

L-BAR
PRODUCTS INCORPORATED

May 4, 1988

State of Washington
Department of Natural Resources
Enumclaw Unit
P.O. Box 68
Enumclaw, WA 98022

Attn: Mr. Walt Pulliam

Ref: Permit No. 10346, Ravensdale Sand Mine

Submitted herewith is a Reclamation Plan for our Ravensdale Sand Mine prepared on our behalf by Mr. William J. Brown, PE.

We hope this is a timely response to the requirement expressed in your Annual Inspection Report dated February 19, 1988.

If you have any questions concerning this Plan Mr. Brown and I would be happy to visit with you about them.

Respectfully submitted.

Very truly yours,

Arthur Miller
Vice President

AM:cb

cc:W.J. Brown

DEPT. OF NATURAL RESOURCES
SOUTH PILOT SOUND AREA

MAY 06 1988

RECEIVED

RECLAMATION PLAN

The purpose of this section of the report is to describe methods and schedules for reclamation of the mining area. The report focuses primarily on the next ten years of mining. The actual life of the property is not known at this time. The actual life will depend on economics, sales commitments, and iron content of the sandstone.

PRESENT CONDITIONS

Conditions existing at the time of the photogrammetry flight (7 February 1987) were as follows:

Total Mining Area	80.0 A
Exposed Bedrock	15.0
Solid Waste Disposal Area	2.6
Reclaimed or Undisturbed Area	17.5
Unclassified Area	44.9

NOTES:

- (1) The Mining Area is defined as the disturbed area within the existing perimeter road network. See Fig. 3.
- (2) The Active Mining Area is defined as the unreclaimed area which has been stripped or mined.
- (3) The Solid Waste Disposal Area is the area now being used for disposal of cement kiln dust.
- (4) Reclaimed or undisturbed areas include those within the Mining Area boundaries which have not been disturbed or have previously been reclaimed.
- (5) Unclassified areas include all of the rest of the land within the Mining Area not falling within the foregoing definitions. Primarily, these are areas which have been disturbed to varying degrees but have not been stripped or mined.

Vegetation within the Mining Area consists of grass and small bunches of brush; there are essentially no trees within the Mining Area.

YEAR 1 AND 2

During Years 1 and 2, mining in the North Pit of the Upper Sand Unit will increase the disturbed area by 3.6 A. In addition, two dumps will be begun. The net change in disturbed area is estimated as follows:



GROUND COVER
 FEBRUARY 1987
 L BAR SAND MINE
 1"=200' 3/8/88 WJB
 FIG. 7

LEGEND

- PERIMETER
- WATER
- KILN DUST
- BEDROCK
- BRUSH

Upper Sand Pit 3.6 A
Dumps:

750 Dump 0.6 A
760 Dump 0.8 A

=====

Total Dumps 1.4 A

=====

Total increase in Active Mining Area 5.0 A

Land Reclaimed:

Unclassified Area 4.0 A

Net Increase in Disturbed Area 1.0 A

YEAR 3 THROUGH 5

During this time, the Active Mining Area will increase by
4.4 A as follows:

Upper Sand Pit 1.4 A
Dumps:

750 Dump 0.4 A
760 Dump 0.7 A
900 Dump 1.9 A

=====

Total dumps 3.0 A

=====

Total Increase in Active Mining Area 4.4 A

Land Reclaimed:

Unclassified Area 6.0 A

760 Dump 1.5 A

=====

Total Reclaimed 7.5 A

Net Decrease in Disturbed Area 3.1 A

YEAR 6 THROUGH 10

The Active Mining Area will increase as follows during these years:

Dumps:

750 Dump	1.0 A
900 Dump	2.1 A

=====

Total Increase in Active Mining Area (1) 3.1 A

Land Reclamation:

760 Dump	1.5 A
Unclassified Area	10.0 A

=====

Total Reclaimed 11.5 A

Net Decrease in Disturbed Area 8.4 A

NOTE:

(1) During this time, waste material from the Upper Sand Unit will be dumped into the mined-out North Pit of the Middle Sand Unit.

DUMP RECLAMATION

The following five steps will be used in construction of truck dumps (See Fig. 4):

1. Topsoil under the planned dump area will be bulldozed uphill to a stockpile above the planned final surface elevation of the dump.
2. The dump will be operated by end dumping from the top surface of the dump.
3. After dumping operations are complete, the face of the dump will be graded to a slope of 1.5:1 or flatter.
4. Topsoil will be reclaimed from the stockpile and be spread over the top and face of the dump.
5. The top and face of the dump will be seeded and fertilized.

Certain reclamation measures will be taken whenever a pit is completed:

1. The pit will be backsloped to a grade not exceeding 1:1. See Map M5.
2. Disturbed areas will be seeded with grass seed.

