EXHIBIT NO. 1

STORMY DAY MINE

Engineering, Milling, and
Metallurgical Reports by
I.E. Klein, and
E.J. Mayhew, Geologists

2340 0007

275
Item 14

5710 Sutter Av.
Carmichael,Cal.
June 20,1955

Nev-Tah Oil and Mining Co.
430 Gazette Building
Reno,Nevada

Gentlemen:

Transmitted herewith is my report "Ore Reserves and Prospective Potentialities of the Sterny Day Mine and the Adjoining Mining Claims - Gerlach area,Pershing county, Nevada".

Sincerely yours,

Ira E. Klein

Ira E. Klein

CC; James H.Wren,Engineer
I.E.Klein-file

THE ORE RESERVES AND PROSPECTIVE POTENTIALITIES OF THE STORMY DAY MINE AND THE ADJOINING MINING CLAIMS

Gerlach area, Pershing County, Nevada

By

IRA E. KLEIN
Geologist

June 1955

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LIST OF APPENDICES

(Photocopies of some exhibits in report of John Uhalde, Oct. 1954, on completion of government sponsored DMEA projects)

MAPS (in pocket)

1. Plan of mine levels, with assay data and some geologic features.

2. Longitudinal section (semi-diagrammatic due to incomplete surveys), showing blocks of developed, probable and possible ore within limits of exploration.

INTRODUCTION

Purpose and Scope:

An examination of the Stormy Day Tungsten Mine and the adjoining Milky Way, Thrasher, and Thraebert groups of mining claims was made at the request of Mr. Arthur L. Damon of the Nev-Tah Oil and Mining Company. Three days were spent on the properties - May 14, 15, and 21, 1955. The express or immediate purpose of this assignment was to determine the ore reserves at the Stormy Day mine and to evaluate the potentialities for tungsten mining of the northern properties covered by the aforementioned three groups of claims. This report presents my findings in that respect. The broader objective - toward which the foregoing field observations and analysis of data may be considered a preliminary stage - is the more complete appraisal of the geologic situation at these tungsten deposits as a basic step in the exploitation and development of the proven and indicated ore reserves and prospective potentialities are therefore advanced preliminarily, and are subject to refinement or possible modification with more complete investigations involving engineering and geologic surveying and sampling which time did not permit in the collection of data for the present report.

Beside the field inspection, an essential part of the work leading to this report was the critical review of a report of October 1954 prepared by Mr. John Uhalde who managed the property since December 23, 1953 for the Modoc Mines and Exploration Company. This report describes the situation at the mine with the completion of a successful program of explorations sponsored by the Defense Minerals Exploration Administration involving diamond drilling, crosscutting and drifting, and bulldozer stripping. Documentary material contained in this report on government-sponsored tests, ore dressing studies and settlement sheets of typical shipments to custom mills have been taken from this source.

Virtually all the accessible underground workings and the surface prospect pits, bulldozer cuts and short adits were inspected by the writer. In the inspection of the prospects on the Milky Way and Thrasher groups, I was guided by Mr. J. Thrasher of Gerlach, the discover of the Stormy Day Mine, to various ore showings and points of interest.

It is not within the scope of this report to give a complete description of the geology, mine plant and developments. The documentary material of an objective nature previously mentioned have been appended to show sources on which the writer drew to make his estimates and also for the general information of those making use of this report. The development and current operations at the mine are briefly discussed. Also a plan drawing of the mine workings showing some geology and assay data; and a longitudinal sect-

ion which is somewhat diagrammatic because of lack of survey information, particularly for the stopes and raises, showing blocks of developed, probable, and possible ore are included (in pocket). The findings on the ore reserves and prospective potentialities, presented rather summarily, in keeping with the preliminary nature of the work, are given in the concluding section of the report.

Location, Access and Topography. - The Stormy Day Mine is in the Hooker Mining District. It is on the west side of the Selenite Range, commonly called the Limbo Range, in Pershing County, Nevada. It is 16 miles south of Gerlach on the Western Pacific Railroad. It lies 2½ miles east of a paved highway linking Gerlach to Reno about 130 miles south.

The mining claims for the large part lie at an elevation of 5,000 to 6,000 feet in a mile-wide desert foothill belt of low to moderate relief eroded in a steeply tilted sequence of limey sedimentary rocks and volcanic "caprocks" which lie west of a rugged mountainous terrain.

The topograph is highly favorable for initial development by short corss-cut adits and even it appears in places by drift-adits to depths of a few hundred feet. Shafts should not be necessary for mining or exploration un il operations are in a fairly advanced state such as the Stormy Day mine now approaches.

Access roads from the mine to the northern claims or from the paved highway which skirts the moutain front can be readily made at low cost and easily maintained. Several miles of fair truck road have already been constructed to various sites of exploratory activities.

The climate is entirely conducive to all-year operations - surface as well as underground. Although the region is arid, water resources appear adequate. They are discussed further in the following section.

Property and Water Rights. - Thirty six unpatented claims laid out in a north-south pattern over a distance of approximately 2,166 feet comprise the holdings. These are divided into the following contiguous groups:

The Stormy Day group of 9 claims, on two of which Nos 1 and 5, almost all the mining is localized.

The Milky Way group of 6 claims, also referred to as the Stormy Day Extension group.

The Thrasher group of 4 claims -- and

The Thraebert group of 16 claims, arranged in pairs along the north end.

These 36 claims covering about 720 acres appear to be

very thoroughly covered in regard to the potentially productive area and insure good access.

Water rights for mining and milling purposes are held on Jenny Creek about a mile distant from the camp. The millsite claims in Township 30, Range 23 East are located so as to be supplied from the Western Pacific Railroad water main. Water for camp use is obtainable from nearby springs. The No. 11 adit makes water for immediate mining needs.

GEOLOGIC FEATURES PERTINENT TO THE ORE RESERVES ESTIMATE OF THE STORY DAY MINE AND THE PROSPECTIVE POSSIBILITIES OF THE ADJOINING CLAIMS.

General Statement: - The scheelite-bearing tactite deposits on the west front of the Selenite Range which are covered in this examination are very typical. Almost an ideal case, of the tungsten occurrences found along the contacts of Paleozoic and Mesozoic (Z) limestones and the late Mesozoic granodioritic batholiths and their associated satellitic off shoots over a broad belt extending northeastward through the Sierra Nevada Range in central California and across western Nevada. The Bishop district in California and the Mill City district in Nevada are outstanding examples of regions where highly productive contactmetamorphic or pyrometasmotic scheelite deposits have been developed, and are now operating on a large scale. The Nightingale district which lies about 60 miles to the south of the Stormy Day, also in Pershing county, has a long record of successful operation of deposits whose geologic features, structurally and mineralogically, are notably similar to those at the Stormy Day mine.

Neither the regional geology or the mineral deposits of the area have been the subject of published reports or maps. Topographic maps are also not available. Unpublished information and aerial photographs by the U.S. Geological Survey and other government agencies are believed to be available. A comprehensive survey of the mining properties of interest or for that matter, normal exploratory work, should make use of these sources. It is also noteworthy that an important gypsum deposit which is mined on a large scale from an open pit by the U.S. Gypsum Company, and a less developed gypsum deposit, reputed to be held by a major industrial concern lie a mile or so north of the Thraebert group.

Regional Geology - The Selenite Range has as its core a granodioritic batholith. The intrusive contact of this igneous body and the calcareous sedimentary formation it has invaded and locally metallized with tungsten runs in nearly north-south direction along the western foothills of the range for a distance of about four to five miles covered by the claims of interest. The principal sedimentary rock invaded by the granodiorite is a thin-bedded shaley limestone comprising a formation at least several hundred feet thick, with intercalated thicker-bedded purer limestone members. In a broad way, the intrusive

relations are structurally concordant as the sediments were generally noted to have a north-south strike and 50 to 70 degrees westerly dips paralleling the intrusive contact. In the northern part of the Stormy Day Mine and in the prospect adit on the Thraebert, the sub-parallel nature of the intrusive contact and the sedimentary structure is clear. The detail, however there are many irregularities in the contact relations - chiefly in the form of sill-like tongues which suggest that the contact is actually cutting across the stratification with depth, dike-like offshoots often aplitic, and cupolas or "islands" of granite. At the Thrasher group, there is a rather large embayment of the limestone by the batholith. South of the main developed ore bodies at the Stormy Day mine, the contact becomes strongly discordant and cuts obliquely and very irregularly in a southwesterly direction across and intertonguing with the bedded limestone.

Since the continuity of the granite-limestone contact is of prime importance as it assures persistence with depth and laterally of the main requirement for ore occurence, the regional subconcordance of the intrusive relations and the large thickness of the limestone are considered highly favorable features of the regional geology. Irregularities along the contact are indicated by some of the ore occurrences to have a marked control over the distribution of tungsten metallisation within metamorphosed contact zone; however, the better ore bodies in the Stormy Day and the showings in the prospects favor the simpler more concordant intrusive relations.

Tertiary-age (Z) volcanism was widespread in the area, and in fact appears to dominate the geology of the country to the north and west of the Selenite Range. The older steeply-dipping marine limestones along the western foothills are covered by more gnelty tilted basaltic lava beds. These lavas do not cover the contact where observed in the area of interest, although they were noted to approach it closely in the Thrasher group of claims. Since they do not appear to cover the granite-lime contact to any great extent at least, the occurrence of these volcanics will not complicate the mining or exploration.

Post-mineral andesite-porphry dikes, probably related to the same period of igneous activity as the basaltic lavas, have been noted in a few places crossing the limestone near the contact. Such an east-west trending 50 to 10 foot wide dike is conspicous at the surface at the Stormy Day mine dividing the ground up by the underground workings from the relatively unexplored terrain to the south. Where this or similar dikes cross the mineralized contact zone, they will form small barren bodies which can be left as pillars, and only minor mining problems are anticipated because of the presence.

Post-mineral faulting, with displacements small enough, however, to only present minor development problems, are fairly common in the Stormy Day Mine and in the prospect adit on the Thraebert claims. There appear to be two sets of normal faults.

The more evident are a near-vertical east-west set which displaces the variably metallized contact zone so that the drifts along the contact head into the granitic footwall or limestone hanging wall after the pass through a fault. Getting back on the contact is a fairly simple proposition if the geologic situation is in hand. There is some evidence of north-south trending faults with dips with downthrown side on the west which could cut out the contact zone over appreciable vertical intervals. They could conceivably cut out the contact zone, and hence potential ore bodies, over vertical intervals so as to complicate exploration for downward extension of ore shoots in some parts of the district; but here again if the geological situation is appreciated and the displacement is not too large, it will not be an obstacle. On the other hand, in the course of my inspection, I saw no indication of a major fault such as might have such an effect.

Mineral Deposits - Scheelite occurs as finely disseminated crystals in a gangue of faitly coarsely crystalline garnet, epidote, quartz, and calcite. The scheelite is in apparent close association in the deeper unoxidized parts of the ore shoots of the Stormy Day mine with the iron sulfides - phrrhotite and pyrite - which in places amount to ten or more percent of the ore. Further information on the mineralogic and textural features and the metallurgy of the ore is presented in the appendix. To a depth of about 100 feet the ore is highly oxidized and has a crumbly, often gossan-like structure resulting from the replacement of the pyrrhotite and pyrite by limenitic irox oxide. This oxidation process appears to have caused a small but appreciable enrichment in the grade of several thousand tons of ore, the transition occurring between about 100 and 150 feet, so that the tenor of the primary ore is not being misconstrued as higher than it actually is because of the enrichment of the oxidized ore.

The ore bodies are scheelite-bearing "shoots" in the garnet-epidote rock referred to as tactite, which as formed irregularly over a width of inches to tens of feet as a replacement of the limestone along its contact with the intrusive grandierite. In the Stormy Day Mine between the ore bodies and the granodierite, a one to two foot coarsely crystalline grey quartzose, locally molybdenite-bearing material believed to be a greisen or silicified border phase of granodierite is prominent and quite continuous. The perpheral silification of the granodierite and the occurrence of iron-sulfides are taken to be ore indicators in prospecting the tactite.

The limestone has been recrystallized over a width of about one hundred feet bordering the contact. This metamorphosed rock ranges from a sugary-textured pure marble to a rock containing much pale green epidote and pinkish garnet which is properly called a calc-silicate hornfels. The varieties in the amount of calcite and silicates reflects the purity of stratified limestone hostrock. The hornfelses, although character-

istically paler colored than the tactite, may be mistaken for tactite with the consequence of misguided exploration, for the hornfels is barren. Also, the purer limestones and their sugary marble derivatives are more favorable as host rocks for the development of tactice, and for the availability of calcium for reaction with the ore-forming solutions emanating from the granodierite for deposition of scheelite, which is calcium tungstate.

