

Washington State University
Department of Sociology and Anthropology
Pullman, Washington, November 18, 1964

Sir: On September 24, 1964, the United States Department of Agriculture, Forest Service, issued a permit authorizing an archaeological excavation on lands of the United States. The results of this work, in compliance with Section 10 of the Uniform Rules and Regulations, are reported in the accompanying paper entitled, "Test Excavation at Wild Rose Rock Shelter, a Site on the Eastern Slope of the Cascades," by David Rice. This paper has been published in Vol. VIII, No. 4 of The Washington Archaeologist.

All artifacts and associated materials recovered are now deposited in the Laboratory of Archaeology and Geochronology, Washington State University, Pullman, Washington. As stipulated in the permit, these may be requested by the Forest Service for V. I. S. purposes.

Very respectfully yours,

David G. Rice
David G. Rice,

Undergraduate Assistant
in Anthropology.

Dr. S. Dillon Ripley,

Secretary, Smithsonian Institution.

TEST EXCAVATION AT WILD ROSE ROCK SHELTER
A Site on the Eastern Slope of the Cascades

By David Rice

ABSTRACT: Wild Rose Rock Shelter, 45YK39, on the Tieton River in the Snoqualmie National Forest, Yakima County, was tested on a limited scale to determine possible cultural affinities. Faunal detritus indicates that this was a seasonal site oriented to hunting. The similarity of the projectile points from this site to those recovered at Wenas Creek suggests that the cultural sequence at Wild Rose fits somewhere between Wenas Creek I and Wenas Creek II and probably post dates 1300AD. While the site is definitely Plateau, the archaeological problems suggested by its location and relation to aboriginal travel routes would establish a research program the fruition of which would create a prehistoric record where hardly any now exists.

INTRODUCTION

In the closing days of December, 1963, the author was conducting research in the south central Cascades in the vicinity of White Pass (cf. Rice, 1964). These investigations led to the discovery of a small rock shelter on the Tieton River in Eastern Washington, situated on Snoqualmie National Forest lands. The site was subsequently designated 45YK39 according to the Washington State site survey system. Due to its proximity to Wild Rose Forest Camp, the site has been called the Wild Rose Rock Shelter.

On August 10, 1964, application was made to Snoqualmie National Forest, L. O. Barrett, Forest Supervisor, for permission to conduct archaeological excavations on United States Government lands at site 45YK39. The application was authorized by Dr. Richard D. Daugherty, Professor of Anthropology, Washington State University, and made by the author, then Undergraduate Assistant in Anthropology at the same institution. On September 13, 1964, a two man team consisting of Charles M. Nelson and the author began work at Wild Rose Rock Shelter under the general direction of Dr. Daugherty. Excavations there were completed on September 15, 1964.

The site itself is situated in a part of the state which is virtually unknown, archaeologically. No scientific investigations have ever been carried out in the south central Cascades of Washington. The closest site which has been excavated under controlled conditions lies at the mouth of Wenas Creek, ca. 6 miles north of Yakima (cf. Warren, 1959). For these reasons 45YK39 is of significance.

Unfortunately, the site was not as revealing as might have been the case. First of all time limitations hampered our work. Secondly, the shelter was badly destroyed by collectors and what was intended to be a testing operation of a



FIGURE 1. Site Locations & Aboriginal Travel Routes in South Central Cascades, Washington.



*FIGURE 2. Wild Rose Rockshelter
(Lower right hand corner.)*

relatively undisturbed site turned out to be a salvage operation. As a consequence, our total data are not satisfactorily complete. However, sufficient information was recovered to warrant this published report.

In spite of the above comments, the findings at Wild Rose Rock Shelter provide documented cultural material which will be useful in working out the cultural sequences and chronology of the Cascade Mountain area. In fact, until such a time arises that an undisturbed site in the same region is located and properly excavated, Wild Rose Rock Shelter will provide the only material suitable to this end.

LOCATION AND DESCRIPTION

45YK39 is a rock shelter which lies adjacent to Wild Rose Forest Camp, Snoqualmie National Forest. Specifically the site is situated in the SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 26, T. 14 N., R. 14 E. of the Willamette Meridian (map reference: U.S. Dept. of Agri., Forest Service, Pacific NW Region, Sept., 1959.) In common terms, the site may be found on State Highway 5 (White Pass Highway) 37 miles west of Yakima, Washington (see map, fig. 1). Elevation is 2,650 feet above sea level.

The site itself rests on the north side of the Tieton under an overhanging rock face of andesite at the base of the canyon (see fig. 2). The shelter faces west, up the Tieton River. The river at this point flows through the opposite (south) side of the canyon ca. 500 feet away from the site. The shelter measures approximately 45 feet wide, 3 to 6 feet high, and 15 feet deep. Its fill consists of alluvium, rubble, and cultural debris. Although the site is within 20 feet of State Highway 5, the mouth of the shelter is obscured by trees and tall grass and is therefore not readily noticed. However, upon examination of the ground surface of the shelter it became immediately apparent that a great many people had noticed the now obscured site. The entire areal extent of the shelter showed signs of recent disturbance by relic hunters.

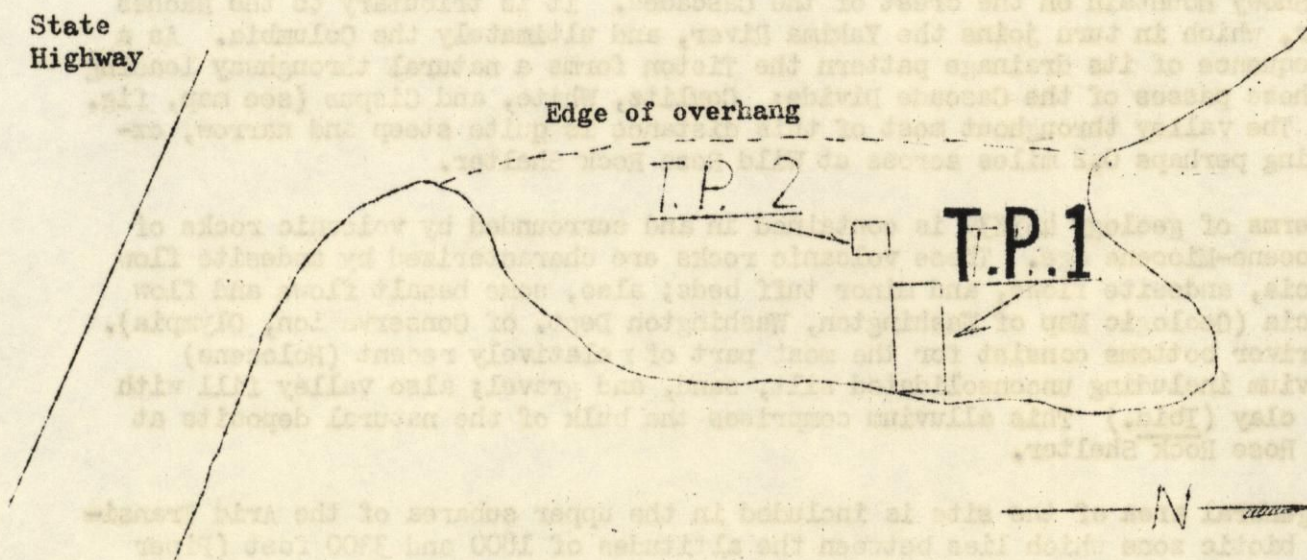


FIGURE 3. Schematic Plan View of Wild Rose Rockshelter.

Two test pits were established at 45YK39 (see fig. 3). The first of these ran from the rear of the shelter toward its mouth in east-west orientation, bisecting the site. Test Pit 2 ran at 90 degrees to Test Pit 1. It extended parallel to the back of the shelter and lay in north-south orientation.

Both test pits demonstrated that disturbance by pot hunters was as deep as it was extensive on the surface. The top 1.25 meters (4 feet) of the deposits had been totally destroyed for scientific purposes. Test Pit 2 was abandoned at a depth of 65 cm. (2 feet), having yielded only broken bottle glass, cigarette packages and gum wrappers. In an attempt to get beneath the disturbed material Test Pit 1 was enlarged to 2.25 meters (7 feet) in length, 1 meter (3 feet) in width, and was taken to a total depth of 2.4 meters (8 feet) below the existing ground surface of the shelter. (The point at which the ground surface intersected the rear wall of the shelter served as our datum). This decision was made in the hopes of obtaining a continuous and well-controlled stratigraphic record from the rear of the site, through its middle (an E-W cross-section - see profile, fig. 4), and down to bed rock. Time limitations in the field prohibited full achievement of this aim. The bottom of the natural deposits was not reached. Cultural material, although sparse at the base of our excavations, was still present and there is the possibility that more cultural material lies at greater depths.

Excavation technique was by shovel in disturbed areas. This material was thoroughly screened (3/8 in. mesh) for artifacts, chipping detritus, and faunal remains, in spite of their shadowy provenience. Where undisturbed material was encountered it was excavated by trowel and then carefully screened. All materials recovered, whether disturbed or undisturbed, were retained.

SETTING

Geographically the Wild Rose Rock Shelter lies in the Tieton River Valley, an ENE-WSW oriented valley in the eastern foothills of the Cascade Mountain Range of south central Washington. The Tieton has its origin near the eastern slopes of Old Snowy Mountain on the crest of the Cascades. It is tributary to the Naches River, which in turn joins the Yakima River, and ultimately the Columbia. As a consequence of its drainage pattern the Tieton forms a natural thoroughway leading to these passes of the Cascade Divide: Cowlitz, White, and Cispus (see map, fig. 1). The valley throughout most of this distance is quite steep and narrow, extending perhaps 0.2 miles across at Wild Rose Rock Shelter.

In terms of geology 45YK39 is contained in and surrounded by volcanic rocks of Oligocene-Miocene age. These volcanic rocks are characterized by andesite flow breccia, andesite flows, and minor tuff beds; also, some basalt flows and flow breccia (Geologic Map of Washington, Washington Dept. of Conservation, Olympia). The river bottoms consist for the most part of relatively recent (Holocene) alluvium including unconsolidated silt, sand, and gravel; also valley fill with some clay (Ibid.) This alluvium comprises the bulk of the natural deposits at Wild Rose Rock Shelter.

The general area of the site is included in the upper subarea of the Arid Transition biotic zone which lies between the altitudes of 1800 and 3300 feet (Piper 1906: 50). This zone is typified by forests of yellow pine (Pinus ponderosa). Other common plants include ninebark (Opulaster pauciflorus), buckbrush

(*Ceanothus sanguineus*), rose (*Rosa gymnocarpa*), huckleberry (*Vaccinium macrophyllum*), and pinegrass (*Calamagrostis suksdorfii*). Average annual precipitation in the vicinity of the site is 24.5 inches, and the mean monthly temperature ranges from 64 degrees F. in July to 26 degrees F. in January (Ray, 1936: 105).

The faunal life which is characteristic of the timbered subarea of the Arid Transition Zone has been discussed by Dalquest:

The pine forest habitat includes many diurnal species, such as the red squirrel, yellow-pine chipmunk, and Columbian ground squirrel. The white-tailed deer occurs here and, for most of the year, the mule deer. Snowshoe rabbits are usually present. Near rocks the bushy-tailed wood rat is common. Mice are scarce, probably because of the open nature of the surface of the ground. (1948: 36)

Although now extinct over most of their range, mountain sheep were once abundant throughout the eastern Cascades (cf. Thomson, 1962: 2-7). Teeth of what appears to be mountain sheep were recovered from 45YK39. Split and burned deer bone appears to comprise the bulk of faunal remains obtained, however.

ETHNOGRAPHIC DATA

Within historic times the territory in which 45YK39 lies was occupied by the Yakima, a Sahaptin speaking group of the western part of the Plateau (cf. Ray, 1936; Spier, 1936). The closest known village site of the Yakima in this region is reported by Ray.

Miya'wax ("chief"). This was a permanent village located on the upper Tieton River at the place now called Rimrock (Tieton Dam). It was an important center for hunting, fishing and berry gathering. (1936: 146).

Numerous temporary campsites were evidently utilized all along the river and it would appear that the site here under concern is one example of these.

A seasonal round of economic activities characterized the way of life of Plateau Indians (cf. Ray, 1932; Spier and Sapir, 1930; Rice, 1964). This seasonal cycle may be abstracted as follows:

- (1) March - May. Winter camps were abandoned. Roots and other vegetal foods were intensively gathered and dried. For women, this period represented a peak of economic activity.
- (2) May - September. Intensive fishing was carried out in the streams of the Cascades. At this time men reached their highest point of economic activity. Mountain resources were also gathered.
- (3) September - October. Fall vegetal resources were gathered. Preparation was made for winter.
- (4) October - March. Winter camps were reoccupied. Deer, elk, and mountain sheep were hunted.

Therefore, from the above, the seasonal dependence upon various food resources has formed the framework for this way of life. Even the sexual dichotomy of labor reflects the seasonal pattern, economic duties fluctuating in intensity from one part of the year to another.