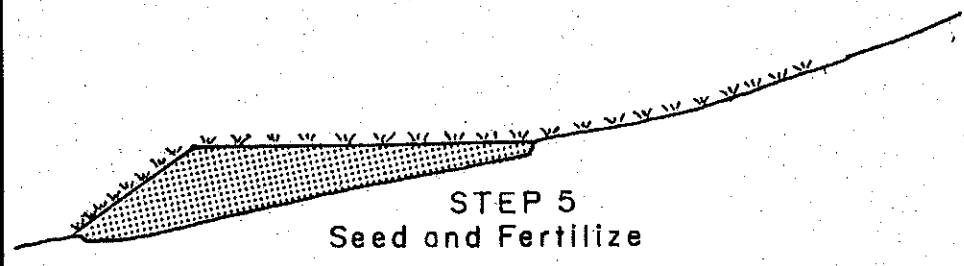
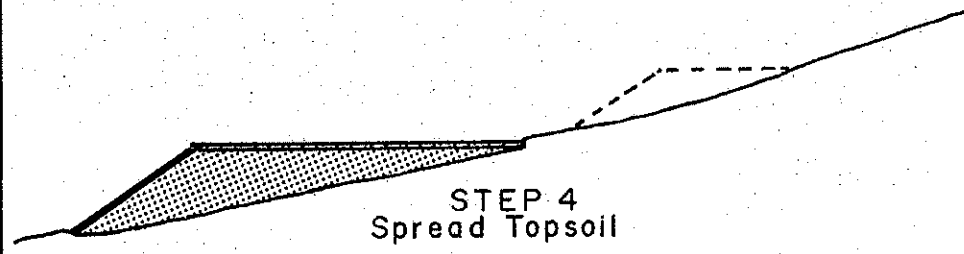
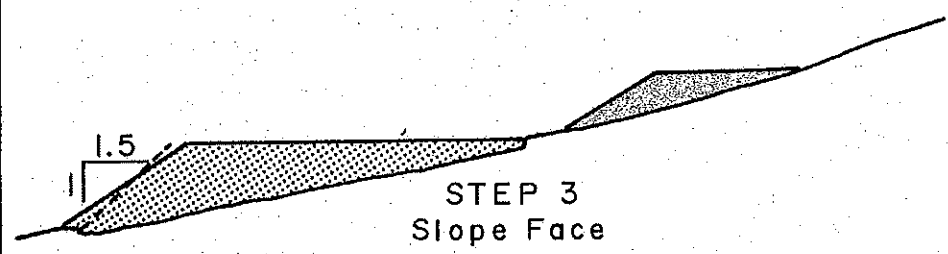
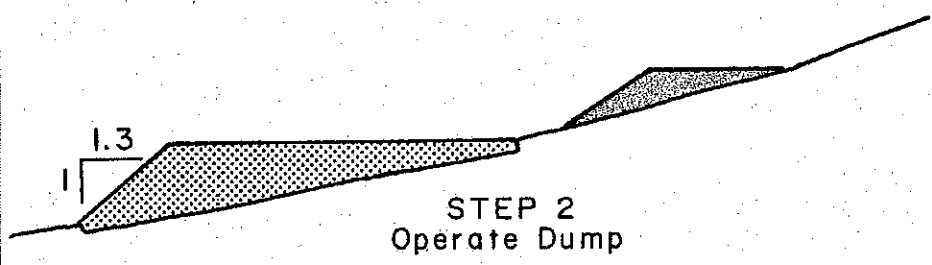
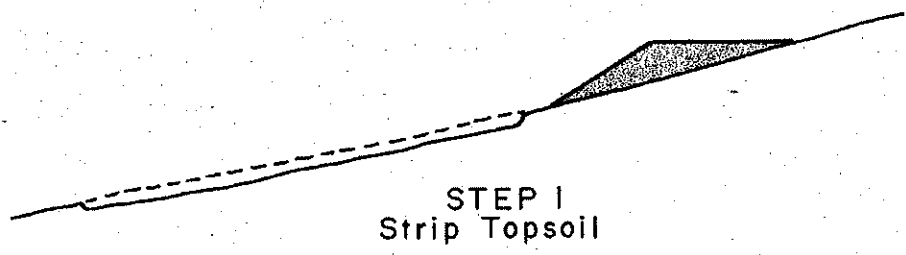
3. As the Solid Waste Disposal Area is filled, this area will be covered with a minimum of 2 ft of clay plus glacial drift or topsoil to total at least 5 ft of cover.

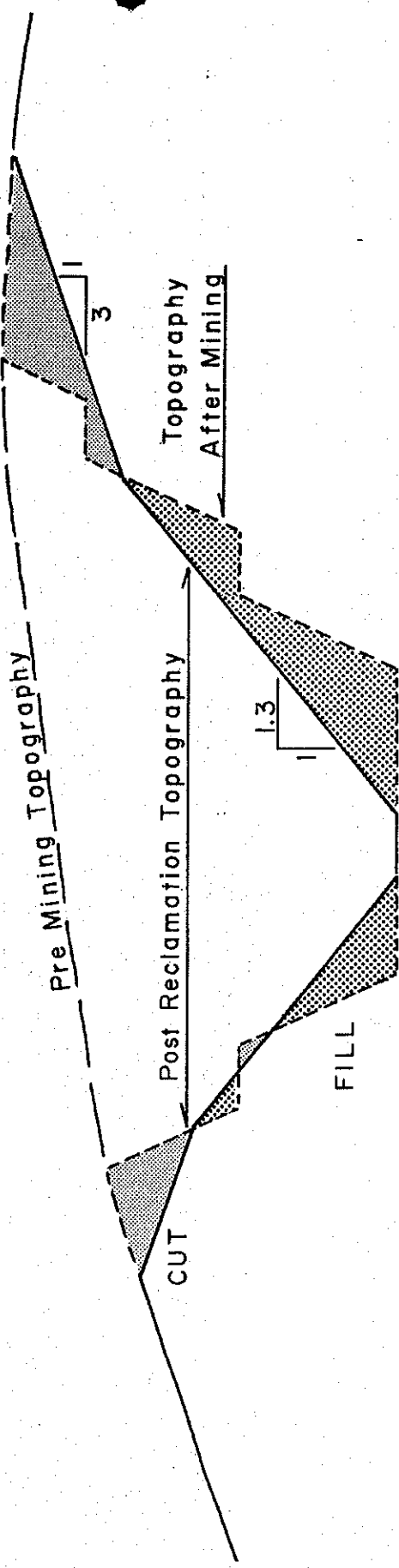
4. It is envisioned that no stagnant water will remain in worked-out pits. Figure 7 shows the drainage pattern after completion of mining.

