DMSA 3390
GOOD HOPE GROUP OF CLAIMS
SAN JUAN URANIUM CORPORATION
LA PLATA COUNTY, COLORADO

INTRODUCTION AND SUMMARY

On December 17, 1954, exploration contract IDm-8706 was activated between San Juan Uranium Corporation and the Defense Minerals Exploration Administration to explore the Good Hope group of claims for uranium.

The claims are standard 600 feet by 1500 foot unpatented locations along Lightner Creek, in the San Juan National Forest, T. 36 N., R. 10 W., New Mexico principal meridian, La Plata County, Colorado.

The object of this project was to explore the Good Hope No. 1 and No. 2 claims for roscoelite-type uranium-vanadium deposits by extending the existing Minnletti adit 350 feet westerly. The contract called for an expenditure of $10,500.00 with Government participation of 75 percent.

Exploration under the contract started on November 1, 1954, and the 350 feet of drift allowed under the contract was completed in July 1955. The operator also sampled the drift at 5-foot intervals and submitted the vanadium and uranium analyses for 70 samples.

Total cost of exploration is $10,500.00, and Government participation of 75 percent is $7,875.00.

Two requests for additional exploration assistance in the amounts of $400,000.00 and $71,500.00 were recommended for denial.

Exploration under DMSA has exposed sandstone containing definite but small and sporadic occurrences of vanadium with only very minor amounts of uranium. The deposit cannot be considered as a significant source of uranium ore.

No further exploration with DMEA participation is recommended, and no Certification of Discovery is recommended.

LOCATION OF THE PROPERTY

The Good Hope group of claims, Nos. 1, 2, 4, 5 and 7 to 20 are in an unsurveyed area of the San Juan National Forest, T. 35 N., R. 10 W., New Mexico principal meridian, La Plata County, Colorado (Figs. 1 and 2). The claims are along the south fork of Lightner Creek at elevations ranging from 8,000 to 9,000 feet. The property is reached from Durango, Colorado, by driving 3 miles west over U. S. Highway 160, thence 6 miles north over a dirt county road, thence 3 miles northwest over a rough access road to the southeast corner of the claims. The terrain is rugged, with steep, forested slopes. The nearest purchasing and processing facilities for uranium ore are at Durango, 12 miles southwest of the property.

OWNERSHIP AND HISTORY

The Good Hope group of unpatented, standard lode locations (Fig. 2) are owned by A. S. and Catherine M. Bahnll, F. H. and Elsie A. Pinkerton, J. S. and Hallie M. Linn and Lloyd and Carol M. Zerbe. The property was leased to W. M. and Bessie Smallwood on March 9, 1954. Mr. Smallwood assigned his lease to San Juan Uranium Corporation on March 17, 1954. The property includes 19 claims, each of which are 600 feet wide and 1500 feet long. They are recorded in the Office of the La Plata County Clerk and Recorder as follows:

Claim	Certificate Number	Date	Book	Page
Good Hope 1	171,018	Sept. 12, 1942	817	370
2	19	"	"	371
4	21	"	"	373
5	22	"	"	374
7	24	"	846	2
8	25	"	"	3
9	26	"	"	4
10	27	"	"	5
11	28	"	"	6
12	29	"	"	7
13	30	"	"	8
14	171,202	Oct. 3, 1942	"	9
15	9	"	"	10
16	10	"	"	11
17	11	"	"	12
18	12	"	"	13
19	13	"	"	14
amended 5	171,361	Sept. 13, 1944	"	82
" 5	834,737	Sept. 16, 1953	"	893

The claims are subordinated under the contract.

Mr. A. S. Retell was contacted at Durango on May 9, 1956, and stated that the lease to the Good Hope claims was terminated as of May 5, 1956, because San Juan Uranium Corporation failed to carry out the terms of the lease. The owners are now trying to interest others in the further development. The claims comprise about 352 acres.

HISTORY AND PRODUCTION

The operator claims that about 1,000 tons of vanadium ore, averaging 2.85 percent V_2O_5 was produced from the property during World War II. At that time no payment was made for uranium, and no records are available to establish the uranium content of the ore.

The property was examined by a Geological Survey and Bureau of Mines team on June 16, 1954, for the Defense Minerals Exploration Administration and a contract IAm-3706 was activated on Dec. 17, 1954.

