Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

MAP NO. 14

Red Match Claim:

There has been a small amount of production from this claim and mine samples show a high vanadium content. The claim has been adequately surveyed and sampled.

The area of mine production has not been sufficiently explored which is true for much of the claim. Geology and drilling is recommended.

Proposed costs are as follows:

Step #1		$ 230.00
Step #2		1,096.00
	Total	$ 1,326.00

Atomic Resources Corp.

523 Third St. NW

Albuquerque, N.M.

MAP NO. 13

Red Patch Claims:

There has been a small amount of production but there are no ore reserves. The claim has been adequately surveyed and sampled. A major portion of the claim is unexplored and geology and drilling are recommended.

Proposed costs are as follows:

Step #1		$ 230.00
Step #2		1,096.00
	Total	$ 1,326.00

Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

MAP NO. 12

Bee Claim:

There is a small ore reserve of 390 tons of 0.34% U_3O_8 and 1.05% V_2O_5 on this claim. In addition there is a small amount of ore left in 2 mine workings. Drilling has explored fairly well the western 2/3 of the claim.

No surveying or mine sampling are required, but geology and drilling are recommended.

Proposed costs are as follows:

Step #1	$ 230.00
Step #2	949.00
	$ 1,179.00

Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

Map No. 11

V_2O_5 Claim:

There has been no production from this claim. It is partially surveyed and needs more topography, geology and drilling.

Proposed costs are as follows:

Step #1		$ 430.00
Step #2		2,603.00
	Total	3,033.00

Atomic Resources Corp.

523 Third St. NW

Albuquerque, N.M.

MAP NO. 10

U_3O_8 Claim:

There has been no production from this claim. It is partially surveyed and needs more topography, geology and drilling.

Proposed costs are as follows:

Step #1	$ 430.00
Step #2	2,603.00
Total	$ 3,033.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

MAP NO. 9

November Claim:

There has been no production from this claim. Drilling has found some low-grade mineralization consisting of 200 tons of 0.12% U_3O_8 and 1.22% V_2O_5. A good portion of the claim is unexplored. No surveying is needed but geology and further drilling are recommended.

Proposed costs are as follows:

Step No. 1	$ 230.00
Step No. 2	$1,507.00
	$1,737.00

Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

MAP NO. 8

Goodhope Claims:

This claim has produced a fair amount of ore, but mine sampling does not indicate a reserve. The property is nearly drilled out but there is room for a little more. The claim has been adequately surveyed but needs geology and more drilling to finish it off.

Proposed costs are as follows:

Step #1		$ 230.00
Step #2		413.00
	Total	$ 643.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

MAP NO. 7

Logan Claim:

This claim has also been a large producer but mine sampling does not indicate any reserve. It needs geology and drilling.

Proposed costs are as follows:

Step #1	$ 285.00
Step #2	10,275.00
	$ 10.560.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

MAP NO. 6

Dime Claim:

This mine was one of the largest producers on the property. It contains a small reserve in the mine workings indicated by mine sampling to be 62 tons of 0.30% U_3O_8 and 2.25% V_2O_5, and 338 tons of 0.128% U_3O_8 and 1.40% V_2O_5. It needs geology and drilling.

Proposed costs are as follows:

Step No. 1		$ 285.00
Step No. 2		10275.00
	Total	$10,560.00

Roanoke claim
no locations shown
on claim map.

Atomic Resources Corporation
523 Third Street N.W.
Albuquerque, New Mexico

Sample No.	Thickness Feet	U_3O_8	V_2O_5
774	1.6	.14	1.14
775	4.1	.02	1.05
776	1.0	.53	2.62
777	2.0	.21	2.74
778	2.0	.88	4.36
779	1.6	.03	3.56
780	1.0	.25	1.67
781	2.0	.36	2.97
782	3.0	.01	1.09
783	1.0	.01	1.69
784	1.6	.02	1.58
785	1.5	.56	3.08
786	1.2	.02	0.40
787	3.1	.25	2.29
788	2.0	1.37	2.25
789	4.0	.05	1.31
790	4.0	.01	0.21
791	3.6	.05	0.60
792	2.4	.04	0.34
793	2.1	.01	1.17
794	1.4	.06	0.47
795	2.2	.04	0.23
796	1.4	.10	0.29
797	1.0	.11	1.38
798	1.0	.13	0.70
Arithmetic average	2.07	.21	1.57
Totals	5.18	5.28	39.19

Atomic Resources Corp.
523 Third St. NW.
Albuquerque, N.M.

MAP NO. 3

Geneva Claim:

This claim has been adequately surveyed. It needs geology, map in a small mine working in order to lay out the unexplored portion of the claim for drilling.

Drilling has indicated an ore body containing 2,836 tons of .27% U_3O_8 and 1.26% V_2O_5. Eight mine samples indicate an ore reserve of 150 tons of 0.19% U_3O_8 and 2.53 V_2O_5.

Proposed costs are as follows:

Step #1		$ 230.00
Step #2		6,850.00
	Total	$ 7,080.00

Atomic Resources Corp.
523 Third Street NW,
Albuquerque, N.M.

MAP NO. 4

Roanoke Claim:

This claim has two small ore bodies as shown on the map, in addition to what is termed the Gilman ore body. The Roanoke #1 has 1711 tons of 0.26% U_3O_8 and 1.50% V_2O_5. The Roanoke #2 has 2161 tons of 0.37% U_3O_8 and 1.50% V_2O_5. The Gilman contains 20,155 tons of 0.18% U_3O_8 and 0.75% V_2O_5.

The claim has been adequately surveyed and sampled, but it does need geology to determine the extent of the exploratory drilling.

Sampling of the Roanoke # (25 samples) gives an arithmetic average of 2.07 feet of 0.21 U_3O_8 and 1.57% V_2O_5.

Proposed costs are as follows:

Step #1	$ 230.00
Step #2	3,425.00
	$ 3,655.00

Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

MAP NO. 15

Woodrow Wilson Claims:

There has been much production from this old mine. Previous drilling has found no ore on its south side or east end. Mine sampling has indicated a small reserve.

The exact dimensions of the claims are not known. It is recommended that the claims be surveyed to determine how much of them are unexplored.

Proposed cost of this work is as follows:

Step #1	$ 300.00
Total	$ 300.00

December 31, 1956

Mr. John F. Shaw
Supervising Mining Engineer
U. S. Bureau of Mines
Building 20
Denver Federal Center
Denver 2, Colorado

Dear Mr. Shaw:

Enclosed herewith is the application of the Atomic Resources Corporation to the D.M.E.A. for an exploratory loan on its Waterfall Property.

The data in this application is arranged as follows:

1. Regular form MF-103.
2. Detailed answers to questions in MF-103.
3. "Outline of Proposed DMEA Exploration Program and Costs."
4. Index, claim group and claim maps of the property.

Under separate cover, by registered mail, I am sending you our only copy of the Chapman and Wood Report, March, 1955. This can be used for verification of the status of the property. Please return as soon as possible.

In addition, we have logs of the holes drilled by Atomic Resources in the summer of 1955, the logs of the holes drilled by Chapman and Wood, and pulp samples of the Chapman and Wood drilling. If you desire this data also, let me know.

I trust that this application is complete and, if not, that you will inform me promptly of the additional data required.

Very truly yours,

ATOMIC RESOURCES CORPORATION

M. Howard Milligan

M. Howard Milligan
Mining Geologist

MHM/ms

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

DMEA
DEPARTMENT OF THE INTERIOR
JAN 7 1957
REGION III
DENVER, COLORADO

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. .....
Metal or Mineral .....
Date Received .....
Estimated Cost .....
Participation (Government %) .....

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Atomic Resources Corporation
523 Third Street N.W.
Albuquerque, N.M.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See details of application

(*b*) State any mine name by which the property is known. Waterfall Group

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it No

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium-Vanadium

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 10 days and be completed within 6 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated January 4, 1957

Atomic Resources Corp.
(Applicant)

By James V. Reynolds, Pres.
523 Third St. N.W.
Albuquerque, New Mexico

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

MF-103 - Revised April, 1952

(Details on Questions)

1. Name of Applicant:
   (a) Atomic Resources Corporation
   523 Third Street N.W.
   Albuquerque, New Mexico

   (b) Atomic Resources Corporation
   Incorporated in the State of Nevada, U.S.A.

   (c) Officers of the Corporation:
   President - James V. Reynolds
   523 Third Street N.W.
   Albuquerque, New Mexico

   Secretary - R. P. Brooks
   2300 Reagan St.
   Dallas, Texas

   Treasurer - John R. Less
   2300 Reagan St.
   Dallas, Texas

   (d) Partnership: No

3. Applicant's Property Rights:

   (a) The claims controlled by Atomic Resources Corporation known collectively as the Waterfall Group, lie in the following Township, Range and Section; see also the index map (Map No. 1).

   Waterfall Claims: Geneva, Roanoke, Gilman, Dime, Logan, Goodhope, November, U308, V205, Bee, Red Match, Red Patch - T31S, R24E, Secs. 1 and 12, T31S, R25E, Secs. 6,7,8 and 9.

   Woodrow Wilson Claims: #1 and #2, T31S, R24E, Secs. 3, 10 and 11.

   Sunset Claim: T31S, R25E, Sec. 30.

   Frisco Group: Frisco #2, Neighbor, Coleman, Hornet T31S, R24E, Sec. 25 and 36.

   Happy Jack: #1 and #2, T32S, R23E, Sec. 1.

Atomic Resources Corporation
523 Third Street, N.W.
Albuquerque, N.M.

(b) Name of Property:
Waterfall Group

(c) Our interest in land: Lessee

(d) How do you control the property:

The history of the ownership of the Waterfall Group as far as we are interested is thus: The Waterfall Group was purchased by the Molybdenum Corporation of America in 1932. On September 10, 1953, that Corporation leased the property to Carl I. Dismant, but this lease is not presented here. In the middle of 1954, Dismant assigned part of his interest in the least to Santa Fe Western Gas and Uranium Corporation, but that agreement is not presented here. On May 26, 1955, Dismant and Santa Fe assigned part of their respective interests in the lease to Atomic Resources Corporation and the agreement between Santa Fe and Atomic Resources is herewith submitted as Document No. 1. On July 21, 1955 Molybdenum Corporation and Dismant amended their agreement, but it is not presented here. On March 21, 1956 Molybdenum Corporation, Dismant, Santa Fe, and Atomic Resources amended the various prior agreements and that agreement is presented here as Document No. 2. On July 25, 1956 Santa Fe quit claimed certain claims to Atomic Resources and that agreement is presented here as Document No. 3.

Documents Nos. 1, 2, and 3 are attached at the end of this report.

(e) Are you the land owner: No

(f) The following unpatented claims are recorded in the office of the Recorder of San Juan County, Utah:

Name of the Claim	Book	Page
1. Geneva	R	330
2. Geneva No. 2		
3. Roanoke	R	329
4. Roanoke No. 2	213	265
5. Gilman	R	330
6. Gilman Fraction	37	511
7. Gilman No. 2	213	264
8. Gilman No. 3	213	264
9. Dime	R	356
10. Dime Fraction	37	511
11. C.I.D.	39	261
12. Bertha M.	39	261
13. Kay D.	37	410
14. Logan	R	354
15. Goodhope	R	329
16. November	R	328
17. U_3O_8 (Dugway No. 2)	R - 1	65

Atomic Resources Corporation
523 Third Street, N.W.
Albuquerque, N.M.

18.	V_2O_5 (Dugway No. 1)	R-1	65
19.	Bee	R	455
20.	Red Patch	R	544
21.	Red Match	R	455
22.	Woodrow Wilson	L	432
23.	Woodrow No. 1	L	
24.	Sunnyside	R	341
25.	Valley View	R	342
26.	Neighbor	R	548
27.	Coleman	R	367
28.	Midvale	R	368
29.	Midway	R	368
30.	Frisco No. 1	T-2	600
31.	Frisco No. 3	R-1	526
32.	Sunset	R	367
33.	Happy Jack No. 1	R	450
34.	Happy Jack No. 2	R	450
35.	Frisco Spring Millsite	L	199
36.	South Canyon Spring Millsite	T-2	391

4. Physical Description:

(a) Almost all of these claims were located in 1913 - 1915, and except for the Jack Pot claims (2) and the U_3O_8 and V_2O_5 all of them have had some production from small or large mine workings. This can be seen on the Waterfall Group Map (#2) and the individual maps of all the claims in that group (Nos. 3 - 14) also maps of the Wilson, Sunset, Frisco, and Happy Jack Claims (Nos. 15, 17, 16, 18).

Atomic Resources Corporation
523 Third Street N.W.
Albuquerque, N.M.

In the accompanying report of Chapman & Wood is given a summary of the past history and production of this property.

During the summer of 1955 we conducted a two month exploratory drilling campaign on the property and in September 1955 we purchased a major interest in the Diamant Uranium Lease. In December, 1955 the firm of Chapman and Wood, a consulting engineering firm in Albuquerque, was contracted to further survey and explore the property. We have also stripped a large portion of the Gilman ore body and have built a 100 ton up-grading mill on the property. We have all the necessary equipment for production that is needed: front end loaders, compressors, hammers, trucks, etc.

At this time all of the mine workings except the Happy Jack are accessible for examination purposes.

(b) There is no current production. We have stockpiled 200 tons of ore at the mill site and 40 tons of concentrate. The ore reserves are given in the Chapman and Wood Report of March 1956 and are as follows:

Direct shipping ore: 13,170 Tons @ .270% U3O8 and 1.26% V2O5

Mill Grade ore: 15,000 Tons @ .152% U3O8 and 0.79% V2O5

Geologically inferred ore:
(a) 4,000 Tons @ .20% U3O8 and 1.0% V2O5
(b) 2,700 Tons @ .157% U3O8 and 1.70% V2O5
(c) 4,400 Tons @ .044% U3O8 and 1.64% V2O5

Dumps: 12,095 Tons @ .033% U3O8 and 0.56% V2O5

Total All Categories:

51,365 Tons @ .149% U3O8 and 0.99% V2O5

Past production is not accurately known, but has been estimated to total from $8,000,000 to $10,000,000.

(c) The deposits on this property are typical flat-lying uranium-vanadium ore bodies in the upper sandstone unit of the Salt Wash formation in southwestern Utah. The geology is fully described in the Chapman and Wood report. Included with this report are all the maps that have been made to date, pertinent to this project.

Our reason for desiring further exploration is that about 70% of the acreage of the claims has not been explored at all. Evidence of this is shown on the claim maps.

(d) Access roads:
There are access roads to every claim and roads traversing every claim; a small amount of road work for drill sites will be required.

The nearest ore buyer, the custom uranium mill at Monticello, is thirty miles away, eleven miles of fair and good dirt roads, and nineteen miles of paved highway.

Supplies for mining and milling can be had out of Denver, Colorado, generally, while small items can be purchased locally in Monticello. Residence can be obtained in Monticello and the company has at this time two trailers at the mill site.