The scheelite-bearing tactite todies in the Stormy Day Mine have measured thickness of up to 16 feet; however, on the whole, the ore bodies are in the order of four to ten feet thick. Near the surface at the Stormy Day mine, the ore body has been exposed over a length of 160 feet and although offset a few feet by a fault, is believed to extend north for an unknown distance. It has a surface width of 12 feet. At 20 to 50 feet below the surface, the ore body is highly oxidized and appreciably enriched as noted earlier - maybe 20 or more feet wide as indicated by development work in progress at the time of my examination, which had not reached the footwall.

Thus far, the significant ore-showings and proven ore bodies appear to be along the main contact zone and not on the smaller intrusive offshoots such as are prominent in the south end of the Stormy Day mine. However, the shallow rather wide ore body mentioned above appears to be localized either in a footwall "roll" or flattening of the contact, or in a trough between the main body and short tongue-like offshoot. The southern termination of an ore body on the south end of the drift off the No. 11 adit appears to have as its structural control a steep northwesterly plunging trough formed by a thick sill-like offshoot of the here highly discordant granodiorite.

The influence of post-mineral faulting and post-mineral likes has been discussed in a preceding section. Unless strike faults with large dip-slip components are more important than was evident during the preliminary inspection faulting should not have a serious effect on the mining potentialities with depth.

In the underground workings at the Stormy Day mine, the contact has been explored over a length of 300 feet along drifts at 105 and 125 feet below the surface, and over a length of 350 feet along a drift at 225 feet. Three ore shoots, each 50 to 70 feet wide dipping 50 to 60 degrees west, extend from the upper to the lower level. The central block is fully developed; the others partially. Above the 105-125 level, the two southern ore shoots are joined into the wider and thicker flatter dipping single body which has been exposed at the surface. The northern ore shoot is inferred to also continue to the surface, but to be offset to the east by a small fault. The surface in this part of the contact zone has not been stripped of a cemented bouldery overburden which, although thin, is obstinate to clear even with a bulldozer. The interence concerning northern extension is based on the occurrence of ore float and the abrupt termination of the 12' thick ore body against marble along a brecciated zone interpreted to be a fault of small displacement found in the underground development.

The central ore body has been proven to extend below the No. 11 Adit level (225') as a result of the diamond drilling phase of a D.M.E.A. sponsored exploratory program. In this operation, a station was slashed in the southwall of the No. 11 adit and 4 holes were drilled which crossed the contact 100' downdip from the drift off this adit. Three of these holes intercepted the central ore body. These holes only explored a 90 foot lateral distance along the contact zone. Obviously, the number and spacing of the holes was not wide enough to prove downward extension of the other oreshoots. (This remark is not made as criticism of the drilling program, but to note their severe limitations) . Also, two holes were drilled to cut the contact 85' further downdip. These cored mineralized but not ore grade tactite at points only 30' apart in the contact zone. This suggests a possible bottoming of the central ore body. However, because of the short distance along the contact sampled by these tests their negative results is not cause of discouragement, in view of the proven facts of ore occurrence in the better explored parts of the contact.

The inherently discontinous nature of metallization in contact metamorphic deposits makes bottoming of some oreshoots a normal situation in the best of mines. However depth below the surface has absolutely no significance within the vertical intervals involved in ordinary mining operations in this type of mineral deposit which formed at depth of many thousands of feet and owe their present near surface occurence to uplift and erosition. The probability of finding other ore bodies by exploring the contact at the depper elevations is just as good as on the drifts on the 105-125' and 225' levels.

On the Milky Way group, two strong ore-grade croppings of mineralized contact which is generally obscured by overburden have been found in surface prospecting. A drill hole spotted to test the contact 200' below the southern of these showings cored a mineable width of ore comparable to the unoxidized ore of the Stormy Day mine. The contact zone is gashed deeply by a canyon a hundred yards or so south of the drill site. Scheelite is reported in the tactite exposures in the canyon. It appears that backs of a few hundred feet can be obtained by locating the portal for an exploration drift in the canyon with obvious advantage over crosscutting through the limestone to reach the contact. More exploratory drilling and a rudimentary engineering and geologic surveying will be required to check this idea.

On the Thraebert group, about three miles north of the Milky Way, a surface showing was investigated by a corsscut which was successful in finding marginal to fair milling grade ore along the contact at about 125' below the surface. The mineralized contact pinched out about 15' north of the crosscut, and a few feet beyond faulting put the heading in the limestone hanging wall. Getting back to the contact to explore it further simply involves turning east. The drift to the south was more encouraging. It followed a thin but mineable width of ore about 90'. The breast was partially in ore of an estimated ¼ to ½ percent grade. The main significance of this prospect is proof of the persistence of tungsten metallization this far north on

the contact.

The Thrasher group is located between the Milky Way and the Thraebert groups. Here a large embayment of the granodiorite batholite cuts westward across the regional strike of the limestone. On the east west striking and vertical dipping southern contact of this offshoot three prospect pits spaced 100' apart expose a 4' thickness of oxidized tactite. The center pit is in fair grade ore. Here again, as in the Thraebert prospect, the main significance is the proof of tungsten metallization over the long contact zone. Some unsuccessful short holes on these claims by previous holders can be discounted as not highly significant on geological grounds even with cursory inspection.

Of the three groups of prospects, the Milky Way appears to merit priority in an exploratory program; which appears justified if kept on a moderate scale and geared to the Stormy Day operations. The geological situation regionally and from the standpoint of the nature of the mineral deposits is interpreted from my reconnaisance to be favorable for the discovery and extension of ore bodies in the Stormy Day Mine, and for the development of ore bodies comparable to those on the Stormy Day on the mining claims to the north.

Brief Remarks on Current Operations - At the time of the writers' inspection during the period May 14 - 21, 1955, development work was going on in two places in the mine - in the oxidized ore between the 125' level and the surface, and in the primary ore above the 225' level. Scheelite-bearing tactite of sub-ore grade was showing up in the breast after following barren granite-marble contact a short distance. The operation was under the supervision of Mr. John Uhalde who, as noted in the introduction, has managed the property since Demcember 1953.

My impression of the mine layout, development procedure, equipment, safety, and employee morale was excellent.

Ore Reserves:

General Statement: - Whether or not mineralized rock in this case tungsten-bearing tactite-is "ore" depends on mining costs and market conditions. A cost study by the previous management presented in the report referred to in the introduction, based on 1500 ton per month production including mining, development, milling, acid treatment, and hauling shows a direct total cost of $14.60 per ton. Based on current $63. per unit price and a recovery of 85% or better, a cut-off grade of 0.25% over a mining width of 5 feet was used to define "ore". (This value approximates a minimum quality necessary to produce at no loss. It must not be confused with an average grade which necessarily must be higher for a profitable operation.)

Another condition implicit in an ore reserve estimate is the depth or vertical range involved. Thus in the figures ad-

vanced below "developed ore" has its bottom set at the 225' level; "probable" ore approximately by the evidence of core drilling below this level; and "possible" ore occurence is strictly a matter of geologic inference - supported of course by tangible evidence of ore showings.

Stormy Day Mine - The ore reserves of the Stormy Day Mine, to a depth of 400 feet below the outcrop of the contact zone, including the relatively unexplored mineralized ground south of the main workings, is estimated at 53,000 tons of scheelite-bearing tactite with minimum grade and thickness of ore shoots as specified above in the definition of "ore".

This 53,000 tons of ore is further classified as follows:

Developed Ore -- 23,000 tons with an average grade of 0.7% WO_3 of which about 10,000 tons of the highly oxidized portions have grade 0.7 - 1.0%.

Probable Ore -- 17,000 tons w/grade of more than 0.25% but probably no higher than 0.7%.

Possible Ore -- 13,000 tons w/grade as above.

Below the depth of 400' covered in the above estimate, and laterally over a distance along the contact zone of 500', it is inferred that a possible 10,000 tons of ore can be developed per hundred feet of depth. Exploration, development, and mining costs necessarily increase with deeper operations. The geologic situation is believed favorable of tungsten deposition well beyond the probable range of economic mining which is probably in excess of 1,000 feet. Assuming a depth of 1,000' a prospective potential of more than 100,000 tons of milling grade ore is indicated.

Prospective Potentialities of the Northern Groups. - The Milky Way, Thrasher, and Thrasbert prospects are too little explored to make any sound estimate of ore reserves. However, it is my opinion that systematic exploration with close geologic and engineering control, with priority to the Milky Way group, offers good possibility of developing one or more mines comparable to the Stormy Day, and some smaller producers.

Ira E. Klein

Ira E. Klein

STORMY DAY MINE

Ore body exposed by bulldozer stripping, near final development underground

Hole-through of development raise on hanging wall side of the ore body

Looking south from raise along strike of ore body, Mine Superintendent Uhalde is about 90 feet away on the footwall contact

PORTAL VIEWS

Adit No. 11 At Stormy Day Mine

Prospect adit on Thraebert group

STORMY DAY MINE

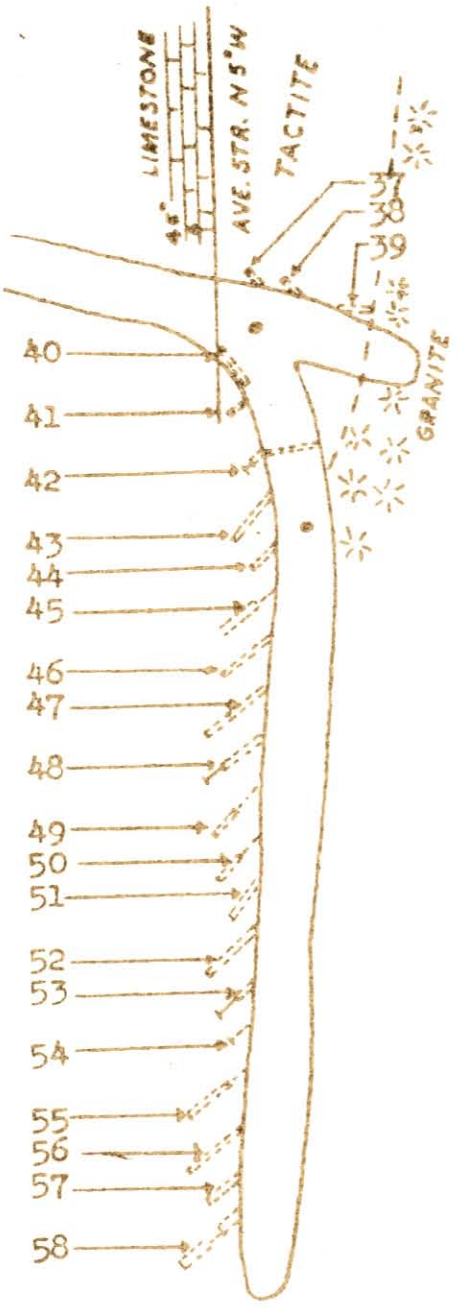
Road connecting mine to highway with Selenite Range in background and mine in middleground.

Ore bin at Adit No. 11

THRASHER GROUP OF CLAIMS

Exploratory access road

Tactite ore-showing in prospect pit



Face 11/6/53

Note: Double lines indicate tactite

Jackhammer holes drilled at 5.0 feet intervals as shown on map:

Sample #37: 3.0' tactite, hit fault gouge.
#38: 4.8' tactite, some sulfides.
#39: 4.9' tactite, heavy sulfides and some granite in end of hole.
#40: Chip sample taken along drift.
#41: 1.6' tactite, hit fault gouge and limestone.
#42: 0.5' tactite, hit gouge and lime. chip sample taken across width of drift.
#43: 6.4' tactite, (WO_3), hit lime.
#44: 4.8' tactite, (WO_3), hanging wall not reached.
#45: 7.55' tactite (WO_3), hanging wall not reached.
#46: 6.1' tactite, hit limestone hanging wall.
#47: 7.5' tactite, hanging wall not reached
#48: 5.6' tactite, limestone penetrated for 2.0'
#49: 3.5' granite, then tactite for a depth of 7.3'. Some mineralization.
#50: 3.0' granite, then tactite to 6.1' hit limestone.
#51: 5.5' tactite, then limestone.
#52: 7.5' tactite, hit limestone.
#53: 2.5' red tactite, limestone to 5.0' feet.
#54: 0.5' tactite, then limestone, no drill sample. Chip sample taken across back.
#55: 2.5' limestone, then tactite (WO_3) to 7.4'.
#56: 7.5' tactite (WO_3), hanging wall not reached.
#57: 4.0' tactite, then limestone to 5.0'.
#58: 2.3' tactite, 2.0' limestone, then tactite to 7.6'.

