Initials: JM

File Name: 430661

Commodity: Al Ca Fe Si

Country: USA

State/Province: California Nevada

County: Inyo —

Project: Kaolin Deposits

Date: 1915

Title/Subject: Correspondence, Assay Data, and Report on the Kaolin Deposits

Notes: In the Tecopa Mining District.

- Oversize Doc(s) ✓ Assay Data ✓ Log(s)

Map Scale: —

T: —

R: —

S: —

NEW YORK CITY
42 BROADWAY

LOS ANGELES, CALIFORNIA
908 W.P. STORY BUILDING

SALT LAKE CITY, UTAH
900 NEWHOUSE BLDG.

MEXICO, D.F.
411 MUTUAL BUILDING

RECEIVED

UNITED STATES SMELTING REFINING & MINING EXPLORATION COMPANY

CABLE ADDRESS, "SMELTINGCO"

55 CONGRESS STREET

BOSTON, MASS.

PRESIDENT'S OFFICE U.S.S.R. & M. CO. 1915 AUG 3 P M

FILE
SUBJECT

212

Salt Lake City, Utah, July 30 - 1915.

United States S. R. & M. Exploration Co.,
#55 Congress Street,
Boston, Mass.

Nevada & California

Dear Sirs:-

We hand you herewith report of Edward R. Zalinski on Kaolin Deposits near Beatty, Nevada, and near Tecopa, California.

Yours truly,

UNITED STATES SMELTING COMPANY

BY _____

Encl.

COPY

Midvale, Utah, July 6th, 1915.

Mr. G. W. Heintz,
Gen.Mgr., U. S. Smelting Co.,
Salt Lake City, Utah.

Dear Sir:-

The first ten samples of supposed kaoline, sent in by Mr. Zalinski, gave the following results on analysis:-

	SiO2	Fe.	Al2O3	CaO
No.1	61.0	2.6	16.3	8.0
2	41.2	2.6	11.6	18.9
3	38.4	2.3	15.0	18.7
4	64.0	0.8	3.0	16.3
5	62.1	1.3	3.0	20.0
6	64.2	0.5	2.8	16.5
7	63.1	0.4	5.4	16.8
8	65.0	0.7	4.8	15.6
9	62.0	0.7	15.0	5.8
10	62.8	0.6	15.4	5.6

Telephone advices were to run only these ten, after which instructions would be given as to what should be done with the remaining samples. The latter are accordingly being held for further advice.

Yours truly,

L. D. Anderson,

Superintendent.

Report on Trip to Find

KAOLIN DEPOSITS NEAR BEATTY, NYE COUNTY, NEVADA

and

NEAR TECOPA, INYO COUNTY, CALIFORNIA

Field Work
June 20-25, 1915

Edward R. Zalinski

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TRIP TO FIND KAOLIN DEPOSIT NEAR BEATTY, NEVADA

Mr. G. W. Heintz
United States Smelting Co.
Salt Lake City

Dear Sir:

In accordance with your request, I made a trip to Beatty, Nevada in search of a kaolin deposit, a specimen of which was furnished you by Mr. J.W. Murphy of Pioneer, Nev.

Beatty is on the Las Vegas & Tonopah R.R., 120 odd miles north of Las Vegas and about 80 miles south of Goldfield. Inquiry was made at Beatty as to the existence of any kaolin or clay deposits in the vicinity, but no one could be found who appeared to have information of such deposits,- with the exception of a clay or adobe near Gold Center. The latter was visited.

The writer found that Mr. J.W. Murphy of Pioneer was working at the Kiernan quicksilver mine at Telluride eight miles east of Beatty, and went to see him for information regarding the kaolin furnished you. Mr. Murphy informed the writer that the deposit was near Tecopa, Inyo county, Cal. on the Tonopah & Tidewater R.R., and that it was owned by Los Angeles men. He had never visited these deposits himself,- the specimen of kaolin sent you having been given him by Ben Morton, the roadmaster of the T. & T. R.R., whose headquarters are at Ludlow. According to Mr. Murphy, Mr. Morton got the kaolin in Amargosa canyon near Tecopa. Murphy told me to call on another Mr. Murphy at Tecopa, manager of the store there, who would arrange for me to see the deposits.

