PRELIMINARY REPORT

Geology of the Afterthought Area, Walker River Paiute Reservation Mineral County, Nevada

The Afterthought area lies approximately eight miles northwest of Schurz, Nevada, and extends from highway U.S. 95 westwards for three miles, covering approximately 12 square miles. The area is gentle in the Afterthought area itself, but the topography is rugged to the west, especially in the area of Mesa peak. The elevation varies from 4500 feet on the Weber Reservoir road to 5000 feet at the Afterthought shaft, and 6042 feet on Mesa peak. The area is somewhat more complicated than the Calico area to the east, but appears to be an extension of the geologic features.

Numbers were assigned to the volcanic units as they were mapped, and do not have any age connotation. The age relationships are shown in the geologic column, however some are tentative, especially the volcanic flows and intrusives. Further work in the area to the north and west will probably clarify the correlation of these units.

Pre-Tertiary Rocks

Metamorphics - (M) The Afterthought area appears to have been covered by Mesozoic sediments consisting of shales, shaly limestone, limestones, sandstones, and limey shales. Some of the limestone have been merely recrystallized, keeping its original bedding. These rocks have been metamorphosed to a series of recrystallized limestone, calc-silicates, skarn, schist, slates, and quartzite. These rocks occur in the area of the IP anomaly west of the Afterthought shaft, and around the flanks of the granitic-aplitic intrusive ½ mile to the northeast. They also appear in drill holes AF 1 and 2.

Diorite and Gabbro (Di) - occurs in the area 3,000 feet north of the Afterthought shaft and along the west flank of the granitic-aplitic intrusive, and extend approximately 1 mile west to the base of Mesa peak. It is medium to coarse grained, and varies from gabbro to diorite in composition. One specimen of gabbro taken from the small pit in the saddle and 200 feet east of the road contained 65% plagioclase (andesine), 20-30% hornblende, 5-10% augite, 2-3% biotite, 3-5% chlorite, and traces magnetite, the magnetite replacing fe-mags along crystallographic planes and boundaries. A specimen of diorite 500 feet west of the road contained 60% palgioclase, 15-20% brown hornblende, 2-3% biotite, 5% actinolite, 1-2% chlorite, and with small amount magnetite replacing the fe-mags along crystallographic planes and boundaries. Another specimen of diorite near the road and along the southwest flank of the granitic-aplitic intrusive showed 50% plagioclase, 30% orthoclase, 3-5% biotite, 3-5% actinolite, 10-15% hornblende, and with magnetite replacing the femags. This magnetite occurs interstitial and along crystallographic boundaries. The diorite and gabbro contains varying amounts of magnetite, and in places the rock is magnetic, especially at "0" E-W and 35N. Hematite with traces of copper carbonates occurs in this area, and a small pit has been dug on it in the past. This diorite appears to continue to the west under the overlying tuffs and volcanic flows.

Granodiorite (GD) - occurs in the area of the Afterthought shaft and to the south covering an area of approximately one square mile. It is fine to medium grained and fairly uniform in composition. One specimen taken above the shaft in thin section showed 30% plagioclase, 40% orthoclase, 15% quartz, 7% hornblende, and 1% pyroxene. It has been silicified in some areas, and in places cut by quartz veins containing traces of copper, being slightly altered in these areas. Otherwise the granodiorite shows no wide spread alteration.

Fine-grained intrusive (FGI) - This rock occurs along the northwest flank of the granodiorite, and also across the wash from the Afterthought shaft against the metamorphics. It may be a border facies of the granodiorite, but more likely represents a border facies of a quartz monzonite intrusive later than the granodiorite. Spatially it is related to the granodiorite and may have been a border facies of it that has been silicified by later solutions. It is separated from the granodiorite by a fault running N 50°E. This rock is intercalated with calc-silicates and skarn of the metamorphics across the wash from the Afterthought shaft, and also in drill holes AF 1 and 2. It contains considerable sulfides in these drill holes near the surface. Thin-sections of the core shows this rock to vary from granite to quartz monzonite and diorite (Lawrence, Rept thin-sections, Afterthought Area). This variation probably is partially due to assimilation of country rock at the time of intrusion. One small outcrop in the area of the V21 flow at 350 feet northeast of drill hole AF 3 is completely silicified. In thin section it shows ghost outlines of feldspar with rims of secondary biotite around corroded quartz phenocrysts. One large feldspar phenocryst shows pericline twinning.

Quartz monzonite (QM) - This rock outcrops in an area 1,500 feet north of the shaft and along the southwest flank of the granitic-aplitic intrusive. It occurs only as small patches and may be merely local variations of the other intrusives. It is medium to coarse grained, and is usually slightly iron stained with yellow-brown iron oxide. There is a larger area of quartz monzonite, medium to coarse grained, approximately 3,000 feet northeast of Mesa peak in Long Valley, which will be discussed in more detail in the B-6 report.

Granitic and aplitic intrusive (G) - occurs approximately ½ mile north of the Afterthought, and is 2,500 feet long and 1,000 feet wide, being elongated in a northeasterly direction. This rock contains 55% orthoclase and microcline, 20% plagioclase, 5% quartz, 5-10% green hornblende, 3-10% augite, and 1% sphene. Another specimen shows 45% microcline, 2-5% plagioclase, and 30-45% quartz, being alaskitic in composition. This intrusive is usually highly siliceous and fine grained. There are several quartz "blow-outs" around this hill. On the west side it is associated with rose quartz and large crystals of microcline. Numerous veins of quartz cut the diorite to the west, and may be genetically related to this granitic-aplitic intrusive. This granite has metamorphosed the Mesozoic sediments to schists, recrystallized limestone, slates, quartzite, calc-silicates, and skarn. There are numerous small propspects along the contact zone. Antimony has been mined in one prospect (Lawrence, 1963). Copper occurs as green stains and coatings

Lawrence, Edmond F., (1960), Antimony deposits of Nevada, Nevada Bureau of Mines, Bull. 61, p. 124.

in the metamorphics along the flanks of the granite.

Tertiary Rocks

Tuffs (V1) - There is a thick section of tuffs in the Afterthought area varying in composition from crystal tuff, lapilli tuff, vitric tuff, welded tuff to agglomerates, with interbedded vitrophyres and glassy flows. These rocks appears to have covered most of this area at one time, occuring overlying the granodiorite in the basin 1,000 feet east of the Afterthought shaft at an elevation 300 feet above the shaft. This unit is the same as the V1 tuff in the Calico area to the east, with local variations in the glassy units. These vitrophyres and glassy flows probably had a local origin. The coloration in the tuff appears to be thermal in origin, and associated with later intrusives and extrusives. It would be possible to work out a detailed section for correlation with the Calico area, but this did not appear desirable in the present investigation. These tuffs are usually well indurated, especially near the intrusives and extrusives. Two horizons in the tuff contain considerable petrified wood.

Andesite flows (V 6, V 21) - These flows and intrusives are similar to the V 6 andesite intrusives in the Calico area. They are composed of up to 40% plagioclase laths and 10-20% hornblende phenocrysts in an aphanitic groundmass.

Rhyolite flows and intrusives (V 8, V 20) - These flows and intrusives occur only as small outcrops along northwesterly faults near U.S. 95. They are aphanitic with occasional phenocrysts of feldspar and quartz, and with flow structure.

Andesite flows and intrusives (V 22) - This unit occurs chiefly west of U.S. 95 and north of the Weber Reservoir road, around the south and east flanks of the granodiorite. It is somewhat similar to the V 21 in composition and texture, but contains less plagioclase phenocrysts. The vents for the flows appear to be in the basin southeast of the Afterthought shaft, and along the south flank. One such plug cuts the granodiorite-V 1 tuff contact, changing the tuff to lavender and greenish in color and the granodiorite to a reddish brown up to 50 feet wide. This V 22 appears to be partially correlative with the V 22 flows.

Andesite flows (V 18) - Thsi flow is magnetic, and may account for the magnetic anomaly over U.S. 95. It is dense, dark gray to black, with phenocrysts up to 1/8 inch of hornblende, biotite, and plagioclase, and with 1-2% magnetite.

Andesitic to intermediate flows (V 26) - This unit occurs in the area south and southwest of the mine area. It is usually thin-bedded, with hornblende and plagioclase phenocrysts.

Quaternary Rocks

Basaltic flows (V 37) - Restricted to the northeast side of the area, but similar to V 19 on the southwest side. It is thin-bedded, dense, with occasional plagioclase phenocrysts and magnetic in some areas. Appears to be from a local vent.

Basaltic flow (V 19) - Same as V 37 above, except on southwest side of area.

Trachybasalt (V 29) - This unit occurs 1 mile northwest of the Afterthought

shaft and south of Mesa peak. It is dense, dark gray to black in color, with a glassy matrix.

Andesite flow (V 36) - This unit occurs as a distinct flow 1,000 feet wide and 3,000 feet long, northest of Mesa peak in Long Valley. It is lighter in color than V 35, aphanitic, with a few phenocrysts of plagioclase and hornblende.

Basalt - Andesite flow (V 35) - This flow, overlying V 36 in part, is 100 to 500 feet wide and at least 4,000 feet long. It is dense, black in color, with occasional phenocrysts of plagioclase and hornblende. It is overlained by V 31.

Basic flows - undifferentiated (V 34) - These flows north of Long Valley were not mapped in detail, but may be correlative with some of the basic flows in this report. They will be described in reports B-6 and C-7.

Andesite and basalt flows and intrusives (V 31) - This unit occurs around Mesa peak and appears to originate in a vent on its side. The basal part of this unit is an agglomerate up to 600 feet thick on the northeast slope of Mesa peak and 50 feet thick on the southwest slope. In places this rock is prophyritic, and partially trachybasalt and trachyandesite.. Basalt flows of this unit may account for the aerial magnetic anomaly southwest of Mesa Peak, but probably not account for the larger magnetic anomaly covering the Afterthought area and extending west and southwest of Mesa peak.

Basalt flows and intrusives (V 30) - This unit occurs co-extensively with V 31, and may be partly intercalated. It is usually dense, black in color, with few phenocrysts, but in places porphyritic, with phenocrysts of plagioclase, sanidine, and hornblende. It contains some andesite and trachybasalt. The vents for these flows appears to be on the side of Mesa peak.

Lacustrine deposits (QS) - Lake sediments, Lahontan in age, occurs along the southwest side of the area, and are up to 280 feet in thickness. They contain a vitric tuff bed that has been mined for pumice, and used locally for pumice blocks. These beds have been tilted and faulted. They extend within 2,500 feet of the Afterthought shaft, to an elevation of 4800 feet.

Alluvium and Sand (Al, S) - Much of the area of interest is obscured by alluvium and wind-blown sand.

Structure

This area lies along the same strike-slip fault zone as the Bounder, Hottentot, and Calico previously mapped and described (1966, Calico Report, Walker Martel files; 1965, Hottentot Report, AIME meeting, Reno). Faulting along this zone since Miocene time appears to be in the order of 2,000 feet with a right lateral movement. Movement of this magnitude could not be detected in the Calico and Afterthought areas. However there is evidence of smaller increments of movement of a right lateral nature in this area. These N 20°N to N 40°N faults are off-set in places by northeasterly faults, part of which is left lateral. This northeasterly set of faults may be equally important in the Afterthought area. There is some evidence that these faults have step-faulted the granitic rocks downwards to the east

towards the Calico area. These two sets of faults mutually cut each other. The IP anomaly in the Afterthought area appears to be along such a N 50°E structure, and the granitic-aplitic intrusive is elongated northeasterly between a N 40°E and a N 50°E fault. Both sets of faults cut the Lahontan lake sediments, with displacements up to 20 feet. There is some evidence of movement along the N 40°W faults in the past few years.

There is a strong possibility that this northwesterly-trending zone has been the structural control for the emplacement of the Mesozoic granitic bodies as well as the Tertiary intrusives and extrusives, and the Quaternary vents and flows. The Calico area appears to have been a center of volcanic activity throughout Tertiart and Quaternary time, while the Mesa peak area appears to have been most active in late Tertiary and Quaternary time.

Doming and other features might be suspected, but must await further study of the areas to the west and north.

Summary

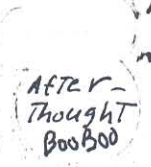
The Afterthought area lies in an area of Mesozoic, intruded by a series of granitic and aphanitic igneous rocks, metamorphosing the sediments to a series of schists, slates, recrystallized limestone, calc-silicates, and skarn. The igneous complex consists of gabbro, diorite, granodiorite, quartz monzonite, fine-grained intrusive(?), granite, alaskite, and pegmatite. These rocks are probably an extension of the dioritic bodies of the Calico area, and may represent a topographic high in Tertiary time. The differentiation of this magma may have provided a mineral-rich solution to form an ore-deposit. The area immediately west of the Afterthought shaft provides a good environment and structural control for such a deposit. IP data indicates an anomaly along this zone, and recent IP work (Oral Com., Redmond) indicates this anomaly bends around to the south. Exploration to the north across the granitic and dioritic areas with IP produced weak to negative results.

Drilling in this area at AF 1, 2, and 3 drill holes indicates interesting mineralization, confirming the ealrier IP anomalies, although not of economic significance. Further drilling should be done in this area and to the southwest and south along the anomaly to adequately test it.

Edmond F. Lawrence
Mining Geologist
Reno, Nevada

April 16, 1966

Afterthought-



* Afterthought

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Reports on Walker Indian Reservation- Borrowed by the Bureau of Mines

1. Property Evaluation, by R.J. Garcia, 8/29/63
2. Report on the Induced Polarization and Resistivity Survey on thhe Calico and Hottentot Prospects, Walker River Area, Paiute Reservation, Nevada, 10/10/63
3. Report on the Induced Polarization and Resistivity Survey on the Hottentot Prospect, Walker River Area, Paiute Reservation, Nevada, 3/6/64
4. Report on Induced Polarization and Resistivity Surveys, Walker Rivar Area, Paiute Reservation, Nevada, 8/13/64
5. Report on the Induced Polarization and Resistivity Survey on the Bounder Prospect, Mineral County, Nevada, 3/20/64
6. Supplement to Report on the Induced Polarization and Resistivity on the Bounder Prospect, Mineral County, Nevada, 7/28/66
7. Projects: Afterthought, Bounder (CU Claims), Copper Hill (Delta Claims), Wild Horse Canyon (RHO Claims), 1965 Under separate cover
9. Calico and West Calico Projects, 2/13/66, Mcphar Geophysics Ltd.
10. Little Calico: Induced Polarization, 7/28/66, Mcphar Geophysics Ltd.
11. Supplementary Report on the Further Induced Polarization Results from the Calico Prospect and the Little Calico Prospect, Mineral County, Nevada, 7/28/66, Mcphar Geophysics Ltd.
12. Supplementary Report on the Induced Polarization and Resistivity Results from the Afterthought Prospect, Mineral County, Nevada, 2/23/66, Mcphar Geophysics Ltd.
13. Report on the Induced Polarization and Resistivity Survey at the Copper Hill Prospect and Wild Horse Canyon Prospect, Mineral County, Nevada, Mcphar Geophysics Ltd., 2/23/66
14. Memorandum on the Induced Polarization Results from Aspiring Prospect, West Calico Prospect and Badger Prospect for Walker-Martel Co., 2/23/66, Mcphar Geophysics Ltd.
15. Report on Beneficiation of a Magnetite-Pyrrhotite-Chalcopyrite Ore for Walker-Martel Mining Co., Project No. 260211, 4/8/66, M.P. Jameson, Project Engineer, Colorado School of Mines
16. Seismic Refraction Study, Calico Area, J. Cooksley, Jr., 9/66
17. Analysis of Geophysical Data from the Walker Indian Reservation, Mineral County, Nevada, 11/25/66, by John S. Sumner
18. Inferred Iron Ore Reserves for the Calico Prospect, Walker Reservation, Nevada, 12/66, by Ron Haxby
20. Possible Mineralized Areas as Indicated by Aerial Magnetics, Walker-Martel Mining Co., 3/27/67, by Robert L. Redmond

466 1235

Included in Redmond Copy of Calico & W. Calico Projects

21. Walker Reservation Geology, by Ed Lawrence, March 1967

22. Hottentot Complex, 4/19/68, R.L. Redmond

23. Interpretation of Aeromagnetic Data in West-Central Nevada(Project No. 1) Feb. 1969, Huntec Ltd.

24. Review of all Geophysical Data, Calico Prospect, Schurz, Mineral County, Nevada, by Chas L. Elliot, 4/10/69

25. Interpretation of Airborne Magnetic Data, Calico Area, Schurz, Mineral County, Nevada, by Charles L. Elliot, 9/5/69

26. Ground Magnetic Survey, Black Eagle North Area, Churchill County, Nevada, by Charles L. Elliot, 5/16/70

27. Geophysical Evaluation of the Hottentot Prospect, Walker River Indian Reservation Mineral County, Nevada, by Elliot Geophysical Co., 6/1/70

29. Ore Reserves on the Walker Reservation by S. Sargis, 5/11/66

30. Induced Polarization and Resistivity Survey, Calico Hills Area, Little Calico and Black South, Mineral County, Nevada, by Canadian Aero Mineral Surveys, Ltd. 3/16/70

33. Interpretation of Induced Polarization, Resistivity and Ground Magnetic Data, Black Eagle South Area, Walker River Indian Reservation, Mineral County,Nevada, by Elliot Geophysical Co.,5/30/70

34. A Geophysical Report on Induced Polarization Surveys, Calico Prospect and Copper Hill Prospect, Walker Indian Reservation, Nevada by W.A.Finney, May 1969

35. Interpretation of Airborne Magnetic Data, Walker Indian Reservation, Mineral County, Nevada, by Charles L. Elliot, 12/19/69

36. Copper Hill: Induced Polarization, 7/28/66, Mcphar

37. Induced Polarizatio and Resistivity Survey, Calico Hills, Afterthought and Weber Reservoir Areas, Mineral and Lyon Counties, Nevada by Mining Geophysical Surveys 5/20/70

39. Calico Iron Pellet Study, Colorado School of Mines, 12/70

40. Unpublished Reports by Holt, 2/25/66

60000041 (0540)

M E M O R A N D U M

TO: FILES
FROM: WLW
RE: W.R.P.R. AFTERTHOUGHT PROSPECT
Date: October 25, 1979

A significant amount of drilling had been done previously by Walker-Martel on this prospect; however, little of economic interest was indicated by this drilling. The following information was developed by Idaho:

1. In 1974, Idaho drilled a number of shallow holes to attempt to better define the suspected buried mineralization. These were labeled AF-7 through AF-20.

2. Gamma logs of holes AF-6, AF-8, AF-10, AF-11, AF-15, AF-17, AF-18, AF-19 and AF-20 were run (copies attached). These were the only holes open at that time.

3. Copies of the Driller's logs for these holes are attached.

4. Hole numbers AF-7 through AF-18 were drilled on an induced polarization anomaly, and their location is shown on one of the attached maps, utilizing the McPhar IP map for a base.

5. Holes 19 and 20 were drilled on magnetic anomalies, and their location is shown on a separate magnetic map.

6. Geochemical analyses of the drill cuttings are attached. We were not encouraged by the results of this drilling, and thereafter abandoned the prospect.

7. Geochem analysis of selected sections of previously drilled holes AF-1, AF-2, AF-3 and AF-4 was performed. Results are attached.

60000041 (0540)
WLW

SUPPLEMENTARY REPORT

ON THE

INDUCED POLARIZATION

AND RESISTIVITY RESULTS

FROM THE

AFTERTHOUGHT PROSPECT

MINERAL COUNTY, NEVADA

FOR

WALKER-MARTEL MINING COMPANY

1. INTRODUCTION

A previous report dated August 13, 1964 describes the original IP results from the Afterthought Area. A definite anomaly was outlined, and the zone has been tested with two vertical drill holes on Line 3+00E. Sulphide mineralization was intersected in both drill holes; some copper was present, but not in enough quantity to be of economic interest.

The original results from the Afterthought did not determine the strike length of the zone. The rocks, alteration and mineralization intersected on Line 3+00E could indicate the nearby presence of mineralization of more economic interest. The measurements described in this report were made to determine the strike length, and the character, of the zone.

2. PRESENTATION OF RESULTS

The induced polarization and resistivity results are shown on the

following enclosed data plots. The results are plotted in the manner described in the notes preceding this report.

Scarn Line	200' electrode intervals	Dwg. IP____-1
Line 27E	500' electrode intervals	Dwg. IP____-2
Line 21E	500' electrode intervals	Dwg. IP____-3
Line 15E	500' electrode intervals	Dwg. IP____-4
Line 15W	500' electrode intervals	Dwg. IP____-5
Line 18W	500' electrode intervals	Dwg. IP____-6
Line 21W	500' electrode intervals	Dwg. IP____-7
Line 27W	500' electrode intervals	Dwg. IP____-8
Line 33W	500' electrode intervals	Dwg. IP____-9

Also enclosed with this report is Dwg. Misc. _____, a plan map of the Afterthought Prospect Area. The definite and possible induced polarization anomalies are indicated by solid and broken bars respectively on this plan map as well as the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

Since the induced polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the spread length; i.e. when using 500' spreads the position of a narrow sulphide body can only be determined to lie between two stations 500' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties

of location. Therefore, while the center of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

The IP results from this survey show that the mineralized zone at the Afterhtought extends from Line 21E to at least Line 33W. The source is therefore at least a mile long. It seems fairly clear that further drilling on other lines is necessary before the zone can be dismissed as being unimportant.

There are no anomalous effects on Line 27E, and the anomaly on Line 21E is not definite. On Line 21E, the pattern suggests a relatively broad zone of weak mineralization. To the west, the anomaly is of larger magnitude, and more definite.

The patterns suggest a zone of more disseminated mineralization with local zones of more concentrated mineralization. The drilling on Line 3+00E confirms this type of mineralization, although there is perhaps not as much concentrated mineralization as would be expected. However, vertical holes were used for the drilling and the sampling may not have been complete.

The narrow, large magnitude part of the anomaly appears to be striking slightly south of west. On Line 21W the source appears to be strong, and relatively narrow. The tabular source would be centered at about 5S. A second source is indicated to be at considerable depth at about 30S on this line. Recent sediments cover the surface in this area, and the apparent

resistivities are low. The surface rocks may also be the reason for the depth indicated.

On Line 27W, the entire area is covered by recent sediments. The anomalous pattern still shows the two sources, although there could be just one broad anomaly. Both sources appear to be at considerable depth, although the source centered at 10S to 5S could have ended to the east.

The only anomaly on Line 33W is centered at 25S to 20S; this position correlates best with the southern anomaly on the lines to the east. The source is indicated to be at considerable depth, but since 1.25 cps was used for the measurement there is no difficulty from inductive coupling. The depth to the top of the source may be as 1.5 electrode intervals; i.e. 750 feet.

4. CONCLUSIONS AND RECOMMENDATIONS

These further results show that the anomalous zone at the Afterthought is at least a mile long. To the east the source terminates at about Line 21E; to the west the source is double, and is very deep in the sediment covered area west of Line 33W.

On Line 21W, the source appears to be stronger, and of less width, then on Line 3+00E. Further drilling is recommended on this line. Angle holes would be desirable, but if vertical holes are necessary, the first hole should be at 4+00S. The next holes should be 200 to 250 feet to the north and south. The source of the strong IP effects is at moderate depth, so that the holes should only go to 500 feet.

The source at depth to the south also warrants a drill hole, probably on Line 33W where it is strong. The first hole should be at about

22+50S. The source is at considerable depth, and the holes should go to a depth of 900 to 1,000 feet; however, rotary drilling can be used in the overburden to reduce the cost.

The drilling recommended above is planned to complete a thorough testing of the anomalous zone at the Afterthought Prospect. Further drilling will depend upon the economic interest of the mineralization intersected in the holes planned.

McPHAR GEOPHYSICS LIMITED

Philip G. Hallof,
Geophysicist.

