FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT
ON
GRAVEL REMOVAL FROM THE LOWER EEL RIVER
JULY 1992

INTRODUCTION

This document is a Program Environmental Impact Report (EIR) which will cover 13 gravel extraction and related processing operations that are located close to one another in the lower part of the Eel River watershed. This type of document is described in detail in Section 15168 of the guidelines for implementation of the California Environmental Quality Act of 1970. The planning department believes this type of document will provide a good overview of the cumulative effects of the removal of gravel from the lower part of the Eel River watershed.

Another benefit of a Program EIR is to provide a basis for an Initial Study for determining whether other gravel removal projects in this area would have significant effects. It may also be incorporated by reference into future environmental documents prepared on specific gravel removal projects within the same area so that document can deal with regional influences, secondary effects, and cumulative impacts.

PROJECT LOCATION

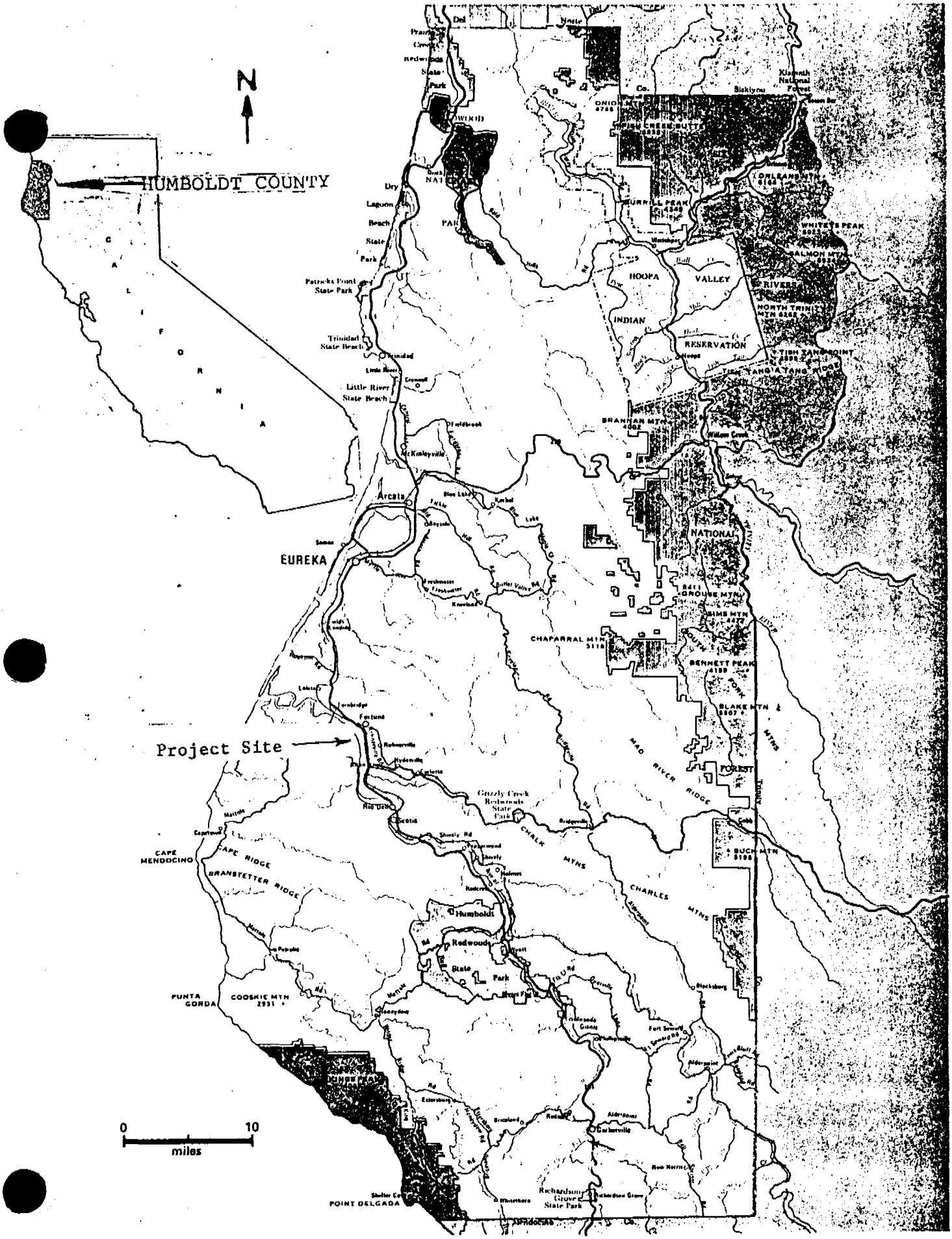
The area from which gravel is to be removed is located on the Lower Eel River and Lower Van Duzen River. On the Eel River 11 gravel operations are located along eight miles of the river between a mile below Fernbridge to the mouth of the Van Duzen River. Two operations on the lower Van Duzen River are located at river mile 5.0 and 6.0. River mile 5.0 is located near the mouth of Yager Creek. River mile 6.0 is near the end of Odd Fellows Park Road near the community of Carlotta. Maps 1 and 2 show these locations.

INDIVIDUAL PROJECT SITE DETAILS

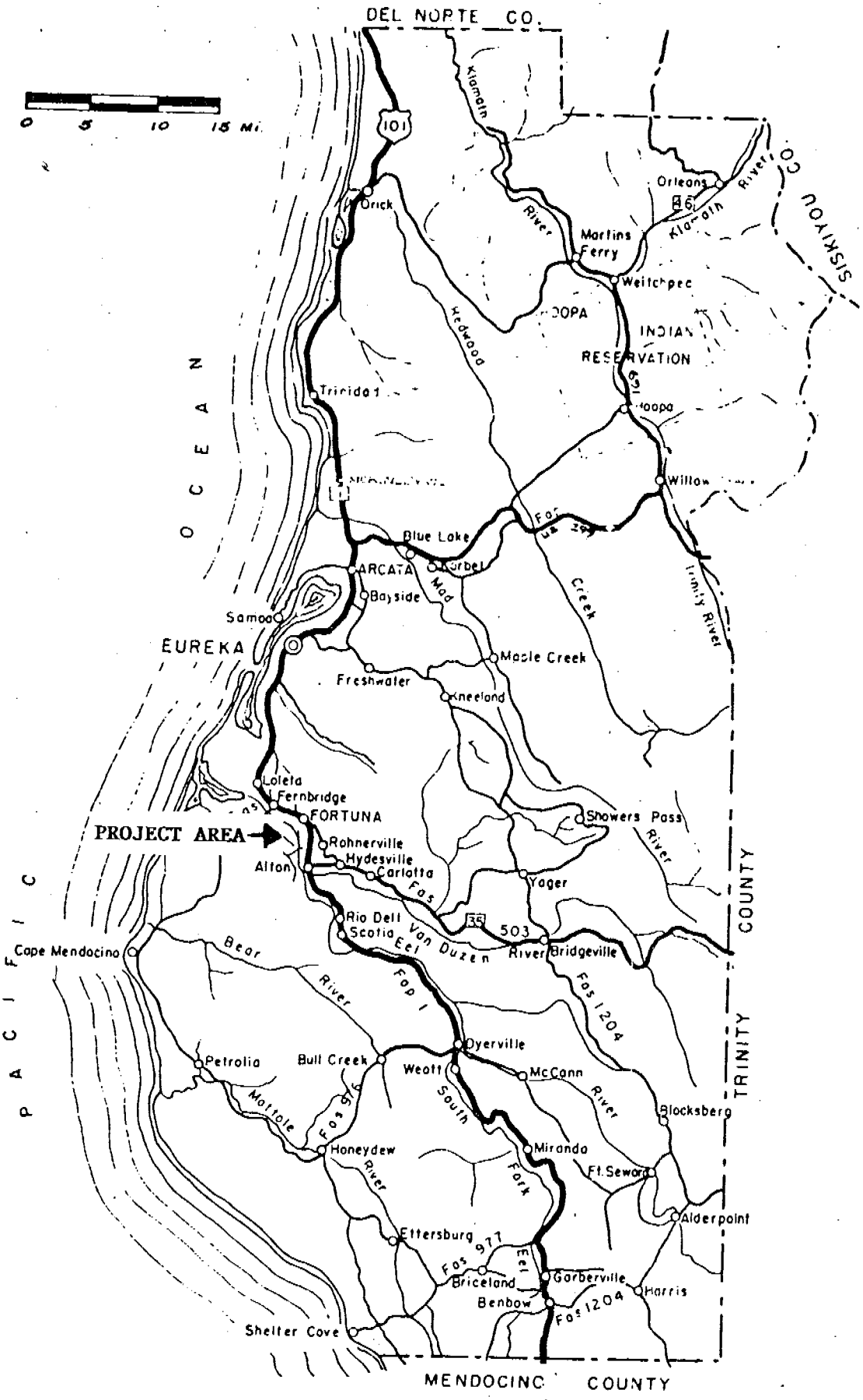
A brief description of each project site follows. Some have existed for many years while a few new ones have been proposed. The gravel projects are presented geographically, in order by location, beginning at the downstream end. The individual gravel projects are numbered. The numerical order does not coincide with the geographic order.

Site No. 12 - Arcata Readimix

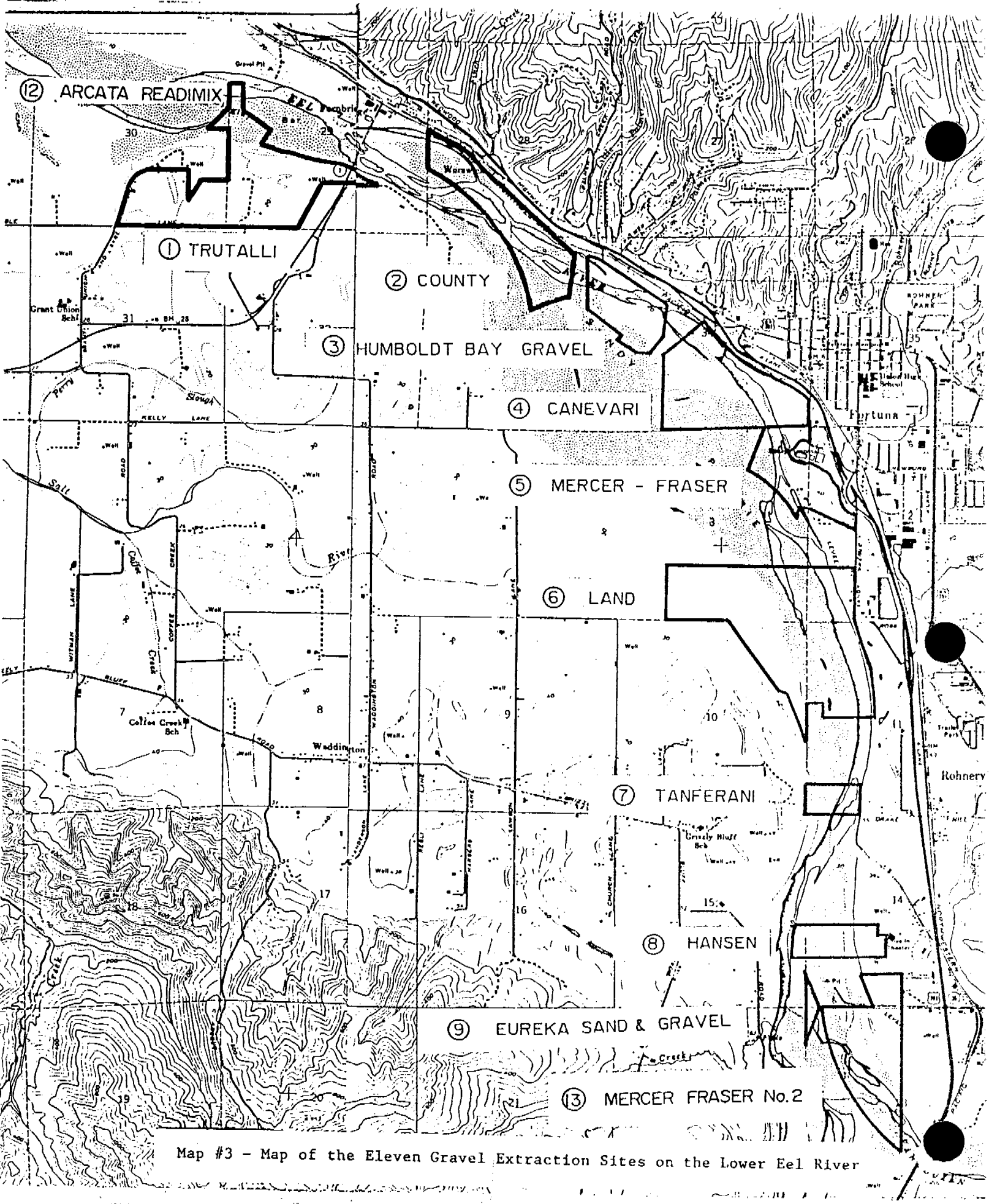
1. Location. The bar from which gravel will be removed extends approximately two miles downstream of Fernbridge as shown on Map No. 3 and Photograph No. 1. The initial extraction area is approximately one mile in length by a few hundred feet in width.



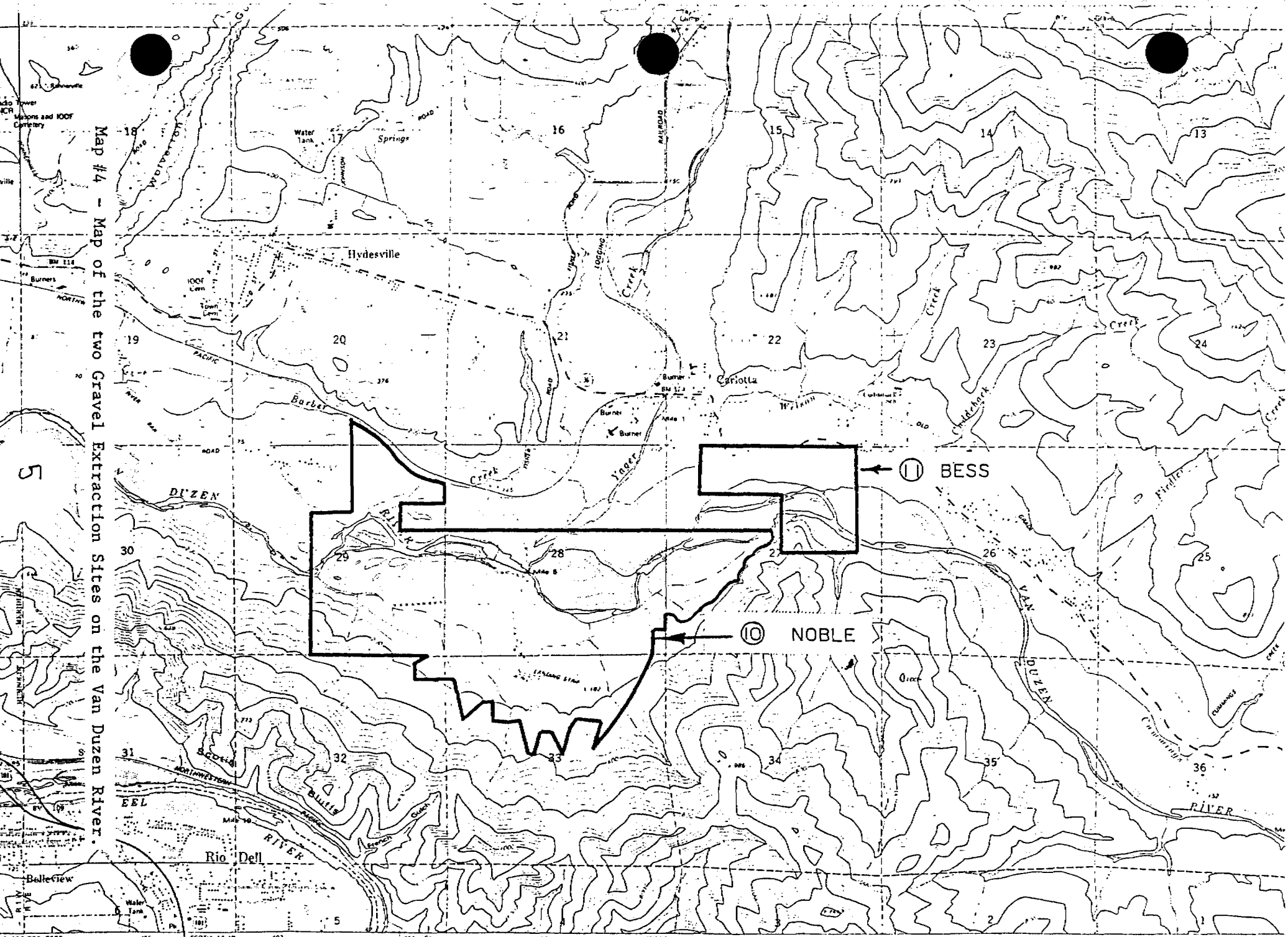
Map #1 - Regional Map



Map #2 - Map of Humboldt County



Map #3 - Map of the Eleven Gravel Extraction Sites on the Lower Eel River



Map #4 - Map of the two Gravel Extraction Sites on the Van Duzen River.

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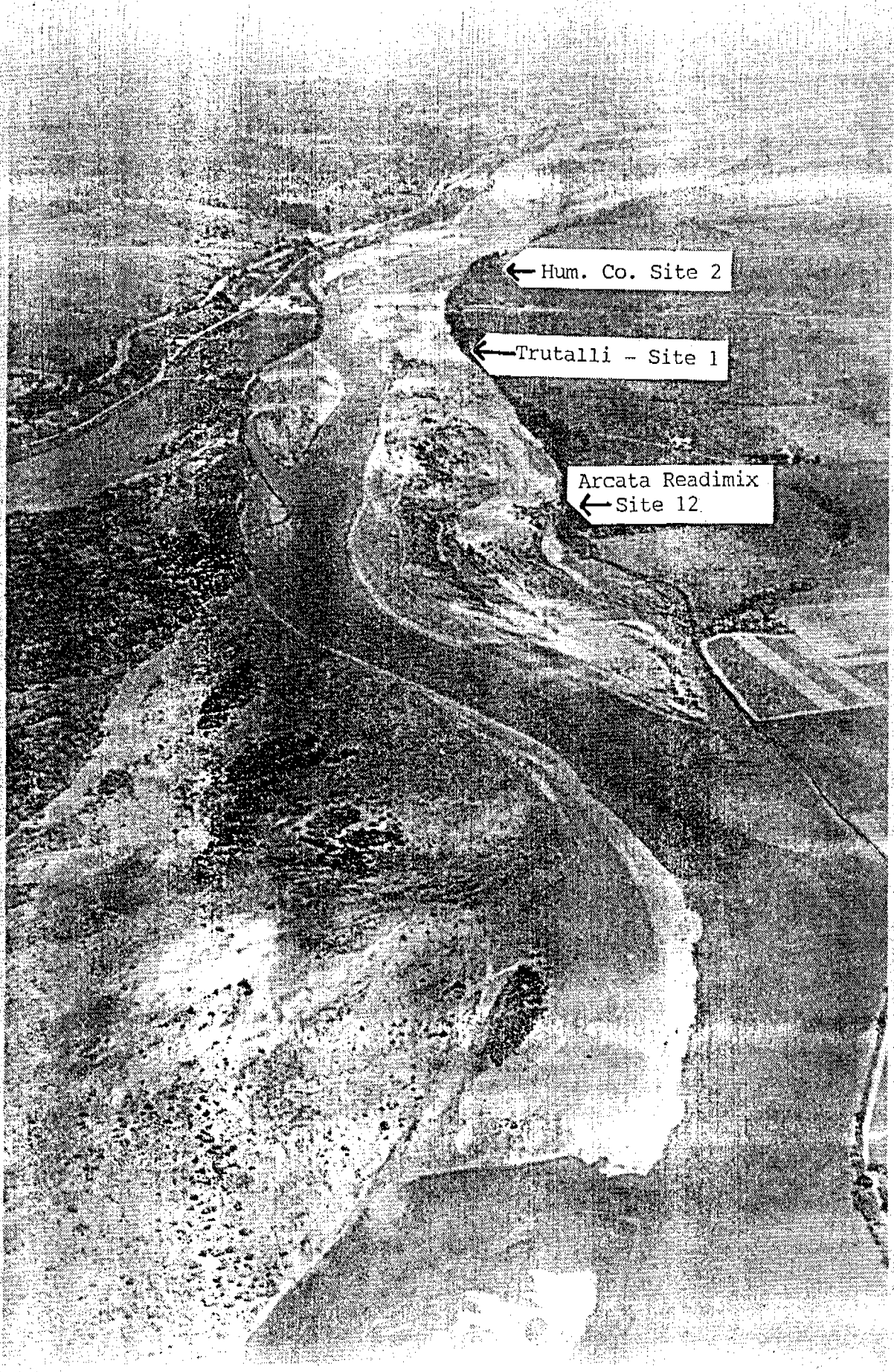
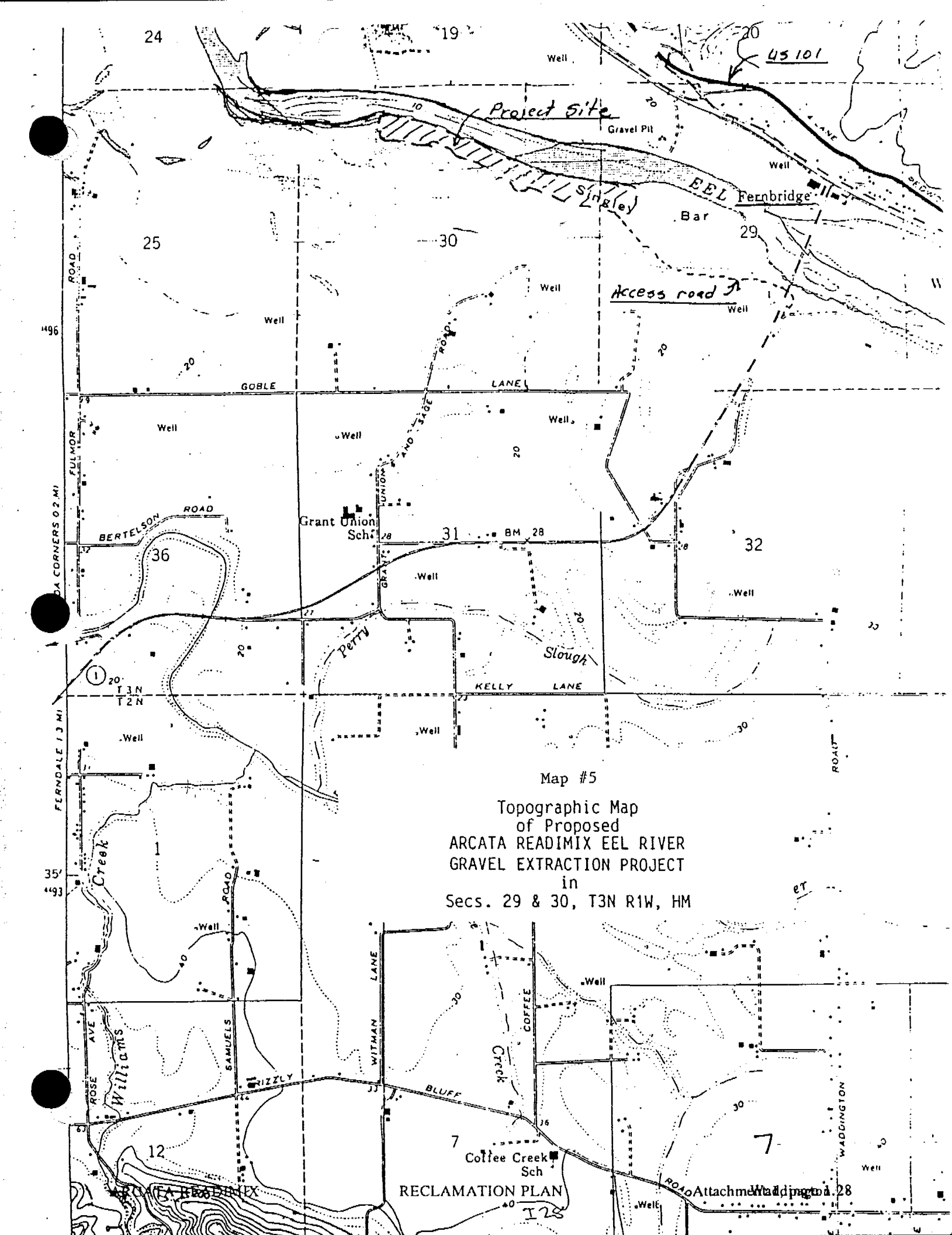