Faunal remains from Wild Rose Rock Shelter may provide the best clues as to the nature of the economic activities carried out there (see Table 1). Great quantities of split and burned deer bone were prevalent throughout most of the site. Although a thorough study of the faunal remains was not possible, certain bones and teeth suggest the presence of elk and mountain sheep, as well as deer. This data tends to indicate that the site was used as a temporary hunting camp, and may well have been inhabited during the winter months since game would then be quite easily obtained. When George Gibbs passed through this region in 1853-1854 he commented that "the deer and elk are almost exterminated throughout the country, the deep snows of winter driving them to the valleys, where the Indians . . . have slaughtered them without mercy." (1855: 404). Besides game animal remains, one fish vertebra was recovered. Since fish were largely obtained during the summer, and fish bones are nearly absent in the deposits, one may conclude that the shelter was largely inhabited during the winter. Numerous large hearth areas in the shelter are also indicators of winter utilization. Therefore, both the economic activities at 45YK39 and the time of year they were conducted may be reconstructed with reasonable certainty.

During the summer months the site was probably used as an occasional overnight refuge from bad weather and may have been used as an overnight stop for travelers enroute to the Cascade summit. Routes leading over the Cascade Divide were extensively used during the summer, in trading with or raiding the peoples of the Coast in addition to routine economic activities. The major routes used are noted in fig. 1 (also confer Rice, 1964). Thus, the site area may be considered in view of these various activities which constituted the way of life of Plateau Indians.

STRATIGRAPHY

Three major stratigraphic units were encountered in the course of excavations at 45YK39. The basal-most of these, unit I, (see fig. 4), consists of sand, gravel, and silt. Cultural material is for the most part absent. The breakdown of Unit I is as follows (the following strata correspond to the Arabic numbers in fig. 4 to the right of Roman numeral I):

Stratum 1. Alternating lenses of sand and clay containing minute specks of charcoal. Rock was encountered in the east end of Test Pit 1, possibly indicating the proximity of the bottom of the natural deposits. No cultural material was found, but the existence of charcoal may indicate man's presence.

Stratum 2. Cross bedded sand and gravel becoming coarse sand in the eastern basal section. No cultural material was found.

Stratum 3. Fine sand and silts. Two separate silt lenses contained cultural material (levels 9 and 10 in Table 1). (In the following, any levels pertain to excavation levels. Data on these may be found in Table 1).

| Level | Stratum | Stone | | Material | | | Unburned Bone | | | | Burned Bone | | | | No. of Artif. | Specimen Numbers | Other Fragments |
|--------|----------------|--------|----------|----------|------|-------|---------------|------|-----|-----|-------------|-----|------------|------|---------------|------------------|-----------------|
| | | < 1.54 | 1.54-2.5 | 2.5-5 | 5-10 | 10-20 | Sm. | Med. | Lg. | Sm. | Med. | Lg. | Sm. | Med. | Lg. | | |
| 1 | U III, S3, 4 | 65 | 40 | 8 | 113 | 47 | 53 | 14 | 78 | 79 | 13 | 14 | 12-24, 26 | 19 | Charcoal | 2 Teeth | 3 Bird Bones |
| 2 | U III, S2 | 50 | 3 | -- | 53 | 7 | 13 | 3 | 10 | -- | 4 | 5 | 37-41 | 1 | Charcoal | 1 Tooth | |
| 3 | U III, S1 | 35 | 17 | 3 | 55 | 176 | 59 | 73 | 14 | 68 | 3 | 13 | 2-6, 29-36 | 77 | Charcoal | 2 Bird Bones | 2 Mandibles |
| 4 | U II, S7, 8, 9 | 22 | 15 | 5 | 42 | 130 | 94 | 23 | 91 | 19 | 4 | 10 | 42-51 | 30 | Charcoal | 1 Tooth | 2 Bird Bones |
| 5 | U II, S6 | 16 | 4 | 4 | 24 | 17 | 4 | -- | 52 | -- | -- | 5 | 52-56 | 2 | Bird Bones | 1 Fish Bone | |
| 6 | U II, S5 | 3 | 1 | -- | 4 | 5 | -- | -- | 12 | -- | -- | 1 | 9 | -- | -- | -- | -- |
| 7 | U II, S2, 3, 4 | 5 | 1 | 1 | 7 | 69 | 52 | 20 | 75 | 28 | 6 | 2 | 10, 11 | 25 | Charcoal | 2 Bird Bone | 3 Pebble Frag. |
| 8 | U II, S1 | -- | -- | -- | -- | 1 | -- | -- | -- | -- | -- | -- | -- | 13 | Charcoal | | |
| 9 | U I, S3 | 1 | -- | -- | 1 | -- | -- | -- | 2 | -- | -- | -- | -- | 5 | Charcoal | | |
| 10 | U I, S3 | -- | 2 | -- | 2 | 18 | 7 | -- | 1 | -- | 4 | -- | -- | 1 | Charcoal | | |
| Totals | -- -- | 197 | 83 | 21 | 301 | 470 | 282 | 133 | 335 | 194 | 34 | 50 | -- | -- | -- | -- | -- |

Table 1. Record of Artifacts and Detrital Materials Recovered from Test Pit No. 1, Wild Rose Rockshelter, 45YK39.

The second major stratigraphic break, Unit II, is composed of light yellow brown clay in addition to ash and oxidized soil from hearth areas. The following strata constitute Unit II:

Stratum 1. Light brown clay containing lightly scattered pieces of charcoal and a single bone (level 8, Table 1).

Stratum 2. Brown clay becoming heavily concentrated with charcoal and cultural debris in the west end of the pit. This layer forms part of level 7.

Stratum 3. Light yellow brown clay containing cultural debris. This layer also forms part of level 7.

Stratum 4. Light brown clay becoming a hearth area of white ash, concentrations of charcoal, and oxidized soil in the west end of the pit. This layer along with the preceding two comprise level 7.

Stratum 5. Light yellow brown clay with some cultural material; level 6.

Stratum 6. Light brown clay with cultural material; level 5.

Stratum 7. A complex of hearth areas consisting of white and gray ash, oxidized soil, and charcoal. There is much cultural debris. This layer forms part of level 4.

Stratum 8. Brown clay with cultural material. This layer also forms part of level 4.

Stratum 9. Light yellow brown clay with cultural material. This layer plus the preceding two layers form level 4.

The uppermost stratigraphic break consists primarily of loose loam, sand, and pea gravel. It is entirely cultural. The following strata compose Unit III:

Stratum 1. Loose loam, sand, and angular to sub-angular pea gravel including some rubble. In the east end of the pit this becomes predominantly coarse rubble and pea gravel with much mammal bone intermixed. This layer forms level 3.

Stratum 2. Loose loam, sand, and angular to sub-angular pea gravel. This layer forms level 2.

Stratum 3. This "stratum" includes two intrusive pits into the deposits. Judging from what was found, or rather, what was not found, these pits appear to be old "pot holes" created by enthusiastic collectors. The loam, containing some ash, was badly churned.

Stratum 4. This "stratum" represents an area totally destroyed by diggers who quite evidently made no attempt to excavate according to any organized scientific method. As a result of this tragedy the cultural sequence in the top 1.25 meters (4 feet) is entirely lacking. On the north side of Test Pit 1 the disturbance extended to a depth of 1.65 meters (5½ feet). Despite these circumstances all disturbed areas were screened for artifacts and level data were recorded (see Table 1).

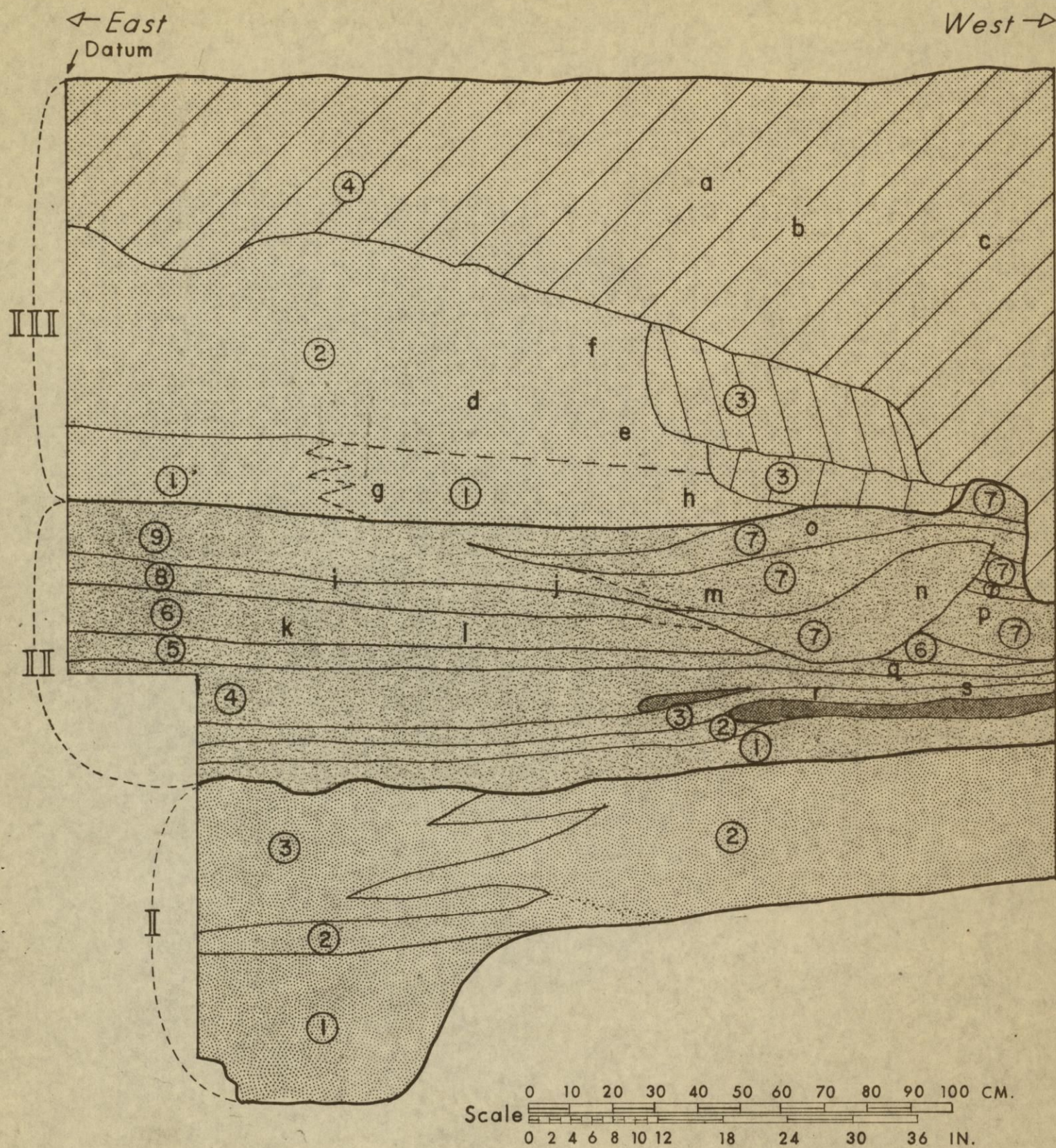


FIGURE 4. Profile of South Face, Test Pit No. 1, 45YK39

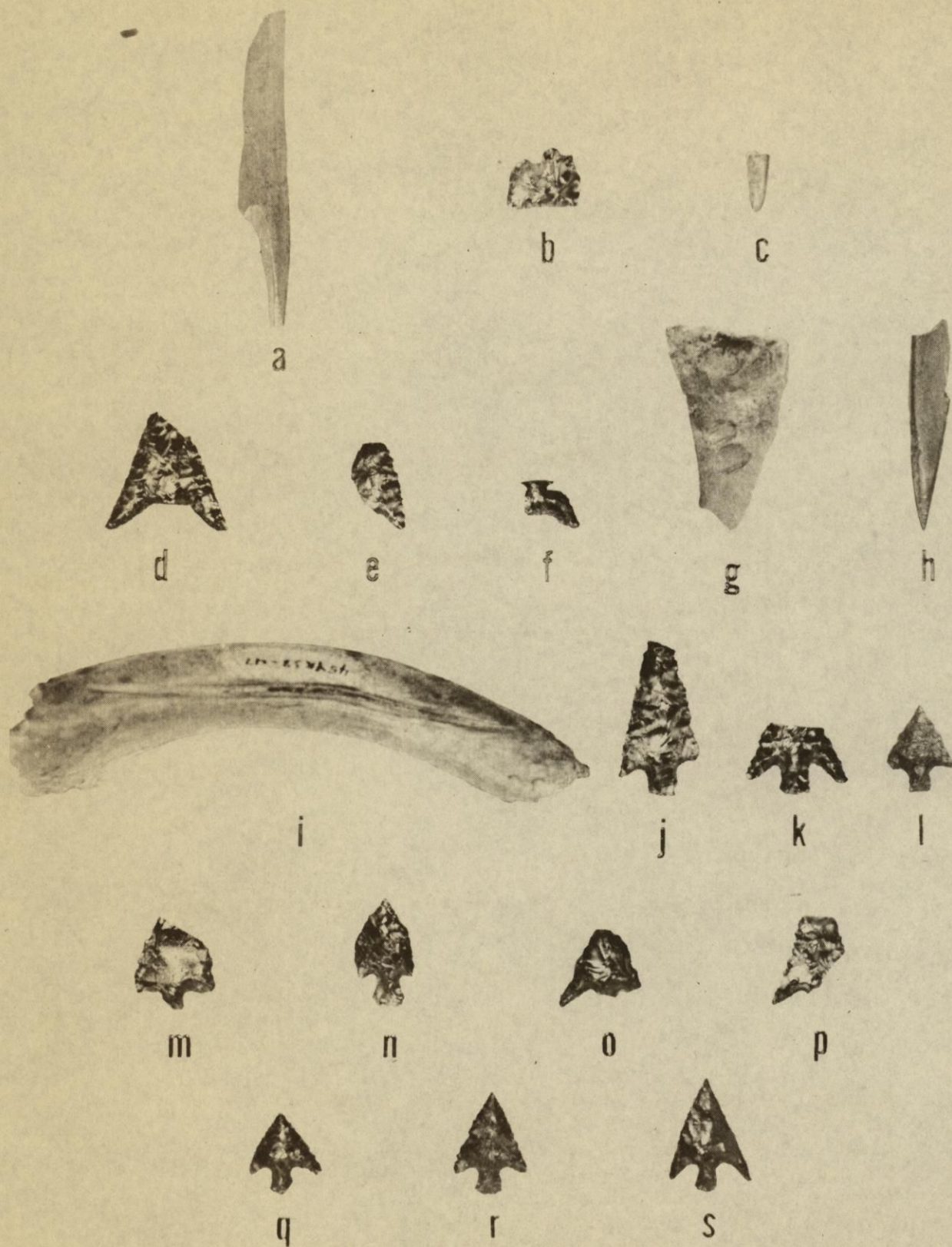


PLATE 1. Diagnostic Artifacts from 45YK39.