(e) It is believed that the supervisory engineering will be handled by personnel of A.R.C. presently on their pay roll; a geologist, two laborers, and a part-time secretary will be the only additional personnel that have to be hired. No large purchases or maintenance of equipment are planned. Water is available at the mill site, and no power is required on this project.

5. The Exploration Project:
(a) Uranium-vanadium
(b) Proposed work: See report and maps.
(c) The work will start within ten days and be completed within 190 days from the date of an exploration project contract.
(d) Atomic Resources Corporation has been actively engaged in mineral exploration and mining for the past year on the Waterfall property, at its Tonituk Mine near Shiprock, New Mexico, and at its Kachina Mine near Cameron, Arizona. It has at this time the following qualified mining personnel on its payroll:

1. Carl I. Dismant, age 60±, graduate mining engineer of the Colorado School of Mines, E.M. and Registered Professional Engineer in Colorado.
2. Mason Rankin, age 49±, graduate mining engineer of the Colorado School of Mines, E. M. and Registered Professional Engineer in Colorado.
3. M. Howard Milligan, age 38, graduate of the University of New Mexico, B.S. in Geology and Registered Professional Engineer in New Mexico.

6. Estimate of costs: (See also "Outline of Proposed DMEA Exploration Program and Costs").

Atomic Resources Corp.
523 Third Street, N.W.
Albuquerque, N.M.

(a) Independent Contracts:

1. Surveying - 50 days work @ $100.00 per day	$ 5,000.00
2. Drilling - 36,000 ft. @ $1.10 per foot	39,600.00
	$ 44,600.00

(b) Labor, Supervision, Consultants (4½ mos.):

Labor, 2 men	$ 2,275.00	
Supervisor - Salary and Expenses	3,600.00	
Geologist - Salary	2,700.00	
Secretary - part-time -$100.00 per mo.	450.00	
		$ 9,025.00

(c) Operating materials and supplies: These will be handled on a cost basis. It is not anticipated that items under this category will amount to much in that the geological work will require hardly any materials and sampling program will need only sample sacks, tags, sharp nails and single jacks. We have at the property numerous small items of equipment that can be used in connection with the project. The inventory available at the project site is taken from the Chapman and Wood report and is appended hereto. $ 500.00

(d) Operating Equipment: The equipment we have will be rented at rates based on published rates of The National Machinery Dealers Association applicable to this area. We have on the property at this time the following equipment that could conceivably be used on the exploration project:

1. 1 - Dodge, World War II, personnel carrier
2. 1 - Dodge pickup
3. 1 - Ford 1956 pickup
4. 1 - Chevrolet 9 passenger carry-all

Allowance for the above @ .12¢ per mile, 150 miles per day - 125 days $ 2,250.00

5. 2 - 250 C.F.M. portable compressor, Chicago-Pneumatic, 1950 rental for above @ $337.00 for gasoline, or $422.00 for deisal per mo.
6. 1 - 300 ft. Failing rotary drill, jeep mounted and 1 - 250 C.F.M. compressor, supplying operator, fuel, bits, etc. @ $27.50 per hour, 600 hours on drilling program $16,500.00
7. 1 - 1955 Drott International bulldozer
   1 - TD9 International loader
   Rate - $8.50 per hour, 2 months, 125 hours, includes enough hours to take in mobilization charge $ 1,060.00

(e) Rehabilitation and repairs: Re-open Happy Jack Mine, Labor and supplies $ 1,500.00

Atomic Resources Corp.
523 Third Street, N.W.
Albuquerque, N.M.

(f) New buildings, improvements, installations:
Office rental $ 675.00

(g) Miscellaneous:

Assaying:	Mine samples - 150 @ $4.50	$ 225.00	
	Rotary Cuttings 250 @ $4.50	$ 1,125.00	
	Core - $4.50	225.00	
	Total		$ 1,575.00

Babbel drill hole probes (owned by the corporation)
Charge per month - @ $75.00, 2½ months 190.00
Workman's Compensation at a combined rate of $1.33 per $100.00 of payroll 120.00

Repairs and maintenance: The mileage charge in the use of vehicles will take care of all repairs and maintenance; the same is true for rental of all other machinery and equipment.

(h) Contingencies:

For this size project we are allotting 4,000.00

7. (a) We are prepared to furnish our share of the costs of the proposed project.
(b) Our share of the costs will be handled as follows:

The total project cost will be $81,995.00 and at the 75:25 ratio of contribution we will have to furnish $20,499.00 or the equivalent in services and rental of equipment. We calculate that on the rental of our drill rig and bulldozer ($17,560.00) that we have a return of 1/3 or $5,850.00, on the use of the vehicles ($2,250.00) a return of ½ or $1,125.00 and a return of ½ on the use of the Babbel probe - $95.00 for a total return of $7,070.00. The remainder of our contribution - $13,429. will be furnished in cash.

January 2, 1957

OUTLINE OF PROPOSED D M E A EXPLORATION PROGRAM AND COSTS

Atomic Resources Corporation desires to use its exploration loan in two steps. The first, to complete the surveying of its claims (claim corners, topography, and mine workings), the necessary geological mapping, and mine sampling. The second step, based on the detailed information gained from the first, is a drilling campaign designed to fulfill the minimum exploratory requirements that the known mineralization on these claims demands. The cost of Step No. 1 is $12,250 and the cost of Step No. 2 is $69,745 -- a total of $81,995.00.

The drilling recommendations of Chapman and Wood, at the conclusion of their project, other than underground work is as follows:

1. Sunset Claim between old workings and adjacent shaft.
2. Frisco Group
   Mineralized area indicated by old drilling on the Midvale Claim and the flanks of prominent re-entrants on the Neighbor, Coleman and Frisco No. 2.
3. Waterfall
   Drill flanks of prominent re-entrants on November and Logan Claims. Drill area indicated as possible ore extension on the Dime.

In addition to these recommendations I could add several more; however, I think that the outline below and a review of the maps will indicate sufficiently well the exploratory program we have in mind.

The costs and duration of these steps are summarized below:

STEP NO. 1: Duration two months

1.	Survey 11 claims on contract basis @ $100.00 per day		$5000.00
2.	Geology - 33 claims		$1200.00
3.	Mine Sampling - 2 claims,		
	50 samples @ $4.50 ---	$225.00	
	Labor	275.00	$ 500.00
4.	Re-open mine (includes labor, equipment, material)		$1500.00
5.	Office rental - $150.00 per mo. for 2 mos.		$ 300.00
	Part-time secretary - $100.00 per mo. for 2 mos.		$ 200.00
6.	Vehicles @ 12¢ per mile, 150 miles per day, 50 days		$ 900.00
7.	Personnel: Supervisory Engineer		$1600.00
	Items duplicated above:		
	Geologist	$1200.00	
	2 mine samplers	$ 275.00	
	1 part-time secretary	$200.00	
	Workmen's compensation, etc.		$ 50.00
		Grand Total	$12,250.00

Atomic Resources Corp.
523 Third Street N.W.
Albuquerque, N.M.

STEP NO. 2: Duration two and one-half months

1.	Drilling - contract: 2 rigs, 30 feet p.h. ea, 600 hrs. ea., 36,000 ft., @ $1.10 per foot	$39,600.00
	Rental equipment: 1 rotary rig, 25 feet p.h., 600 hrs., 15,000 ft. @ $27.50 p.h.	$16,500.00
2.	Personnel: Supervisory Engineer salary and expenses	$ 2,000.00
	1 geologist	$ 1,500.00
	2 helpers	$ 2,000.00
	1 part-time secretary	$ 250.00
	Workmen's compensation, etc.	$ 70.00
3.	Assaying - Rotary cuttings 250 @ $4.50	$ 1,125.00
	Core 50 @ $4.50	$ 225.00
	Probe rental - $75.00 per mo. 2½ mos.	$ 190.00
4.	Office rental - $150.00 per mo., 2½ mos.	$ 375.00
5.	Vehicles @ 12¢ per mile, 150 miles per day, 75 days	$ 1,350.00
6.	Rental equipment, includes fuel and operator: Bulldozer, $8.50 per hour, 125 hours	$ 1,060.00
7.	Operating material	$ 500.00
8.	Contingencies	$ 3,000.00
	Grand Total	$69,745.00
	Total of Steps Nos. 1 and 2	$81,995.00

DETAILS OF PROGRAM

STEP NO. 1

1. Happy Jack Claims (2): Corners of claims unknown. Mine quite productive from sandstone lense in the Brushy Basin, high in vanadium. Main entrance caved, but inclined shaft open and has water in bottom. Recommend survey property, geology, topography, reopen mine if possible, survey and sample underground workings.

Cost:	Surface Survey - 6 days	$ 600.00
	Reopen Mine	$1,500.00
	Survey mine workings - 4 days	$ 400.00
	Sample workings	$ 500.00
	Geology	$ 100.00
	Indirect cost	$ 600.00
	Total	$3,700.00

Atomic Resources Corp.
523 Third Street N.W.
Albuquerque, N.M.

2. Jackpot Claims (2): Corners of claims unknown, no maps. Very little or no mining done on these claims. Recommend: survey property, geology, topography.

Cost:	Survey		$ 500.00
	Geology		$ 100.00
	Indirect costs		$ 250.00
		Total	$ 850.00

3. Sunset Claim (1): Fair map of surface available; workings surveyed well and sampled; corners not exactly known; Utóco reports ore body immediately adjacent. Fair past production. Recommend: survey to produce adequate map and tie in previous mine sampling.

Cost:	Survey - 4 days		$ 400.00
	Geology		$ 50.00
	Indirect costs		$ 140.00
		Total	$ 590.00

4. Frisco Group Claims (4): Fair past production, old maps available, but only fair. Recommend: survey of surface and underground, and tie in previous mine sampling, topography, geology.

Cost:	Survey - 18 days		$1,800.00
	Survey mine workings - 6 days		$ 600.00
	Geology		$ 200.00
	Indirect costs		$ 940.00
		Total	$3,540.00

5. Woodrow Wilson Group (2): Good past production; area around mine has been drilled, boundaries of claims unknown. Recommend survey of claims to determine what acreage in claims is unexplored.

Cost:	Survey - 3 days		$ 300.00
		Total	$ 300.00

6. Waterfall Group (15):

Geneva Claim:

	Geology		$ 60.00
	Indirect costs		170.00
		Total	$ 230.00

Roanoke Claim:

	Geology		$ 60.00
	Indirect Costs		170.00
		Total	$ 230.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

Gilman Claim:		
Geology		$ 60.00
Indirect costs		170.00
	Total	$ 230.00
Dime Claim:		
Geology		$ 75.00
Indirect costs		210.00
	Total	$ 285.00
Logan Claim:		
Geology		$ 75.00
Indirect costs		210.00
	Total	$ 285.00
Goodhope Claim:		
Geology		$ 60.00
Indirect costs		170.00
	Total	$ 230.00
November Claim:-		
Geology		$ 60.00
Indirect costs		170.00
	Total	$ 230.00
U_3O_8 Claim:		
Geology		$ 60.00
Survey		200.00
Indirect costs		170.00
	Total	$ 430.00
V_2O_5 Claim:		
Geology		$ 60.00
Survey		200.00
Indirect costs		170.00
	Total	$ 430.00
Bee Claim:		
Geology		$ 60.00
Indirect costs		170.00
	Total	$ 230.00
Red Patch Claim:		
Geology		$ 60.00
Indirect Costs		170.00
	Total	$ 230.00
Red Match Claim:		
Geology		$ 60.00
Indirect costs		170.00
	Total	$ 230.00
	GRAND TOTAL	$ 12,250.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

Note: The use of the word "geology" is intended to mean geologic mapping necessary to delineate the upper ore-bearing sandstone unit of the Salt Wash formation, the position and color of the clays in conjunction with that unit - whether bleached by mineralization or not - and especially the major fracture systems seen in the mine workings along with the ore trend. It is believed that this work will give us the control needed to place effectively the exploratory drill holes; and that the work will only take from 1 - 3 days per claim.

STEP NO. 2

The following footage allocations are an attempt at this time to distribute adequately the approximate 50,900 feet of drill hole among the various claims that require it based on my first hand familiarity with the property. The allocations are arrived at arbitrarily on the assumption that each hole will be 100 feet deep which permits 509 holes to be distributed.

Happy Jack	44	holes
Frisco Group	79	"
Sunset Claim	26	"
Jackpot Claims	35	"
Geneva Claim	50	"
Roanoke Claim	25	"
Gilman Claim	25	"
Dime Claim	75	"
Logan Claim	75	"
Goodhope Claim	3	"
November Claim	11	"
U_3O_8 Claim	19	"
V_2O_5 Claim	19	"
Bee Claim	7	"
Red Match Claim	8	"
Red Patch Claim	8	"
Total	509	holes @ 100 ft. per hole = 50,900 ft.

The following are the estimated costs of STEP NO. 2 work on each claim separated into the drilling costs at $1.10 per foot and an indirect cost which is equal to the STEP NO. 2 unit cost of $1.37 per foot, minus $1.10 which is 27¢ per foot of hole.

1. Happy Jack Claims:

Drill 44 holes, 4,400 feet	$4,850.00
Indirect costs	1,188.00
Total	$ 6,038.00

2. Frisco Group:

Drill 79 holes, 7900 feet	$8,700.00
Indirect costs	2,133.00
Total	$ 10,833.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

3. Sunset Claim:

Drill 26 holes, 2600 feet		$2,860.00
Indirect Costs		702.00
	Total	$3,562.00

4. Jackpot Claims:

Drill 35 holes, 3500 feet		$3,850.00
Indirect costs		945.00
	Total	$4,795.00

5. Geneva Claim:

Drill 50 holes, 5000 feet		$5,500.00
Indirect costs		1,350.00
	Total	$6,850.00

6. Roanoke Claim:

Drill 25 holes		$2,750.00
Indirect costs		675.00
	Total	$3,425.00

7. Gilman Claim:

Drill 25 holes, 2500 feet		$2,750.00
Indirect costs		675.00
	Total	$3,425.00

8. Dime Claim:

Drill 75 holes, 7500 feet		$8,250.00
Indirect costs		2,025.00
	Total	$10,275.00

9. Logan Claim:

Drill 75 holes, 7500 feet		$8,250.00
Indirect costs		2,025.00
		$10,275.00

10. Goodhope Claim:

Drill 3 holes, 300 feet		$ 330.00
Indirect costs		83.00
	Total	$ 413.00

11. November Claim:

Drill 11 holes, 1100 feet		$1,210.00
Indirect costs		297.00
	Total	$1,507.00

12. U_3O_8 Claim:

Drill 19 holes, 1900 feet		$2,090.00
Indirect costs		513.00
	Total	$2,603.00

13. V_2O_5 Claim:

Drill 19 holes, 1900 feet		$2,090.00
Indirect costs		513.00
	Total	$2,603.00

14. Bee Claim:

Drill 7 holes, 700 feet		$ 770.00
Indirect costs		179.00
	Total	$ 949.00

15. Red Match Claim:

Drill 8 holes, 800 feet		$ 880.00
Indirect costs		216.00
	Total	$1,096.00

16. Red Patch Claims:

Drill 8 holes, 800 feet		$ 880.00
Indirect costs		216.00
	Total	$ 1,096.00

STEP NO. 2 Grand Total $69,745.00

The following is a resume of STEP NO. 1 and STEP No. 2 costs on each claim or group of claims:

1. Happy Jack:

Step No. 1 costs		$3,700.00
Step No. 2 costs		6,038.00
	Total	$9,738.00

2. Jackpot Claims:

Step No. 1 costs		$ 850.00
Step No. 2 costs		4,795.00
	Total	$5,645.00

3. Sunset Claim:

Step No. 1 costs		$ 590.00
Step No. 2 costs		3,562.00
	Total	$ 4,152.00

4. Frisco Group:

Step No. 1 costs		$3,540.00
Step No. 2 costs		10,833.00
	Total	$14,373.00

5. Woodrow Wilson Group:

Step No. 1 costs		$ 300.00
	Total	$ 300.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N. M.