Photo #1. View east, looking upstream, of Eel River near Fernbridge, Showing sites 1, 2, and 12



Map #5

Topographic Map
of Proposed
ARCATA READIMIX EEL RIVER
GRAVEL EXTRACTION PROJECT
in
Secs. 29 & 30, T3N R1W, HM

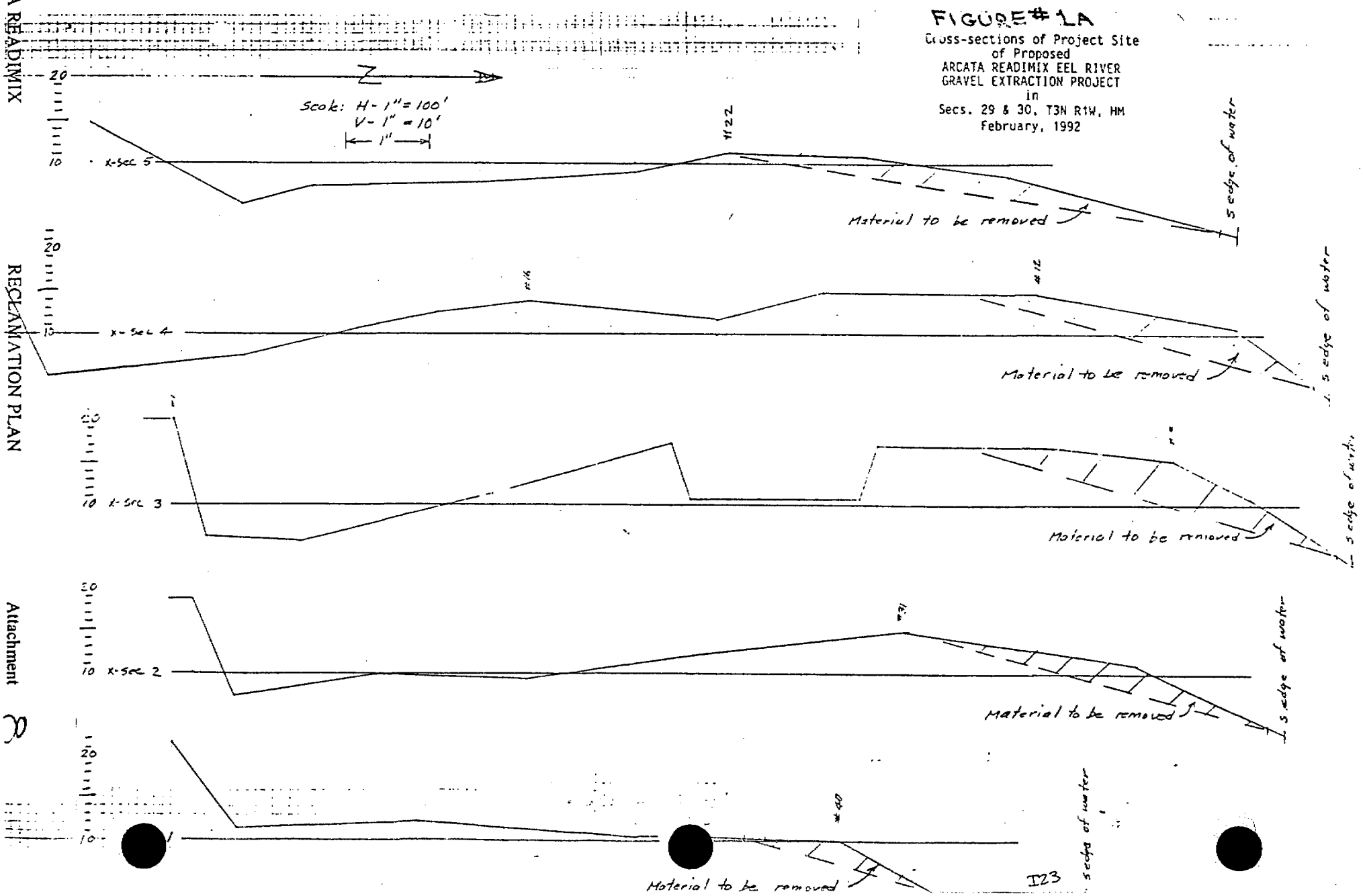
ARCATA READIMIX

RECLAMATION PLAN

Attachment

FIGURE #1A

Cross-sections of Project Site
of Proposed
ARCATA READIMIX EEL RIVER
GRAVEL EXTRACTION PROJECT
in
Secs. 29 & 30, T3N R1W, HM
February, 1992



2. Land owner. The bar and initial extraction area is located on portions of parcels owned by the following individuals: Raymond E. and Bertha Tedsen of Ferndale; Tony M. and Lucy Rocha of Ferndale; Patrick O'Dell of Fortuna; and Edward L. and Paula Nielson of Ferndale.

3. The operator will be Arcata Readimix located in Arcata at 4945 Boyd Road (707) 822-1795.

4. Description of Operation. This is a new project. Arcata Readimix has applied to the Humboldt County Planning Commission for permission to remove up to a maximum of 150,000 cubic yards per year for 15 years. The actual volume of sand and gravel removed in any year will be based on market conditions and annual evaluations of channel cross sections. An assessment of the appropriate amount to be removed and the method of removal will be developed prior to the beginning of each extraction season.

Initially the method of extraction will be by skimming. Extracted gravel will be loaded on trucks and removed from the bar prior to processing. Additional details are found in the Supplemental Environmental Impact Report dated April 8, 1992 on file with the Humboldt County Planning Department.

5. Environmental Setting. The gravel bar is located along the south bank of the Eel River and extends approximately two miles downstream of Fernbridge. The initial extraction area extends from 0.5 to 1.5 miles downstream from Fernbridge. Access to the bar begins with a turn east off of State Highway 211 onto Waddington Road. At the junction with Sub-Station Road one turns left and travels northeast to the southerly end of the Fernbridge where the road turns left; passes through a gate; and parallels the river along the top of the river bank, for approximately a half-mile, then descends to the river bar. The graveled road passes through riparian vegetation and trees. The bar is visible from vehicles utilizing Fernbridge.

Recreational use is limited to fishermen with four-wheel drive vehicles gaining access to the river bar utilizing Sub-Station Road and proceeding straight to the river bar along the east edge of the Fernbridge structure. They cannot utilize the gravel road that Arcata Readimix will use because that road has a locked gate just after the left turn under the bridge.

Noise levels on the gravel bar range from 40 to 50 dBA. A list of trees, shrubs and herbaceous plants growing on the bar is contained on pages 18 and 19 in the Reclamation Plan dated February 7, 1992, and on file at the Humboldt County Planning Department.

The bank-to-bank width of the Eel River at this location is approximately 2,000 feet. The bar averages about 1,000 feet in width.

Site No. 1 - Trutalli & Saottini

1. Location. This site is located on the same bar as Site No. 12 and is immediately upstream of the extraction area proposed by Arcata Readimix. Trutalli removes gravel from an area that is about 1,000 to 3,500 feet downstream from Fernbridge on the bar. See Photo No. 1.

2. Land Owner. Marice Silva, Silva Estates, 1348 Lincoln, Ferndale, California 95536.

3. Operator. David Trutalli and Gene Saottini, both of Ferndale.

4. Description of Operation. This operation consists of an annual removal of up to 10,000 cubic yards of gravel from this site. The operation would continue as long as gravel is available. Gravel is removed with scrapers, excavators, and bulldozers and loaded into 5 and 10-yard dump trucks and hauled to the location of the client.

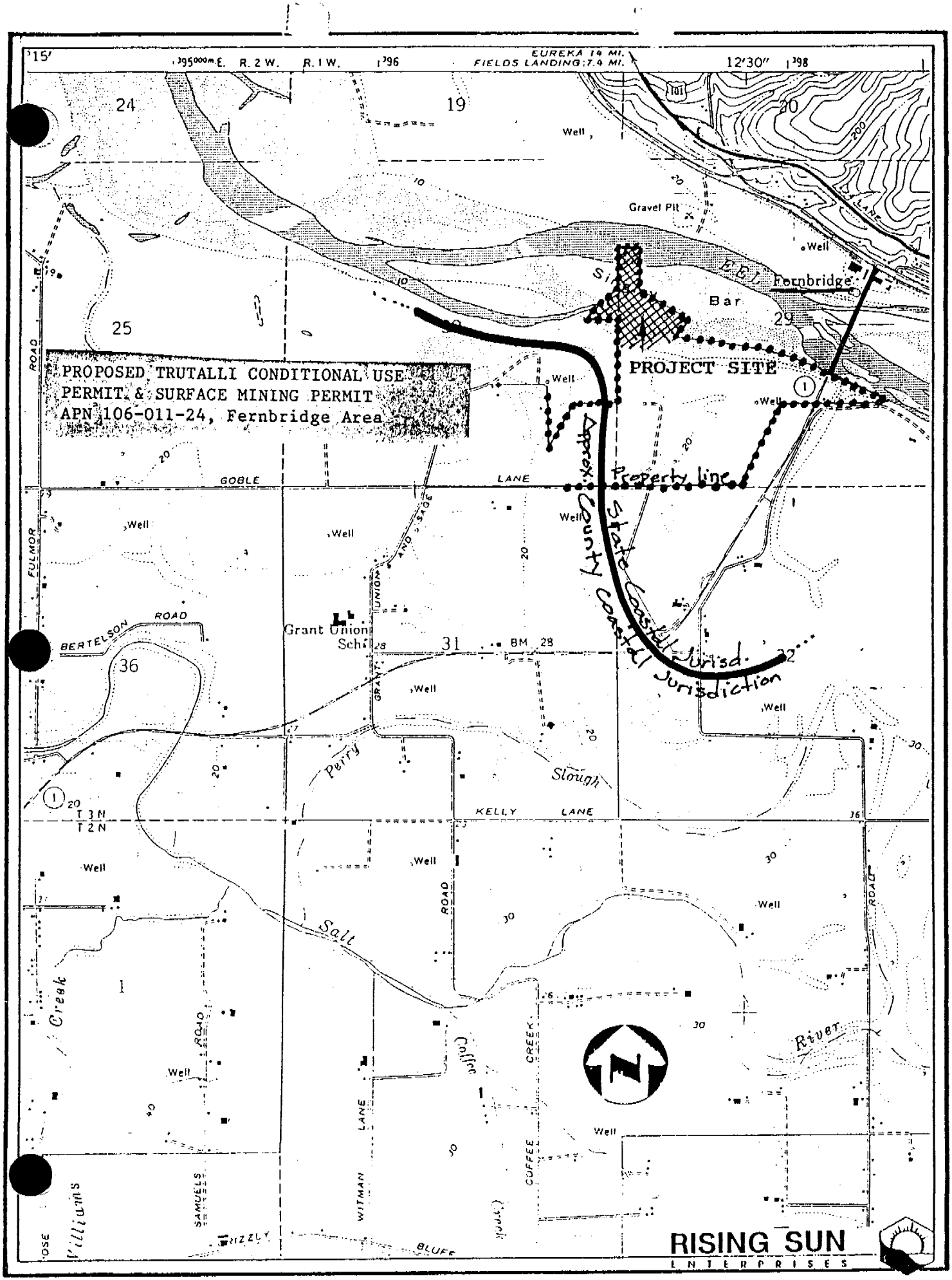
This operation has received a vested right from the Humboldt County Planning Commission.

5. Environmental Setting. The access route to this site is the same as that described above for Arcata Readimix. This site is visible from passengers in vehicles crossing Fernbridge over the Eel River. This site may also be accessible from time-to-time off the north end of Sage Road which runs north off State Highway 211 about two miles southwest of Fernbridge.

Recreational use of this portion of the bar is by fishermen with four-wheel drive vehicles. They can reach the bar either off the end of Sage Road or by utilizing Sub-Station Road and proceeding along the east edge of the Fernbridge structure to the river bar.

Noise levels most of the year on this bar range from 40 to 50 dBA.

Riparian vegetation grows along the south bank of the Eel River from Fernbridge west ranging in width from 100 to 300 feet along this particular bar area.


PROPOSED TRUTALLI CONDITIONAL USE PERMIT & SURFACE MINING PERMIT
APN 106-011-24, Fernbridge Area
PROJECT SITE
Approx. Property line
State Coastal Jurisd. Jurisdiction
Gravel Pit
Well
Fernbridge
Bar
GOBLE LANE
BERTELSON ROAD
KELLY LANE
FULMOR ROAD
UNION AND SAGE GRANT
Grant Union Sch.
Perry Slough
Salt Creek
Cuffee Creek
WITMAN LANE
SAMUELS ROAD
COFFEE CREEK ROAD
Eel River
BLUFF
T 3 N
T 2 N
RISING SUN
ENTERPRISES

Map #6 Site #1

Photo #2 Site #1 - Trutalli & Saottini showing extraction area and property lines.

Site No. 2 - Worswick

1. Location. One-half mile upstream of Fernbridge in the southwest quarter of Section 28, T3N, R1W.

2. Land Owner. Humboldt County.

3. Operator. Humboldt County Public Works Department, Road Division, and a contractor who will be awarded a lease by the Board of Supervisors.

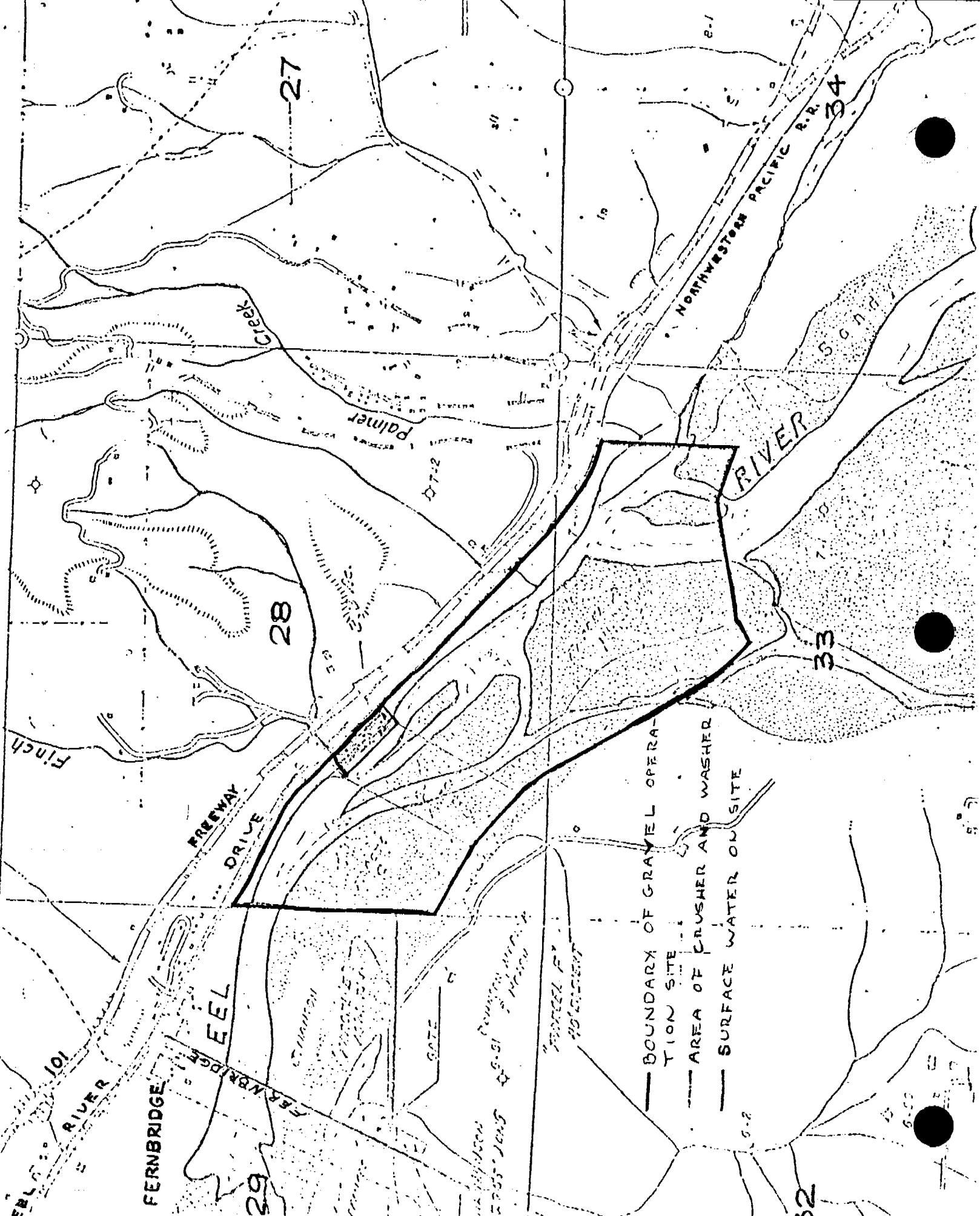
4. Description of Operation. The County proposes to lease this bar to a private operator. The lease permits the operator to remove up to 200,000 cubic yards per year. The gravel will be removed by skimming and a gravel processing plant may be erected on the County's processing yard adjacent to the site above the floodplain. If the low flow channel moves to the east side of the river, it would be necessary for the operator to utilize flatcar bridges for summer crossings. The gravel would be removed from the bar between June 1st and October 1st. The crushing operation could continue throughout the year.

Ten-yard dump trucks or larger may be used to remove the gravel from the bar area. Front-end loaders would probably skim the gravel off the surface and load it directly into the trucks.

The actual amount of gravel that could be removed in any one season would be dependant on the quantity available. That volume will be determined through analysis of cross-sections taken at the beginning of each season.

5. Environmental Setting. This bar is accessible from the north side of the river off Fernbridge Drive. Where the lease agreement requires that gravel removed from this bar by a contractor be sold out-of-County it is the County's understanding the gravel will be removed from the gravel processing yard by rail. Therefore, there should be no traffic impacts resulting from this operation.

Noise levels on the gravel bar when no operations are occurring range from 50 to 60 dBA depending on levels generated from the freeway and nearby processing plant. If a crushing operation is occurring in the processing yard, a level of 90 dBA at 50 feet is generated. This results in a 66 dBA level at the exterior wall of the nearest occupied residential structures, which is 800 feet away. The next nearest home is on the opposite side of the freeway 1,500 feet away and would receive 60 dBA. Two more houses, one 1,400 feet south and one 1,700 feet east up a canyon, would receive a level of 50 dBA at the exterior wall.



Map #7 Site # 2 - County-owned bar at Worswick showing property lines and crusher site.

Along this portion of Eel River the river is bordered on the north side by a 200 foot wide riparian corridor for about one-quarter of a mile at the downstream end. At the gravel processing yard, the corridor is only 50 to 100 feet wide for the next quarter mile along this north side. The southern portion of the site is bordered by a wider corridor of 150 feet wide for the next 2,500 feet.

The south side of the river is bordered by a riparian area 1,400 feet long and about 200 feet wide. This tapers off to a zero width following the eroded bank of the Hackett Ranch for about 900 feet, then riparian vegetation is found for the next 400 feet ranging in width from 200 to 600 feet.

A small clump of willows has taken hold at the downstream end of the Worswick bar near Fernbridge. The bar itself is sparsely covered with several of the species listed on pages 18 and 19 in the Supplemental Environmental Impact Report of Arcata Readimix.