RECLAMATION COST ESTIMATE

Seed and Fertilize	52A	@ \$1440/A	\$74 880
Backslope Pit Walls	143 500CY	@ \$0.41/CY	59 438
			=====
Total estimated reclamation cost			\$134 318

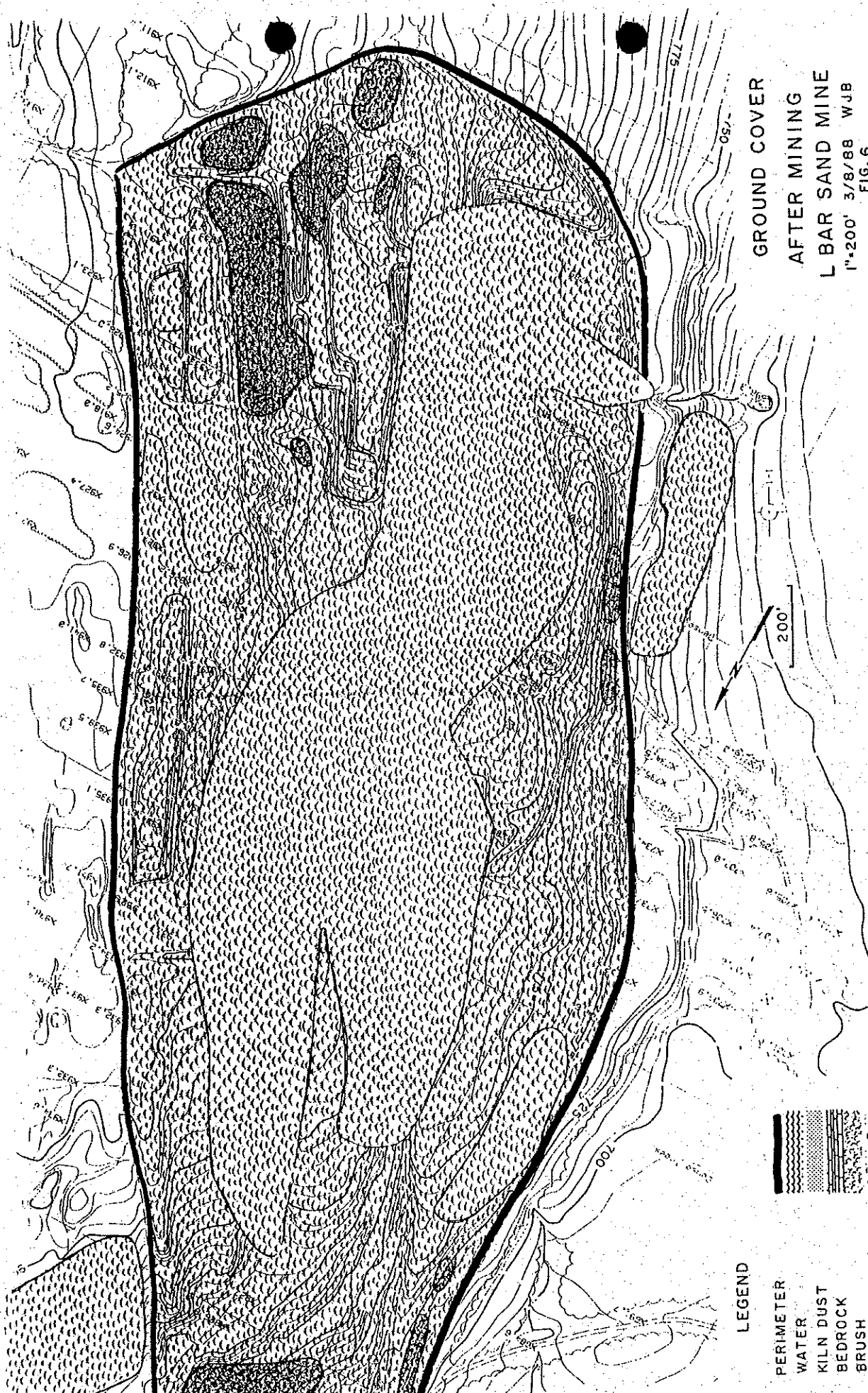
DUMP RECLAMATION		DRAWN BY WJB	
		REVISED	
APPROVED BY:		L BAR SAND MINE	
SCALE: NONE	DATE: 3/7/88		
		DRAWING NUMBER FIG. 4	



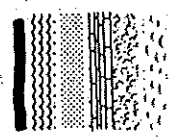


TYPICAL CROSS SECTION

MINE RECLAMATION			
SCALE: NONE	APPROVED BY:		DRAWN BY WJB
DATE: 3/4/88			REVISED
L BAR SAND MINE			
			DRAWING NUMBER FIG.5