ASSAYS

#38 - 1.77% WO_3		#45 - 1.71% WO_3	
#39 - 0.26	"	#46 - 1.01	"
#40 - 0.80	"	#47 - 0.02	"
#41 - 0.10	"	#48 - 0.02	"
#42 - 1.74	"	#49 - 0.13	"
#43 - 3.26	"	#50 - 0.03	"
#44 - 0.58	"	#51 - 0.49	"

Sample map of Drift, Number 11 Adit, Stormy Day Mine
Pershing County , Nevada
D'BA- 2925
Scale: 20'= 1"

ASSAYS

# 52 - 0.63% WO_3		#56-A - 1.07% WO_3	
# 53 - 1.07	"	#56-B - 1.72	"
# 54 - 0.89	"	#57 - 3.25	"
# 55 - 0.92	"	#58 - 1.09	"

"EXHIBIT 1"

REPORT OF ASSAY

ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street
San Francisco

November 25, 1953

Deposited by Dr. Fred M. Anderson
6 State Street
Reno, Nevada

Sample of ore

Labty. No.	Mark	Percentages TUNGSTIC OXIDE
61860	#38	1.77%
61	#39	0.26
62	#40	0.80
63	#41	0.10
64	#42	1.74
65	#43	3.26
66	#44	0.58
67	#45	1.71
68	#46	1.01
69	#47	0.02
70	#48	0.02
71	#49	0.13
72	#50	0.03
73	#51	0.49
74	#52	0.63
75	#53	1.07
76	#54	0.89
77	#55	0.92

 ABBOT A. HANKS, INC.

/s/ Martin P. Quist

"EXHIBIT 2"

REPORT OF ASSAY

ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street
San Francisco

November 25, 1953

Deposited by Dr. Fred M. Anderson
6 State Street
Reno, Nevada

Sample of ore

Labty. No.	Mark	Percentages TUNGSTIC OXIDE
61878	#56-A (Dark Ore)	1.07%
79	#56-B (Light Ore)	1.72
80	#57	3.25
81	#58	1.09

ABBOT A. HANKS, INC.
ORIGINAL SIGNED BY
MARTIN P. QUIST

"EXHIBIT 2"

SAMPLING

Lot No.	Wet Wgt.	% H_2O	Dry Wgt	Grab %	U.S.V.	Control	Umpire	Tentative Settling	Final Settlement	Additional Payment
1061	306790	2.38	299499	1.49	1.10	1.15	1.07	6257.36	6257.36	
1081	327590	2.56	363042	1.03	.86	.72	---	5776.07	5776.07	
1104	335850	2.97	325876	.72	.72	.62	---	4340.84	4340.84	
1113	425830	3.20	412200	.82	.75	.85	.79	5719.46	6024.34	304.88
1123	452460	2.52	441041	.80	.68	.90	.70	5384.98	5711.32	326.34
1133	343990	1.94	337318	.65	.43	.65	.57	2610.72	3461.04	850.32
1145	579570	2.54	564846	.65	.57	.95	---	5795.28	6400.00	
	2,817,080				.735%	.91%			37,970.97	

NOTE: Shipments 1-7 = 1,408.5 tons or

$26.90 per ton or .735% WO_3

Exhibit 4

GETCHELL MINE INC.

Red House, Nevada

CUSTOM ORE SETTLEMENT SHEET

Received of: Stormy Day Mine
Dr. Fred Anderson
130 South Virginia Street
Reno, Nevada

Date Rec'd 5-6-54
Shippers Mark
Lot No.

BY GETCHELL MINE INC.

1	Trucks weighing	33,340	Gross Lbs.
1.0	% Moisture	11,270	Tare Lbs.
0.78	% WO_3	22,070	Net Wet Lbs.
10.9845	Net dry tons	221	Moisture Lbs.
8,521	Contained STU WO_3	21,849	Net Dry Lbs.

PAYMENT:

Pay for 80% contained STU WO_3 . at $46.00 ¢ $ 313.58

LESS CHARGES:

Treatment of 10.9845 Net Dry Tons at $6.00	$ 65.55	
Sampling & Assaying	$ 10.00	
Umpire Assay Lot #1	$ 7.50	
TOTAL		$ 83.05

NET PROCEEDS $ 230.53

Less Partial Payment - - - - - - - - - - - - - - - - - - 170.00

Bal. Due 60.53

"EXHIBIT 5"

GETCHELL MINE INC.

Red House, Nevada

CUSTOM ORE SETTLEMENT SHEET

Received of: Stormy Day Mine
Dr. Fred Anderson
130 South Virginia Street
Reno, Nevada

Date Rec'd 5-7-54
Shipper's Mark
Lot No.

BY GETCHELL MINE INC.

1	Trucks weighing	77,490	Gross Lbs.
1.7	% Moisture	29,700	Tare Lbs.
0.72	% WO_3	47,790	Net Wet Lbs.
23.489	Net Dry Tons	812	Moisture Lbs.
16.912	Contained STU WO_3	46,978	Net Dry Lbs.

PAYMENT:

Pay for 80% contained STU WO_3 13.530 at $46.00 * $622.38

LESS CHARGES:

Treatment of 23.489 net dry tons at	$140.93	
Sampling & Assaying	10.00	
Umpire Assay Lot # 2	7.50	
TOTAL		$158.43

NET PROCEEDS	$463.95
Less partial payment - - - - - - - - - - - - - - - - - -	330.00
Bal. Due	$133.95

* (equals)

"EXHIBIT 5"

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
RARE AND PRECIOUS METALS EXPERIMENT STATION
Hydrometallurgical & Ore-Dressing Branch
Box D, University Station

Reno, Nevada
November 20, 1953

METALLURGICAL DIVISION
Region III

Stormy Day Mines, Pershing Co., Nev.
DMEA 2455 - Tungsten (Jones) Re-0-2.107

The ore contained 0.7 percent WO_3 as scheelite in a siliceous gangue, with pyrrhotite, pyrite, garnet, quartz, calcite and a little molybdenite. Analyses also showed 5.3 percent sulfur, 0.17 percent copper, less than 0.01 percent molybdenum, only traces of gold and silver, and no platinum.

Examination of the ore after crushing to 1/4-inch size showed considerable liberation of scheelite at minus 20-mesh, but much of the scheelite was very fine-grained.

A portion weighing 100 pounds was stage-crushed to minus 20-mesh. This was hydraulically classified into three sand products and slimes. Each was treated on the laboratory shaking table. The coarse middlings were ground to minus 35-mesh and retreated.

The concentrates from these operations contained scheelite, pyrrhotite, pyrite, and garnet. After drying the bulk concentrates were sized by screening into five portions, plus 48, 65, 100 and 200-mesh, and minus 200-mesh. Each was cleaned in several stages:

1. The low-intensity magnet was used to remove most of the pyrrhotite.

2. The high-intensity magnetic separator removed most of the garnet.

3. Since these treatments left much pyrite in the scheelite product, flotation treatment was used to remove most of the pyrite. (In usual plant practice, the product containing pyrite would be given a flash roast, and the altered pyrite would then be removed by magnetic separation. Since no flash roasting equipment was available, the pyrite was removed by flotation, using standard reagents.)

"EXHIBIT 8"

The final scheelite concentrates contained 64.75 percent WO_3, representing 65.1 percent recovery of the total tungsten in 0.72 percent of the original weight of ore. Analyses of this product also showed 1.67 percent sulfur, and 0.03 percent molybdenum.

Detailed data of these tests are shown in the following tabulation:

Product	Weight, Percent	Analysis-Percent WO_3	Analysis-Percent S	Distribution-Percent WO_3	Distribution-Percent S
Scheelite Concentrates	.72	64.75	1.67	65.1	.2
Pyrite Flot. "	.35	4.94	46.2	2.4	3.0
Hi Magnetic "	6.34	1.64	19.3	14.5	23.1
Total Middlings "	3.88	.99	7.2	5.3	5.2
Lo-Magnetic "	3.90	.01	37.1	0.1	27.2
Table Tailings	75.86	.03	2.5	3.7	36.7
Slimes	8.95	.72	2.7	8.9	4.6
Composite	100.00	.72	5.3	100.00	100.00

Examination of the several middling products and high-intensity magnetic concentrates showed that the scheelite was very fine-grained and locked with gangue minerals, and would require grinding to minus 100-mesh for liberation. Satisfactory treatment of material ground to that fineness would require flotation, as would further treatment of the slimes products resulting from the gravity treatment described.

FLOTATION TESTS

A portion of the ore was ground to minus 100-mesh for flotation. The sulfide minerals were removed by conditioning the pulp with 1.0 pound copper sulfate per ton of ore, then several increments of potassium pentasol amyl xanthate, as collector reagent, totalling 0.16 pound per ton of ore, and 0.5 pound Dow froth, as frother. Concentrates were made containing 29.4 percent sulfur, representing 98.6 percent removal, in 18.8 percent of the original weight of ore. This product contained only 0.06 percent WO_3, representing a loss of only 1.6 percent of the total tungsten.

"EXHIBIT 8"

The scheelite was then floated after conditioning the pulp with 5 pounds caustic soda and five pounds sodium silicate per ton of ore, and 0.15 pound quebracho. The collector reagent used was 6 pounds oleic acid, modified with 0.6 pound aerosol 18, added in small increments. The rougher froth was cleaned with 0.2 pound quebracho.

Concentrates containing 10.6 percent WO_3 were made, representing 96.7 percent recovery, in 6.6 percent of the original weight of ore. Detailed data of the test are as follows:

Product	Weight Percent	Analyses-Percent WO_3	Analyses-Percent S	Distribution-Percent WO_3	Distribution-Percent S
Sulfide concentrates	18.6	0.06	29.4	1.6	98.6
Scheelite "	6.6	10.60	0.09	96.7	0.1
Cleaner tailing	5.2	0.11	0.09	0.8	0.1
Rougher tailings	69.4	*0.01	0.09	0.9	1.2
Composite	100.00	0.72	5.6	100.00	100.00

* Less than 0.01 percent WO_3

Conclusions:

The simplest treatment method, particularly for a small tonnage plant, apparently would be grinding the ore to minus 100-mesh, and treating the pulp by two stages of flotation. In the first stage, nearly complete removal of sulfide minerals could be accomplished. In the second stage, the scheelite could be recovered satisfactorily, and if desirable, several cleaning steps could be employed to produce higher grade final concentrates than obtained in the laboratory.

"EXHIBIT 8."

WESTERN MACHINERY COMPANY
"WEMCO PRODUCTS"
760-766 Folsom Street
San Francisco 7, California

June 22, 1954

Dr. Fred Anderson
No. 6 State Street
Reno, Nevada

Subject: Stormy Day Laboratory Test
Project L-458

Dear Dr. Anderson:

Attached hereto please find a metallurgical report covering the completed test work as of this date on the Stormy Day Ore.

The last test indicated that by a change in reagents which probably would be accomplished in practice, can materially change the total recovery and improve the grade of the rougher concentrate. You will note in Table IV that a rougher concentrate was made containing 7.14 percent scheelite, representing 93.8 percent of the total WO_3. While in Test V, a concentrate of 23.88 was made representing 83 percent of the total scheelite. In practice a rougher concentrate of approximately 15 percent, would prove satisfactory, it could then be cleaned and recleaned and probably brought up to 30 percent, which would then go to acid treatment for producing a final product of 60 percent or better. These are things that usually work out in practice and cannot be duplicated in the laboratory inasmuch the quantity of rougher concentrate is very small.

I am sending a copy of this letter to Mr. Alan Bible, in the Gazette Building, also one to John Uhelde for their information and trust that you find it sufficiently complete to make a final determination as to the future of the property.

I do not know the exact time as to when I will make my next trip to Nevada, but if it is not necessary for me to come before, and you and Mr. Bible wish to discuss future financing, etc., do not hesitate to let me know, and I will make arrangements to come over at that time.

With kindest regards, we are

Very truly yours,

WEMCO DIVISION
WESTERN MACHINERY COMPANY
/s/ IRVIN S. THYLE
Irvin S. Thyle
Sales Engineer

LST:lt

"EXHIBIT 9"

June 21, 1954

Project: L-458

Technicians: P. A. Boukind
J. V. Hill

Sample - 1

Report of Preliminary Froth Flotation Tests Conducted on a Sample of Tungsten Ore Submitted by Stormy Day Mine, Reno, Nevada.

Introduction and Purposes

A sample of tungsten ore from northwest Nevada was submitted on March 16, 1954 by Stormy Day Mine, a partnership. The sample weighing approximately 100 pounds was received in good condition.

A limited amount of development work has been completed on the property which is about 10 miles south of Gerlach, Nevada. The client is now diamond drilling to determine ore reserve, and as an aid to planning future development work.