This site is visible from southbound lanes of Highway 101 and from Fernbridge.

Recreational use of the site is infrequent except during the fishing season. Currently there is a locked gate across the access point to the yard. During fishing season it has been a practice to leave this gate open to permit access to the river with four-wheel drive vehicles.

The bank to bank width in this area is 1,600 feet and the low flow channel ranges in width from 250 feet at the downstream end to 450 feet in the mid-stream end to 120 feet at the upstream end. The channel has moved to the south side of the bar and the bar contains 120 acres of gravel surface.

On April 28, 1992, six cross-sections were taken of this bar by the County Public Works Survey Crew. The width of the bar from the north bank to the edge of water of the low flow channel varied from 1,250 to 1,350 feet. The highest points of the bar tended to be 14 feet above low water about 600 feet away.

The County has a vested right for 200,000 cubic yards per year for this site received December 16, 1987 from the Planning Department. Permits required in order to remove 200,000 cubic yards per year are shown in Table 1.

Site No. 3 - Ken Drake

1. Location. This site is located just upstream of the Humboldt County Fernbridge bar. The crusher and asphalt plant are located on the south side of Highway 101 across from

Palmer Boulevard and Hansen Drive. The crusher operation is accessible from the east end of the Palmer Boulevard off ramp off the southbound Highway 101 lane. See Photo No. 3.

2. Land Owner. George Beach of El Cajon, California.

3. Operator. Historically Humboldt Bay Gravel removed gravel from this bar. They have a conditional use permit to remove 250,000 cubic yards per year.

4. Description of Operation. There has been an ongoing operation for many years at this location. Currently Humboldt Bay Gravel has a permit for a maximum of 250,000 cubic yards per year. In the processing yard there is a gravel crushing operation and a concrete making operation.

Truck traffic was estimated by Wes Nally of Humboldt Bay Gravel to run three to four trucks per hour. He mentioned much of their material moves by rail. The concrete operation is run by Ken Drake who has a lease from George Beach. Photo No. 5 shows their crushing plant operation. Photo No. 4 shows Mr. Drake's concrete making plant.

This site has been leased to Fortuna Ready Mix of which Ken Drake is President. The bar contains 120 acres. Of the 120 acres, 24 acres are used for gravel production. Water is pumped from several existing wells and after it is used for processing, is sent to existing settling ponds.

This operation has utilized trenching for removal of gravel during the past few years.

5. Environmental Setting. This site is accessible from State Highway 101 utilizing the off and onramps at the Palmer Boulevard intersection. The haul route utilized by the trucks is Highway 101.

Noise levels at this site are fairly high. There are 64 houses across the freeway within 500 to 3,000 feet of the processing area. Many of the houses are in canyons and some are up on ridges. The noise levels at these houses could range from a high of 70 dBA down to 54 dBA.

Along the river bank at this site the riparian corridor narrows down to about 40 feet. The south side of the river is bordered by a large corridor ranging from 500 to 1,100 feet in width. One island 1,000 feet south of the processing yard contains a cluster of riparian vegetation growing on gravel that has been stored in place for approximately 18 years.

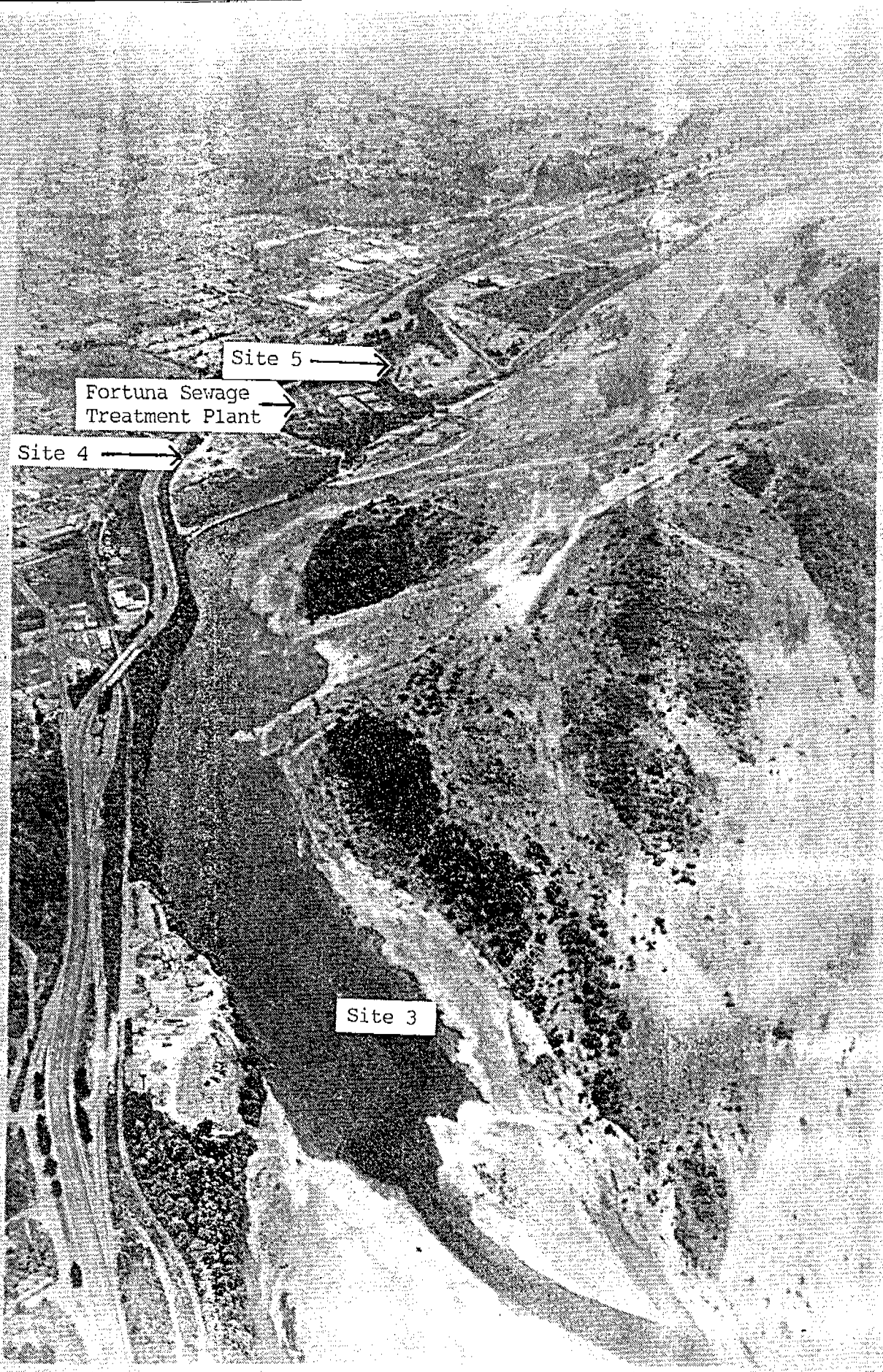
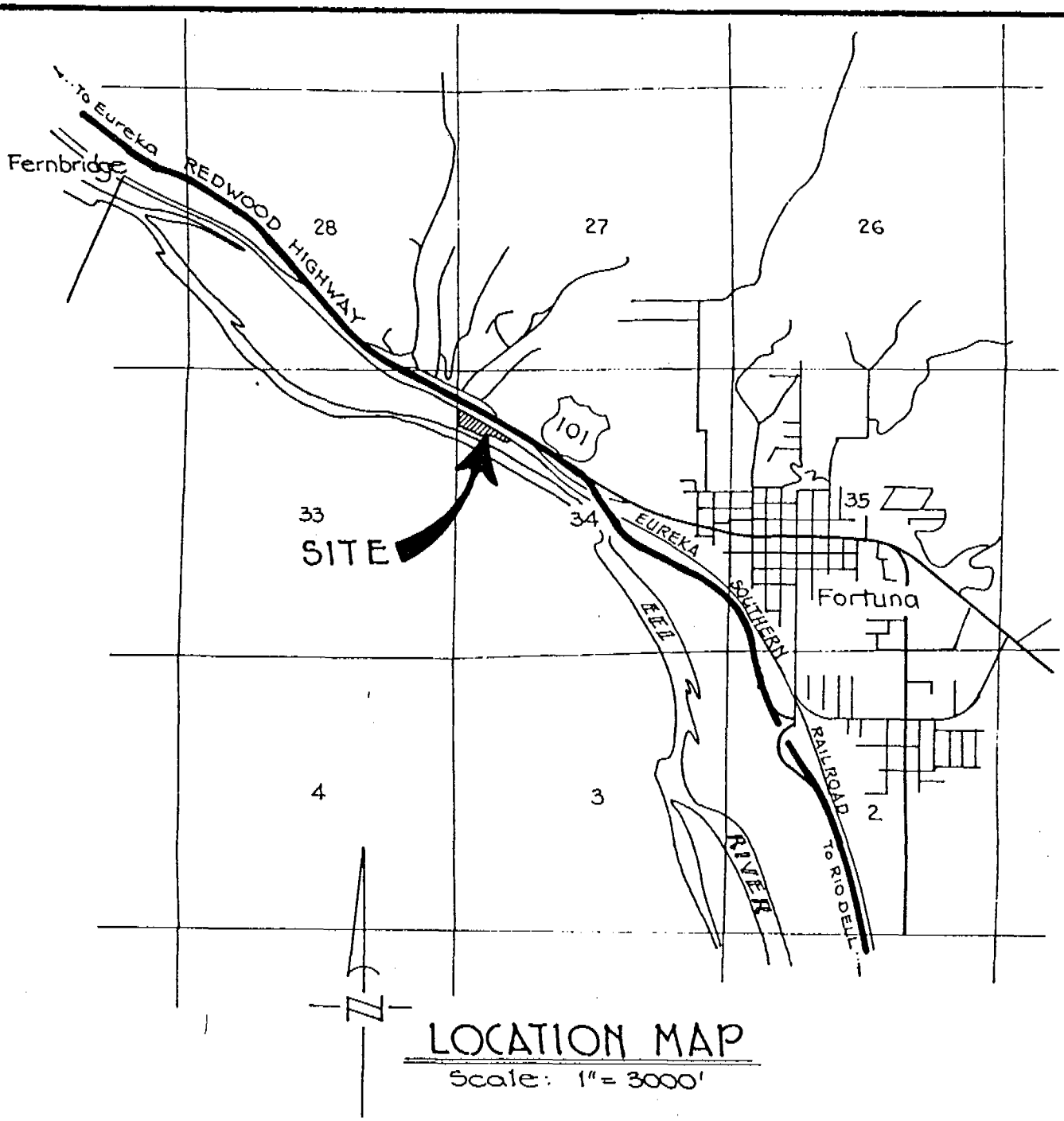
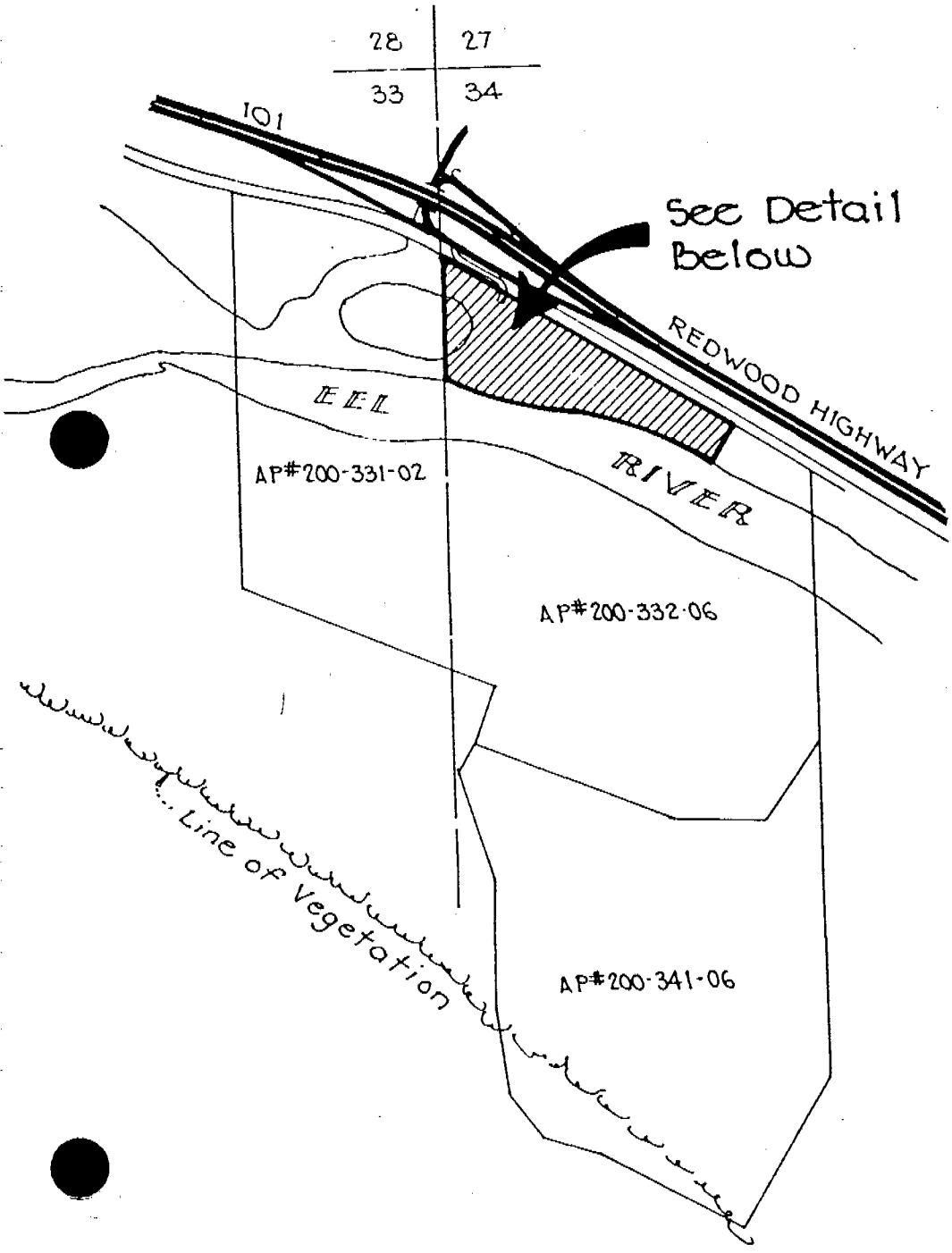


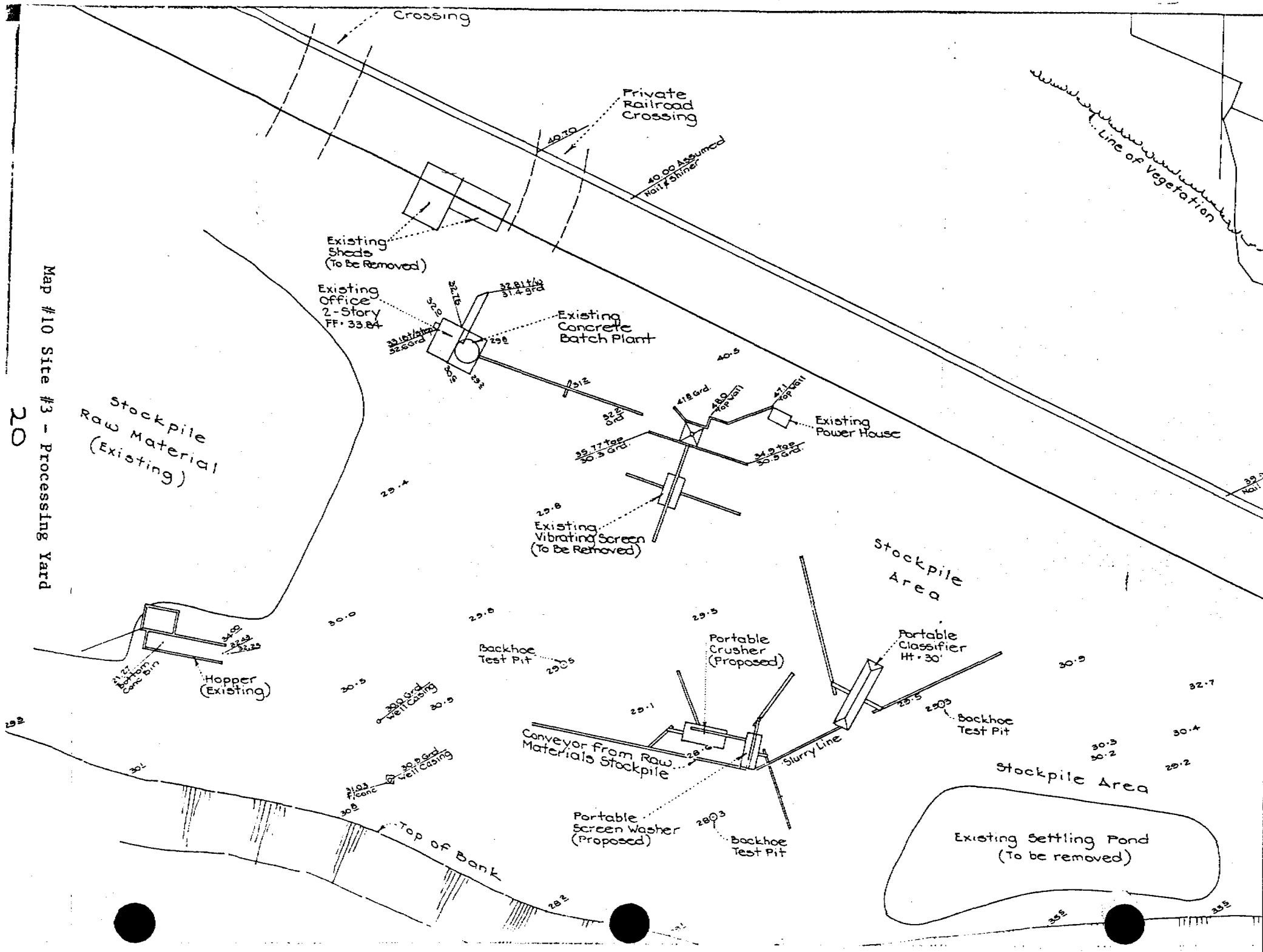
Photo #3 View upstream of Eel River at Fortuna, showing sites 3, 4, and 5.



Map #8 Site #3 - Ken Drake



Map #9 Site #3 - Property Lines



Map #10 Site #3 - Processing Yard

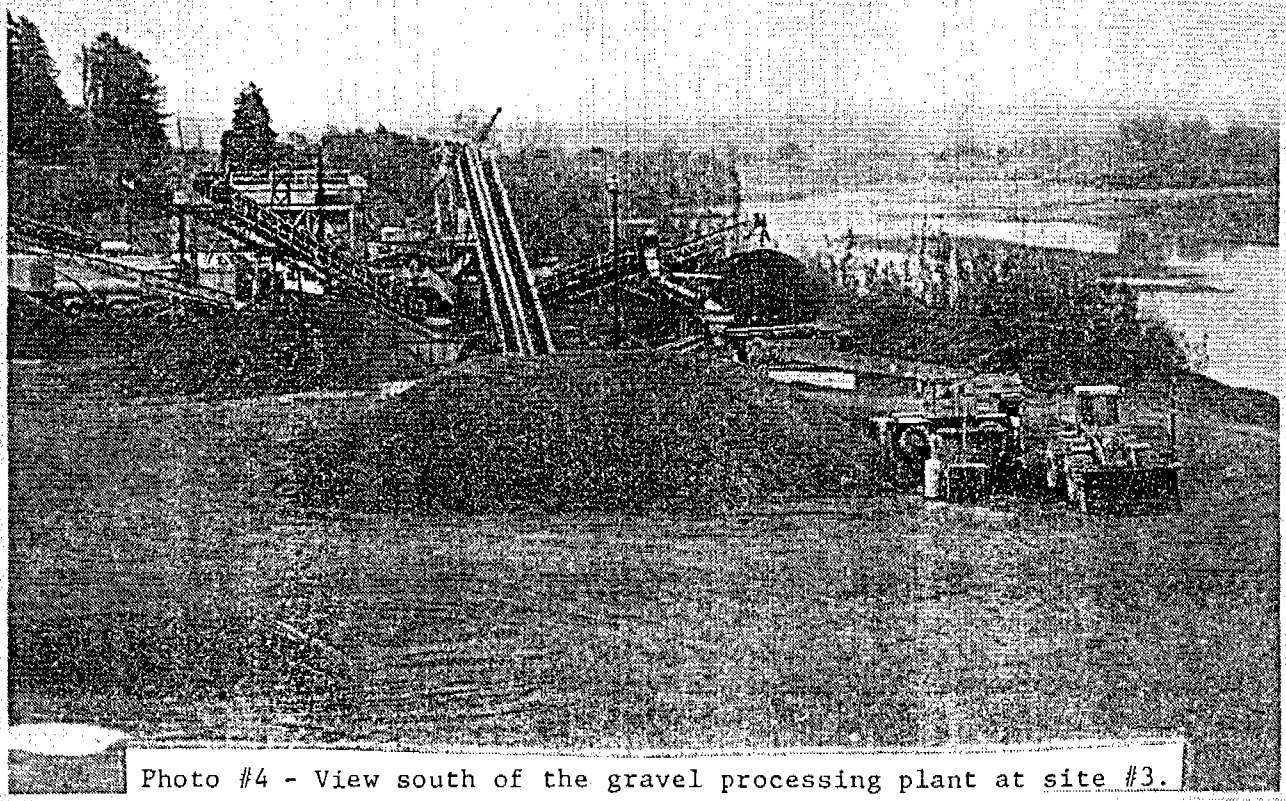


Photo #4 - View south of the gravel processing plant at site #3.