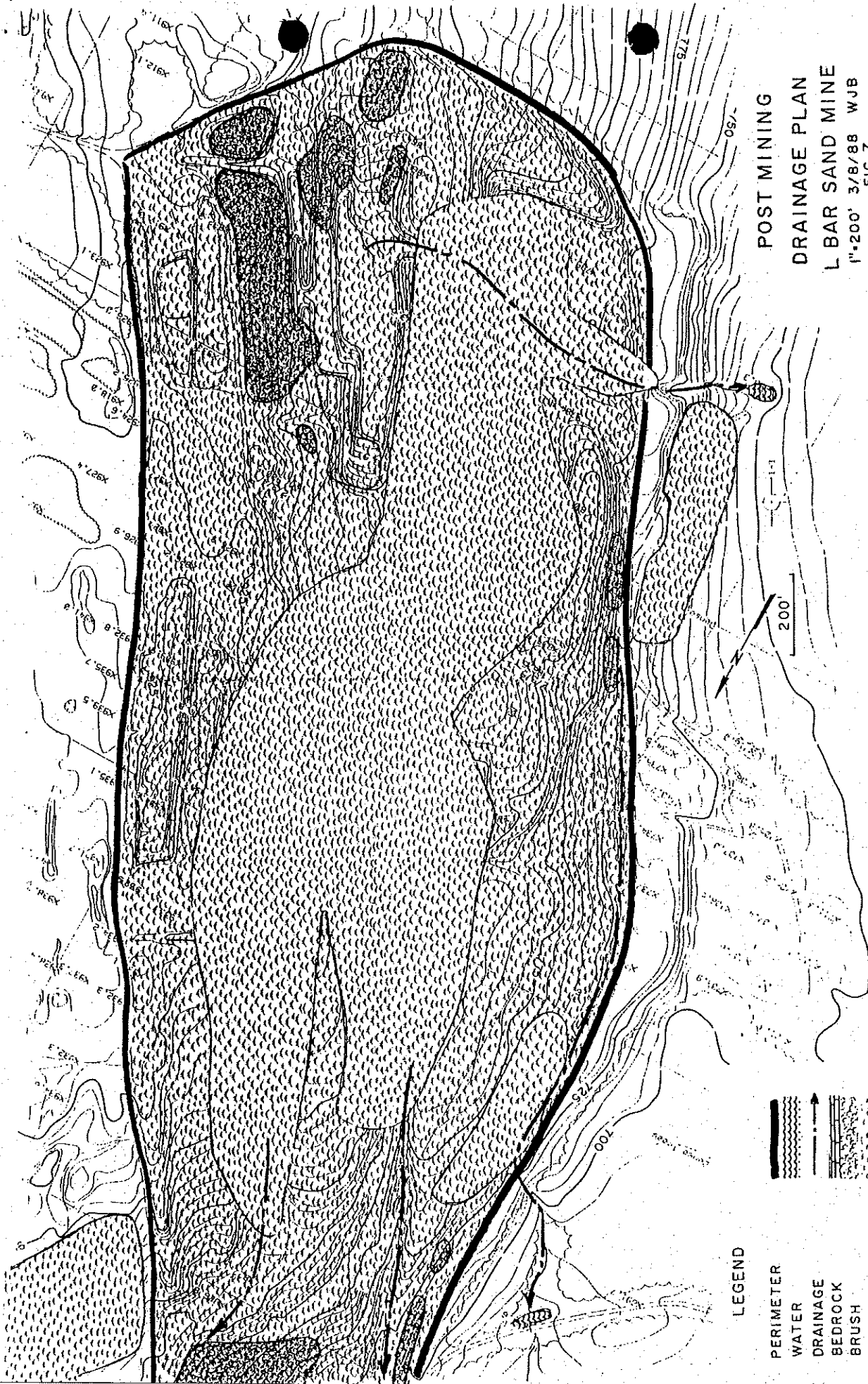


GROUND COVER
 AFTER MINING
 L BAR SAND MINE
 1"=200' 3/8/88 WJB
 FIG. 6



LEGEND
 PERIMETER
 WATER
 KILN DUST
 BEDROCK
 BRUSH
 GRASS

200'



POST MINING
 DRAINAGE PLAN
 L BAR SAND MINE
 1"=200' 3/8/88 WJB
 FIG. 7

LEGEND

- PERIMETER
- WATER
- DRAINAGE
- BEDROCK
- BRUSH
- GRASS

FORM SM-8A
STANDARD RECLAMATION AND OPERATING PLAN

THE SURFACE-MINED LANDS RECLAMATION ACT (RCW 78.44), AS AMENDED DURING 1987, REQUIRES THAT ALL MINES EXCEEDING THE FOLLOWING THRESHOLDS SHALL HAVE AN APPROVED RECLAMATION AND OPERATING PLAN ON FILE WITH THE DEPARTMENT OF NATURAL RESOURCES:

- (1) MINES IN WHICH THREE ACRES OF LAND (INCLUDING HIGHWALLS, PIT FLOORS, STOCKPILED AREAS, SIDECAST AREAS AND PROCESSING PLANT SITES) HAVE BEEN DISTURBED BY MINING OR RELATED ACTIVITIES AND/OR,
- (2) MINES HAVING WORKING FACES WHICH ARE BOTH HIGHER THAN 30 FEET AND STEEPER THAN 1 HORIZONTAL TO 1 VERTICAL (45°).

LANDS WHICH HAVE BEEN RECLAIMED TO THE STANDARDS GIVEN IN RCW 78.44 ARE NOT INCLUDED WHEN CALCULATING THE DISTURBED AREA OR FACE HEIGHT THRESHOLDS.

THE DEPARTMENT ENCOURAGES OPERATORS OF MINES THAT DO NOT MEET THE THRESHOLD MINIMUMS TO PREPARE A RECLAMATION/OPERATING PLAN IN ORDER TO PROTECT AGAINST EXCESSIVE RECLAMATION COSTS SHOULD OPERATIONS EXPAND IN THE FUTURE. THE FOLLOWING FORM IS INTENDED AS A GUIDE TO ASSIST THE OPERATOR IN PREPARATION OF A RECLAMATION/OPERATING PLAN WHICH MEETS ALL REQUIREMENTS OF THE ACT.

GENERAL INFORMATION

RESERVE SILICA CORP.

- (1) OPERATOR RESERVE SILICA CORP.
Black Diamond Products Inc
- (2) OPERATOR'S ADDRESS P.O. Box 95
RAVENSDALE, WA 98081
- (3) OPERATOR'S PHONE NO. (206) 432-1286
- (4) LANDOWNER HEXAGONAL MINERAL CO
- (5) LANDOWNER'S ADDRESS 5613 DTE PKWY
ENGLEWOOD, CO 80111
- (6) LANDOWNER'S PHONE NO. (303) 930-9277
- (7) NAME OF MINE RAVENSDALE SILICA OPERATION
- (8) LOCATION OF MINE SW 1/4 QUARTER OF THE SW 1/4 QUARTER
SECTION(S) 36 TOWNSHIP 22N RANGE 6E
1 21N 6E
KING COUNTY(IES)
- (9) STREET ADDRESS OF MINE BLACK DIAMOND - RAVENSDALE RD

(10) MATERIAL(S) TO BE MINED:

- (A) GRAVEL
- (B) SAND
- (C) BASALT
- (D) SILICATE ROCK
- (E) LIMESTONE
- (F) BUILDING STONE
- (G) OTHER _____

(11) TYPE(S) OF DEPOSIT(S):

- (A) GLACIAL
- (B) RIVER FLOOD PLAIN (ALLUVIAL)
- (C) RIVER CHANNEL DEPOSITS
- (D) TALUS
- (E) BEDROCK
- (F) UNKNOWN
- (G) OTHER _____

(12) TOTAL PRODUCTION TO DATE: UNKNOWN TONS OR _____ YDS.

(13) ESTIMATED ANNUAL FUTURE PRODUCTION: 80,000 TONS OR _____ YDS.