Dated: February 8, 1966

DWG. NO.-I.P.-2170-7

6000 0041 (0540)

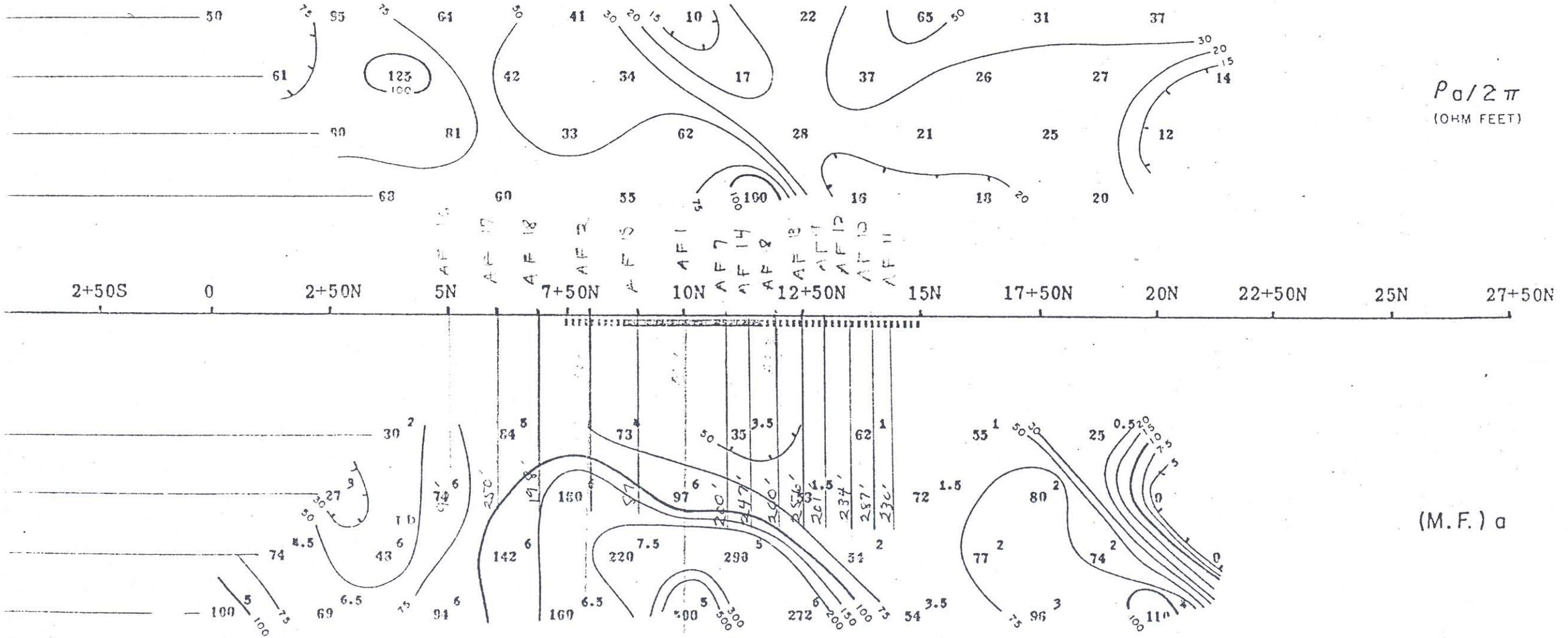
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

RATION
← X →

I

NT



DWG. NO. - I.P. - 2170 - 6

6000 0041 (0540)

RATION
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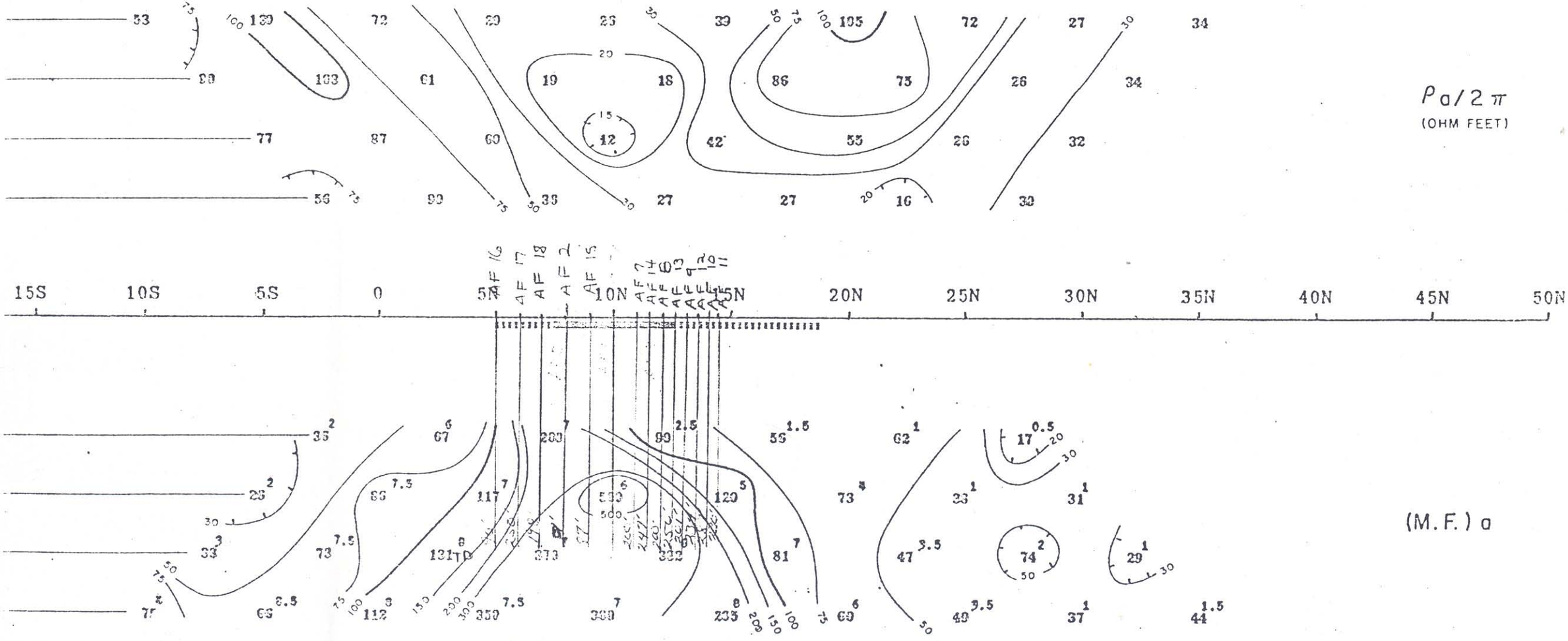
(I)

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NT



DWG. NO.-I.P.-2170-7

6000 004 (0540)

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

GRATION
← X →
(I)

HT

Pa/2π
(OHM FEET)

2+50S 0 2+50N 5N 7+50N 10N 12+50N 15N 17+50N 20N 22+50N 25N 27+50N

AF 16 AF 17 AF 18 AF 2 AF 15 AF 1 AF 7 AF 14 AF 8 AF 13 AF 9 AF 12 AF 10 AF 11

(M.F.) a

DWG. NO.-I.P.-2170-6

60000041 (05-40)

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

RATION
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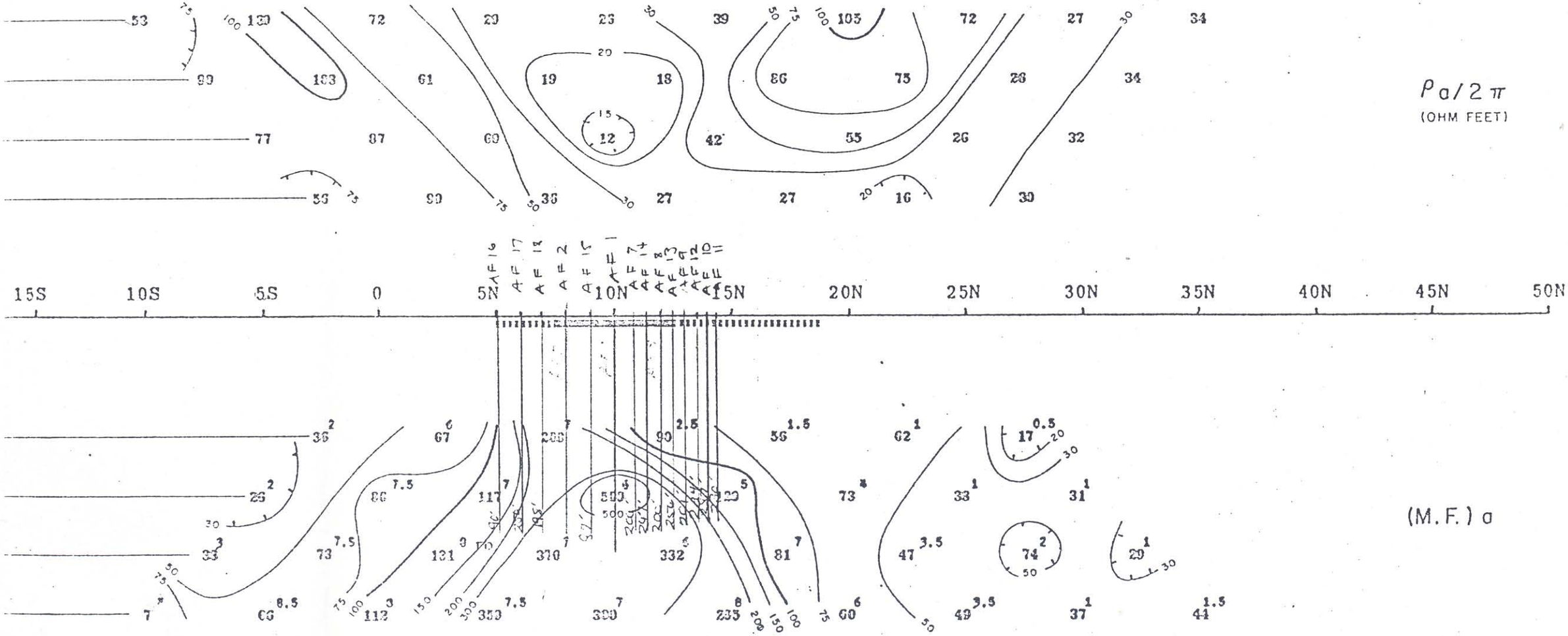
(I)

NT



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Pre-Tertiary Rocks

Metamorphics - (M) The Afterthought area appears to have been covered by Mesozoic sediments consisting of shales, shaly limestone, limestones, sandstones, and limey shales. Some of the limestone have been merely recrystallized, keeping its original bedding. These rocks have been metamorphosed to a series of recrystallized limestone, calc-silicates, skarn, schist, slates, and quartzite. These rocks occur in the area of the IP anomaly west of the Afterthought shaft, and around the flanks of the granitic-aplitic intrusive ½ mile to the northeast. They also appear in drill holes AF 1 and 2.

Diorite and Gabbro (Di) - occurs in the area 3,000 feet north of the Afterthought shaft and along the west flank of the granitic-aplitic intrusive, and extend approximately ½ mile west to the base of Mesa peak. It is medium to coarse grained, and varies from gabbro to diorite in composition. One specimen of gabbro taken from the small pit in the saddle and 200 feet east of the road contained 65% plagioclase (andesine), 20-30% hornblende, 5-10% augite, 2-3% biotite, 3-5% chlorite, and traces magnetite, the magnetite replacing fe-mags along crystallographic planes and boundaries. A specimen of diorite 500 feet west of the road contained 60% palgioclase, 15-20% brown hornblende, 2-3% biotite, 5% actinolite, 1-2% chlorite, and with small amount magnetite replacing the fe-mags along crystallographic planes and boundaries. Another specimen of diorite near the road and along the southwest flank of the granitic-aplitic intrusive showed 50% plagioclase, 30% orthoclase, 3-5% biotite, 3-5% actinolite, 10-15% hornblende, and with magnetite replacing the femags. This magnetite occurs interstitial and along crystallographic boundaries. The diorite and gabbro contains varying amounts of magnetite, and in places the rock is magnetic, especially at "O" E-W and 35N. Hematite with traces of copper carbonates occurs in this area, and a small pit has been dug on it in the past. This diorite appears to continue to the west under the overlying tuffs and volcanic flows.

Granodiorite (GD) - occurs in the area of the Afterthought shaft and to the south covering an area of approximately one square mile. It is fine to medium grained and fairly uniform in composition. One specimen taken above the shaft in thin section showed 30% plagioclase, 40% orthoclase, 15% quartz, 7% hornblende, and 1% pyroxene. It has been silicified in some areas, and in places cut by quartz veins containing traces of copper, being slightly altered in these areas. Otherwise the granodiorite shows no wide spread alteration.

Fine-grained intrusive (FGI) - This rock occurs along the northwest flank of the granodiorite, and also across the wash from the Afterthought shaft against the metamorphics. It may be a border facies of the granodiorite, but more likely represents a border facies of a quartz monzonite intrusive later than the granodiorite. Spatially it is related to the granodiorite and may have been a border facies of it that has been silicified by later solutions. It is separated from the granodiorite by a fault running N 50°E. This rock is intercalated with calc-silicates and skarn of the metamorphics across the wash from the Afterthought shaft, and also in drill holes AF 1 and 2. It contains considerable sulfides in these drill holes near the surface. Thin-sections of the core shows this rock to vary from granite to quartz monzonite and diorite (Lawrence, Rept thin-sections, Afterthought Area). This variation probably is partially due to assimilation of country rock at the time of intrusion. One small outcrop in the area of the V21 flow at 350 feet northeast of drill hole AF 3 is completely silicified. In thin section it shows ghost outlines of feldspar with rims of secondary biotite around corroded quartz phenocrysts. One large feldspar phenocryst shows pericline twinning.

Quartz monzonite (QM) - This rock outcrops in an area 1,500 feet north of the shaft and along the southwest flank of the granitic-aplitic intrusive. It occurs only as small patches and may be merely local variations of the other intrusives. It is medium to coarse grained, and is usually slightly iron stained with yellow-brown iron oxide. There is a larger area of quartz monzonite, medium to coarse grained, approximately 3,000 feet northeast of Mesa peak in Long Valley, which will be discussed in more detail in the B-6 report.

Granitic and aplitic intrusive (G) - occurs approximately ½ mile north of the Afterthought, and is 2,500 feet long and 1,000 feet wide, being elongated in a northeasterly direction. This rock contains 55% orthoclase and microcline, 20% plagioclase, 5% quartz, 5-10% green hornblende, 3-10% augite, and 1% sphene. Another specimen shows 45% microcline, 2-5% plagioclase, and 30-45% quartz, being alaskitic in composition. This intrusive is usually highly siliceous and fine grained. There are several quartz "blow-outs" around this hill. On the west side it is associated with rose quartz and large crystals of microcline. Numerous veins of quartz cut the diorite to the west, and may be genetically related to this granitic-aplitic intrusive. This granite has metamorphosed the Mesozoic sediments to schists, recrystallized limestone, slates, quartzite, calc-silicates, and skarn. There are numerous small propspects along the contact zone. Antimony has been mined in one prospect (Lawrence, 1963). Copper occurs as green stains and coatings

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Lawrence, Edmond F., (1960) Antimony deposits of Nevada, Nevada Bureau of Mines, Bull. 61, p. 124.

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in the metamorphics along the flanks of the granite.

Tertiary Rocks

Tuffs (V1) - There is a thick section of tuffs in the Afterthought area varying in composition from crystal tuff, lapilli tuff, vitric tuff, welded tuff to agglomerates, with interbedded vitrophyres and glassy flows. These rocks appears to have covered most of this area at one time, occuring overlying the granodiorite in the basin 1,000 feet east of the Afterthought shaft at an elevation 300 feet above the shaft. This unit is the same as the V1 tuff in the Calico area to the east, with local variations in the glassy units. These vitrophyres and glassy flows probably had a local origin. The coloration in the tuff appears to be thermal in origin, and associated with later intrusives and extrusives. It would be possible to work out a detailed section for correlation with the Calico area, but this did not appear desirable in the present investigation. These tuffs are usually well indurated, especially near the intrusives and extrusives. Two horizons in the tuff contain considerable petrified wood.

Andesite flows (V 6, V 21) - These flows and intrusives are similar to the V 6 andesite intrusives in the Calico area. They are composed of up to 40% plagioclase laths and 10-20% hornblende phenocrysts in an aphanitic groundmass.

Rhyolite flows and intrusives (V 8, V 20) - These flows and intrusives occur only as small outcrops along northwesterly faults near U.S. 95. They are aphanitic with occasional phenocrysts of feldspar and quartz, and with flow structure.

Andesite flows and intrusives (V 22) - This unit occurs chiefly west of U.S. 95 and north of the Weber Reservoir road, around the south and east flanks of the granodiorite. It is somewhat similar to the V 21 in composition and texture, but contains less plagioclase phenocrysts. The vents for the flows appear to be in the basin southeast of the Afterthought shaft, and along the south flank. One such plug cuts the granodiorite-V 1 tuff contact, changing the tuff to lavender and greenish in color and the granodiorite to a reddish brown up to 50 feet wide. This V 22 appears to be partially correlative with the V 22 flows.

Andesite flows (V 18) - Thsi flow is magnetic, and may account for the magnetic anomaly over U.S. 95. It is dense, dark gray to black, with phenocrysts up to 1/8 inch of hornblende, biotite, and plagioclase, and with 1-2% magnetite.

Andesitic to intermediate flows (V 26) - This unit occurs in the area south and southwest of the mine area. It is usually thin-bedded, with hornblende and plagioclase phenocrysts.

Quaternary Rocks

Basaltic flows (V 37) - Restricted to the northeast side of the area, but similar to V 19 on the southwest side. It is thin-bedded, dense, with occasional plagioclase phenocrysts and magnetic in some areas. Appears to be from a local vent.

Basaltic flow (V 19) - Same as V 37 above, except on southwest side of area.

Trachybasalt (V 29) - This unit occurs 1 mile northwest of the Afterthought

shaft and south of Mesa peak. It is dense, dark gray to black in color, with a glassy matrix.

Andesite flow (V 36) - This unit occurs as a distinct flow 1,000 feet wide and 3,000 feet long, northest of Mesa peak in Long Valley. It is lighter in color than V 35, aphanitic, with a few phenocrysts of plagioclase and hornblende.

Basalt - Andesite flow (V 35) - This flow, overlying V 36 in part, is 100 to 500 feet wide and at least 4,000 feet long. It is dense, black in color, with occasional phenocrysts of plagioclase and hornblende. It is overlained by V 31.

Basic flows - undifferentiated (V 34) - These flows north of Long Valley were not mapped in detail, but may be correlative with some of the basic flows in this report. They will be described in reports B-6 and C-7.

Andesite and basalt flows and intrusives (V 31) - This unit occurs around Mesa peak and appears to originate in a vent on its side. The basal part of this unit is an agglomerate up to 600 feet thick on the northeast slope of Mesa peak and 50 feet thick on the southwest slope. In places this rock is prophyritic, and partially trachybasalt and trachyandesite.. Basalt flows of this unit may account for the aerial magnetic anomaly southwest of Mesa Peak, but probably not account for the larger magnetic anomaly covering the Afterthought area and extending west and southwest of Mesa peak.

Basalt flows and intrusives (V 30) - This unit occurs co-extensively with V 31, and may be partly intercalated. It is usually dense, black in color, with few phenocrysts, but in places porphyritic, with phenocrysts of plagioclase, sanidine, and hornblende. It contains some andesite and trachybasalt. The vents for these flows appears to be on the side of Mesa peak.

Lacustrine deposits (QS) - Lake sediments, Lahontan in age, occurs along the southwest side of the area, and are up to 280 feet in thickness. They contain a vitric tuff bed that has been mined for pumice, and used locally for pumice blocks. These beds have been tilted and faulted. They extend within 2,500 feet of the Afterthought shaft, to an elevation of 4800 feet.

Alluvium and Sand (Al, S) - Much of the area of interest is obscured by alluvium and wind-blown sand.

Structure

This area lies along the same strike-slip fault zone as the Bounder, Hottentot, and Calico previously mapped and described (1966, Calico Report, Walker Martel files; 1965, Hottentot Report, AIME meeting, Reno). Faulting along this zone since Miocene time appears to be in the order of 2,000 feet with a right lateral movement. Movement of this magnitude could not be detected in the Calico and Afterthought areas. However there is evidence of smaller increments of movement of a right lateral nature in this area. These N 20°N to N 40°N faults are off-set in places by northeasterly faults, part of which is left lateral. This northeasterly set of faults may be equally important in the Afterthought area. There is some evidence that these faults have step-faulted the granitic rocks downwards to the east

towards the Calico area. These two sets of faults mutually cut each other. The IP anomaly in the Afterthought area appears to be along such a N 50°E structure, and the granitic-aplitic intrusive is elongated northeasterly between a N 40°E and a N 50°E fault. Both sets of faults cut the Lahontan lake sediments, with displacements up to 20 feet. There is some evidence of movement along the N 40°W faults in the past few years.

There is a strong possibility that this northwesterly-trending zone has been the structural control for the emplacement of the Mesozoic granitic bodies as well as the Tertiary intrusives and extrusives, and the Quaternary vents and flows. The Calico area appears to have been a center of volcanic activity throughout Tertiary and Quaternary time, while the Mesa peak area appears to have been most active in late Tertiary and Quaternary time.

Doming and other features might be suspected, but must await further study of the areas to the west and north.

Summary

The Afterthought area lies in an area of Mesozoic, intruded by a series of granitic and aphanitic igneous rocks, metamorphosing the sediments to a series of schists, slates, recrystallized limestone, calc-silicates, and skarn. The igneous complex consists of gabbro, diorite, granodiorite, quartz monzonite, fine-grained intrusive(?), granite, alaskite, and pegmatite. These rocks are probably an extension of the dioritic bodies of the Calico area, and may represent a topographic high in Tertiary time. The differentiation of this magma may have provided a mineral-rich solution to form an ore-deposit. The area immediately west of the Afterthought shaft provides a good environment and structural control for such a deposit. IP data indicates an anomaly along this zone, and recent IP work (Oral Com., Redmond) indicates this anomaly bends around to the south. Exploration to the north across the granitic and dioritic areas with IP produced weak to negative results.

Drilling in this area at AF 1, 2, and 3 drill holes indicates interesting mineralization, confirming the ealrier IP anomalies, although not of economic significance. Further drilling should be done in this area and to the southwest and south along the anomaly to adequately test it.

Edmond F. Lawrence
Mining Geologist
Reno, Nevada

April 16, 1966

MEMORANDUM

From: WLW
To: Kay
Re: Afterthought

On July 22nd, we visited the Afterthought and staked out some drill holes North and South of Drill Hole AF-3. We also decided to run geochem for copper, moly, and gold, and possibly silver, on Drill Holes AF-1, -2, -3 and -4.

We decided not to drill any holes at the present time on the South side of the main canyon; however, we should sample as many dumps as can be done on the South side of the canyon, and the dumps in the main canyon, and to take a traverse on the ridge just East of the Afterthought shaft on 50' centers, taking soil and/or rock samples from the intrusive down into the alluvium, and to run those samples also for gold, arsenic, and mercury, and possibly silver. The dump samples should be run for arsenic and mercury, as well as gold.

In sampling the dumps, etc., be sure to sample the workings on the extreme East end, which are in the light felsic volcanics, and to which there is no road. I want to look through the aerial photography, particularly the enlargements, to see if we have any enlargements of the photography in this area. If not, we could order some, but I could also send the contact prints to you and mark this area on the East end that we want to make sure to sample.

Check the Cartwright photography to see if any photos were taken of the Afterthought area.

AFTERTHOUGHT PROJECT DATA.

Drill Hole information:

DH AF-1 Narrative log.
Graphic log.
Assay tabulation, (includes spectographic work)

DH AF-2 Narrative log.
Graphic log.
Geochemical work on drill samples.
Assay tabulation.

DH AF-3 & DH AF-4

Narrative and graphic logs for each hole.

DH AF-5 & DH AF-6

Logging is in progress. Assay tabulation is enclosed.

Reports:

Preliminary geological report.

Page size, 2" = 1 mile Aeromagnetic map, 500' av. terrain clearance.

Maps:

Geochemical survey, surface rock chip samples located on I.P. survey grid. Rocky Mountain Geochem tabulation. With map 1" = 100'

1" = 1000', Geologic, includes I.P. grid.

Comparison sheet of I.P., S.P., Magnetics, AFMAG, all on I.P. North and South Zero line. 1" = 200 '.

Geologic map with I.P. Grid lines. 1"= 2 00'

[illegible] PROJECT DATA.

Drill Hole information:

DH AF-1 Narrative log.
Graphic log. To 1022
Assay tabulation. (includes spectographic work)

DH AF-2 Narrative log.
Graphic log.
Geochemical work on drill samples.
Assay tabulation.

DH AF-3 & DH AF-4

Narrative and graphic logs for each hole.

DH AF-5 & ~~DH AF-6~~

Logging is in progress. Assay tabulation is enclosed.

DH AF-6 Narrative Log
Graphic Log

Reports:

Preliminary geological report.

Page size, 2" = 1 mile Aeromagnetic map, 500' av. terrain clearance.

Maps:

Geochemical survey, surface rock chip samples located on I.P. survey grid. Rocky Mountain Geochem tabulation. With map 1" = 100'

1" = 1000', Geologic, includes I.P. grid.

Comparison sheet of I.P., S.P., Magnetics, AFMAG, all on I.P. North and South Zero line. 1" = 200 '.