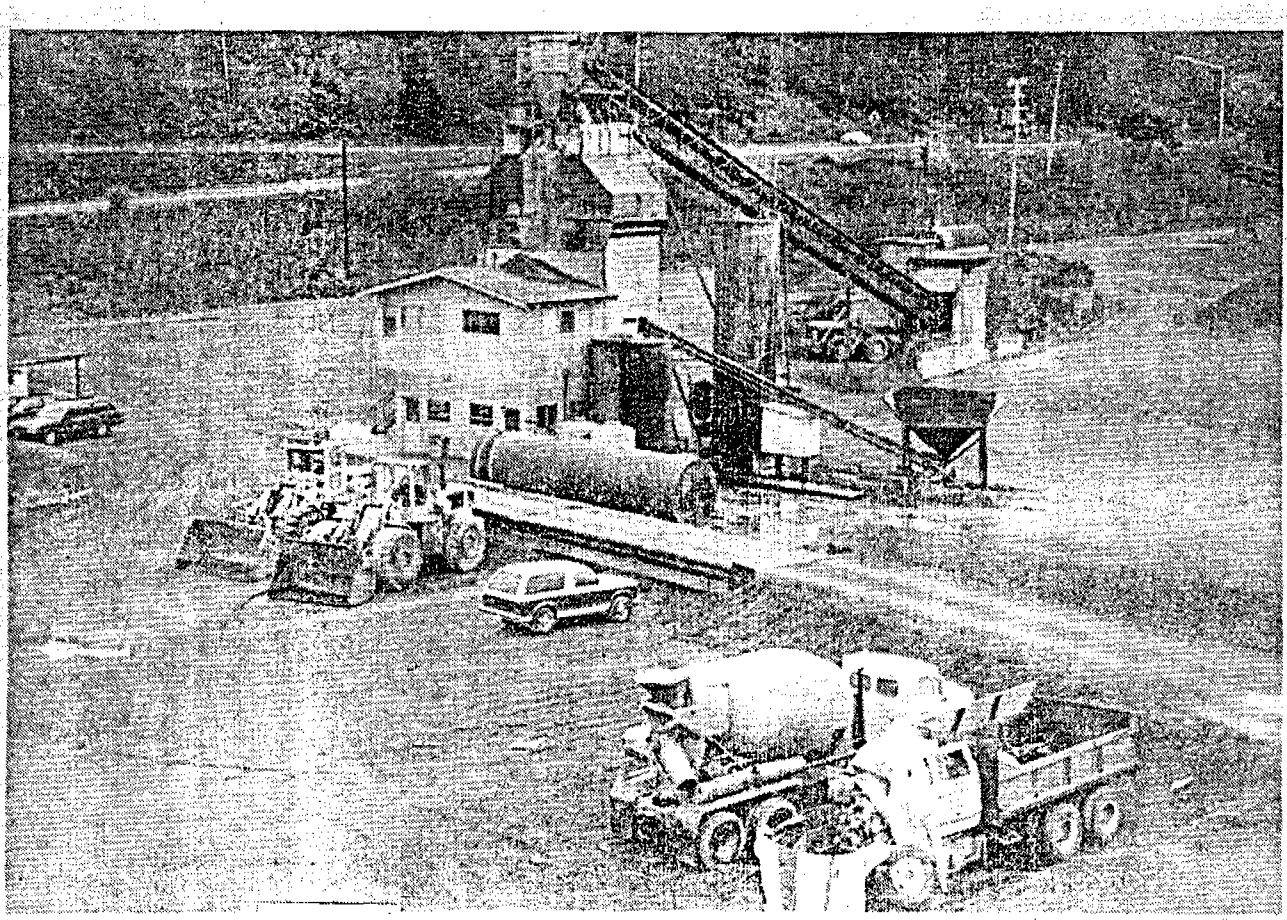


Photo #5.- View of the concrete plant at site #3.

This site is highly visible from the southbound lanes of Highway 101. Some parts of it may be visible from Fernbridge.

Recreational use of the river in this particular section is very limited due to difficulty of access. The river flows along the easterly side through this area. It turns away from the bank and flows to the west side at about the south end of the County bar.

Fishermen would have access to this area during the fishing season provided the gate is left unlocked at the entrance to the County-owned processing yard at Site No. 2.

The bed of the river is 2,100 feet wide and contains a low flow channel 400 feet wide. According to a survey in 1857, the width, bank-to-bank, was about 300 feet narrower at this point of the river than it is today.

Regarding permits, this site has a conditional use permit, reclamation plan, coastal development permit issued by the county, a permit for the batching plant from the North Coast Unified Air Quality Management Board plus a Coastal Development Permit issued by the State Coastal Commission. Other permits that may be required for the operation to continue are summarized in Table 2, and mostly involve the Regional Water Quality Control Board, State Department of Fish & Game and State Land Commission. If any summer crossings are required that would trigger a Section 404 Permit required from the Corps of Engineers.

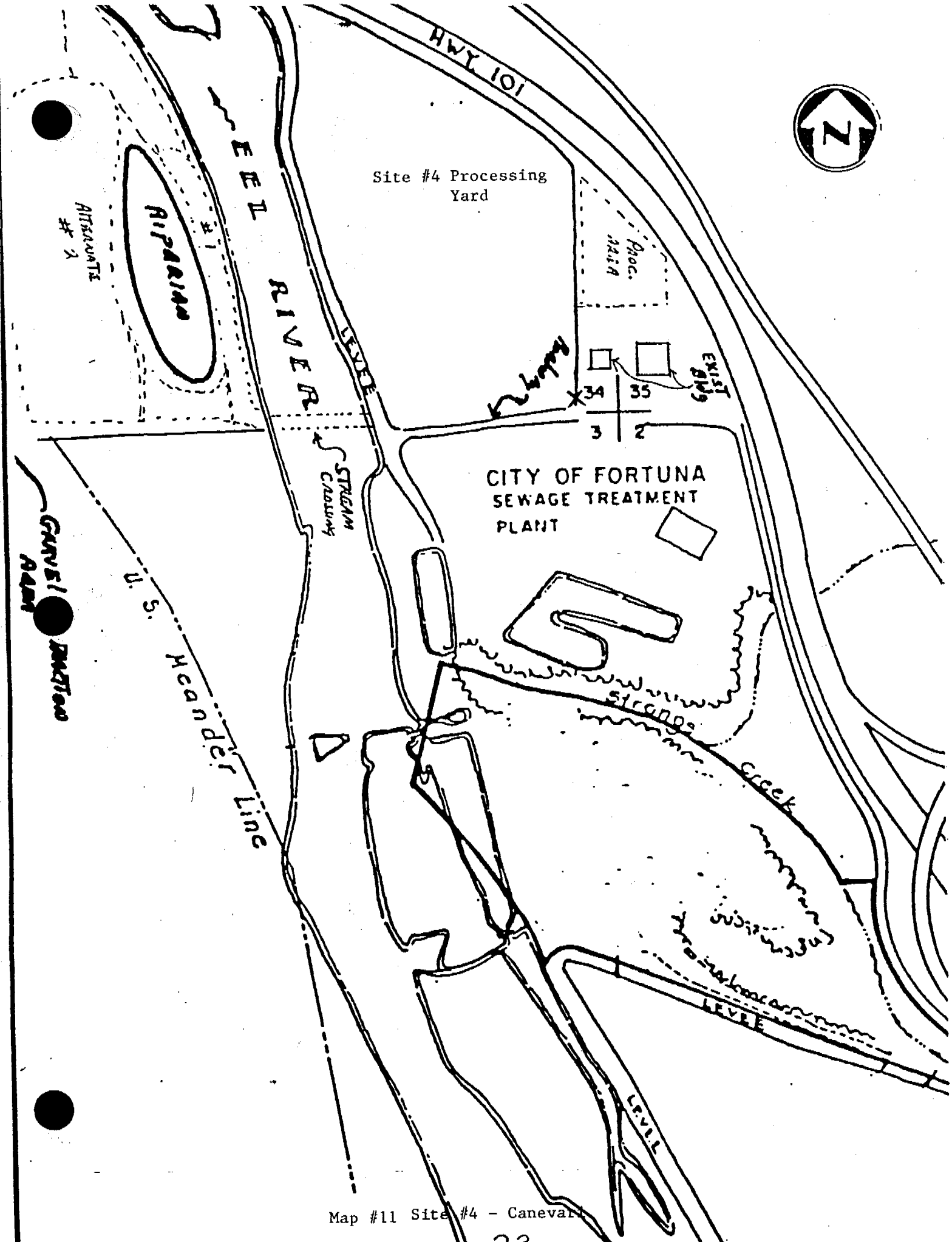
Site No. 4 - Canevari

1. Location. The processing yard is located immediately downstream of the Fortuna sewage treatment plant. The area is accessible by driving to the north end of Dinsmore Drive off Sandy Prairie Road. The gravel removal area is directly west of the processing yard and is in the southeast quarter of Section 34, T3N, R1W. See Photo No. 3.

2. Land Owner. Robert Canevari of Fortuna.

3. Operator. Jim Cook of Canevari Timber Company.

4. Description of Operation. The operation consists of the annual removal of up to 200,000 cubic yards per year both by skimming and trenching. The operation includes a gravel crushing plant and fan asphalt production plant. Flatcar bridges are used when necessary to bridge the summer low flow channel. The flatcar bridges are 12 feet wide and 90 feet long.



Map #11 Site #4 - Canevari

On March 17, 1992, Jim Cook estimated truck traffic from the gravel bar to the processing yard to be about 40 to 50 trucks per day. The trucks can carry 23 to 25 tons each. The gravel, after processing, is sold to various customers. The main haul route from the processing yard consists of Dinsmore Drive to Sandy Prairie Road then turn left and enter southbound Highway 101 with an onramp, or turning more to the left, use a bridge to go over the freeway to the ramp leading to the northbound Highway 101. Essentially the volume of truck traffic is so low as to not be significant or require any changes in intersection design.

Noise levels in the processing yard are fairly high as would be expected for a gravel crushing plant and asphalt plant. The nearest house is 500 feet away and it could receive a maximum level of 70 dBA. Most of downtown Fortuna is within a 3,000 foot radius of the plant receiving some possible noise levels ranging from a high of 70 to 54 dBA, depending on one's distance from the plant.

On a field trip, April 28, 1992, while visiting the County-owned bar, a fairly high noise level was heard from the asphalt plant. Oddly enough this plant could also be heard from the Arcata Readimix site more than a mile downstream of Fernbridge.

A narrow 50 to 100 foot corridor of riparian vegetation grows at the river's edge opposite the processing yard along less than half of this site. Years ago an eroding bank had to be rip-rapped to stop erosion from removing the property and Highway 101. There is no riparian vegetation along the rip-rapped area. About 800 feet west of the site is a gravel bar island that contains 18 year old riparian vegetation. The Department of Fish & Game has directed in the 1603 negotiation that Jim Cook not encroach closer than 50 feet to the edge of any of the riparian vegetation on this gravel island. This vegetation covers an area on the island 600 feet by 1,100 feet.

When trenching is utilized as a method for gravel removal, the gravel has to be stockpiled on the bar for approximately five days.

5. Environmental Setting. This site is easily visible from the southbound lanes of Highway 101. The processing yard is relatively new and the large stockpiles are a new visual item seen from Highway 101.

Recreational use of the bar area is limited because there is no easy access to the gravel bar and island since they are on the opposite side of the river from all of the vehicular

access points. No public are permitted to pass through the processing yard.

The bed of the Eel River is about 4,600 feet wide at this point. It's a large gravel storage area with a braided stream pattern during higher flows. The summer low-flow channel is along the east side of the entire bed and ranges in width from 200 to 300 feet.

At the time of writing the Final Environmental Impact Report, this site had only received a permit from the North Coast Unified Air Quality Management Board. No other permits had been received for this operation.

Site No. 5 - Mercer-Fraser Company

1. Location. This site is located just upstream of the Fortuna sewage treatment plant. It is accessible by turning west off Sandy Prairie Road just after crossing the bridge over Strong Creek. The crusher and asphalt plant are located immediately south of the Fortuna sewage treatment plant. Gravel is removed from the bar west of the crusher area in the northeast quarter of Section 3, T2N, R1W. See Photo No. 3.

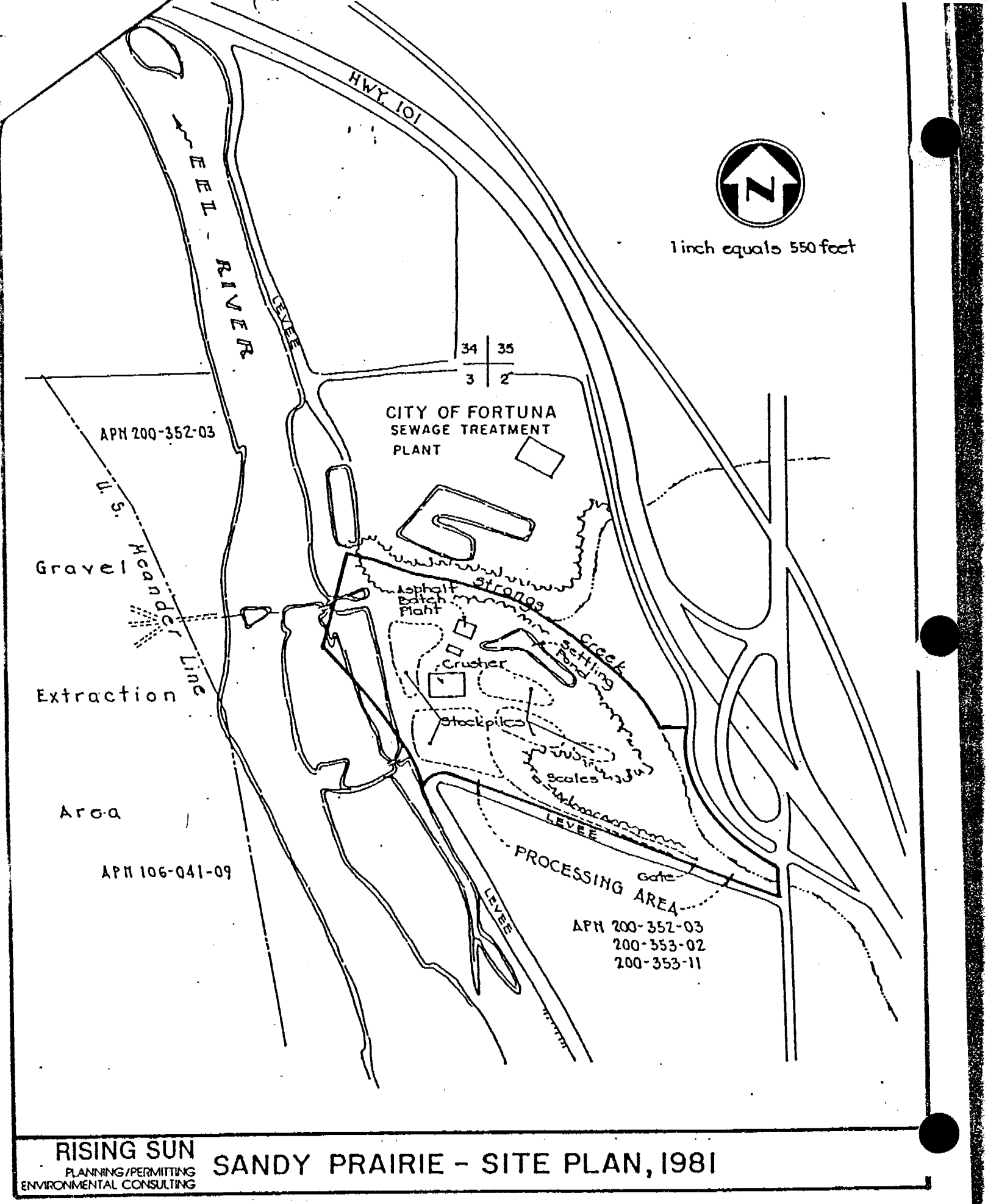
2. Land Owner. Albert Pedrazzini of Loleta.

3. Operator. Mercer-Fraser Company of Eureka.

4. Description of Operation. This operation includes the removal of 70,000 cubic yards per year. The operation also contains a gravel processing area with large stockpiles and an asphalt batch plant. Two flatcar bridges are available for use when necessary to cross the summer low flow channels. Photo No. 6 shows their asphalt batch plant. Photo No. 7 shows their crushing and stockpile area. The summer of 1991 included two summer crossings with flatcar bridges and two sediment settling ponds. This operation has been ongoing for many hears.

Fred Bott, local manager for Mercer-Fraser, stated the truck traffic averages about 52 trucks per day. Their busiest season is June to mid-October which averages about 75 trucks per day. Rarely do they ever reach 100 trucks per day. The route they utilize includes their driveway which runs parallel to the levee until they reach Sandy Prairie Road. At this point they can easily access State Highway 101 which contains on-ramps for both north and south directions.

5. Environmental Setting. As mentioned earlier, the site is accessible off Sandy Prairie Road. One turns west off Sandy Prairie Road just after crossing Strong Creek.



Map #12 Site #5 - Mercer-Fraser property lines, extraction area and processing yard.

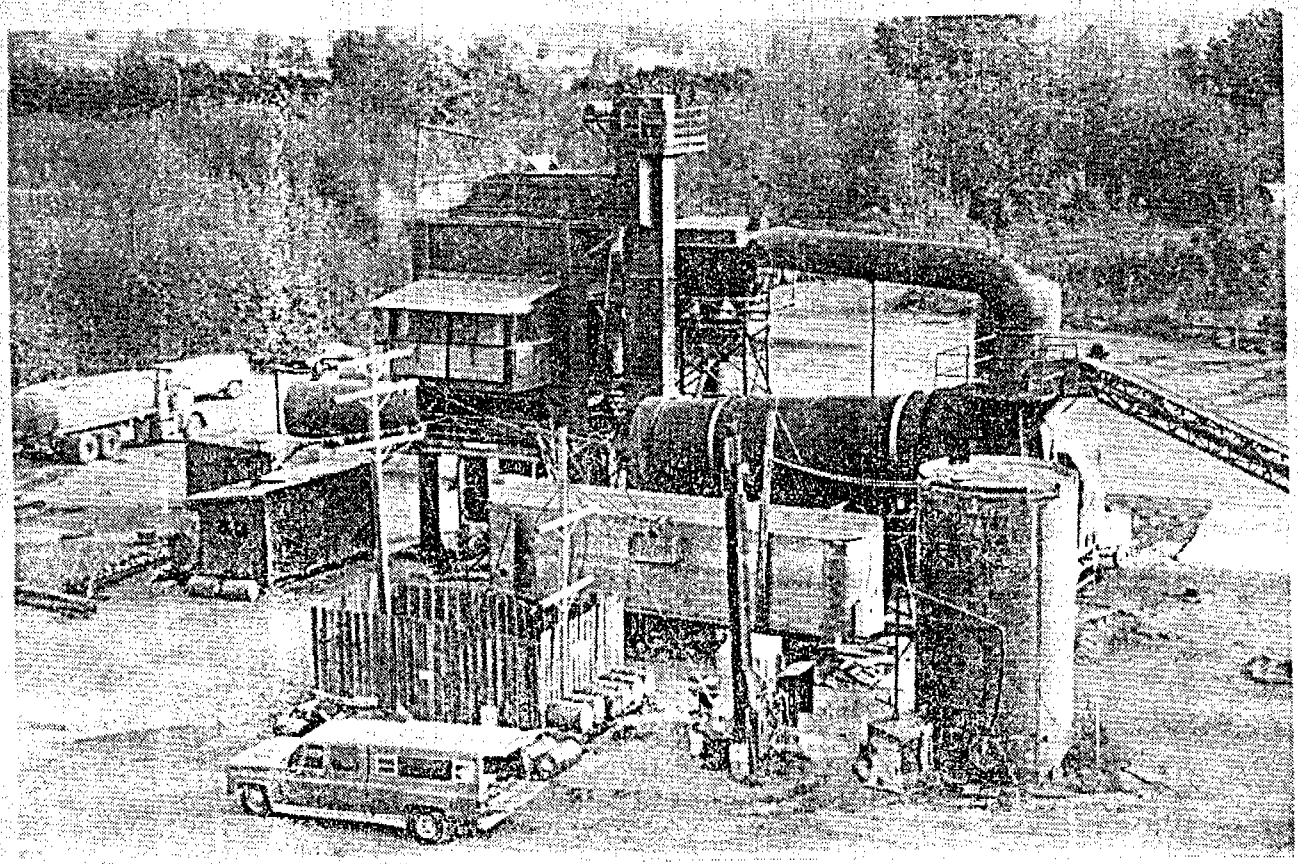


Photo #6 - View of the asphalt batch plant at Mercer-Fraser's yard at site #5.