The purpose of this project was to determine if ore as represented by the submitted sample could be concentrated with froth flotation.

Sample History:

Description and Analysis:

The sample, packed in two doubled bags, was received in good condition. It was composed primarily of large lumps about 6 inches in diameter. The sample did not seem to contain as much fine material as would be obtained in "mine run" ore.

Scheelite was present in the sample as well dispersed fine (about 35 mesh) crystals. Minor amounts of pyrite, powellite, and molybdenite were also observed. Primary gangue minerals were quartz, epidote, garnet and calcite.

"EXHIBIT 9"

June 21, 1954

Project L-458

A test head portion of this sample contained 0.71 percent WO_3 (Calculated assay on 2 separate flotation tests was 0.89 percent WO_3).

Other characteristics of the sample as determined, on a portion of the sample after it had been crushed to minus 10 mesh, were as follows:

Percent Moisture (as received)	0.45
Specific Gravity	3.26
pH (50 g plus 100 m. of distilled water pH 7.0)	8.3
Soluble Salts (pounds per ton)	0.6

Preparation for Testing

The entire sample was stage crushed to pass through a one-half inch square opening. After crushing, the sample was thoroughly mixed by repeated riffling and three-quarters of the sample put in reserve. The one-quarter riffled out was staged crushed to minus 10 mesh, thoroughly mixed, and riffled into representative 600 gram portions for testing.

To provide storage for future projects in this laboratory it will be necessary, pending contrary instructions, to discard the reserve of this sample and of the test products 3 months from the date of this report.

Test Procedure:

Froth flotation test charges were ground, as shown in each test sheet, in a laboratory ball mill with steel balls. Each ground charge was transferred to a WEMCO Laboratory Fagergren Flotation Machine and conditioned with the air valve closed. After a conditioning period the air valve was opened and the resultant froth removed from the surface of the pulp by hand paddle skimming. The removed product was the "rougher" con-

-continued-

(Sulfide, WO_3, or Scavenger) and the final remaining product was the "rougher" or "scavenger tail."

General Notes

Most of pyrite and other metallic minerals were removed prior to scheelite flotation. This was accomplished by froth flotation with reagents often utilized for "sulfide" flotation.

San Francisco tap water (pH7.6) was used throughout these tests. The temperature of the pulp during conditioning and flotation was about 22° centigrade.

A key to the reagent symbols used in the tabulation of test results may be seen in Table 1.

Test Results

Test F-1

This was a "guide" test to determine the approximate grind and flotation reagent quantities required for good promotion of scheelite and depression of gangue minerals. The general appearance of this test was good, however the concentrate contained some "locked" gangue. This locking was indicative of too coarse a grind so the products of this test were not analyzed.

Detailed procedure and product weights for this test are shown in Table II.

Test F-2

A slightly finer grind and less promoter reagent was used for this test. The resulting froth was "lacey" in appearance. This type of froth is general characteristic of good scheelite flotation. Less "locked" gangue was observed in the concentrate than in the concentrate of test F-1

The tungsten rougher concentrate represented 11.7 percent by weight of the total sample, assayed 7.14 percent WO_3 and contained 93.8 percent of the total WO_3.

An assayed screen analysis of the final rougher tail indicated the grind used was sufficiently fine for good scheelite liberation. It is possible that a slightly coarser grind might be adequate as most of the scheelite in this rougher tail was in the minus 200 mesh fraction of the rougher tail. A screen analysis of flotation feed, after grinding, is shown in Table III

Test F-3

The procedure for this test was essentially the same as for Test F-2 except that more quebracho and less oelic acid were used in a successful attempt to produce a higher grade rougher concentrate.

The rougher concentrate grade, 23.48 percent WO_3, was over 3 times the grade obtained in Test F-2 with a sacrifice of about 10 percent in recovery. Froth appearance during flotation of this concentrate was characteristic of froths which are "upgraded" in practice with various cleaning stages.

The tungsten concentrate contained only 0.10 percent sulfide sulfur. This was an indication that sulfide removal prior to tungsten flotation was fairly complete. Presuming a 60 percent WO_3 concentrate could be produced by cleaner flotation and acid treatment in plant practice the sulfide sulfur content of this final concentrate would probably not exceed the generally specified maximum of 0.50 percent.

Conclusions:

1. Ore as represented by the submitted sample can be concentrated with froth flotation.

2. Required removal of sulfides prior to tungsten flotation was accomplished with simple sulfide flotation. The loss of WO_3 in each of these products was slightly over 2 percent.

3. Determination of final concentrate grade is best done in plant practice where froth cleaning and acid treatment for removal of undesired minerals can be performed on actual mill products.

Recommendations:

1. A representative portion of the diamond drill cores, weighing from 100 to 200 pounds, should be submitted for final testing. The primary purpose of this final testing would be to determine if the core drill sample responds similarly to froth flotation, since it is assumed the core drill sample would be more representative of ore as it would be mined than the sample used for these preliminary tests.

2. A sample of water from the proposed source for milling should be submitted with the core drill sample. A final flotation test should be made using this water sample. The results obtained could be compared with results when using laboratory tap water to determine if special water treatment would be required.

At least 20 gallons should be submitted. It should be shipped in clean containers - preferably glass. Glass Con-

June 21, 1954 Project L-458

tainers would be preferable. However clean milk cans or other containers could also be used.

3. A semi-quantitative spectrographic analysis should be made of any new ore sample submitted for testing. This analysis would be used to decide what specification elements should be determined on a final test concentrate.

MINERAL TESTING LABORATORY
WEMCO DIVISION
WESTERN MACHINERY COMPANY

/s/JACK V. HILL

Jack V. Hill, Chief Technician

/s/ PERRY A. BOUKIND
Perry A. Boukind, Technician

June 21, 1954 Project L-458

TABLE I

KEY TO REAGENT SYMBOLS

SYMBOL	REAGENT DESCRIPTION
CuSO	Copper sulfate
Z6	Dow Chemical Company Zanthate Z-6
D250	Dow Chemical Company Dowfroth 250
SA	Commercial soda ash
SS	Sodium Silicate (40° Baume)
Queb	Clarified quebracho as supplied by American Cyanamid Company
OlAc	Oleic Acid as supplied by American Cyanamid Company
A-18	American Cyanamid Company Aerosol 18

MINERAL TESTING LABORATORY
WESTERN MACHINERY COMPANY

Project L-458

Date 5/10/54

Engineer P. A. Boukind Table No. II Test No. F-1 Sample 1

FROTH FLOTATION TEST on a representative portion of the Sample Stage crushed to minus 10 mesh.

Point of Addition	CONDITIONS Time Mins.	% Solid	pH	CuSO	Z6	REAGENTS - POUNDS PER TON D250	SA	SS	Queb	OlAc	A-18
Ball Mill	6½	60									
Cond.	5	22	8.6	1.0							
Sul. Flot.	6	"			0.16	0.12					
Cond.	5						2.0	2.0	0.15		
WO_3 Flot.	6		9.7							21 21 21	.15 .05 .05

Stage ground thru 100 mesh

Tungsten concentrate appeared rather low grade.

Product	Percent Weight	Assay % WO_3
Assay Sample	-	0.71
Calc Sample	100.0	
Sul. Ro. Conc.	10.4	
WO_3 Conc.	13.7	
+ 200 Ro. Tail	30.4	
-200 Ro Tail	45.5	

June 21, 1954

Project L-458

TABLE III

SCREEN ANALYSIS OF SAMPLE AFTER GRINDING FOR TESTS F-2 and F-3

Mesh Size	Percent Weight Retained	
	Individual	Cumulative
100	1.3	1.3
150	11.2	12.5
200	14.4	26.9
325	22.6	49.5
Pan	50.5	100.0

June 21, 1954

Project L-458

TABLE III

SCREEN ANALYSIS OF SAMPLE AFTER GRINDING FOR TESTS F-2 and F-3

Mesh (Tyler)	Percent Weight Retained	
	Individual	Cumulative
100	1.3	1.3
150	11.2	12.5
200	14.4	26.9
325	22.6	49.5
Pan	50.5	100.0

MINERAL TESTING LABORATORY
WESTERN MACHINERY COMPANY

Date 5/10/54 Project L-458

Engineer P. A. Boukind Sample 1

Table No. IV Test No. F-2
FROTH FLOTATION TEST on a representative portion of the Sample Stage crushed to minus 10 mesh

Point of Addition	Conditions: Time Mins.	Conditions: % Solid	Conditions: pH	Reagents - Pounds per Ton: CuSO	Z-6	D250	SA	SS	Queb	OlAc	A-18
Ball Mill	7½	60	-								
Cond	5	22	8.7	1.0							
Sul. Flot.	6	"			0.16	0.12					
Cond.	5		9.7				2.0	2.0	0.15		
	3									0.21	.15
WO_3 Flot.	5									0.07	.05
										0.07	.05
										0.07	.05

Stage ground thru 100 mesh

Product	Percent Weight	Assay % WO_3	% Distribution WO_3
Assay Sample	---	0.71	---
Calc Sample	100.0	0.89	100.0
Sul. Ro. Conc.	9.9	0.21	2.4
WO_3 Ro Conc.	11.7	7.14	93.8
∠ 200 Ro Tail	25.8	0.03	0.9
-200 Ro Tail	52.6	0.05	2.9
Calc Ro Tail	78.4	0.04	3.8

MINERAL TESTING LABORATORY
WESTERN MACHINERY COMPANY

Project L-458

Sample 1

Date 5/26/54

Engineer P. A. Boukind

Table No. V Test No. F-3

FROTH FLOTATION TEST on a representative portion of the sample stage crushed to minus 10 mesh

Point of Addition	Conditions		Reagents - Pounds per Ton							
	Time Mins.	% Solid	pH	CuSO	Z-6	D250	SA	SS	Queb	OlAc: A-18
Ball Mill	7½	60								
Cond.	5	22	8.7	1.0						
Sul. Flot.	6	"	8.4		0.16	0.12				
Cond.	5		9.6				2.0	2.0	0.20	
	3									0.14: 0.40
WO_3 Flot.	3									0.07: "
Scav. Flot.	2									0.07: 0.10
										0.07: 0.10

Product	Percent Weight	Assay % WO_3	Assay % Sulfide Sulfur	% Distribution WO_3
Assay Sample	-	0.71		
Calc. Sample	100.0	0.89		100.0
Sul. Ro. Conc.	7.2	0.28	29.00	2.2
WO_3 Ro. Conc.	3.1	23.88	0.10	83.0
Scav. Conc.	3.7	1.95	0.35	8.1
Scav. Tail	86.1	0.07		6.7
Ro and Scav. (Calc) WO_3 Conc.	6.8	11.95		91.1
Calc Ro Tail	89.8	0.15		14.8

July 26, 1955

TO: Mr. A. L. Damon, Gen'l. Mgr.
Nev-Tah Oil And Mining Co.

FROM: E. J. Mayhew

SUBJECT: STORMY DAY MINE, CURRENT SUMMARY
(See Exhibits No. 1. A, B, C, D)
Also Regional Map I

HISTORY:

Discovered in 1941, development work began in 1942. Original shipments by location were first marketed to U. S. Government stockpile. Ore grade of all preliminary shipments averaged 0.764% WO_3.

Property was purchased by Dr. Anderson and associates of Reno during the early 1950s, and a normal comprehensive mining program was instituted. Three DMEA loans were obtained and expanded on exploration. Some 6,000 tons of ore was shipped which averaged over .70% WO_3 and considerable tonnage blocked out.

Economies connected with long shipment hauls and marketing with custom mills did not prove satisfactory from an income standpoint.

During the early summer of 1955, Nev-Tah Oil And Mining Company acquired a lease with option to purchase agreement on the mine. That organization's proposed plans were either to construct a mill on the property, or acquire a plant already set up within economic haulage distance. The above-mentioned company negotiated for the Wolfram plant at Toulon, Nevada. The objective was to reduce "middleman" charges connected with custom milling and by increased production volume to create a more favorable operating margin.

LOCATION:

The Stormy Day property is located in the Hooker Mining District, Pershing County, Nevada, 110 Miles from the Toulon Mill by road and 12 miles from rail at Gerlach, Nevada. The property consists of 4 full lode mining claims.

GEOLOGY:

The ore is scheelite, disseminated in a tactite of variable width along a contact metamorphic zone between granite and limestone.

ORE RESERVES:

Classification	Tons	% WO_3	Gross Value
Positive	35,000	0.70	$1,543,500.00
Probable	17,000	0.70	374,850.00
Possible	60,000	0.70	2,072,300.00
Total	112,000	0.70	$3,990,650.00

Positive blocked out tonnage has been increased over the above Klein original reserve report because of recent drifting on the 125' level--bringing in additional blocked tonnage.