(14) ESTIMATED NUMBER OF YEARS OF OPERATION REMAINING 16

(15) DEPTH TO WATER TABLE:

_____ FEET BELOW _____ DATUM (I.E. SEA LEVEL) OR EL. 580

UNKNOWN (DO NOT CHECK THIS BOX IN SPOKANE, ISLAND, SAN JUAN OR WALLA WALLA COUNTIES)

RECLAMATION PLAN

(1) COUNTY/MUNICIPALITY FORM SM-6 ATTACHED SHOWS THAT BOTH MINING AND THE PROPOSED SUBSEQUENT USE OF THIS MINE SITE HAVE BEEN APPROVED BY THE COUNTY.
No _____ Yes _____

(2) SUBSEQUENT LAND USE:

- (A) INDUSTRIAL
- (B) AGRICULTURAL
- (C) FORESTRY
- (D) RESIDENTIAL
- (E) WET LAND

OTHER UNKNOWN

(3) POST-RECLAMATION TOPOGRAPHY

- (A) LESS THAN 10% GRADE
- (B) LOW ROLLING HILLS
- (C) LAKE/POND
- (D) BEDROCK CLIFFS

OTHER _____

(4) MINIMUM SETBACKS TO BE MAINTAINED CONTINUOUSLY ALONG BOUNDARIES WITH ADJACENT PROPERTIES NOT OWNED OR LEASED BY THE PERMITTEE:

(A) SAND & GRAVEL PITS

- I. 25 FEET FOR HIGHWALLS LESS THAN 50 FEET HIGH OR...
- II. 50 FEET FOR HIGHWALLS GREATER THAN 50 FEET

(B) BEDROCK QUARRIES

- I. SETBACKS AS ABOVE OR...
- II. AN UNDISTURBED 10 FEET TOGETHER WITH A 15 FOOT WIDE X 15 FOOT HIGH BENCH AT THE TOP OF WORKING FACES STEEPER THAN ONE (HORIZONTAL) TO ONE (VERTICAL)...

(C) WRITTEN EXPLANATION FOR REQUEST FOR VARIANCE FROM SETBACK REQUIREMENTS ATTACHED

(5) MAXIMUM FINISHED SLOPES FOR SAND AND GRAVEL PITS:

- (A) SLOPES IN DEPOSITS WHICH CONTAIN AT LEAST 50% CLAY WILL BE RECLAIMED TO 1.5 HORIZONTAL (H) TO 1 VERTICAL (V) [34°] OR...
- (B) SLOPES WHICH WILL BE DRESSED WITH A MINIMUM OF ONE-FOOT THICK TOPSOIL OR CLAY COVER WILL BE RECLAIMED TO 1.5H TO 1V [34°] OR...
- (C) OTHER SLOPES WILL BE RECLAIMED TO 1.75H TO 1V [30°] TO FACILITATE NATURAL REVEGETATION

(6) MAXIMUM FINISHED SLOPES FOR BEDROCK QUARRIES:

- (A) ALL BEDROCK WORKING FACES WILL BE RECLAIMED WITH A BENCH NO LESS THAN 15 FEET WIDE AND NO GREATER THE 15 FEET HIGH CONTINUOUSLY ALONG THE TOP OF ALL CLIFFS IN EXCESS OF 30 FEET HIGH [FOR SAFETY] AND...
- (B) HIGHWALLS BENCHED TO 10 FEET WIDE BY 30 FEET HIGH TO ENHANCE SCENIC VALUES OR...
- (C) HIGHWALLS SLOPED TO AN AVERAGE OF 1H TO 1V OR...
- (D) NO SLOPE RECLAMATION OTHER THAN (A) WILL BE UNDERTAKEN BECAUSE EXISTING NATURAL TOPOGRAPHY AT OR ADJACENT TO THE PROPOSED QUARRY CONSTITUTES A SAFETY HAZARD INDIGENOUS TO THE AREA

(7) MAXIMUM FINISHED SLOPES FOR MINES RECLAIMED AS LAKES OR PONDS:

ALL LAKE/POND BOTTOMS WILL BE SLOPED AT 1.5H TO 1V TO A DEPTH AT LEAST 2 FEET BELOW THE LOWEST WATER LEVEL TO ASSURE EGRESS FOR NON-SWIMMERS. (OPERATIONS USING DREDGES NEED TO CONSIDER THIS REQUIREMENT CAREFULLY WHILE PLANNING THE MINE.)

(8) POST-MINING TOPOGRAPHY SHOULD BE DESIGNED TO BLEND WITH ADJACENT NATURAL TOPOGRAPHY:

- (A) CONTOURS WILL BE ARCUATE WHEN VIEWED IN PLAN AND..
- (B) CONTOURS AND PROFILES WILL BE GRADED TO AVOID 90° ANGLES, ESPECIALLY AT SECTION CORNERS AND/OR PROPERTY BOUNDARY CORNERS AND..
- (C) CHUTES AND BUTTRESSES WILL BE GRADED PERIODICALLY ALONG RECLAIMED WORKING FACES NA AND..
- (D) RESTORED CONTOURS WILL BE GRADED TO TIE INTO EXISTING OFFSITE NATURAL CONTOURS

(9) POST-MINING WATER CONTROL (NOTE: EVEN MINOR SEDIMENTATION AND/OR MINOR WATER POLLUTION IS PROHIBITED BY STATE AND FEDERAL LAW.)