6. Geneva Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		6,850.00
	Total	$ 7,080.00

7. Roanoke Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		3,425.00
	Total	$3,655.00

8. Gilman Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		3,425.00
	Total	$3,655.00

9. Dime Claim:

Step No. 1 costs		$ 285.00
Step No. 2 costs		10,275.00
	Total	$10,560.00

10. Logan Claim:

Step No. 1 costs		$ 285.00
Step No. 2 costs		10,275.00
	Total	$10,560.00

11. Goodhope Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		413.00
	Total	$ 643.00

12. November Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		1,507.00
	Total	$1,737.00

13. U_3O_8 Claim:

Step No. 1 costs		$ 430.00
Step No. 2 costs		2,603.00
	Total	$3,033.00

14. V_2O_5 Claim:

Step No. 1 costs		$ 430.00
Step No. 2 costs		2,603.00
	Total	$3,033.00

15. Bee Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		949.00
	Total	$1,179.00

Atomic Resources Corp.
523 Third Street NW
Albuquerque, N.M.

16. Red Patch Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		1,096.00
	Total	$ 1,326.00

17. Red Match Claim:

Step No. 1 costs		$ 230.00
Step No. 2 costs		1,096.00
	Total	$ 1,326.00

Grand Total	$81,995.00

Atomic Resources Corp.
523 Third Street N.W.
Albuquerque, New Mexico

MAP NO. 1

This map shows the location of all the claim groups of the Waterfall Property.

Summarized below are the combined costs of Step Nos. 1 and 2 of the exploration program:

1.	Waterfall Claims	$ 47,783.00
2.	Wilson Claims	300.00
3.	Jackpot Claims	5,645.00
4.	Frisco Claims	14,373.00
5.	Sunset Claim	4,152.00
6.	Happy Jack Claims	9,738.00
	Total	$ 81,995.00

On each of the following maps the status of the claims is described and also the costs of Step Nos. 1 and 2.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 14 1957

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4603 (Uranium)
Atomic Resources Corporation
Waterfall Group
San Juan County, Utah

Dear Mr. Harshman:

The subject application is being referred to you for investigation, a field examination if warranted, and recommendations.

Enclosed for your information are memoranda, dated January 23 and October 8, 1957, by James Paone, USBM, and W. P. Williams, USGS, respectively, relating to the application. Also enclosed, for the use of the Field Team, are one copy of the application and the following supplemental material submitted by the Applicant:

1. Three copies of a letter, dated July 3, 1957, from the Applicant to the Administrator.

2. Three copies of a letter, dated September 9, 1957, from the Applicant to the Administrator.

3. Three sets of bids from three drilling contractors.

4. One copy of an Affidavit, dated October 9, 1953, byCarl I. Dismant.

5. One copy of a Mining Lease, dated September 10, 1953.

6. One copy of a Contract and Agreement, dated June 22, 1954.

7. One copy of an Amendment to Lease, dated July 21, 1955.

8. One copy of an Agreement, dated May 26, 1955.

The Applicant's letter of September 9 advised that additional claim maps were being forwarded. These maps have not been received to date, but copies will be forwarded to you when received.

The number and composition of the claims that are to be included in the proposed project are still unclear. Applicant's letter of July 3 explained that the Frisco No. 3 claim should not be listed as a valid claim but included the Frisco No. 1 as one of five Frisco-group claims. However, the letter of September 9 stated that the Frisco No. 1 should not be included in the list of valid claims. There are other inconsistencies which have not been clarified by the Applicant.

You will note that the letter of July 3 modified the application by eliminating Step No. 1 in the proposed work program. Because of the rather confused picture presented by the Applicant with respect to the property involved, the Field Team may find it necessary to modify the areas to be examined and covered by the proposed project.

In the event a contract is recommended, the Applicant should be advised that Consent to Lien and Subordination Agreement forms must be executed by the Molybdenum Corporation of America, Santa Fe Western Gas and Uranium Corporation, and Carl I. Diamant and Kay Diamant, his wife.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

W. P. Williams

Member, Geological Survey

MChing/gla 10-14-57
cc to: Admr.'s Reading File
Operating Committee
THKillsgaard, Rm. 5224
Mr. Ching

October 8, 1957

Memorandum

To: R. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4603, Atomic Resources Corporation (uranium), Waterfall claims, San Juan County, Utah

The applicant proposes to explore for undiscovered uranium ore deposits in the Salt Wash sands on the old Waterfall claims.

The applicant's proposal is set up in two steps, of which the first step is surveying, geologic mapping, etc. The second step is a drilling project consisting of a total of 50,900 feet of drilling. The first step would not constitute exploration.

The applicant was asked for more information several months ago, and some additional material was received; but the application is still incomplete. I do not believe, however, that much could be gained by requesting more information of the applicant. Instead, I recommend that the application be referred to the Field Team for field examination should they consider such necessary and suitable report.

W. P. Williams

cc: DMEA (3)
Jack Kratchman
James Paone
Director's reading
Branch reading
Chron. file
Docket file ✓
WPWilliams/mm

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. James V. Reynolds, President
Atomic Resources Corporation
523 Third Street N. W.
Albuquerque, New Mexico

Re: Docket No. [illegible]-603 (Uranium)
Waterfall Group
San Juan County, Utah

Dear Mr. Reynolds:

We have reviewed your application for aid in an exploration project and suggest that you supply the additional information and modify the application as indicated hereinafter.

1. We find the information supplied in relation to the property rights somewhat ambiguous and inadequate for our purposes. Under 3(a) of the application form, 21 claims are listed whereas under 3(f) there are 36 claims. Please advise which list is to be covered by the proposed project. If the list under 3(f) is to be used please supply the book and page numbers for the Geneva No. 2 claim and the page number for the Woodrow No. 1 claim. Also, please advise which two names are correct, namely Woodrow Wilson and Woodrow No. 1 or Woodrow Wilson No. 1 and Woodrow Wilson No. 2.

   We note that of the 36 claims listed under 3(f), 8 are included in the Quitclaim Deed, dated June 25, 1956, and 27 in the Assignment, dated May 24, 1956, (assuming that the Vugsey No. 1 claim is the same as the V_2O_5 and the Vugsey No. 2 is the same as the U_3O_8). This would leave the Geneva No. 2 claim unaccounted for.

   As the prospective operator under this application, the Atomic Resources Corporation must have a sufficient possessory interest in the land for the purposes of an exploration project. The information supplied with the application does not show that you have such an interest, nor does it show the outstanding claims or liens against the property. To remedy this deficiency it is requested that you supply this office with two copies each of all leases, assignments, agreements and agreements that have a bearing on the ownership, control, royalty or other rights in relation to the property. As you probably know, before an exploration contract can be

approved a Consent to Lien and Subordination Agreement form must be signed by all owners, other than the operator, and by holders of any claims or liens against the property.

2. In connection with the proposed program of exploration we find that most of the work outlined in Step No. 1 is work that ordinarily should be done by the Applicant prior to a DMA project. In view of the considerable amount of work that has been done on these claims and the large amount of information already available you may find it possible, with a little additional preliminary work, to modify your application to satisfy our requirements. The basic requirements in this case are reliable claim maps showing all the claims to be subordinated, and a concrete program of exploratory drilling (possibly in stages) with well-defined targets or objectives. Usually, if the work is done in stages, the proposed locations of the first-stage holes should be shown on the maps, and provisions should be made in later stages for offsetting or extending favorable showings of the earlier stages.

If you agree that such a modification is possible please so advise this office and proceed to prepare a supplement to the present application. Two copies of the supplement should be sent to this office and two copies to Mr. W. C. Traver, Executive Officer, DMA Field Team, Region III, 224 New Customhouse Building, Denver 2, Colorado. If the application is then found satisfactory, the Field Team will be requested to schedule a field examination of the property. As a result of such examination and discussions with your engineers and geologists, your proposed program may be subject to further modification if a project is approved.

Sincerely yours,

Ernest Wm. Allin, Chief
Rare and Miscellaneous
Metals Division

EWAching/ism 1-31-57
cc to: Code 700
Mr. Ching
DMA FT Reg. 3 (2)
Adm.'s Reading File
Messrs. JBCrawford, 3643
THKillegaard, 5224
JHretchman, AAC

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Carl I. Dismant, Manager
Atomic Resources Corporation
523 Third Street, N.W.
Albuquerque, New Mexico

Re: Docket No. DMEA-4603 (Uranium)
Waterfall Group
San Juan County, Utah

Dear Mr. Dismant:

Reference is made to our letters of July 15 and August 16, 1957, relating to the captioned docket.

We wish to cooperate with you fully in allowing ample time to supply the required information; however, we cannot indefinitely postpone action on an application. Therefore, if we do not receive the required information within 30 days from the date of this letter, we will assume that you are no longer interested in proceeding with your application, and will consider it as having been withdrawn.

Sincerely yours,

Frank E. Johnson

Acting Administrator

MChing/izm 9-17-57
cc: Mr. Ching
Admr.'s Reading File
DMEA FT Reg. 3 (2)
THKiilsgaard, 5224

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

EXTRA COPY
D M E A
RECEIVED JAN 25 1957

DATE	INITIALS	CODE

224 New Customhouse
Denver 2, Colorado

January 23, 1957

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Docket DMEA 4603 (Uranium) Atomic Resources Corp. (Waterfall group) San Juan County, Utah.

Enclosed are the original and three copies of a review of the subject application by members of the Grand Junction Office, DMEA.

On the basis of the past history of the property, they recommend that a field examination be made. But since the surveying, mapping, and sampling proposed by the Applicant as Stage I, they believe that this work should precede a field examination by DMEA. We concur with the field in this belief that the Applicant's initial step is essential for a proper evaluation of the property, and should be done at the Applicant's expense since none of the work in this stage could be classed as exploration as defined in DMEA Order No. 1.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures
DMC:ytl
cc
Harshman
Shaw (2)
Hasler
Docket 4603
Chron.

IN REPLY REFER TO:

MINERAL DEPOSITS
DMEA
RECEIVED
JAN 22 1957
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
DEPARTMENT OF THE INTERIOR
JAN 23 1957
REGION III
DENVER, COLORADO

P. O. Box 360
Grand Junction, Colorado

EXTRA COPY
DMEA
RECEIVED JAN 25 1957

DATE	INITIALS	CODE

Memorandum

January 21, 1957

To: Executive Officer, DMEA Field Team, Region III

Through: J. William Hasler JWH
E. N. Harshman ENH

From: W. E. Gandik
M. H. Salsbury

Subject: Recommendation for field examination, DMEA docket 4603 (Uranium) Atomic Resources Corporation (Waterfall group), San Juan County, Utah

The Atomic Resources Corporation has applied for DMEA assistance to explore for uranium on 36 claims located in the Dry Valley area of the Monticello Mining District. The first stage consists of sampling, surveying, geological work, and mine rehabilitation, costing an estimated $12,250.00. The second stage includes 509 drill holes totaling 50,900 feet and costing an estimated $69,745.00. A definite drilling plan has not been worked out, but presumably would be based on results of the proposed first stage. The total proposed cost of the program is $81,995.00. As pointed out in E. N. Harshman's memorandum to the Operating Committee, dated January 9, 1957, none of the proposed stage I work can be classed as exploration. No bids by independent drill contractors were presented, and ownership data appears to be incomplete.

The applicant's property has a production history dating back to the early 1920's. Known ore deposits are characteristically high in vanadium and low in uranium content, consequently most of the mines were worked for vanadium ore. The Union Mines Development Corporation estimated that the Wilson, Waterfall and Frisco groups produced 25,000 to 45,000 tons of ore through 1944. R. P. Fischer, USGS geologist who mapped the applicant's Happy Jack mine before it became inaccessible estimated that the mine produced about 1,000 tons of vanadium ore before reserves were depleted. From 1944 to 1956 the combined total production from the applicant's Dry Valley property amounted to about 10,000 tons averaging 0.22 percent U_3O_8 and 1.67 percent V_2O_5. The ore was apparently upgraded before it was shipped. It was mentioned in the application that a 100-ton upgrading mill was utilized on the property and that 200 tons of ore and 40 tons of concentrate were stockpiled at the mill site. At the present time no ore shipments are being made. Practically all of the ore was mined from the upper sandstone unit of the Salt Wash member of the Jurassic Morrison formation.

The Atomic Energy Commission drilled 187 holes behind the mines on the Wilson, Waterfall and Frisco groups. According to available records this drilling resulted in the discovery of 2,190 tons of ore on the Waterfall group, 8 ore holes on the Frisco group, and negative results on the Wilson group.

R. P. Fischer and G. W. Weir, USGS geologists who are familiar with the area, were consulted regarding the merits of the applicant's property. They agree that some additional exploratory drilling may be warranted.

On the basis of the relatively long producing history of the property a field examination is advisable and, therefore, recommended. As the surveying, mapping, and sampling proposed by the applicant as the initial step is probably essential for an evaluation of the property, it would appear that this work should precede a field examination by DMEA personnel.