Geologic map with I.P. Grid lines. 1"= 2 00'

TABULATION OF DRILL HOLE DATA ON THE AFTERTHOUGHT PROJECT AS OF ~~APRIL 7, 1967~~ 1968

Hole Designation	Date started	Date Completed	Hole Diameter	Depth from	Depth to	Type drilling
AF-1	9-1-65	11-8-65	5 5/8"	0	102	Rotary
			NX	102	535	Core
AF-2	9-8-65	11-24-65	NX	0	412	Core
			BX	412	638	Core
AF-3	9-13-65	9-14-65	5 5/8"	0	105	Rotary
AF-4	9-15-65	10-28-65	6"	0	20	Rotary
			5 5/8"	20	180	Rotary
AF-5	6-15-66	6-23-66	5 5/8"	0	924	Rotary
AF-6	6-24-66	7-25-66	5 5/8"	0	238	Rotary
			NX	238	898	Core

6629

- No.	Cu	Mo	Au	Ag	Pb.	Zn	Geochem	Spectrographic	SAMPLE No.	SAMPLE No.	Depth.
AF 1										823R	101-101 5
4F 2	0.069									810R	5-30
	0.088		.010	.10	None	0.10				811R	30-33
							✓		836R	845R	310-400
4F 3	No Assays.										
4F 4	No Assays.										
4F 5	No Assays										
4F 6	.012		Tr	None						25WM	300-310 5
	.018		Tr	None						26WM	363-379
	.012		Tr	0.10						8 WM	642-654
	.012		None	None						9 WM	654-666
	.018		Tr	None						10 WM	666-678
	.018		.005	None						11 WM	678-690
	.006		Tr	None						51WM	480-484
	.006		Tr	None						50WM	683-696
	.006		.005	None						49WM	754-762
	.025		.010	None						48WM	836-844
	.006		Tr	None						47WM	888-898

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

Rotary to 102'
DDH 102-

Bottom: 535 feet

Vertical

0.0 - 15.0 Blow sand

15.0 - 102.0 Fine grained intrusive, quartz-monzonite(?), tan to buff in color due to staining by iron oxides; 5-10% quartz, 15-25% plagioclase, 10-20% orthoclase, 5-10% biotite, 3% muscovite, considerable limonite, with ½ to 3% pyrite; ½% green copper carbonate at 78'; several grains chalcopyrite at 80-85'; dark hexagonal grains at 25-30' and 85-90' probably graphite; slightly argillized and silicified.

102.0 - 119.2 Diorite(?), fine-grained, dark grey in color, fairly fresh, slightly to moderately chloritized, and slightly silicified; 5% quartz, 30% plagioclase, 10% orthoclase(?), 3-10% biotite, hornblende, and pyroxene; small amount calc-silicates at 102.0-102.8; somewhat coarser-grained at 109.8-110.9; 3% pyrite at 111' and 106', and 5% at 109', balance up to ½% pyrite; 35 quartz at 106', 1% at 112', and ½% at 107'; green copper stain at 105', grains of tetrahedrite(?) at 106', and several grains chalcopyrite and tetrahedrite at 111'; 15-25% chloritized; 3-15% carbonate.

119.2 - 131.9 Calc-silicates, white, brownish, greenish in color. Banded, occasional veinlets tremolite; considerable tremolite at 126-128, along with ½-1% biotite; chlorite and limonite on fractures; 5-10% biotite at 128.0-130.5'; occasional plagioclase; ½% magnetite at 126.4; fair to moderately amounts calcite; several grains chalcopyrite and tetrahedrite at 120.9.

131.9 - 219.8 Fine-grained intrusive, quartz-diorite to quartz monzonite in composition; dark gray in color; approximately 35% palgioclase, 10-20% orthoclase, 5-10% quartz, 3-5% biotite, 5-15% amphiboles, traces sphene, magnetite; 10-25% chloritization, 2-15% calcite in altered zones, 5-40% silicification at 131.9-177.0; argillized at 134-136; highly silicified at 137.8-138.9 with pyrite, pyrrhotite, and chalcopyrite; several grains chalcopyrite at 156 and 197'; quartz as veinlets and pods in groundmass at several intervals; pyrite from trace to 3%; 1-3% pyrite at 132-139', ½-1% at 139-172', and ½-1% at 172-210'; pyrrhotite in varying amounts mixed with pyrite, not estimated separately; small to moderate amounts chlorite on fractures; small amount scapolite at 168; occasibnal veinlets quartz and calcite from 1/16 -½" wide; increased amounts calcite at 218.0-219.8.

219.8 - 234.7 Calc-silicates, with recrystallized calcite and epidote; veinlets of calcite with pyrite with dark green to apple-green chlorite; small amounts pyrite on fractures and in coatings.

234.7 – 242.2 Same as 131.9-219.8; fine-grained intrusive, quartz diorite to quartz monzonite in composition; phenocrysts plagioclase finer grained; trace to 1% pyrite.

242.2 – 285.6 ~~Calc-silicates~~; banded; banding at 45°; considerable wollastonite, occasional kyanite; small amount biotite; trace to 2% pyrite, including pyrrhotite, pyrrhotite being present in varying amounts; ½-3% graphite, and 10% graphite at 246'; several grains chalcopyrite at 256, 261, and 285'; small amounts grossularite at 260-263 and 270.6; pyrite, pyrrhotite, and chalcopyrite in quartz veinlet at 273.1; black sulfide(?) at 271.8; pyrite and pyrrhotite occur as single grains, small pods, and veinlets; chlorite along fractures; brecciated at 263.4-264.4; some granitic material at 264.8; 10-45% calcite.

285.6 – 295.8 Calc-silicates; finer-grained, hornsfelic; up to 15% epidote; more silicification; 1-3% biotite; considerable chlorite along fractures; ½-1% pyrite and pyrrhotite; 1-5% quartz as pods and veinlets.

295.8 – 302.0 ~~Calc-silicates~~, medium grained; sililar to 242.2-285.6 above; considerable wollastonite, some biotite; banded; pink marble; 5% pyrite and pyrrhotite at 300.0-302.1, with trace chalcopyrite and molybdenite(?); occasional calcite and quartz veinlets; banding at 50°.

302.0 – 315.6 Fine-grained ~~calc-silicates~~; hornsfelic; banded at 40-50°; fine grained biotite; 3% carbonate; 10-15% chloritized; ½-2% pyrite and pyrrhotite; chalcopyrite at 314-315; trace graphite;

315.6 – 317.5 Fine grained intrusive, quartz diorite, ½% pyrite, trace chalcopyrite.

317.5 – 322.5 Calc-silicate, same as 302.0-315.6; small amount pyrite.

322.5 – 324.8 Quartz diorite (Quartzmonzonite?); same as 315.6-317.5.

324.8 – 341.5 Calc-silicates; hornsfelic; considerable chlorite; ½-1% pyrite. 5% pyrite and phyrrhotite at 329'.

341.5 – 369.0 Quartz diorite, fine grained, dark gray in color; plagioclase phenocrysts up to 1/8"; approximately 45% plagioclase, 5-15% quartz, _% orthoclase, 5% biotite; 10% chloritization; trace pyrite;

369.0 – 412.5 Very fine grained intrusive mixed with skarn; hornsfelic; varying amounts calcite and epidote; banded at 30 45°; ½-3% pyrite and pyrrhotite; banded with chlorite and calc-silicates; numerous calcite veinlets, occasional quartz veinlets; traces bornite at 405.8; black sulfide at 405.8; brecciated at 374.0-377.5, recemented with calcite and chlorite; occasional grains chalcopyrite; 1% graphite at 412'.

412.5 - 422.0 Quartz diorite, granitic texture, banded at 20-25°; medium grained with plagioclase, orthoclase, quartz, biotite; up to 35% chloritization; considerable calcite and dark green chlorite on fractures, with some pyrite; 35% calcite at 417-422.

422.0 - 454.8 Calc-silicates; banded 45°; some granitic material, with pink orthoclase; considerable wollastonite at 441.0-454.8; trace to ½% pyrite and pyrrhotite; 5-20% calcite; 10-25% chloritization;

454.8 - 461.5 Fine grained intrusice, quartz diorite in composition; 40% plagioclase, 15-20% quartz, 20%(?) ortoclase, 5% amphibole; trace to ½% pyrite.

461.5 - 464.6 Calc-silicates, white and gray; ½-1% pyrite.

464.6 - 500.0 Quartz diorite (quartz monzonite?), dark gray in color, medium to coarse grained; 40% plagioclase, 25(?)% orthoclase, 10-15% quartz, 10% chlorite replacing biotite and amphiboles; numerous calcite veinlets; highly chloritized 494-500'; Brecciated at 503.4 - 505.5; trace to ½% pyrite; fine grained at 494-495'; several grains chalcopyrite at 479; 10-20% argillized at 490-505'.

500.0 - 511.0 Clay and gouge, faulting dipping 65°(?).

511.0 - 535.0 Quartz monzonite(?), dark gray in color; brecciated at 516-527'; highly chloritized 511-527'; fairly fresh at 527.6-535'; trace to ½% pyrite; at 528' 35-45% plagioclase, 10-10% orthoclase, 10-20% quartz, 3-10% biotite, 10% amphibole; 20-40% chloritization.

Bottom: 535'

6000 0041 (0540)

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought — COORDINATES OF COLLAR: — SHEET 1 OF 5 — SCALE 1"=10'

LOCATION 8 miles north of Schurz, Nevada — N — BY EFL — AU. @

HOLE NO. AF-1 — E — DATE 11/65

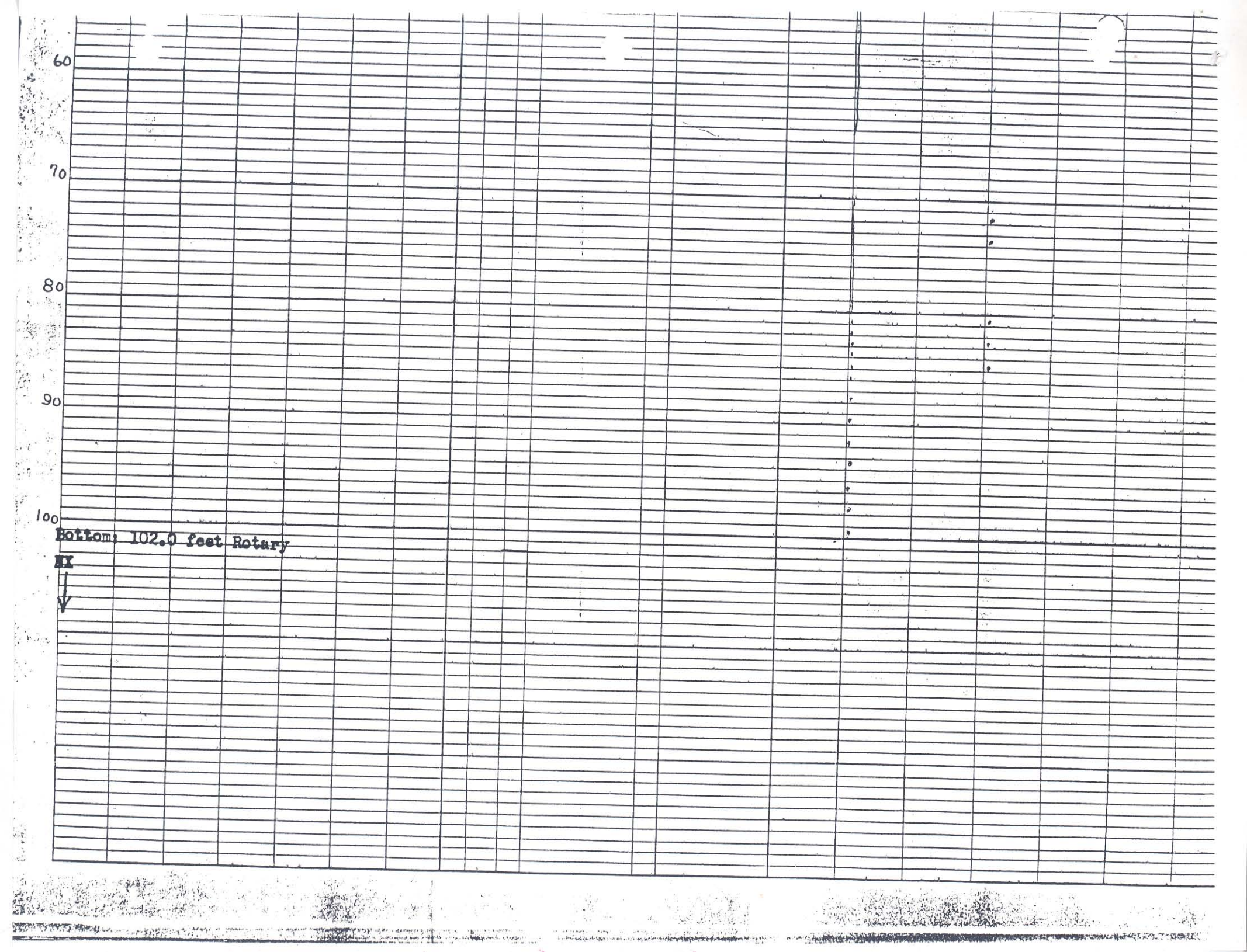
BEARING — LENGTH OF HOLE 535 feet — CASING

DIP Vertical — HOLE SIZE 4¾" to 102.0'; NX 102.0-535.0

Boyles Bros. Drilling Company — Rotary to 102'

ACCOMPANIED BY NARRATIVE LOG YES [X] N

ALTERATION	LOG AND ROCK TYPE					MINERALIZATION					
	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS		Py		Cu	
0				Sand							
10											
				Quartz-monzonite							
20											
30											
40											
50											


60
70
80
90
100
Bottom: 102.0 feet Rotary

HOLE No. (IE 1)	Cu	Mo	Au	Ag	Pb.	Zn	Geochem	Spectosymp ✓	SAMPLE	SAMPLE	Depth.
										823R	101 - 101 5/5
AF 2	0.069										
	0.088		.010	.10	None	0.10				810R	5 - 30
										811R	30 - 33
							✓		836R	845R	310 - 400
AF 3	No	Assays.									
AF 4	No	Assays.									
AF 5	No	Assays.									
AF 6	.012		FR	None						25WM	300 - 310 5/5
	.018		FR	None						26WM	363 - 379
	.012		FR	0.10						8 WM	642 - 654
	.012		None	None						9 WM	654 - 666
	.018		FR	None						10 WM	666 - 678
	.018		.005	None						11 WM	678 - 690
	.006		FR	None						51WM	480 - 484
	.006		FR	None						50WM	683 - 696
	.006		.005	None						49WM	754 - 762
	.025		.010	None						48WM	836 - 844
	.006		FR	None						47WM	888 - 898

60000041 (0540)

CABLE: HANX

Assay–Chemical Division

ABBOT A. HANKS

ESTABLISHED 1866

1300 SANSOME STREET • SAN FRANCISCO, CALIFORNIA 94111 • TELEPHONE (415) 397-2464

Assayers
Chemists
Spectrographers
Mining Consultation
Representatives
Inspectors
Samplers

LABORATORY REPORT

Lab. No. 1717

Date September 22, 1965

Submitted by Mr. Robert L. Redmond
1080 Pine Ridge Drive
Reno, Nevada

Sample Mark 823 R - Sample of Drill Core

QUALITATIVE SPECTROGRAPHIC ANALYSIS
Metals Found and Estimated Percentage Range

Less than .03%	.03% to .30%	.30% to 3%	3% to 30%	30% to 100%
Molybdenum	Manganese	Aluminum	Silicon	
Vanadium	Titanium	Magnesium	Calcium	
Copper	Strontium	Iron		
Zirconium		Sodium		
Nickel		Barium		
Chromium				

AF 1

101-1015

..al

dh

Charles J. Taylor

C. J. Taylor

6000 0041 (0540)

Afterthought AF-2

Walker Martel Mining Company

Walker Martel Mining Company

DDH - Vertical

Bottom: 412 feet

0.0 - 59.5 Granite, fine-grained, highly silicified; with up to 10-15% limonite pseudomorphic after pyrite; pyrite had been in crystals, and veinlets; small pheocrysts of feldspar remnant in groundmass; numerous veinlets of quartz; approximately 20% limonite at 6.0'; 5% altered biotite; small amount unoxidized pyrite at 10.5'; considerable jarosite; up to 5% pyrite at 16.8-16.9', 20% at 57.8-58.6'; trace to 1% pyrite balance of section; sporadic grains of molybdenite at 22.0-59.5'; highly brecciated at 22.0-40.0; In thin-section rock is a granite, fine-grained; with 40-65% K-feldspars, 10% plagioclase, 50-15% quartz, 3-5% biotite, 5% amphiboles, and 1-3% apatite.

59.5 - 61.8 Quartz-monzonite, grey in color, fine-grained; in thin-section 35% plagioclase, 30% orthoclase, 7% quartz, 8% amphiboles, 4% pyroxenes, 3% chlorite; 1%+ pyrite.

61.8 - 66.0 Sheared zone, argillized with considerable limonite.

66.0 - 69.7 Same as 59.5-61.8 above; ½-1% pyrite.

69.7 - 119.4 Calc-silicates; with garnet, epidote, plagioclase; scattered veinlets of calcite; some exotic limonite along fractures; 2-10% graphite; trace to 2% pyrite; 10-15% chloritization.

119.4 - 125.5 Quartz-monzonite, same as above; with up to 10% pyrite as pods and veinlets, averaging ½-2%.

125.5 - 131.8 Calc-silicates, same as 69.7-119.4 above; 2% graphite.

131.8 - 152.8 Quartz-monzonite, same as above, with ½-3% pyrite.

152.8 - 164.6 Calc-silicates, same as above, with 1-2% pyrite and 2-5% graphite.

164.6 - 176.5 Quartz-monzonite, same as above, with ½-3% pyrite.

176.5 - 184.5 Calc-silicates, same as above, with ½-5% pyrite and 3-8% graphite. Small amount chalcopyrite.

184.5 - 189.6 Gouge and breccia.

189.6 - 194.8 Calc-silicates, same as above, with ½-5% pyrite and 5% graphite.

194.8 - 199.0 Quartz-monzonite, same as above; with 2% pyrite.

199.0 - 209.8 Calc-silicates, same as above; with 3-5% pyrite and 3-4% graphite; considerable green chlorite.

209.8 - 267.5 Quartz-monzonite, fine-grained, grey in color; in thin-section 30% plagioclase, 30% orthoclase, 10% quartz, 2% biotite, 12% hornblende, 8% pyroxene, 2% apatite, and 5% pyrite, part of pyrite is pyrrhotite. 7% pyrite at 214'; ½-1% pyrite balance of section; partially silicified.

267.5 - 296.0 Calc-silicate, same as above; with 1% pyrite, and 3-10% graphite at 267.5-274.0', and 6-10% at 293-296', and 2% balance of section.

296.0 - 412.0 Quartz-monzonite, fine- to medium-grained, grey to dark grey in color; in thin section variable in composition, with sections at 303', 396', and 409'; at 303' approximately 25% plagioclase and 40% orthoclase, at 396' 50% plagioclase and 20% orthoclase, and at 409' 15% plagioclase and 45% orthoclase; 5-15% quartz, 2-5% biotite, 6-12% amphiboles, 7-13% pyroxenes, ½-3% apatite; slightly silicified.
Some calc-silicates at 407.0-409.0 and 411-412.
7% pyrite at 305'; 3% at 320-340', and ½-1% balance of section; grains of molybenite at 313 and 339'. Sporadic grains chalcopyrite at 299, 316, 337, and 359'.
Slightly chloritized, with fair amount dark green chlorite along fractures; slightly to moderately silicified.

Bottom

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

DDH 0.0 - 412.0
412.0 - 638.0

Bottom: 638.0

Vertical

412.0 - 433.8 Calc-silicates; considerable pyroxene at 420.8-421.5; some garnet, epidote, zoisite, chlorite, and wollastonite; considerable wollastonite at 423-424'; banding at 45°; small amount pyrite and pyrrhotite; considerable chlorite at 426.8-427.5', and along fractures; somewhat hronsfelic; occasional calcite veinlet.

433.8 - 439.0 Quartz-diorite, medium grained; small rosette of molybdenite.

439.0 - 492.0 Calc-silicates, hornsfelic; considerable wollastonite; trace to 2% pyrite and pyrrhotite as grains, crystals, and minute veinlets; banding at 40-50°; dark green chlorite along fractures.

492.0 - 494.9 Quartz-diorite, medium grained, fresh; pyrite and chlorite along fractures.

494.9 - 543.0 Calc-silicates, hornsfelic; considerable epidote and calcite and fair to moderate amounts wollastonite; occasional veinlet biotite at 526-535'; banding at 45-50°; apple-green chlorite at 509.6; small amount granitic rock at 519.7; ½-2% pyrite and pyrrhotite, considerable pyrrhotite at 535'.

543.0 - 547.7 Quartz-diorite

547.7 - 558.0 Calc-silicates, hornsfelic, banding at 40-45°; considerable biotite.

558.0 - 560.0 Quartz-diorite, medium grained.

560.0 - 596.0 Calc-silicates with 4" granitic rock at 592.2-592.7'; fine- to medium grained; considerable chlorite along fractures with associated calcite; fair to moderate amounts biotite; banding at 40-50°; trace to 2% pyrite and pyrrhotite as grains and veinlets; highly chloritized at 586-596'.

596.0 - 625.4 Calc-silicates; up to 3% sulfides at 605-611', ½-2% balance of section; traces of chalcopyrite; 5-15% pyroxenes at 596-605; traces molybdenite at 603.5'; trace sphalerite at 609.5; considerable wollastonite at 596-605'; pyrite and pyrrhotite in grains, minute pods, and veinlets; veinlets of quartz and calcite; heavy green chlorite on fractures.

625.4 - 638.0 Quartz-diorite, fine to medium grained; highly chloritized; brecciated and recemented by calcite; numerous veinlets calcite; heavy clay at 629.4-631.0; brecciated at 633-638.