- (A) ALL WATER INCLUDING WATER ORIGINATING FROM RAINFALL, DUST CONTROL, BREACHED WATER TABLES, ETC., CONTAINED ON SITE? YES _____ NO
- (B) WATER WILL BE ROUTED AROUND NEWLY DISTURBED SLOPES THAT HAVE CLAY CONTENTS EXCEEDING 50% BY INSTALLING TIGHT LINES OR ARMORED DRAINAGES YES _____ NA
- (C) DRAINAGES ARMORED WITH RIPRAP AND OTHERWISE RESTORED IN SUCH A FASHION AS TO ESTABLISH A PERMANENT, EROSION RESISTANT DRAINAGE YES NO _____
- (D) LOW TOPOGRAPHIC RELIEF AREAS SLOPED AT APPROXIMATELY 2% INTO ARMORED DRAINAGE. NA YES _____ NO _____
- (E) LAKES CREATED BY MINING OPERATIONS WILL BE OF SUFFICIENT SIZE FOR RECREATION WILDLIFE AND RESIDENTIAL PURPOSES YES NO _____
- (F) ALL EXPOSED COAL BEDS COVERED WITH TOPSOIL YES

(10) LANDFILL/BACKFILL (NOTE: BACKFILLING IS GENERALLY AN UNACCEPTABLE RECLAMATION TECHNIQUE AND WILL BE APPROVED ONLY IN UNIQUE CIRCUMSTANCES AND ONLY UPON SUBMISSION OF A DETAILED OPERATING PLAN. THIS PLAN MUST IDENTIFY THE SOURCE OF FILL, COMMIT THE OPERATOR TO MAINTAINING THIS FILL SOURCE FOR RECLAMATION ONLY AND GIVE EVIDENCE THAT BACKFILLING IS AN ECONOMICALLY REASONABLE METHOD OF RECLAMATION FOR THIS MINE.

- (A) NOXIOUS OR COMBUSTIBLE MATERIALS WILL NOT BE PLACED IN THE MINE YES

NOT AFTER THIS DATE.

(11) REVEGETATION

(A) NATURAL REVEGETATION (NATURAL REVEGETATION IS ACCEPTABLE FOR FINAL RECLAIMED SLOPES OF 1.75H TO 1V AND IN SOME OTHER CASES)

(B) HYDROMULCHING

(C) GRASS (TYPE(S) AND PERCENTAGE MIX: _____)

(D) NOXIOUS WEED CONTROL PLANNED

PLAN OF OPERATIONS

(1) AREA TO BE DISTURBED IN NEXT TWELVE MONTHS TO NEAREST 0.5 ACRE:

(A) ACCESS ROAD _____ ACRES

(B) PIT FLOORS AND HIGHWALLS 3 . 6 ACRES

(C) SPOIL BANKS/OVERBURDEN 1 . 4 ACRES

(D) STOCKPILES _____ ACRES

(E) TOTAL 5 . 0 ACRES

(2) PROBABLE TOTAL AREA TO BE DISTURBED DURING LIFE OF THE MINE (THIS CANNOT EXCEED THE TOTAL PERMITTED ACREAGE GIVEN ON FORM SM-2) 12 . 8 ACRES

(3) NATURAL VEGETATIVE SCREENING FROM RESIDENCES/ROADS WILL BE PRESERVED YES

(4) NO STOCKPILING AROUND THE BASE OF SCREENING TREES YES

(5) WATER CONTROL DURING MINING:

(A) ALL MINING OPERATIONS WILL BE KEPT A MINIMUM OF 200 FEET FROM RIVERS, LAKES AND WETLANDS YES _____ NO

(B) IF NO, DO YOU HAVE APPROPRIATE COUNTY, DEPT. OF ECOLOGY, AND/OR FEDERAL NPDES PERMITS (NOTE: MUST OBTAIN BEFORE DNR APPROVAL.) YES _____ NO _____ *

(C) ALL WATER INCLUDING WATER ORIGINATING FROM RAINFALL, DUST CONTROL, BREACHED WATER TABLES, ETC., CONTAINED ON SITE? YES _____ NO

*ENGINEERING NOW BEING DONE TO OBTAIN NPDES PERMIT.

(D) SEDIMENTATION PONDS CAPABLE OF CATCHING A 10 INCH IN 24-HOUR RAINSTORM WILL BE CONSTRUCTED IMMEDIATELY YES _____ *

(E) ALL RUNOFF FROM THE OPERATION INCLUDING MINOR DRAINAGE ON THE ACCESS ROADS SHOWN ON THE ATTACHED PLAN ROUTED INTO THE SEDIMENT POND YES _____ *

(F) RUNOFF ROUTED AROUND WORKING FACES TO LOW ELEVATION USING TIGHT LINES AND ENERGY DISSIPATORS YES _____ NA.

(6) PUBLIC SAFETY (DESCRIBE APPROPRIATE MEASURES TO MITIGATE DANGER TO THE PUBLIC OUTSIDE THE MINE DURING OPERATIONS BY CHECKING THE ATTACHED BOXES AND BY ATTACHING SUITABLE PLANS ON A SEPARATE SHEET.)

(A) PLAN OF BLASTING TO LIMIT FLYROCK ATTACHED NA.

(B) BLASTING MATS WILL BE USED

(C) FENCING IF APPROPRIATE [NOTE THAT FENCES SHOULD NOT BE USED FOR RECLAMATION]

(D) TRUCK TRAFFIC CONTROL PLANNED

(E) CONTROLLED ACCESS PLANNED INCLUDED POSTING OF INTER-VISIBLE SIGNS

(F) SLOPE STABILITY ASSESSED

(G) EGRESS FROM PONDS ESTABLISHED

(7) TOPSOIL STOCKPILED FOR FUTURE USE AND TEMPORARILY REVEGETATED IN HIGH WIND OR RAIN AREAS YES NO _____

IF NO, WHY? _____

(8) BERMS: TOPSOIL OR OVERBURDEN STOCKPILED IN SUCH A FASHION AS TO LIMIT NOISE POLLUTION AND VISUAL EFFECTS OF MINING YES NO _____

IF NO, WHY? _____

* PONDS DESIGNED FOR 2 YR - 24 HR RAINFALL = 3 1/2". ONE POND IS BUILT. SECOND POND IS YET TO BE BUILT.

- (9) CRUSHERS, TRUCK ACCESS ROUTES, BATCH PLANTS, AND OTHER NOISE PRODUCING APPARATUS PLACED IN SUCH A POSITION AS TO MAKE USE OF NATURAL TOPOGRAPHY AND SCREENING IN ORDER TO LIMIT NOISE IMPACTS OUTSIDE OF THE PIT. WHILE THIS IS NOT A REQUIREMENT UNDER THE ACT, AND MAY NOT BE POSSIBLE OWING TO OPERATIONAL CONSTRAINTS, ANY EFFORT TO MINIMIZE NOISE WILL REDUCE PUBLIC COMPLAINT REGARDING YOUR OPERATION.

