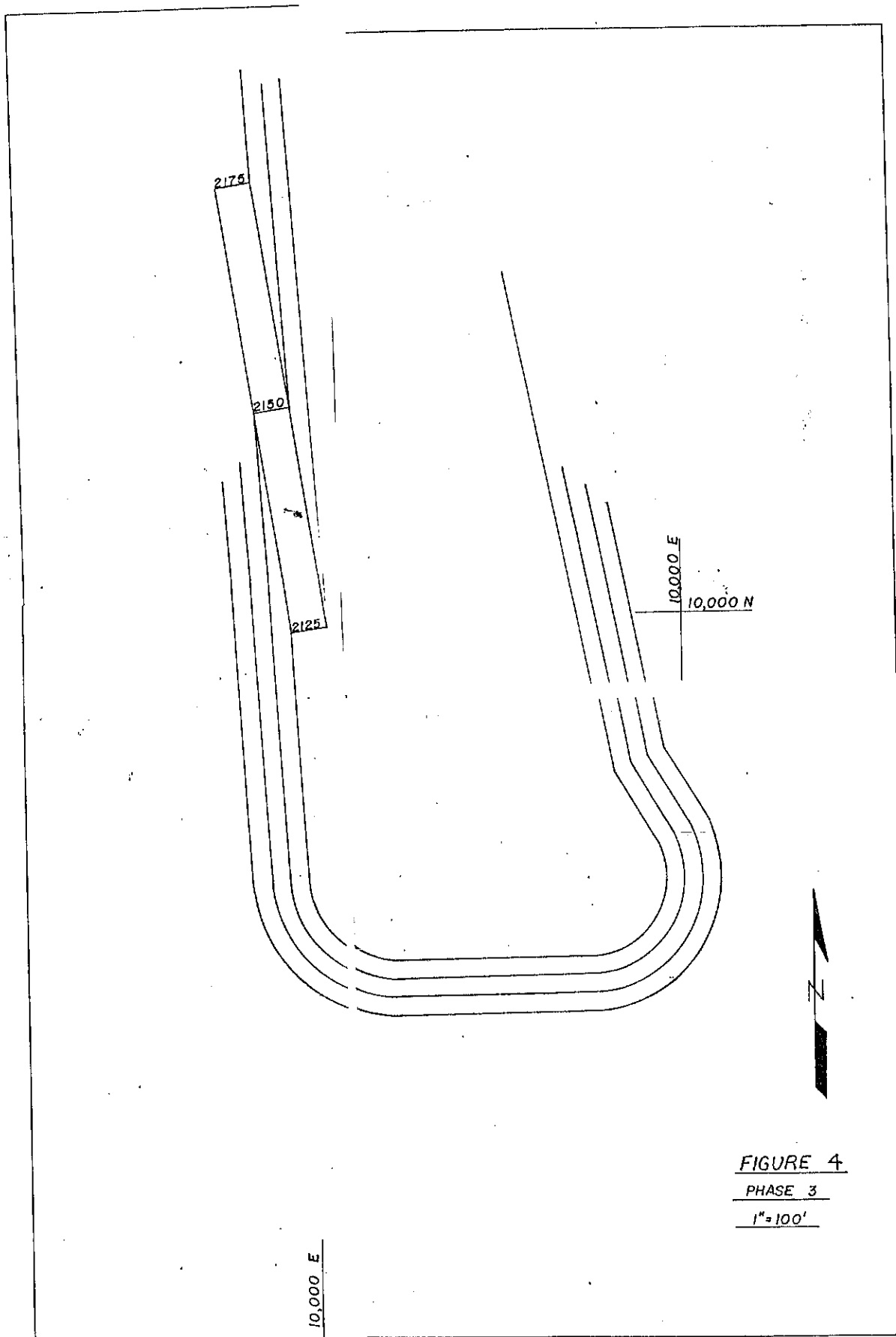