On Dec. 17, 1954, San Juan Uranium Corporation requested that the

contract be amended to provide for a much larger program. The operator proposed to drive three 5- by 7-foot adits on the Good Hope No. 3, Good Hope No. 9 and Nevada No. 4 claims for a total length of 2,172 feet, starting from rimrock locations. In addition, it proposed to core drill 14,975 feet of holes 60 to 500 feet deep. Total cost of this additional program was estimated at about $400,000.00. The property was again examined for RFCA on July 19, 1955, and the operator's request was denied.

On May 26, 1955, San Juan Uranium Corporation again requested consideration of additional exploration assistance in the amount of $71,568.00, to extend the Minaletti adit 300 feet, and to drive three 300-foot adits from rimrock locations to explore the Good Hope No. 3, Nevada No. 3 and Atom No. 3 claims. The property was examined again on May 9, 1956. At this time the property had been repossessed by the owners through default on the part of San Juan Uranium Corp. This request was also recommended for denial. In the last two requests the Good Hope No. 3, Nevada Nos. 3 and 4, and Atom No. 3 claims were subordinated under the proposed amendments.

GEOLOGY AND ORE DEPOSITS

The geology and ore deposits of the La Plata Mountains are described by Edwin B. Eckel (1949) in the U. S. Geological Survey Professional Paper 319. The following summary of the regional geologic setting is taken largely from that publication.

The La Plata Mountains are composed of sedimentary rocks, ranging in age from Pennsylvanian to Cretaceous, and sills, stocks, and dikes of porphyritic and non-porphyritic igneous rocks of late Cretaceous or early Tertiary age.

The major structural feature is a domal uplift of the sedimentary rocks. The dome is about 13 miles in diameter and is partly bounded by a horseshoe-shaped hinge fold, open toward the south and encircling the central part of the mountains. Major and minor faults have broken the sediments, particularly along the hinge line and along the north and northeast edge of the dome. The maximum uplift of the sediments is about 6,000 feet. Kohal concludes that doming was caused in part by intrusion of the many sills now exposed in the area and in part by folding in the basement rocks.

The Goodhope group of claims is in an area of gently-dipping sedimentary rocks on the southern flank of the La Plata Mountains. Erosion has exposed a thick section of sandstone, limestone, mudstone, and shale. Progressively from the bottom upward the formations are: the Dolores formations of Triassic age, consisting of 400 to 500 feet of red shale and mudstones; the Entrada sandstone of upper Jurassic age 80 to 100 feet thick; the Wanakah formation of upper Jurassic age, consisting of 25 to 35 feet of limestone (Pony Express member) overlain by 100 to 125 feet of sandstone and marl; and the Junction Creek sandstones of upper Jurassic age, 200 to 300 feet thick.

No major faults or folds were recognized in the immediate vicinity of the claims. Minor faults, shear zones and folds are seen in the cliff face along Lightner Creek and in the DVKA adit. They did not complicate exploration of the deposit.

The vanadium-uranium deposits of the Lightner Creek area are in the upper part of the Entrada sandstone, from 1 to 4 feet below the contact with the overlying Pony Express limestone member of the Wanakah formation. This limestone may correlate with the Todilto limestone present in the Grants

uranium district to the south. The formations strike about N. 80° E. and dip 10° to 20° south.

The mineralized zone appears to be continuous over a wide area southwest of the south fork of Lightner Creek. It can be traced without interruption along at least 400 feet of cliff face near the workings shown on figure 2, in road cuts extending more than 2,000 feet southwest from these workings, and in the DMEA Minoletti adit. The locations of samples are shown on figures 2 and 3. The results of assaying are tabulated in Annex I.

Exploration and limited mining operations have shown the mineralized material to be in a tabular zone ranging from a few inches to 4 feet in thickness. The "ore" is classed as a roscoelite and carnotite type, high in vanadium and low in uranium.

Mineralized material occurs in irregularly spaced rolls, lenses, and pods, generally flattened on the bottom, and pitching southwesterly. Individual pods are connected by mineralized seams or bands, in some places not over a quarter of an inch thick but always present. The lower contact between the mineralized material and sandstone is rather sharp, and in some places is marked by a thin clay seam; the upper contact is gradational. The factors governing the position, size and grade of individual mineralized pods are not readily apparent but the position of some of the pods may be governed by crossbedding and minor faulting in the Entrada sandstone.

Individual pods, lenses, or rolls range from a few inches to 4 feet thick and from 1 to 10 feet long. The average thickness is estimated to be about 6 inches.