YES _____ NO

EXPLANATION OF MAPS AND CROSS SECTIONS ACCOMPANYING THE RECLAMATION AND OPERATING PLANS.

THE FOLLOWING MAPS AND SECTIONS ARE REQUIRED IN ORDER TO DOCUMENT THE PRE-EXISTING GEOGRAPHY, THE PROPOSED MINING OPERATIONS AND FINAL RECLAMATION OF THE SITE. FOR SMALL MINES, ACCURATELY HAND-DRAWN MAPS ON GRAPH PAPER ARE ACCEPTABLE. FOR LARGER PROPOSALS, AN ENLARGED USGS 7.5 MINUTE TOPOGRAPHIC SHEET OR ENGINEERING DRAWINGS IS APPROPRIATE.

- (1) MAP 1: A REGIONAL INDEX MAP SHOWING THE MINE IN RELATION TO ADJACENT TOWN AND HIGHWAYS SHOULD BE ATTACHED UNLESS THIS INFORMATION IS SHOWN ON MAP 2 BELOW. (A PHOTOCOPY OF A PORTION OF A ROAD MAP WILL SUFFICE.)

- (2) MAP 2: A TOPOGRAPHIC MAP SHOWING ALL OF THE FOLLOWING:

- | | |
|---|---|
| (A) EXISTING CONTOURS | (H) ROADS |
| (B) PROPOSED CONTOURS UPON FINAL RECLAMATION | (I) UTILITIES |
| (C) ACCESS | (J) PARKS |
| (D) BOUNDARIES OF PROPERTY | (K) NAMES OF ADJACENT SURFACE OWNER |
| (E) BOUNDARIES OF DISTURBED AREAS | (L) LOCATION OF CROSS-SECTIONS |
| (F) LOCATIONS, NAMES AND WATER TYPES OF STREAMS | (M) MAP SCALES AND NORTH ARROW |
| (G) RAILROADS | (N) SETBACKS FROM ADJACENT PROPERTIES AND UTILITIES |

(NOTE THAT MOST OF THESE ITEMS ARE SHOWN ON USGS TOPOGRAPHIC SHEETS. CONSEQUENTLY, A PHOTOCOPY OF THE RELEVANT PORTION OF A TOPOGRAPHIC SHEET WILL SUFFICE AS A BASE MAP FOR THE RECLAMATION PLAN.)

- (3) TWO INTERSECTING CROSS-SECTIONS SHOWING:

- | | |
|----------------------------------|--------------------------|
| (A) FINAL RECLAIMED SLOPES | (F) BENCHES |
| (B) SETBACKS | (G) BERMS |
| (C) EXISTING TOPOGRAPHY [DASHED] | (H) LAKES/PONDS |
| (D) MINERALS EXPOSED AT SURFACE | (I) WATER TABLE IF KNOWN |
| (E) PROPOSED VEGETATION | |

- (4) SKETCH MAPS SHOWING THE MINE DEVELOPMENT AT FIVE YEAR INTERVALS, AS PRESENTLY ENVISIONED. THESE SKETCH MAPS NEED TO INDICATE DIRECTION OF MINING ON EACH WORKING FACE, POSITION OF NOISE GENERATING EQUIPMENT, WATER CONTROL MEASURES, ETC. (THESE SKETCH MAPS ARE UNNECESSARY FOR MINES LESS THAN TEN ACRES.)

- (5) PHOTOGRAPHS MAY BE ATTACHED TO DOCUMENT PRE-EXISTING TOPOGRAPHY OF MINING ACTIVITIES. (OPTIONAL, BUT IT IS GENERALLY IN THE OPERATOR'S BEST INTEREST TO SUBMIT A PHOTO.)

SIGNATURES

SIGNATURE OF APPLICANT:
DATE:

X Arthur Miller
Arthur Miller

SIGNATURE OF LANDOWNER
APPROVING PROPOSED SUBSEQUENT USE:

X Mark S. Tow
SR. Vice-President
MARK S. TOWE

DATE: 2-19-91
PRINT NAME OF LANDOWNER:

FOR DEPARTMENTAL USE ONLY

- (1) ARE THE FACTS ACCURATELY PRESENTED IN THE APPLICATION AND SUPPLEMENTAL MATERIAL? YES NO
- (2) CAN RECLAMATION BE REASONABLY AND ECONOMICALLY ACCOMPLISHED AS SPECIFIED? YES NO
- (3) SHOULD A PERMIT BE ISSUED? YES NO
- (4) RECOMMENDATIONS AND COMMENTS:

responses to 8A: pg 4, 9A there no refers to water which feeds wash plant down slope from the pit site. this water is ponded at that location pg 4 10A one area was used. EPA & local health officials monitored it & I believe have signed off on it. Pg 5 5A & B. NPDES permit applied for via DOE. for this water, an old mine drains water on to plant site & is used for wash water which is ponded & then released into stream. (Hence the need for the NPDES permit. Plant located adjacent to Co. rd in town of Ravensdale. small rural community screening is desired but not practical everywhere. the mine site itself is well screened.