EXPLORATION AND DEVELOPMENT:

Development drifts are being carried forward along the ore zone on the 105', 125' and 225' levels. More diamond drilling is planned below the 400' zone to trace the downward extension of the main ore chutes.

The present development along drifts is blocking out more tonnage and the deeper core drilling is intended also to increase the positive, blocked out ore.

ECONOMICS:

1. Positive Ore Reserves (Blocked Out)

Note: No exploration or development charge against the following tonnage:

	Tons	% WO_3	Gross Value @ $63
Positive Ore	35,000	0.70	$1,543,500.00
Production Cost Per Ton to deliver into Mine bin			4.59
Positive Ore Production Cost			160,650.00
2. Probable Ore	17,000	0.70	374,850.00
3. Possible Ore	60,000	0.70	2,072,300.00
			$2,447,150.00
Exploration and Development Cost estimate on above per ton			1.55
Production Cost per ton, estimated			4.59
Probable & Possible Ore Exploration, Dev. & Pro. Cost			472,780.00
Total Production Costs 102,000 Tons			643,430.00
Net Gross Value of 102,000 tons delivered to mine bin			$3,347,220.00

ESTIMATED HAULING & MILLING COSTS ON STORMY DAY RESERVES:

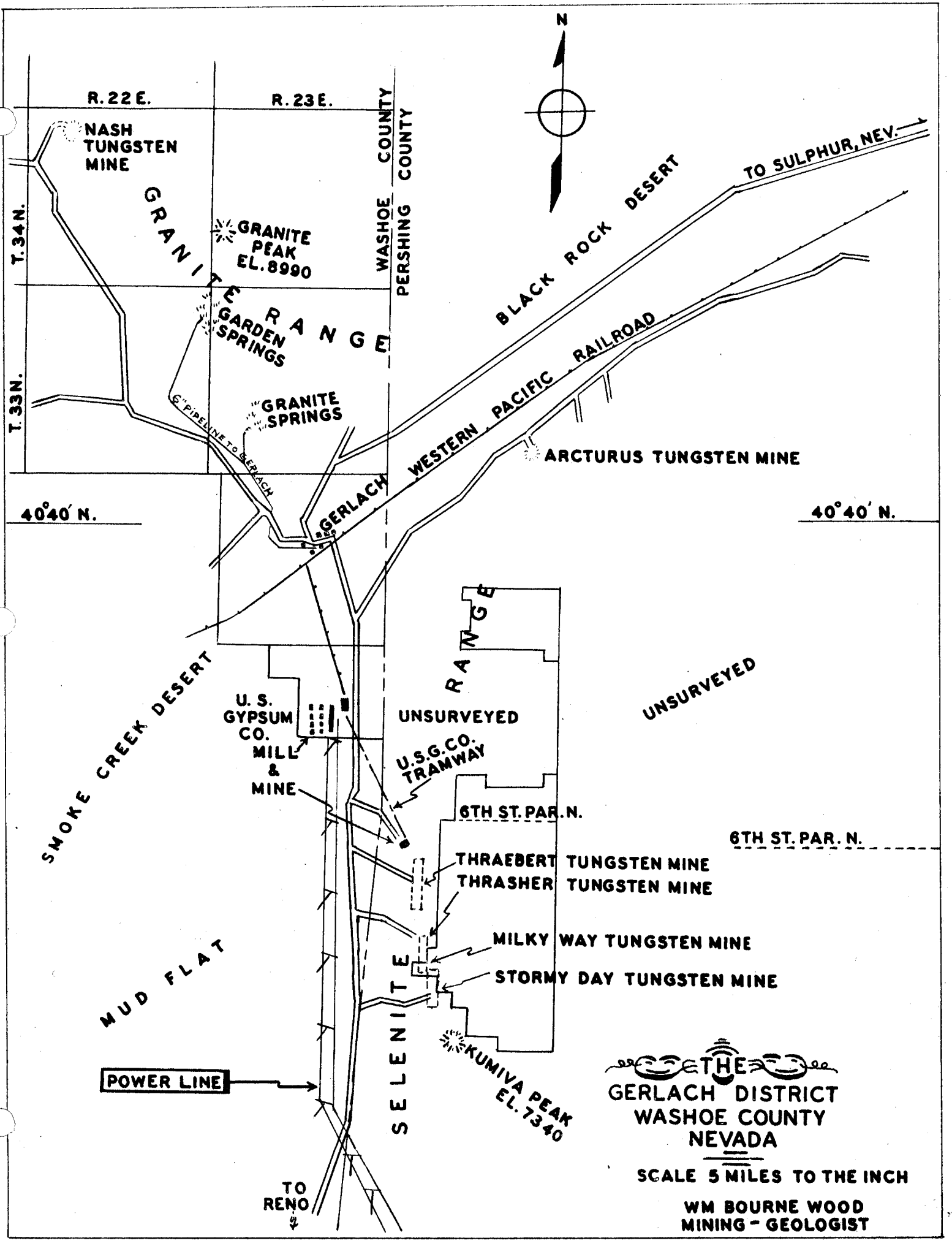
Note: The following is based upon acquirement of the Wolfram Mill on gravity concentration alone. The 25% estimated mill loss will be lowered after being rerun through proposed flotation circuit.

Haulage cost (set contract) mine to mill		3.75 per ton
Milling & Marketing Cost, 200 tons capacity		3.00 per ton
Total haulage and milling cost		6.75 per ton
Total Stormy Day Reserves, Haulage & Milling Cost estimate 102,000 tons	$688,500.00	
Gross Value of Reserves @ 0.70% WO_3 @ $63.....	3,990,650.00	
Less 25% mill loss	987,662.50	
	3,002,987.50	
Less Milling Costs	643,430.00	
Possible Net before Amortization & Taxes	$2,359,557.50	

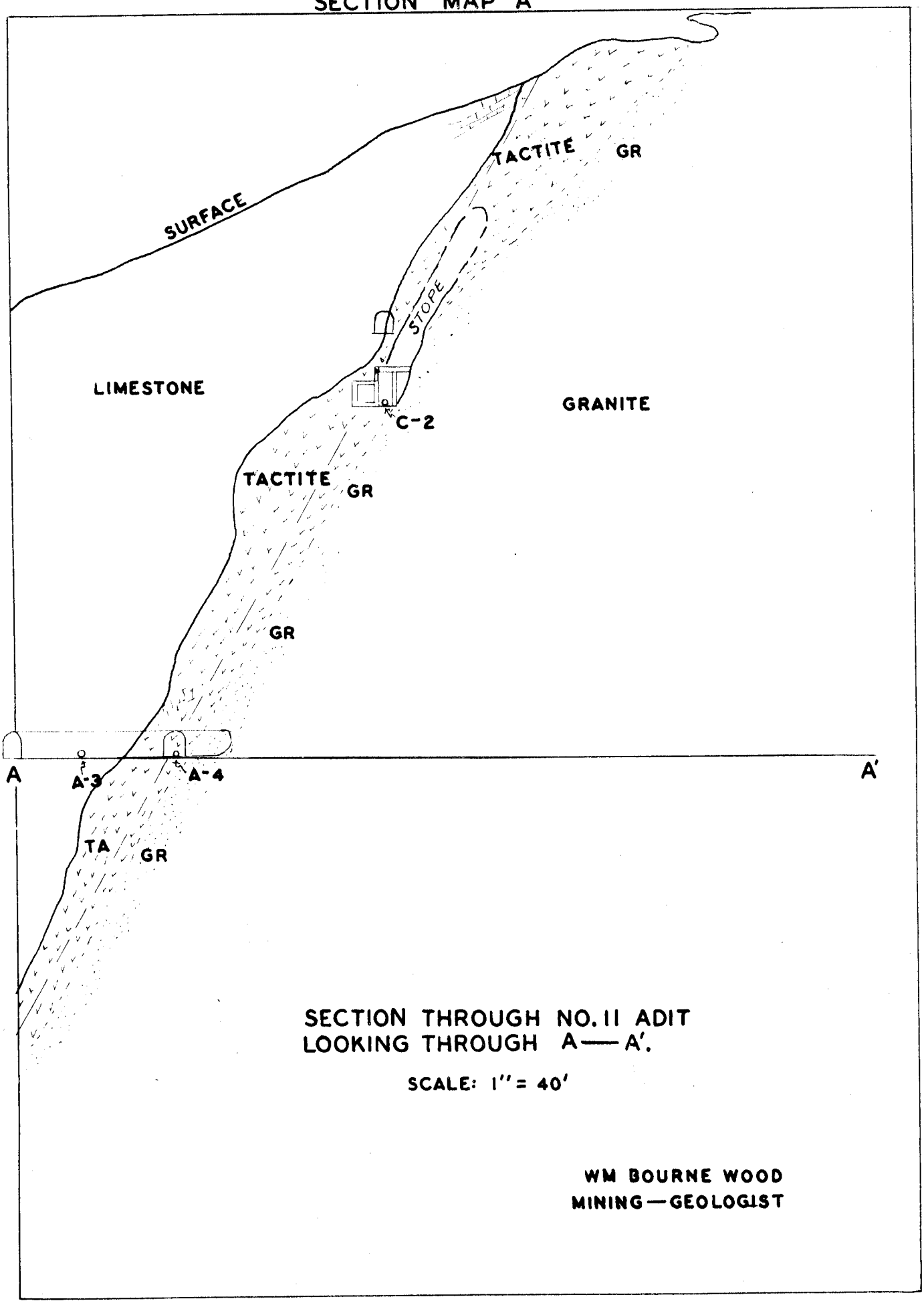
B.N. The mine will not be able to produce 200 tons per day. However, the above economics will be reasonably accurate, as the milling charge will be constant in view of capacity mill feed availability.

E. J. Mayhew

cc: E. Reiter
Oscar Zapf
L. E. Damon
Engineering File
J.H.W. File


N
R. 22 E.
R. 23 E.
NASH TUNGSTEN MINE
GRANITE RANGE
GRANITE PEAK EL. 8990
WASHOE COUNTY
PERSHING COUNTY
T. 34 N.
T. 33 N.
GARDEN SPRINGS
GRANITE SPRINGS
6" PIPELINE TO GERLACH
BLACK ROCK DESERT
TO SULPHUR, NEV.
WESTERN PACIFIC RAILROAD
ARCTURUS TUNGSTEN MINE
GERLACH
40°40' N.
40°40' N.
SMOKE CREEK DESERT
U. S. GYPSUM CO. MILL & MINE
U.S.G.CO. TRAMWAY
UNSURVEYED
RANGE
UNSURVEYED
6TH ST. PAR. N.
6TH ST. PAR. N.
THRAEBERT TUNGSTEN MINE
THRASHER TUNGSTEN MINE
MILKY WAY TUNGSTEN MINE
STORMY DAY TUNGSTEN MINE
MUD FLAT
SELENITE
KUMIVA PEAK EL. 7340
POWER LINE
TO RENO
THE GERLACH DISTRICT
WASHOE COUNTY
NEVADA
SCALE 5 MILES TO THE INCH
WM BOURNE WOOD
MINING - GEOLOGIST

SECTION MAP "A"