Artifacts which have some diagnostic value appear in Plate 1. The letters beneath the artifacts correspond to the artifacts' stratigraphic placement in the profile in fig. 4. They are also placed in approximate sequential order. Only in the case of artifacts a, b, and c in stratum 4 of Unit III is the provenience questionable. The remainder of the artifacts appear in the profile about where they were actually recovered from undesicrated midden.

ARTIFACT INVENTORY

A total of 59 artifacts was recovered from Wild Rose Rock Shelter. For ease of presentation these have been grouped into categories of chipped stone and worked bone. The complete breakdown is as follows:

CHIPPED STONE

Projectile Points

The point classification used here will be essentially the same as that used by Claude Warren at Wenas Creek because of the close similarity of the artifact forms and because of the consequent ease in comparing the points from each site. Where points are fragmentary estimates have been made as to their original dimensions.

Style S1. Barbed shoulder corner notch (1 specimen, see Plate 1, fig. j).

| | |
|------------------|--|
| Specimen number: | 48 |
| Length: | ca. 3.3 cm. |
| Width: | 1.8 cm. |
| Thickness: | 0.4 cm. |
| Outline: | modified triangle |
| Cross-section: | lenticular |
| Edges: | straight |
| Base and stem: | corner notched, barbed shoulders, rectangular stem with diagonal base. |
| Material: | chalcedony |
| Provenience: | excavation level 4 |

Style S10. Columbia Valley corner notched (8 specimens, see Plate 1, figs. d, e, k, o, p, q, r, and s).

| | |
|-------------------|---|
| Specimen numbers: | 37, 40, 54, 45, 46, 9, 10, and 11 |
| Length: | 1.6 to 2.8 cm. |
| Width: | 1.3 to 2.2 cm. |
| Thickness: | 0.2 to 0.4 cm. |
| Outline: | modified triangle |
| Cross-section: | lenticular; plano-convex |
| Edges: | straight (3), convex (4), concave (1) |
| Base and stem: | corner notched with shoulders varying from straight to long barbed. In three specimens the stems are expanding with a rounded base; in one specimen the stem is rectangular. The remainder of the points have fragmented stems. |

Material: chalcedony (4), chert (3), opal (1)
Provenience: excavation levels 2, 4, 5, 6 and 7.

Style S11. Small, straight shouldered points (3 specimens, see Plate 1, figs. 1, m, and n).

Specimen numbers: 56, 43, and 44
Length: 1.7 to 2.0 cm.
Width: 1.1 to 1.5 cm.
Thickness: 0.4 cm.
Outline: modified triangle
Cross-section: lenticular
Edges: convex
Base and stem: corner notched with straight shoulders and rectangular stem. One specimen has a slightly expanding stem.
Material: chalcedony (2), quartz (1)
Provenience: levels 4 and 5

Style T1. Non-stemmed, triangular with straight base (1 specimen, see Plate 1, fig. b).

Specimen number: 22
Length: ca. 2.5 cm.
Width: ca. 1.7 cm.
Thickness: 0.3 cm.
Outline: triangular
Cross-section: lenticular
Edges: straight
Base: straight
Material: agatized wood
Provenience: level 1

Style T5. Triangular side notched (1 specimen, see Plate 1, fig. f).

Specimen number: 41
Length: ca. 1.5 cm.
Width: ca. 1.5 cm.
Thickness: 0.2 cm.
Outline: modified triangle
Cross-section: lenticular
Edges: straight (?)
Base & notches: concave base, finely chipped. Notches are located 0.7 cm. from the base and are 0.2 cm. wide and 0.2 cm. deep.
Material: chalcedony
Provenience: level 2

Unclassifiable fragments. (7 specimens)

Specimen number: 19
Description: Point mid-section
Material: chalcedony
Provenience: level 1

Specimen number: 20
 Description: point tip
 Material: andesite
 Provenience: level 1

Specimen number: 23
 Description: point tip
 Material: opal
 Provenience: level 1

Specimen number: 36
 Description: point tip
 Material: chalcedony
 Provenience: level 3

Specimen number: 38
 Description: point tip
 Material: chert
 Provenience: level 2

Specimen number: 39
 Description: point tip
 Material: opal
 Provenience: level 2

Specimen number: 55
 Description: point mid-section
 Material: chalcedony
 Provenience: level 5

Scrapers

Side Scrapers (5 specimens)

Specimen numbers: 32, 49, 52, 53, and 60
 Length: 2.0 to 3.7 cm.
 Width: 1.6 to 2.6 cm.
 Thickness: 0.4 to 0.7 cm.
 Outline: generally parallel sided with irregular ends
 Cross-section: irregular
 Material: chert (1), blue green obsidian (1), chalcedony (3)
 Provenience: levels 3, 4, 5 and from disturbed area.

End Scrapers (2 specimens)

Specimen numbers: 16 and 51
 Length: 1.6 to 2.8 cm.
 Width: 1.5 to 1.7 cm.
 Thickness: 0.4 to 0.7 cm.
 Outline: ovoid
 Cross-section: plano-convex
 Material: chert (1), chalcedony (1)
 Provenience: levels 1 and 4

Core Scrapers (4 specimens)

Specimen numbers: 2, 3, 29, and 33
Length: 3.7 to 4.7 cm.
Width: 1.5 to 3.5 cm.
Thickness: 0.7 to 1.9 cm.
Outline: irregular
Cross-section: irregular
Material: chert (2), chalcedony (2)
Provenience: level 3

Irregular Scrapers (4 specimens)

Specimen numbers: 12, 17, 57, and 59
Length: 3.5 to 4.6 cm.
Width: 2.3 to 3.8 cm.
Thickness: 0.7 to 1.3 cm.
Outline: irregular
Cross-section: irregular
Material: jasper (2), chalcedony (1), seam agate (1)
Provenience: level 1, disturbed area

Utilized Flakes (8 specimens)

Specimen numbers: 6, 18, 26, 27, 31, 34, 35, and 58
Length: 1.2 to 2.6 cm.
Width: 0.7 to 2.0 cm.
Thickness: 0.2 to 0.5 cm.
Outline: variable
Cross-section: irregular
Material: jasper (1), andesite (1), chalcedony (6)
Provenience: level 3, level 1 - disturbed area

Knives (2 specimens, both are fragmentary)

Specimen numbers: 14 and 50
Length: 2.3 to 2.7 cm.
Width: 1.6 to 2.4 cm.
Thickness: 0.4 to 0.5 cm.
Outline: triangular
Cross-section: lenticular
Material: chalcedony (2)
Provenience: levels 1 and 4

Pebble Tools (2 specimens)Cobble

Specimen number: 1
Length: 14 cm.
Width: 12 cm.
Thickness: 7.2 cm.
Chipping: unifacial with work on both ends so that the artifact may be used reverseably.
Material: andesite
Provenience: surface

Specimen number: 42
Length: 5.9 cm.
Width: 4.5 cm.
Thickness: 2.2 cm.
Chipping: unifacial on a split cobble
Material: andesite
Provenience: level 4

Miscellaneous Chipped Stone (2 specimens)

Description: rectangular shaped water worn stone with small indentations in both ends and in one side.

Specimen number: 13
Length: 3.5 cm.
Width: 1.2 cm.
Thickness: 0.5 cm.
Material: andesite
Provenience: level 1

Description: triple flow (red, black, and translucent) obsidian chip

Specimen number: 57
Length: 1.2 cm.
Width: 0.8 cm.
Thickness: 0.1 cm.
Material: obsidian
Provenience: disturbed area

WORKED BONE

Worked bone ? (fig. g, Plate 1)

Specimen number: 4
Description: fragmentary mammal bone exhibiting two shallow oval shaped depressions which contain parallel striations. It is possible that these depressions were caused by rodent gnawing.

Length: 4.1 cm.
Width: 2.5 cm.
Thickness: 1.4 cm.
Provenience: level 3

Specimen number: 5
Description: the natural channel of the cannon bone appears to have been deepened by grooving, but could also be natural. The piece is fragmentary.

Length: 10.5 cm.
Width: 2.8 cm.
Thickness: 1.1 cm.
Provenience: level 3

Cut Antler

Specimen number: 7
Description: the proximal end of the antler (probably deer) shows small but distinct cutting scars.
Length: 7.5 cm.
Diameter: 1.6 cm.
Provenience: disturbed area

Flattened Bone Rod Fragment

Specimen number: 8
Description: this flattened piece of bone has been rounded at one end and polished on both sides. The other end is broken. It is similar to bone rods found at Wenas Creek (see Warren, 1959, Plate 7 - H-I).
Length: 3.5 cm.
Width: 1.3 cm.
Thickness: 0.6 cm.
Provenience: disturbed area

Splinter Awl (fig. a, Plate 1)

Specimen number: 15
Description: an irregularly split bone which has been sharpened at one end. All edges are well polished. The piece has also been fire burned.
Length: 6.0 cm.
Width: 1.0 cm.
Thickness: 0.5 cm.
Provenience: level 1

Worked Bone?

Specimen number: 21
Description: A fragmentary mammal bone which has irregularly been incised on the rounded surface. This may be due to rodent gnawing.
Length: 3.6 cm.
Width: 1.1 cm.
Thickness: 0.6 cm.
Provenience: level 1

Bone Point Tip (fig. c, Plate 1)

Specimen number: 24
Description: The point is smooth and rounded, but blunt, at the tip. The scars from manufacture are still evident. It has a generally oval cross-section. The piece has also been fire burned.

Length: 1.2 cm.
 Diameter: 0.5 cm.
 Provenience: level 1

Polished Bone Rod Fragment

Specimen number: 28
 Description: This piece is the mid-section out of a bone rod which has been split lengthwise. The piece has also been fired.
 Length: 1.6 cm.
 Width: 0.9 cm.
 Thickness: 0.6 cm.
 Provenience: disturbed area

Awl Tip (fig. h, Plate 1)

Specimen number: 30
 Description: This piece is well ground and polished, and has been fire-blackened. The point is long, narrow, and sharp. Cross-section is rectangular.
 Length: 4.0 cm.
 Width: 0.8 cm.
 Thickness: 0.5 cm.
 Provenience: level 3

Sawed and Incised Antler (fig. 1, Plate 1)

Specimen number: 47
 Description: This piece is the mid-section of a deer antler which has been cut at either end and has a single, deep, longitudinal groove. The piece exhibits superficial line incisions which run parallel to the groove. The antler itself is rather sharply bowed.
 Length: 10.4 cm.
 Width: 4.3 cm.
 Thickness: 1.8 cm.
 Provenience: level 4

(Note: Artifacts bearing the following numbers were recovered from badly disturbed areas and are not assignable to a particular stratum: 7, 8, 27, 28, 57-60. Also, artifact number 25 is non-existent.)

DISCUSSION

The sequence of artifacts at 45YK39 exhibits quite close similarity with sequences found at the other recorded sites in this part of the state. Considering the seasonal round of activities of Plateau Indians which was in operation, certain consistencies could be expected. However, the nature of the economic activity at any one site would reflect artifact diversity to a certain degree. This diversity may also be attributed to sexual dichotomy of labor.

In the case of Wild Rose Rock Shelter the economic activity illustrated by artifacts such as projectile points, scrapers, and associated faunal remains indicate that the site was used as a hunting station and that the game animals were consumed at the site. The presence of awls, knives, and scrapers may show that the animal hides were cleaned, dressed, and manufactured into articles of clothing at the site. From this we obtain a picture of men hunting in areas peripheral to the site, while we see women keeping the fires tended, and engaged in such domestic activities as cooking and making clothing.