D.S.P. 3/7/91

Received
11/8/71
CMB



STATE OF WASHINGTON
BOARD
of
NATURAL RESOURCES
P.O. Box 168 Olympia, Wa 98501

**COUNTY OR MUNICIPALITY
RECOMMENDATIONS**

SURFACE MINING

TO BE COMPLETED BY APPLICANT

APPLICANT (TYPE OR PRINT) Smith Bros. Silica Sand Co. Inc.		DESCRIPTION OF SITE maximum area 40 ac. on west flank of Ravensdale Hill in NW$\frac{1}{4}$, N$\frac{1}{2}$SW$\frac{1}{4}$ sec 1 and S$\frac{1}{2}$SW$\frac{1}{4}$ of sec 36	
ADDRESS P.O. Box 236 Auburn, Washington, 98002 plant mailing address P.O. Box 95 Ravensdale, Wn., 98051		SEC 1 36	T 21N 22N N
TELEPHONE NO.: Ge 2 0655		RGE 6E 6E	COUNTY King
		DIRECTION FROM west	NEAREST COMMUNITY Ravensdale

INDICATE PROPOSED SUBSEQUENT USE OF SITE UPON COMPLETION OF RECLAMATION
land to be restored to natural condition conforming to adjacent physiographic features

SIGNATURE (APPLICANT'S) <i>A. B. Berg</i>	TITLE President Industrial Minerals Inc.	DATE 3/30/71
--	--	------------------------

TO BE COMPLETED BY APPROPRIATE COUNTY OR MUNICIPALITY

TO: BOARD OF NATURAL RESOURCES
SUBJECT: RECOMMENDATIONS ON SURFACE MINING PERMIT APPLICATION FOR A NEW OPERATOR COMMENCING OPERATIONS

1. Would the proposed subsequent use be illegal under current local zoning regulations?	5/13/71 E.L.	Yes	No
2. If required by local regulations, does the applicant have an appropriate permit to conduct surface mining?	#1122 m. Lechko	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Recommendations and comments:			

ADDRESS King County Department of Building Room 450 King County Administration Building Seattle, Washington 98104	SIGNATURE (PLANNING DIRECTOR OR ADMINISTRATIVE OFFICIAL) <i>Robert L. ...</i>
	TELEPHONE NO.:

NOTE: Chapter 64, Laws of 1970, 1st Ex. Sess., requires evidence that the proposed subsequent use would not be illegal under local zoning regulations.

PERMIT NO. **10346**



STATE OF WASHINGTON
 BOARD
 of
NATURAL RESOURCES
 P.O. Box 168 Olympia, Wa 98501

RECEIVED
 MAY 4 1972

**APPLICATION
 FOR
 OPERATING PERMIT
 SURFACE MINING**

(SEE INSTRUCTIONS BELOW)

NAME OF APPLICANT (TYPE OR PRINT) Smith Bros. Silica Sand Co, Inc.		SIZE AND LEGAL DESCRIPTION maximum area to be involved- 40 acres area under lease NW$\frac{1}{4}$, N$\frac{1}{2}$SW$\frac{1}{4}$ sec(1)one S$\frac{1}{2}$SW$\frac{1}{4}$ sec 36															
PERMANENT ADDRESS (INCLUDE 'ZIP') P.O. Box 236 Auburn, Washington 98002		SEC 1 36	T 21N 22N														
TELEPHONE NO. Ge 2 0655		RANGE 6E	COUNTY King														
TEMPORARY ADDRESS (INCLUDE 'ZIP') plant mail address P.O. Box 95 Ravensdale, Wn., 98051		DIRECTION FROM west	NEAREST COMMUNITY Ravensdale														
TELEPHONE NO. Ge 2 0655		TYPE OF OVERBURDEN bedrock soil and glacial till	APPROX. MAX. DEPTH OF OVERBURDEN 15 ft.														
OWNERSHIP: Surface of land to be surface mined (show names and addresses) Burlington Northern Central Building Seattle, Wn.		MATERIAL TO BE MINED OR REMOVED quartz rich sandstone	QUANTITY (TONS OR YARDS) OVERBURDEN MINERAL unknown														
OWNERSHIP: Mineral Rights (show names and addresses) same as above		ESTIMATED TOTAL ACRES TO BE SURFACE MINED max. 40	ESTIMATED NUMBER OF ACRES TO BE MINED IN FIRST YEAR 2														
		METHOD OF MINING open pit	EST. MAX. DEPTH TO BE SURFACE MINED 60 ft														
PURPOSE FOR WHICH THIS LAND IS TO BE USED AFTER MINING landowner has not yet decided but will be compatible with existing uses																	
		Do you or any person, partnership, or corporation associated with you now hold, or have ever held, an operating permit? Yes No X															
		If the answer to the above is yes, please list. Reclamation Complete Or Current															
		<table border="1"> <tr> <th rowspan="2">Permit No.</th> <th colspan="2">Active Operation</th> <th colspan="2">Reclamation Complete Or Current</th> </tr> <tr> <th>Yes</th> <th>No</th> <th>Yes</th> <th>No</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Permit No.	Active Operation		Reclamation Complete Or Current		Yes	No	Yes	No					
Permit No.	Active Operation		Reclamation Complete Or Current														
	Yes	No	Yes	No													
		Have you had an operating permit or bond revoked or forfeited? Yes No X															
INSTRUCTIONS		If yes, give permit number and location of site.															
<ol style="list-style-type: none"> This application must be accompanied by the fee, a reclamation plan and a plan of surface mining. Attach a statement (or form) from the appropriate zoning agency showing that the proposed subsequent use of the property is a legal use under present zoning classification. Maps must be submitted with each application to the following scales. Contour intervals shall not be more than 5 feet. Variations are permitted subject to approval. <table border="1"> <tr> <th>Area of Site</th> <th>Not Less Than</th> </tr> <tr> <td>0-5 Acres</td> <td>1"=50'</td> </tr> <tr> <td>5-10 Acres</td> <td>1"=100'</td> </tr> <tr> <td>Over 10 Acres</td> <td>1"=200'</td> </tr> </table> 		Area of Site	Not Less Than	0-5 Acres	1"=50'	5-10 Acres	1"=100'	Over 10 Acres	1"=200'	DESIGNATE NUMBER OF SITES COVERED BY THIS APPLICATION: 1 A BASIC FEE OF \$25 PER SITE IS HEREWITH ATTACHED							
Area of Site	Not Less Than																
0-5 Acres	1"=50'																
5-10 Acres	1"=100'																
Over 10 Acres	1"=200'																
FOR DEPARTMENT USE ONLY		SIGNATURE															
DATE ACCEPTED BY DEPARTMENT: Nov. 11, 1971		 President Industrial Minerals Inc.															
ACCEPTED BY: Larry K Sweeney		DATE 3/30/71															
		PERMIT NO. 10346															