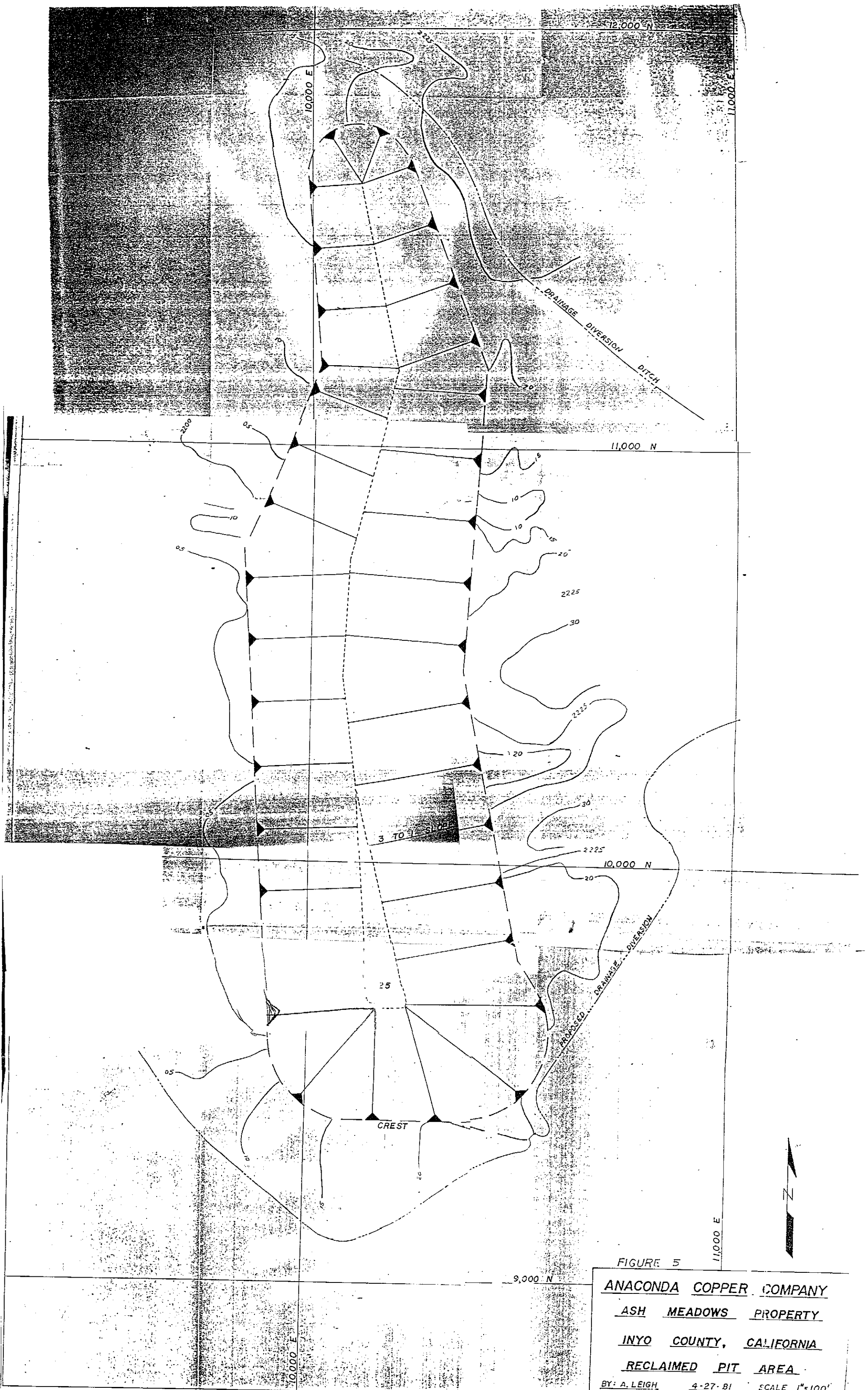