The actual sequence of artifacts at Wild Rose may be described as follows:

- (a) Cultural deposits from Unit I clearly show that game animals were consumed at this level. However, no artifacts were found.
- (b) At the base of Unit II the predominant projectile point style is S10, Columbia Valley corner notched. This style remains abundant to the surface of the undisturbed material at the site. Hearth areas rich in charcoal and faunal remains are also found.
- (c) Towards the top of Unit II point styles S11 and S1 make their appearance, the former being more abundant. Point style S10 continues. The greatest abundance of faunal remains and hearth areas occurs at this level. Worked antler also is found.
- (d) Unit III marks the introduction of point styles T1 and T5. Point style S10 continues. The quantity of worked bone increases in proportion to the stone artifacts. A bone point tip and two bone awls were recovered. The concentration of faunal remains and hearths continues.
- (e) The top of Unit III is missing out of the archaeological record due to the activities of collectors.

At Wenas Creek near Yakima (see fig. 1) Warren (1959) encountered a sequence similar to that reported here. Horizon 3, including Wenas Creek I and Wenas Creek II, is characterized by the introduction of large quantities of small points (1959: 158). Among these are included point styles S10, S11, and T5, with S10 points predominating. For the most part the point sequence at Wild Rose duplicates that at Wenas Creek. Splinter awls and flattened bone rods are common to both sites. On the basis of these similarities, it would appear that the culture sequence at Wild Rose fits somewhere between Wenas Creek I and Wenas Creek II. From this it appears that 45YK39 represents a westward radiation of the sequence found at Wenas Creek.

In further support of this view a small shelter was located by the author at Windy Point, about 10 miles east of Wild Rose Rock Shelter and also in Snoqualmie National Forest. This site has been completely destroyed by collectors, although some pictographs were noted. It was later found that Warren (1959: 188-189) reported the same site at Windy Point on the Tieton, but had not located it. He reports that the site was "excavated" by staff members of the Yakima County Museum and that the artifacts found are now on display at the museum. Most of the artifacts found here duplicate findings at Wild Rose. The dominating point style is S10, the Columbia Valley corner notch. Artifacts found here but not at Wild Rose Rock Shelter include plain triangular points, a tapered stem point, a

Plateau Pentagonal, and a stemmed triangular metal point (European contact item).

Another intersecting association can be drawn with Fryingpan Rock Shelter in Mt. Rainier National Park, the highest known archaeological site in the state of Washington (Rice and Nelson, 1964). This site lies on the eastern slopes of Mt. Rainier just below Fryingpan Glacier (see map, fig. 1). Archaeological materials recovered here indicate close affinities with Eastern Washington. The stone chippings are largely of opal and chalcedony such as is found on the Columbia. Also, a single Columbia Valley corner notched point (S10) was found. The site was only seasonally occupied, evidently with the intent of hunting.

The foregoing data all point to a westward expansion of the cultural sequence found at Wenas Creek in late times, probably post-1300 A.D. according to Warren's chronology. It is hypothesized here that this westward movement of cultural traits may reflect the annual movement of peoples into the Cascades during times of the year well suited for economic purposes. In a larger sense, this pattern of life may be considered the nucleus of Plateau Culture.

CONCLUSIONS

It has been the prime objective of this study to report the archaeological findings at Wild Rose Rock Shelter in relation to the physical, natural, and cultural environments surrounding the site. Special emphasis has been placed upon relating artifacts and associated materials to a total way of life. Finally, the cultural sequence represented at the site has been compared with other sites in the same geographic area.

From the data obtained at 45YK39 the following broad conclusions have been drawn:

- (1) Wild Rose Rock Shelter was utilized as a temporary hunting campsite and therefore represents only a portion of a total way of life. This total way of life is characterized by seasonal movements of population in pursuit of natural resources necessary for life sustenance.
- (2) The cultural sequence at Wild Rose represents a western manifestation of the same sequence present in Horizon 3 at Wenas Creek. The antiquity of this sequence probably post-dates 1300 A.D. Neither the extent of western expansion of this cultural complex nor its origin is definitely known, but elements of this complex have been found on Mount Rainier.

Taken together, these two conclusions provide a basic understanding of the evolution of Plateau culture during the Late Period and up to historic times.

In closing, the importance of this area should not be underestimated. Problems relating to the growth of Plateau culture, the origin of various point styles, the movement of culture traits from the Coast to the Interior and vice versa, all remain unclarified. Many of these problems can be answered only by more extensive scientific work in mountain areas, especially in our National Forests. Now is the time for this research to be conducted, before future road construction and the activities of collectors destroy those resources still existent.

It is therefore recommended that a government sponsored program be established which would provide, or would aid in providing, for the following:

- (1) A detailed archaeological survey of Snoqualmie National Forest which would locate and describe all prehistoric sites within that area.
- (2) Selective testing of archaeological resources documented by the survey in step 1.
- (3) Complete excavation of sites which have been tested and show promise of yielding sufficient data to aid in reconstructing the prehistory of the south central Cascades.
- (4) Provision for publication of significant findings.
- (5) Provision for a permanent display of the artifacts recovered from such a program after research studies have been conducted. This display would be placed in the custody of the National Forest for the purpose of public education and information.
- (6) Enforcement of the Federal Antiquities Law of June 8, 1906.

Such a program as that outlined above could quite easily be carried out by one of the state universities, or by the Washington Archaeological Society backed by one of the universities. In any event, the financial support of the National Forest Service would be essential.

ACKNOWLEDGEMENTS

The author is indebted to the following individuals and groups without whose help this project would not have been possible. Dr. Richard D. Daugherty, Washington State University, authorized and supported the project. Mr. Charles M. Nelson, Washington State University, assisted in excavation of the site and in profile drawing. Mr. C. G. Nelson prepared the figures and photographs for publication. Members of the Washington Archaeological Society washed and catalogued artifacts, and also recorded level bag data. Finally, the National Forest Service, Snoqualmie National Forest, is to be thanked for their co-operation and interest.

BIBLIOGRAPHY

- Dalquest, Walter W.
1948 "Mammals of Washington"
University of Kansas Publications, Museum of Natural History, Vol. 2,
Lawrence, Kansas.
- Gibbs, George
1855 "Report on the Indian Tribes of the Territory of Washington"
Pacific Railroad Report, Vol. 1, pp. 402-436.
Washington.

Piper, Charles V.

- 1906 "Flora of the State of Washington"
U. S. National Museum Contributions from the U. S. National Herbarium,
Vol. XI.
Washington.

Ray, Verne F.

- 1932 "The Sanpoil and Nespelem"
University of Washington Publications in Anthropology, Vol. 5.
Seattle.
- 1936 "Native Villages and Groupings of the Columbia Basin"
The Pacific Northwest Quarterly, Vol. 27, No. 2, pp. 99-152.
Seattle.

Rice, David

- 1964 "Indian Utilization of the Cascade Mountain Range in South Central
Washington"
The Washington Archaeologist, Vol. 8, No. 1, pp. 5-20.
Seattle.

Rice, David G. and Charles M. Nelson

- 1964 "Archaeology of Fryingpan Rock Shelter, Mount Rainier National Park"
Unpublished manuscript, Washington State University.
Pullman, Washington.

Spier, L. and E. Sapir

- 1930 "Wishram Ethnography"
University of Washington Publications in Anthropology, Vol. 3,
No. 3, pp. 151-300.
Seattle.

Thomson, Jack

- 1962 "Archaeological Evidence of Rim Rock Sheep in Washington"
The Washington Archaeologist, Vol. VI, No. 12, pp. 2-7.
Seattle.

Warren, Claude N.

- 1959 "Wenas Creek: a Stratified Site on the Yakima River, Its
Significance for Plateau Chronology and Cultural Relationships"
Unpublished Master's Thesis, University of Washington.
Seattle.

Spier, L.

- 1936 "Tribal Distribution in Washington"
General Series in Anthropology, No. 3
Menasha.

- - - - -

WASHINGTON STATE UNIVERSITY

PULLMAN, WASHINGTON 99163

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

August 14, 1966

Mr. Click Relander
3701 Commonwealth Drive
Yakima, Washington

Dear Click,

I will be passing through Yakima again on Tuesday the 16th and hope that you will not mind if I pay you a visit. Most probably I will not arrive until early evening.

One of my reasons for seeing you will be to obtain names of possible informants from the southern Yakima and Wishram areas. You see, Dr. Walker with two Nez Perce informants will be in the Yakima vicinity on Wednesday and Thursday and would like me to accompany him on a few interviews. The nature of his research is to gather information pertaining to Nez Perce fishing along the Lower Columbia, thus he does not want his presence announced prehand. Naturally, individuals from the lower Yakima Valley and The Dalles would be the most fruitful to interview from this standpoint. In order for Dr. Walker to reach me in the field I have given as my address your own. He said that he would call me Tuesday evening late or early Wednesday morning so as to arrange a meeting time and place. I hope that this imposition does not interrupt any of your plans and that we are, in fact, able to procede in this manner.

A second reason for visiting you will be to discuss some of my findings from the western slopes of the Cascades in relation to Yakima ethnographic patterns. So far, most of my work in Western Washington has been around Packwood, but I also have some interesting parallels from the Willipa Hills region among the Chehalis.

I am already deeply indebted to you for past favors, so I hope that this is not the straw that broke the camel's back.

Sincerely yours,

Dave Rice

David G. Rice
Research Assistant
in Anthropology

*Robert B. Jones
Copy* *1/8/68*

Pullman, Washington
April 6, 1967

Mr. Jin:

I hope you are good at puzzles -- all of the enclosed maps either match or overlap. They cover the entire length of the John Day Reservoir. There is one possible confusion: That is that the first five sheets are taken from USCGS hydrographic charts; all of the remaining sheets are taken from USGS topographic maps. The latter are preferred because of their greater detail. Of course, the numbers which appear on the map sheets correspond to the ethnographic sites as they are listed in the accompanying manuscript.

Also included are photographs of several sites and also a few features which relate directly to fishing. These, too, are keyed by number to the sites listed in the manuscript.

Again, I hope that this material is useful to you and lives up to your expectations. Also, I would appreciate it if you would acknowledge receipt of these documents.

Very truly yours,

David G. Rice

David G. Rice
Teaching Assistant
in Anthropology
Washington State University
Pullman, Washington

ETHNOGRAPHIC SETTLEMENTS AND FISHING SITES
IN THE JOHN DAY RESERVOIR AREA OF THE COLUMBIA RIVER

Manuscript prepared by

David G. Rice
Department of Anthropology,
Washington State University
Pullman, Washington
in
cooperation with
The Yakima Tribal Council

This manuscript is a list of ethnographic settlements and fishing locations obtained from Mr. and Mrs. George Gibson and Mr. Walter Cloud on August 24, 1966. Levi George served as translator. All of the sites listed below were seen and/or visited by the writer in the company of the above named informants. Undoubtedly, there are a few errors and it is pointed out that the writer is in the process of rechecking this material for eventual publication. Nevertheless, it is felt that this listing is the most accurate and complete compilation of Indian settlements that is available for the John Day Reservoir area.

The following listing is intended to serve as a numerical key to the site locations enumerated on the maps which accompany this text. It is pointed out that although the numbers are consecutive, they are not continuous. The gaps include numbers 11, 13, 15, and 19. These do not reflect gaps in the information.

at dam

1. witsas' *ank-wichas = (muscles)*

This is the general name for the area surrounding the John Day damsite. Several seasonal sites were included within its bounds, including a burial yard and numbers 2 and 3 below.

2. -----

This was a seasonal fishing site. Petroglyphs occur on the rocks here.

3. *sook pah - ~~was~~ ^{was} ~~had~~ (point)*

This was another big fishing place which extended along the beach for about a mile.

4. me xa'

This was an important fishing place at the mouth of the John Day River where the present-day bridges cross its banks.

5. -----
This is the site of an eel fishery.

6. -----
Fish were netted at this place.

7. -----
This was another place where fish were taken.

8. -----
Fish were speared and netted at this place. Three or four fish leads have been constructed out of rocks. In the past these had scaffolds erected over them. This was also an extensive campsite. Several stone net weights (pebbles and cobbles notched at both ends) were recovered here, and the site has a rather thick midden deposit.

9. tsa wi' wins
This is a place where fish were netted.

10. -----
Fish were dip-netted from the rocks at this site.

12. ~~naxs~~ kila kila ("crooked place")
This is a general area name which included a camp on the Washington side of the river. Salmon, steelhead, and eels were taken here, and fish drying racks once lined the beaches.

Wa wit - man's name (like rusty (painted) over 100 yrs ago -

14. ha la ka lu t ("coming into the water")
Fish were speared along a sand bar in this locality.

16. Snops ~~Schups~~ *Schups-pa Schups-pa-pa - the alder shell on one side Springs =*
Fishing place for bluebacks.

17. k'na xo pa *coyote rock + wa u k'la - (ore-see) coyote rock*
General name for area. It was not a living area, but one used for fishing and fish drying. Channels in the rocks here were used for catching eels. Steelhead and salmon were speared. *(wade out holes)*

18. k mit ("opening in the rock")
This term applies to the area upstream from the mouth of Rock Creek; also, it is the name of a village located close to the mouth of Rock Creek. Where the rocks are steep along the river fishing was done. There used to be horse racing on the long flat to the east of the mouth of Rock Creek.

20. ta ma pa no ("thrown into the river") *Jill Net Place*
Seasonal fishing camp. Soldiers once attacked this village thinking that the inhabitants were Paiutes.

21. ta waš ("roasting something")
This was a village area. Fishing was done between April and October; no winter fish were taken.