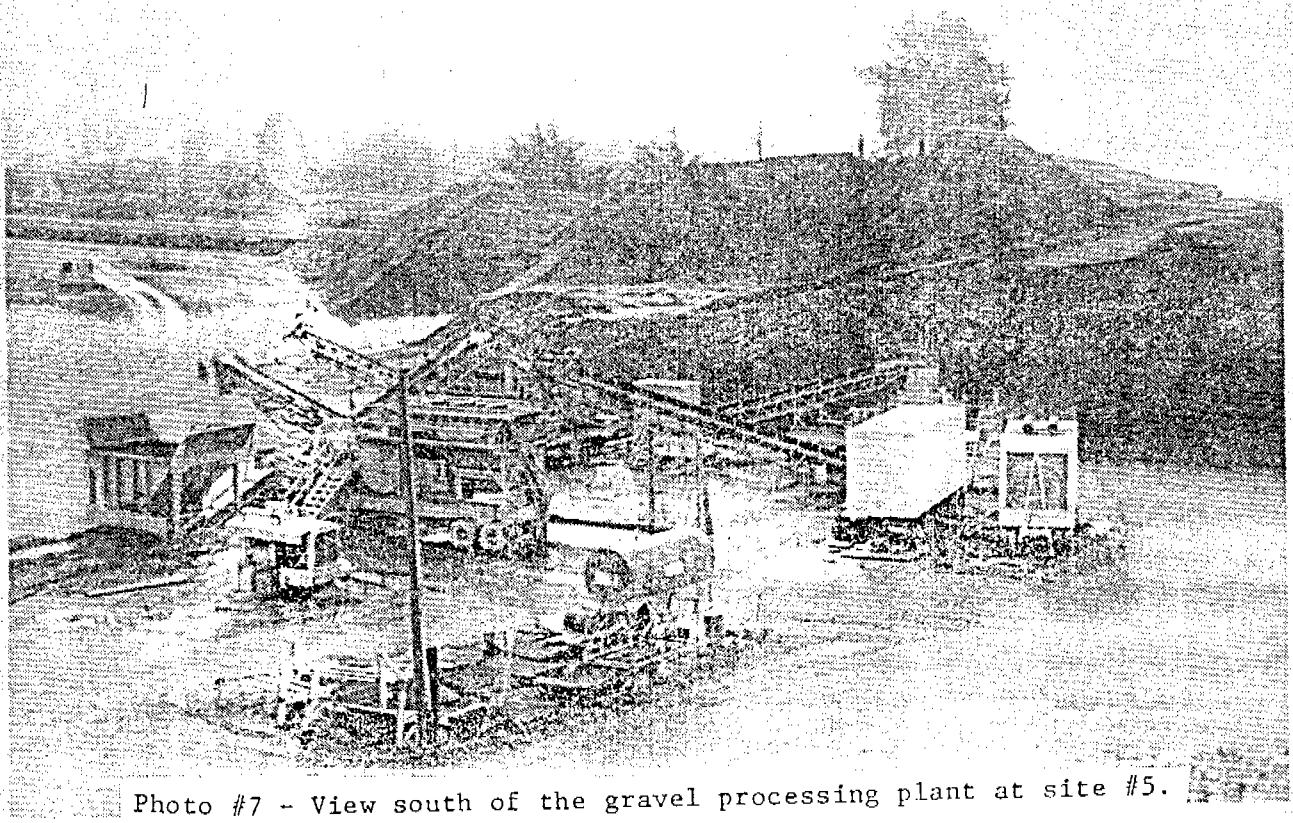


Photo #7 - View south of the gravel processing plant at site #5.

Noise levels generated at this site when both plants are operating is considerable. One residential structure is located within 1,000 feet across the freeway and two ramps over. This house could receive a 64 dBA noise level. Seventy other houses are within 2,400 feet opposite and across the freeway and could receive levels of 57 dBA.

On a recent field trip, April 28, 1992, levels out on the gravel bar generated by one crushing plant running were estimated to be about 68 dBA.

A very small amount of riparian vegetation occurs along the bank of this site. West and a little south of the operation across the river is a large riparian area measuring about 2,600 feet wide and 1-1/2 miles long.

The processing yard and related stockpiles are visible from the river. In the fishing season recreational use of the bar immediately opposite the site is quite limited because there is no legal or easy access to the area. It would be dangerous to have any of the public drive through the processing yard during operation. People with four-wheel drive vehicles may be able to access the bar on the opposite side of the river utilizing East Ferry Road on the west side of the Eel River about two miles upstream.

The active channel width as this site is about 2,600 feet. During flood flows the old floodway channel width is about one mile wide at this point. According to the map prepared in 1857, the channel width was 1,500 to 2,000 feet in width at that time.

This particular operation has many permits already approved. The only permits that appear to be required would be one from the State Coastal Commission, a Stormwater Pollution Prevention Permit from Regional Water Quality Control Board, and a permit from the State Lands Commission.

Site No. 6 - Elbert Land Operation

1. Location. The area proposed for gravel extraction is west and south of the south end of Sandy Prairie Road. See Map No. 13 and Photo No. 8. This project also proposes two gravel processing areas. The first is in the triangular piece at the southerly end of Sandy Prairie Road. The other would be straight west 4,000 feet in an area free of any substantial vegetation, but surrounded by riparian vegetation.

2. Land Owner. Elbert A. Land of Roseville, California.

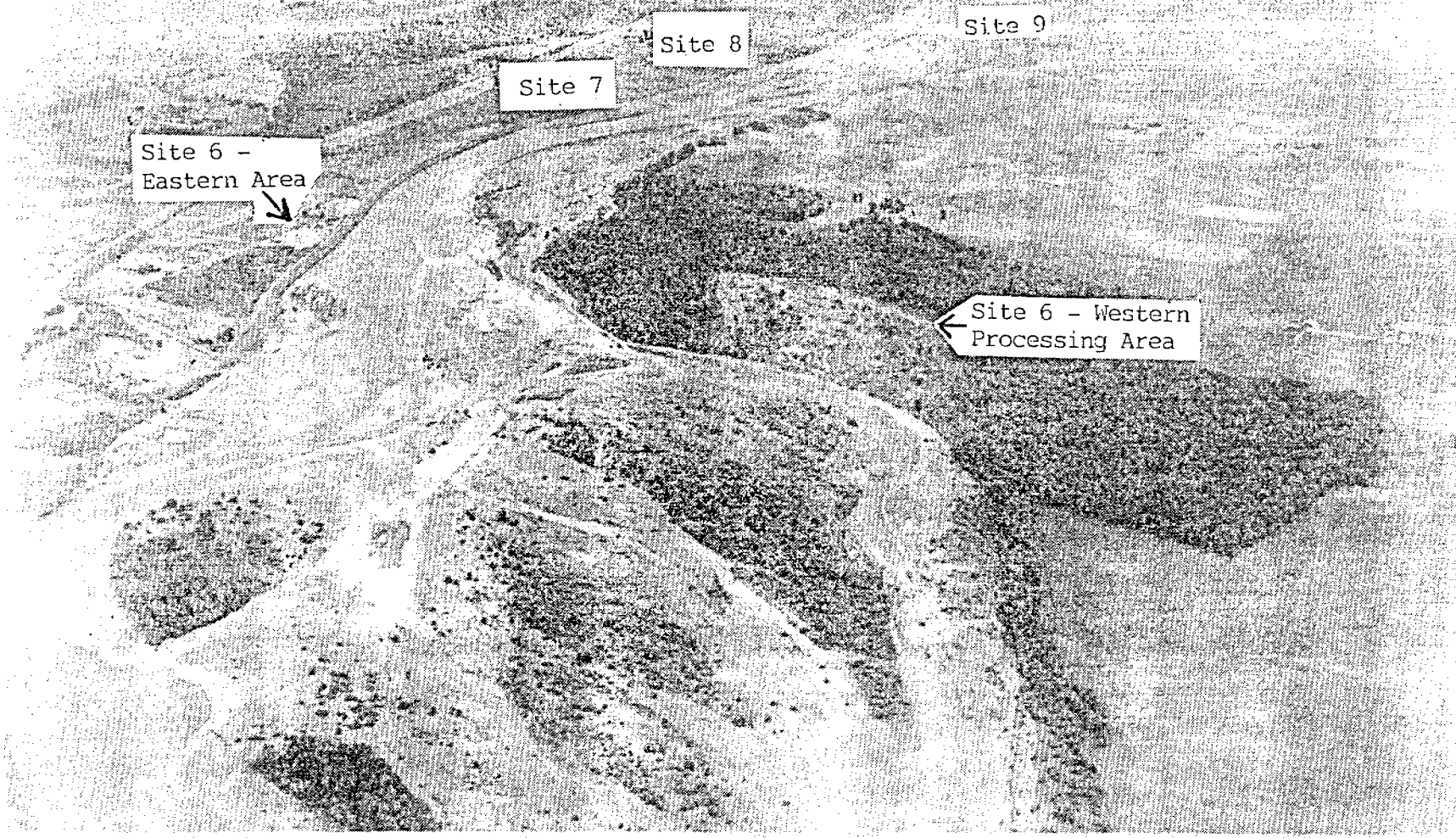
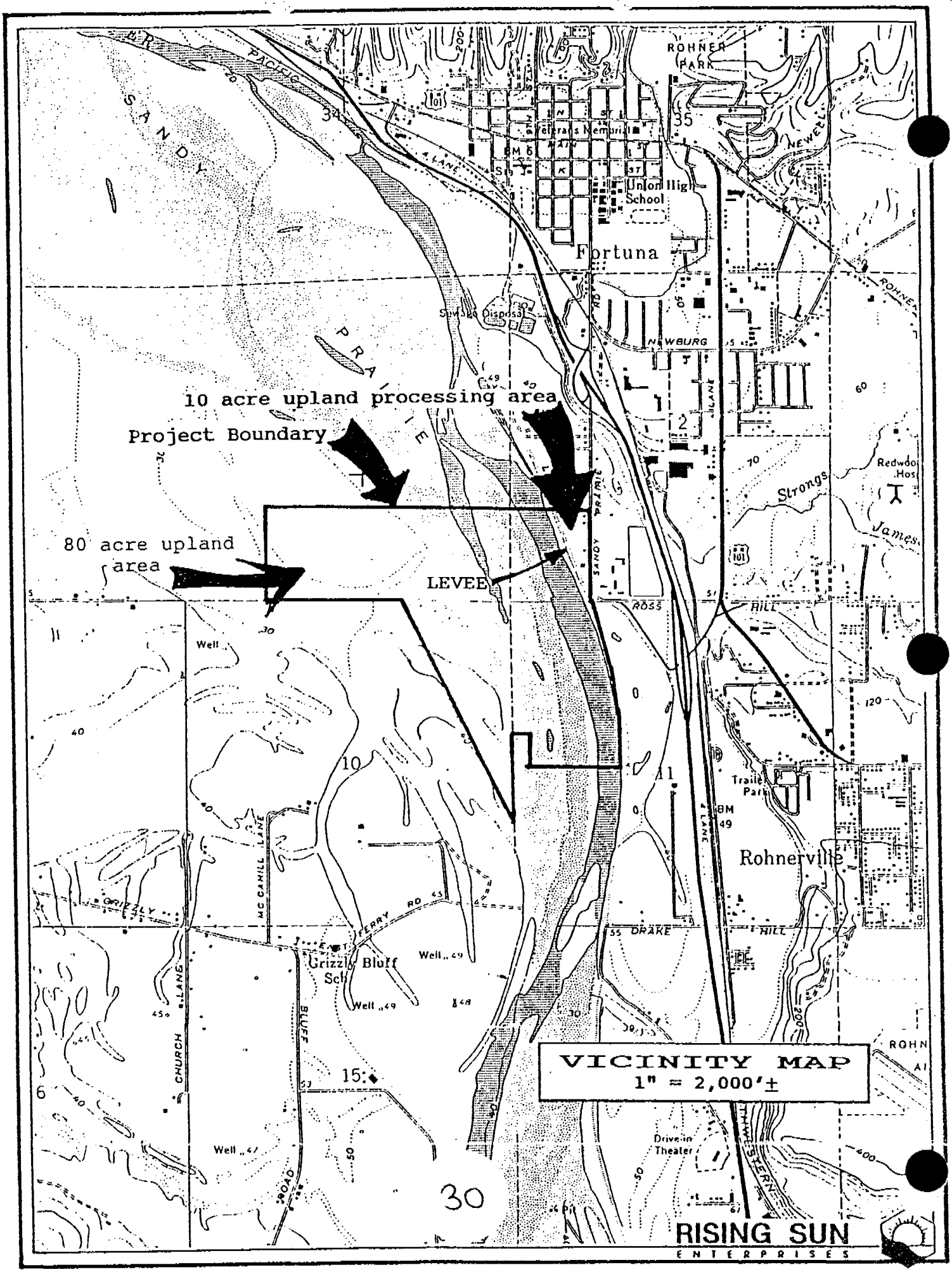


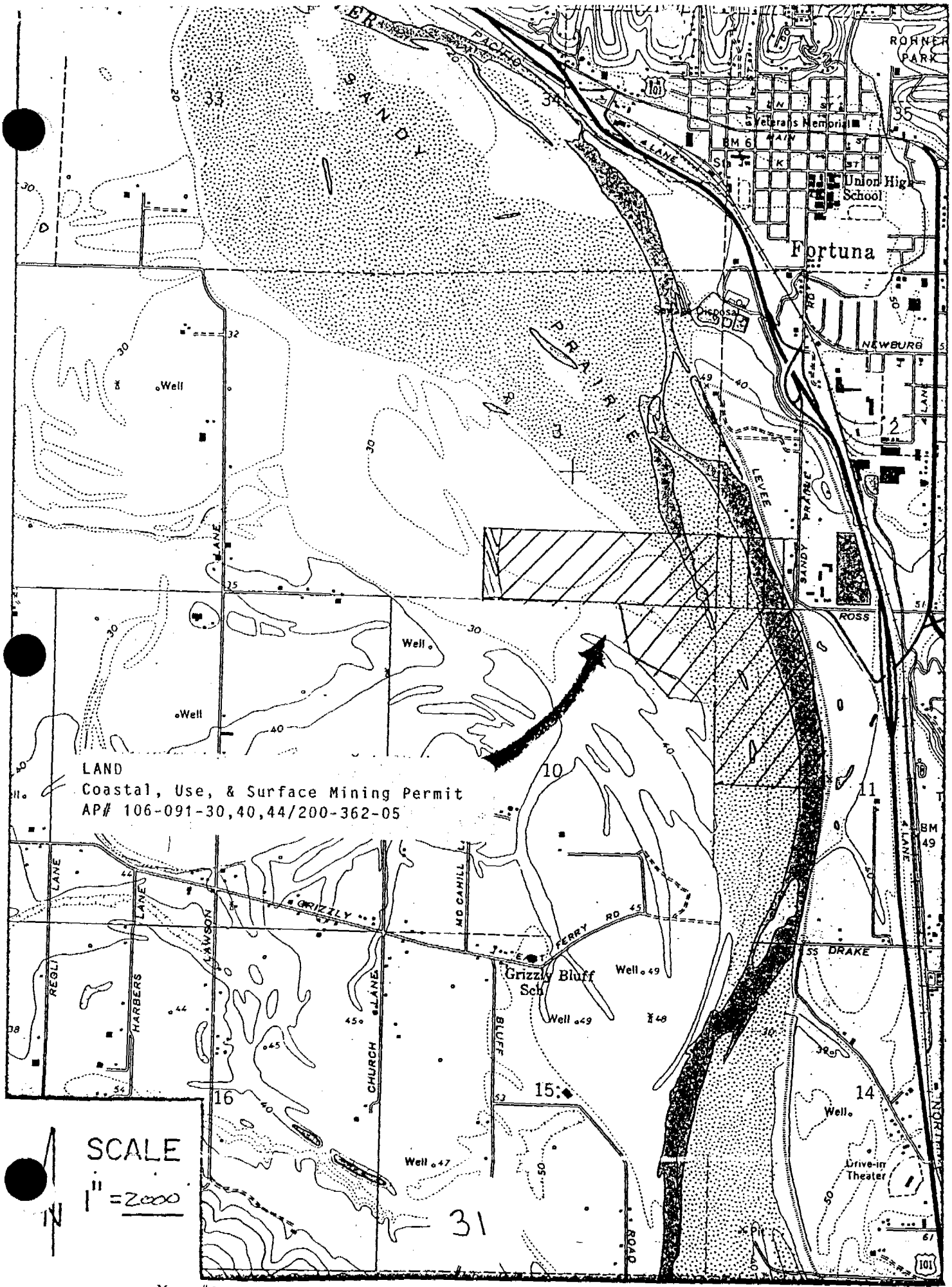
Photo #8 View south and upstream of Eel River, showing sites 5,6,7,8 and 9

8 x 10

29



Site #6 - Elbert Land showing property lines and proposed processing and extraction areas.
Map #13



Map #14 Site #6 - Elbert Land property on Eel River.

3. Operator. Unknown because this is a pending application to the Humboldt County Planning Department.

4. Description of Operation. The project description includes the proposed removal of 200,000 cubic yards per year. The site contains about 100 acres of gravel bar.

The eastern site selected for gravel crushing and processing consists of a 10-acre triangular piece of land between the levee and Sandy Prairie Road. It is zoned Heavy Industrial. The western processing site is proposed on a 40-acre cleared area surrounded on three sides by fairly mature riparian forest. This would be a portable processing plant because this area is within the floodplain.

The application for this project is currently under review by the Humboldt County Planning Department. Details on the project description are found in the permit application report dated July 1, 1991, on file in the Planning Department.

The project proposal includes gravel removal utilizing skimming and trenching. The trench excavation may involve a section dredge whereby the gravel or sand would be transported through a pipeline to the gravel processing area.

This proposal could generate considerable truck traffic on Sandy Prairie Road depending on where the gravel would be hauled.

5. Environmental Setting. The 40-acre partially vegetated area on the west side of the river is accessible from the end of East Ferry Road. This area is surrounded by a fairly mature riparian forest.

Noise levels in that area are low ranging from 40 to 50 dBA most of the time. Trails on the ground indicate the area may be used by motorcycles or some type of off-road recreational vehicles.

Noise levels on the gravel bar opposite the end of Sandy Prairie Road range from 50 to 65 dBA depending on whether the processing plant is in operation at Mercer-Fraser's site. Existing levels in the triangular area at the end of Sandy Prairie Road are still relatively low in the 50 to 55 dBA range. If a processing plant were located on this area, new noise levels would be generated to adjacent structures east of the road. The City of Fortuna has zoned much of the area for highway commercial, such as motels. A relatively new overnight recreational vehicle park is 1,600 feet from this site. This park would receive levels up to 60 dBA from the processing plant. Structures within 200 to 600 feet of the

processing plant would receive levels as high as 78 dBA down to about 68 dBA.

The processing plant would be very visible from Sandy Prairie Road and nearby structures. The gravel removal operation would presumably occur on the west side of the river where a gravel bar has existed for many years. That area is only visible from the end of Sandy Prairie Road.

The 40-acre proposed westerly processing area is not visible from any road because it is isolated on three sides by the riparian forest and vegetation growing on a gravel bar on the north side tends to block any views from Highway 101.

Recreational use of the river and bars at the end of Sandy Prairie Road is fairly limited because of the difficulty of accessibility. The levee made out of large boulders, is difficult to walk down. Also, the river is flowing immediately adjacent to the levee. The gravel bar on the west side of the river is accessible off East Ferry Road and is utilized by fishermen with four-wheel drive vehicles during the fishing season.

Today the active bank-to-bank width of the river bed in this reach is 1,450 feet and the low flow channel tends to be about 450 feet wide. The property owner claims the bed width to be 4,800 feet wide. The bed width in this reach has varied over time. The bank-to-bank width in 1857 was about 1,500 feet. After the 1937-38 floods the bed width was 3,600 to 5,100 feet. The difference between the 4,800 ft. and 1,450 ft. width measurements may be resulting from a rather vague physical definition of the channel brought about the great variability over time.

Because trenching is proposed as a method of extraction, a Section 404 Permit will be required along with other permits noted in Table 2.