Mr. Murphy apologized for not having answered your letters, and said he was waiting to be able to make a trip to the deposits himself in order to get you further samples. He had not done so up to date partly on account of the expense necessary to reach them and on account of his having a chance to work at the Kiernan mine . Mr. Murphy gave me all the information at his disposal,and appeared anxious to have the deposits found.

CLAY OR ADOBE DEPOSIT AT GOLD CENTER NEAR BEATTY

Bullfrog Mining District,Nye County,Nev.

Inquiry was made at Beatty as to any kaolin or clay deposits in the vicinity,and Mr. J. Christensen,postmaster at Beatty and who runs the main store there,told the writer of a deposit ,one and a half miles south of Beatty near Gold Center.

Mr. Harry Waller, a mining man and prospector of Beatty ,knew of this clay,and said it was the best material in the neighborhood He had hauled one or two dozen wagon loads of the material ,using it for mortar by mixing sand with it for building stone houses,plastering etc. This is the only adobe or clay in this vicinity,according to Mr. Waller,that is any good,and he has prospected the country thoroughly.

Location and Extent of Deposit

The deposit is a mile and a half south of Beatty east of the Las Vegas & Tonopah railroad tracks ,and about a third of a mile south of Gold Center. Gold Center is deserted at present.

The deposit is not extensively developed. There is an open cut about 40 feet long north and south by ten to twenty feet

wide east and west,-where the material hauled by Mr. Waller was obtained. This cut is near the base of the foothills below a belt of crystalline mica schist,which outcrops at the foot of Bare Mountain. The schist trends N.20°E. and dips 50°S.E.into the range.

The clay or adobe is fine-grained ,yellowish-brown material evidently decomposed from the mica schist,as shown by the silvery white mica scales in it,(muscovite or sericite). The cut is three or four feet deep,and white alkali occurs as an efflorescence along the east rim of the cut. No white clay or kaolin was seen,nor could any be found by digging in the bottom of the cut.

Sample 1. was taken of what appeared to be the best brownish clayey material from the bottom of the cut

Photo.1. looking N.20°W. toward Gold Center,shows the open cut in foreground.

Probable Extent The extent is hard to determine from the the present exposure. There is a gulch or flat basin-like depression 300 feet wide north and south,cutting the mica schist and extending down into Amargosa valley in a westerly direction. This is filled with wash ,and the clay or adobe is only exposed in the main cut,but may extend several hundred feet down toward the railroad. The Las Vegas & Tonopah railroad track is about 250 yards west of open cut.

The possible extent is estimated at 300 feet north and southx x 350 feet east and west x 5 to 10 feet maximum thickness,-judging from the flat character of the basin or depression below the cut.

From the small amount of erosion above the open cut in the

schist it does not appear that the deposit will be very large. Also the schist is relatively dark-colored, and does not contain much feldspar, so that the amount of kaolin present is probably small. Nothing that could positively be identified as kaolin was seen.

TRIP TO TECOPA

Following information from MR. J.W. Murphy as to kaolin deposits near China ranch, the writer went from Beatty to Tecopa, Inyo county Cal on the Tonopah & Tidewater R.R. Tecopa is 80 miles south of Beatty in the southern part of Inyo countynear the San Bernardino county line.

Gypsum and Clay Deposit near China Ranch

China ranch is about seven miles by wagon-road southeast of Tecopa. There are gypsum deposits here, which are being worked by the Acme Cement & Plaster Co. of Los Angeles. (C.L.MacDonald, 750 South Alemeda St., Los Angeles, general manager). This company is shipping a car of gypsum daily, there being a branch line or spur one and a quarter miles long from the Tonopah & Tidewater R.R. at Morrisons to the gypsum mine.

Mr. J.W. Murphy thought the kaolin deposits were in this neighborhood below cliffs in Amargosa canyon. An afternoon was spent in this section looking for the deposit, but nothing resembling kaolin could be found. There are some brownish clay-like beds overlying and underlying the gypsum deposits, and similar material below China ranch and in Amargosa canyon.

The gypsum quarries are working fourteen men, and shipping one or two cars of gypsum daily to Los Angeles,-freight rate $2. a ton. There is an eight foot bed of gypsum lying between brown clay-like beds capped by gravels.