22. pal wax'
This was a winter village. A cemetery is here. people moved downstream to fishing places for the rest of the year. An eel fishery was just upstream from the site.

23. mul mul pa ("springs")
This was a small winter campsite.

24. šxo away
This was the general area name for the town of Roosevelt and Wood Gulch.
Also, there was a winter village here. A fishing site, number 25, is included within this area.

25. -----
This fishing site has petroglyphs on the rocks along the beach. A fish lead was also observed here.

26. taks paš pa ("red dirt") *John Day River - Lut za lu K(ah) Red dirt*
This was a big fishing site.

27. hou ye *Big*
A ~~small~~ fishing site. *g. H. W. T.*

28. wi la xou yut ("wind blowing")
Properly the name of a village headman, this was a winter encampment.

29. pou xan pat *water coming back up*
This name refers to a winter camp area.

30. tan ou i ša
A small fishing site. *Pine creels people fished there - like water running against the land*

31. so wait sas ("sticking out into the water")
This place name refers to a small point of land downstream from number 29.

32. ta na ma
This was a winter village, including a cemetery within its area. During the summer the adjacent island was occupied.

32A - *Rolling rock game - Tow Bow Kah La-Li teekas - like a pony arch*

33. tam oi ou la tes (refers to a rock throwing game)
This was a winter village.

34. puš pa ("juniper") *Push pa*
(a) This was a fishing place.
On the side (b) Here eels were caught on boulders.

35. na wa wi
This was a winter village in the vicinity of Alderdale.

36. slux tia xis ("alkali dirt")
This was a winter village.

37. *wa* ~~wa~~ pa ("on the tail") *twine pa*
This was a site for dip-netting salmon.

38. pa lax pit pa (refers to a shaman treating a sick person)
An eddy where fish were netted.

39. paška paška pa ("skull")
This was a fishing place located close to a cemetery.

40. ama ama pa ("island")
This was a big camp area during the spring.

41. ai yu i

This was a winter village.

42. tika lu ni ("getting into the water")

This is a general area name and includes a winter village area, number 43.

43. tika lu ni

This refers to the winter village area along the river.

44. yu ma tsit

This was a big cemetery and contained small camps during the summer. Fish weights occur on the south side of the island in piles. This site is included within the area of tika lu ni.

45. nu i chas pa

This was a site where fish were netted.

46. ya pa losa ("island sitting in the water")

The mainland area was a winter village. During the summer there were many camps on the island.

47. ka li sa pa ("bend in the river")

This was a fishing site where silvers and bluebacks were caught by dip-net. Fish were also caught here by drifting in canoes over a gravel bar with nets.

48. las qum pa ("ashes")

This was a winter village area. In late fall and winter fish were speared by torch-light while drifting by islands 17 and 18.

49. -----

This area denoted a specific section of the winter village of las qum pa.
(ashes)

50. hou hou ("willow trees").

This was another winter village area.

51. pa lait

This is a general name for the area on the Oregon side of the river opposite hou hou.

52. qwalk pa - *shallow water - Ripples =*

Winter village area.

53. sa lu sa ("rock sticking into the water")

This was a fishing site adjacent to a big eddy.

54. wai pax pa ("river going down")

This was a winter fishery.

55. um pa

This was a fishing place at the mouth of the Umatilla River. In winter fishermen waded up the Umatilla River with a wide net for any fish they could get.

Scale 1:20,000 at Lat. 45°43'

SOUNDINGS IN FEET

Soundings downstream from the foot of Rock Creek Rapids (Long. 120°29') refer to the normal pool elevation of Lake Celilo, which is 160 feet above mean sea level; soundings upstream from Long. 120°29' refer to an adopted low water gradient established by The Corps of Engineers. (see Profile for elevations)

Areas which are subject to drying or covering depending on the elevation of the water surface above the chart datum are tinted green.





36'

35'

34'

1000 500

Towal

SP & SRR

SQUALLY HOOK
RAPIDS RANGE

Sec 50ft

8

52ft

INDIAN RAPIDS RANGE 2

UPRR

Hook

U.S. Hwy No 30

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see C. & G. S. Chart No. 1)

Lights (Lights are white unless otherwise indicated):
 F fixed S-L short-long OBS obscured Rot. rotating
 Fl flashing Occ. occulting WHI whistle SEC sector
 Qk quick Alt. alternating DIA diaphone m. minutes
 Gp group I. Qk. interrupted quick M. nautical miles sec. seconds

Buoys T B temporary buoy N. nun B. black Or. orange W. white
 C. can. S. spar R. red G. green Y. yellow

Bottom characteristics:
 Cl clay M. mud hrd. hard bk. black gy. gray
 Co coral Rk. rock rky. rocky br. brown rd. red
 G. gravel S. sand sft. soft bu. blue wh. white
 Grs. grass Sh. shells stk. sticky gn. green yl. yellow

(23) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.

(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

AERO aeronautical R Bn. radiobeacon C. G. Coast Guard station
 Bn. daybeacon R TR. radio tower D.F.S. distance finding station

AUTH authorized; Obs. obstruction; P.A. position approximate; E.D. existence doubtful.

HEIGHTS

Heights in feet

AUTHORITIES

Surveys by the Coast & Geodetic Survey and the Corps of Engineers.

PLANE COORDINATE GRID

Oregon State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.

CAUTION

Temporary defects in aids to navigation are not indicated on this chart except where a buoy replaces a fixed aid.

deviations see C & G S Chart No 1)

BSC obscured
 HIS whistle
 A diaphone
 nautical miles
 sec. seconds
 Or orange
 G green
 W white
 Y yellow

bk black
 br brown
 bu blue
 gn green
 gr gray
 rd red
 wn white
 y yellow

the depth indicated
 et above datum of soundings
 C G Coast Guard station
 DFS distance finding station
 approximate E D existence doubtful

the Corps of Engineers

PRD
 indicated by dashed
 - digits are omitted

avigation are
 here a buoy
 to Mariners



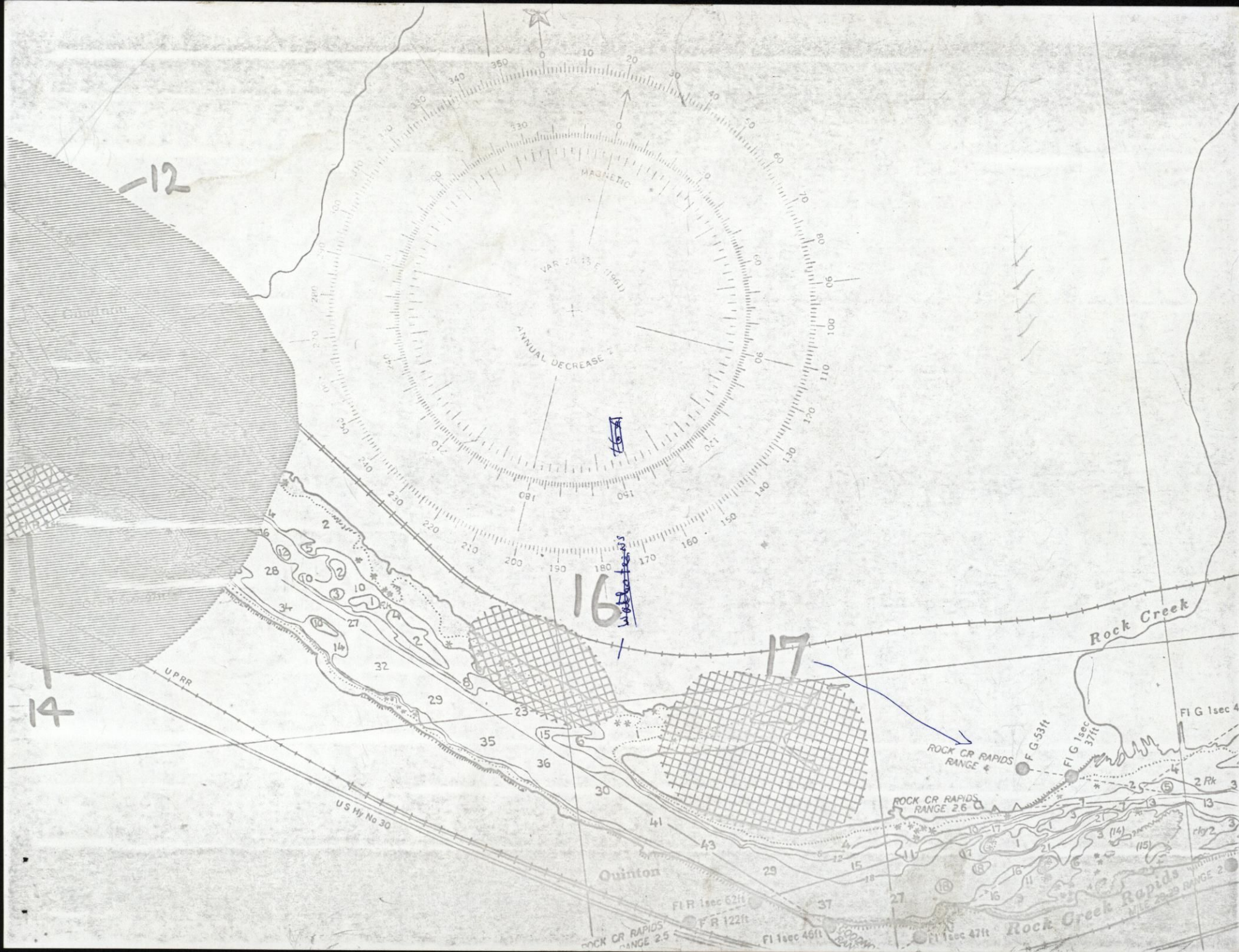
755
 10"
 45°
 44'
 50"
 750
 43'
 (JOINS PANEL BELOW)