Work under the DMEA contract started at a point 180 feet from the portal of the Minoletti tunnel. Minor faulting somewhat disturbed the ore horizon for the first 100 feet of adit driven under the contract;

the remaining 375 feet of adit was driven in somewhat fractured but relatively undisturbed sandstone. The ore-bearing horizon exposed in the underground workings contains fewer and smaller pods of mineralized material than did the old workings on the cliff face. The largest pod of mineralized material was encountered in the adit at a point about 150 feet from the starting point. Here a small pod, about 2 feet in thickness is exposed for about 15 feet along the adit walls. The material is not ore grade. Elsewhere in the adit the ore horizon contains only narrow stringers or small thin pods of mineralized material.

Although the operator contends that additional drifting to the southwest would certainly discover material of ore grade and thickness, there is no geologic reason to assume that mineralized sandstone greatly different from that exposed in the present adit would be encountered.

ORE RESERVES

Although very selective mining at certain points in the Minoletti adit might result in the production of a few tons of ore-grade material the average grade of the material in the mineralized zone as shown in Annex I is far below ore grade.

No estimate of ore reserves is possible due to the erratic distribution of uranium and vanadium in narrow streaks and small, discontinuous pods.

THE PROJECT

Description of work completed:

Defense Minerals Exploration Administration contract Idm-4796 was signed on December 17, 1954, and work under the contract started November 30, 1954. At this time the Minoletti adit (figs. 2 and 3) from which

exploration was to start, had been driven 180 feet southwesterly.

Work under the contract consisted of advancing the Minaletti adit southwesterly and westerly 352 feet. This is 2 feet in excess of contract stipulations. Work under the contract was completed in July 1955. The Minaletti adit is now 532 feet long. The advance of the Minaletti adit was sampled at 5 foot intervals. The resulting 70 samples (fig. 3) were analyzed for their uranium and vanadium content, and the results are tabulated as Annex I. The results of 16 samples taken by DMEA are also included.

Cost of the project:

The authorized and accepted costs of the project are summarized below. The summary also includes the units of work.

Summary of Costs and Project Work

Work authorized by contract				Work Completed	
Type of Work	Units	Unit Cost	Total Cost	Units	Approved Cost
Drifting	350 feet	$30.00 per foot	$10,500.00	352 ft.	$10,500.00
Sampling & assaying	sample every 5 ft.	Included in drifting cost	Included in drifting cost	70 samples	Included in drifting cost

The Government withholds $250.00 from the operator pending resolution of all matters relative to the closing of the project account.

Project equipment:

The fixed unit price stipulated in the contract includes all costs for equipment and supplies necessary to complete exploration satisfactorily, and reflects any salvage value. The Government is therefore not concerned with the disposition of any property upon termination of the contract.

Efficiency of operations:

Advance under the contract ranges from 26 to 56 feet of drift per month. Considerable delay occurred because of severe winter weather and equipment breakdowns. The work was performed slower than expected.

CONCLUSIONS AND RECOMMENDATIONS

The material exposed by the DMEA work on the Good Hope group of claims contains appreciable amounts of vanadium but only minor amounts of uranium. The deposit cannot be considered as a significant source of uranium ore.

Extension of the Minoletti adit 350 feet under DMEA has resulted in the exposure of small, lenticular bodies of very low grade vanadium-uranium ore with occasional small streaks of higher-grade material.

No significant discovery of uranium has been made and therefore no Certification of Discovery is recommended.

No further exploration with DMEA assistance is recommended.

ANNEX I

Results of sampling under DMEA contract Ida-2706 (figs. 2 and 3)