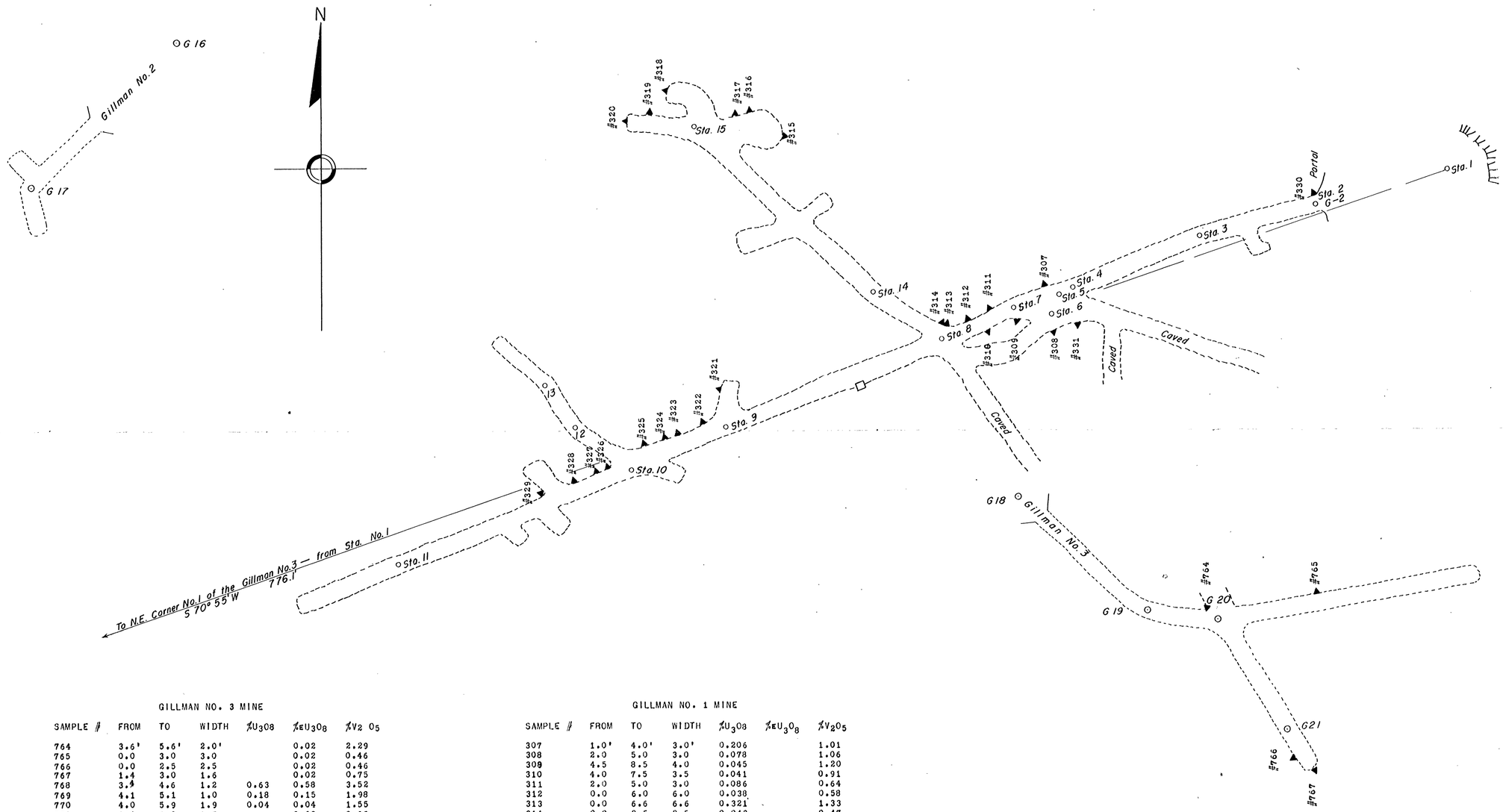
W. B. Gazdik

W. B. Gazdik,
Geological Survey

M. H. Salsbury

M. H. Salsbury,
Bureau of Mines

WBG:MHS/mlr



GILLMAN NO. 3 MINE

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%ΣU_3O_8	%V_2O_5
764	3.6'	5.6'	2.0'		0.02	2.29
765	0.0	3.0	3.0		0.02	0.46
766	0.0	2.5	2.5		0.02	0.46
767	1.4	3.0	1.6		0.02	0.75
768	3.4	4.6	1.2	0.63	0.58	3.52
769	4.1	5.1	1.0	0.18	0.15	1.98
770	4.0	5.9	1.9	0.04	0.04	1.55
771	4.3	6.0	1.7		0.02	0.93

GILLMAN NO. 1 MINE

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%ΣU_3O_8	%V_2O_5
307	1.0'	4.0'	3.0'	0.206		1.01
308	2.0	5.0	3.0	0.078		1.06
309	4.5	8.5	4.0	0.045		1.20
310	4.0	7.5	3.5	0.041		0.91
311	2.0	5.0	3.0	0.086		0.64
312	0.0	6.0	6.0	0.038		0.58
313	0.0	6.6	6.6	0.321		1.33
314	0.0	2.5	2.5	0.043		0.47
315	0.0	1.0	1.0	0.019		0.43
316			5.0	0.021		0.50
317			4.0	0.014		0.37
318	0.0	4.5	4.5	0.052		0.61
319	0.0	4.5	4.5	0.20		0.21
320	0.0	4.5	4.5	0.21		0.09
321			3.0	0.174		1.24
322			3.0	0.438		2.56
323			4.0	0.050		0.28
324			3.0	0.102		0.38
325	0.0	3.0	3.0	0.037		0.61
326			2.5	0.257		1.45
327			2.5	0.018		0.11
328			4.0	0.006		0.06
329			4.0	0.016		0.19
330	2.5	6.5	4.0	0.228		1.96
331	2.8	5.8	3.0	0.02	0.07	0.01

MAP OF THE GILLMAN MINE
UNDERGROUND WORKINGS

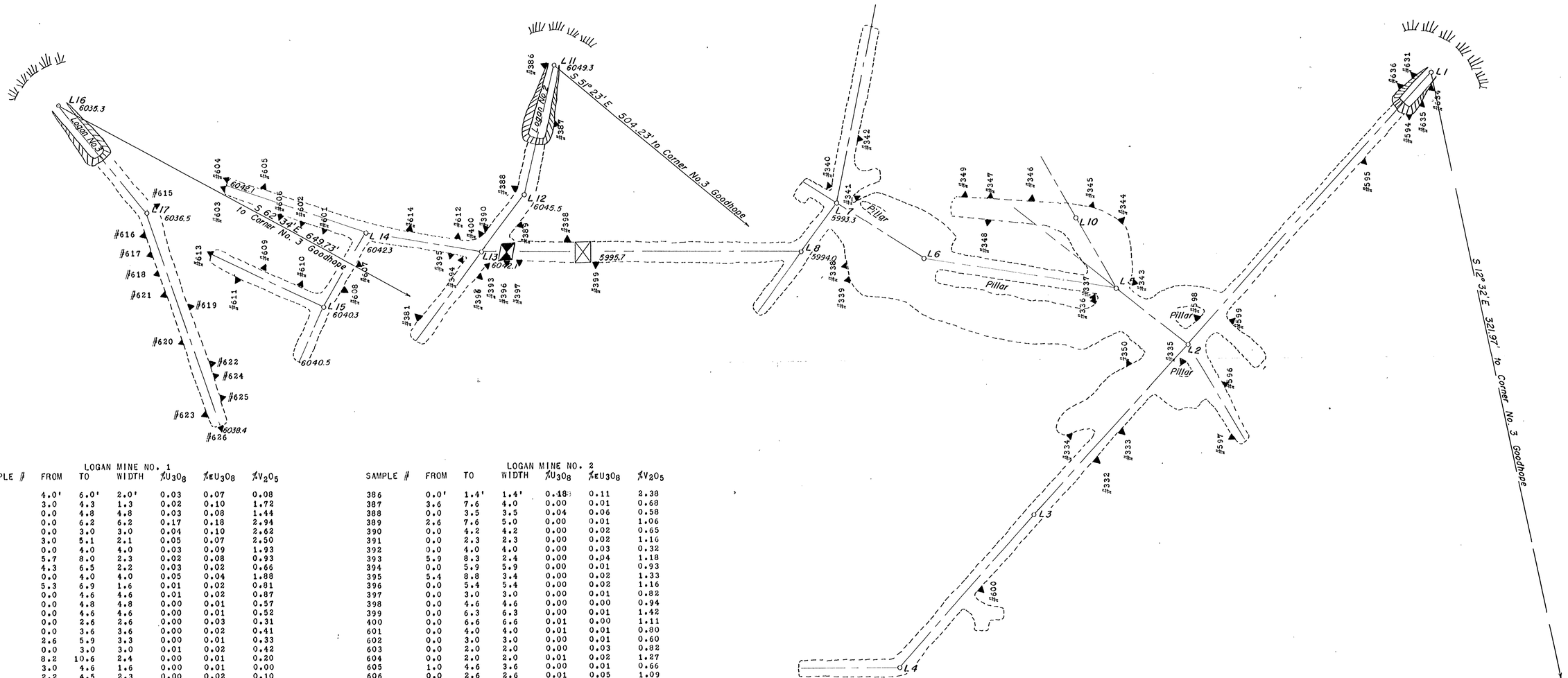
WATERFALL GROUP — SAN JUAN COUNTY, UTAH

CHAPMAN & WOOD DRWG. NO. U-22

SCALE 1" = 20'
JANUARY, 1956

Atomic Res. Corp.
523-3rd St. N.W.
ABQ - N.M.

Map No. 5A



LOGAN MINE NO. 1

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%eU_3O_8	%V_2O_5
332	4.0'	6.0'	2.0'	0.03	0.07	0.08
333	3.0	4.3	1.3	0.02	0.10	1.72
334	0.0	4.8	4.8	0.03	0.08	1.44
335	0.0	6.2	6.2	0.17	0.18	2.94
336	0.0	3.0	3.0	0.04	0.10	2.62
337	3.0	5.1	2.1	0.05	0.07	2.50
338	0.0	4.0	4.0	0.03	0.09	1.93
339	5.7	8.0	2.3	0.02	0.08	0.93
340	4.3	6.5	2.2	0.03	0.02	0.66
341	0.0	4.0	4.0	0.05	0.04	1.88
342	5.3	6.9	1.6	0.01	0.02	0.81
343	0.0	4.6	4.6	0.01	0.02	0.87
344	0.0	4.8	4.8	0.00	0.01	0.57
345	0.0	4.6	4.6	0.00	0.01	0.52
346	0.0	2.6	2.6	0.00	0.03	0.31
347	0.0	3.6	3.6	0.00	0.02	0.41
348	2.6	5.9	3.3	0.00	0.01	0.33
349	0.0	3.0	3.0	0.01	0.02	0.42
350	8.2	10.6	2.4	0.00	0.01	0.20
594	3.0	4.6	1.6	0.00	0.01	0.00
595	2.2	4.5	2.3	0.00	0.02	0.10
596	1.6	4.0	2.4	0.01	0.03	0.76
597	0.0	4.7	4.7	0.00	0.02	0.24
598	0.0	4.8	4.8	0.02	0.02	0.78
599	3.1	5.1	2.0	0.04	0.06	0.90
600	4.0	5.4	1.4	0.26	0.25	2.98
634	0.0	3.6	3.6	0.00	0.01	0.97
635	6.0	8.0	2.0	0.00	0.01	0.76
636	0.0	1.6	1.6	0.01	0.01	1.23
637	0.0	1.0	1.0	0.00	0.02	1.26

LOGAN MINE NO. 2

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%eU_3O_8	%V_2O_5
386	0.0'	1.4'	1.4'	0.18	0.11	2.38
387	3.6	7.6	4.0	0.00	0.01	0.68
388	0.0	3.5	3.5	0.04	0.06	0.58
389	2.6	7.6	5.0	0.00	0.01	1.06
390	0.0	4.2	4.2	0.00	0.02	0.65
391	0.0	2.3	2.3	0.00	0.02	1.16
392	0.0	4.0	4.0	0.00	0.03	0.32
393	5.9	8.3	2.4	0.00	0.04	1.18
394	0.0	5.9	5.9	0.00	0.01	0.93
395	5.4	8.8	3.4	0.00	0.02	1.33
396	0.0	5.4	5.4	0.00	0.02	1.16
397	0.0	3.0	3.0	0.00	0.01	0.82
398	0.0	4.6	4.6	0.00	0.00	0.94
399	0.0	6.3	6.3	0.00	0.01	1.42
400	0.0	6.6	6.6	0.01	0.00	1.11
601	0.0	4.0	4.0	0.01	0.01	0.80
602	0.0	3.0	3.0	0.00	0.01	0.60
603	0.0	2.0	2.0	0.00	0.03	0.82
604	0.0	2.0	2.0	0.01	0.02	1.27
605	1.0	4.6	3.6	0.00	0.01	0.66
606	0.0	2.6	2.6	0.01	0.05	1.09
607	0.0	3.4	3.4	0.00	0.04	0.56
608	0.0	4.6	4.6	0.00	0.02	0.51
609	0.0	3.0	3.0	0.00	0.02	0.64
610	0.0	5.9	5.9	0.00	0.04	0.38
611	0.0	4.1	4.1	0.00	0.04	0.50
612	0.0	3.0	3.0	0.00	0.04	0.57
613	0.0	2.6	2.6	0.00	0.01	1.14
614	0.0	4.2	4.2	0.00	0.00	0.51

LOGAN MINE NO. 3

615	2.0	5.9	3.9	0.01	0.04	0.66
616	3.2	6.4	3.2	0.00	0.02	0.29
617	4.2	6.0	1.8	0.00	0.05	0.36
618	1.0	5.0	4.0	0.00	0.04	0.28
619	0.0	2.6	2.6	0.00	0.03	0.30
620	0.0	3.1	3.1	0.00	0.00	0.16
621	0.0	2.8	2.8	0.00	0.00	0.47
622	0.0	2.5	2.5	0.01	0.05	0.28
623	0.0	1.9	1.9	0.00	0.01	0.25
624	1.0	2.8	1.8	0.00	0.01	0.31
625	0.0	1.6	1.6	0.00	0.02	0.38
626	0.0	1.1	1.1	0.00	0.04	0.29