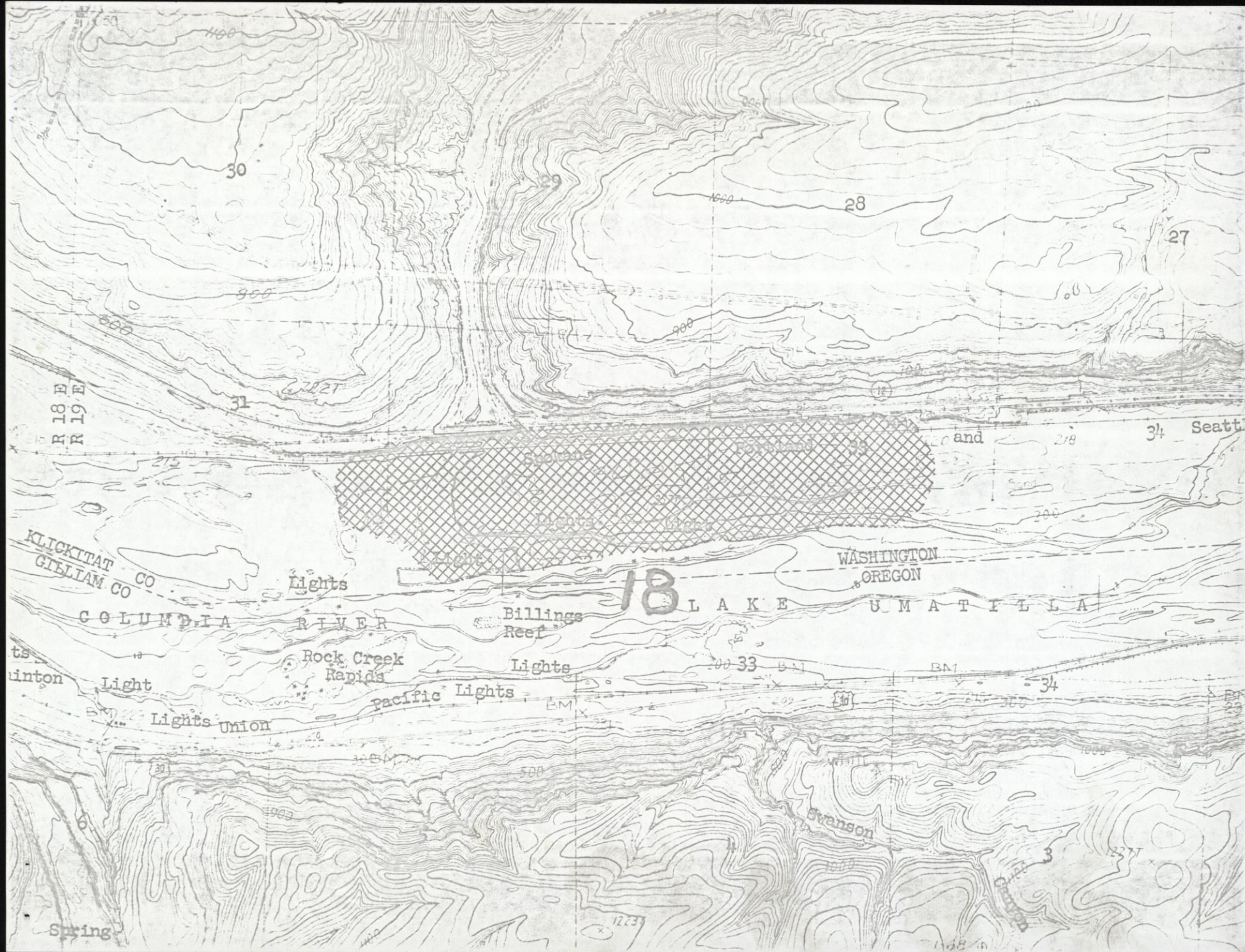
-12

14

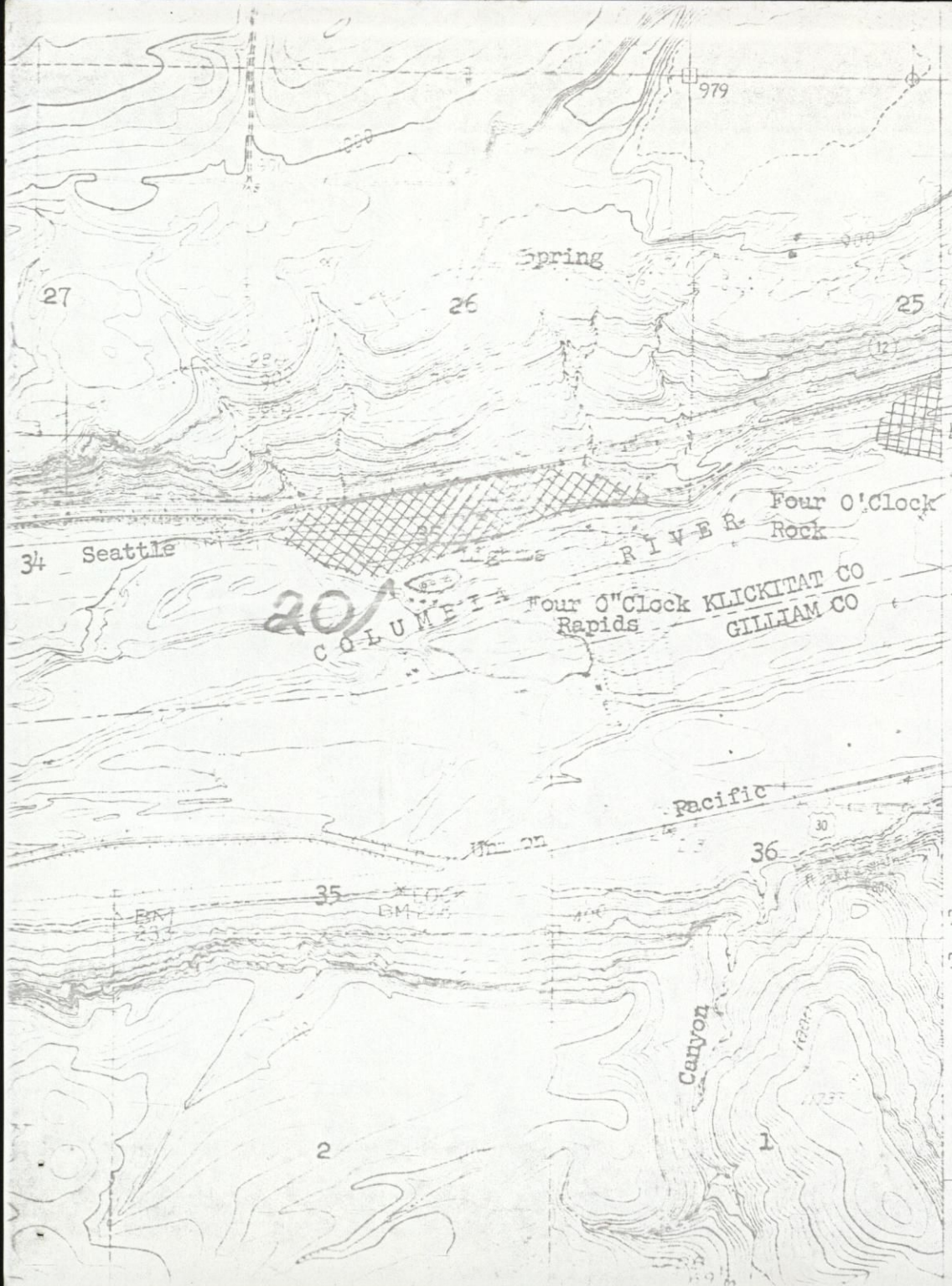
16

17





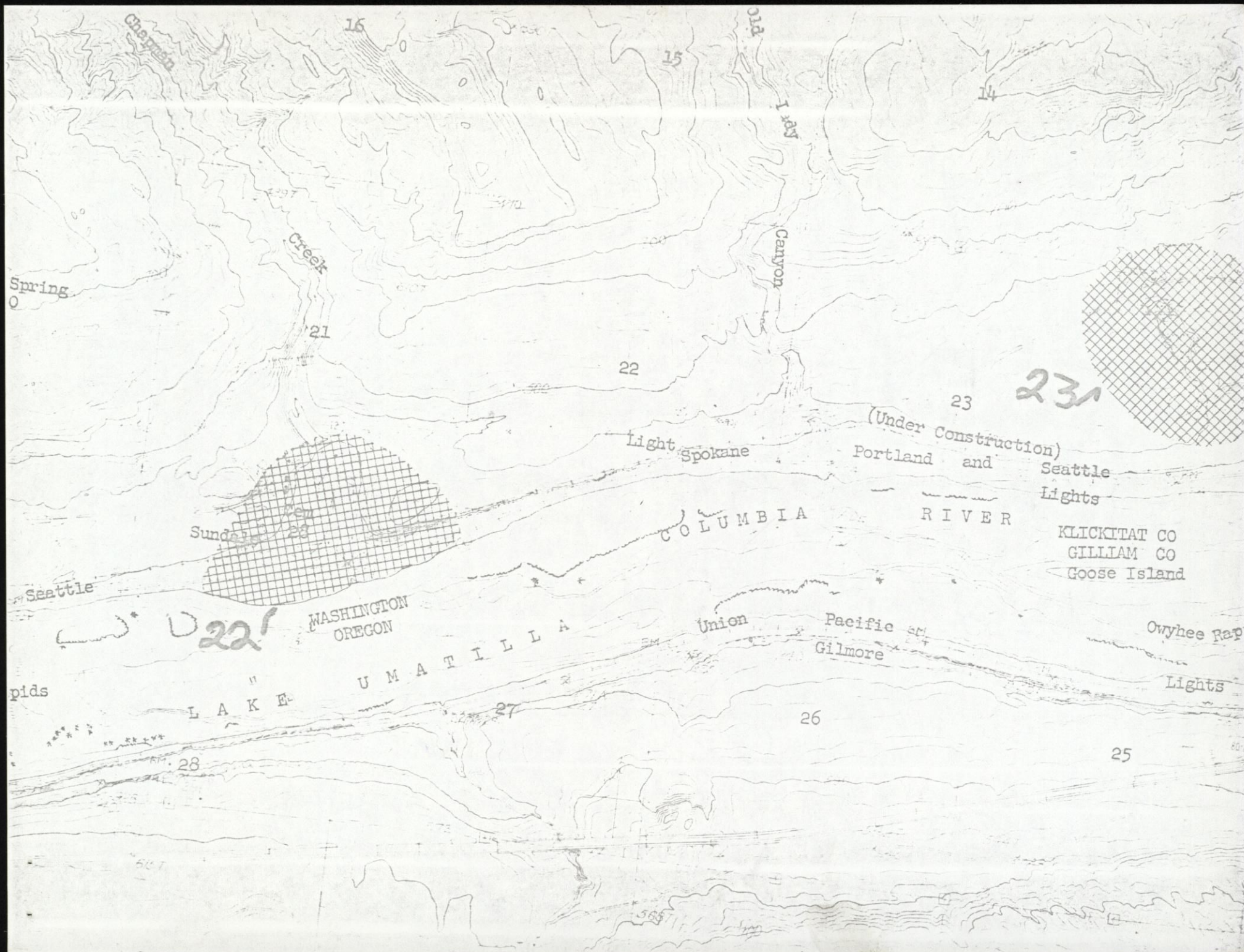


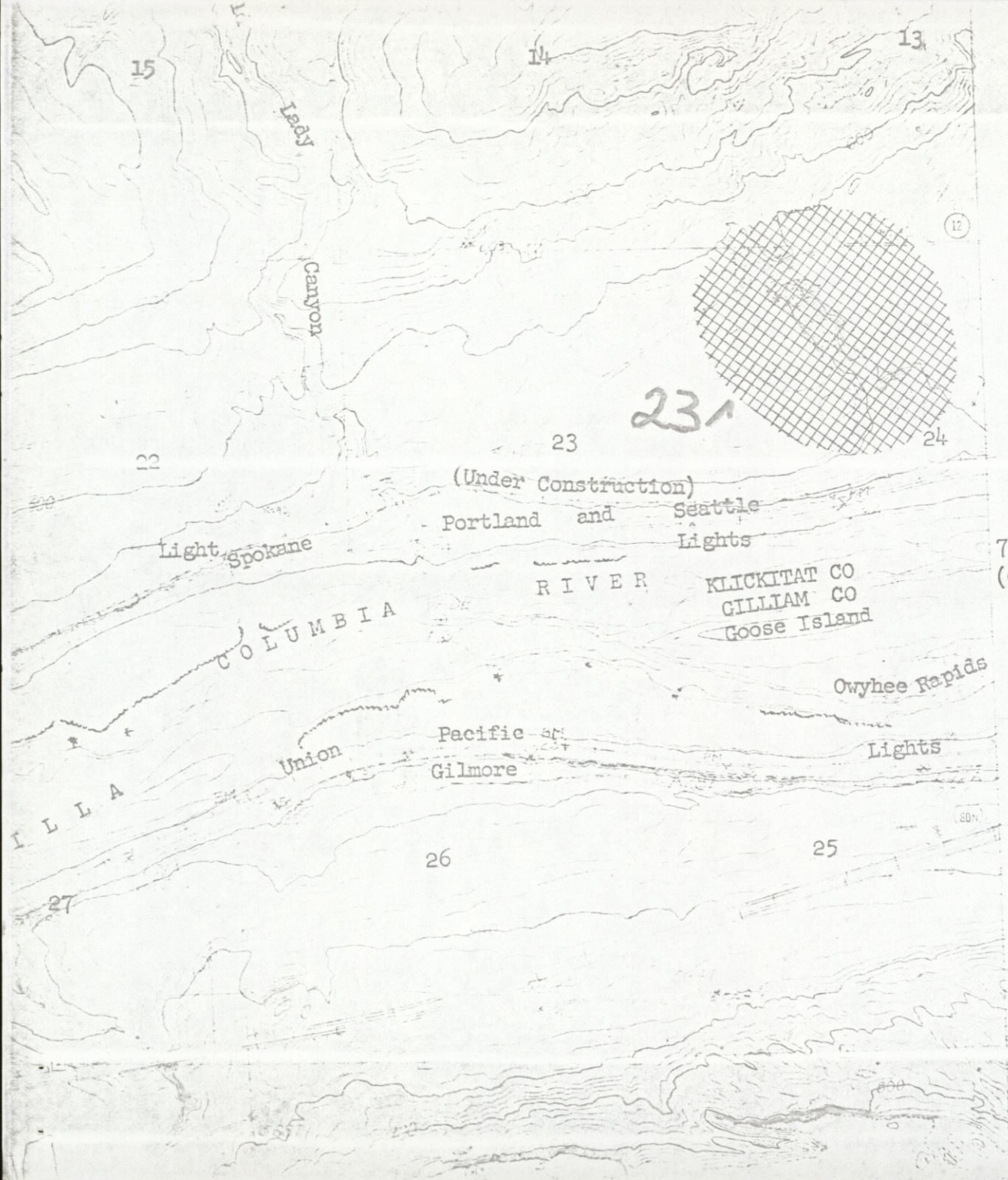


42'30"

T.3 N.

T.2 N.





750 000 FEET
(OREG.)

42' 30"

DEPT. OF THE INTERIOR
GEOLOGICAL SURVEY
120°15' 45°45' R.20 E. R.21 E.

2 070 000 FEET (WASH.) 12'30"

150 000 FEET
(WASH.)

13

Spring

18

West Roosevelt

17

Roosevelt

Wood

Green

25

Island No 30

24

19

Spokane
lights

Portland

and

WASHINGTON
OREGON

Toll Ferry

Seattle

CORPORATE
BOUNDARY

UMATILLA
RIVER

Union

Pacific

Klickitat CO
GILLIAM CO

24

LAKE

COLUMBIA

Owyhee
Rapids

Lights

Light

Gravel
Pit

Arlington Municip

Airway Beacon

ARLINGTON AIRPORT

Arlington

W T.