Site No. 7 - Tanferrani Operation

1. Location. Off the west end of Drake Hall Road. See Photo No. 9.

2. Land Owner. Ed Tanferrani of Alton, California.

3. Operator. Dick Ehrhardt of Fortuna.

4. Description of Operation. About 5,000 cubic yards of unprocessed gravel are removed from a 10-acre site with a front-end loader and/or scraper and dump truck. This has been

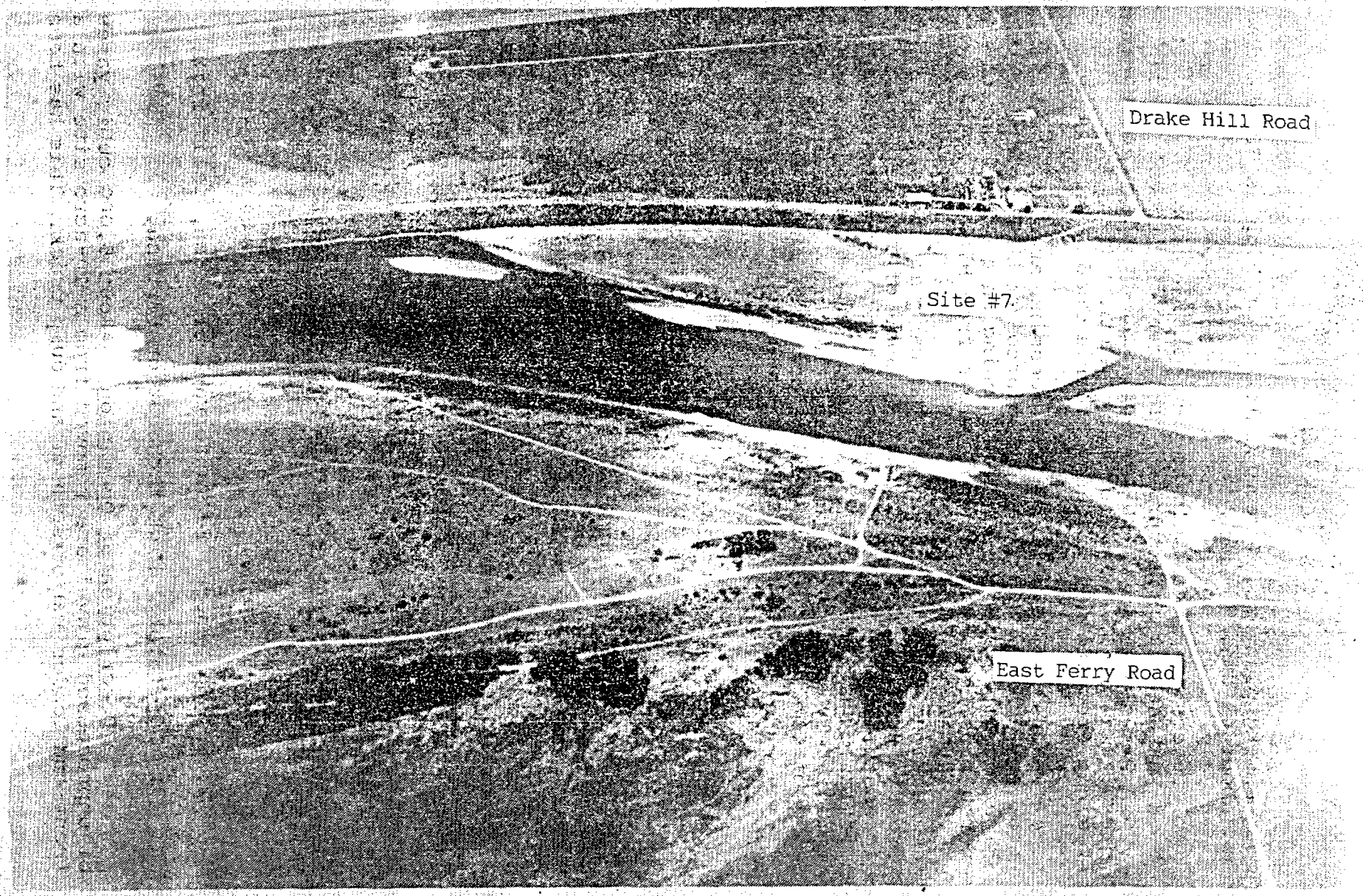
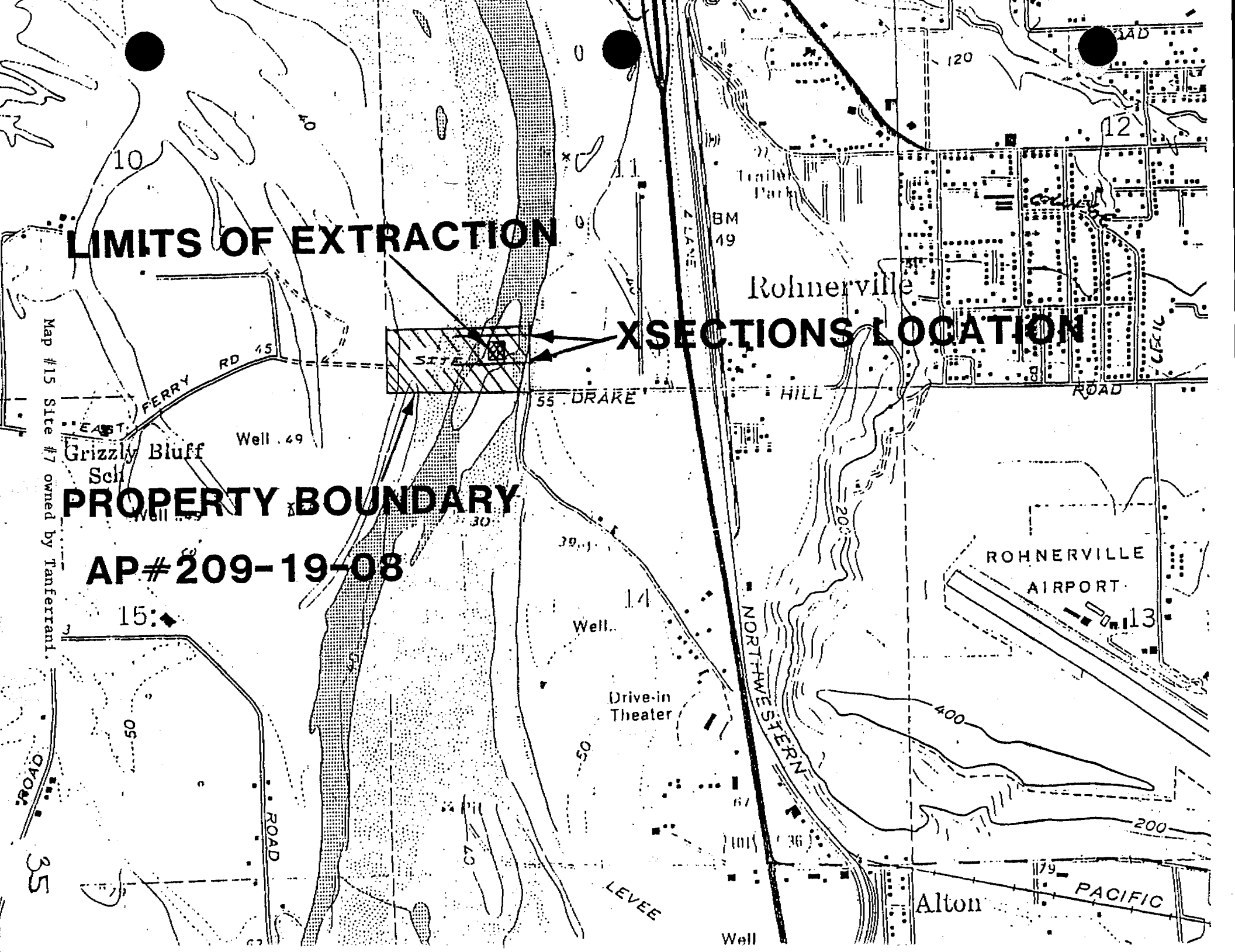


Photo #9 View east across Eel River of Sandy Prairie Levee, Site #7, Drake Hill Road, East Ferry Road.


LIMITS OF EXTRACTION
XSECTIONS LOCATION
PROPERTY BOUNDARY
AP#209-19-08
Map #15 Site #7 owned by Tanferrani.
SITE
DRAKE HILL ROAD
FERRY RD
EAST
Grizzly Bluff
Well 49
Rohnerville
Trailer Park
BM 49
ROHNERVILLE AIRPORT
NORTHWESTERN
Drive-in Theater
LEVEE
Alton
PACIFIC
ROAD
Well
10
11
12
13
14
15
35
120
400
200

an ongoing operation for several years. It generates very little traffic.

The bar is accessible off the west end of Drake Hill Road by a road that runs down the face of the levee to the river bar.

The property extends over to the west side of the river also. If necessary, that part of the bar is easily accessible off of the east end of East Ferry Road.

On March 18,1992, Mr. Ehrhardt estimated that this operation generates an average of 8 - 10 trucks per day with a maximum of 40 per day. This is a relatively low volume utilizing Drake Hill Road to access State Highway 101. There are no acceleration lanes constructed at this intersection.

5. Environmental Setting. Most of the yard noise levels from this bar range in the 45 to 50 dBA. Mr. Tanferrani lives in the house at the west end of Drake Hill Road. His home would receive levels as high as 78 to 89 dBA from each truck that drove up the levee access road. He would also receive 70 to 75 dBA while the front-end loader or scraper is working immediately next to the levee to remove gravel.

There are three houses along Drake Hill Road which would receive noise levels from the trucks hauling gravel from the site. These trucks could generate levels as high as 86 dBA at 50 feet, and these levels could occur a maximum of 80 times in any one working day in the summer season. A normal average amount would be 16 to 20 trucks a day passing these houses.

There is no riparian vegetation along the east side of the river in this area due to the existence of the levee. Across the river on the west bank there is very little vegetation. A few trees exist north of the east end of East Ferry Road.

This operation would be visible from the top of the levee and especially from Mr. Tanferrani's home. It also would be visible to recreationists using the river in this area for recreational fishing.

East Ferry Road on the west side of the river provides easy access to the general public who wish to utilize the river bars in this area. They would be able to see and hear this small operation.

The current river bed measures 1,450 feet at this Site. The bar on the east side is about 500 feet wide. Two separate low flow channels come together near this Site to form a low flow channel about 200 feet in width.

To continue, this operation needs a conditional use permit from County Planning plus other permits. Historically, the operator has always obtained a 1603 Streambed Alteration Agreement from the Department of Fish & Game. The required permits are summarized in Table 2.

On the west side of the river at this site the County Roads Division has historically obtained between 1,000 and 2,000 cubic yards on an as needed basis. That small operation has occurred through the use of a 1603 Streambed Alteration Agreement. With the new requirements, it is probable that at least five permits will be required in order for that operation to continue.

SITE No. 8 - CHARLIE HANSEN'S OPERATION

1. Location. At the west end of Hansen Lane, which is a private road leading off Highway 101, along the north edge of Hansen's Truck Stop area. The crusher operation and stockpile area is located on the east bank of the river at the end of this access road on the river side of the levee. The river bar from which gravel is extracted is immediately west of the crusher site and contains over 60 acres. It is in the southwest quarter of Section 14, T2N, R1W. See Photo No. 10.

2. Land Owner. Charles Hansen of Fortuna.

3. Operator. Charles Hansen.

4. Description of Operation. This operation involves the removal of a maximum of 75,000 cubic yards per year. The method of removal is skimming. Much of the gravel is processed at the crusher yard which is located on the upper bed of the river, but on the river side of the levee. A gravel processing plant, stockpiles, and other older plants and pieces of equipment occupy the processing years.

The river in this area is considerably braided and it is not clear where the best area for gravel removal is located.

This operation requires a summer crossing because one of the channels flows directly adjacent to the processing yard.

Traffic data was unavailable, but due to the volume removed per year, it would be expected that traffic generated would be similar to that of Mercer-Fraser Company. One could assume an average day in the busiest time of the year would generate between 50 and 70 trucks utilizing Hansen Lane out to Highway 101. That intersection serves as the entrance to the restaurant, fueling, and truck repair station.

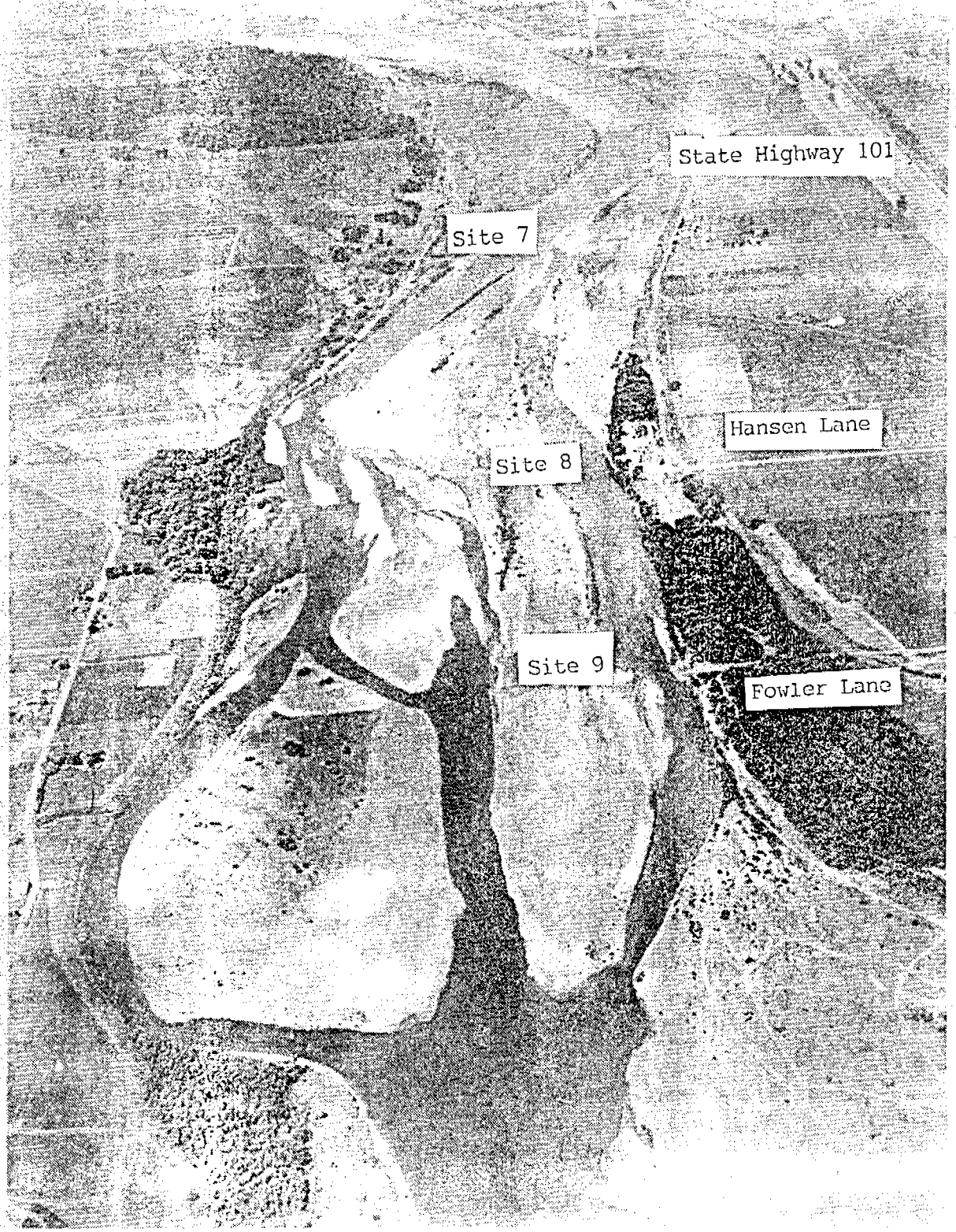
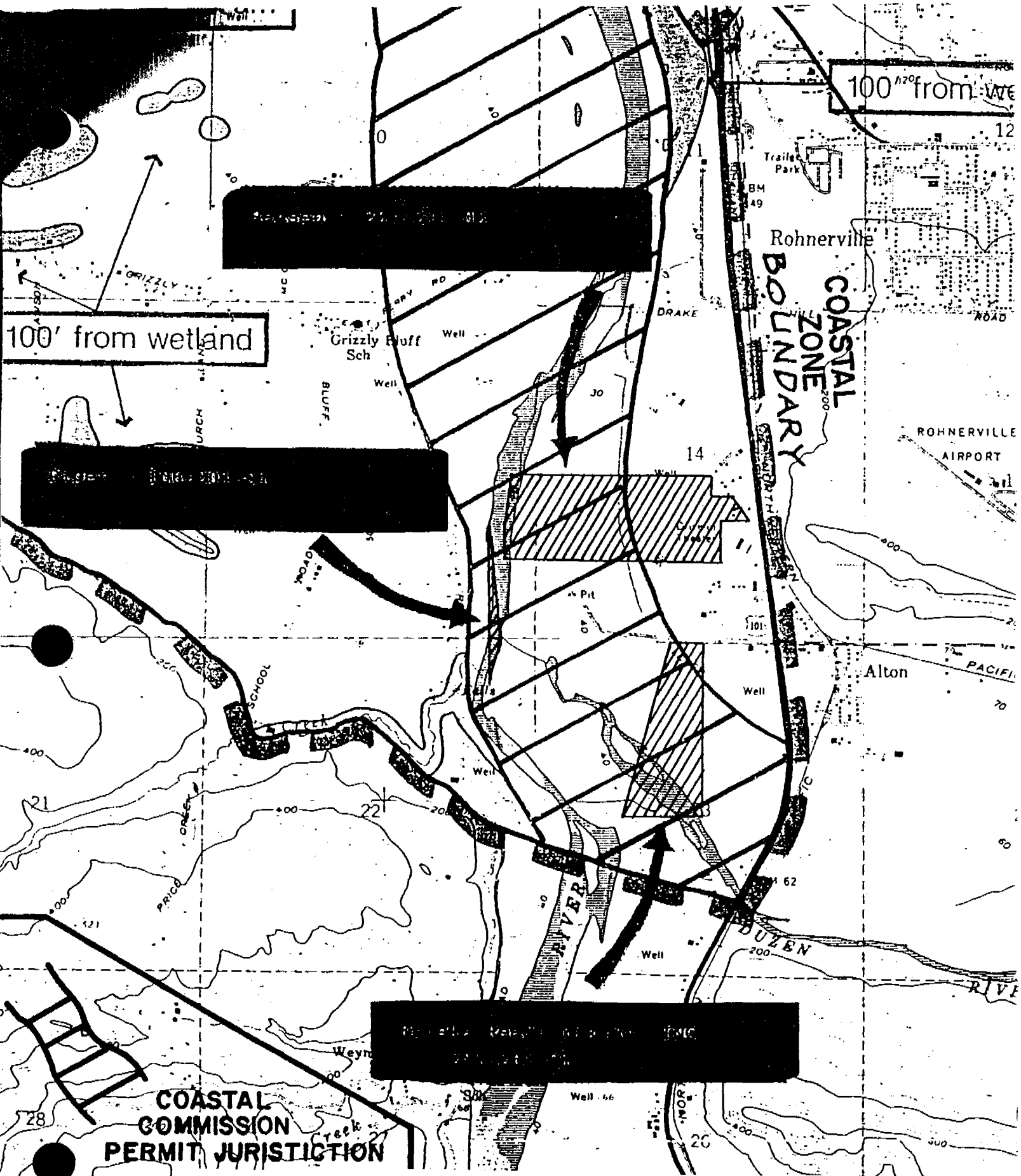


Photo #10 View downstream (north) of Eel River near mouth of Van Duzen River, showing sites 7, 8, and 9.



Map #16 Site #8 operated by Charlie Hansen and is the northern -- cross hatched area opposite the old drive-in-theater in Section 14.

3. Operator. Eureka Sand & Gravel of Eureka.

4. Description of Operation. This operation includes the removal of 150,000 cubic yards per year. Much of the material is crushed and stockpiled on the east side of the levee. In 1991, the operation required two river crossings. The method of extraction was skimming.

This operation has existed at this location for many years. Traffic generated by this operation was estimated by Mr. McLaughlin on March 17, 1992, to include 30 to 35 trucks on a normal day in the busy season, plus five or six pickup trucks and sedans. There are periods when concrete is made and this will generate an additional 15 to 20 concrete trucks maximum and an average of five to ten additional trucks in a normal day.

These trucks utilize the intersection of Fowler Lane with Highway 101. Highway 36 is directly opposite across Highway 101. Haul routes include Highway 101 and Highway 36.

5. Environmental Setting. The processing yard occurs in a small triangular area surrounded by agricultural pastures.

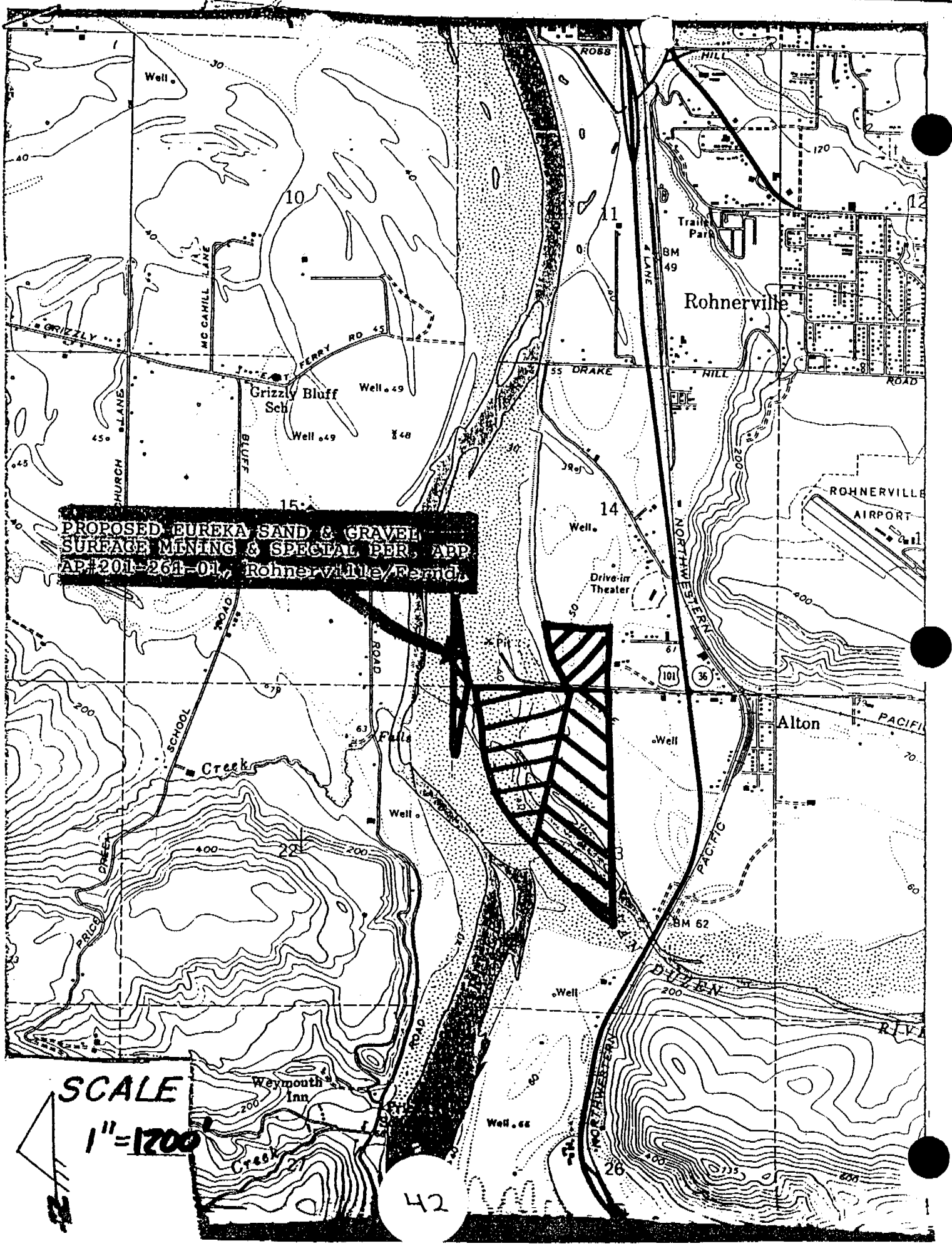
Fowler Lane, after it crosses the levee going west, passes through 400 feet of riparian vegetation.

The river bed is braided into three separate channels at this location. One of the channels flows directly along the east side of the river next to the riparian area. Therefore, to remove gravel, summer crossings are required.

There is very little riparian vegetation on the west side of the river in this area.