Location of sample	Sampler	Width sampled feet	Percent U_3O_8	Percent V_2O_5	Remarks
0 plus 0	San Juan Uranium Corp.	-	-	-	Start of contract, 180 feet from the portal of the Minoletti adit (fig. 3)
plus 5	"	0.75	0.20	0.00	Minoletti adit (fig. 3)
10	"	5.0	0.06	1.32	"
15	"	5.0	0.02	0.08	"
20	"	0.75	0.13	0.62	"
25	"	5.0	0.02	0.06	"
30	"	5.0	0.02	0.20	"
35	"	5.0	0.01	0.08	"
40	"	1.0	0.01	0.12	"
45	"	1.0	0.01	0.13	"
50	"	0.5	0.01	0.13	"
55	"	0.5	0.01	0.15	"
60	"	1.0	0.01	0.13	"
65	"	1.0	0.01	0.12	"
70	"	0.5	0.02	0.29	"
75	"	0.5	0.02	0.58	"
80	"	0.5	0.01	0.12	"
85	"	0.5	0.01	0.03	"
90	"	1.0	0.01	0.08	"
95	"	Grab	0.01	0.11	"
100	"	3.5	0.04	0.17	"
105	"	5.0	0.02	0.37	"
110	"	5.0	0.01	0.34	"
115	"	5.0	Trace	0.02	"
120	"	5.0	Trace	0.02	"
125	"	5.0	Trace	Trace	"
130	"	5.0	0.02	0.30	"
135	"	5.0	0.02	0.39	"
140	"	5.0	0.07	0.42	"
145	"	5.0	0.08	0.79	"
150	"	5.0	0.03	0.74	"
155	"	Grab	0.10	1.55	"
160	"	Grab	0.17	0.81	"
165	"	Grab	0.07	2.34	"
170	"	0.8	0.10	1.60	"
175	"	0.8	0.07	1.40	"
180	"	1.0	0.02	0.89	"
185	"	1.0	0.01	0.39	"
190	"	1.3	0.01	0.03	"
195	"	0.7	0.05	0.05	"
200	"	0.8	0.01	0.02	"
205	"	Grab	0.18	1.84	"
210	"	"	0.16	1.94	"
215	"	"	0.08	0.64	"

	220	"	Grab	0.07	0.36	Minoletti adit (figure 3)
	225	"	"	0.22	3.82	"
	230	"	"	0.04	0.68	"
	235	"	"	0.03	0.41	"
	240	"	"	Trace	0.03	"
	245	"	"	0.15	2.56	"
	250	"	"	0.06	0.18	"
	255	"	"	0.03	0.14	"
	260	"	"	0.03	0.39	"
	265	"	"	0.02	0.08	"
	270	"	"	0.01	0.11	"
	275	"	"	0.01	0.18	"
	280	"	"	0.02	0.06	"
	285	"	"	0.02	0.07	"
	290	"	"	0.01	0.07	"
	295	"	"	0.01	0.14	"
	300	"	"	0.01	0.08	"
	305	"	"	0.01	0.11	"
	310	"	"	0.02	0.14	"
	315	"	"	0.05	0.46	"
	320	"	"	0.04	0.71	"
	325	"	"	0.06	0.70	"
	330	"	"	0.08	0.61	"
	335	"	"	0.14	1.14	"
	340	"	"	0.12	1.46	"
	345	"	"	0.18	2.18	"
	350	"	"	0.12	2.50	"
0 plus	6	DHMA	1.7	0.045	1.36	"
	46	"	1.3	0.196	2.21	"
	51	"	0.7	0.005	0.90	"
	97	"	0.7	0.013	0.03	"
	199	"	0.9	0.031	0.11	"
	238	"	1.0	0.009	2.31	"
	304	"	2.0	0.026	0.82	"
	342	"	5.0	0.036	2.20	"
	-	"	Grab	0.045	0.99	Across the valley from the Minoletti adit (east) in old workings
	1500 feet NW of Minoletti adit (Fig. 2) DHMA 0.9			0.020	2.66	1.25 feet below bottom of Tedilite LS. Rim rock exposure
	1100 feet NW of Minoletti adit (Fig. 2) DHMA 0.6			0.038	4.38	3 feet below bottom of Tedilite LS. Minrock exposure
	250 feet NW of Minoletti adit (Fig. 2) DHMA 1.0			0.374	5.73	Shallow recess in minrock. Breast is 3 feet in. Exposure is 10 ft. from sample below

240 feet NW of Minoletti adit
(fig. 8)

DMEA	0.2	0.477	24.60	Shallow room in rimrock, 10 feet from above room

First room above Minoletti adit

DMEA	1.6	0.273	11.1	Outer edge of lens

Face of Minoletti adit
180 feet in from portal

DMEA	1.8	0.045	1.36	Streak in breast of adit at start of DMEA contract

140 feet in from portal of Minoletti adit

DMEA	1.3	0.196	2.22	15-inch streak on south side of a mined out lens 40 feet back from breast and start of DMEA contract