CORPORATE BOUNDARY

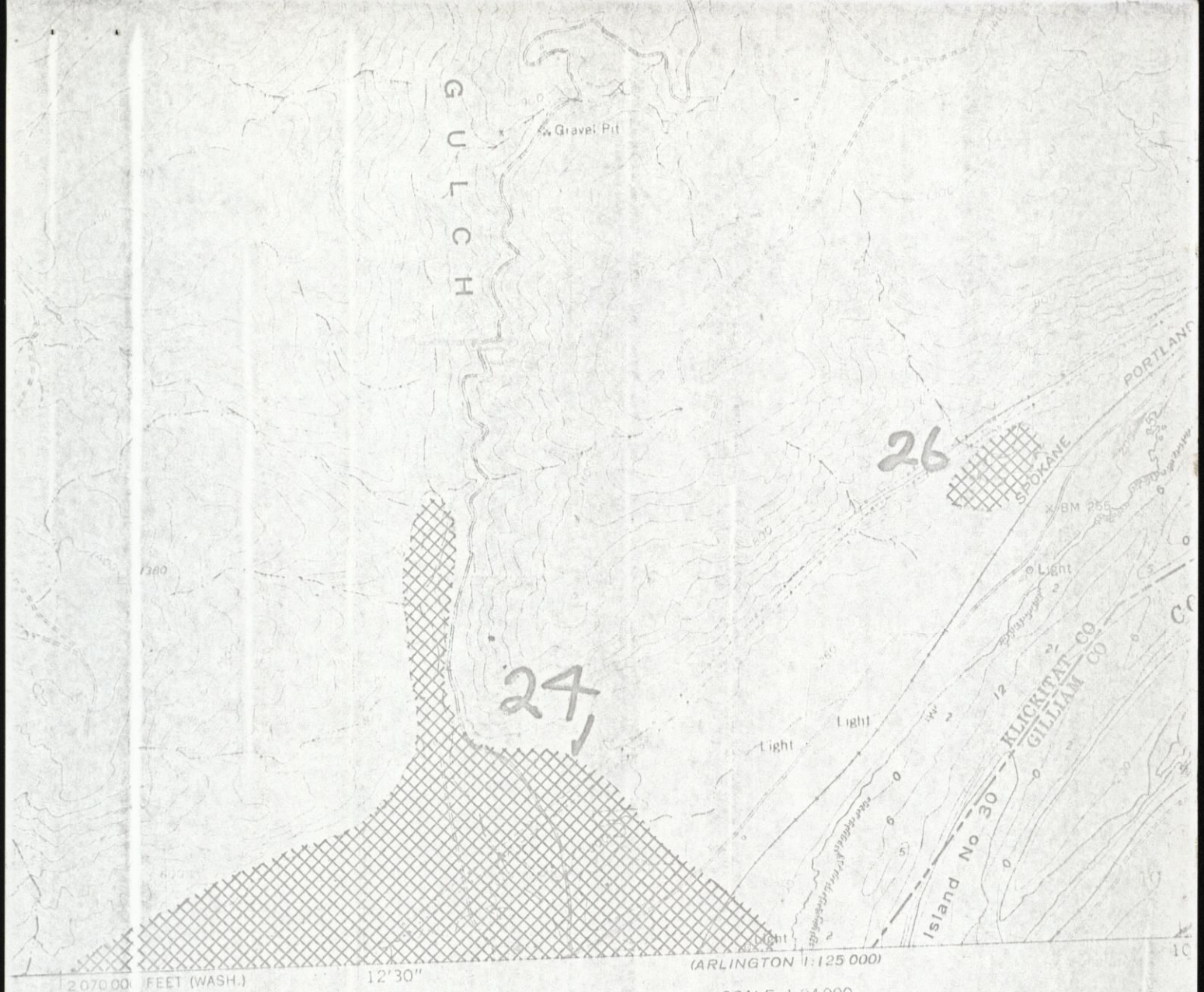
CORPORATE BOUNDARY

30

VAMQ
1-16

29

30"



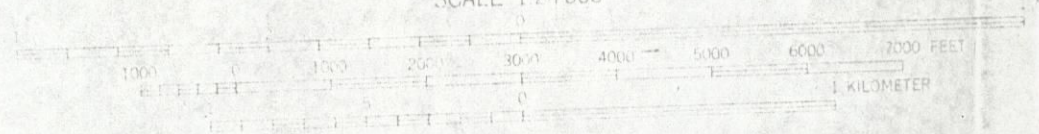
cal Survey

Chart 6161 (1962)

roposes

n
system, south zone

(S,



CONTOUR INTERVAL 20 FEET

DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET - DATUM IS LOW WATER
GRADIENT ESTABLISHED BY CORPS OF ENGINEERS

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



47'30"

28

26

27

SEATTLE

PORTLAND

SPOKANE

WASHINGTON
OREGON RIVER

COLUMBIA

PACIFIC

Klickitat Co
Gilliam Co

Peyaka Island

Light Island

Light

BM 255

BM 222

UNION

Gravel Pit

5071000m N

2090000 FEET

770000 FEET
(OREG)

10'

47'30"

Creek

32

29

31

30

Light

Light

BM

SPOKANE

PORTLAND

Island

WASHINGTON
OREGON

COLUMBIA

Light No 28 Light

Will

BM X 222

X BM 241

Klickitat CO
GILLIAM CO

Moonax

EM 237

Peyaka Island

EM

231

UNION

X Gravel Pit

BM 223

160 000 FEET
(WASH.)

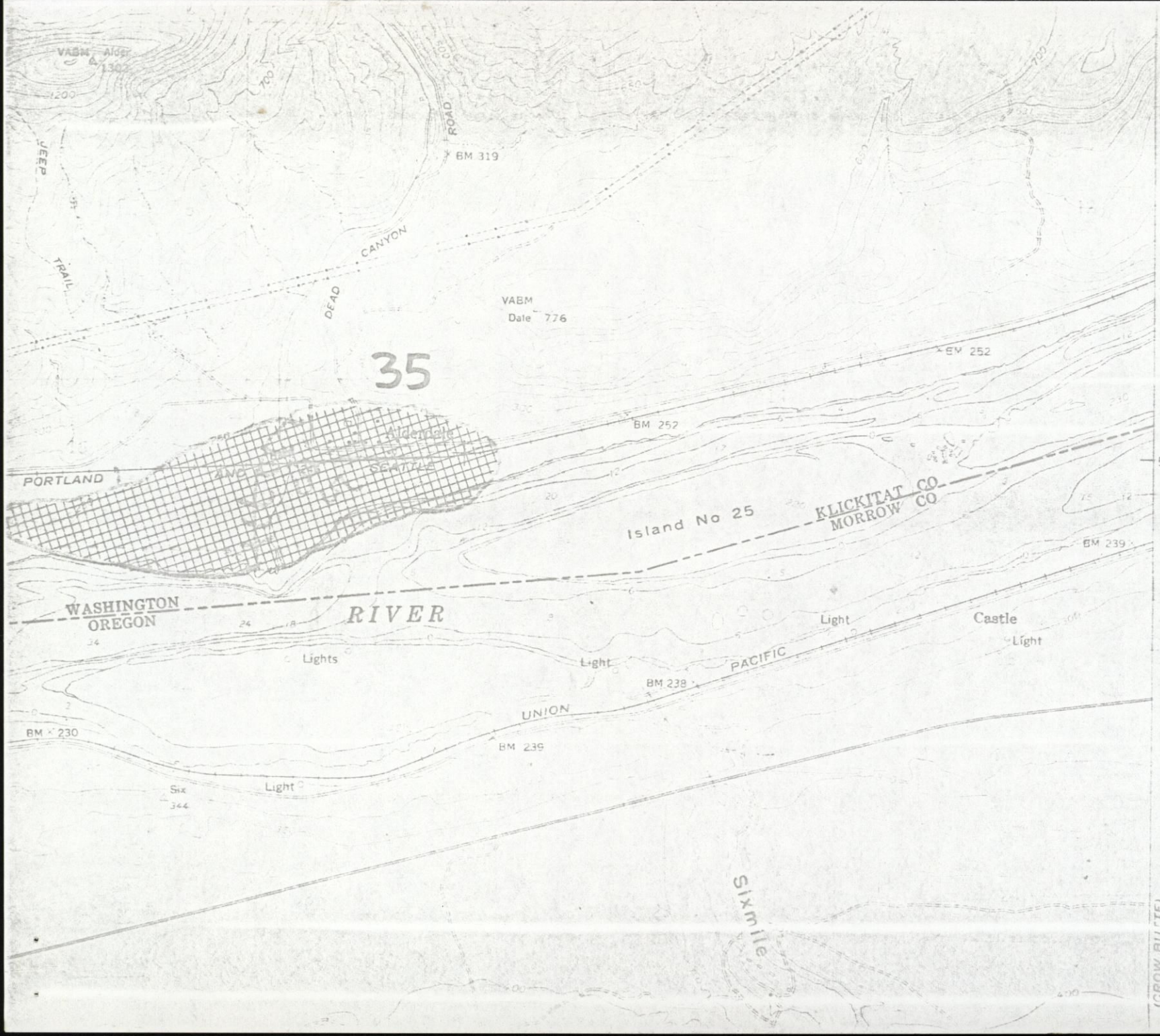


(ALDERDALE)

47° 30"

770 000 FEET
(OREG.)





35

PORTLAND

WASHINGTON
OREGON

RIVER

Island No 25

Klickitat CO
MORROW CO

Light

Castle

Light

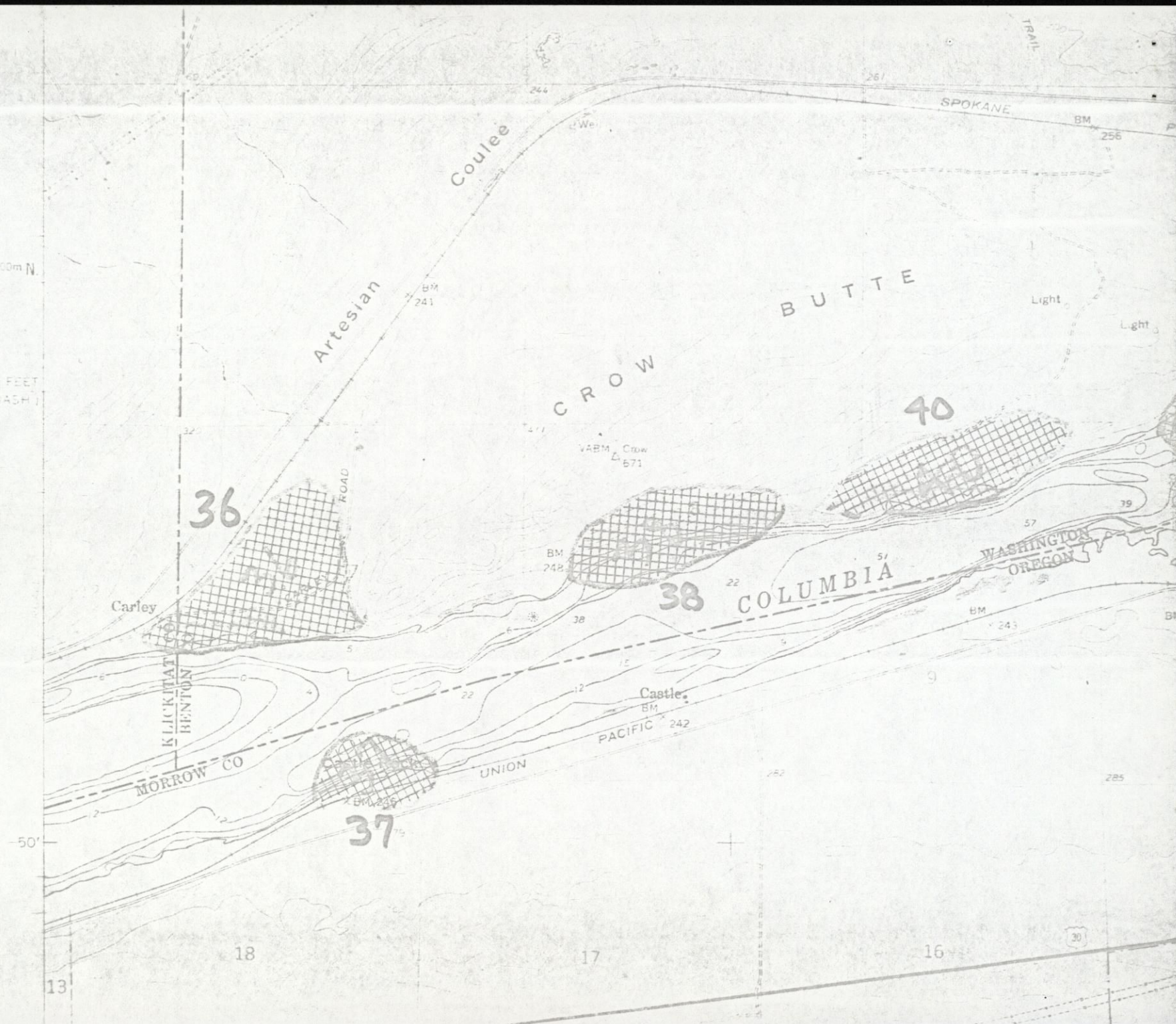
UNION

PACIFIC

Six mile

(CROW BUTTE)

508200m N.
190 000 FEET
WASH



7.5 MINUTE SERIES (TOPOGRAPHIC)

IBLA

47°30"

2 190 000 FEET (OREG.)

119°45'

45°52'30"

Canoe Ridge

PORTLAND

AND BM 256

SEATTLE

Water

Whitecomb

BM 264

42

41

800 000 FEET (OREG.)

39

Canoe Encampment
RIVER Rapids

BENTON CO
MORROW CO

Island No 23

UNION

PACIFIC

SAM BOARDMAN AVE

Toms Camp

269

AD

BOARDMAN
MATHIAS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(CANOE RIDGE)

119°45'
45°52'30"

288000m E

2 200 000 FEET (WASH.)