FIGURE 4
PHASE 3
1" = 100'



Planing Unit 44
CHECKLIST FOR 3809 REGULATIONS
Ashmeadows Zeolite Pit

A. Status Information (Fill in blank or check box where applicable).

Resource Area: Barstow

Date of Plan Receipt: 6-22-81

Mining Claim Numbers: CA MC 2123-2127, 2151-2154
11-6-77 11-6-77 11-6-77 11-6-77
8703, 8717, 8732, 8733

Claimant Name, Address, Telephone Number:

Mr W. C. Norem, Anaconda Copper Co.
P.O. Box 1000
Yerington, NV 89447

☐ Operator different from claimant.
Operator's Name, Address, Telephone Number:

Expected period of operations:

☐ Weekdays: Monday-Friday

☐ Weekends: Friday 1500 - Sunday 2400

☐ Continuous

☒ Intermittant (specify): Not specified

☐ Other (specify): _____

Approximate legal description: T. 25N, R. 16E, portions of
Sec. 9, 10, 15

☐ Claimant exercising rights in withdrawn area. Specify withdrawal number and type of withdrawal: _____

☐ Operation within an area subject to wilderness interim management policy. No check indicates no wilderness management responsibilities. WSA name and number: _____

☐ Notice published in appropriate newspapers. _____ and
names: _____

☐ Operation within an Area of Critical Environmental Concern
(ACEC). Name and resource value(s): _____

Access Designation:

☐ Open; ☒ Limited; ☐ Closed.

Proposed Access:

☐ Existing routes of travel;
☒ New - see attached plan for delineation.

B. Resource Section (check applicable boxes - if not checked, a
negative declaration is assumed).

	Field Exam Required	Date Exam Performed	Field Report Attached	Mitig. Measures Required ¹⁾	Need For Delay ²⁾
Archaeology					
Realty					
Recreation					
Soils					
Visual Resources					
Vegetation ³⁾	✓	6-29-81	✓	✓	
Wilderness ⁴⁾					
Wildlife ³⁾	✓	6-29-81	✓	✓	

1) Do not fill in measures. These will be enumerated in
Section C. Do not use this column unless preceding column
checked.

2) Check appropriate box for delay - state in attached field
report:

☐ Section 106 consultation - date initiated:

_____ (Archaeology)

☐ Section 7 consultation - date initiated:

_____ (Wildlife, Vegetation)

☐ Significant environmental conflicts - specify: _____

Public Interest: Provide a statement summarizing any public interest noted. Public interest is shown by telephone calls, letters or personal knowledge. If none, so state:

Some people in the Death Valley Junction area object to the dust produced by ore trucks on the haul road. I talked briefly with the couple who run the Amargosa Theater

C. Mitigating Measures

Fill in this page with summary of mitigating measures for those resources that checked the 4th column in Section B.

1. Sign access road (at turn-off point in SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 9, T. 25 N., R. 6 E.) as "Mining Access Only" to discourage additional vehicular use.
2. Post a 25 MPH speed limit sign at the above location to reduce the potential for wildlife mortality.
3. Upon completion of mining activities remove all trash, equipment and toxic wastes if used.
4. Upon completion of mining activities, scarify access roads to discourage use and encourage the reestablishment of native vegetation.
5. Leave pockets of native vegetation wherever possible to encourage reestablishment of native vegetation.
6. Backfill and/or contour all test pits and trenches and portions of the pit that are no longer in use as quickly as possible to reduce entrapment and mortality of wildlife.

D. Summary and Recommendations

☐ Bond is required. Give justification: _____

If box is not checked, no bond required.

Recommendations (check one box only):

☐ Plan be approved as submitted.

☐ Plan be approved as modified in field examination with operator.

☒ Plan be approved subject to measures in Section C.

☐ Other action (specify): _____

E.I.S. Determination:

I ~~do~~ do not consider the proposed action to be a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. An Environmental Statement ~~is~~ is not required.

Prepared by: K.C. Schulte
Area Geologist

7-9-81
Date

Recommended for Approval by: Alden Sievers
Area Manager

7/16/81
Date

I approve: Bruce Ottensfeld
District Manager, California Desert

7/21/81
Date

☐ Check if telephone notification of DM's signature by District Geologist is wished for high priority cases.

Don't forget your monthly status reports.

Memorandum

TO: Geologist, Barstow Resource Area
FROM: Wildlife Biologist, Barstow Resource Area
SUBJECT: Review of Mining Plan of Operations from Anaconda Company
(T.25N., R.16E., S.9, 10, 15)

Introduction

On June 29, 1981, I visited the site of an open pit zeolite mining operation northeast of Death Valley Junction, Inyo County, California. The present dimensions of the pit are approximately 125 yards by 100 yards. Anaconda plans to expand the pit operation to encompass an additional 10 acres of lands. I inventoried the area surrounding the present pit for wildlife resource values, and have provided mitigation measures designed to reduce adverse effects to biological resources in this area.