Photos. 2 and 3 show the outcrop of the gypsum-bearing formation and old gypsum mill,-looking n.e. The quarry is above the mill to the left.

According to Frank Arnold, superintendent at the quarry, the only clay known to him is a streak of kaolin up to a foot thick, lying directly under the bed of gypsum. Specimens of this white clayey material were taken but were not turned in for assay on account of the thinness of the streak.

Above the gypsum bedthere is a brown clayey material, 10 to 20 feet or greater in thickness. Sample 2. was taken of this across five feet, lying directly on top of the gypsum.

Photo.4. shows the north openihg of the gypsum quarry with outcrop of the brown clay-like material.

Sample 3. was taken across seven feet of brown clay at the south end of this quarryfifteen feet northeast of sample 2, and of harder more compact brown clayey material. Superintendent Arnold states that this clay would make good cement, on account of some admixed gypsum, if it were nearer a market.

While the brown material was evidently not kaolin, it appeared worth while to take a sample or two of it to see if there was anything of value as there are large deposits of this character in the neighborhood.

 Photo.5 shows hills containing much of this brown material

on the south side of the gulch at China ranch.

China ranch and the gypsum quarries are taken up as a homestead and placers,but the ground surrounding is open to,location.

Photo.6. shows gypsum loading station and clay and gravel cliffs,-looking N.E.

At the junction of China ranch gulch and main Amargosa canyon there is a large area of rhyolite,with surrounding volcanic ashes tuffs,and muds,which are well-bedded,and dip away from the central rhyolite on all sides.These deposits are similar to those in which the gypsum and clays occur. But some of the gypsum and clay-bearing beds lie more nearly horizontal and appear to have been re-deposited in water.

A grayish material resembling clay in the bottom of Amargosa canyon,proved to be solid rhyolite. As far as could be determined, there are no clays in the canyon in this vicinity.

KAOLIN,CLAY,OR RHYOLITE TUFF DEPOSITS TWO AND A HALF MILES SOUTH OF TECOPA

On returning from the gypsum quarries, a telegram was sent to Mr. B.S.Horton,roadmaster of the Tonopah & Tidewater R.R. at Ludlow, asking him for the location of the kaolin or white clay deposit,a specimen of which had been given by him to Mr. J.W. Murphy of Pioneer,- saying that the writer was at Tecopa to look at the deposits.

Mr. Horton wired back that the deposits were two and a half miles south of Tecopa near Bridge 84-A. ,and within 50 feet of the track on the left-hand side going south. He said there were several

clay deposits in the neighborhood.

Bridge 84 -A. ,Tonopah & Tidewater R.R.,two and a half miles south of Tecopa was visited. There is a bed of white,gritty,porous, apparently kaolinized material,that appears to be a rhyolite tuff. The bed is from four or five up to eight feet thick,and outcrops east of the bridge within a short distance of the railroad track. The outcrop could be followed prominently along a small gulch for over a hundred feet. The strike is N.30°E.,and dip about 25 • N.W.

Photo.7 shows this outcrop and Bridge 84-A. looking W.

The white bed averages four to five feet thick here: its outcrop is indicated by red pencil in photo.

While the white bed did not appear to be pure clay,it was the only material resembling kaolin seen in this neighborhood. It therefore seemed advisable to locate this five-foot white bed,and to take samples of the material on the chance of its being of some value. There may be clay or pure kaolin deposits in this neighborhood,derived from the decomposition of the white bed.

White Bed Placer Claim (Location)

According to the Tonopah & Tidewater R.R.map,which shows the surveyed lands and mining camps of this section,the ground near Bridge -84-A. is unsurveyed. See accompanying R.R.map.

The most prominent outcropsof the white bed were located,being covered by an association placer claim of 160 acres. This claim is in the form of a square,2640 ft.on a side,the sidelines running north and south and east and west. The discovery monument was placed 100 feet east of Bridge-84-A. on the outcrop shown in photo.7. The claim was located June 23,which will hold it for 90 days,without any work. A copy of the location notice follows.

The claim is tied to the Tonopah & Tidewater railroad at Bridge 84-A.,and near the northwest corner (Corner No.4) to culvert 85-A, or wooden drain under the railroad,which fixes its position. The railroad right of way,50 feet on each side of the track ,is excluded,but is not important. A switch or spur could readily be built below the material,should the analyses prove it to be of value.