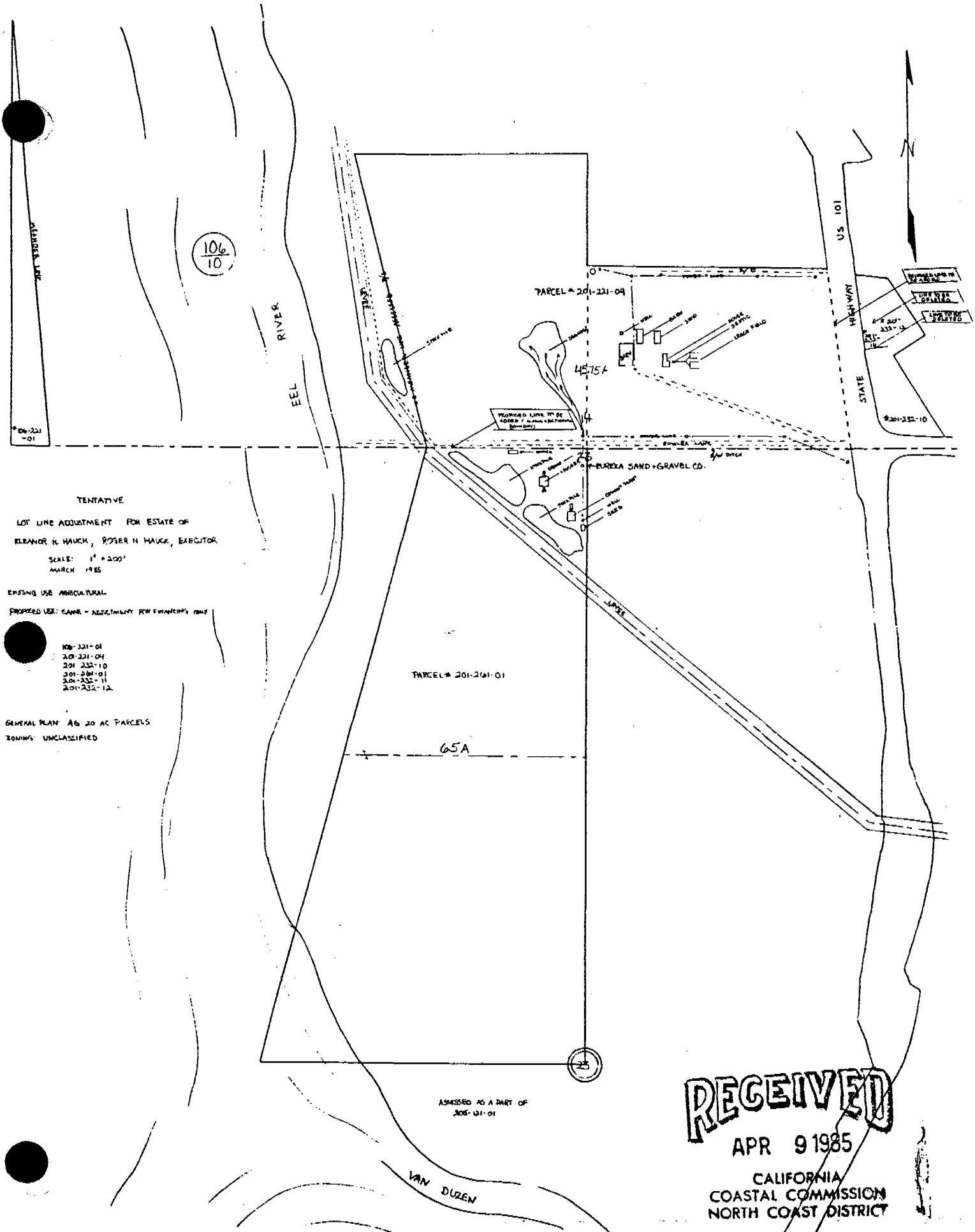
The processing yard is visible from Highway 101. It is not visible from the river bar. The gravel bar is visible to recreationists utilizing the river. However, due to the braided channel morphology, access directly opposite this bar is difficult.

In the fishing season some fishermen utilizing rafts float down past this particular area. During the summer season it would probably be dangerous for the general public to attempt to access the river off Fowler Lane at the height of the gravel extraction operation. Permits for this operation are summarized on Table 2. It appears that a vested right and special permit were granted in 1991, for the 150,000 cubic yards.



42

Map #17 Site #9 - Eureka Sand & Gravel



Map #18 Site #9 - Operated by Eureka Sand & Gravel showing stockpiles, processing yard and property lines.

SITE No. 13 - MERCER-FRASER NO. 2

1. Location. This site is located on the Van Duzen River next to and downstream of Highway 101. It is accessed off of Highway 101 close to the Van Duzen River Bridge. See Photo No. 11, an aerial Photo map of Site 13.

2. Land Owner. Roger and Susan Hauck of Fortuna.

3. Operator. Mercer-Fraser Company of Eureka.

4. Description of Operation. This is a new operation which proposes to remove a maximum of 100,000 cubic yards per year from the 30 acre gravel bar just downstream of Highway 101 on the Van Duzen River. It is assumed the operation will utilize skimming as the method of extraction and the equipment would be similar to that utilized by all of the other operators. It is not known whether a processing yard would be set up on-site. Detailed information will be provided in an application to the Planning Department prepared and submitted for Mercer-Fraser by Rising Sun Enterprises.

Access onto Highway 101 may be difficult and require special engineering.

5. Environmental Setting. The access point is about 500 feet north of the end of the bridges over the Van Duzen River. This allows a few seconds for a driver heading north to see a vehicle attempting a left turn off Highway 101 to the access road that leads to the bar. Making a left turn onto Highway 101 from this access point in a regular vehicle is fairly difficult. A fully loaded truck may constitute a dangerous situation that would require construction and engineering a new or different access point.

Noise levels on the gravel bar are in the range of 50 to 65 dBA depending on traffic volume on Highway 101, time of day, and whether the gravel crushing operation is being operated by Eureka Sand & Gravel about 2,000 feet north of this area.

If a gravel processing plant were setup on the gravel bar, it would generate new noise levels of 90 dBA at 50 feet. The nearest occupied residence appears to be about a quarter-mile away, resulting in a noise level to be around 60 to 62 dBA at the exterior wall.

The north side of this bar is bordered by riparian vegetation varying in width from about 100 to 600 feet. The sparse vegetation growing on the gravel bar would be expected to be similar to that listed in the Supplemental Environmental Impact Report done by Arcata Readimix on pages 18 and 19 of that report.

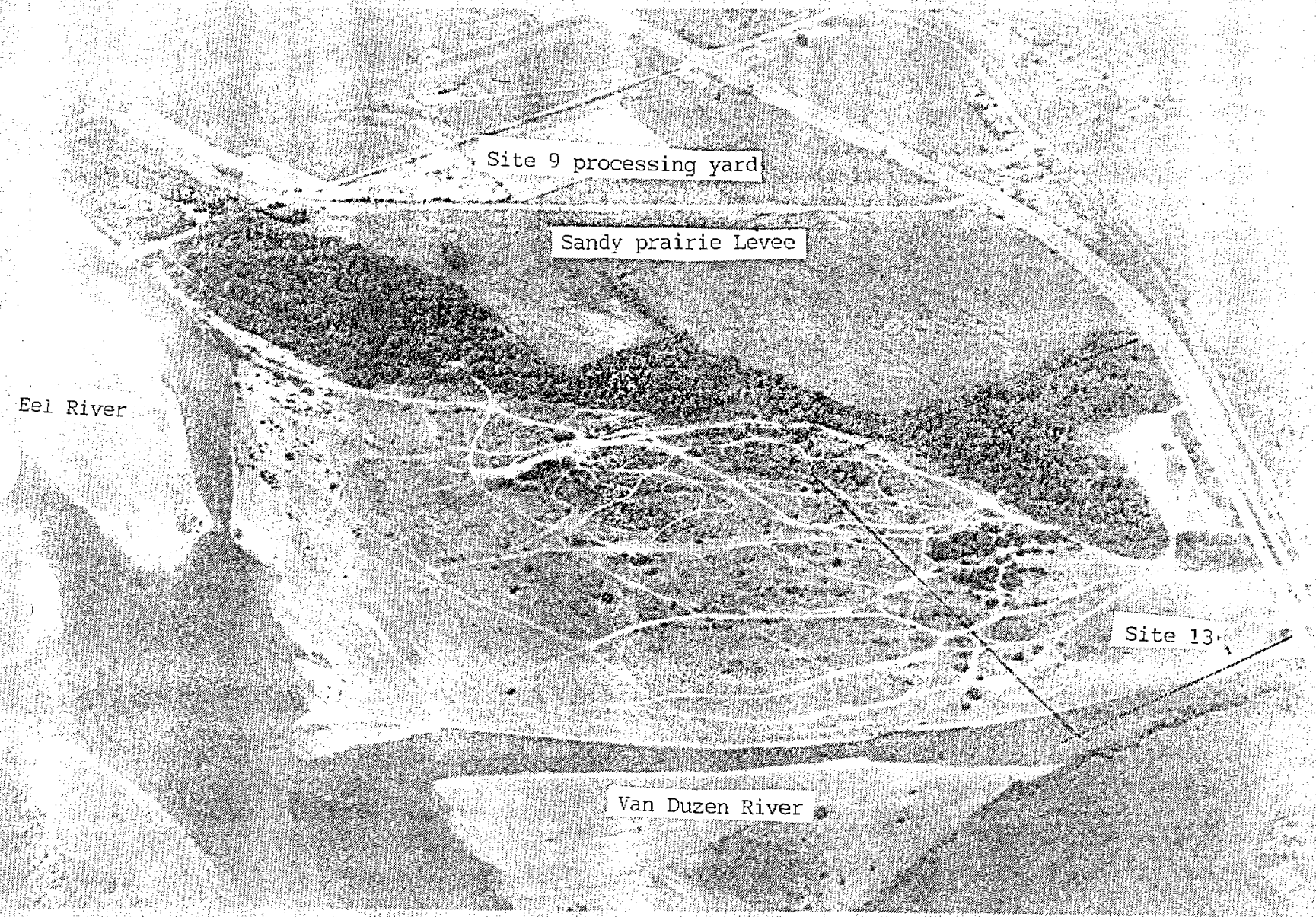
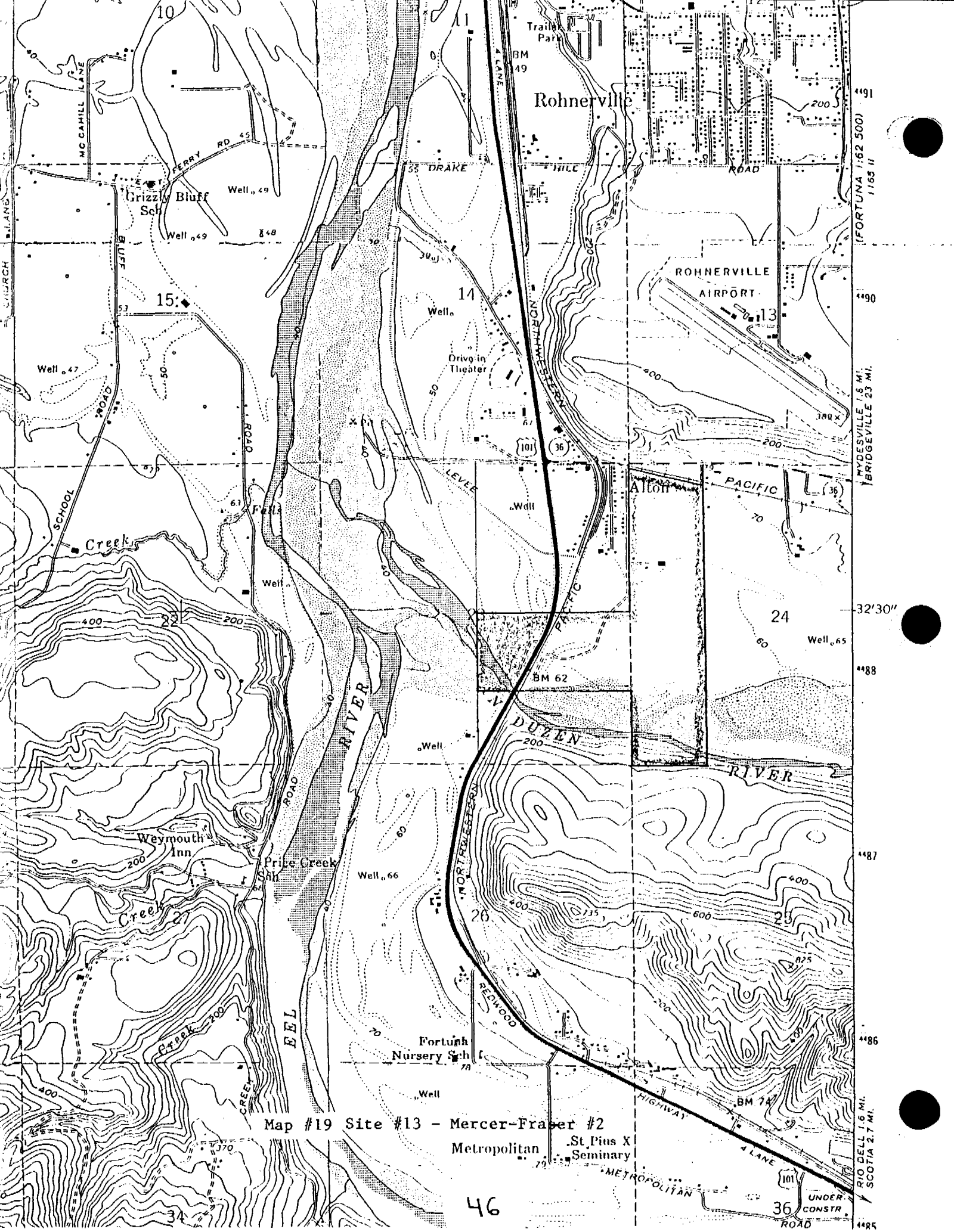
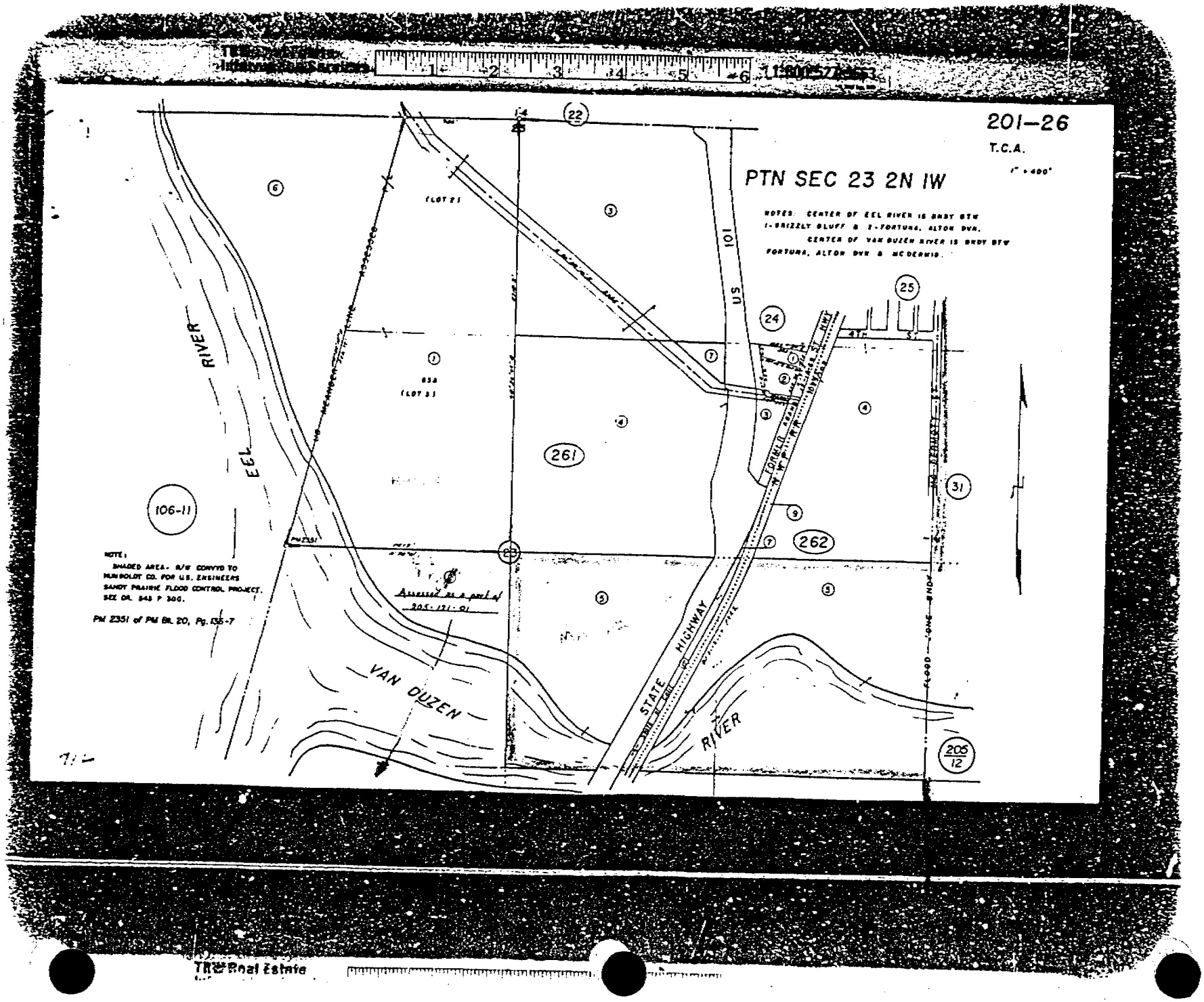


Photo #11 View northeast of mouth of Van Duzen River showing sites 9 and 13.



Map #19 Site #13 - Mercer-Fraser #2

Photo #12 S[illegible]cer-[illegible]



Map #20 Site #13 - AP Map

L8

This gravel bar is highly and briefly visible from the southbound lanes of Highway 101.

Recreational use of this gravel bar is fairly heavy during the fishing season. Photograph No. 18 shows a typical gathering of fishermen during the fishing season. They utilize the access point off Highway 101. They would be the group most impacted by any gravel operation on this bar. The low flow channel of the Van Duzen River ranges from 20 to 80 feet wide in this area.

This project would require many of the permits listed in Table 2.

SITE No. 10 - Jack Noble Operation

1. Location. This site is five miles above the mouth of the Van Duzen River in Section 27, 28 and 29, T2N, R1E. It is immediately downstream of the mouth of Yager Creek. See Photo No. 13.

2. Land Owner. Jack Noble of Carlotta.

3. Operator. Jack Noble of Carlotta.

4. Description of Operation. Mr. Noble proposes to remove about 40,000 cubic yards of gravel per year while at the same time improving and enhancing fishery habitat. This operation includes provisions for creating a new high flow channel for the Van Duzen River to keep it from eroding or heading into agricultural areas that have been reclaimed. If the gravel were sold, truck traffic might range from 10 to 20 trucks per day. Photo No. 13 shows the project area.

5. Environmental Setting. The gravel bar area is at the mouth of Yager Creek about 3/4 to one mile south of Highway 36. It can be reached by two roads. River Bar Road turns south off Highway 36 about 1-1/2 miles east of Highway 101. River Bar Road terminates at Jack Noble's private residence. A private road continues onward to the river bar project site.

Another route is on Fisher Road which turns south off Highway 36 one mile east of Hydesville. Fisher Road is a narrow, winding, paved County road. It ends at the mouth of Yager Creek and it is about 1-1/4 miles in length.

The gravel bar can be located on a U.S.G.S. plat map by looking at the center of Section 28, T2N, R1E.

Photo #13 View upstream (east) of Van Duzen River showing Site 10 near mouth of Yager Creek and Site 11.