Bottom: 638.0 11/24/65

6000 0041 (0540)

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE AFTERTHOUGHT COORDINATES OF COLLAR: SHEET 1 OF 5 SCALE 1"=10'

LOCATION 8 miles north of Schurz, Nevada N BY EFL AU. @

HOLE NO. AF-2 E DATE 11/65

BEARING LENGTH OF HOLE 638.0 feet CASING

DIP Vertical HOLE SIZE NX 0.0-412.0; BX 412.0-638.0

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
Chlor	Garb	Arg	Ser	Sili	Alb	Ortho	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py	Fe	Cu	Mo	As	Pyr
										Granite									
								35											
								80											
								20											
								20											
								55											
								20											
								35											
								35											
								20											
								75											
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								75											
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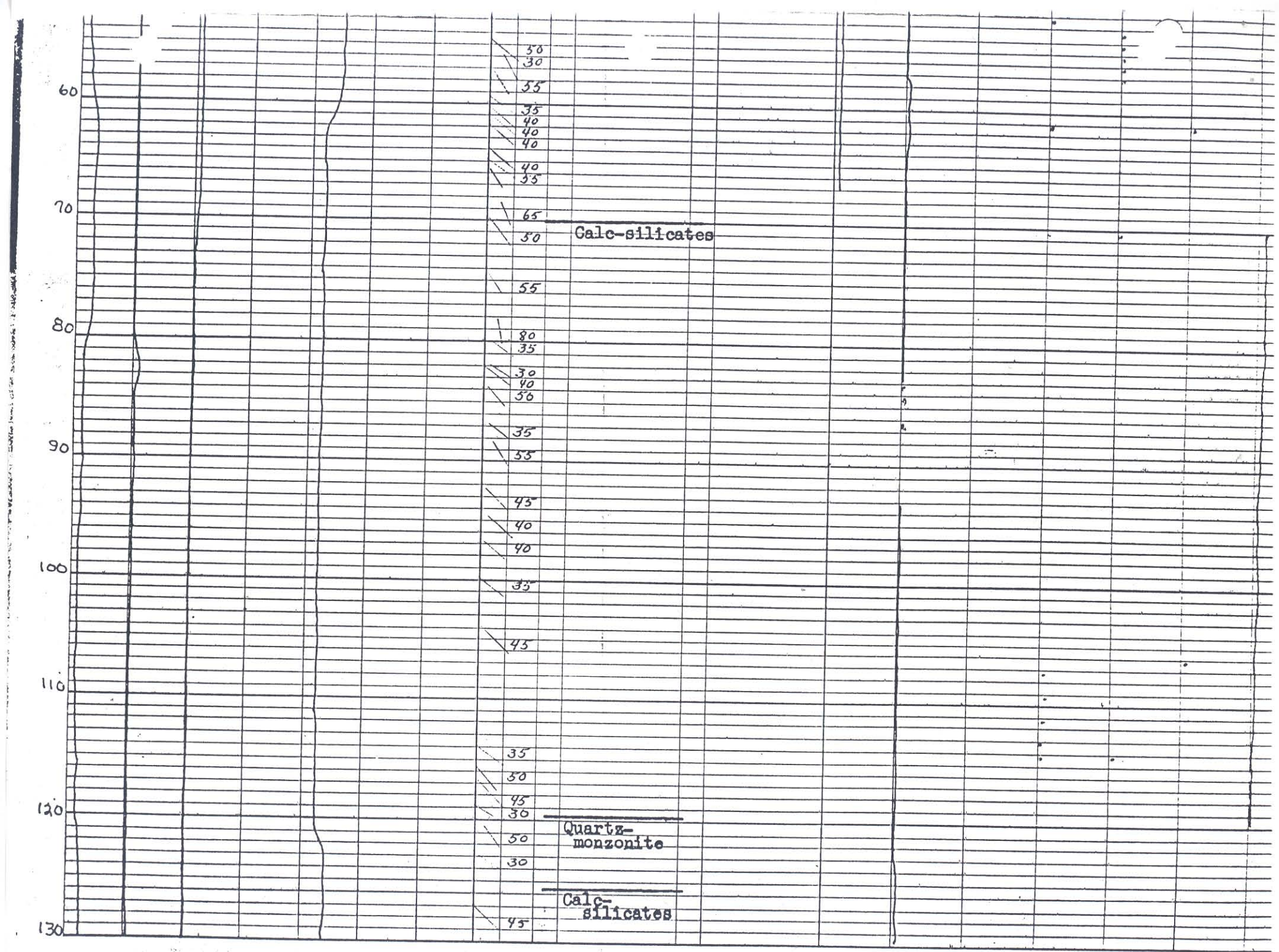
								45											
								20											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Calc-silicates
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40
40
35
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35
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45
30
50
30
Quartz-monzonite
Calc-silicates
45

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought | COORDINATES OF COLLAR: | SHEET 2 OF 5 | SCALE 1"=10'

LOCATION | N | BY | AU. @

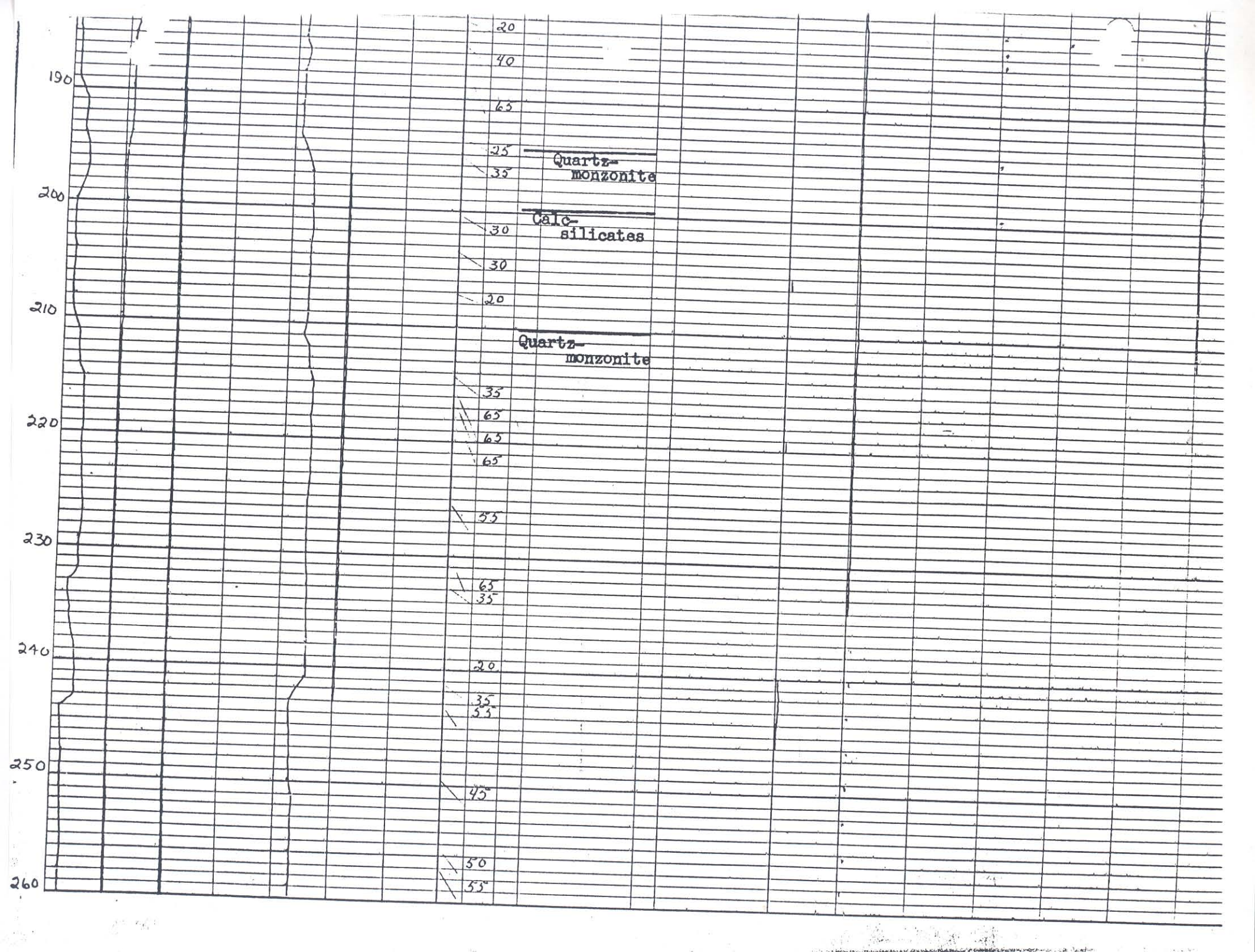
HOLE NO. AF-2 | E | DATE 11/24/65

BEARING | LENGTH OF HOLE 638.0' | CASING

DIP Vertical | HOLE SIZE NX to 412'; BX to 638'

ACCOMPANIED BY NARRATIVE LOG YES [X]

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py	Fe	Cu	Mo	As Pyr
										Calc-silicates								
										Quartz-monzonite								
								75										
										Calc-silicates								
								20										
								55		Quartz-monzonite								
								40										
								75										
								35										
								85		Calc-silicates								
								30										
								35										
								35										
								20										


190
200
210
220
230
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250
260
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65
25
35
Quartz-
monzonite
30
Calc-
silicates
30
20
Quartz-
monzonite
35
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63
65
53
65
35
20
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53
45
50
55

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought | COORDINATES OF COLLAR: | SHEET 3 OF 5 | SCALE 1"=10'

LOCATION | N | BY | AU. @

HOLE NO. AF-2 | E | DATE 11/65

BEARING | LENGTH OF HOLE 638.0 | CASING

DIP Vertical | HOLE SIZE NX to 412; BX 412-638'.

ACCOMPANIED BY NARRATIVE LOG YES [X] N

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py	Fe	Cu	Mo	AS Pyr	Gr
								35		Quartz-monzonite									
								35		Calc-silicates									
								75											
								55											
								45											
								20											
								20											
								85											
										Quartz-monzonite									
								70											
								70											
								55											

260 270 280 290 300 310


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50
65

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought | COORDINATES OF COLLAR: | SHEET 4 OF 5 | SCALE 1"=10'

LOCATION | N | BY | AU. @

HOLE NO. AR-2 | E | DATE 11/65

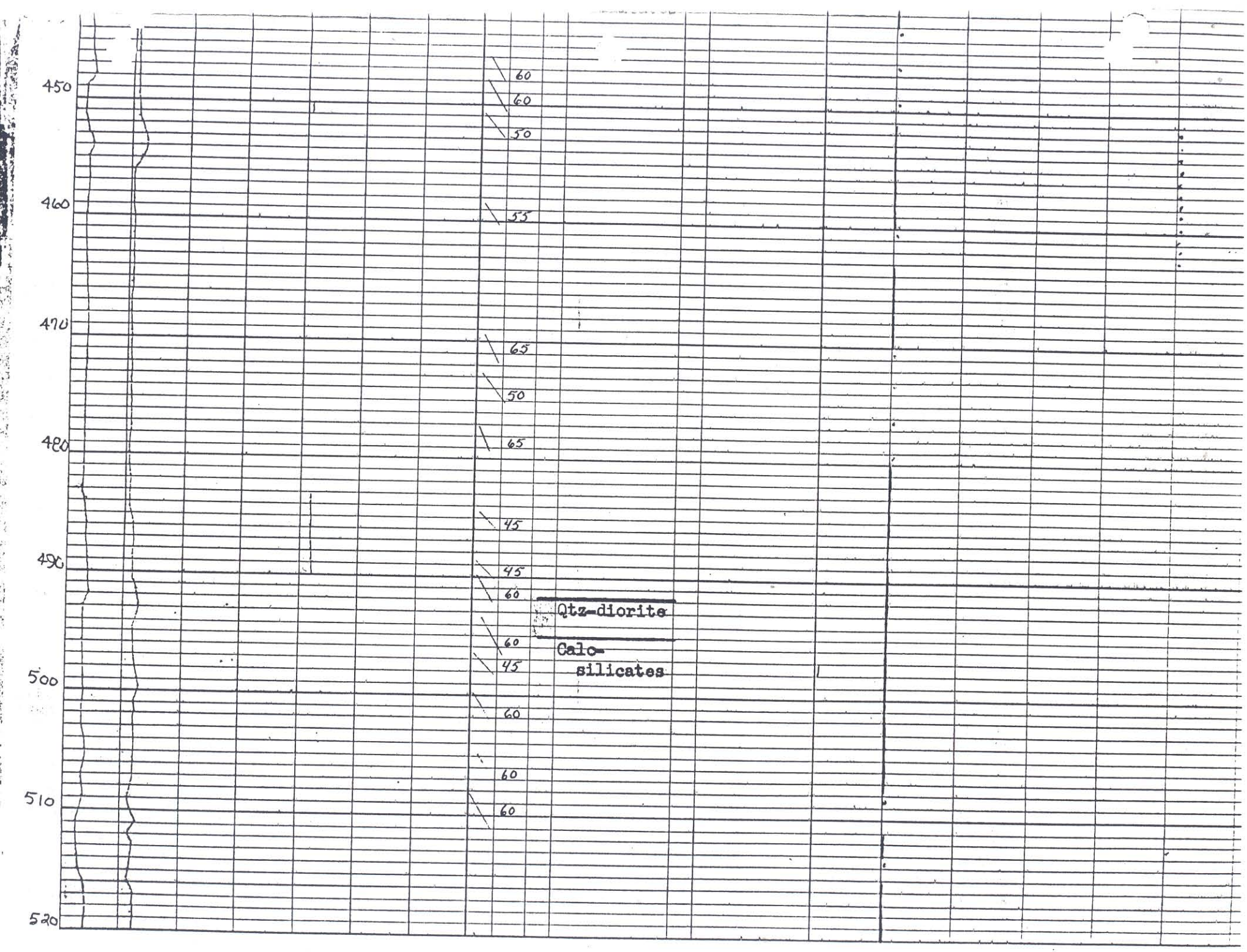
BEARING | LENGTH OF HOLE 638.0' | CASING

DIP Vertical | HOLE SIZE NX to 412'; BX 412-638'

ACCOMPANIED BY NARRATIVE LOG YES [X]

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	LOG	DIP	LOG	ROCK DESCRIPTION	CORE	REMARKS	Qtz	Py	Fe	Cu	Mo	Pyr	Gr
										Quartz-monzonite									
								52											
								45											
								45											
								40											
								55											
								50											
								55											
								45		Calc-silicates									
								45											
								50											
								55											
								50		Quartz-monzonite									
								40											
										Calc-silicates									

390 400 410 420 430 440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60
Qtz-diorite
Calc-
silicates

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought | COORDINATES OF COLLAR: | SHEET 5 OF 5 | SCALE 1"=10'

LOCATION | N | BY | AU. @

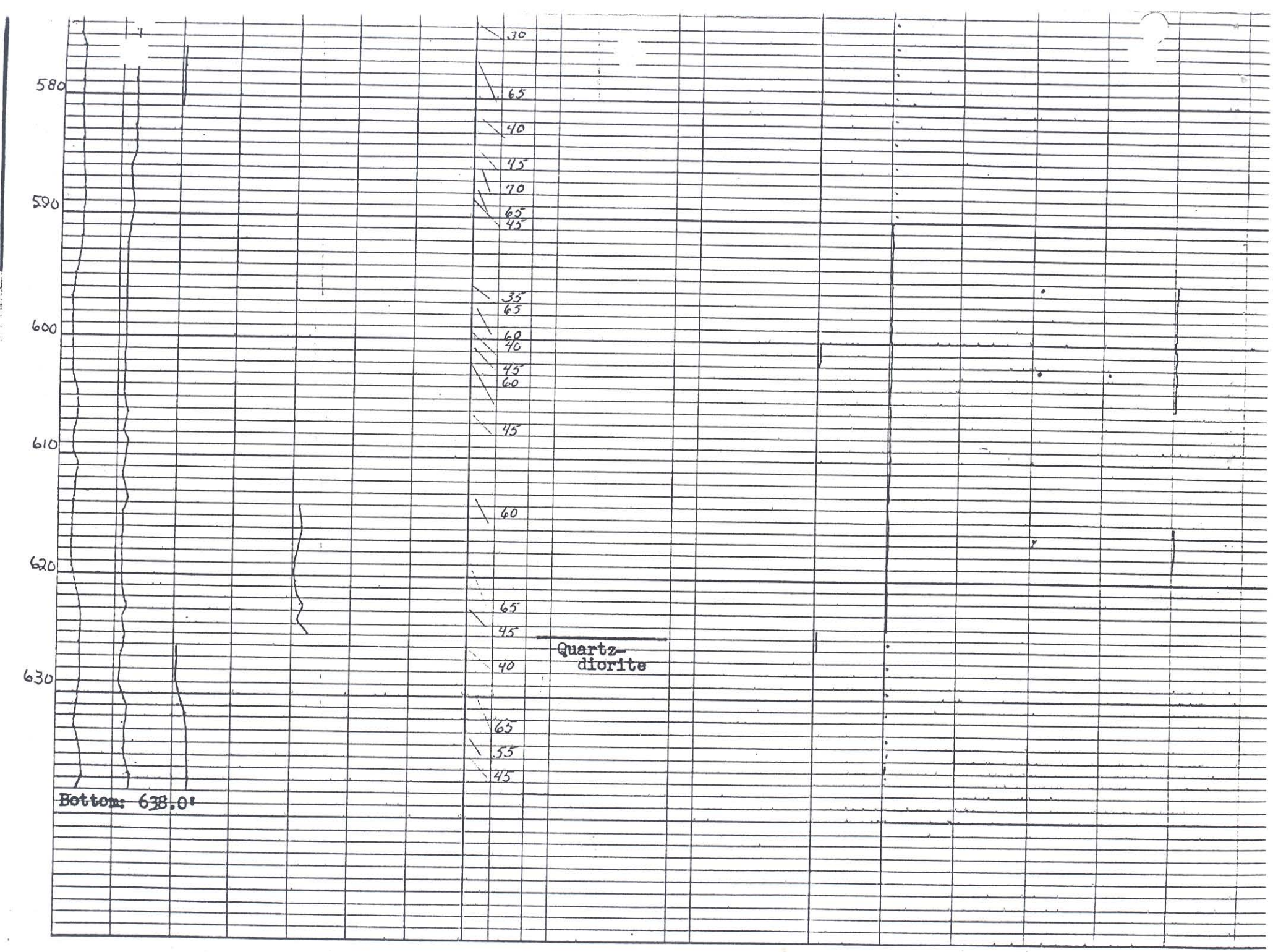
HOLE NO. AF-2 | E | DATE 11/65

BEARING | LENGTH OF HOLE 638.0 | CASING

DIP Vertical | HOLE SIZE NX to 412', and BX at 412-638'

ACCOMPANIED BY NARRATIVE LOG YES [X]

	ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
	Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py	Fe	Cu	Mo	As Pyr	G
520											Calc-silicates									
									45											
									60											
530									55											
									45											
									75											
540									45											
									45											
											Quartz-Diorite									
550									40		Calc-silicates									
									30											
									70											
560											Quartz diorite									
									45		Calc-silicates									
570									45											


580
590
600
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620
630
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70
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35
65
60
40
45
60
45
60
65
45
40
65
55
45
Quartz-
diorite
Bottom: 638.0'

Trace Analysis

6000 0041 (0540)
Geochemical Surveys

ROCKY MOUNTAIN GEOCHEMICAL LABORATORIES

P. O. Box 2217, 1870 South 2nd West St.
SALT LAKE CITY, UTAH 84110

Phone 466-9172
Area Code: 801

ANALYTICAL REPORT

Date 10-27-55

AFTERTHOUGHT.
DH 2.

Client Mr. William Wilson
Walker-Martel Mining Company
1080 Pine Ridge Drive
Reno, Nevada

Report on: 10 large drill core samples

Submitted by: Mr. Wilson

Date: October, 1955

Analysis: Copper & Molybdenum

Remarks: All analyses done colorimetrically.

cc: Enc.
file

JJJ:ab

AF-2

Sample No.	Copper	Molybdenum
Footage.		
836R 390-400	20	2
837R 380-390	15	3
838R 370-380	120	2
839R 360-370	150	8
840R 350-360	20	5
841R 340-350	55	12
842R 330-340	265	10
843R 320-330	280	8
844R 310-320	330	5
845R 300-310	340 = 0.0340%	25

Rocky Mountain Geochemical Laboratories
Salt Lake City, Utah October 27, 1965

By James J. Johnson

James J. Johnson

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

Rotary 0.0 - 105.0

Bottom: 105'

Vertical

0 - 5 Quartz-monzonite(?), fine grained; with 10-15% quartz, 20-25% plagioclase, 15-20% orthoclase, 5-10% biotite, 3-5% hornblende, and ½-1% pyrite replaced by limonite; 20% silicified and 15% argillized.

5 - 30 Same as above, bleached, with some scattered pyrite replaced by limonite.

30 - 35 Same as above, stained reddish by hematite.

35 - 40 Same as above, bleached, with 2% pyrite.

40 - 95 Same as above, bleached, stained brownish by limonite; limonite pseudomorphs after pyrite; 3-5% gypsum at 85-90'.

95 - 105 Same as above, gray in color, fairly fresh; 3% pyrite at 95-100', and 5% at 100-105'.

Bottom: 105 feet.

6000044 (0540)

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought

COORDINATES OF COLLAR:

SHEET 1 OF 1 SCALE 1" =10'

LOCATION 6 miles northwest of Schurz, Nevada N

BY EFL AU. @

HOLE NO. AF 3 E

DATE 1965

BEARING

LENGTH OF HOLE 105 feet

CASING No

DIP Vertical

HOLE SIZE Rotary 0-105'

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

ALTERATION						LOG AND ROCK TYPE						MINERALIZATION						
Ch lor	Carb	Arg	Ser	Sili	Alb	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py		Cu			
									Quartz-monzonite(?)									

0

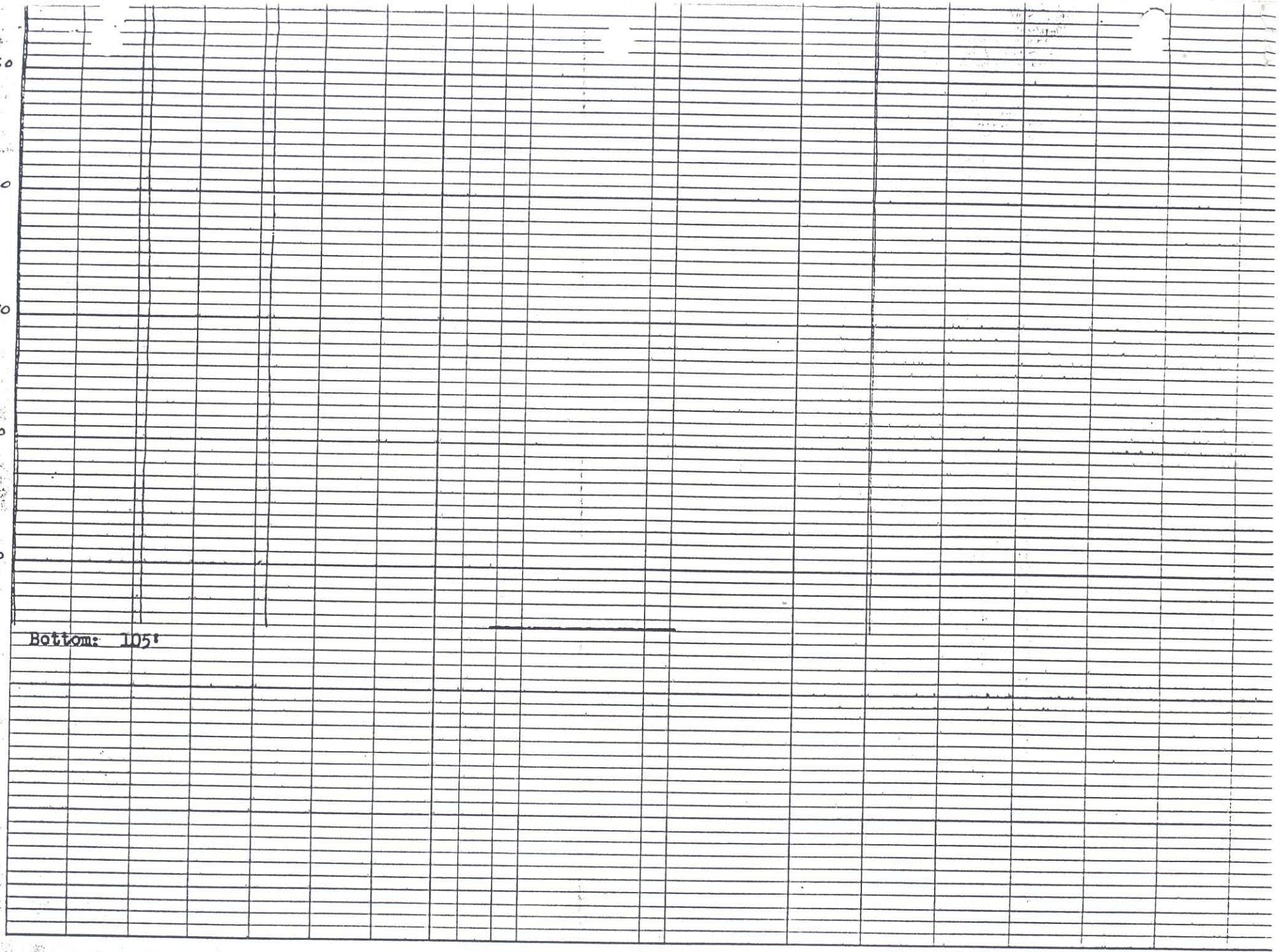
10

20

30

40

50


60
70
80
90
100
Bottom: 105'

60000041 (0540)

AFTER HOUR'S ANALYSIS OF SAMPLES (Coral)

TO: J. K. Hayes, Supervisor - Field Exploration

FROM: R. W. Morgan, Supervisor - Chemical Laboratory

DATE: March [illegible], 1954

SUBJECT: Iron Ore

AF 3

R. L. Redmond

	Sample No. 7548	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.
Fe	55.5					
SiO_2	2.21					
Al_2O_3	1.67					
CaO	.70					
MgO	.12					
S	.120					
P	.062					
Mn						
As	.01					
Cu	.01					
Ni	.02					
Pb						
Zn						
Ti	.25					
F ppm						
CaF_2						
$CaCO_3$						
R_2O_3						
Loss						

R. W. Morgan
Supervisor - Chemical Laboratory

Afterthought AF-4

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

Rotary: 0.0 - 180.0

Bottom: 180 feet

Vertical

0 - 25	Alluvium - sand
25 - 60	Quartz-monzonite(?), bleached, stained brown by limonite; highly argillized; occasional quartz veinlet; some limonite pseudomorphs after pyrite; part of limonite exotic; small amount gypsum.
60 - 80	Same as above; slightly more silicified; arsenopyrite(?) at 70-75'; trace molybdenite at 75-80'; small amounts pyrite at 65-70'.
80 - 140	Same as above, but with small amount skarn and epidote.
140 - 155	Same as above, but stained reddish by hematite.
155 - 180	Same as above but less argillized; 10-15% quartz, 35% plagioclase, 20% orthoclase, biotite; limonite pseudomorphs after pyrite.

Bottom: 180 feet.