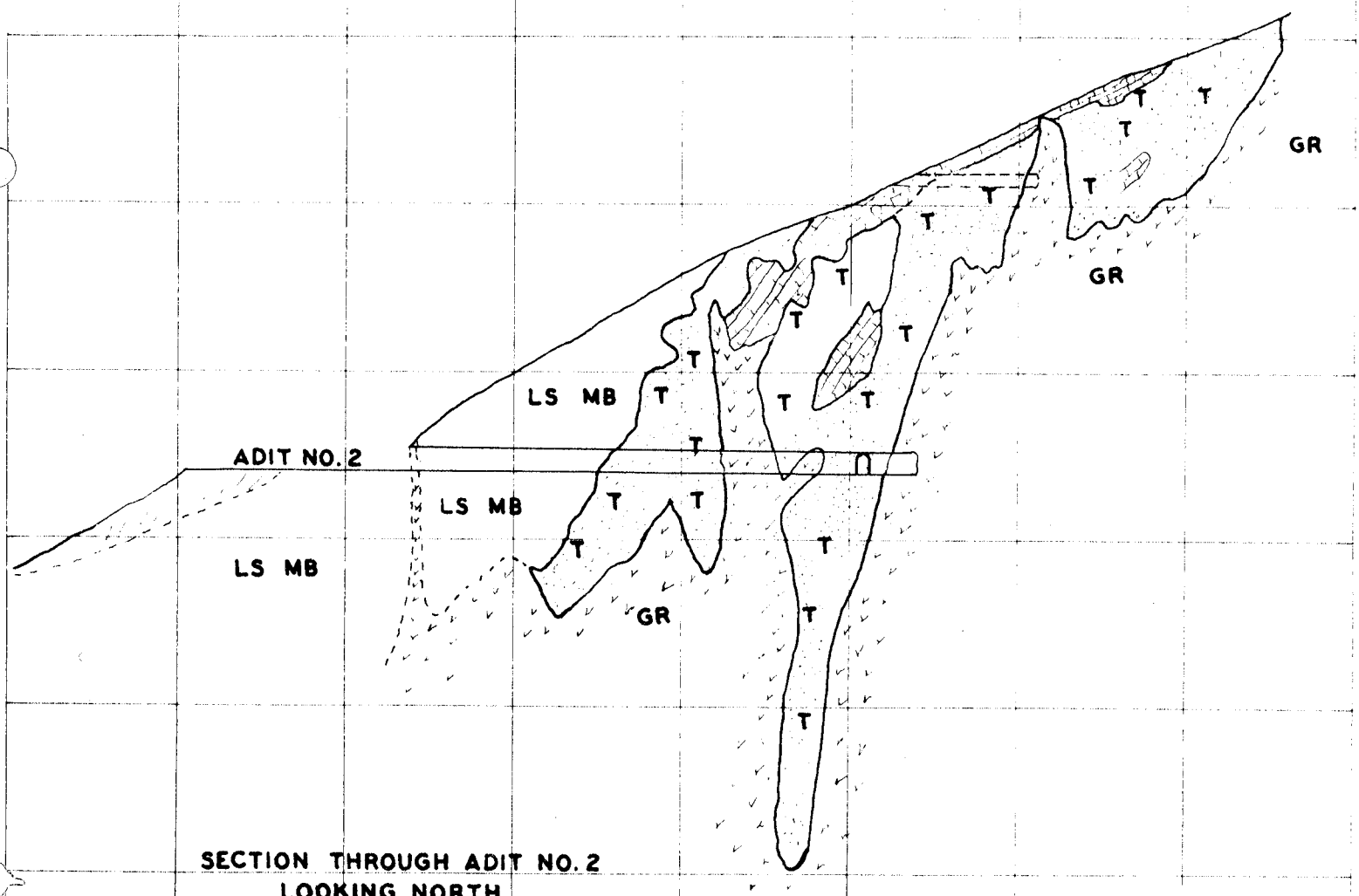


SECTION THROUGH NO. 11 ADIT
LOOKING THROUGH A — A'.

SCALE: 1" = 40'

WM BOURNE WOOD
MINING — GEOLOGIST

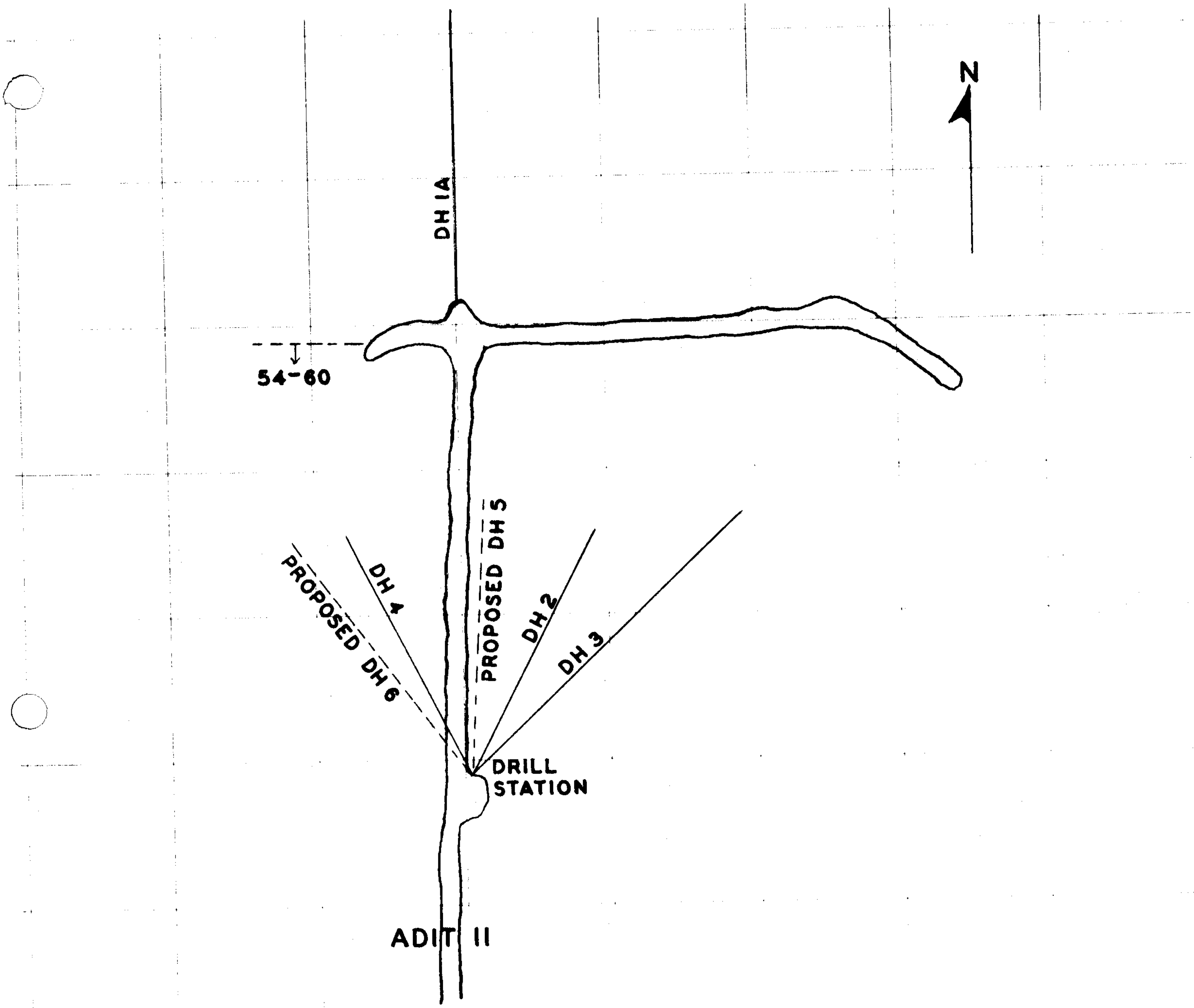
SECTION MAP B



SECTION THROUGH ADIT NO. 2
LOOKING NORTH

WM BOURNE WOOD
MINING - GEOLOGIST

STORMY DAY MINE
1" = 50'



DRILL HOLE	BEARING	DIP	LENGTH	
1	EAST	-45°	135'	
2	[illegible]71°-34'E	-42°	143'	
3	[illegible]56°-10'E	-40°	184'	
4	N71°-34'[illegible]	-42°	130'	
1A	[illegible]	Flat	100'	(Not completed)
PROP. 5	[illegible]85°[illegible]	-67°	132'	
PROP. 6	N62°[illegible]	-67°	172'	

DMEA 2925

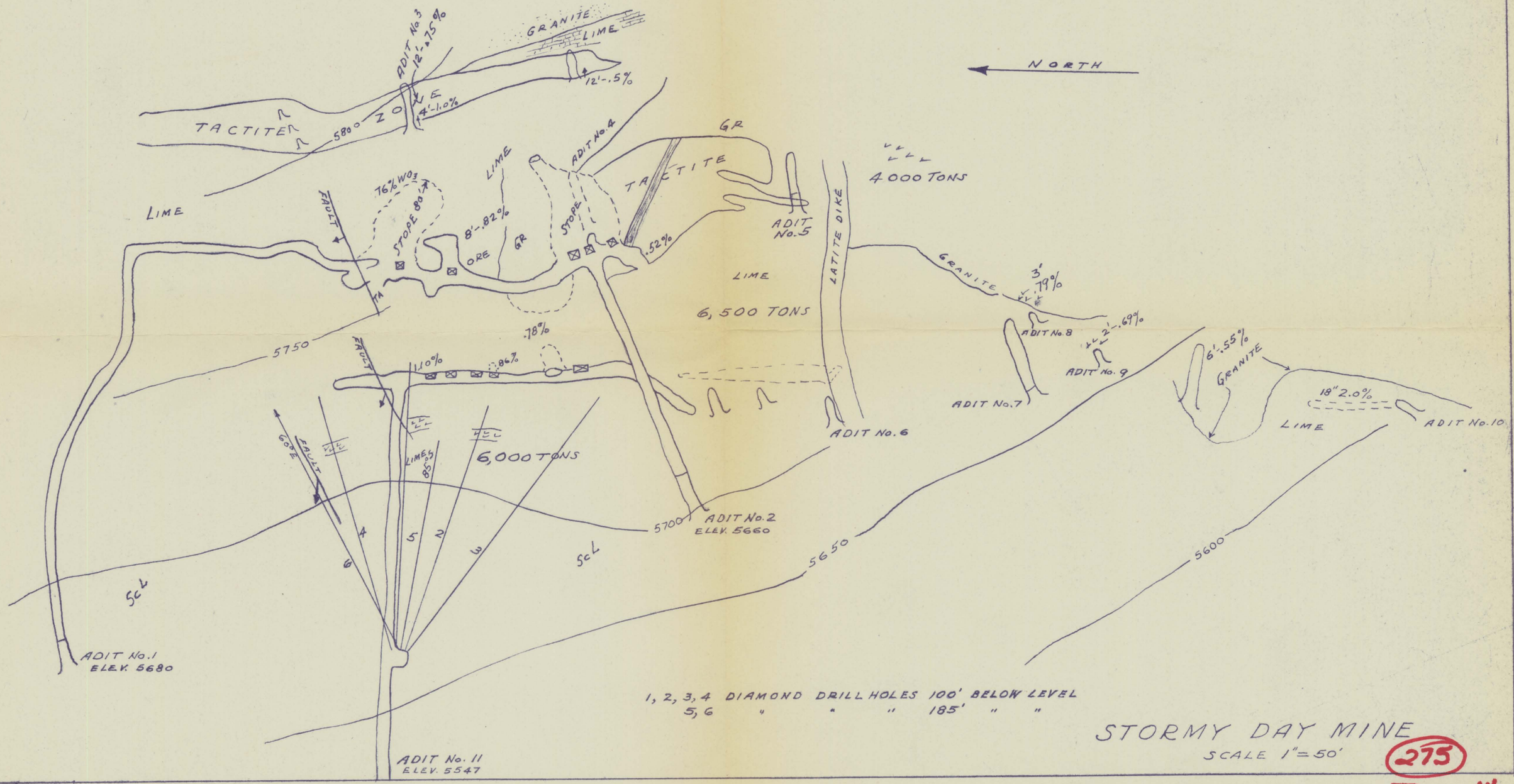
STORMY DAY MINE

PERSHING COUNTY, NEVADA

PORTION OF ADIT 11 SHOWING COMPLETED AND PROPOSED DIAMOND DRILL HOLES.