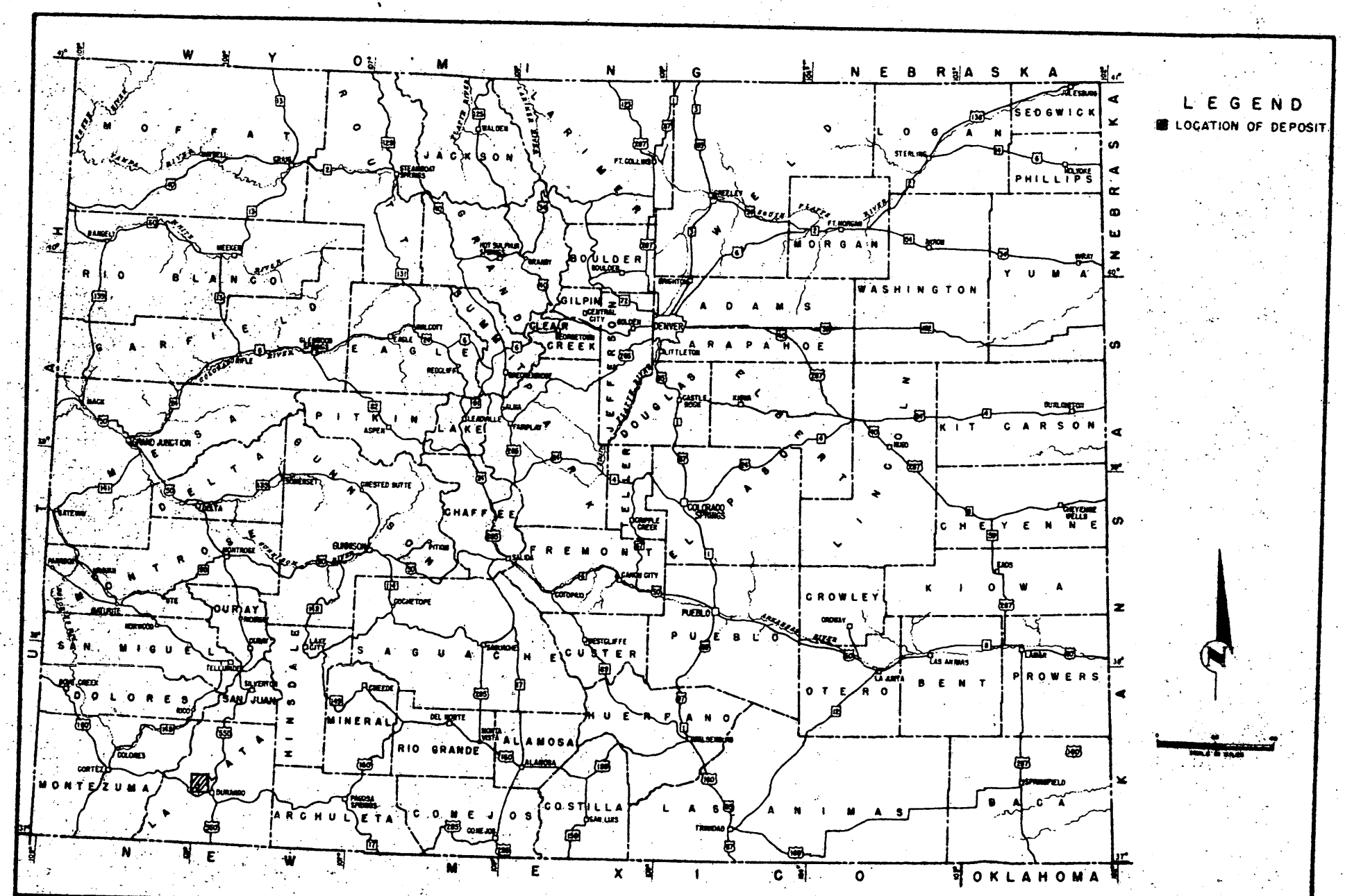

FIGURE 1 - LOCATION MAP, SAN JUAN URANIUM CORPORATION, (GOOD HOPE GROUP), LA PLATA COUNTY, COLO. DMEA 3390
CONTRACT Idm-E706