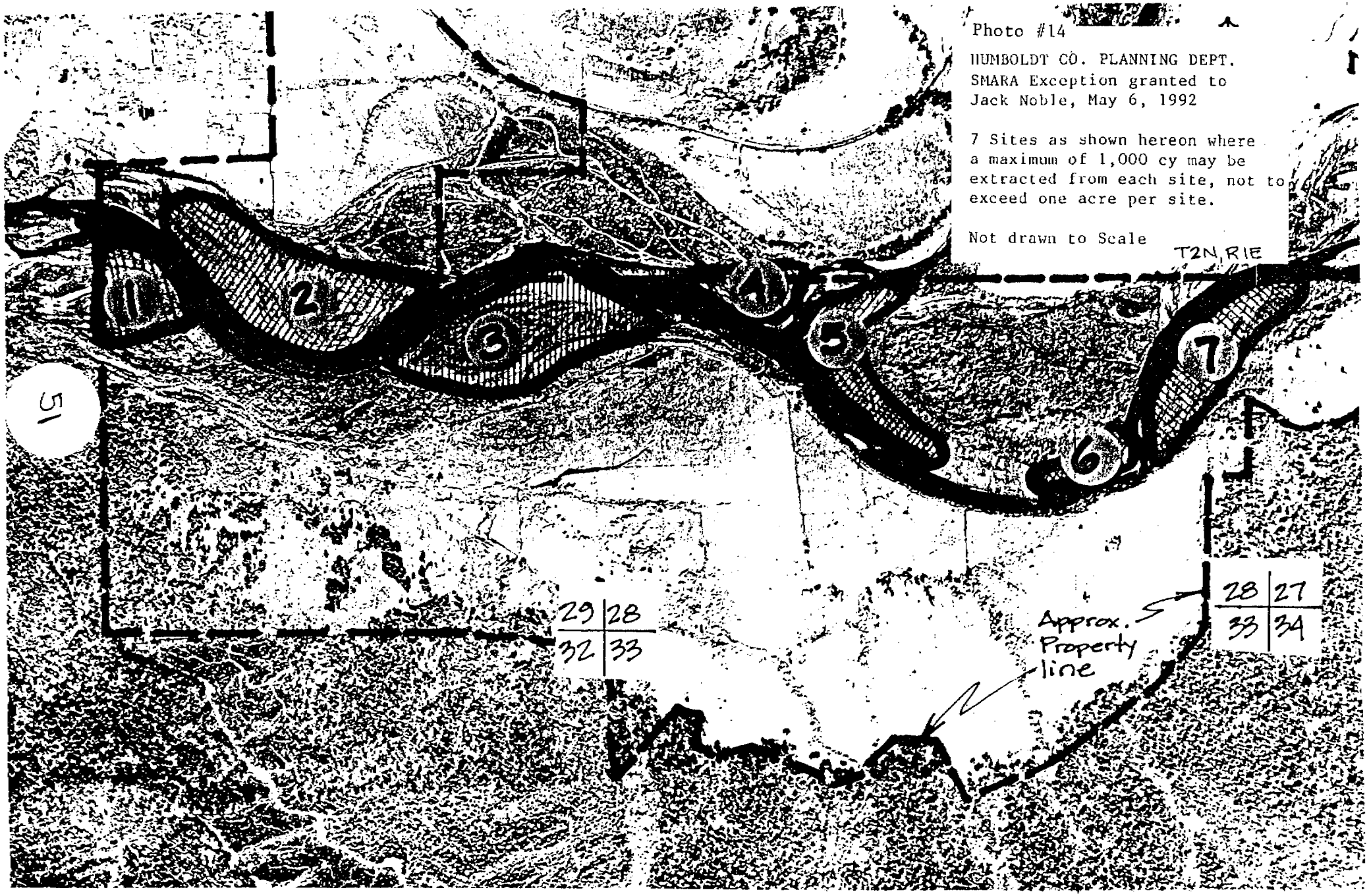


Photo #14
HUMBOLDT CO. PLANNING DEPT.
SMARA Exception granted to
Jack Noble, May 6, 1992
7 Sites as shown hereon where a maximum of 1,000 cy may be extracted from each site, not to exceed one acre per site.
Not drawn to Scale
T2N, R1E
1
2
3
4
5
6
7
29 28
32 33
28 27
33 34
Approx. Property line

Noise levels on the site at this time range from 40 to 50 dBA. Gravel removal equipment would generate noise levels of 80 to 85 dBA at 50 feet. This would generate a noise level of 60 dBA at the exterior wall of the nearest occupied house which is 1,450 feet away. The next nearest house is 3,500 feet away and could receive about 52 dBA noise levels.

Riparian vegetation exists on both sides of the Van Duzen River in the project area. It is not necessary to disturb or remove any of this vegetation in order to carry out the project.

The river bar is not visible from any highway or County road. It may be visible near the mouth of Yager Creek which is a place utilized by some fishermen. Mr. Noble has seen fishermen at the mouth of the creek utilizing this area.

The width of the river varies from 500 to 800 feet in this area. A low flow channel is about 145 feet wide.

The channel appears to be heavily aggraded with gravel brought down in the 1955, 1964, 1974 and 1986 floods. A definite meander pattern can be measured and it is noted that the meander repeats itself every 4,000 feet below Yager Creek. Any river restoration plan must recognize this natural pattern.

No permits have been issued for this operation to date. An exemption for 7,000 cubic yards for non-commercial use was granted to Jack Nobel on May 6, 1992. It appears the permits required consist of a Conditional Use Permit, approved Reclamation Plan, 1603 Streambed Alteration Agreement, and a permit from the State Lands Commission. If any dredging or summer bridges are constructed or stockpiles placed on the bed, a Section 404 permit from the Corps of Engineers would be required.

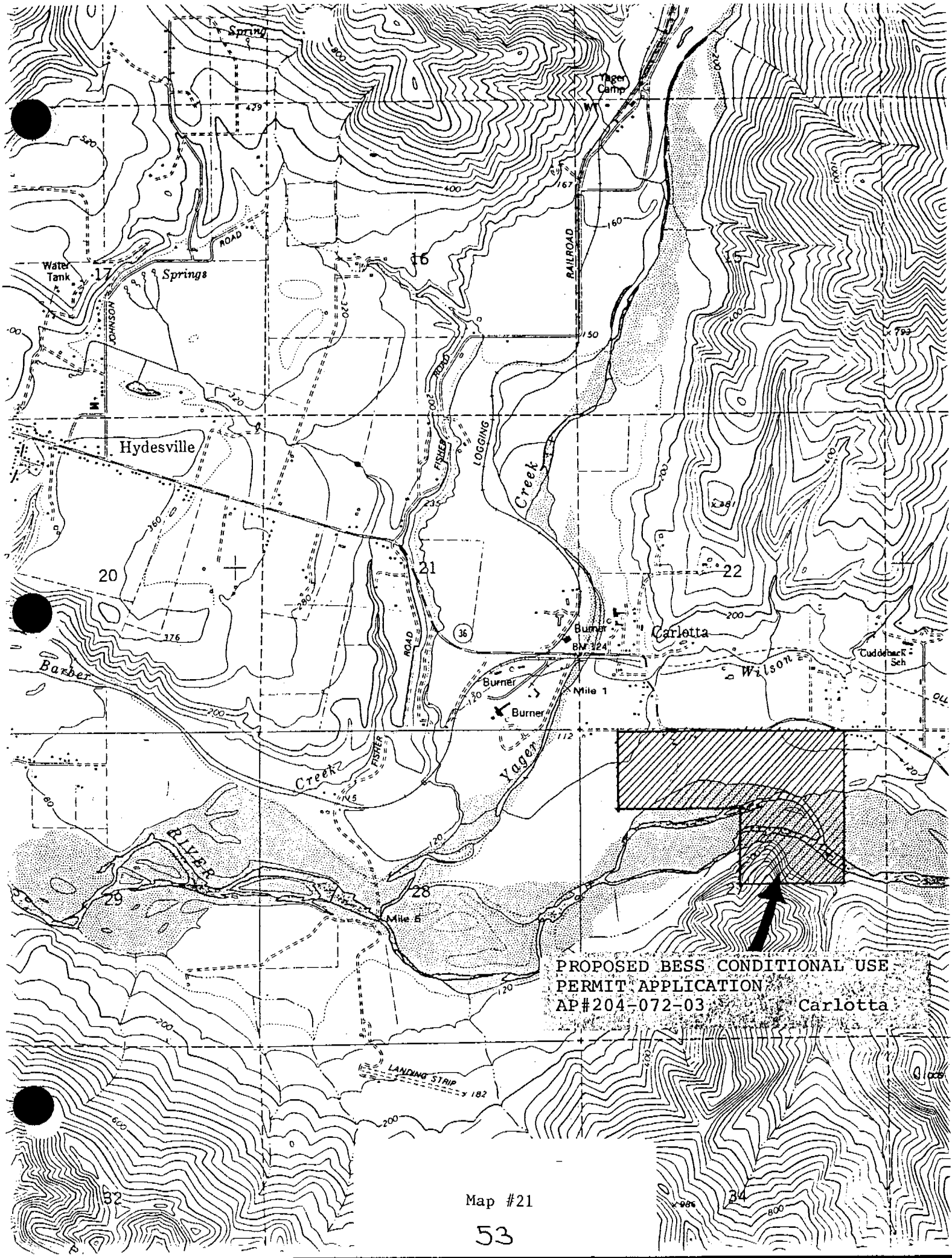
SITE No. 11 - Tom Bess Operation

1. Location. This site is located one mile upstream of Site No. 10. It is in the northeast quarter of Section 27, T2N, R1E. See Photo No. 13.

2. Land Owner. Thomas R. Bess of Carlotta.

3. Operator. Thomas R. Bess of Carlotta.

4. Description of Operation. This operation has existed for many years and involves the removal of 20,000 cubic yards per year There is a small gravel processing plant located on the north side of the river on a five-acre parcel zoned Industrial. The project generates a small amount of


Spring
Yager Camp
Water Tank
Springs
JOHNSON ROAD
RAILROAD
FISHER ROAD
LOGGING
Creek
Hydesville
Carlotta
Burner
BM 124
Mile 1
Cuddeback Sch
Wilson
Barber
Creek
FISHER
Yager
RIVER
Mile 6
LANDING STRIP
16
17
15
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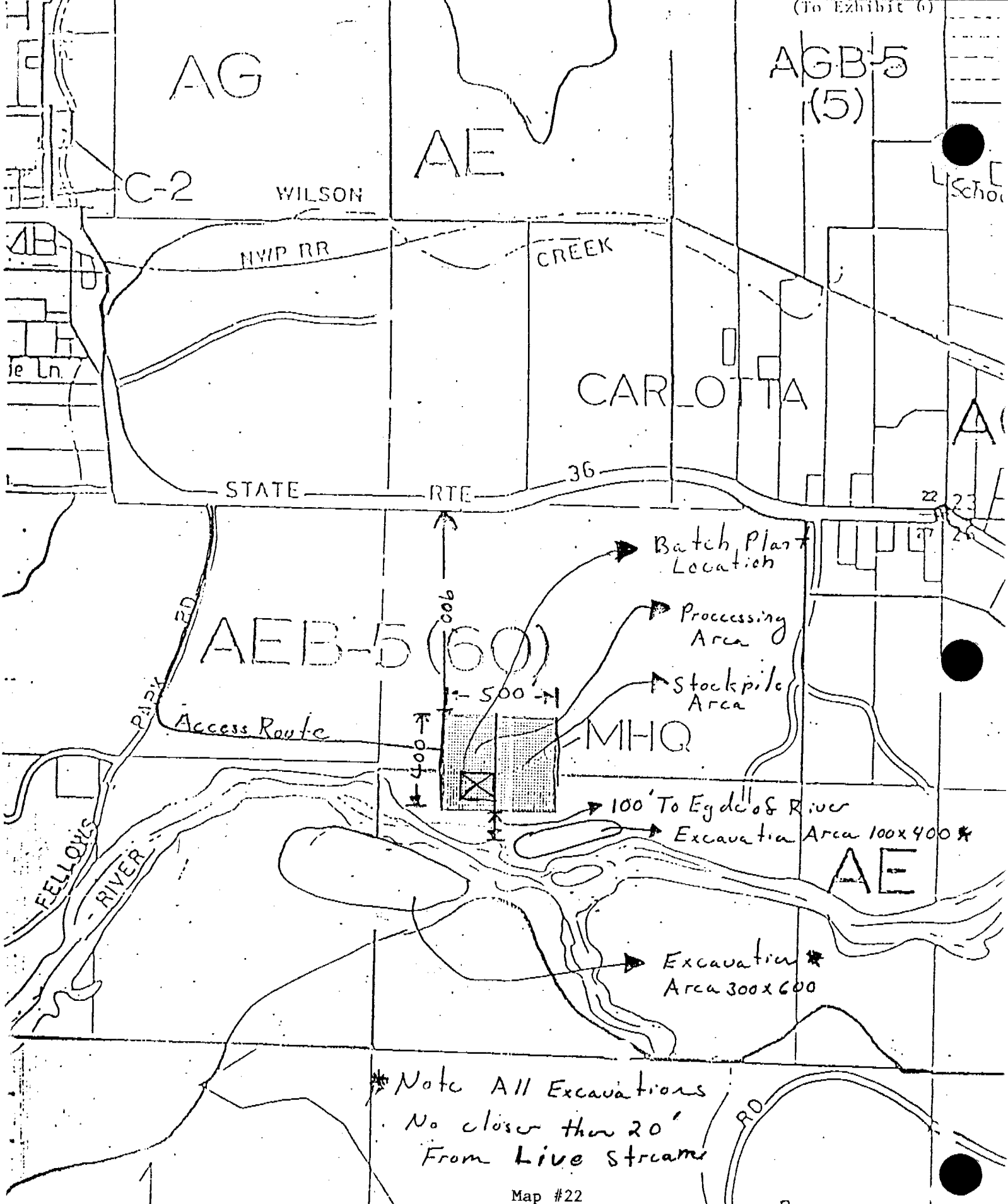
32
34
PROPOSED BESS CONDITIONAL USE PERMIT APPLICATION
AP#204-072-03
Carlotta

Map #21



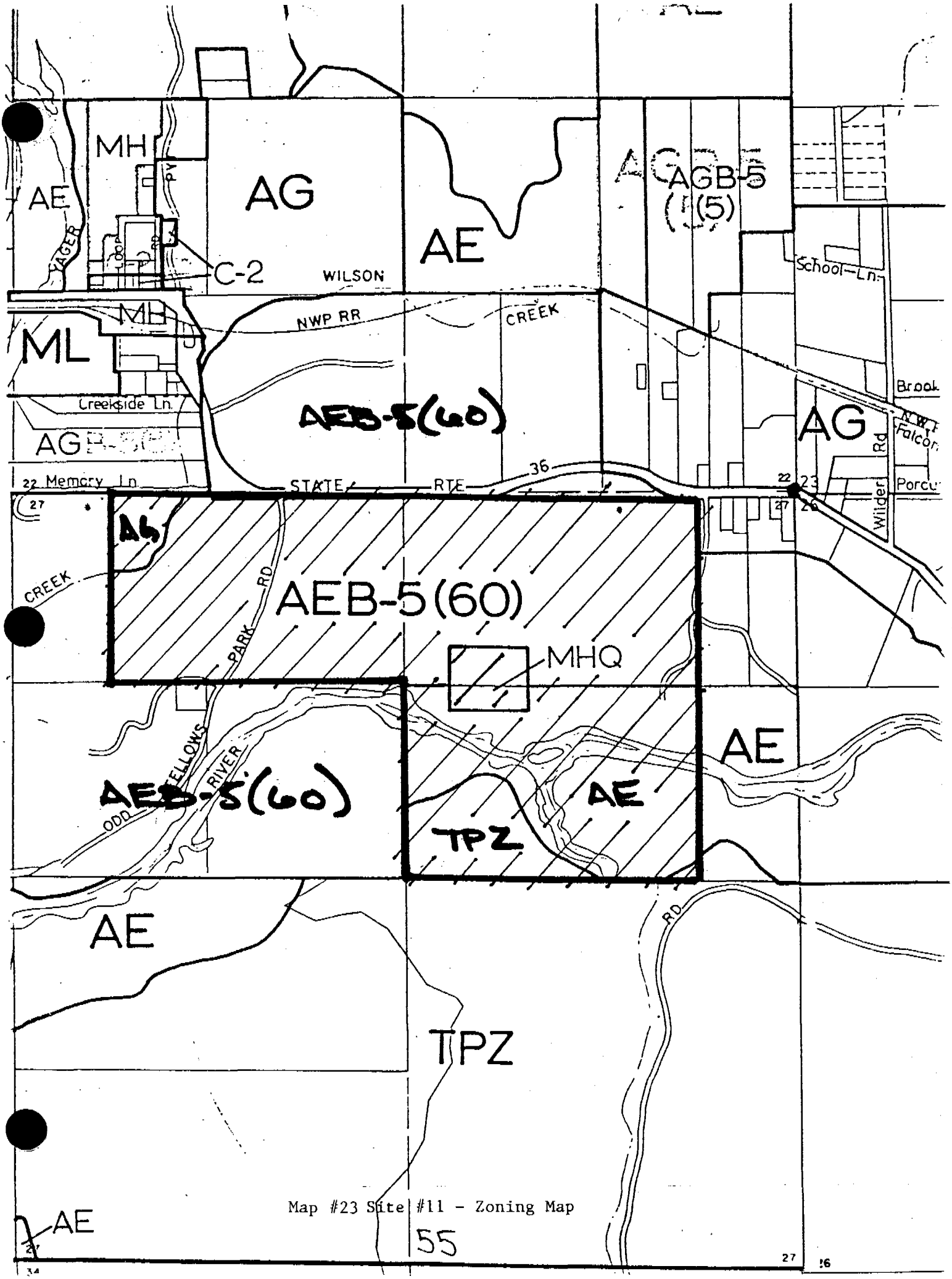
Map #22

Site #11 - Operated by Thomas Bess showing excavation, processing and stockpile areas.

1"=600'

TIDE 54

Community Plan



Map #23 Site #11 - Zoning Map

traffic during the operating season. It is accessible off the Odd Fellows Road which is a County road. This road turns off of Highway 36 one-half mile east of Carlotta.

5. Environmental Setting. This bar is located on the Van Duzen River six miles above the mouth of the river. It is bordered on the north by pasture land and the south by a steep slope covered with second growth redwood forest. The nearest occupied house owned and lived in by Tom Bess, is 1,600 feet away. When the gravel crushing and processing machine is running, this house would receive a level up to 60 dBA. The next nearest house is 1,700 feet away and could receive about the same level. There are 11 other houses within 2,800 feet which could receive a level of 56 dBA. Most of these houses are adjacent to Highway 36 and receive noise levels from passing vehicles in the range of 55 to 70 dBA.

This operation is generally not visible from Highway 36 because it is one-quarter of a mile south of the highway.

Recreational use of this portion of the river is very low. Access to the river is provided off Old Fellows Road.

The river bed at this point is 400 feet wide and contains a low flow channel 60 feet wide.

Most of the permits required for this operation have been obtained. All of the County requirements have been met. Some of the new requirements such as the Stormwater Pollution Prevention Plan and State Lands Commission permit have not been acquired to date. The annual 1603 Streambed Alteration Agreement will be negotiated soon.

There are two more sites on the Van Duzen River upstream from Bess. The first is a County extraction site nine miles east of Carlotta and involves the annual removal of 3,000 cubic yards. The second is operated by Mercer-Fraser in Trinity County on land owned by Louisiana Pacific. It involves the removal of 32,000 cubic yards.

There are four additional sites located on the South Fork Eel River just west of the community of Garberville. The first site originally known as the Randall Sand & Gravel site is located east of Moody Bridge which crosses the Southfork Eel River in the northwest quarter of Section 25, T4S, R3E. This site is now operated by Charles Studebaker with an annual extraction of up to 30,000 cubic yards.

The second site near Garberville is operated by Wallin & Johnson Construction and is accessible off Bear Creek Road in Section 13, T4S, R3E.

The third site near Garberville is operated by Mercer-Fraser Company on land owned by Tom Dimick and is located in Section 24, T5S, R3E.

The fourth site is located just upstream of Moody Bridge and is operated by the County. Annual extraction volume when gravel is available, is 4,000 cubic yards. Once every five years 25,000 cubic yards are removed and crushed.

These four sites on the Southfork Eel River constitute 59,000 cubic yards of gravel extraction per year and up to 84,000 cubic yards once every five years.

There are five additional operations within the watershed of the main Eel worth mentioning. An application was submitted to the Planning Department by Jim Sorensen, as an agent for Marguerite Satterlee of the Fort Seward Ranch, for 200,000 cubic yards per year at Fort Seward. The extraction area covers about 25-30 acres. Fort Seward is located about 29 miles upstream from the junction of the main Eel with the South Fork Eel.

The second site, to be used by the County Road Department, is on the same bar mentioned in the previous paragraph. The County has a borrow agreement with the owners, to remove 4,000 cubic yards per year and 25,000 cubic yards once every five years.

The third site is located on Dobbyn Creek just upstream of Alderpoint Road near Ware Ranch Road. This site is operated by the County Road Department and involves 2,000 cubic yards per year.

The fourth site is on Larabee Creek five and one-half miles north of Blocksburg and 500 feet east of Alderpoint Road. This site consists of a small valley that filled with gravel during the 1964 flood. It is operated by the County Road Department and involves 4,000 cubic yards per year and 25,000 cubic yards once every five years.

The fifth site is on the main Eel just upstream of the railroad bridge at the junction of the main Eel and South Fork Eel. This site is operated by the County Road Department through a borrow agreement with Pacific Lumber Company. It involves the removal of 1,000 cubic yards per year and 25,000 cubic yards once every five years.

The total volume potentially removed in a year from these five sites ranges from 211,000 cubic yards to 277,000 cubic yards if one assumes the Fort Seward Ranch application for 200,000 is approved.

Table 1. Individual Gravel Operations in Eel River Watershed, Humboldt County

Operation	River	Permitted Volume	Unpermitted or Pending Volume (cubic yards)	Proposed Volume
Arcata Readimix	ER			150,000
Trutalli	ER	10,000		
Humboldt County	ER	200,000		
Ken Drake/Humboldt Bay Gravel	ER	250,000		
Canevari	ER		200,000	
Mercer-Fraser	ER	70,000		
Land	ER			200,000
Humboldt County	ER		3,000	
Tanferrani	ER		5,000	
Hansen	ER		75,000	
Eureka Sand & Gravel	ER		150,000	
Mercer-Fraser No. 2	ER			100,000
		530,000	433,000	450,000
Satterlee	ER			200,000
Humboldt County				
Dyerville	ER		1,000-25,000	
Dobbyn Creek	ER		2,000	
Larrabee Creek	ER		4,000-25,000	
Fort Seward	ER		4,000-25,000	
Sub Total			11,000-77,000	200,000
Randle	SFE	35,000		
Humboldt County	SFE		4,000-25,000	
Mercer-Fraser	SFE	20,000		
Tooby	SFE			10,000
Wallan & Johnson	SFE		10,000	
Sub Total		55,000	14,000-35,000	10,000
Jack Nobel	VAN	7,000		40,000
Tom Bess	VAN	20,000		
Mercer-Fraser	VAN		32,000	
Humboldt County/Dinsmore	VAN	3,000		
Sub Total		30,000	32,000	40,000

Table 1 (cont.) Humboldt County Eel River Watershed Gravel Operation Summary

Summary	Unpermitted Permitted Volume	or Pending Volume (cubic yards/year)	Proposed Volume	Total
Eel River Project Area	530,000	433,000	450,000	1,413,000
Van Duzen Project Area	27,000		40,000	67,000
Total Project Area	557,000	433,000	490,000	1,480,000
Others in Watershed				
Eel River		11,000-77,000	200,000	211,000-277,000
South Fork Eel River	55,000	14,000	10,000	79,000
Van Duzen	3,000	32,000		35,000
Total Others	58,000	57,000-123,000	210,000	325,000-391,000

Total Potential From Eel River Watershed = 1,805,000 to 1,871,000