42'30"

(BLALO)



119°37'

4

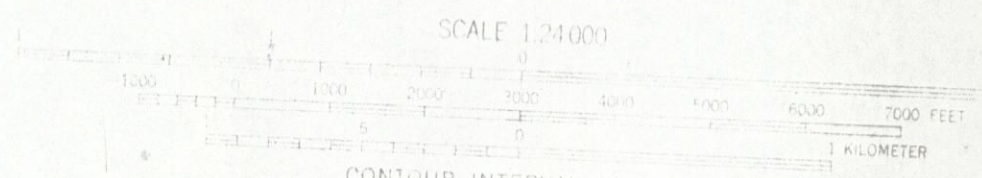




ological Survey

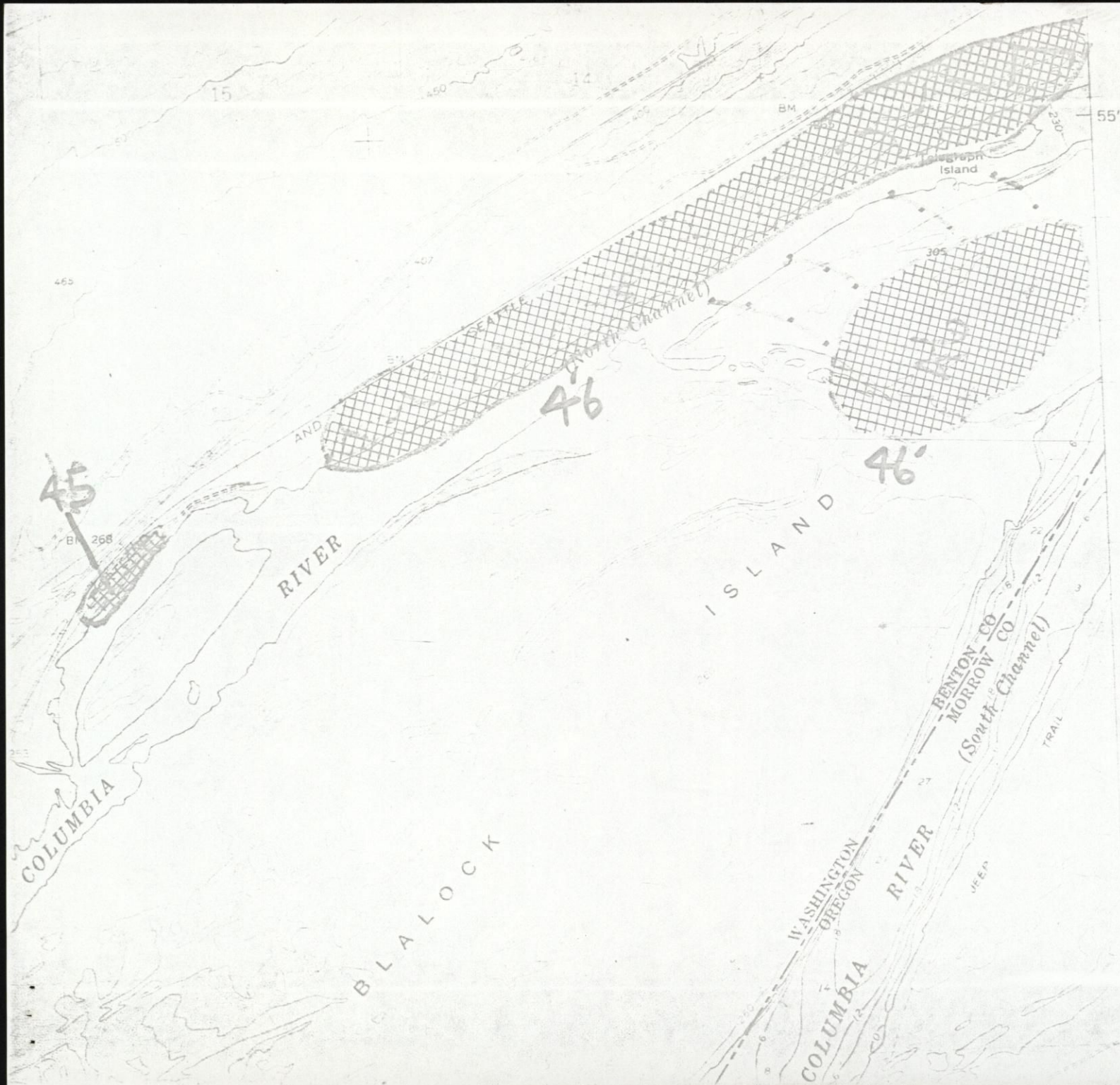
trial
um
n system, south zone

ks.
S Charts 616) and
or navigational purposes
ent data



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS LOW WATER
GRADIENT ESTABLISHED BY CORPS OF ENGINEERS

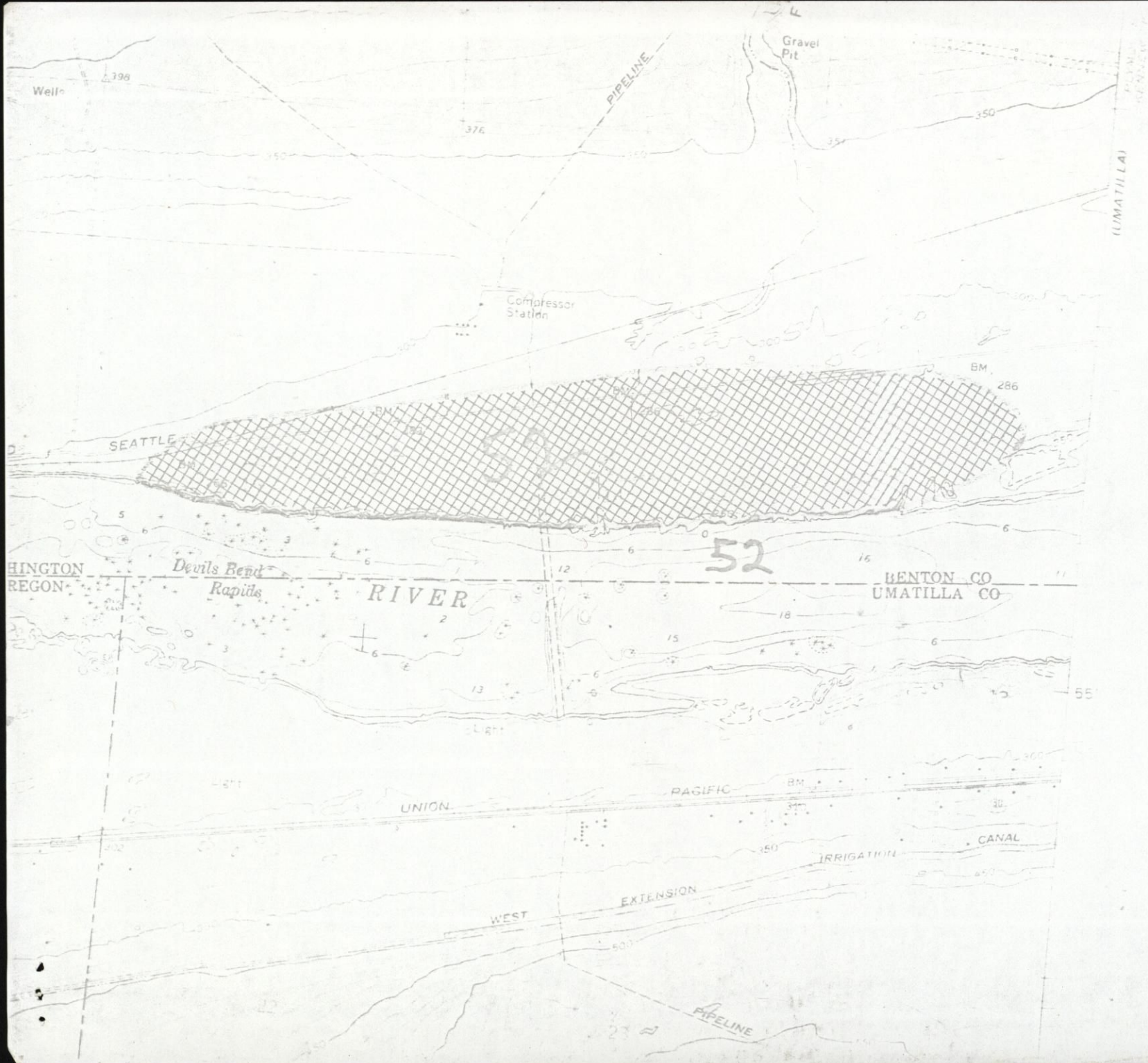
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



BLALOCK ISLAND







Simasi Butte

SPOKANE PORTLAND AND SEATTLE

Plymouth

WASHINGTON OREGON

COLUMBIA RIVER

BENTON CO
UMATILLA CO

COLUMBIA

55

Umatilla

PACIFIC

UNION

WEST EXTENSION

54

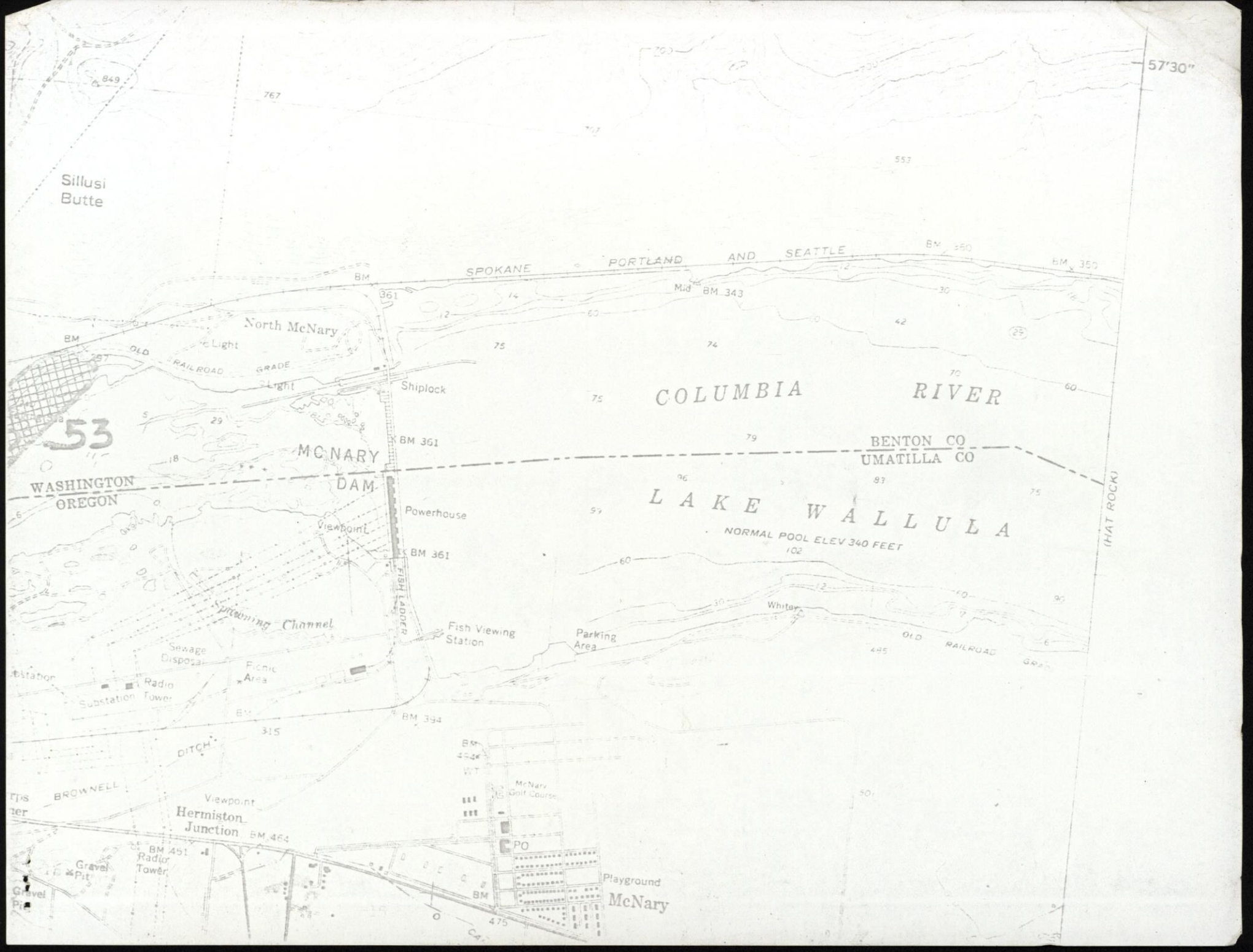
Sharps Corner

Gravel Pit

Gravel Pit

(IRRIG DN)

55'



57°30"

Sillusi Butte

SPOKANE PORTLAND AND SEATTLE

COLUMBIA RIVER

BENTON CO
UMATILLA CO

LAKE WALLULA

NORMAL POOL ELEV 340 FEET

(HAT ROCK)

53
WASHINGTON
OREGON

MCNARY
DAM

Shiplock

Powerhouse

BM 361

Viewpoint

FISH LADDER

Fish Viewing Station

Parking Area

Whitney

OLD RAILROAD

Sewage Disposal

Picnic Area

Radio Substation Tower

DITCH

Viewpoint

Hermiston Junction

BM 451
Radio Tower

McNary Golf Course

PO

Playground
McNary