Water sufficient for camp purposes could be obtained in Amargosa creek a few hundred feet to the west. At present there is a small flow of water carrying some alkali,but which is drinkable. Water can be obtained anywhere in the creek bed by digging a short distance.

An accompanying map shows the White Bed placer claim,and position relative to the railroad. The location of the principal outcrops,gulches,etc. are indicated,also the position of the samples taken.

Principal Outcrops

The white bed outcrops near the discovery east of Bridge 84-A. for a total distance of several hundred feet along two gulches , which expose the bed on its dip. Sample 6. to 18.inclusive were taken in this neighborhood,across the white porous bedded material averaging four to five feet in thickness. The average thickness of the beds throughout can be conservatively taken at four feet. The material is very light and porous,and it is estimated,it would take at least 25 cu.ft. to the ton for rock in place.

Photos. 8 and 9 show the outcrop of the bed,where samples were taken. The outcrop is indicated by red pencil. In photos. 7 and 8,there appear to be two white beds lying one above the other. The

The upper bed in the background of photos. is a portion of the main bed,which has been displaced about 15 feet vertically by faulting. Photo.9 shows a white bed of similar material on the west side of Amargosa canyon outside of the claim,--- outcrop indicated by an arrow. This bed is also faulted a short distance,as can be seen in picture.

The white bed outcrops in the railroad cut 300 feet south of Bridge 85-A. on the ground located,averaging four feet in thickness . The strike is northerly and southerly and the dip flat to the west.

Photo. 10 shows this exposure.

Near the center of the south sideline of the claim is high ground on which the white bed outcrops near the top of the gravel or conglomerate cliff.Photo.11 shows the position of the outcrop here. Near the southeast part of the claim ,Corner No.2,and below the cliffs the bed has been eroded as will be seen from the foreground in this photograph.

The white bed outcrops 275 feet northeast of bridge 84-A. on the north side of a gulch for about 100 feet in length. Sample 19 was taken here across four and a half feet,and sample 20 across four feet. Also on the south side of this gulch and northeast of the discovery are intermittent outcrops of the same bed,which are shown by red pencil in photo.12. The white blocks on left hand side in photo.12 have been cut from the white bed material,-blasted out by the railroad.

Near the central part of the claim on very high ground,the white bed outcrops along the summit of a ridge,where it appears to be four or five feet thick. This outcrop can be traced for nearly a thousand feet in length on the dip.

 Following the north sideline of the claim betwen corners 3 and 4

is a prominent gulch or wash, trending east and west. White beds three to four feet thick are exposed along the south side of this gulch in several places. The strike is northeast and the dip flat to the west. Near corner 3, there are two white beds , one lying over the other from eight to fifteen feet from top to bottom . The beds are separated by waste, carrying gravel, pebbles, etc. The white beds vary from two to four feet in thickness. Sample 5. was taken from the lower bed 500 feet southwest of corner3. Sample 4 was there from the gulch near corner 3, -same character of material, but rock not in place.

SAMPLES

Sample 1.	Clay or adobe deposit at Gold Center below Beatty	
Sample 2.	Clay lying above gypsum bed at China ranch, across	5 ft.
Sample 3.	Ditto ----------, across	7 ft.
Sample 4.	White Bed south of Tecopa, float fr. N.E. cor. of claim	
Sample 5.	White Bed " " " , outcrop N. part of claim-	4 ft.
Sample 6.	Ditto, outcrop of White Bed near discovery ------	5 ft.
Sample 7.	Ditto, outcrop near discovery	6 ft.
Sample 8	Ditto,	5 ft.
Sample 9.	Ditto,	5 ft.
Sample 10.	Ditto,	4 ft.
Sample 11/	Ditto,	5 ft.
Sample 12.	Ditto,	3 ft.
Sample 13.	Ditto,	4 ft.
Sample 14.	Ditto,	4 ft.
Sample 15.	Ditto,	3 ft.
Sample 16.	Ditto,	3 ft.
Sample 17.	Ditto,	4 ft.
Sample 18.	Ditto,	4 ft.
Sample 19.	Outcrop 275 ft. north of discovery	4½ ft.
Sample 20.	Ditto,	4 ft.