60000041 Lot 54 AF-4

DRILL LOG

COMPANY NAME Walker Martel Mining Company

MINE Afterthought

COORDINATES OF COLLAR:

SHEET 1 OF 2

1" = 10'

LOCATION 6 miles northwest of Schurz, Nevada

N

BY EFL

SCALE

AU. @

HOLE NO. AF - 4

E

DATE 1965

BEARING

LENGTH OF HOLE 180 feet

CASING No

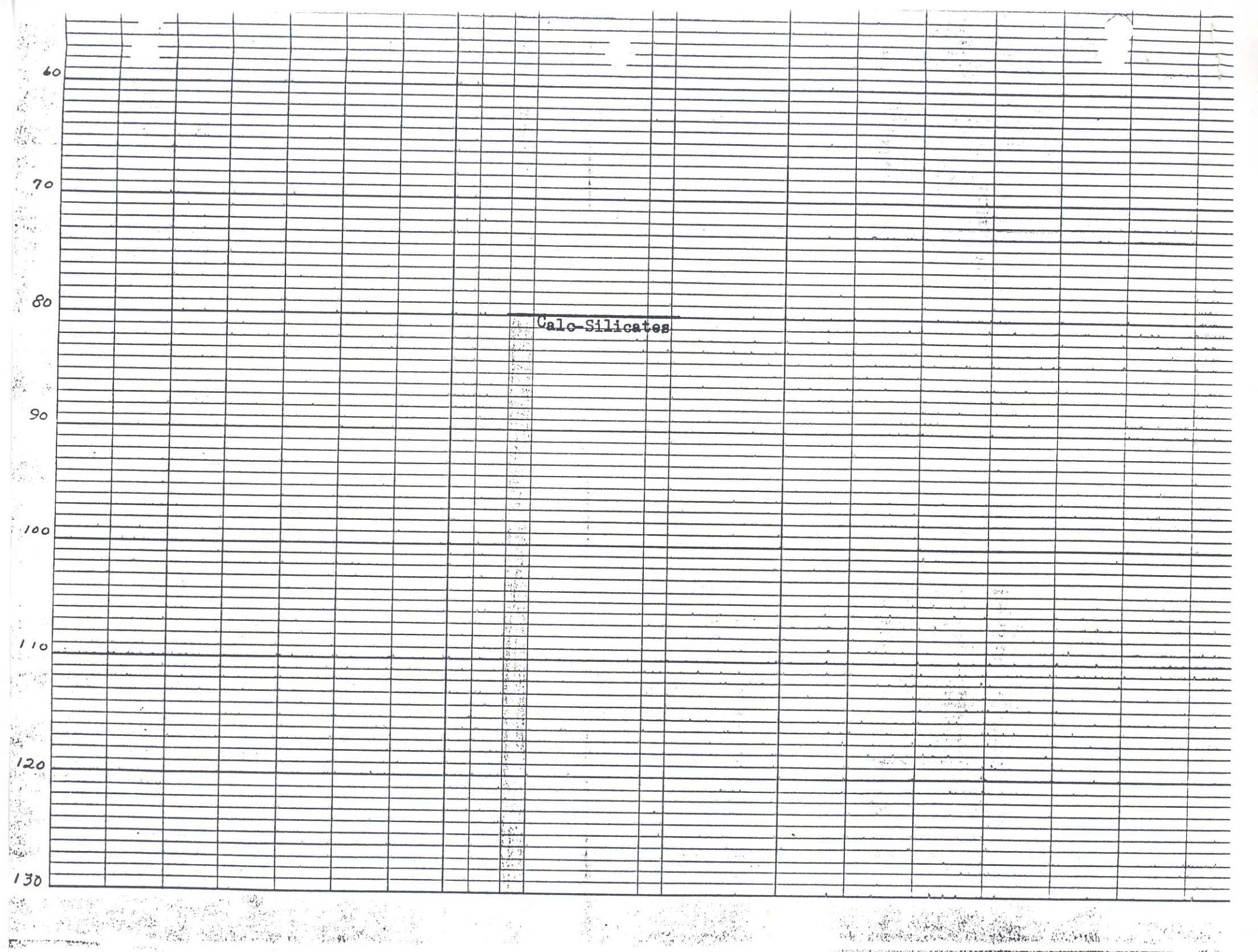
DIP Vertical

HOLE SIZE Rotary 0-180'

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb		LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py		Cu			
										Sand									
										Quartz-monzonite (?)									


60
70
80
Calc-Silicates
90
100
110
120
130

DRILL LOG

COMPANY NAME Walker M[illegible]el Mining Company

MINE Arterthought | COORDINATES OF COLLAR: | SHEET 2 OF 2 | SCALE

LOCATION | N | BY EFL | AU. @

HOLE NO. AF - 4 | E | DATE 1965

BEARING | LENGTH OF HOLE 180' | CASING

DIP Vertical | HOLE SIZE Rotary 0 - 180'

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

ALTERATION						LOG AND ROCK TYPE					MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS	Qtz	Py		Cu		
									Calc-Silicates								
									Quartz-Monzonite (?)								
									Bottom: 180 feet								

1014.0 - 1028.0	Quartz monzonite, medium grained, gray, with 30-40% plagioclase, 15-30% orthoclase, 5-15% quartz, 3% biotite; with ½-1% pyrite disseminated in groundmass; slightly chloritized.
1028.0 - 1040.8	Calc-silicates, light gray; with several veinlets of calcite containing vugs of calcite crystals; 1-2% graphite; ½-3% pyrite; traces hematite at 1038; traces chalcopyrite.
1040.8 - 1068.0	Calc-silicates derived from black carbonaceous limestone; dark gray; numerous calcite with pyrite; ½-3% pyrite; occasional grains chalcopyrite; brecciated at 1042-47'.
1068.0 - 1073.0	Calc-silicates, lighter in color; dipping 20°; ½% pyrite.
1073.0 - 1074.0	Granodiorite, gray, fine-grained.
1074.0 - 1171.3	Calc-silicates, light gray in color; ½-2% pyrite; traces pyrrhotite; occasional traces chalcopyrite; small amounts graphite; occasional grains of galena; traces to ½% sphalerite at 1143-55'; bedding dips 20°; small amounts intrusive at 1107; several small veinlets gypsum at 1160'; occasional copper carbonates; numerous small veinlets calcite and pyrite; 24" gouge at 1079-81.
1171.3 - 1179.8	Black calc-silicates; small amounts garnet and hematite. 1-3% graphite; traces pyrite.
1179.8 - 1331.0	Calc-silicates, gray in color; numerous random veinlets calcite; occasional veinlets apple-green chlorite; ½-3% pyrite; traces chalcopyrite; trace to 3% sphalerite at 1186-1201', with occasional traces sphalerite; averages 2-3% graphite; 20% garnet at 1184; small amounts brown chlorite, with dark green chlorite on fractures; pyrite occurs as veinlets, pods, and disseminated; several veinlets calcite, and pyrite; at 1330-31' several minute veinlets calcite, galena, sphalerite; some apple-gree chlorite on fractures.
Bottom: 1331.0	

EFL 1/10/68

60000041 (0540)

DRILL LOG

COMPANY NAME Walker Nortel Mining Company PROJECT Afterthought

HOLE AF-5 LOCATION COORDINATES COLLAR ELEV. SHEET 1 OF 5 SCALE 1" = 100'

ROTARY SIZE 5 1/8" START 0.0' BOTTOM @ 924.0 DATE 6/23/66 CASING SIZE TO

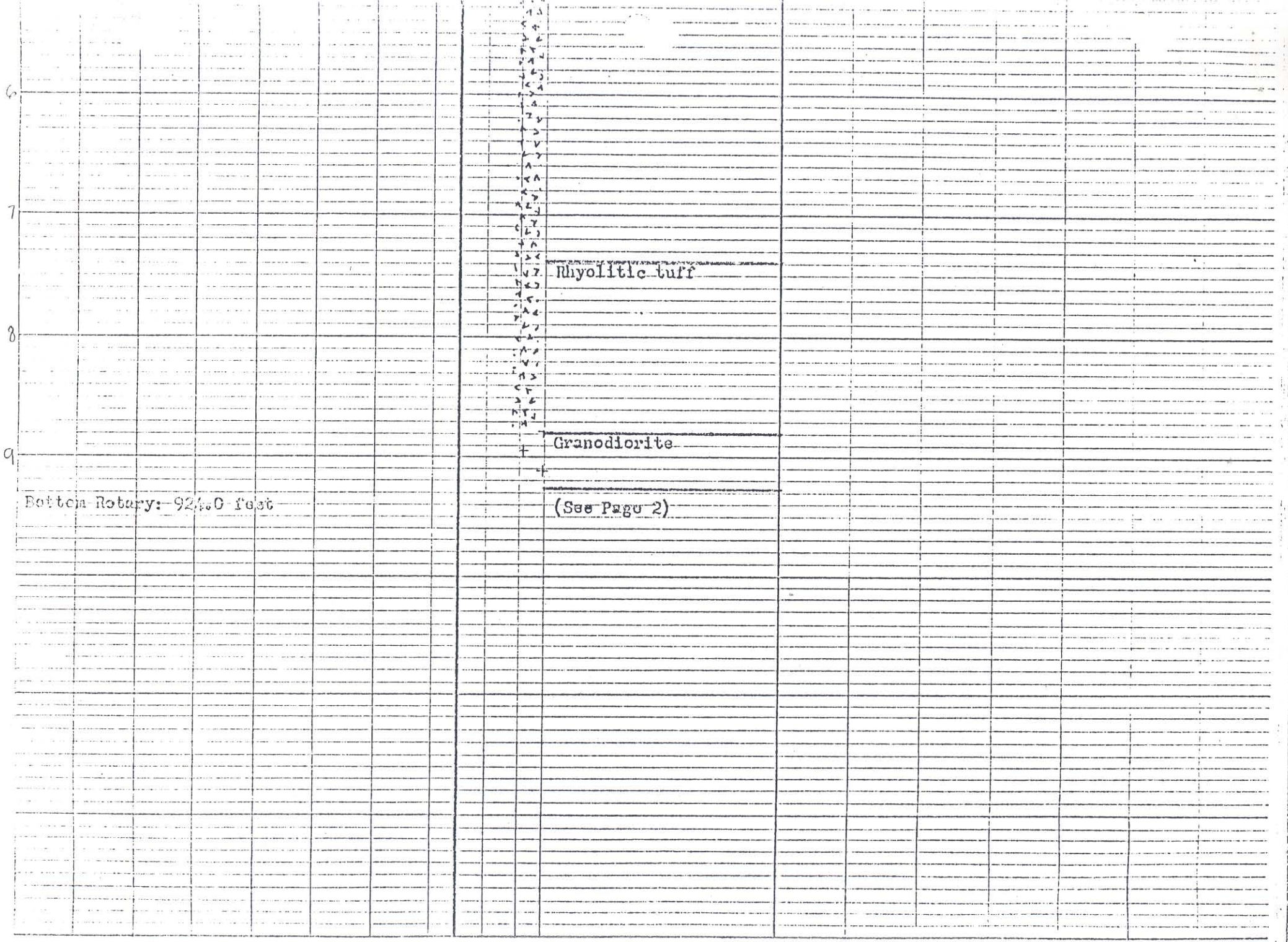
CORE SIZE NX START 924.0 BOTTOM 1331.0' DATE 12/20/67 CASING SIZE TO NX at 764 - 924'

ROTARY CUTTING SAMPLE BOARDS FROM 0.0' TO 920.0' BY EFL

CORE REP. SET FROM 920.0' TO 1331.0' DRILL LOG BY EFL DATE 1/68

NARRATIVE LOG BY EFL DATE 1/68 SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
Chlor	Carb	Arg	Sili	Ser	Alb	Orth	CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Pyrrh	Cp	Sp	Pb	Graph.
											Sand							
											Rhyolitic crystal tuff							


6
7
8
9
Rhyolitic tuff
Granodiorite
Bottom Rotary:- 92%.0 feet
(See Page 2)

DRILL LOG

COMPANY NAME Walker Merkel Mining Company PROJECT Afterthought

HOLE AF-5 LOCATION COORDINATES COLLAR ELEV. SHEET 2 OF 5 SCALE 1" = 10'

ROTARY SIZE START BOTTOM @ DATE CASING SIZE TO

CORE SIZE START BOTTOM DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM TO BY

CORE REP. SET FROM TO DRILL LOG BY DATE

NARRATIVE LOG BY DATE SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
Chlor	Carb	Arg	Sili	Ser	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Pyrrh	Cp	Sp	Pb	Graph
Rotary to 93.0'																		
											Granodiorite, silicified		2%		Tr			
							100						5%		½			
									85		1/8" calcite		1%		Tr			
													⅓					
													3		Tr			
															½			
							100						10					
													3		Tr			
													10					
									25		24" breccia & clay		tr					
													½					
							75											
													⅓					
									65		Fault zone, 1' gouge and 12' breccia				tr			
							100						1%					
									65		Calc-silicates Granodiorite & calc							

Calc-silicates

Grano- ite & calc-
silicates

980

65° 28" gouge & breccia 3? 1%

25

65 Calc-silicates 5 10 3 3 5

990

45

25 ½" quartz ½ tr

84" heavy gouge & breccia 3

1000

25 1%

1010

tr

½

Quartz monzonite

1% ½

1020

60 4" calcite

75 Calc-silicates tr

1030

tr

½

65 1/8" caly & calcite 3 ½

15 Calcite

1040

65 Pyrite & calcite veins

55 8" gouge tr

15

65

65 calcite veinlets 5 ½

3 ½

1050'

DRILL LOG

COMPANY NAME Walker Hartel Mining Company PROJECT Afterthought

HOLE AF-5 LOCATION COORDINATES COLLAR ELEV. SHEET 3 OF 5 SCALE 1" = 10'

ROTARY SIZE START BOTTOM @ DATE CASING SIZE TO

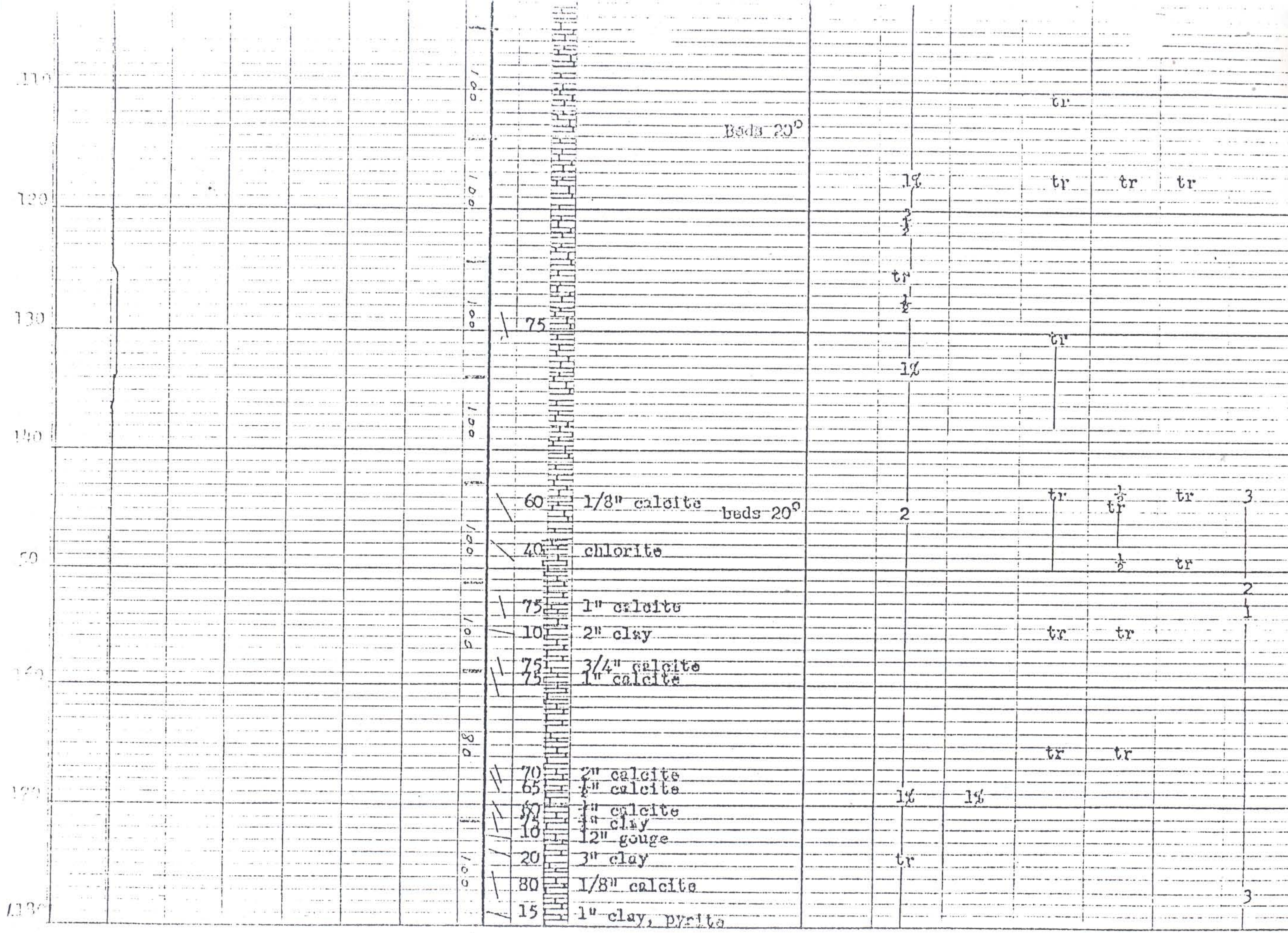
CORE SIZE START BOTTOM DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM TO BY

CORE REP. SET FROM TO DRILL LOG BY DATE

NARRATIVE LOG BY DATE SAMPLING COMPLETED

ALTERATION									LOG AND ROCK TYPE				MINERALIZATION							
	Chlor	Carb	Arg	Sili	Ser	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Pyrrh	Cp	Sp	Pb	Graph
1050								100				Calc-silicates		3					
														3					
														3		tr			
														2					
1060								100						1%					
														½					
										85						tr			
								100											
										10		½" calcite		tr					
1070														½					
								100				Beds 20°							
												Granodiorite		2		tr			
												Beds 20°		1%					
												Beds 20°							
1080								100		20		24" gouge							
														½					
1090																			
								100		70		8" gouge		tr					
										40				½					
1100								100		65		tight		2%		tr			



110
120
130
140
Beds 20°
75
1/8" calcite
beds 20°
40
chlorite
75
1" calcite
10
2" clay
75
3/4" calcite
75
1" calcite
70
2" calcite
65
80
1" calcite
12" gouge
20
3" clay
80
1/8" calcite
15
1" clay, pyrite
tr
1%
2

DRILL LOG

COMPANY NAME Walker Marbel Mining Company PROJECT Afterthought

HOLE AF-5 LOCATION COORDINATES COLLAR ELEV. SHEET 4 OF 5 SCALE 1" = 10'

ROTARY SIZE START BOTTOM @ DATE CASING SIZE TO

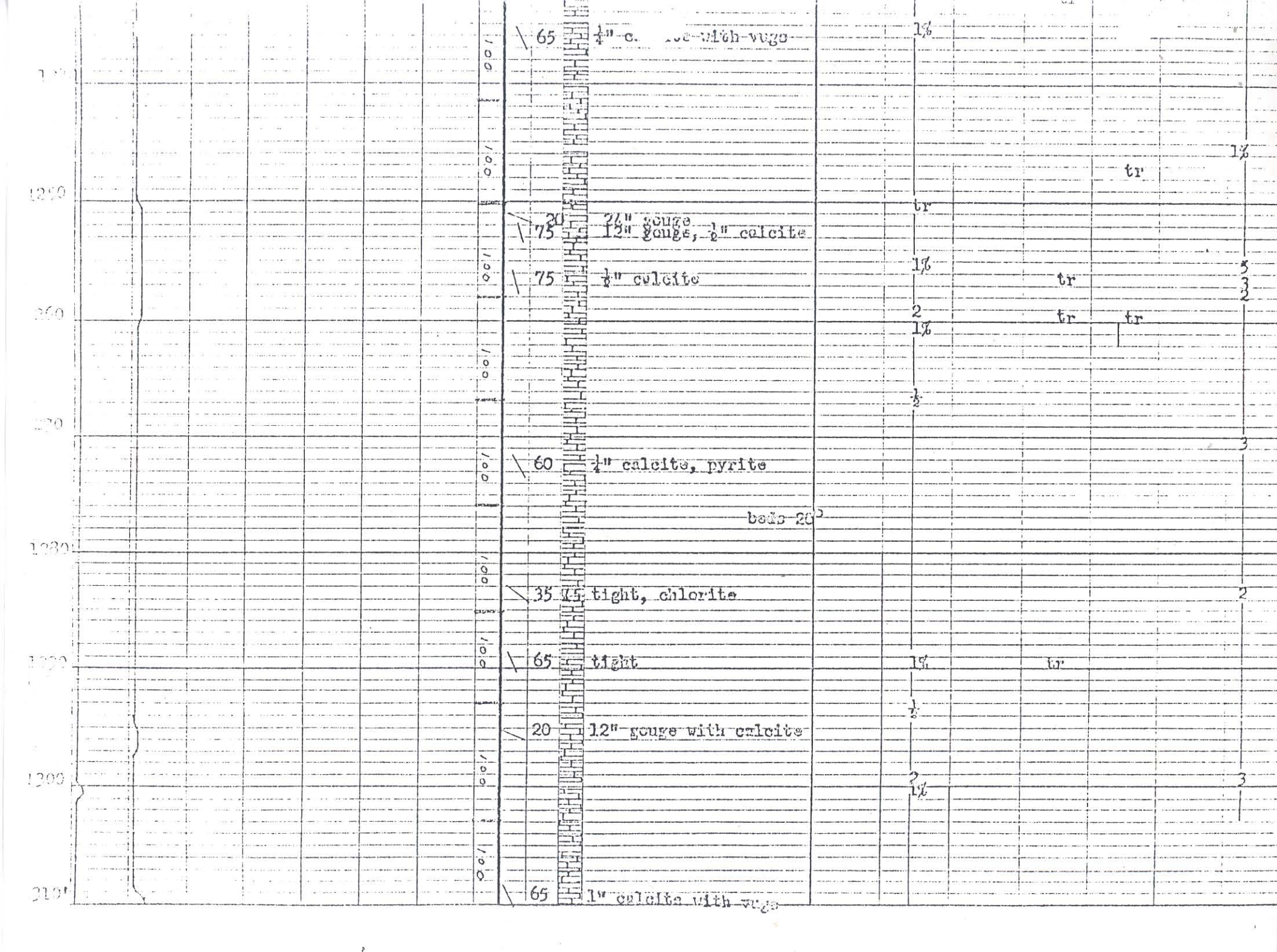
CORE SIZE START BOTTOM DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM TO BY

CORE REP. SET FROM TO DRILL LOG BY DATE

NARRATIVE LOG BY DATE SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION							
Chlor	Carb	Arg	Sili	Ser	Alb	Ortho	CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Pyrrh	Cp	Sp	Pb	Graph	
											Calc-silicates		1%	tr				2	120
							90		85		¼" calcite, zeolites		3 1%	1%	tr ½ tr	tr ½ tr			
									65							3 ½			
									75		¼" calcite		2	tr		tr			
													3			1% ½			
									20		1/8" calcite		3						
									65		¼" calcite		1%			tr		5	
																tr			
																		3	
																		2	
														tr	tr	tr		3	
											beds 20°				tr	½		2	
														tr	tr	tr		3	
													2		tr			2	
														1% ½	tr	tr			
															tr				
									55		tight beds 20°								240
									40		calcite				tr				


65 ¼" c. ...e with vugs
1%
1%
tr
1250
20
75 2½" gouge
12" gouge, ½" calcite
tr
75 ½" calcite
1%
tr
3
3
2
2
tr
tr
1%
½
60 ¼" calcite, pyrite
3
beds 20°
1230
35 15 tight, chlorite
2
65 tight
1%
tr
½
20 12" gouge with calcite
1200
2
1%
3
65 1" calcite with vugs
210'

DRILL LOG

COMPANY NAME Walker Mortel Mining Company PROJECT Afterthought

HOLE # AF-5 LOCATION COORDINATES COLLAR ELEV. SHEET 5 OF 5 SCALE 1" = 10'

ROTARY SIZE START BOTTOM @ DATE CASING SIZE TO

CORE SIZE START BOTTOM DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM TO BY

CORE REP. SET FROM TO DRILL LOG BY DATE

NARRATIVE LOG BY DATE SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
310'	Chlor	Carb	Arg	Sili	Ser	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Pyrrh	Cp	Sp	Pb	Graph
												Calc-silicates		tr ½		tr			2
								001		65		1/8" calcite, chlorite		2		tr			
320														½ 1%					
								001		65		½" calcite, ¼" pyrite		½			tr tr		
1330																			
Bottom: 1331.0 feet																			

AFTERTHOUGHT AF-6
6000 0041 (0540)

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

Total depth: 898 feet

Rotary: 0.0 - 238.0'
DM: 238.0 - 898.0'

Vertical

0.0 - 50.0 Alluvium, mostly wind-blown sand, no sample.

50.0 - 90.0 Decomposed granitic rock with thin layer lacustrine sediments(?) covering the top; samples badly contaminated in upper part; fragments contains plagioclase, orthoclase, quartz, biotite, hornblende; with 3-10% limonitic and jarositic material replacing sulfides and partly exotic; numerous pseudomorphs limonite after pyrite.

90.0 - 238.0 Quartz monzonite(?) with layers(?) metamorphics including calc-silicates; probably quartz monzonite intruding along bedding of calcareous sediments; 5-15% limonitic and jarositic material both replacing sulfides and exotic, part of limonitic dark brown and pitchy; small amounts gypsum; some pseudomorphs of limonite after pyrite; fresh pyrite at 170-238' from 2-5%; traces galena(?), at 215'; some epidote and garnet at 155'.

Bottom of rotary at 238.0 feet.

238.0 - 247.0 Calc-silicates with small amount silicified fine-grained intrusive; hornfelsic texture; with garnet, epidote, zoisite; bedding at 40-50°; small amounts gypsum and chlorite on fractures; ½-2% pyrite disseminated in groundmass, some partially oxidized to limonite; a few pseudomorphs limonite after pyrite; traces graphite; small amounts chlorite and carbonate in groundmass.