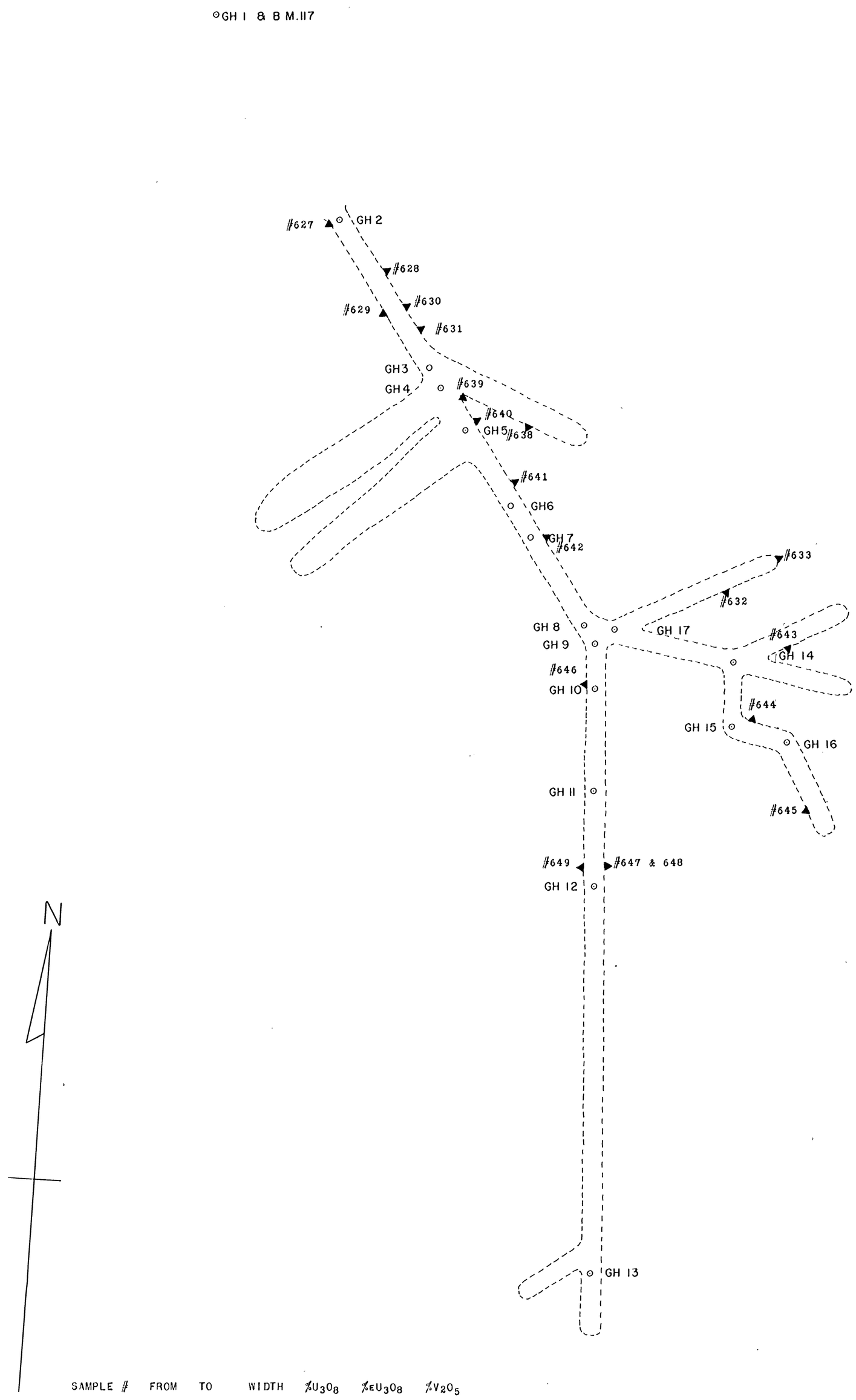
LOGAN CLAIM
UNDERGROUND WORKINGS
WATERFALL GROUP — SAN JUAN COUNTY, UTAH

CHAPMAN & WOOD DRWG. NO. U-23

Atomic Res. Corp.
523-3rd St. N.W.
ABQ-N.M.

JANUARY, 1956
SCALE 1" = 20'

Map No. 7A



SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%EU_3O_8	%V_2O_5
627	0.0'	3.6'	3.6'	0.00	0.05	0.73
628	0.0	4.0	4.0	0.00	0.02	0.86
629	0.0	2.3	2.3	0.00	0.00	0.26
630	0.0	3.0	3.0	0.00	0.02	0.66
631	0.0	4.4	4.4	0.00	0.05	0.74
632	0.0	2.1	2.1	0.00	0.02	0.63
633	2.6	5.1	2.5	0.01	0.05	1.48
638	0.0	3.0	3.0	0.00	0.04	0.03
639	2.0	5.0	3.0	0.00	0.02	0.98
640	5.8	7.0	1.2	0.00	0.02	1.28
641	5.0	6.8	1.8	0.00	0.01	0.90
642	2.3	4.1	2.7	0.01	0.03	2.07
643	0.0	2.0	2.0	0.01	0.04	1.70
644	0.0	2.4	2.4	0.00	0.05	2.48
645	0.0	2.0	2.0	0.01	0.02	0.36
646	0.0	2.6	2.6	0.01	0.02	0.92
647	3.0	4.0	1.0	0.01	0.02	3.20
648	1.0	2.0	1.0	0.01	0.02	0.59
649	0.0	1.0	1.0	0.01	0.01	1.11
650	1.8	3.2	1.4	0.02	0.03	0.35

GOODHOPE CLAIM
UNDERGROUND WORKINGS
WATER FALL GROUP SAN JUAN COUNTY, UTAH

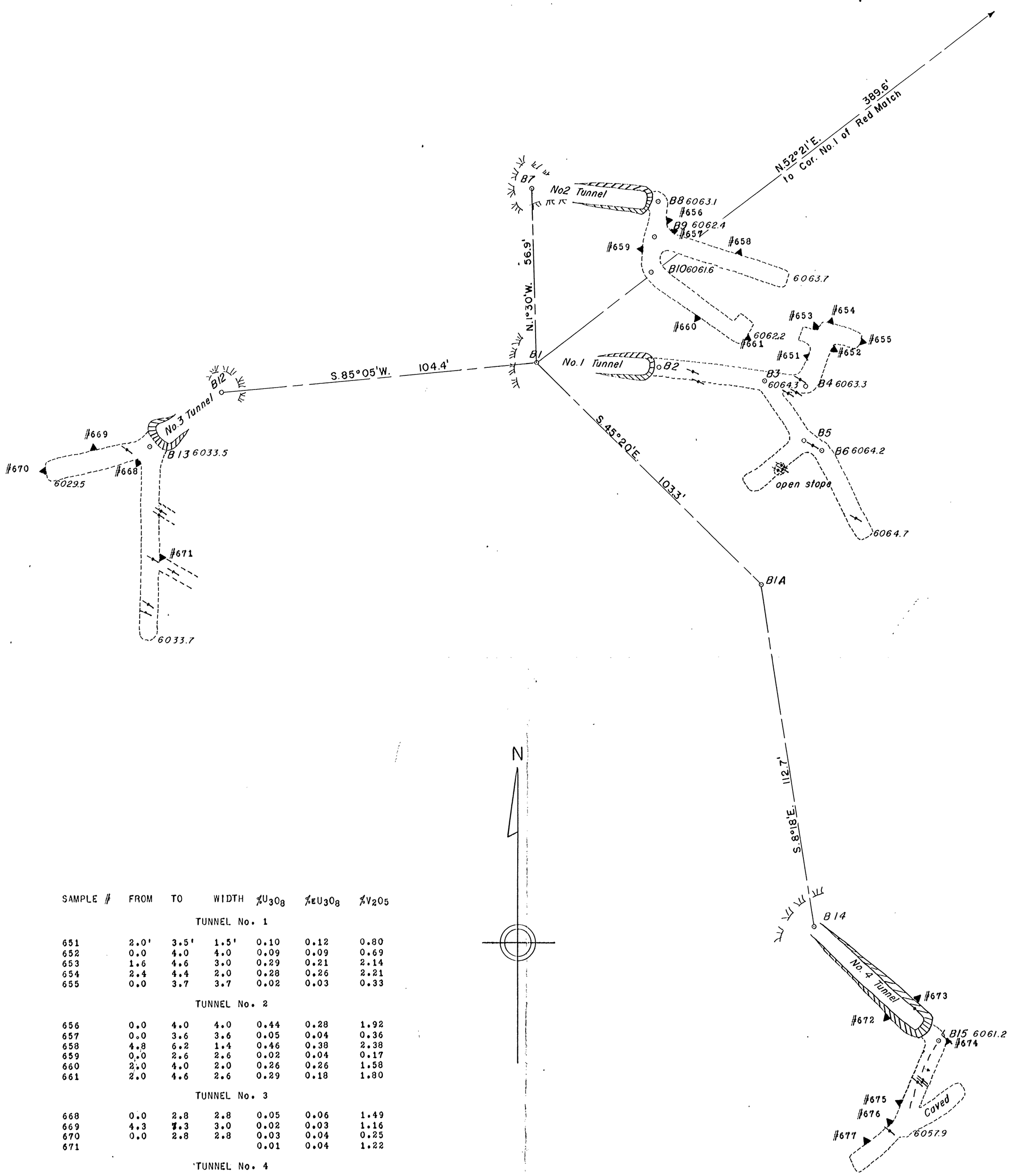
CHAPMAN & WOOD DRWG. U-8

DECEMBER 1955

SCALE 1"=20'

Atomic Res. Corp.
523 - 3rd St. N.W.
ABQ - N.M.

Map No18A



SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%EU_3O_8	%V_2O_5
			TUNNEL No. 1			
651	2.0'	3.5'	1.5'	0.10	0.12	0.80
652	0.0	4.0	4.0	0.09	0.09	0.69
653	1.6	4.6	3.0	0.29	0.21	2.14
654	2.4	4.4	2.0	0.28	0.26	2.21
655	0.0	3.7	3.7	0.02	0.03	0.33
			TUNNEL No. 2			
656	0.0	4.0	4.0	0.44	0.28	1.92
657	0.0	3.6	3.6	0.05	0.04	0.36
658	4.8	6.2	1.4	0.46	0.38	2.38
659	0.0	2.6	2.6	0.02	0.04	0.17
660	2.0	4.0	2.0	0.26	0.26	1.58
661	2.0	4.6	2.6	0.29	0.18	1.80
			TUNNEL No. 3			
668	0.0	2.8	2.8	0.05	0.06	1.49
669	4.3	7.3	3.0	0.02	0.03	1.16
670	0.0	2.8	2.8	0.03	0.04	0.25
671				0.01	0.04	1.22
			TUNNEL No. 4			
672	5.0	6.2	1.2	0.25	0.24	1.26
673	3.8	4.8	1.0	0.09	0.11	0.94
674	0.0	1.0	1.0	0.41	0.20	0.68
675	4.9	6.0	1.1	0.18	0.16	1.94
676	0.0	2.0	2.0	0.02	0.06	2.32
677	0.0	2.0	2.0	0.02	0.08	1.57

BEE CLAIM
UNDERGROUND WORKINGS
WATERFALL GROUP — SAN JUAN COUNTY, UTAH

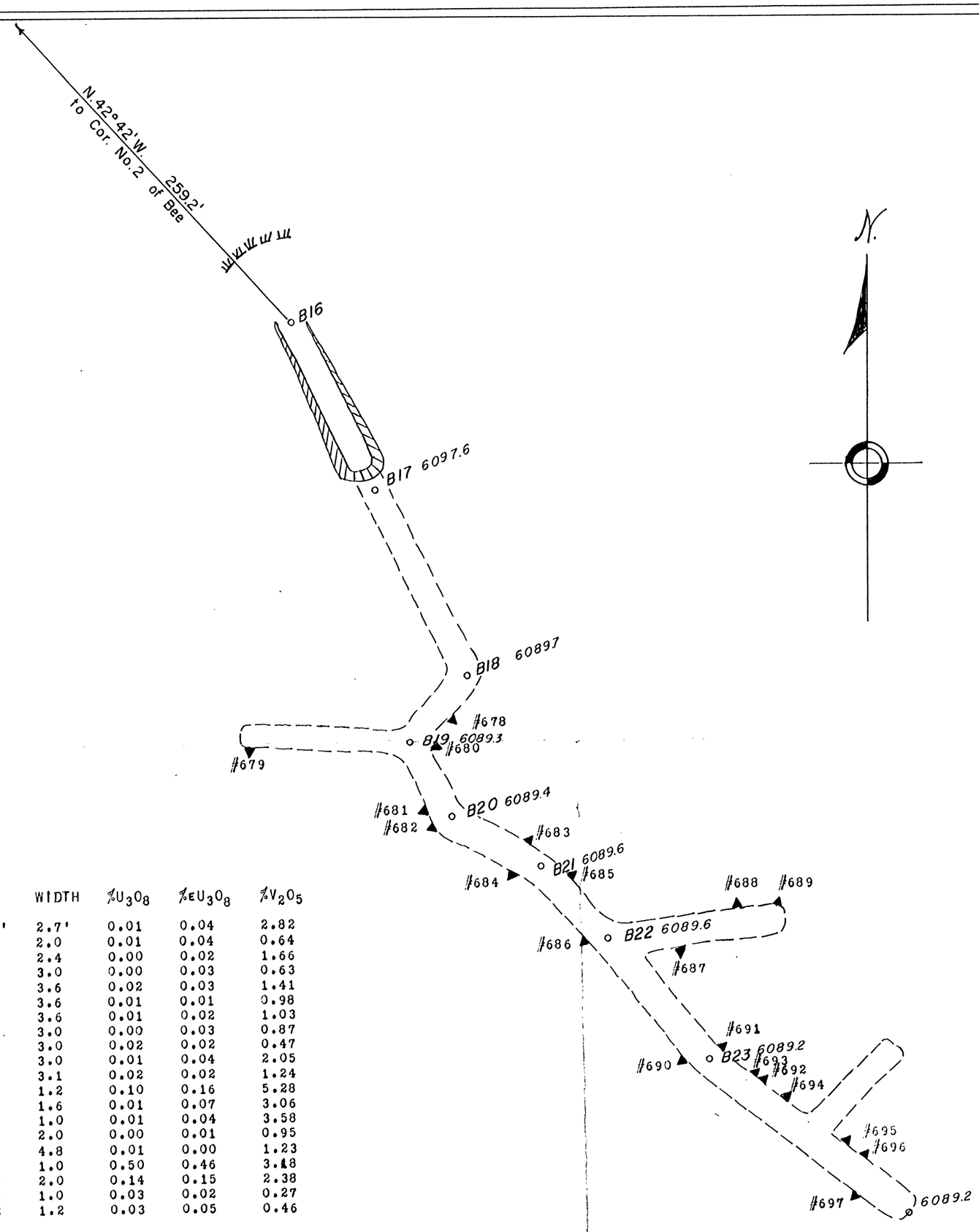
CHAPMAN & WOOD DRWG. NO. U-18

JANUARY, 1956

Atomic Res. Corp.
523-3rd St. N.W.
ABQ-N.M.