SCALE 1" = 50'

WM BOURNE WOOD
MINING—GEOLOGIST



1, 2, 3, 4 DIAMOND DRILL HOLES 100' BELOW LEVEL
5, 6 " " " 185' " "

STORMY DAY MINE

SCALE 1"=50'

275
Item 14

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SURFACE

HEAVY OVERBURDEN WITH ORE FLOAT

105' LEVEL

HANGING WALL "LIME" HAS A 25-35° DIP IN THIS AREA

5650

125' LEVEL

225' LEVEL

5/21/55

5/21/55

POST ORE DIKE

42°

45°

42°

40°

67°

67°

5600

DMEA DRILL HOLES

ADIT # 2

ADIT # 1

5550

5500

5450

ADIT # 11

Note Granodiorite "island" near portal size Unknown believed small

N

ORE EXPOSED IN THREE PLACES ON CONTACT IN THIS INTERVAL

18" 2.2% WO_3

LEGEND

- ORE-TACTITE WITH ¼-1% WO_3 OVER 5' MINING WIDTH
- TACTITE of NON-ORE GRADE
- GRANODIORITE AND ASSOCIATED IGNEOUS ROCKS
- CALCAREOUS META-SEDIMENTS "LIMESTONE", MARBLE AND HORNFELS

ORE-OCCURRENCE AND PRELIMINARY GEOLOGY
STORMY DAY MINE

PERSHING COUNTY, NEVADA

BY IRA E. KLEIN-GEOLOGIST

JUNE 19th 1955

SCALE 1" = 40 FT

COPY

275

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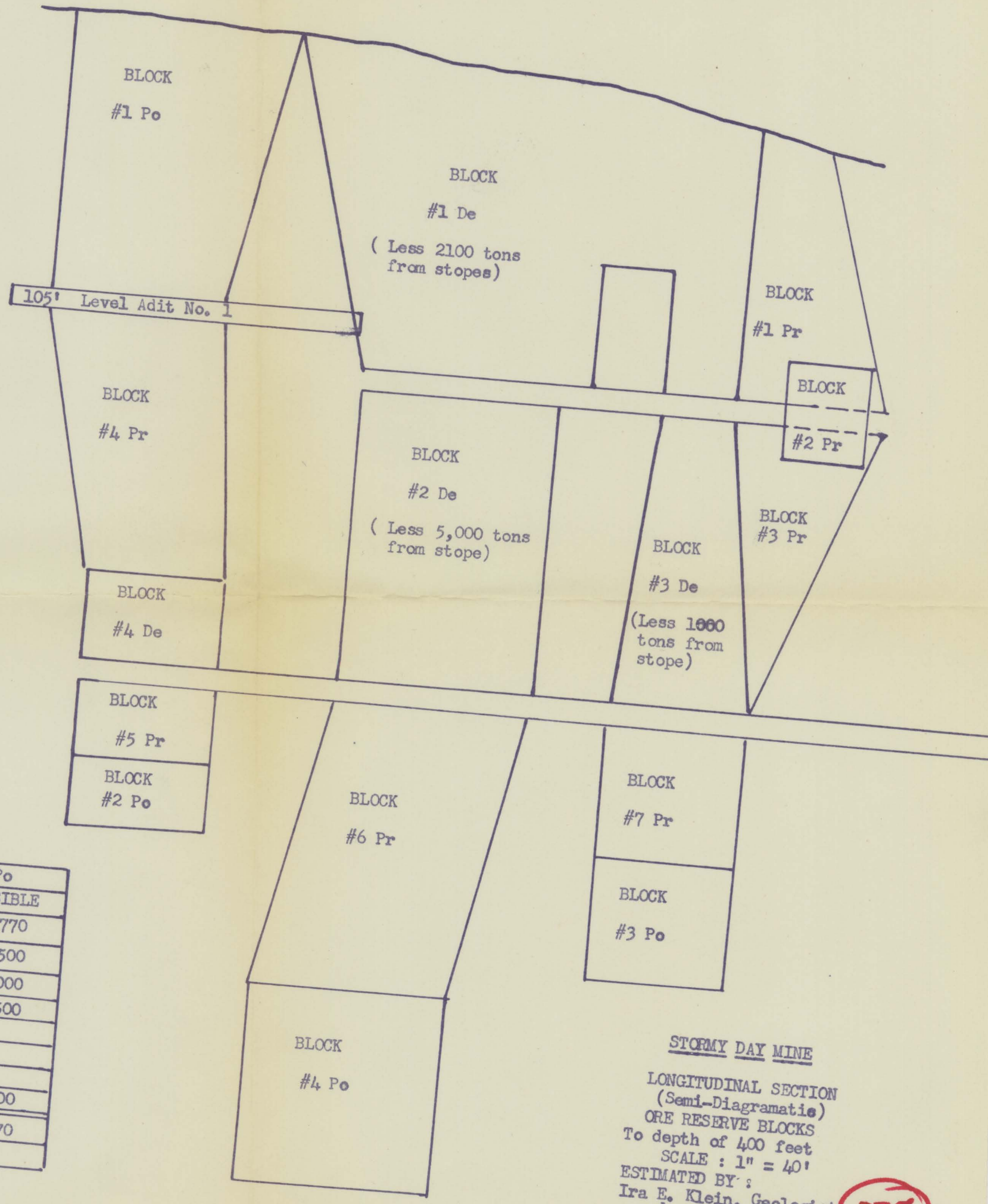

COMPUTED ORE TONNAGES

BLOCK	De	Pr	Po
	DEVELOPED	PROBABLE	POSSIBLE
#1	14,600	2,860	5,770
#2	3,600	600	500
#3	3,860	1,350	1,000
#4	1,000	3,780	1,500
#5		500	
#6		5,400	
#7		1,500	
S. END		1,000	4,000
S.TOTAL	23,060	16,990	12,770
TOTAL	52,820 Tons.		

STORMY DAY MINE

LONGITUDINAL SECTION
(Semi-Diagramatic)
ORE RESERVE BLOCKS
To depth of 400 feet
SCALE : 1" = 40'
ESTIMATED BY :
Ira E. Klein, Geologist
June 19, 1955

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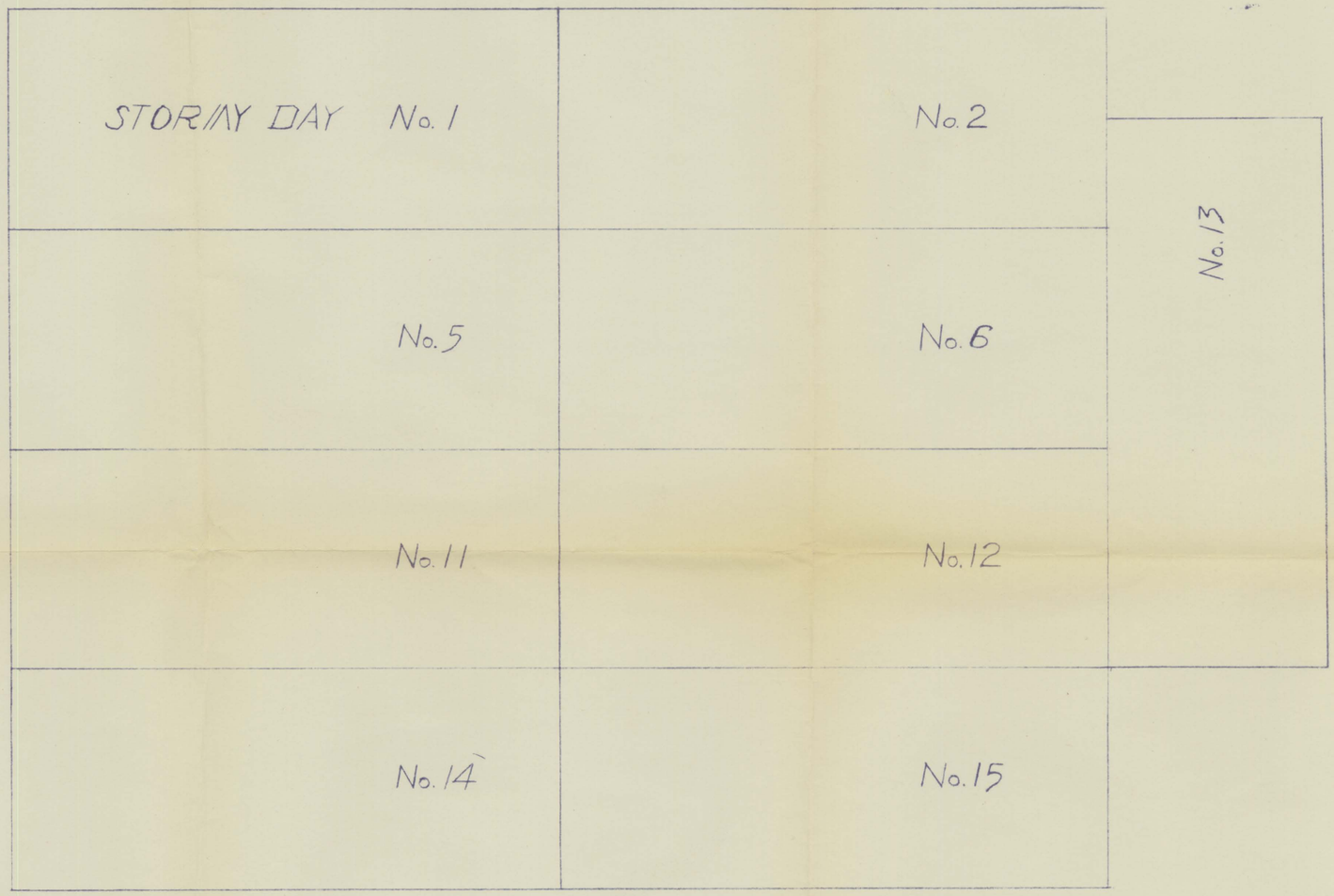

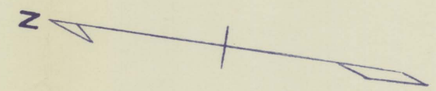

STORMY DAY MINE
PERSHING COUNTY
NEVADA

SCALE 1" =300'

275
Item 14

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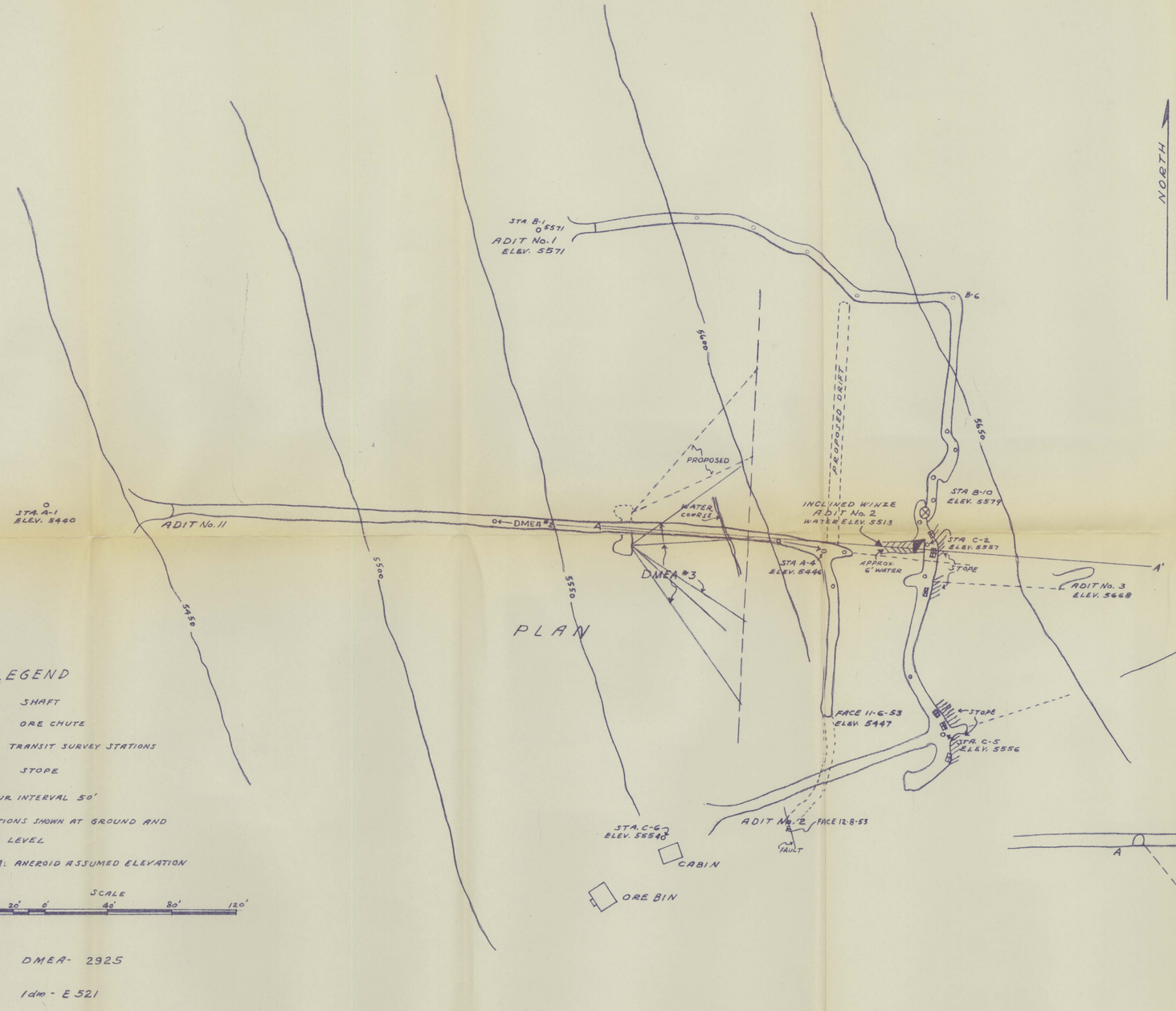

LEGEND

- SHAFT
- ORE CHUTE
- TRANSIT SURVEY STATIONS
- STOPE

CONTOUR INTERVAL 50'

ELEVATIONS SHOWN AT GROUND AND TRACK LEVEL

DATUM: ANEROID ASSUMED ELEVATION

SCALE

40' 20' 0' 40' 80' 120'