247.0 - 254.0 Quartz monzonite, medium grained; with plagioclase, orthoclase, 5-15% quartz, 3-5% hornblende; ½-3% pyrite disseminated and as veinlets, slightly ozidized; groundmass slightly chloritized with small amount carbonate;

254.0 - 265.0 Calc-silicates; banding at 45°; some wollastonite at 254-55'; darker bands of femags; small amount clay and green chlorite along fractures.

265.0 - 294.0 Quartz monzonite, silicified; up to 5% biotite at 269'; 25-45% silicified, slightly argillized and chloritized, with small amounts carbonate in groundmass; traces to 2% pyrite, partly oxidized, up to 2% pseudomorphs after pyrite in places; some gypsum and exotic brown limonite on fractures; a few minute pods magnetite in places; brecciated at 290-93'.

294.0 - 296.6 Calc-silicates; banding at 70°; some minute veinlets of gypsum and limonite, 2% graphite; slightly argillized and chloritized with small amounts carbonate.

296.6 - 298.0 Quartz monzonite, silicified; traces pyrite.

298.0 - 300.0 Calc-silicates; stained brown by limonite; traces graphite; 20% argillized with some chlorite and carbonate.

300.0 - 302.6 Quartz monzonite, silicified; 25% silicified groundmass and partially argillized and chloritized; 1% pyrite with traces arsenopyrite; considerable limonite with up to 10% limonitic pseudomorphs after pyrite at 300-01'.

302.6 - 303.5 Calc-silicates; with 3% pyrite, traces arsenopyrite, trace graphite.

303.5 - 314.0 Quartz monzonite, fairly fresh; slightly silicified and argillized with some chlorite and carbonate; ½-5% pyrite with traces arsenopyrite; pyrite as veinlets and disseminated; 2-5% femags.

314.0 - 365.0 Calc-silicates; with alternating bands recrystallized limestone and calc-silicates; small amount wollastonite at 336-7', garnet and epidote at 345-47', wollastonite at 345-54'; anthophyllite asbestos at 368-72'; slightly chloritized with varying amounts carbonate in groundmass; banding at 70° at 318', 55° at 322', 55° at 335', 40° at 350'; 12" gouge at 339-40'; 3" gouge at 55° at 363'; traces blue copper carbonate at 347' and 354'; up to 5% brown mica at 357-63'; traces to 1% pyrite at 314-58' and 2-5% at 358-65'; traces arsenopyrite and pyrrhotite at 357-63'; arsenopyrite associated with pyrite.

365.0 - 389.0 Quartz monzonite, fairly fresh; moderately silicified with small amounts chlorite and carbonate; 1-5% pyrite averaging 2½%; trace to 1% arsenopyrite at 372-80'; trace chalcopyrite and pyrrhotite at 379'; at 389' 2" veinlet of 45% pyrite with small amount arsenopyrite.

389.0 - 559.0 Calc-silicates; with garnet, epidote, wollastonite, zoisite, calcite, and brown mica; appears to be from fairly pure carbonate beds with interlayers of clayey calcareous sediments; small amount quartz monzonite at 397-98'; up to 15% brown mica at 485-86'; banding at 60° at 420', 35° at 425', 35° at 440', and 35° at 455'; small amount quartz monzonite at 431-32', 545', and 550'; slightly argillized with some chlorite and carbonate in groundmass; occasional veinlet and pods of quartz; traces to 1% pyrite, with 1-2% at 480-84'; traces to 5% graphite at 413-519', 1% at 549-553', and 3-15% at 553-59'; traces arsenopyrite at 410-22', 429-49', 490-91', with 1% at 390-98', and traces to 1% at 549-55'; trace chalcopyrite at 545'; ; 4" gouge on fracture at 459' dipping 60°; traces sphalerite and chalcopyrite at 450'; small amount specularite at 513'; a few grains rhodocrosite at 533'; dark green chlorite on fractures.

559.0 - 563.0 Quartz monzonite, fairly fresh; with 45-55% plagioclase, 10-30% femags, 20% quartz; up to 20% silicified; with ½-2% pyrite, trace to 3% pyrrhotite, trace chalcopyrite, and up to 1% molybdenite at 559-60'.

563.0 - 590.0 Calc-silicates; with epidote, garnet, calcite, wollastonite, brown mica; banding at 45-50°; traces to 1% pyrite; traces to 1% pyrrhotite with 3% at 569'; traces to 2% graphite; trace chalcopyrite at 578'; pyrite and pyrrhotite in veinlets and disseminated; dark green chlorite on fractures.

590.0 - 593.0 Quartz monzonite with calc-silicates; with 2% quartz, traces pyrite and pyrrhotite.

593.0 - 621.0 Calc-silicates; banded at 35-40°; traces pyrite, traces to 1% pyrrhotite, traces to 2% graphite, trace chalcopyrite at 578'; veinlets quartz, pyrite, pyrrhotite, and calcite; apple-green chlorite on fractures.

621.0 - 632.0 Quartz monzonite, slightly silicified, chloritized; trace to 1% pyrite; traces to 1% pyrrhotite; 12" gouge at 631' dippng 55°.

632.0 - 688.0 Calc-silicates, gray; with epidote, wollastonite, calcite, amphiboles; slightly chloritized; ½-2% pyrite with 10% at 643'; ½-3% pyrrhotite; 5-20% graphite; traces chalcopyrite at 649' and traces molybdenite at 683'; part of pyrite and pyrrhotite along bedding planes; pyrite usually in veinlets associated with calcite and pyrrhotite; dark colloidal chlorite on some fractures; calcite as crystals in vugs in places.

688.0 - 701.0 Quartz monzonite with calc-silicates; slightly silicified; ½-3% pyrite disseminated and as veinlets; 2-5% pyrrhotite; trace chalcopyrite at 696'; moderate amount black concoidal chlorite on fractures.

701.0 - 717.0 Calc-silicates; same composition as above; gray in color; with ½-1% pyrite as veinlets and disseminated; ½-2% pyrrhotite associated with pyrite; 2-15% graphite; some apple-green chlorite on fractures.

717.0 - 721.0 Quartz monzonite, medium grained; some plagioclase visible showing albite twinning; ½% pyrite, 1% pyrrhotite.

721.0 - 822.0 Calc-silicates, gray; with wollastonite, epidote, garnet, calcite, brown mica; with trace to 1% pyrite; 1-3% pyrrhotite; 1-5% graphite with up to 15% in places; numerous calcite veinlets, some with pyrite and pyrrhotite; traces chalcopyrite at 807 and 814'; copper carbonate at 814'; brecciated and recemented by calcite at 814-15'; small amount piedmontite at 801'; banding at 35-65°.

822.0 - 848.0 Quartz monzonite; with plagioclase, orthoclase, quartz, biotite, and hornblende; slightly silicified; considerable biotite at 823'(20%) and at 838'; some calc-silicates at 844'; trace to 1% pyrite at 822-37' and 5-10% at 837-48'; 2-5% pyrrhotite; slightly magnetic; at 836-844' 1% galena, 3% arsenopyrite, 7% pyrite, 5% pyrrhotite; numerous veinlets calcite with pyrite and pyrrhotite, a few scattered veinlets of quartz and calcite with pyrite and pyrrhotite; 8" gouge at 836' dipping 60°; dark green chlorite on fractures.

848.0 - 897.0 Calc-silicates, gray; at 865-74' 80-90% wollastonite; 90% calcite at 885-88'; alternating layers gray and white calc-silicates, probably from slightly impure carcous sediments; 1-2% pyrite, traces pyrrhotite; 2-5% graphite; numerous veinlets calcite with pyrite and pyrrhotite; random veinlets cryptocrystallined quartz at 892-97'; quartz veinlets at 892-97' with pyrite and pyrrhotite; banding at 35-55°;

897.0 - 898.0 Quartz monzonite; with plagioclase, orthoclase, quartz, biotite, and amphiboles; moderately silicified; minute veinlets quartz with small amounts pyrite and pyrrhotite; some pyrite and pyrrhotite disseminated in groundmass.

Bottom: 898.0 foot

Note: See visual log for fractures and other structures, and for estimations of percentage of minerals per foot.

EFL

60000041 (0540)

DRILL LOG

COMPANY NAME Walker Martel Mining Company PROJECT Afterthought

HOLE # AF-6 LOCATION COORDINATES COLLAR ELEV. SHEET 1 OF 7 1"=100' SCALE

ROTARY SIZE 5 1/8" START 0.0 BOTTOM @ 238.0 DATE CASING SIZE TO

CORE SIZE NX START 238.0 BOTTOM 898.0 DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM 0.0 TO 238.0 BY EFL

CORE REP. SET FROM 238.0 TO 898.0 DRILL LOG BY EFL DATE

NARRATIVE LOG BY EFL DATE SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION							
							% CORE	LOG	DIP	LOG	ROCK DESCRIPTION								
0											Alluvium								
100											Quartz-monzonite								
200																			
Bottom of rotary 238.0 ft.																			

DRILL LOG

COMPANY NAME Walker Martel Mining Company PROJECT Afterthought

HOLE # AF-6 LOCATION COORDINATES COLLAR ELEV. SHEET 2 OF 7 SCALE 1"=10'

ROTARY SIZE START BOTTOM @ DATE CASING SIZE TO

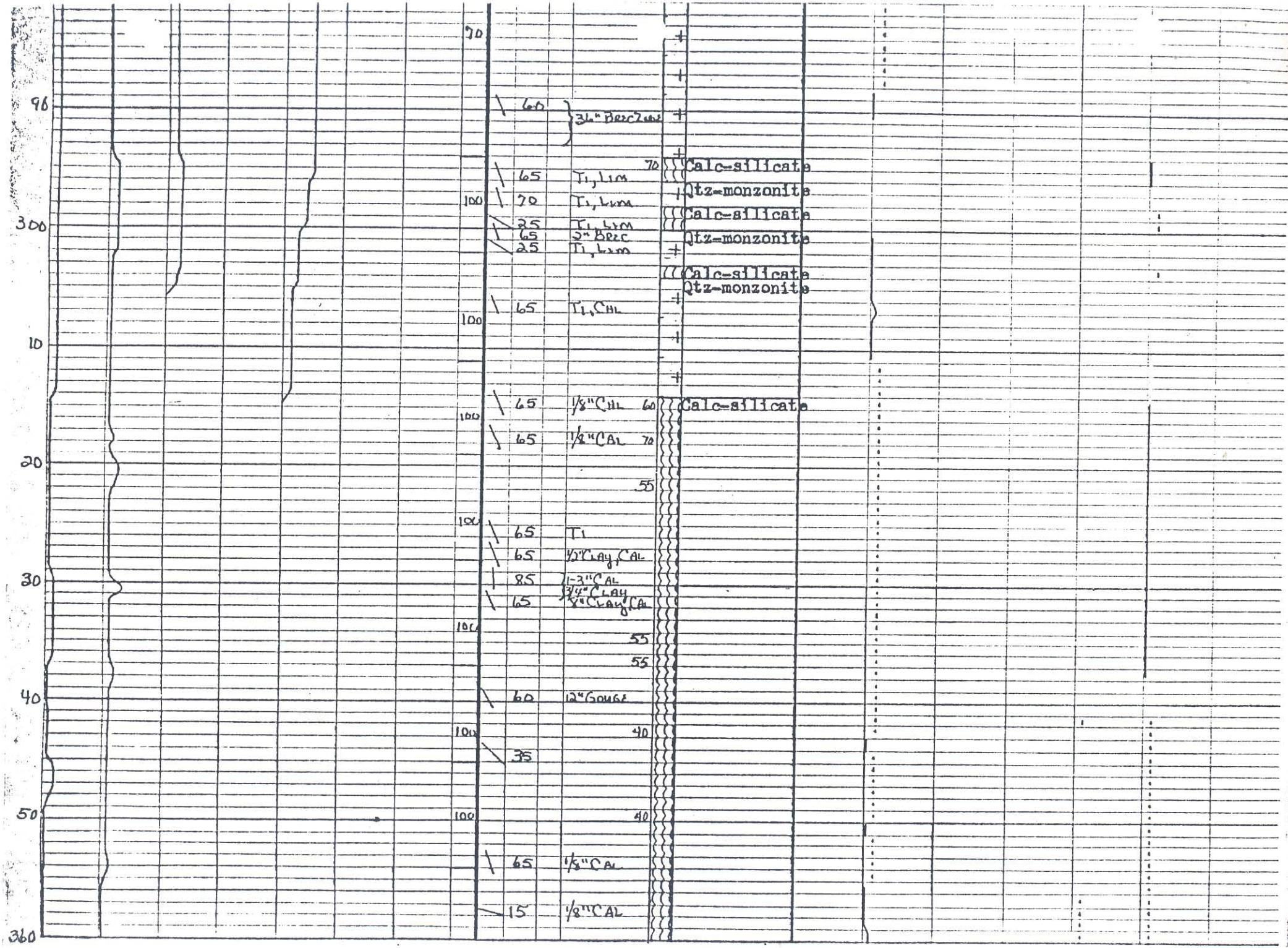
CORE SIZE START BOTTOM DATE CASING SIZE TO

ROTARY CUTTING SAMPLE BOARDS FROM TO BY

CORE REP. SET FROM TO DRILL LOG BY DATE

NARRATIVE LOG BY DATE SAMPLING COMPLETED

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Fe*	Cu **	Pyrrh	Graph	Asp
230											Bedding							
									75		T₁,Clay,Chl							
									70		T₁,Clay,Chl+Ho							
40									20		1/8" Chl							
									55		1/8" Chl							
							100				50							
											Qtz-monzonite							
50									60		T₁,Chl							
							100		70		T₁							
									55		T₁							
									75		T₁							
											Calc-silicate							
											45							
60																		
							100		70		T₁,Clay,Chl							
									55		T₁,Lim							
									40		T₁,Clay,Lim							
							85				Qtz-monzonite							
70																		
									75		T₁,Chl							
									60		T₁							
80																		



* Fe estimate made on basis of recoverable iron from magnetite.
** Cu estimate made on basis of percentage of copper minerals present, usually chalcopyrite.

DRILL LOG

COMPANY NAME _____ PROJECT _____

HOLE # AF-6 LOCATION COORDINATES _____ COLLAR ELEV. _____ SHEET 3 OF 7 SCALE _____

ROTARY SIZE _____ START _____ BOTTOM @ _____ DATE _____ CASING SIZE TO _____

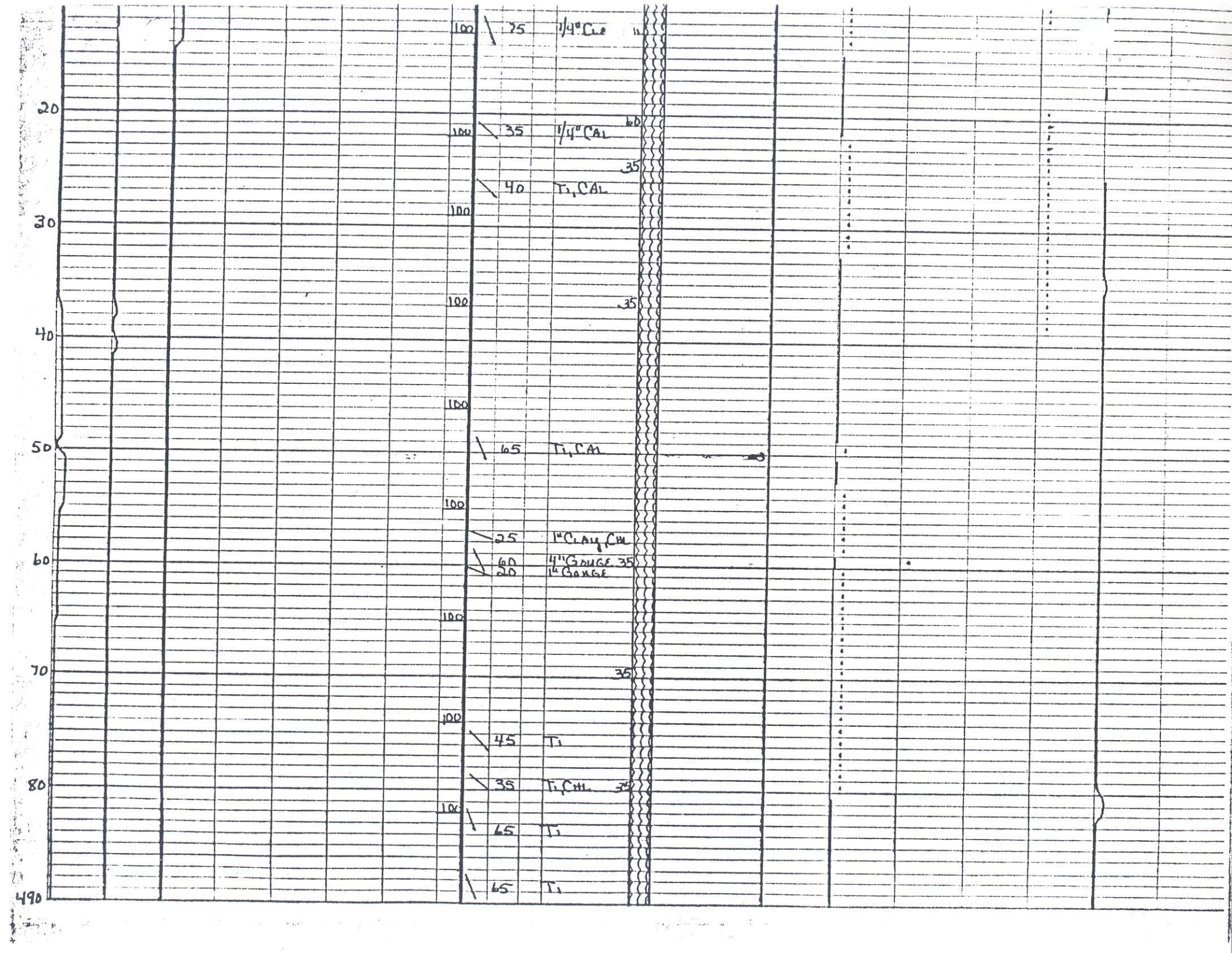
CORE SIZE _____ START _____ BOTTOM _____ DATE _____ CASING SIZE TO _____

ROTARY CUTTING SAMPLE BOARDS FROM _____ TO _____ BY _____

CORE REP. SET FROM _____ TO _____ DRILL LOG BY _____ DATE _____

NARRATIVE LOG BY _____ DATE _____ SAMPLING COMPLETED _____

ALTERATION								LOG AND ROCK TYPE					MINERALIZATION							
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Bedding	Qtz	Py	Fe	Cu	Pyrrh	Graph	Asp
360									65		T₁, CHL									
							100		55		3" Gouge									
													Calc-silicate							
												+	Qtz-monzonite							
									80		½" Clay, Lim	+								
70									80		T₁	+								
							100					+								
												+								
									80		½" Clay	+								
							100					+								
80									65		T₁	-								
									85		T₁	+								
												-								
												+								
							100		80		1" Flm + Lim	-								
90													Calc-silicate							
									75		T₁, CHL									
							100		75		T₁, CAL, CHL									
400																				
									55		½" CALCITE									
									85		T₁									
							100													
									50		T₁									
10																				


20
30
40
50
60
70
80
490
100
25
1/4" CLE
35
1/4" CAL
40
T1, CAL
65
T1, CAL
25
1" CLAY, CH
60
4" GOUGE 35
20
1" GOUGE
45
T1
35
T1, CH
65
T1
65
T1
60
35
35
35

DRILL LOG

COMPANY NAME _____ PROJECT _____

HOLE # AE-6 LOCATION COORDINATES _____ COLLAR ELEV. _____ SHEET 4 OF 7 SCALE _____

ROTARY SIZE _____ START _____ BOTTOM @ _____ DATE _____ CASING SIZE TO _____

CORE SIZE _____ START _____ BOTTOM _____ DATE _____ CASING SIZE TO _____

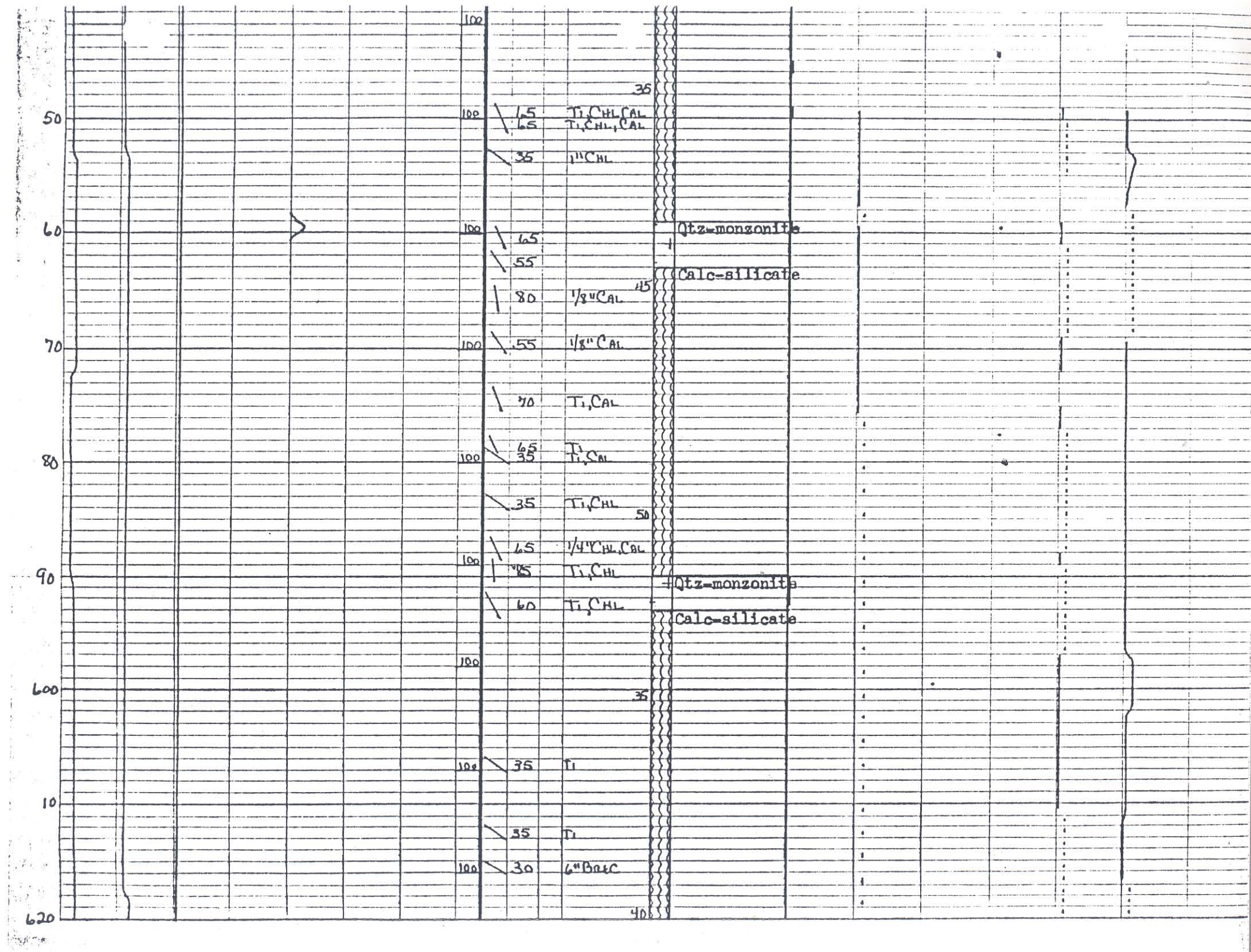
ROTARY CUTTING SAMPLE BOARDS FROM _____ TO _____ BY _____

CORE REP. SET FROM _____ TO _____ DRILL LOG BY _____ DATE _____

NARRATIVE LOG BY _____ DATE _____ SAMPLING COMPLETED _____

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Fe	Cu	Pyrrh	Graph	Asp
											Bedding Calc-silicate							
									45		T1, CHL							
							100											
									65		1/2" CAL							
							100		65		1/4" CAL							
									65		T1, CAL							
							100		65		T1, CAL							
									85		T1, CAL							
							100		65		1" CAL							
							100		75		1" CAL, CHL							
									65		T1, CAL							
									55		T1, CHL							
									20		T1, CHL							

490 500 10 20 30 40


50
60
70
80
90
600
10
620
100
35
100
65
65
Ti, Chl, Cal
Ti, Chl, Cal
35
1" Chl
100
65
55
Qtz-monzonite
Calc-silicate
45
80
1/8" Cal
100
55
1/8" Cal
70
Ti, Cal
65
35
Ti
Ti, Cal
35
Ti, Chl
50
65
1/4" Chl, Cal
100
85
Ti, Chl
Qtz-monzonite
60
Ti, Chl
Calc-silicate
100
35
100
35
Ti
35
Ti
100
30
6" Brec
40