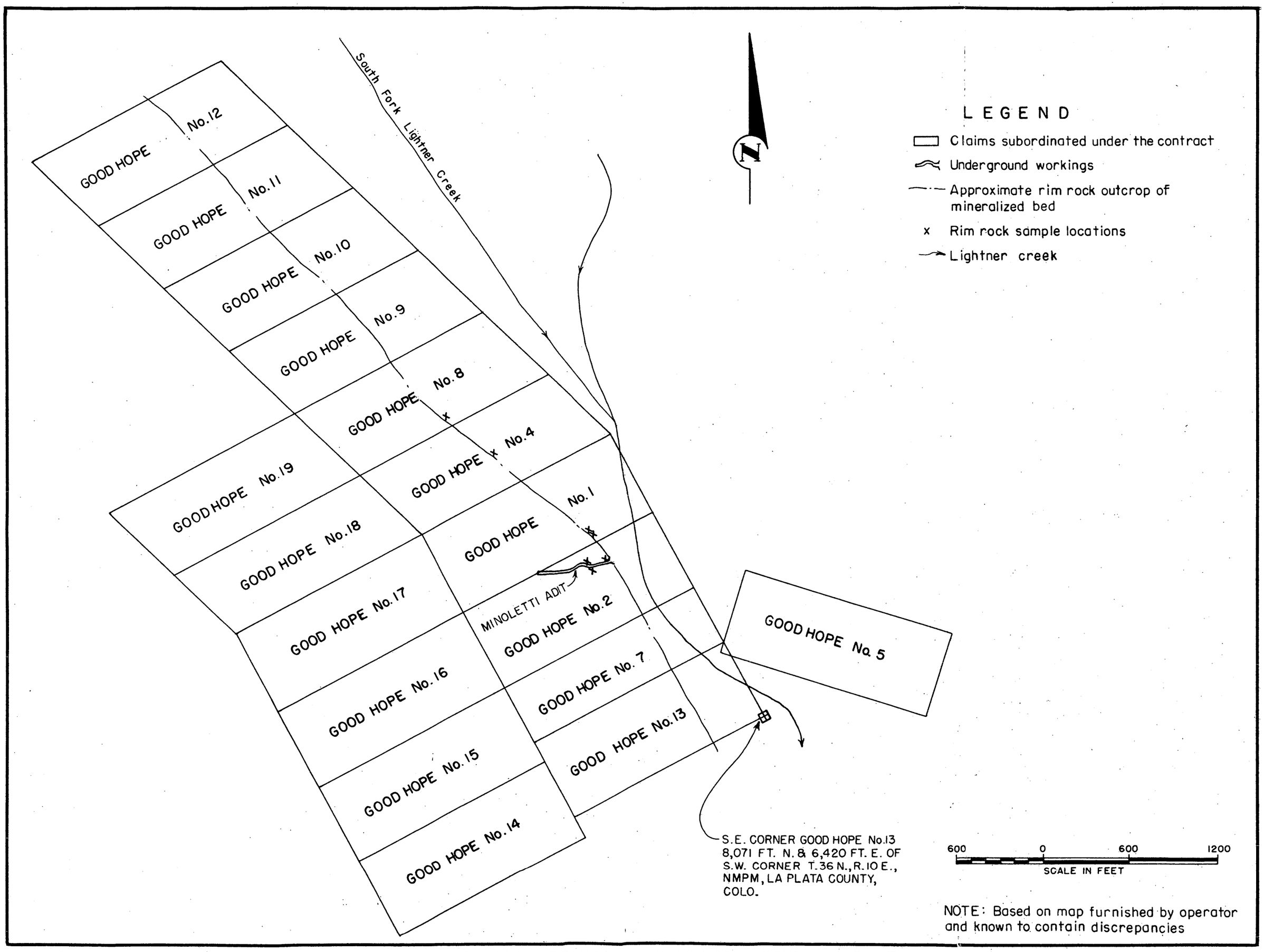

FIGURE 2 - CLAIM AND EXPLORATION MAP, SAN JUAN URANIUM CORPORATION, (GOOD HOPE GROUP) LA PLATA COUNTY, COLO. DMEA 3390, CONTRACT Idm-E706