DMEA- 2925

Idm - E 521

TRANSIT SURVEY 11-6-53

STORMY DAY MINE (TUNGSTEN)
PERSHING COUNTY, NEVADA. PLAN & SECTION MAP

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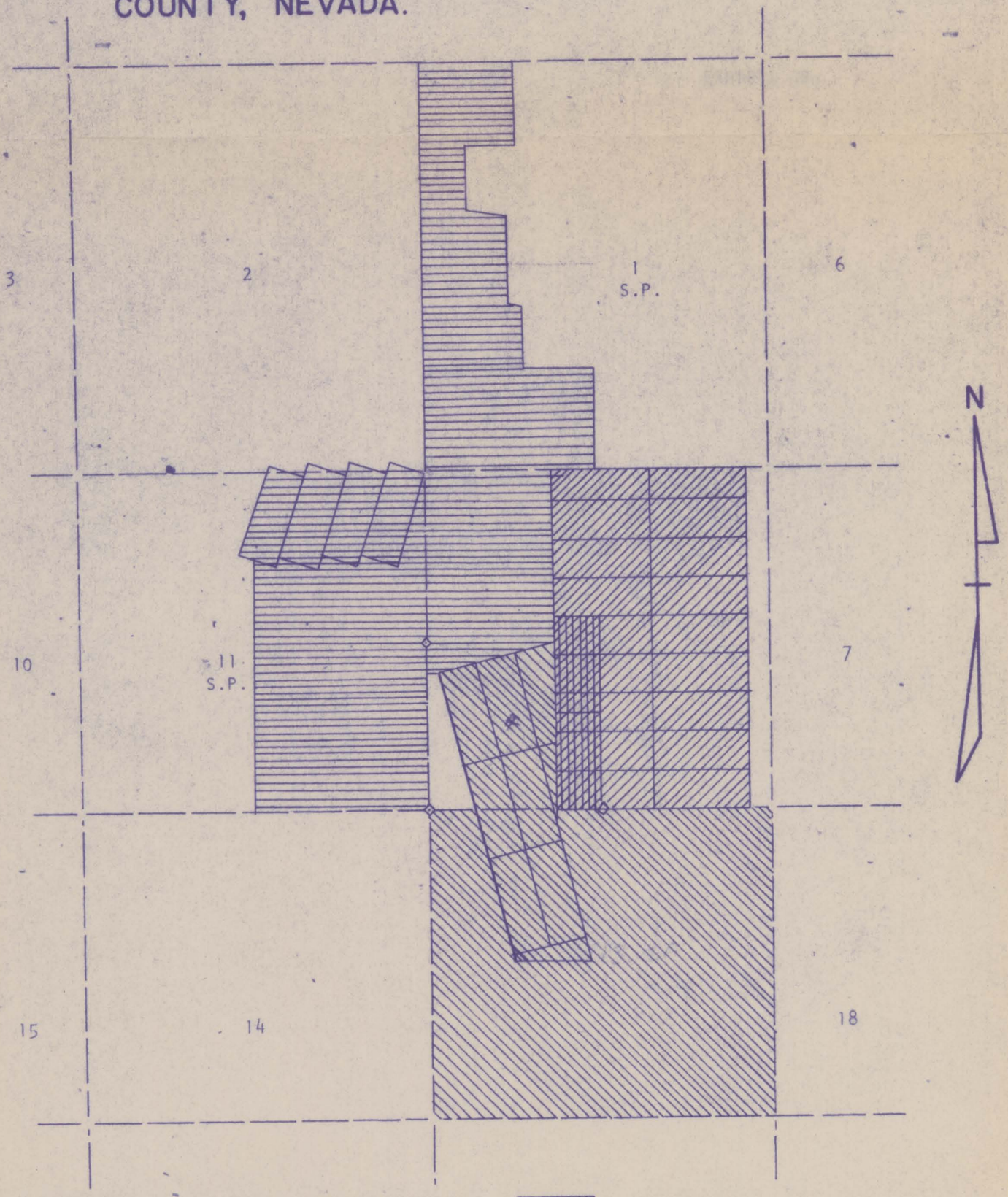
PROPERTY LOCATION MAP, IRON POINT PROSPECT, HUMBOLDT COUNTY, NEVADA.



Molycorp claims and leases

N A E claims

Purcell claims and lease

Other claims of doubtful validity

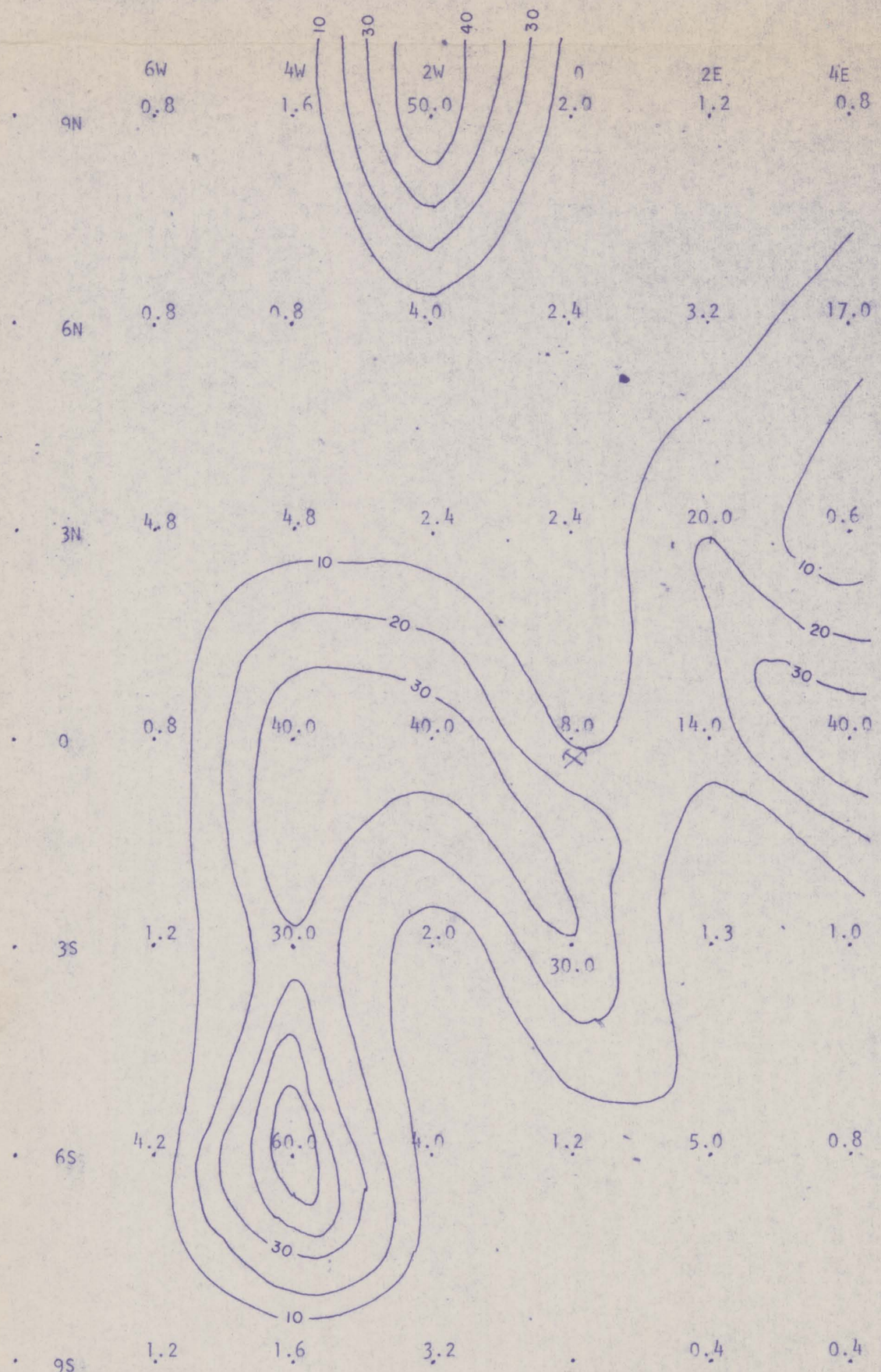
Scale

1000' 0 2000'

Scale: 1" = 2000'
Dr. by L.C.G., Tr. by R.A.C.
North American Exploration, Inc.
January 1, 1971

2340-0007

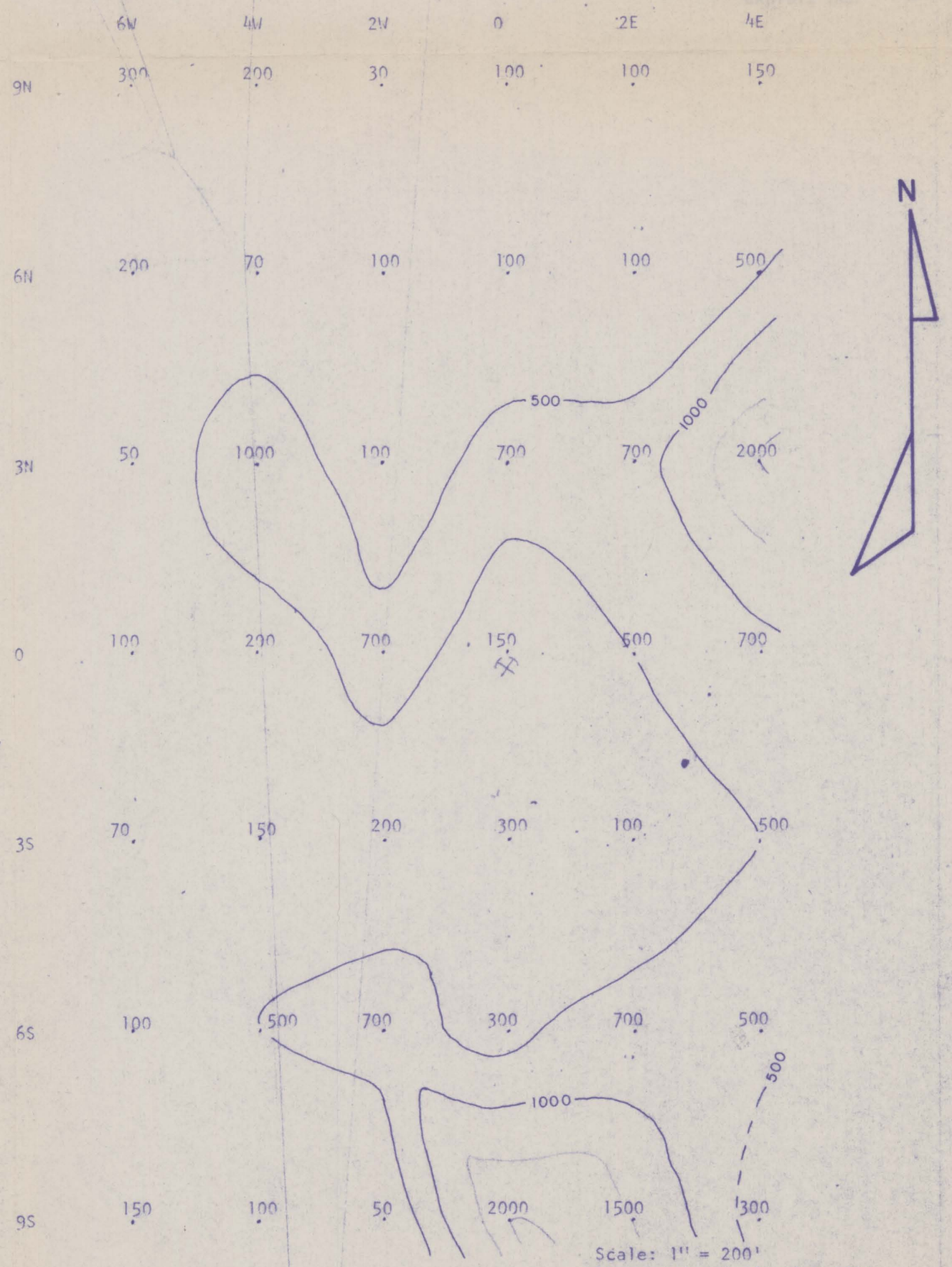
DISTRIBUTION OF MERCURY VALUES, IRON POINT PROSPECT, HUMBOLDT COUNTY, NEVADA.



Scale: 1" = 200'
Contour Interval = 10 PPM
Dr. by L.C.G., Tr. by R.A.C.
North American Exploration, Inc.
January 1, 1971

2340-0007

DISTRIBUTION OF VANADIUM VALUES, IRON POINT PROSPECT, HUMBOLDT COUNTY, NEVADA.



Scale: 1" = 200'
Contour Interval = 500 PPM
Dr. by L.C.G., Tr. by R.A.C.
North American Exploration, Inc.
January 1, 1971

2340-0007