DRILL LOG

COMPANY NAME _____ PROJECT _____

HOLE # AF-6 LOCATION COORDINATES _____ COLLAR ELEV. _____ SHEET 5 OF 7 SCALE _____

ROTARY SIZE _____ START _____ BOTTOM @ _____ DATE _____ CASING SIZE TO _____

CORE SIZE _____ START _____ BOTTOM _____ DATE _____ CASING SIZE TO _____

ROTARY CUTTING SAMPLE BOARDS FROM _____ TO _____ BY _____

CORE REP. SET FROM _____ TO _____ DRILL LOG BY _____ DATE _____

NARRATIVE LOG BY _____ DATE _____ SAMPLING COMPLETED _____

ALTERATION

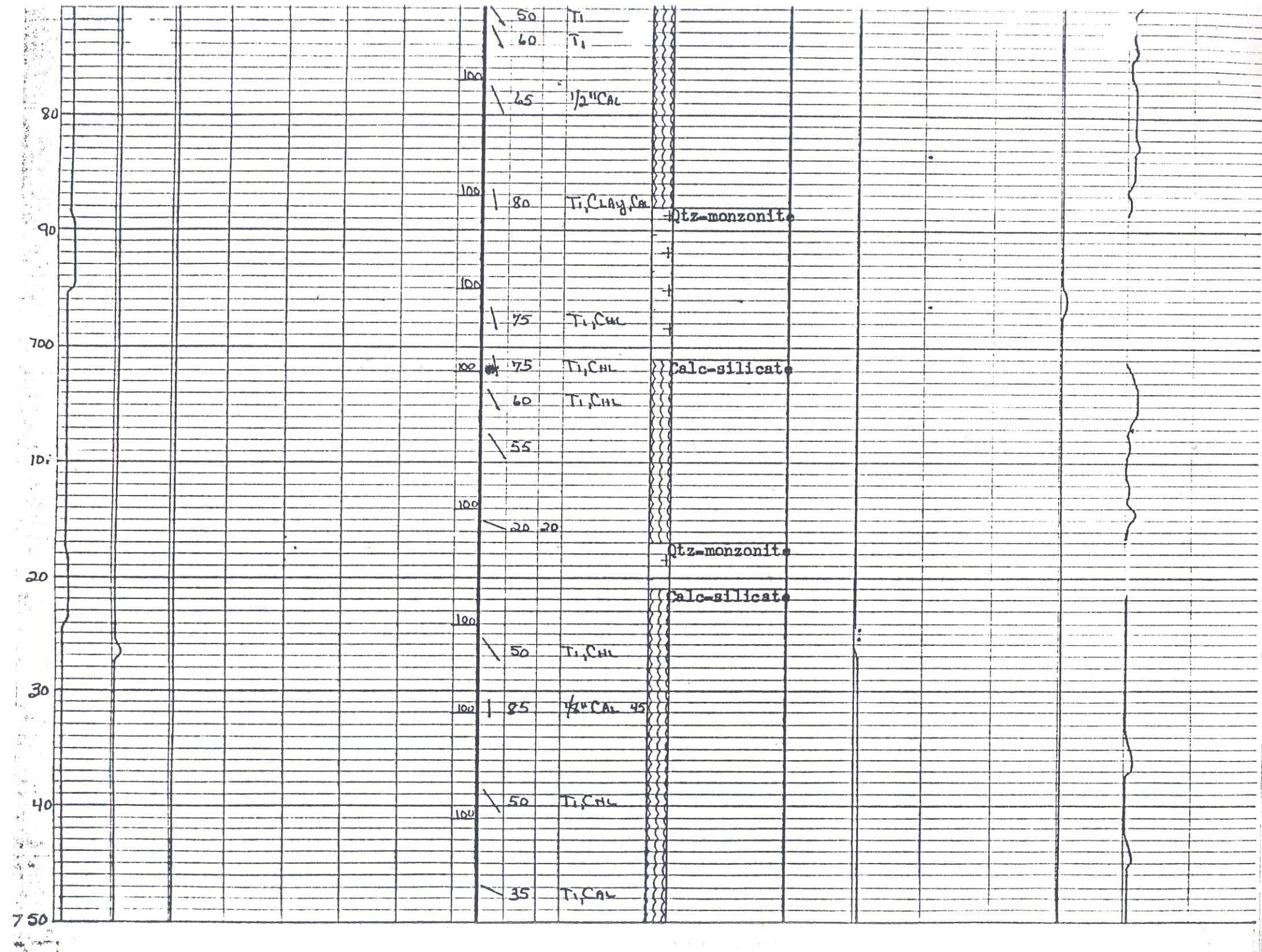
20	Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE
								100
30								100
40								100
50								100
60								100
70								

LOG AND ROCK TYPE

LOG	DIP	LOG	ROCK DESCRIPTION	Bedding
/	65	Ti, Chl	Calc-silicate	+
/	15	Ti, Chl	Qtz-monzonite	+
/	35	Ti, Chl		+
/	35	36" Shear Zone		+
/	35			+
/	55	12" Gouge		+
/	20	2" Clay		
			Calc-silicate	
/	65	Ti, Chl		
//	80	Ti, Chl		
//	70	Ti, Chl		
/	45	Ti, Chl		
/	60	1/2" Cal		
/	60	Ti, Chl		
/	40	1/2" Cal		

MINERALIZATION

Qtz	Py	Fe	Cu	Pyrrh	Graph	Asp


50 Ti
60 Ti
100
25 1/2" Cal
80
100 80 Ti, Clay, Cal
Qtz-monzonite
90
100
75 Ti, Chl
700
100 75 Ti, Chl
Calc-silicate
60 Ti, Chl
55
10
100
20 20
Qtz-monzonite
20
Calc-silicate
100
50 Ti, Chl
30
100 85 1/8" Cal 45
40
50 Ti, Chl
100
35 Ti, Cal
750

DRILL LOG

COMPANY NAME _____ PROJECT _____

HOLE # AF-6 LOCATION COORDINATES _____ COLLAR ELEV. _____ SHEET 6 OF 7 SCALE _____

ROTARY SIZE _____ START _____ BOTTOM @ _____ DATE _____ CASING SIZE TO _____

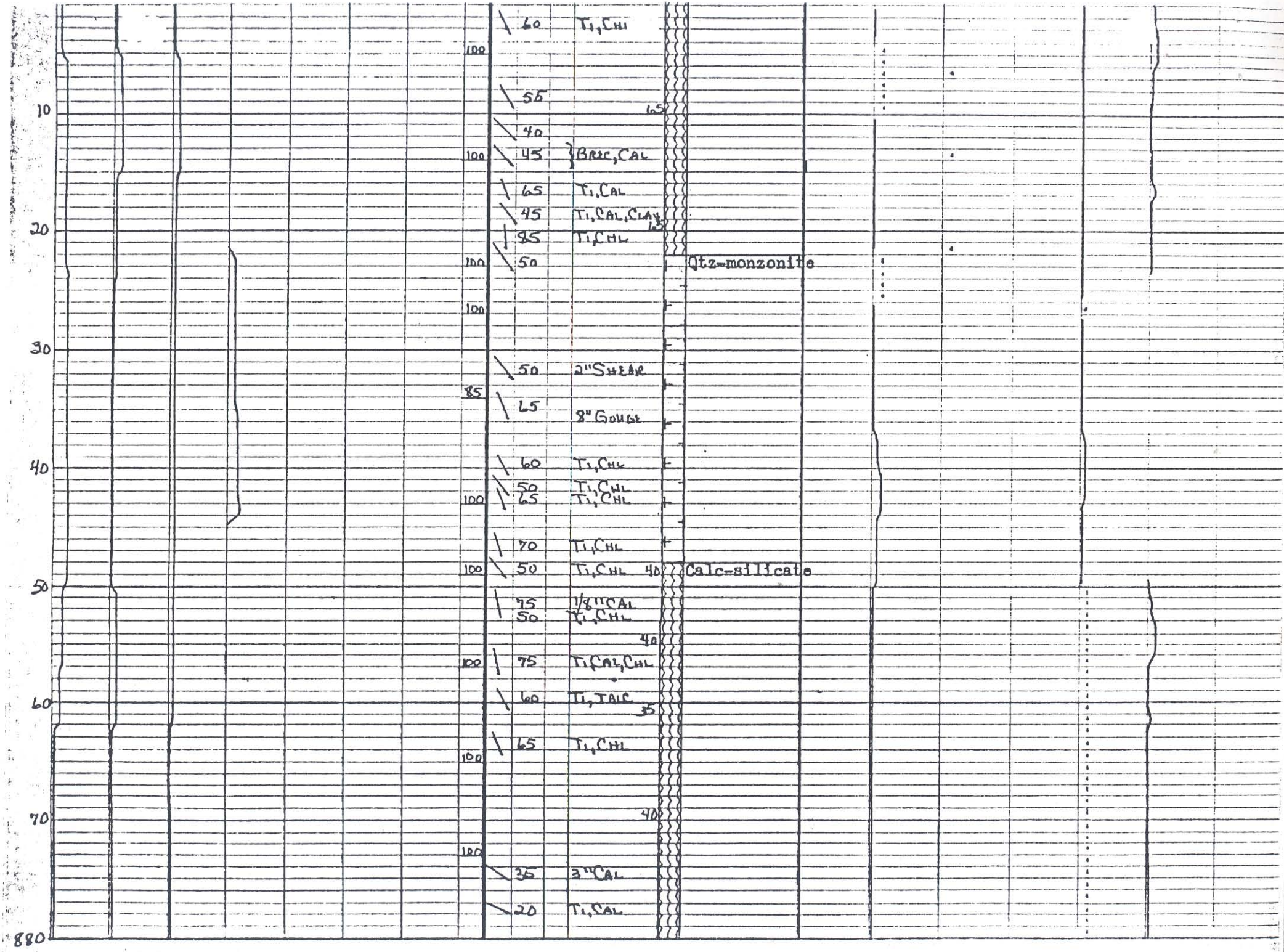
CORE SIZE _____ START _____ BOTTOM _____ DATE _____ CASING SIZE TO _____

ROTARY CUTTING SAMPLE BOARDS FROM _____ TO _____ BY _____

CORE REP. SET FROM _____ TO _____ DRILL LOG BY _____ DATE _____

NARRATIVE LOG BY _____ DATE _____ SAMPLING COMPLETED _____

	ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
	Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Fe	Cu	Pyrrh	Graph	Asp
750												Bedding Calc-silicate							
								100				45							
60																			
								100		25		6" Brec							
70																			
								100		65		Ti, Cal							
												35							
80										55		6" Gouge							
										25		1/8" Cal							
								100		45		Ti, Cal							
90																			
								100		85		Ti, Cal, Chl							
										65		Ti, Chl							
										50		Ti, Chl							
100												40							


60 Ti, Chl
100
55
65
40
100 45 Brec, Cal
65 Ti, Cal
45 Ti, Cal, Clay
65
85 Ti, Chl
100 50
Qtz-monzonite
100
50 2" Shear
85
65 8" Gouge
60 Ti, Chl
50 Ti, Chl
100 65 Ti, Chl
70 Ti, Chl
100 50 Ti, Chl 40
Calc-silicate
75 1/8" Cal
50 Ti, Chl
40
100 75 Ti, Cal, Chl
60 Ti, Talc
35
65 Ti, Chl
100
40
100
35 2" Cal
20 Ti, Cal
10
20
30
40
50
60
70
880

DRILL LOG

COMPANY NAME _____ PROJECT _____

HOLE # AE-6 LOCATION COORDINATES _____ COLLAR ELEV. _____ SHEET 7 OF 7 SCALE _____

ROTARY SIZE _____ START _____ BOTTOM @ _____ DATE _____ CASING SIZE TO _____

CORE SIZE _____ START _____ BOTTOM _____ DATE _____ CASING SIZE TO _____

ROTARY CUTTING SAMPLE BOARDS FROM _____ TO _____ BY _____

CORE REP. SET FROM _____ TO _____ DRILL LOG BY _____ DATE _____

NARRATIVE LOG BY _____ DATE _____ SAMPLING COMPLETED _____

ALTERATION								LOG AND ROCK TYPE				MINERALIZATION						
Chlor	Carb	Arg	Ser	Sili	Alb	Ortho	% CORE	LOG	DIP	LOG	ROCK DESCRIPTION	Qtz	Py	Fe	Cu	Pyrrh	Graph	Asp
880											40 Calc-silicate							
90									55		12" Calcite							
							100		100		Ti 55							
							100		60		Ti, Chl							
898									45		Ti, Chl + Qtz-monzonite							
Bottom: 898 ft.																		

(3)

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 7/28/74 Hole No. AF-7

District Afterthought [illegible] Claim

Total Depth 200

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	7			alluvium		
7	75			[illegible]		
75	120			[illegible]		
120	134			[illegible]		
134	180			[illegible]		
180	200			[illegible]		

Probe Depth ______ Driller Tatum

Remarks:

6000 0041 (0540)

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 7/28/74 Hole No. AF-8

District Afterthought Claim

Total Depth 200

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	17			[illegible]		
17	94			[illegible]		
94	125			[illegible]		
125	195			[illegible]		
195	200			[illegible]		

Probe Depth ______ Driller Tatum

Remarks:

6000 004 (0540)

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 7/29/79 Hole No. AF-9

District Afterthought Claim

Total Depth 201

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	30			med hard shattery		
30	145			hard		
145	170			Eyt hard to hard		
170	201			Eyt hard		
				broke coupling pulled		
				rods out of hole		
				[illegible] in hole with		
				1/2 collar		

Probe Depth ______ Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 7/30/79 Hole No. AF-10

District Afterthought Claim

Total Depth 287

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	90			med hard damp		
90	150			hard		
150	287			hard Eyt. lose [illegible]		
				[illegible] with Button		
				Bits		
				sharpened bit at	177	
				and 179		

Probe Depth ______ Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 7/31/79 Hole No. AP-11

District [illegible] Claim

Total Depth 230

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	120			med soft to med hard		
120	130			med soft very wet		
130	138			med soft — [illegible] sample		
138	150			[illegible] hard		
150	180			hard		
180	223			[illegible] hard		
223	230			med hard [illegible]		
				[illegible]		
				[illegible]		

Probe Depth ______ Driller [illegible]

Remarks:

TATUM EXPLORATION DRIL NG

WAGON DRILL REPORT

Date 8/5/79 Hole No. AP-12

District [illegible] Claim

Total Depth 234

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	150			med hard		
150	234			[illegible] hard Some Hard [illegible]		
234				to [illegible] Cut		
				broke Coupling at	90 ft	
				fished out		

Probe Depth ______ Driller [illegible]

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/6/74 Hole No. AF-13

District Afterthought Claim

Total Depth 256

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	30			hard shattering + ravely		
30	220			hard		
220	230			ext hard		
230	240			med hard shattery ravely		
240	256			Ext hard		
256				to hard to drill		
				stopped [illegible] at	120	

Probe Depth ______ Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/7/74 Hole No. AF-14

District Afterthought Claim

Total Depth 247

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	40			hard Shattering	Ravely	
40	120			hard		
120	247			Ext hard SB	at 160	
				" "	" 212	
				drill	" 247	

Probe Depth ______ Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/2/74 Hole No. AF-15

District afterthought Claim

Total Depth 87

Footage FROM	Footage TO	Description TYPE ROCK	Description COLOR	Description REMARKS	Probe Reading DEPTH	Probe Reading SCALE
0	16			Blow sand & gravel		
16	50			Lava Shattery Loosely		
50				fractur		
50	68			Ext hard		
68	87			med Soft Caving		

Probe Depth _____ Driller Tatum

Remarks: _____

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/3/74 Hole No. AF-16

District afterthought Claim

Total Depth 90

Footage FROM	Footage TO	Description TYPE ROCK	Description COLOR	Description REMARKS	Probe Reading DEPTH	Probe Reading SCALE
0	40			med hard Shatty Caving		
40	70			med hard		
70	90			med Soft fractured Caving		
				Lost Circulation		

Probe Depth _____ Driller Tatum

Remarks: _____

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/8/74 Hole No. AF-17

District Afterthought Claim

Total Depth 250

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	38			med hard spotty		
38	115			hard		
115	208			Ext. hard & hard lenses		
208	250			Ext hard		
				shapened bit at 213		

Probe Depth

Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 8/8-9/74 Hole No. AF-18

District Afterthought Claim

Total Depth 198

Footage		Description			Probe Reading	
FROM	TO	TYPE ROCK	COLOR	REMARKS	DEPTH	SCALE
0	44			med soft spotty	Covering	
44	60			Ext hard		
60	160			hard & Ext hard lenses		
160	198			Ext hard		

Probe Depth

Driller Tatum

Remarks:

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 9/19/74 Hole No. TF 19

District Littlethought Claim

Total Depth 207

Footage FROM	Footage TO	Description TYPE ROCK	Description COLOR	Description REMARKS	Probe Reading DEPTH	Probe Reading SCALE
0	5			Alluvium, Sand		
5	207			Med. Hard Ravely		

Probe Depth _____ Driller Tatum

Remarks: _____

TATUM EXPLORATION DRILLING

WAGON DRILL REPORT

Date 9/20/74 Hole No. TF 20

District Littlethought Claim

Total Depth _____

Footage FROM	Footage TO	Description TYPE ROCK	Description COLOR	Description REMARKS	Probe Reading DEPTH	Probe Reading SCALE
0	5			Silty Sand		
5	208			Hard		

Probe Depth _____ Driller Tatum

Remarks: _____

PRELIMINARY REPORT

Geology of the Afterthought Area, Walker River Paiute Reservation Mineral County, Nevada

The Afterthought area lies approximately eight miles northwest of Schurz, Nevada, and extends from highway U.S. 95 westwards for three miles, covering approximately 12 square miles. The area is gentle in the Afterthought area itself, but the topography is rugged to the west, especially in the area of Mesa peak. The elevation varies from 4500 feet on the Weber Reservoir road to 5000 feet at the Afterthought shaft, and 6042 feet on Mesa peak. The area is somewhat more complicated than the Calico area to the east, but appears to be an extension of the geologic features.

Numbers were assigned to the volcanic units as they were mapped, and do not have any age connotation. The age relationships are shown in the geologic column, however some are tentative, especially the volcanic flows and intrusives. Further work in the area to the north and west will probably clarify the correlation of these units.

Pre-Tertiary Rocks

Metamorphics - (M) The Afterthought area appears to have been covered by Mesozoic sediments consisting of shales, shaly limestone, limestones, sandstones, and limey shales. Some of the limestone have been merely recrystallized, keeping its original bedding. These rocks have been metamorphosed to a series of recrystallized limestone, calc-silicates, skarn, schist, slates, and quartzite. These rocks occur in the area of the IP anomaly west of the Afterthought shaft, and around the flanks of the granitic-aplitic intrusive ½ mile to the northeast. They also appear in drill holes AF 1 and 2.

Diorite and Gabbro (Di) - occurs in the area 3,000 feet north of the Afterthought shaft and along the west flank of the granitic-aplitic intrusive, and extend approximately 1 mile west to the base of Mesa peak. It is medium to coarse grained, and varies from gabbro to diorite in composition. One specimen of gabbro taken from the small pit in the saddle and 200 feet east of the road contained 65% plagioclase (andesine), 20-30% hornblende, 5-10% augite, 2-3% biotite, 3-5% chlorite, and traces magnetite, the magnetite replacing fe-mags along crystallographic planes and boundaries. A specimen of diorite 500 feet west of the road contained 60% palgioclase, 15-20% brown hornblende, 2-3% biotite, 5% actinolite, 1-2% chlorite, and with small amount magnetite replacing the fe-mags along crystallographic planes and boundaries. Another specimen of diorite near the road and along the southwest flank of the granitic-aplitic intrusive showed 50% plagioclase, 30% orthoclase, 3-5% biotite, 3-5% actinolite, 10-15% hornblende, and with magnetite replacing the femags. This magnetite occurs interstitial and along crystallographic boundaries. The diorite and gabbro contains varying amounts of magnetite, and in places the rock is magnetic, especially at "0" E-W and 35N. Hematite with traces of copper carbonates occurs in this area, and a small pit has been dug on it in the past. This diorite appears to continue to the west under the overlying tuffs and volcanic flows.

Granodiorite (GD) - occurs in the area of the Afterthought shaft and to the south covering an area of approximately one square mile. It is fine to medium grained and fairly uniform in composition. One specimen taken above the shaft in thin section showed 30% plagioclase, 40% orthoclase, 15% quartz, 7% hornblende, and 1% pyroxene. It has been silicified in some areas, and in places cut by quartz veins containing traces of copper, being slightly altered in these areas. Otherwise the granodiorite shows no wide spread alteration.

Fine-grained intrusive (FGI) - This rock occurs along the northwest flank of the granodiorite, and also across the wash from the Afterthought shaft against the metamorphics. It may be a border facies of the granodiorite, but more likely represents a border facies of a quartz monzonite intrusive later than the granodiorite. Spatially it is related to the granodiorite and may have been a border facies of it that has been silicified by later solutions. It is separated from the granodiorite by a fault running N 50°E. This rock is intercalated with calc-silicates and skarn of the metamorphics across the wash from the Afterthought shaft, and also in drill holes AF 1 and 2. It contains considerable sulfides in these drill holes near the surface. Thin-sections of the core shows this rock to vary from granite to quartz monzonite and diorite (Lawrence, Rept thin-sections, Afterthought Area). This variation probably is partially due to assimilation of country rock at the time of intrusion. One small outcrop in the area of the V21 flow at 350 feet northeast of drill hole AF 3 is completely silicified. In thin section it shows ghost outlines of feldspar with rims of secondary biotite around corroded quartz phenocrysts. One large feldspar phenocryst shows pericline twinning.

Quartz monzonite (QM) - This rock outcrops in an area 1,500 feet north of the shaft and along the southwest flank of the granitic-aplitic intrusive. It occurs only as small patches and may be merely local variations of the other intrusives. It is medium to coarse grained, and is usually slightly iron stained with yellow-brown iron oxide. There is a larger area of quartz monzonite, medium to coarse grained, approximately 3,000 feet northeast of Mesa peak in Long Valley, which will be discussed in more detail in the B-6 report.

Granitic and aplitic intrusive (G) - occurs approximately ½ mile north of the Afterthought, and is 2,500 feet long and 1,000 feet wide, being elongated in a northeasterly direction. This rock contains 55% orthoclase and microcline, 20% plagioclase, 5% quartz, 5-10% green hornblende, 3-10% augite, and 1% sphene. Another specimen shows 45% microcline, 2-5% plagioclase, and 30-45% quartz, being alaskitic in composition. This intrusive is usually highly siliceous and fine grained. There are several quartz "blow-outs" around this hill. On the west side it is associated with rose quartz and large crystals of microcline. Numerous veins of quartz cut the diorite to the west, and may be genetically related to this granitic-aplitic intrusive. This granite has metamorphosed the Mesozoic sediments to schists, recrystallized limestone, slates, quartzite, calc-silicates, and skarn. There are numerous small propspects along the contact zone. Antimony has been mined in one prospect (Lawrence, 1963). Copper occurs as green stains and coatings

Lawrence, Edmond F., (1960): Antimony deposits of Nevada, Nevada Bureau of Mines, Bull. 61, p. 124.

in the metamorphics along the flanks of the granite.

Tertiary Rocks

Tuffs (V1) - There is a thick section of tuffs in the Afterthought area varying in composition from crystal tuff, lapilli tuff, vitric tuff, welded tuff to agglomerates, with interbedded vitrophyres and glassy flows. These rocks appears to have covered most of this area at one time, occuring overlying the granodiorite in the basin 1,000 feet east of the Afterthought shaft at an elevation 300 feet above the shaft. This unit is the same as the V1 tuff in the Calico area to the east, with local variations in the glassy units. These vitrophyres and glassy flows probably had a local origin. The coloration in the tuff appears to be thermal in origin, and associated with later intrusives and extrusives. It would be possible to work out a detailed section for correlation with the Calico area, but this did not appear desirable in the present investigation. These tuffs are usually well indurated, especially near the intrusives and extrusives. Two horizons in the tuff contain considerable petrified wood.

Andesite flows (V 6, V 21) - These flows and intrusives are similar to the V 6 andesite intrusives in the Calico area. They are composed of up to 40% plagioclase laths and 10-20% hornblende phenocrysts in an aphanitic groundmass.

Rhyolite flows and intrusives (V 8, V 20) - These flows and intrusives occur only as small outcrops along northwesterly faults near U.S. 95. They are aphanitic with occasional phenocrysts of feldspar and quartz, and with flow structure.

Andesite flows and intrusives (V 22) - This unit occurs chiefly west of U.S. 95 and north of the Weber Reservoir road, around the south and east flanks of the granodiorite. It is somewhat similar to the V 21 in composition and texture, but contains less plagioclase phenocrysts. The vents for the flows appear to be in the basin southeast of the Afterthought shaft, and along the south flank. One such plug cuts the granodiorite-V 1 tuff contact, changing the tuff to lavender and greenish in color and the granodiorite to a reddish brown up to 50 feet wide. This V 22 appears to be partially correlative with the V 22 flows.

Andesite flows (V 18) - Thsi flow is magnetic, and may account for the magnetic anomaly over U.S. 95. It is dense, dark gray to black, with phenocrysts up to 1/8 inch of hornblende, biotite, and plagioclase, and with 1-2% magnetite.