SCALE 1"=20'

Map No. 12A



SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%EU_3O_8	%V_2O_5
678	2.0'	4.7'	2.7'	0.01	0.04	2.82
679	0.0	2.0	2.0	0.01	0.04	0.64
680	0.0	2.4	2.4	0.00	0.02	1.66
681	0.0	3.0	3.0	0.00	0.03	0.63
682	0.0	3.6	3.6	0.02	0.03	1.41
683	0.0	3.6	3.6	0.01	0.01	0.98
684	1.0	4.6	3.6	0.01	0.02	1.03
685	0.0	3.0	3.0	0.00	0.03	0.87
686	0.0	3.0	3.0	0.02	0.02	0.47
687	1.8	4.8	3.0	0.01	0.04	2.05
688	0.0	3.1	3.1	0.02	0.02	1.24
689	4.0	5.2	1.2	0.10	0.16	5.28
690	0.0	1.6	1.6	0.01	0.07	3.06
691	1.6	2.6	1.0	0.01	0.04	3.58
692	5.0	7.0	2.0	0.00	0.01	0.95
693	1.0	5.8	4.8	0.01	0.00	1.23
694	3.8	4.8	1.0	0.50	0.46	3.18
695	2.5	4.5	2.0	0.14	0.15	2.38
696	2.3	3.3	1.0	0.03	0.02	0.27
697	0.0	1.2	1.2	0.03	0.05	0.46

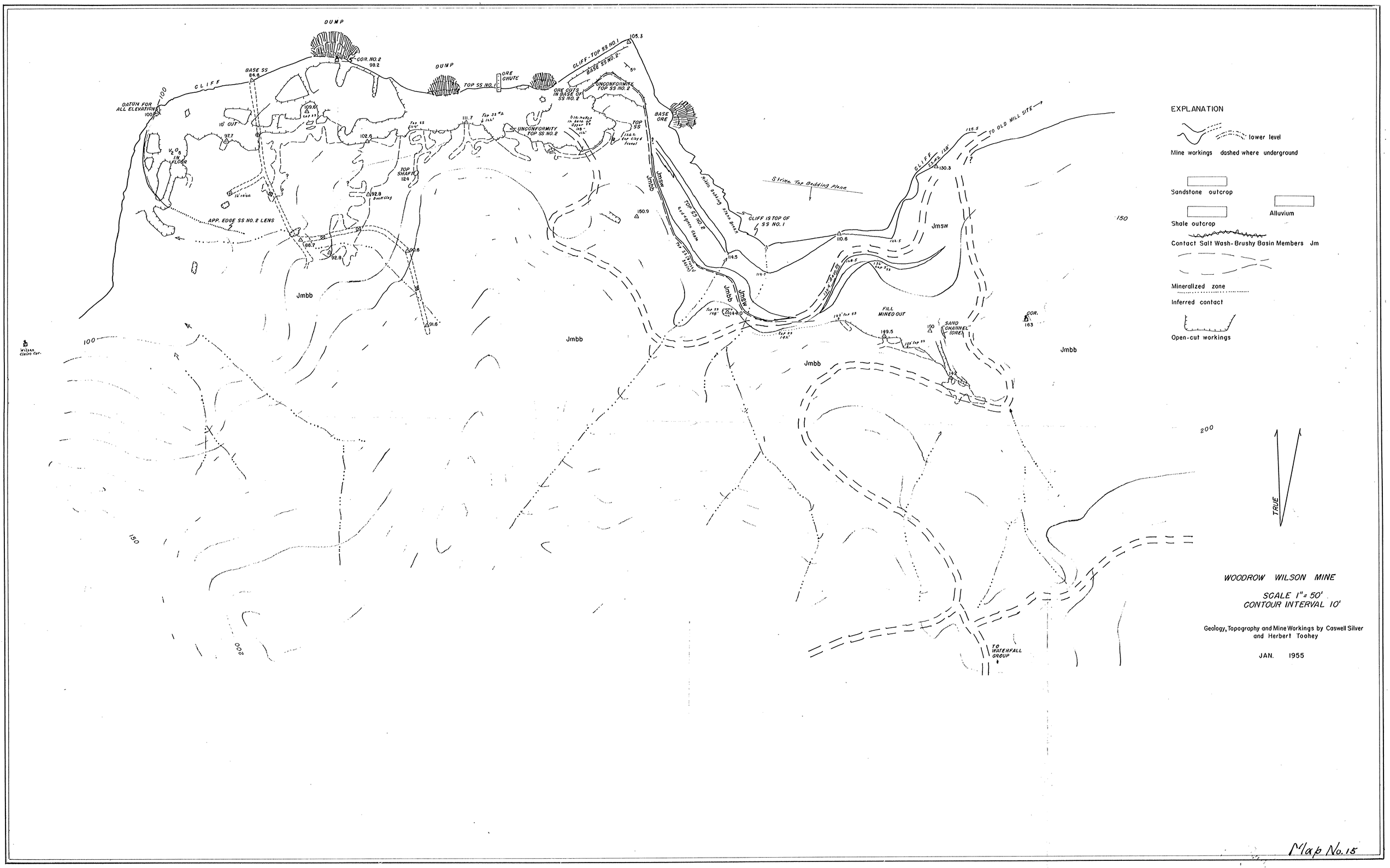
RED MATCH CLAIM
UNDERGROUND WORKINGS
WATERFALL GROUP SAN JUAN COUNTY, UTAH

CHAPMAN & WOOD DRWG. NO. U-19
JANUARY, 1956

SCALE 1"=20'

Atomic Res. Corp.
523-3rd St. N.W.
ABQ-N.M.

Map No. 14A



EXPLANATION

lower level

Mine workings dashed where underground

Sandstone outcrop

Alluvium

Shale outcrop

Contact Salt Wash-Brushy Basin Members Jm

Mineralized zone

Inferred contact

Open-cut workings

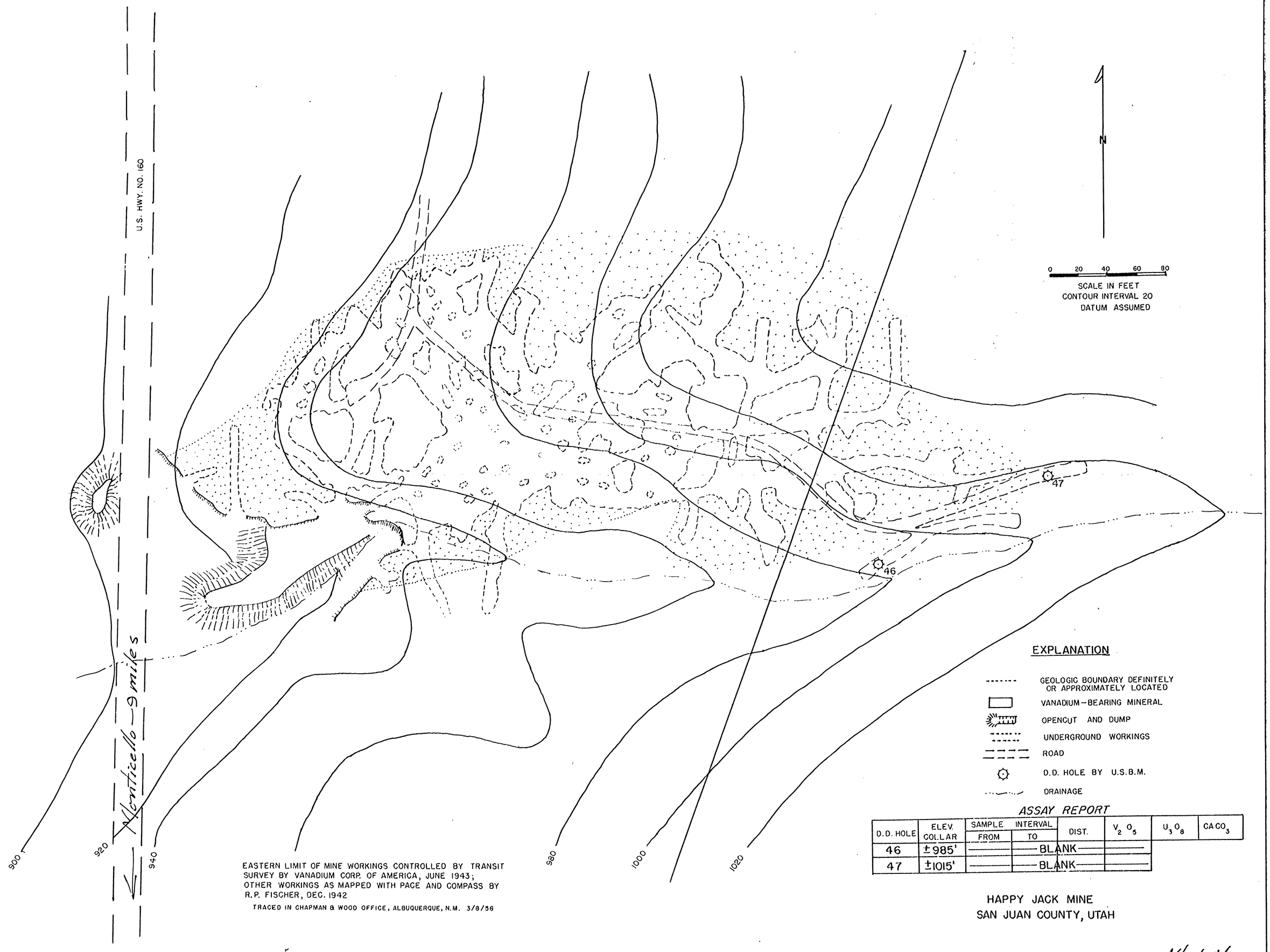
WOODROW WILSON MINE

SCALE 1" = 50'
CONTOUR INTERVAL 10'

Geology, Topography and Mine Workings by Caswell Silver and Herbert Toohey

JAN. 1955

Map No. 15



ASSAY REPORT

D.D. HOLE	ELEV. COLLAR	SAMPLE INTERVAL FROM	SAMPLE INTERVAL TO	DIST.	V_2O_5	U_3O_8	$CaCO_3$
46	±985'	BLANK					
47	±1015'	BLANK					

HAPPY JACK MINE
SAN JUAN COUNTY, UTAH

Map No. 18

Atomic Resources Corp.

523 Third Street NW

Albuquerque, N.M.

MAP NO. 18

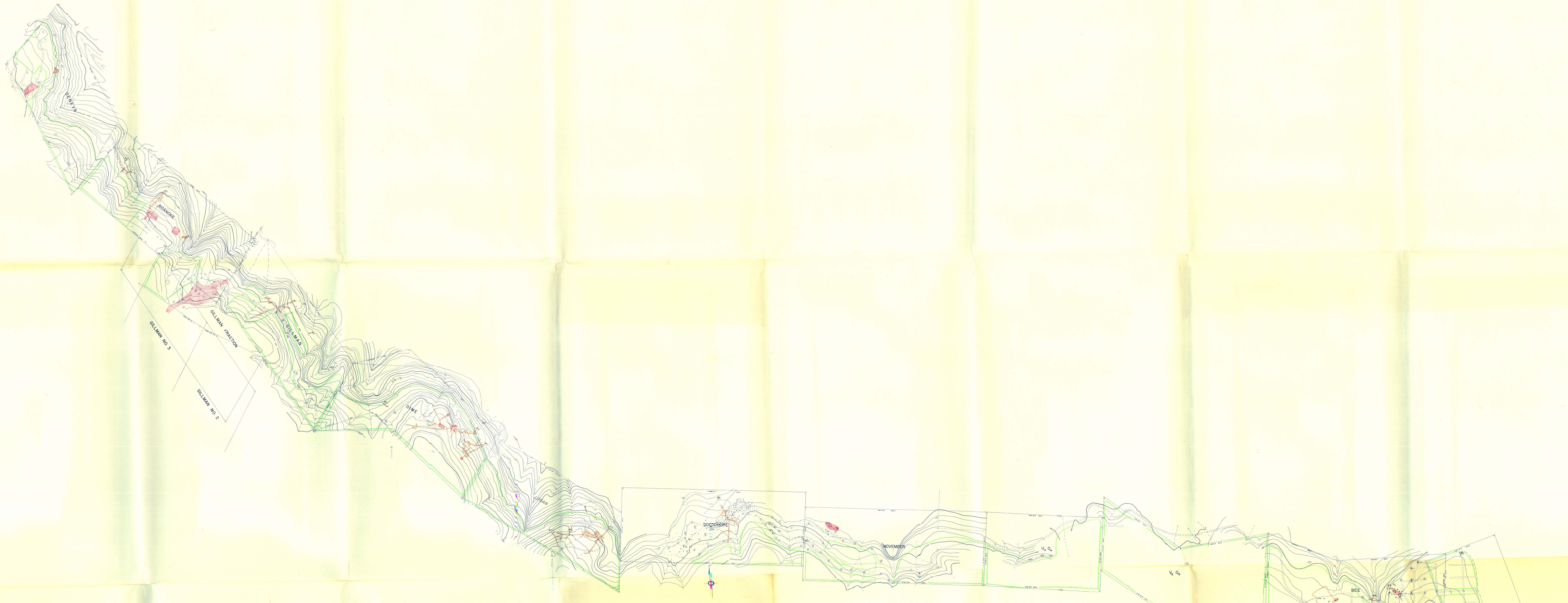
Happy Jack Claims:

The Happy Jack mine was an important producer of hi-grade vanadium ore. At this time the mine workings are not accessible, as the mine entrance is caved but not badly and on inclined shaft on east side though in fair condition had water at the bottom in the summer of 1955.

The claims should be surveyed to establish corners, re-open the mine, surface and mine survey, geology and drilling.

Proposed costs are as follows:

Step #1	$3,700.00
Step #2	6,038.00
Total	$ 9,738.00



LEGEND

- CHAPMAN & WOOD DRILL HOLES
- CHAPMAN & WOOD DRILL HOLES - MINERALIZED
- BARREN DRILL HOLES (PREVIOUS TO DEC. 1955)
- MINERALIZED DRILL HOLES (PREVIOUS TO DEC. 1955)
- UNDERGROUND WORKINGS
- ROADS
- APPROXIMATE ORE AREA
- Unexplored area of claim proposed for drilling

PLAN
WATER FALL GROUP

T.31S., R.24 & 25E., SAN JUAN COUNTY, UTAH

CHAPMAN & WOOD DRWG. U-3

SURVEYED & MAPPED DEC. 1955-FEB. 1956

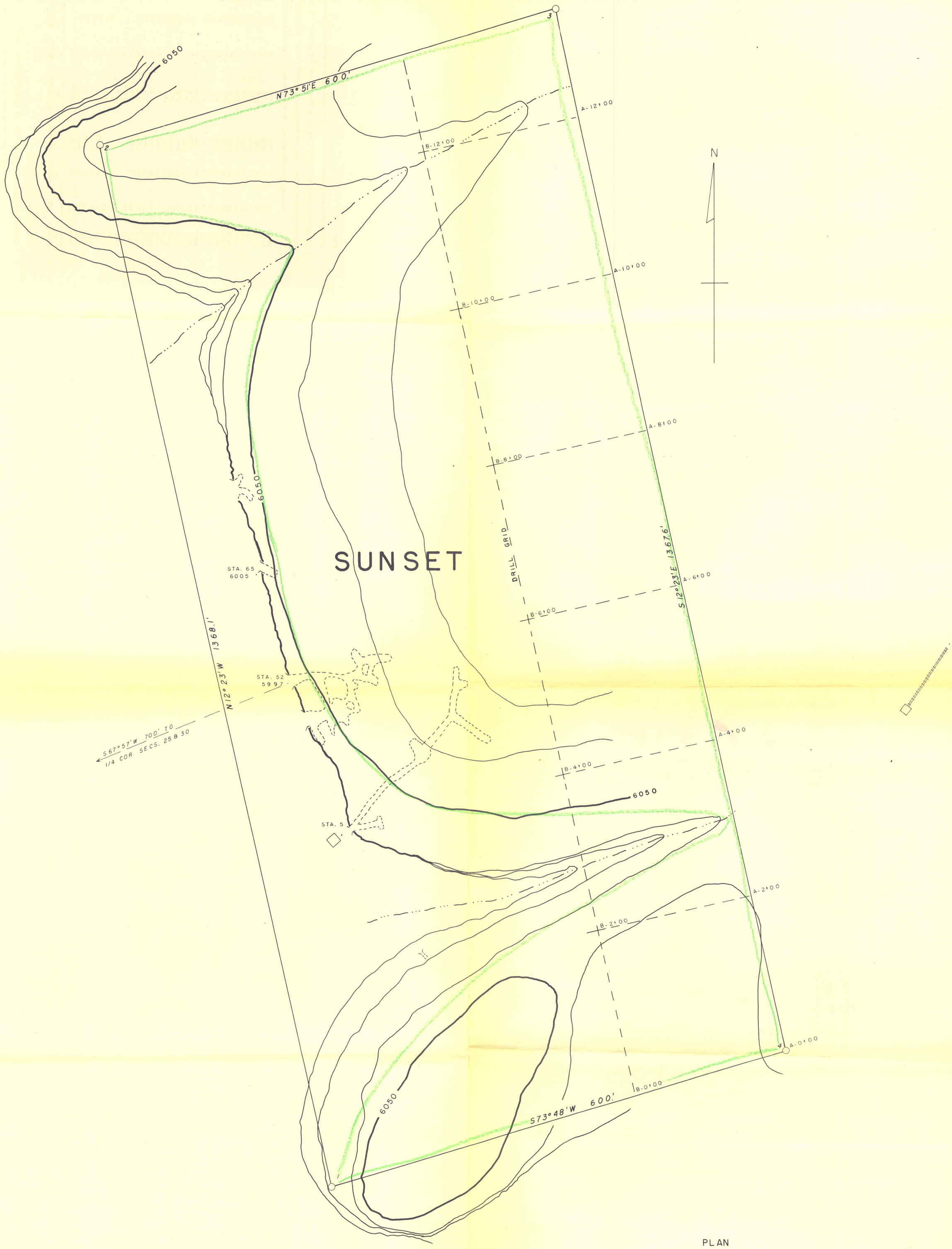
SCALE IN FEET

0 200 400 600

CONTOUR INTERVAL 10 FEET

Atomic Res. Corp.
528-3rd St. N.W.
Albq - N.M.