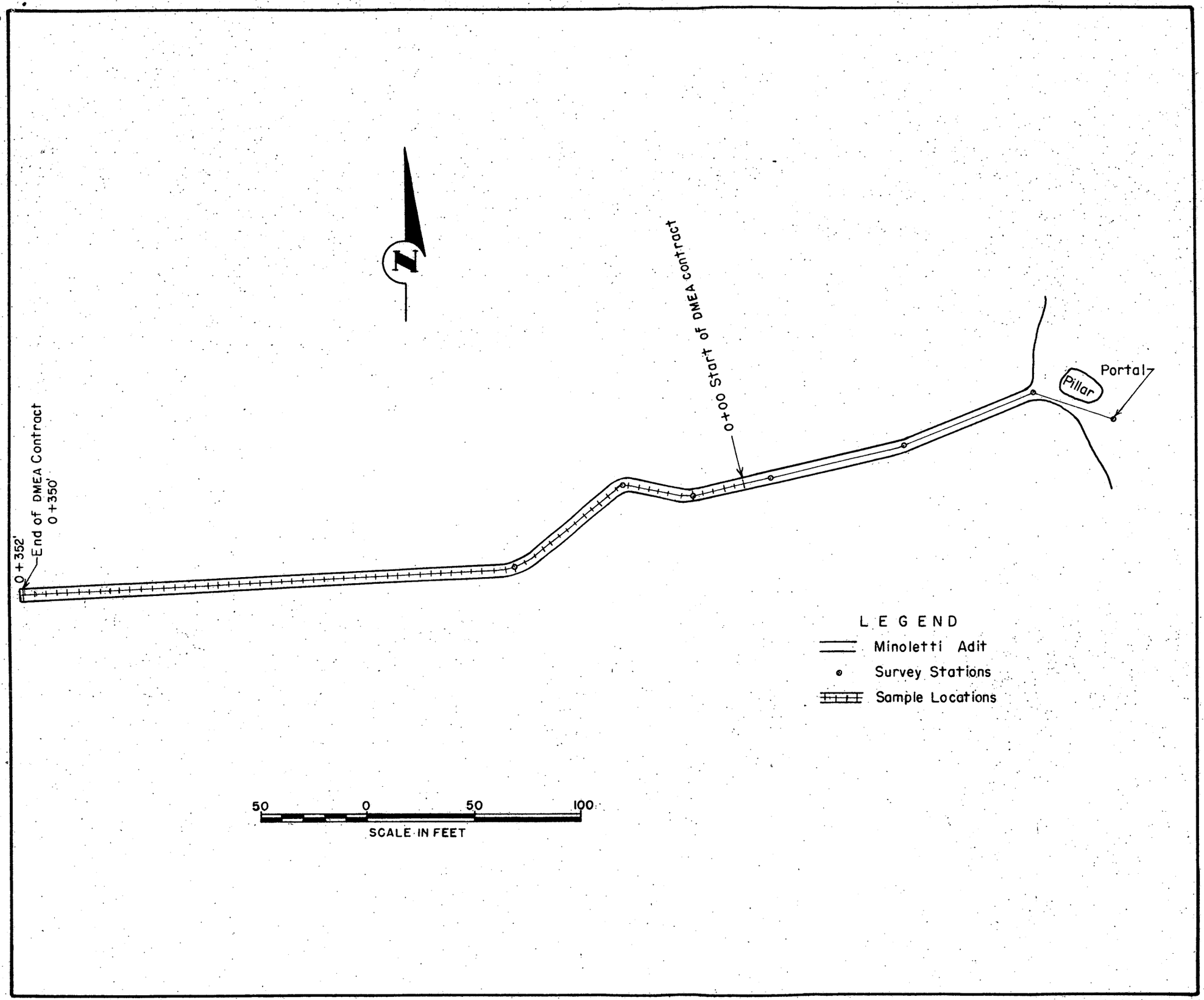

FIGURE 3- EXPLORATION AND SAMPLE LOCATION MAP OF MINOLETTI ADIT, SAN JUAN URANIUM CORPORATION, (GOOD HOPE GROUP)
LA PLATA COUNTY, COLO. DMEA 3390, CONTRACT Idm-E706

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION XIX

DMEA 3300, Contract 2Ds-4706
SAN JUAN URANIUM CORPORATION
LA PLATA COUNTY, COLORADO

Uranium

Joint Engineering and Geologic Final Report

by

C. H. Harvey, Mining Engineer
Bureau of Mines

E. H. Harshman, Geologist
Geological Survey

November 1956

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1. Location map, San Juan Uranium Corporation (Good Hope Group) La Plata County, Colorado

2. Claim and exploration map, San Juan Uranium Corporation (Good Hope Group) La Plata County, Colorado

3. Exploration and sample location map of Mimbetti adit, San Juan Uranium Corporation (Good Hope Group) La Plata County, Colorado