Assays for the determination of alumina and silica not finished.

CONCLUSIONS

Rhyolite by decay and weathering leads to the formation of clays and kaolin from the decomposition of the feldspar. The material south of Tecopa is white and porous, and appears to be somewhat in the nature of a rhyolite tuff, except that it occurs in an extensive strata and is interbedded between layers of conglomerates and gravel showing well water-worn pebbles. The gravel beds lie horizontal in most places, and were clearly laid down in water. It appears from a study of the material in hand specimens that the white bed here considered is composed of fragments from explosive eruptions of rhyolite, which were loose at the time of falling, but were redeposited in water so as to show the nature of a sediment. The bed covers a considerable area, - one half to one mile north and south by one half to one mile east and west.

There may be deposits of clay or kaolin in this immediate vicinity derived from rhyolite or rhyolite tuffs, such as the sample given by Mr. Norton to Mr. Murphy, but , if so, it does not appear likely that these are very extensive, as nothing of the kind could be found on the present visit. The White Bed placer claim , however, should cover the most favorable ground for such deposits, and was located as covering the ground described by Mr. Norton in his telegram, near Bridge -84-A., and on the chance of the White Bed being of value.

Respectfully submitted,

Edward R. Zalinski.

June 30, 1915

WHITE BED PLACER

TECOPA MNG. DISTRICT

Inyo Co., California

Scale 440 ft. = 1 in.

TONOPAH & TIDEWATER R. R.

CULVERT 85 A.

560° E. 195'

4

2640 Ft.

3

(On Ridge.)

Gulch ← dry wash

White Bed 4 ft. thick. (Approx. position)

35°

White Bed 4 ft.

30°

Sample 5

White beds with pebbles not clean - 8 ft. one 3 ft. bed and one bed 2 to 4 feet thick - (Approx. position)

20°

15°

Sample 4 (float)

Very high ground - White Bed Outcrops near top

Gulch

Outcrop

Sample 20

Sample 19

WHITE BED PLACER

Area 160 Acs.

2640 Ft.

2640 Ft.

Bed Outcrops.

Gulch

Samples No. 6 to 18 incl. at 10 ft. intervals.

Outcrop

150 ft.

Outcrop

Discovery

BRIDGE 84 A
T. & T. R.R.

High ground white bed outcrops near top of cliffs.

Low flat, white bed eroded here.

Railroad Cut

White Bed.

600

1

240'

2640 Ft.

2

NOTE:

Located as Association Placer Claim. June 23, 1915, on Unsurveyed Lands. Brunton Survey. Distances paced. Position of Outcrops Approximate.

Fill

TONOPAH & TIDEWATER R.R.

To Ludlow.

Amargosa River.

19° 30'

Gravel Cliffs 100 ft. high Nearly vertical.