Map No. 2



PLAN
SUNSET CLAIM
SEC. 30, T.31S., R25E.
SAN JUAN COUNTY, UTAH

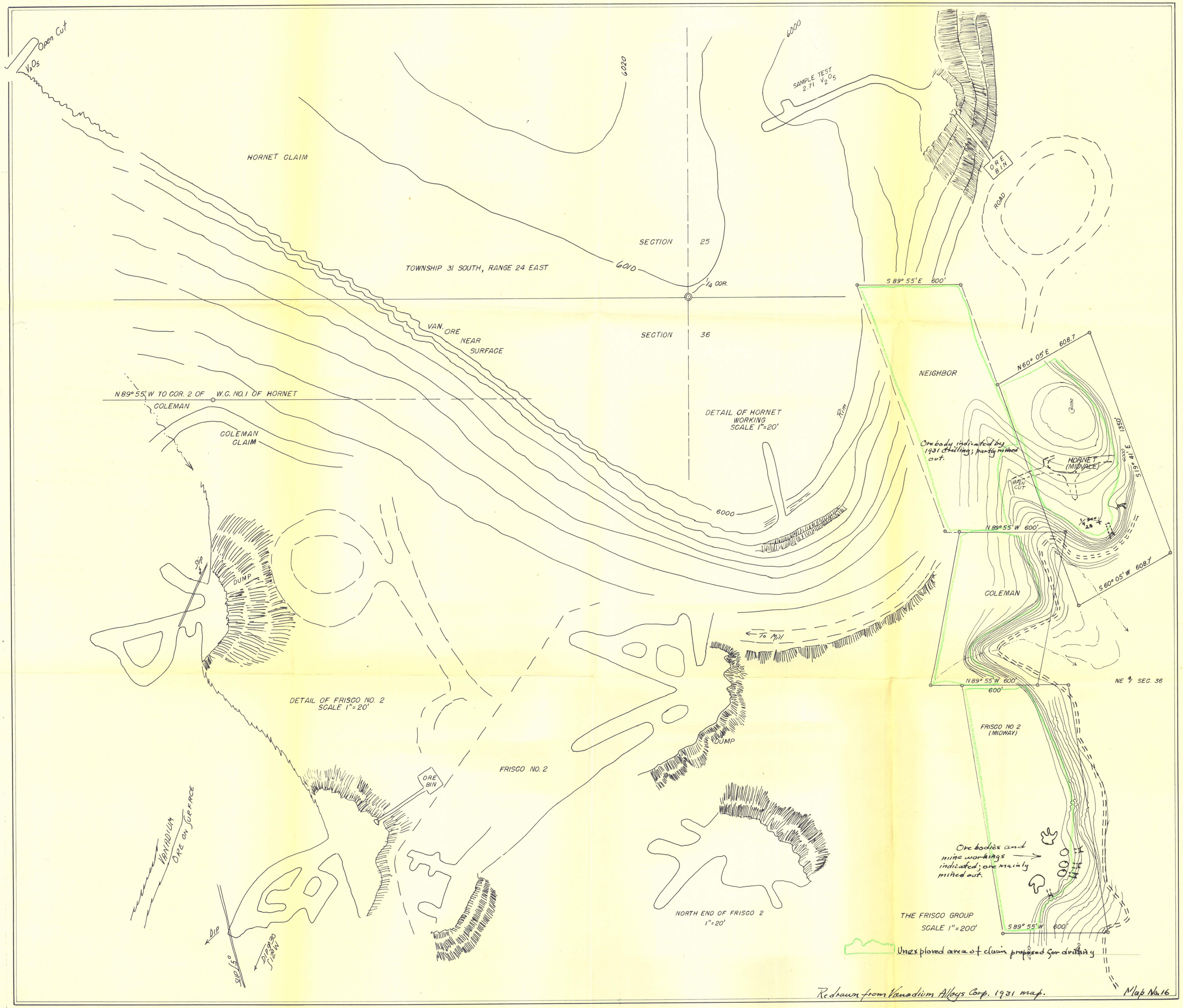
COMPILED FROM VANADIUM ALLOYS CORP. MAP DV5
CHAPMAN & WOOD DRWG. U-27

SURVEYED JANUARY 1956

SCALE IN FEET
0 50 100 150

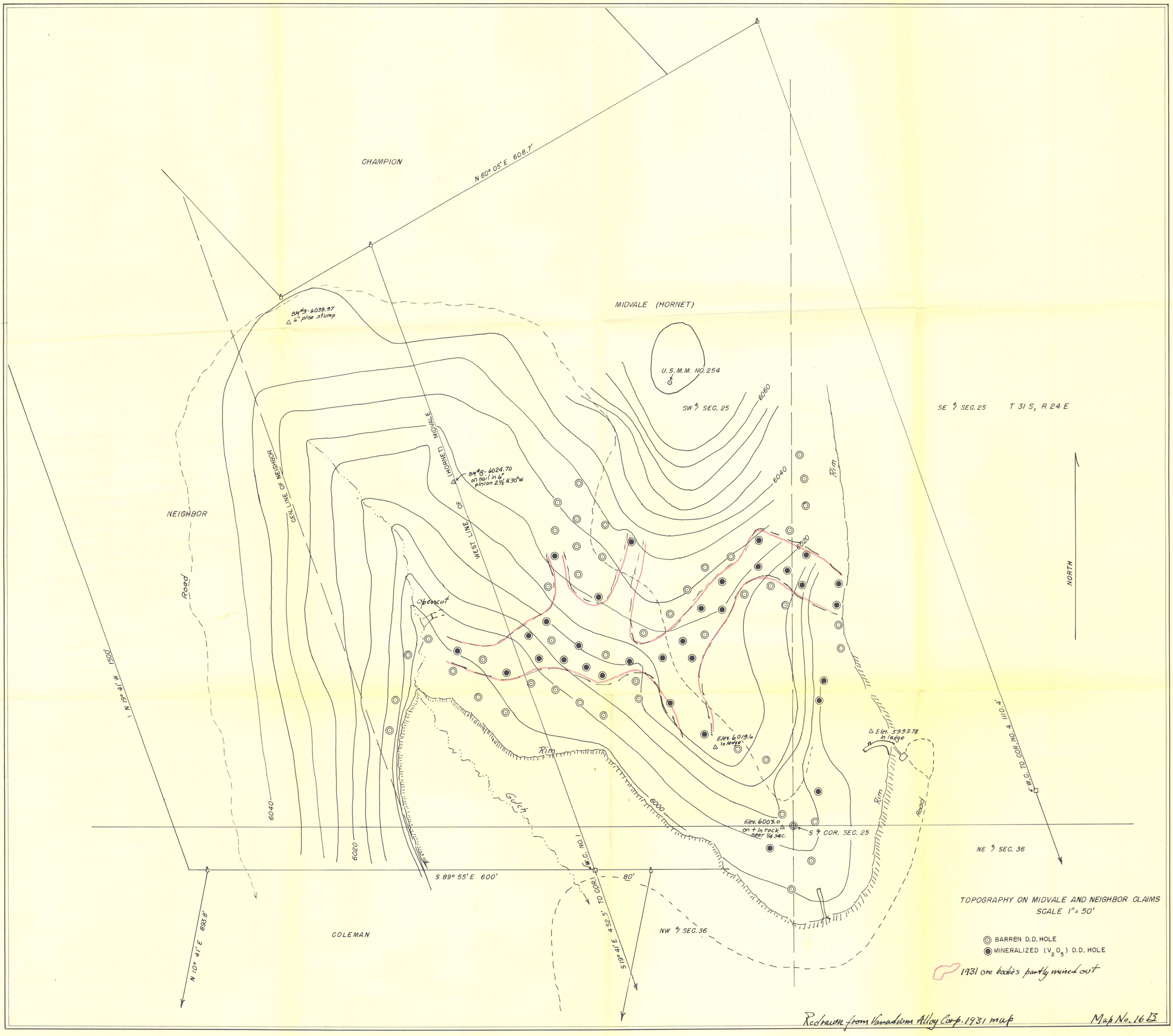
CONTOUR INTERVAL 10 FEET

Map No. 17



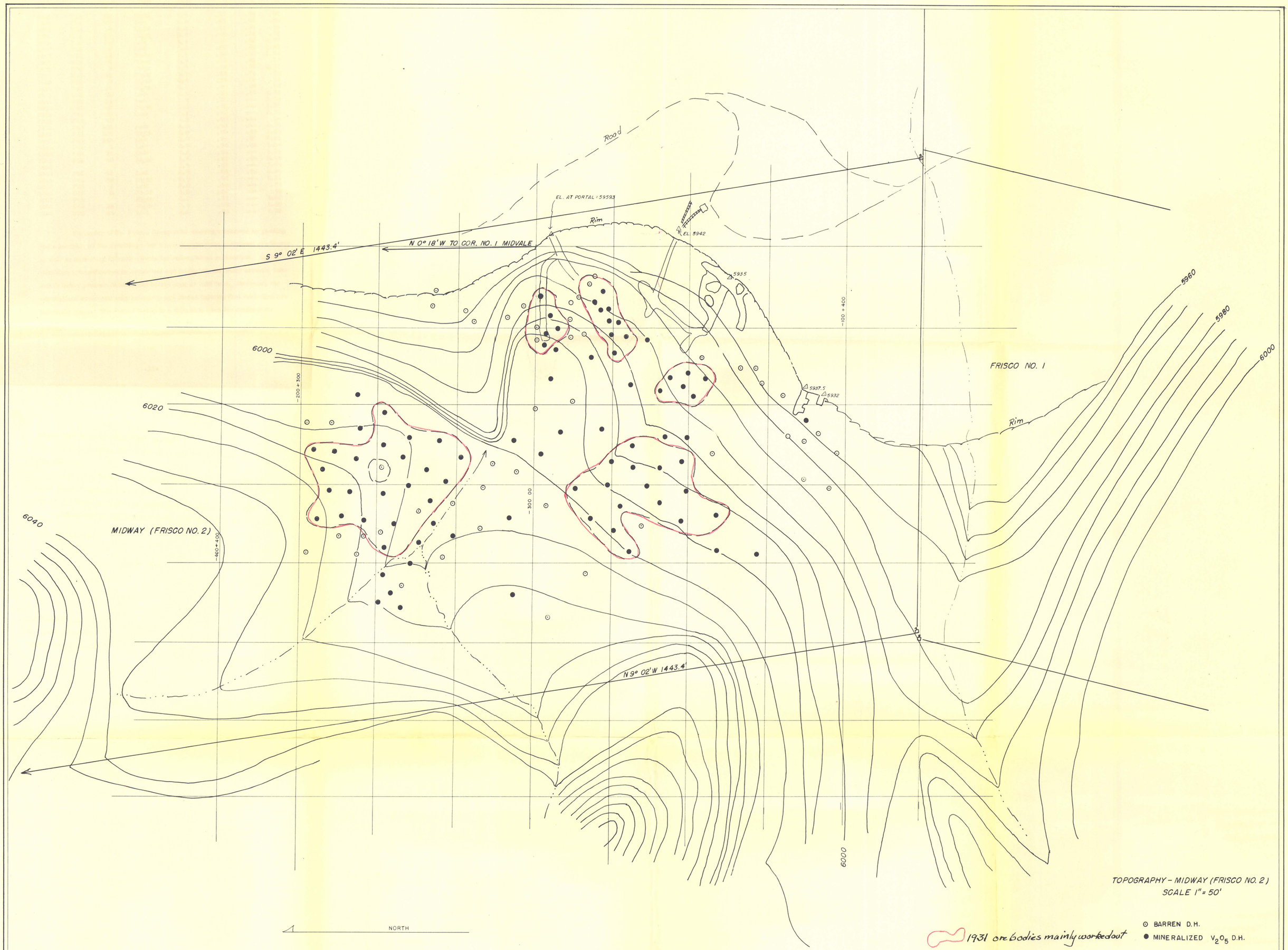
Redrawn from Vanadium Alloys Corp. 1931 map.