Vegetation

The mining pit is situated on a gently undulating plain dissected by shallow wash systems. Soil consists of loose gravels and fine sand in association with scattered areas of desert pavement. Elevation is approximately 2100 feet. Vegetation in this area is sparse and widely scattered. Dominant perennial plants are creosote bush (Larrea tridentata), burrobush (Ambrosia dumosa), and desert holly (Atriplex hymenelytra). Other perennial plant species located here include Nevada joint fir (Ephedra nevadensis), indigobush (Dalea fremontii), fourwing saltbush (Atriplex canescens), cholla (Opuntia sp.) and buckwheat (Eriogonum inflatum). The introduced Russian thistle (Salsole Australis) is present in disturbed soils along pit edges. Total ground cover was estimated to be less than 5 percent.

No rare, sensitive, threatened or endangered plants were observed during this trip. However, at least two plant species are known to occur approximately one mile west of this mining site. Nitrophila mohavensis is present on alkaline flatlands in this area. The species is federally listed as endangered. Another species, Chordylanthus tecopensis, has also been recorded approximately 1 mile west of this location. This species is federally listed as threatened.

Wildlife

The general vicinity of mining operations is comprised of widely scattered low vegetation. Wildlife species observed were the black-tailed jackrabbit (Lepus californicus), desert iguana (Dipsosaurus dorsalis), western whiptail (Cnemidophorus tigris), zebra-tailed lizard (Callisaurus draconoides), and side-blotched lizard (Uta stansburiana). An abandoned kit fox (Vulpes macrotis) burrow was located about fifty yards west of the existing pit. Bird species not observed, but expected to occur here based on inventories of similar habitats throughout the CDCA include the Black-throated Sparrow (Amphispiza bilineata), Loggerhead Shrike (Lanius ludovicianus), Mourning Dove (Zenaidura macroura) and Horned Lark (Eremophila alpestris). Mammal species expected in this area include the Merriam kangaroo rat (Dipodomys merriami), deer mouse (Peromyscus maniculatus), southern grasshopper mouse (Onychomys torridus), and antelope ground squirrel (Ammospermophilus leucurus). There are no known sensitive, rare, threatened, or endangered wildlife species or their habitats known to occur within the site area.

Discussion of Proposal and Impacts

The development and expansion of the existing pit operation will have several impacts on

wildlife species and habitat. Approximately 10 acres of habitat will be lost from removal of topsoil and vegetation. Wildlife populations will be affected from direct mortality during mining operations, loss of cover and food from removal of vegetation and destruction of burrows and other places of refuge, displacement and increased competition with neighboring populations for available resources, and increased noise levels and human disturbance. In order to minimize effects on wildlife resources in this area, the following mitigation measures are recommended:

- 1) Sign ^{Anacconda-built} access road as "Mining Access Only" to discourage additional vehicular use.
- 2) Limit speed limit to a maximum 25 MPH to reduce the potential for wildlife road mortality.
- 3) Stipulate that upon completion of mining activities, the operator remove all trash, equipment, and toxic wastes (if any).
- 4) Stipulate that operator fill all pits and trenches with excavated soils and recontour surface to as near original soil profile as possible.
- 5) Stipulate that all access roads be scarified to discourage use and encourage the reestablishment of native vegetation upon completion of mining activities.
- 6) Stipulate that operator leave "pockets" of native vegetation wherever possible to encourage reestablishment of native vegetation upon completion of mining activities.
- 7) Stipulate that all test pits and trenches and portions of the pit which are no longer in use be backfilled as quickly as possible to reduce entrapment and mortality of wildlife.
- 8) Stipulate that any vegetation found containing bird nests, whether active or inactive, be left entirely intact wherever possible.

Recommendations

Allow the project to proceed, subject to stipulations under "Discussion of Proposal and Impacts". If the project is expanded past the boundaries provided in this mining plan of operations, provide for an additional field assessment prior to plan approval. NOTE: The possible occurrence of two federally listed plant species in the immediate vicinity of this mining pit warrants a field inspection by the District Botanist in order to ensure that these species are not affected by the proposed action, and the BLM is in compliance with the Endangered Species Act and other applicable laws and policies governing their protection.

Paul R. [Signature]
July 2, 1981