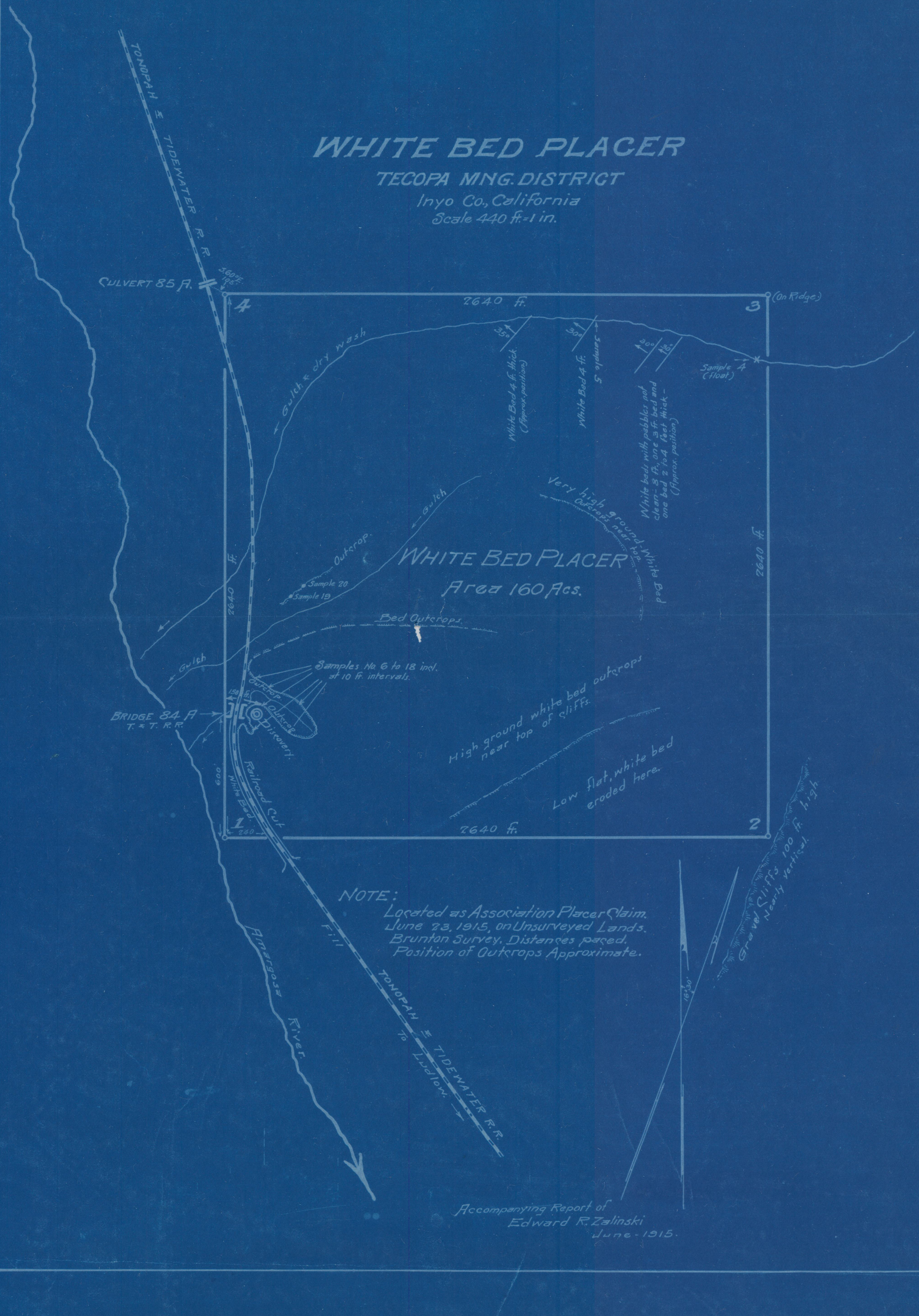
Accompanying Report of
Edward R. Zalinski
June - 1915.

WHITE BED PLACER

TECOPA MNG. DISTRICT

Inyo Co., California

Scale 440 ft. = 1 in.



NOTE:

Located as Association Placer Claim. June 23. 1915. on Unsurveyed Lands. Brunton Survey. Distances paced. Position of Outcrops Approximate.

Accompanying Report of
Edward R. Zalinski
June - 1915.

Report on Trip to Find

KAOLIN DEPOSITS NEAR BEATTY, NYE COUNTY, NEVADA

and

NEAR TECOPA, INYO COUNTY, CALIFORNIA

RECEIVED
1915
AUG
3
U.S.G.S. R. & M. CO.
PRESIDENT'S OFFICE

RECEIVED
PRESIDENT'S OFFICE
U.S.R.&M.CO.
1915
AUG
3
P M

CROSS REFERENCE SHEET

FILE 210 - Nevada

SUBJECT: ~~Dredging Properties~~
~~California & Nevada~~

EXTRACT FROM LETTER _____ TO _____ DATE _____

Corresp. Apr. 1932 between A. G. Baker Engineering Co. & U. S. S. R. M. Co. (Mr. Rice) re = above properties
see California Unit.

ORIGINAL FILED No. _____

SUBJECT: _____

CROSS REFERENCE SHEET

~~#6~~ #212

FILE ~~#6~~ Nevada

SUBJECT: Dexter Mt Hope Mine or Property

Eureka Nevada.

EXTRACT FROM LETTER _____ To _____ DATE _____

Dexter Mt Hope Property

Eureka Co.

Nevada

transferred to Nevada #6.

ORIGINAL FILED No. _____

SUBJECT : _____

6-40-6M