Map No. 16



Redrawn from Vanadium Alloy Corp. 1931 map

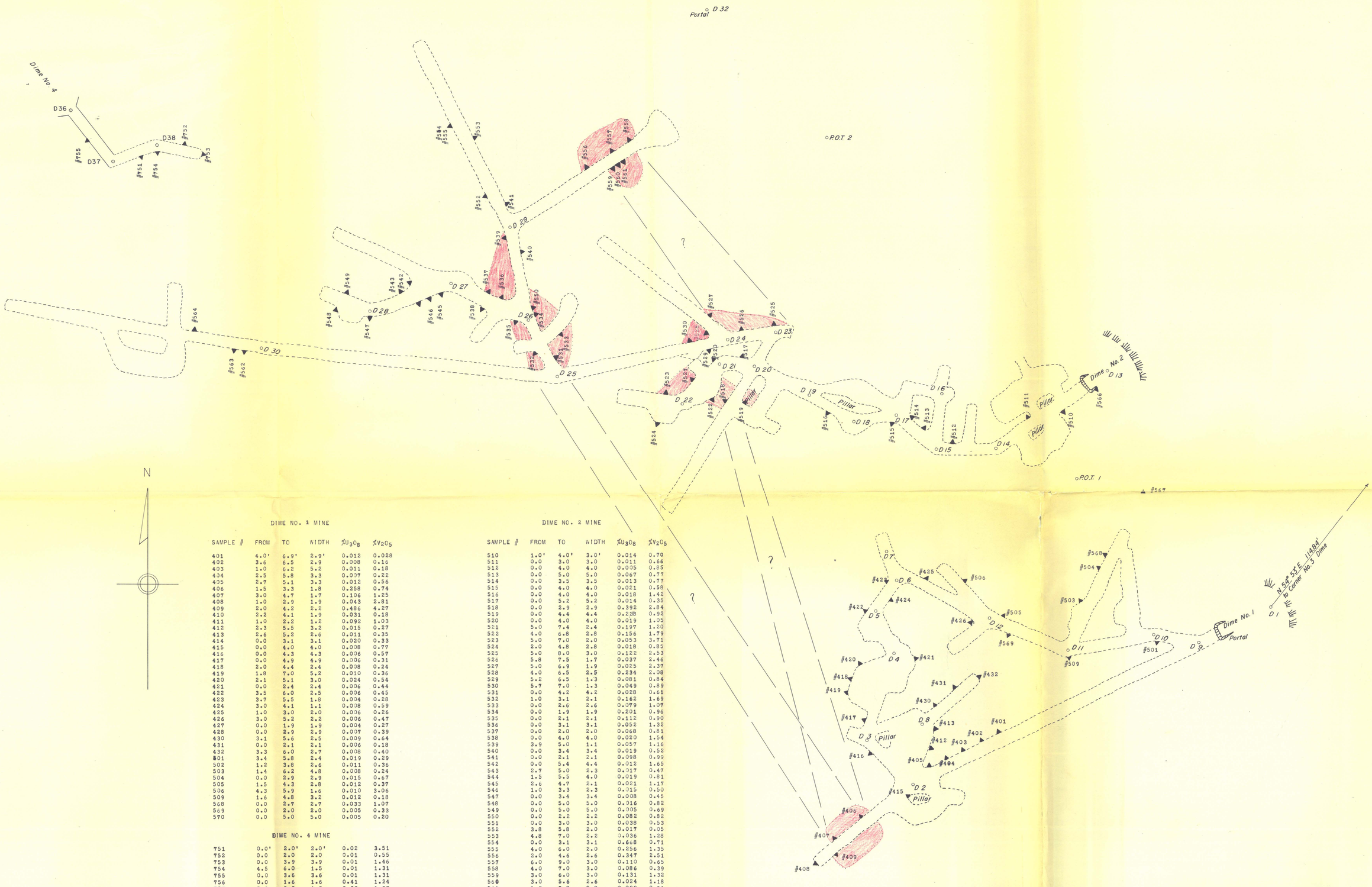
Map No. 16



TOPOGRAPHY – MIDWAY (FRISCO NO. 2)
SCALE 1" = 50'

Redrawn from Vanadium Alloys Corp. 1931 map.

Map No. 16A



DIME NO. 1 MINE

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%V_2O_5
401	4.0'	6.9'	2.9'	0.012	0.028
402	3.6	6.5	2.9	0.008	0.16
403	1.0	6.2	5.2	0.011	0.18
404	2.5	5.8	3.3	0.007	0.22
405	2.7	5.1	3.3	0.012	0.56
406	1.5	3.3	1.8	0.258	0.74
407	3.0	4.7	1.7	0.106	1.25
408	1.0	2.9	1.9	0.043	2.81
409	2.0	4.2	2.2	0.486	4.27
410	2.2	4.1	1.9	0.031	0.18
411	1.0	2.2	1.2	0.092	1.03
412	2.3	5.5	3.2	0.015	0.27
413	2.6	5.2	2.6	0.011	0.35
414	0.0	3.1	3.1	0.020	0.33
415	0.0	4.0	4.0	0.008	0.77
416	0.0	4.3	4.3	0.006	0.57
417	0.0	4.9	4.9	0.006	0.31
418	2.0	4.4	2.4	0.008	0.24
419	1.8	7.0	5.2	0.010	0.36
420	2.1	5.1	3.0	0.024	0.54
421	0.0	2.4	2.4	0.006	0.44
422	3.5	6.0	2.5	0.006	0.45
423	3.7	5.5	1.8	0.004	0.28
424	3.0	4.1	1.1	0.008	0.59
425	1.0	3.0	2.0	0.006	0.26
426	3.0	5.2	2.2	0.006	0.47
427	0.0	1.9	1.9	0.004	0.27
428	0.0	2.9	2.9	0.007	0.39
430	3.1	5.6	2.5	0.009	0.64
431	0.0	2.1	2.1	0.006	0.18
432	3.3	6.0	2.7	0.008	0.40
501	3.4	5.8	2.4	0.019	0.29
502	1.2	3.8	2.6	0.011	0.36
503	1.4	6.2	4.8	0.008	0.24
504	0.0	2.9	2.9	0.015	0.67
505	1.5	4.3	2.8	0.012	0.37
506	4.3	5.9	1.6	0.010	3.06
509	1.6	4.8	3.2	0.012	0.18
568	0.0	2.7	2.7	0.033	1.07
569	0.0	2.0	2.0	0.005	0.33
570	0.0	5.0	5.0	0.005	0.20

DIME NO. 4 MINE

751	0.0'	2.0'	2.0'	0.02	3.51
752	0.0	2.0	2.0	0.01	0.55
753	0.0	3.9	3.9	0.01	1.46
754	4.5	6.0	1.5	0.01	1.31
755	0.0	3.6	3.6	0.01	1.31
756	0.0	1.6	1.6	0.41	1.24
757	2.3	3.3	1.0	0.30	1.20
758	0.0	1.2	1.2	0.00	0.89

DIME NO. 2 MINE

SAMPLE #	FROM	TO	WIDTH	%U_3O_8	%V_2O_5
510	1.0'	4.0'	3.0'	0.014	0.70
511	0.0	3.0	3.0	0.011	0.66
512	0.0	4.0	4.0	0.005	0.85
513	0.0	5.0	5.0	0.067	0.77
514	0.0	3.5	3.5	0.013	0.77
515	0.0	4.0	4.0	0.021	0.58
516	0.0	4.0	4.0	0.018	1.42
517	0.0	5.2	5.2	0.014	0.35
518	0.0	2.9	2.9	0.392	2.84
519	0.0	4.4	4.4	0.228	0.92
520	0.0	4.0	4.0	0.019	1.05
521	5.0	7.4	2.4	0.197	1.20
522	4.0	6.8	2.8	0.156	1.79
523	5.0	7.0	2.0	0.053	3.71
524	2.0	4.8	2.8	0.018	0.85
525	5.0	8.0	3.0	0.122	2.53
526	5.8	7.5	1.7	0.037	2.46
527	5.0	6.9	1.9	0.025	2.37
528	4.0	6.5	2.5	0.234	2.08
529	5.2	6.5	1.3	0.081	0.84
530	5.7	7.0	1.3	0.049	0.89
531	0.0	4.2	4.2	0.028	0.61
532	1.0	3.1	2.1	0.162	1.69
533	0.0	2.6	2.6	0.079	1.07
534	0.0	1.9	1.9	0.201	0.96
535	0.0	2.1	2.1	0.112	0.90
536	0.0	3.1	3.1	0.052	1.32
537	0.0	2.0	2.0	0.068	0.81
538	0.0	4.0	4.0	0.020	1.54
539	3.9	5.0	1.1	0.057	1.16
540	0.0	3.4	3.4	0.019	0.52
541	0.0	2.1	2.1	0.098	0.99
542	0.0	5.4	4.4	0.012	1.65
543	2.7	5.0	2.3	0.017	0.47
544	1.5	5.5	4.0	0.019	0.81
545	2.6	4.7	2.1	0.021	1.17
546	1.0	3.3	2.3	0.015	0.50
547	0.0	3.4	3.4	0.008	0.45
548	0.0	5.0	5.0	0.016	0.82
549	0.0	5.0	5.0	0.005	0.69
550	0.0	2.2	2.2	0.082	0.82
551	0.0	3.0	3.0	0.038	0.53
552	3.8	5.8	2.0	0.017	0.05
553	4.8	7.0	2.2	0.036	1.28
554	0.0	3.1	3.1	0.668	0.71
555	4.0	6.0	2.0	0.256	1.35
556	2.0	4.6	2.6	0.347	2.51
557	6.0	9.0	3.0	0.110	0.65
558	4.0	7.0	3.0	0.086	0.39
559	3.0	6.0	3.0	0.131	1.32
560	3.0	5.6	2.6	0.024	1.18
561	1.0	3.0	2.0	0.022	0.96
562	0.0	3.6	3.6	0.018	0.73
563	1.0	3.3	2.3	0.017	0.28
564	3.0	5.0	2.0	0.091	0.90
565	2.0	5.0	3.0	0.009	0.66
567	0.0	2.8	2.8	0.006	0.75

MAP OF THE DIME MINE
UNDERGROUND WORKINGS
WATERFALL GROUP — SAN JUAN COUNTY, UTAH

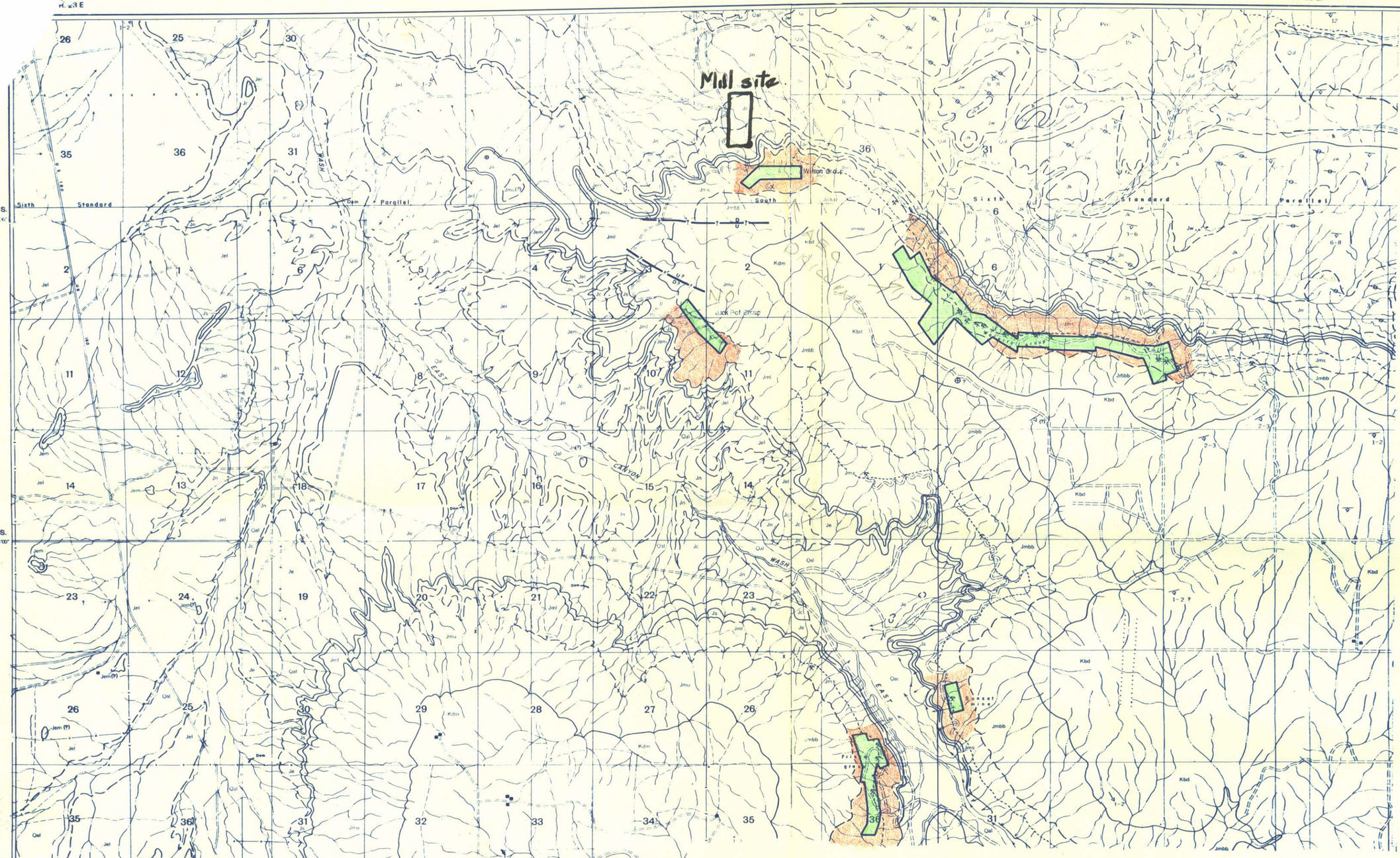
CHAPMAN & WOOD DRWG. NO. U-24

JANUARY, 1956

SCALE 1" = 20'

Atomic Res. Corp.
523-3rd St. N.W.
ABQ - N.M.

Map No. 6A



EXPLANATION

Qal	Alluvium Valley fill and terrace gravel	QUATERNARY
Kbd	Burro Canyon formation and Dakota sandstone, undifferentiated (In places may be covered by thin mantle of Mancos shale (Upper Cretaceous))	CRETACEOUS (Lower and Upper)
Jmbb Jms	Morrison formation Brushy Basin shale member, Jmbb; Salt Wash sandstone member, Jms. Dashed line shows position of base of carnotite-bearing sandstone where field mapped	JURASSIC (Upper)
Js	Summerville formation	JURASSIC (Upper)
Je	Entrada sandstone (May include the Moab tongue)	JURASSIC (Middle)
Jc	Carmel formation	JURASSIC (Middle)
Jn	Navajo sandstone	JURASSIC (?)
Jk	Kayenta formation	JURASSIC (?)
Jw	Wingate sandstone	JURASSIC (?)
Ic	Chinle formation	TRIASSIC (Upper)

Contact
(Can be accurately located within 30 feet horizontally)

Contact
(Can be approximately located within 30 to 200 feet horizontally)

Contact
(Cannot be located accurately; probable error greater than 200 feet)

Fault

Strike and dip of beds
(Based on photo-interpretation)

Horizontal beds

Dip component

Strike of approximately vertical joint system
(Based on photo-interpretation)

Uninterpretable linear feature on photograph
(May be geologically significant)

Mine or quarry

Secondary road

Trail

Surveyed line

Fence

PHOTOGEOLOGIC MAP

ATOMIC RESOURCES CORP. HOLDINGS IN SAN JUAN COUNTY, UTAH

CHAPMAN & WOOD DRAWING NO. U-31

REPRODUCED FROM U.S.G.S. PHOTOGEOLOGIC MAPS, MT. PEALE 10, 11, 14, 15

SCALE

0 ½ 1 MILE

MARCH 1956

IRMIE 12

Map No. 1