Andesitic to intermediate flows (V 26) - This unit occurs in the area south and southwest of the mine area. It is usually thin-bedded, with hornblende and plagioclase phenocrysts.

Quaternary Rocks

Basaltic flows (V 37) - Restricted to the northeast side of the area, but similar to V 19 on the southwest side. It is thin-bedded, dense, with occasional plagioclase phenocrysts and magnetic in some areas. Appears to be from a local vent.

Basaltic flow (V 19) - Same as V 37 above, except on southwest side of area.

Trachybasalt (V 29) - This unit occurs 1 mile northwest of the Afterthought

shaft and south of Mesa peak. It is dense, dark gray to black in color, with a glassy matrix.

Andesite flow (V 36) - This unit occurs as a distinct flow 1,000 feet wide and 3,000 feet long, northest of Mesa peak in Long Valley. It is lighter in color than V 35, aphanitic, with a few phenocrysts of plagioclase and hornblende.

Basalt - Andesite flow (V 35) - This flow, overlying V 36 in part, is 100 to 500 feet wide and at least 4,000 feet long. It is dense, black in cclor, with occasional phenocrysts of plagioclase and hornblende. It is overlained by V 31.

Basic flows - undifferentiated (V 34) - These flows north of Long Valley were not mapped in detail, but may be correlative with some of the basic flows in this report. They will be described in reports B-6 and C-7.

Andesite and basalt flows and intrusives (V 31) - This unit occurs around Mesa peak and appears to originate in a vent on its side. The basal part of this unit is an agglomerate up to 600 feet thick on the northeast slope of Mesa peak and 50 feet thick on the southwest slope. In places this rock is prophyritic, and partially trachybasalt and trachyandesite.. Basalt flows of this unit may account for the aerial magnetic anomaly southwest of Mesa Peak, but probably not account for the larger magnetic anomaly covering the Afterthought area and extending west and southwest of Mesa peak.

Basalt flows and intrusives (V 30) - This unit occurs co-extensively with V 31, and may be partly intercalated. It is usually dense, black in color, with few phenocrysts, but in places porphyritic, with phenocrysts of plagioclase, sanidine, and hornblende. It contains some andesite and trachybasalt. The vents for these flows appears to be on the side of Mesa peak.

Lacustrine deposits (QS) - Lake sediments, Lahontan in age, occurs along the southwest side of the area, and are up to 280 feet in thickness. They contain a vitric tuff bed that has been mined for pumice, and used locally for pumice blocks. These beds have been tilted and faulted. They extend within 2,500 feet of the Afterthought shaft, to an elevation of 4800 feet.

Alluvium and Sand (Al, S) - Much of the area of interest is obscured by alluvium and wind-blown sand.

Structure

This area lies along the same strike-slip fault zone as the Bounder, Hottentot, and Calico previously mapped and described (1966, Calico Report, Walker Martel files; 1965, Hottentot Report, AIME meeting, Reno). Faulting along this zone since Miocene time appears to be in the order of 2,000 feet with a right lateral movement. Movement of this magnitude could not be detected in the Calico and Afterthought areas. However there is evidence of smaller increments of movement of a right lateral nature in this area. These N 20°N to N 40°N faults are off-set in places by northeasterly faults, part of which is left lateral. This northeasterly set of faults may be equally important in the Afterthought area. There is some evidence that these faults have step-faulted the granitic rocks downwards to the east

towards the Calico area. These two sets of faults mutually cut each other. The IP anomaly in the Afterthought area appears to be along such a N 50°E structure, and the granitic-aplitic intrusive is elongated northeasterly between a N 40°E and a N 50°E fault. Both sets of faults cut the Lahontan lake sediments, with displacements up to 20 feet. There is some evidence of movement along the N 40°W faults in the past few years.

There is a strong possibility that this northwesterly-trending zone has been the structural control for the emplacement of the Mesozoic granitic bodies as well as the Tertiary intrusives and extrusives, and the Quaternary vents and flows. The Calico area appears to have been a center of volcanic activity throughout Tertiart and Quaternary time, while the Mesa peak area appears to have been most active in late Tertiary and Quaternary time.

Doming and other features might be suspected, but must await further study of the areas to the west and north.

Summary

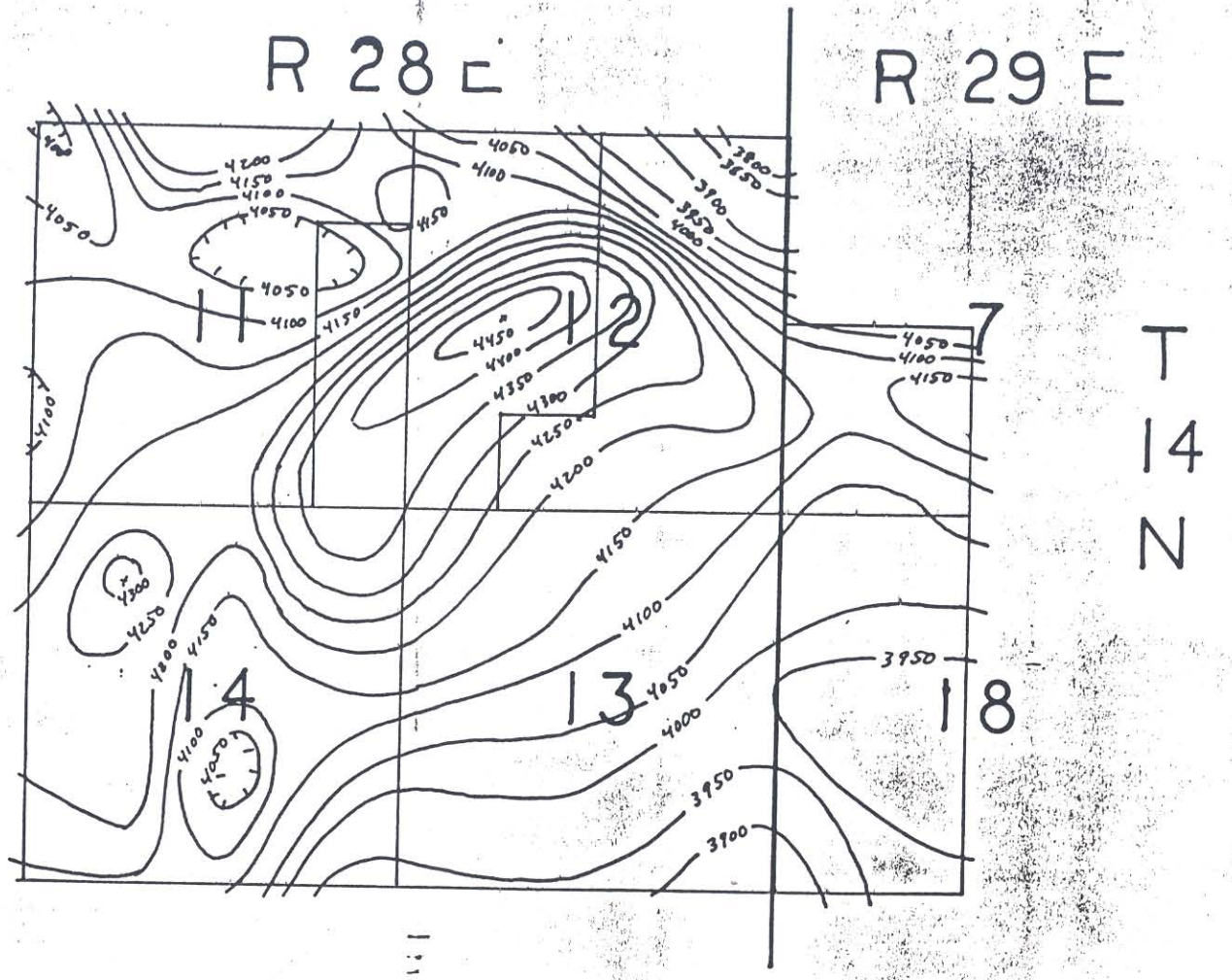
The Afterthought area lies in an area of Mesozoic Rocks, intruded by a series of granitic and aphanitic igneous rocks, metamorphosing the sediments to a series of schists, slates, recrystallized limestone, calc-silicates, and skarn. The igneous complex consists of gabbro, diorite, granodiorite, quartz monzonite, fine-grained intrusive(?), granite, alaskite, and pegmatite. These rocks are probably an extension of the dioritic bodies of the Calico area, and may represent a topographic high in Tertiary time. The differentiation of this magma may have provided a mineral-rich solution to form an ore-deposit. The area immediately west of the Afterthought shaft provides a good environment and structural control for such a deposit. IP data indicates an anomaly along this zone, and recent IP work (Oral Com., Redmond) indicates this anomaly bends around to the south. Exploration to the north across the granitic and dioritic areas with IP produced weak to negative results.

Drilling in this area at AF 1, 2, and 3 drill holes indicates interesting mineralization, confirming the ealrier IP anomalies, although not of economic significance. Further drilling should be done in this area and to the southwest and south along the anomaly to adequately test it.

Edmond F. Lawrence
Mining Geologist
Reno, Nevada

April 16, 1966

6000 0041 (0540)



Aeromagnetic Map--AFTERTHOUGHT PROSPECT

Walker River Paiute Reservation

Magnetic contours drawn at 50 gamma intervals

6000 0041 (0540)

Geochemical Surveys

ROCKY MOUNTAIN GEOCHEMICAL LABORATORIES

P. O. Box 2217, 1870 South 2nd West St.
SALT LAKE CITY, UTAH 84110

Phone 466-9172
Area Code: 801

ANALYTICAL REPORT

AFTERTHOUGHT

Date 10/11/65

Client Mr. Wm. L. Wilson
Walker-Martel Mining Co.
1080 Pine Ridge Drive
Reno, Nevada

Report on: 55 rock samples

Submitted by: Mr. Wilson

Date: 9/24/65

Analysis: Copper, Zinc, Lead & Molybdenum

Remarks: All analyses done colorimetrically. One copper assay reported below.

cc: Enc.
file

JJJ:ab

Sample No.	%Copper
AF-3E-14.5N	0.56

Sample No.	Copper	Zinc	Lead	Molybdenum
AF-3W-Zero	20	10	5	8
AF-3W-1S	30	5	5	4
AF-3W-2S	15	5	5	3
AF-3W-1N	210	5	5	7
AF-3W-7N	25	50	10	22
AF-3W-8N	400	15	5	10
AF-3W-9N	45	30	10	4
AF-3W-10N	60	15	5	4
AF-3W-11N	10	30	5	3
AF-3W-12N	20	30	5	6
AF-9W-Zero	130	10	10	12
Bot. Anom. of 900W -0	180	40	10	7
AF-9W-1S	110	15	10	148
AF-9W-2S	20	10	-5	5
AF-9W-3S	220	10	5	9
AF-9W-4S	20	5	5	3
AF-9W-5S	10	5	5	4
AF-9W-1N	70	115	5	10
AF-9W-2N	85	35	5	3
AF-9W-7N	55	15	10	3
AF-9W-8N	20	20	5	3
AF-9W-9N	45	15	10	6
AF-9W-10N	20	40	-5	4
AF-9W-11N	25	20	5	4
AF-9W-12N	10	5	-5	9

Sample No.	Copper	Zinc	Lead	Molybdenum
AF-9W-13N	20	20	-5	3
AF-9W-15N	15	15	5	2
AF-3E-2N	25	10	-5	2
AF-3E-3N	20	10	-5	3
AF-3E-4N	30	10	10	3
AF-3E-5N	200	15	-5	5
AF-3E-6N	115	45	5	10
AF-3E-11N	65	35	-5	5
AF-3E-12.5N	65	5	5	8
AF-3E-14N	55	95	10	5
AF-3E-14.5N	+1000	100	5	5
AF-3E-15N	20	30	10	3
ey Shaft. AF-Dump-Chlor-Zone	130	15	5	29
AF-9E-2N	15	5	-5	3
AF-9E-3N	10	10	5	3
AF-9E-4N	90	10	5	5
AF-9E-5N	50	10	10	28
AF-9E-6N	45	5	5	3
AF-9E-7N	110	10	10	9
AF-9E-8N	300	40	15	43
AF-9E-9N	50	5	10	6
AF-9E-10N	15	45	10	3
AF-9E-13N	15	50	5	3
E AKA AF-Skarn in Rd.Cut	105	10	5	4
AF-15E-4N	10	5	5	3

Sample No.	Copper	Zinc	Lead	Molybdenum
AF-15E-5N	15	5	5	3
AF-15E-6N	30	5	5	5
AF-15E-7N	5	80	25	3
AF-15E-8N	5	35	10	3
AF-15E-9N	5	20	5	4

Rocky Mountain Geochemical Laboratories'
Salt Lake City, Utah October 11, 1965

By James J. Johnson

6000 0041 (0540)

Idaho Mining Corporation

POST OFFICE BOX 1315 • PHONE 323-1324 • RENO, NEVADA

April 4, 1963

Sage Exploration & Development Co., Inc.
1435 G Street, N. W.
Washington 5, D. C.

Re: Notice of Discovery,
BOO BOO PROSPECT

Attention: Mr. Harold E. Rainville, President.

Dear Mr. Rainville:

Pursuant to our Letter Agreement of January 23, 1963, and the subsequent modification dated March 13, 1963, notice is hereby given that Idaho Mining Corporation has made a "discovery" of mineral, as provided in paragraph 4 of said letter agreement of January 23. For purposes of identification, we are calling this discovery the "Boo Boo Prospect".

The land claimed in this discovery is the SE¼ of Section 1, T 14 N, R 28 E, MDB&M, Lyon County, Nevada, and covers approximately 160 acres. This land has been surveyed and subdivided.

The enclosed maps show the magnetic anomaly and ground magnetic work done on this prospect. We are also furnishing magnetic profiles across the anomaly for your perusal.

This anomaly is probably occurring over a relatively small but shall iron ore occurrence. There are no outcrops of iron ore nearby, however the geologic conditions are favorable for this type of deposition. We will probably do some additional geophysics on this prospect before drilling, and will keep you advised of the progress.

This anomaly is in one of the areas which we had considered favorable from our reconnaissance prospecting of last April. We are continuing to do further ground work until the Aerial magnetic work is completed.

Yours very truly,

IDAHO MINING CORPORATION

By: Wm L Wilson
Wm. L. Wilson, Mgr. Exploration

encl:

map, Boo Boo Prospect, 1" = 200'
map, Boo Boo Prospect, 1" = 50'
10 profiles, Boo Boo Prospect

certified mail No. 525970
return receipt requested.

6000 0041 (0540) (7)

RENO OFFICE

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET • SPARKS-RENO, NEVADA 89431 • PHONE: (702) 359-6311

Certificate of Analysis

RMGC Numbers:

Local Job No.: 74-21-33R

Foreign Job No.:

Invoice No.: 8940

Date: July 27, 1974

Client: Idaho Mining Corporation

521 Gordon Avenue

Reno, Nevada

Client Order No.: None

Report On: 40 cutting samples

Submitted by: John Volgamore

Date Received: July 23, 1974

Analysis: Copper, Molybdenum, and Gold

Analytical Methods: Molybdenum analysis is determined colorimetrically. All other analyses are determined by atomic absorption.

Remarks: None

cc: Enclosed (2)
RMGC
File

GMF:sp

ND = None Detected 1 ppm = 0.0001% 1 Troy oz./ton = 34.286 ppm 1 ppm = 0.0292 Troy oz./ton

Sample No.			ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF1	2	10-20'	75	5	-0.05
	3	20-30'	35	4	0.05
	4	30-40'	40	5	-0.05
	5	40-50'	65	4	-0.05
	6	50-60'	55	6	-0.05
	7	60-70'	40	5	-0.05
	8	70-80'	40	2	-0.05
	9	80-90'	30	2	-0.05
AF1	10	90-100'	30	2	-0.05
AF2	1	0-10'	205	8	-0.05
	2	10-20'	330	22	-0.05
	3	20-30'	410	17	0.05
AF2	4	30-40'	280	20	0.20
AF3	1	0-10'	240	11	-0.05
	2	10-20'	50	1	-0.05
	3	20-30'	120	11	-0.05
	4	30-40'	600	6	-0.05
	5	40-50'	100	2	-0.05
	6	50-60'	80	3	-0.05
	7	60-70'	60	2	-0.05
	8	70-80'	95	1	-0.05
	9	80-90'	85	1	-0.05
	10	90-100'	100	-1	-0.05
AF3	11	100-110'	125	2	-0.05

Sample No.			ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF4	3	20-30'	75	2	-0.05
	4	30-40'	50	2	-0.05
	5	40-50'	220	3	-0.05
	6	50-60'	140	5	-0.05
	7	60-70'	250	6	-0.05
	8	70-80'	250	3	-0.05
	9	80-90'	160	8	-0.05
	10	90-100'	205	10	-0.05
	11	100-110'	180	4	-0.05
	12	110-120'	100	3	-0.05
	13	120-130'	65	2	-0.05
	14	130-140'	55	6	-0.05
	15	140-150'	65	6	-0.05
	16	150-160'	70	8	-0.05
	17	160-170'	50	5	-0.05
AF4	18	170-180'	65	11	-0.05

By _____

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada July 27, 1974

AF-6.

60000041 (0540)

	From	To	Fe	Cu	Au	Ag
Bottom	642	654		.012	Fe	.10
9	654	666		.012	No	Vg
10	666	678		.018	Fe	No
11 Wall	678	690		.018	.005	No.

Client Idaho Mining Corporation Date August 7, 1974 RMGC Job No. 74-23-36R

Sample No.		ppm Copper	ppm Molybdenum	ppm Gold
AF	7-12 110-120	40	3	-0.05
	8-12 110-120	160	2	-0.05
	9-12 110-120	40	1	-0.05
	10-3 20-30	190	-1	-0.05
	10-12 110-120	50	8	0.05
AF	11-12 110-120	55	-1	-0.05

By Gary M. Fechko

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada August 7, 1974

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF -7-	1 0-10'	45	3	-0.05
	2 10-20'	70	5	-0.05
	3 20-30'	95	3	-0.05
	4 30-40'	130	4	-0.05
	5 40-50'	90	3	-0.05
	6 50-60'	165	10	-0.05
	7 60-70'	45	5	-0.05
	8 70-80'	25	4	-0.05
	9 80-90'	45	3	-0.05
	10 90-100'	25	3	-0.05
	11 100-110'	50	10	-0.05
	13 120-130'	35	4	-0.05
	14 130-140'	30	4	-0.05
	15 140-150'	20	2	-0.05
	16 150-160'	20	3	-0.05
	17 160-170'	15	8	-0.05
	18 170-180'	30	5	-0.05
	19 180-190'	50	8	-0.05
-7-	20 190-200'	45	10	-0.05
-8-	1 0-10'	135	8	-0.05
	2 10-20'	150	3	-0.05
	3 20-30'	180	4	-0.05
	4 30-40'	105	2	-0.05
AF -8-	5 40-50'	75	-1	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF -8-	6 50-60'	100	1	-0.05
	7 60-70'	185	1	-0.05
	8 70-80'	110	1	-0.05
	9 80-90'	80	1	-0.05
	10 90-100'	90	1	-0.05
	11 100-110'	265	1	-0.05
	13 120-130'	65	1	-0.05
	14 130-140'	50	-1	-0.05
	15 140-150'	50	1	-0.05
	16 150-160'	55	3	-0.05
	17 160-170'	50	3	-0.05
	18 170-180'	55	3	-0.05
	19 180-190'	45	4	-0.05
-8-	20 190-200'	40	4	-0.05
-9-	1 0-10'	50	10	-0.05
	2 10-20'	155	8	-0.05
	3 20-30'	135	3	-0.05
	4 30-40'	40	3	-0.05
	5 40-50'	110	3	-0.05
	6 50-60'	80	-1	-0.05
	7 60-70'	45	1	-0.05
	8 70-80'	55	4	-0.05
	9 80-90'	70	4	-0.05
AF -9-	10 90-100'	35	3	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF	9- 11 100-110'	30	2	-0.05
	13 120-130'	25	10	-0.05
	14 130-140'	45	3	-0.05
	15 140-150'	50	3	-0.05
	16 150-160'	40	3	-0.05
	17 160-170'	40	2	-0.05
	18 170-180'	45	3	-0.05
	19 180-190'	45	3	-0.05
	20 190-200'	50	3	-0.05
	9- 20.1 200-201'	50	3	-0.05
	10- 1 0-10'	60	3	-0.05
	2 10-20'	175	2	-0.05
	4 30-40'	110	2	-0.05
	5 40-50'	90	1	-0.05
	6 50-60'	75	-1	-0.05
	7 60-70'	45	-1	-0.05
	8 70-80'	30	1	-0.05
	9 80-90'	20	6	-0.05
	10 90-100'	35	11	-0.05
	11 100-110'	40	5	-0.05
	13 120-130'	40	5	-0.05
	14 130-140'	40	4	-0.05
	15 140-150'	40	3	-0.05
AF	10- 16 150-160'	45	2	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 10-	17 160-170	35	3	-0.05
	18 170-180	120	4	-0.05
	19 180-190	45	5	-0.05
	20 190-200	50	10	-0.05
	21 200-210	40	13	-0.05
	22 210-220	55	13	-0.05
	23 220-230	65	10	-0.05
	24 230-240	50	10	-0.05
	25 240-250	55	10	-0.05
	26 250-260	50	11	-0.05
	27 260-270	60	10	-0.05
	28 270-280	55	3	-0.05
10-	28.7 280-287	50	4	-0.05
11-	1 0-10	5	-1	-0.05
	2 10-20	10	-1	-0.05
	3 20-30	5	-1	-0.05
	4 30-40	5	-1	-0.05
	5 40-50	20	-1	-0.05
	6 50-60	15	-1	-0.05
	7 60-70	20	-1	-0.05
	8 70-80	20	-1	-0.05
	9 80-90	15	-1	-0.05
	10 90-100	65	-1	-0.05
AF 11-	11 100-110	85	-1	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 11-	13 120-130	65	-1	-0.05
	14 130-140	75	-1	-0.05
	15 140-150	85	1	-0.05
	16 150-160	50	4	-0.05
	17 160-170	65	10	-0.05
	18 170-180	90	17	-0.05
	19 180-190	50	16	-0.05
	20 190-200	25	15	-0.05
	21 200-210	35	16	-0.05
	22 210-220	25	4	-0.05
AF 11-	23 220-230	40	15	-0.05

By Gary M. Fechko

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada August 27, 1974

60000041 (05-48)
(6)

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET • SPARKS-RENO, NEVADA 89431 • PHONE: (702) 359-6311

RENO OFFICE

Certificate of Analysis

RMGC Numbers:

Local Job No.: 74-25-16R

Foreign Job No.:

Invoice No.: 9120

Date: August 27, 1974

Client: Idaho Mining Corporation
P. O. Box 2183
Grand Junction, Colorado 81501

Client Order No.: None

Report On: 107 drill cutting samples

Submitted by: John H. Volgamore

Date Received: August 12, 1974

Analysis: Copper, Molybdenum, and Gold

Analytical Methods: Molybdenum analysis is determined colorimetrically.
All other analyses are determined by atomic absorption.

Remarks: None

cc: Enclosed
Idaho Mining--Reno, Nevada
RMGC
File

GMF:sp

Client Idaho Mining Corp. Date August 27, 1974 RMGC Job No. 74-25-16R

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 7-	1 0-10'	45	3	-0.05
	2 10-20'	70	5	-0.05
	3 20-30'	95	3	-0.05
	4 30-40'	130	4	-0.05
	5 40-50'	90	3	-0.05
	6 50-60'	165	10	-0.05
	7 60-70'	45	5	-0.05
	8 70-80'	25	4	-0.05
	9 80-90'	45	3	-0.05
	10 90-100'	25	3	-0.05
	11 100-110'	50	10	-0.05
	13 120-130'	35	4	-0.05
	14 130-140'	30	4	-0.05
	15 140-150'	20	2	-0.05
	16 150-160'	20	3	-0.05
	17 160-170'	15	8	-0.05
	18 170-180'	30	5	-0.05
	19 180-190'	50	8	-0.05
7-	20 190-200'	45	10	-0.05
8-	1 0-10'	135	8	-0.05
	2 10-20'	150	3	-0.05
	3 20-30'	180	4	-0.05
	4 30-40'	105	2	-0.05
AF 8-	5 40-50'	75	-1	-0.05

Client Idaho Mining Corp. Date August 27, 1974 RMGC Job No. 74-25-16R

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 8-	6 50-60'	100	1	-0.05
	7 60-70'	185	1	-0.05
	8 70-80'	110	1	-0.05
	9 80-90'	80	1	-0.05
	10 90-100'	90	1	-0.05
	11 100-110'	265	1	-0.05
	13 120-130'	65	1	-0.05
	14 130-140'	50	-1	-0.05
	15 140-150'	50	1	-0.05
	16 150-160'	55	3	-0.05
	17 160-170'	50	3	-0.05
	18 170-180'	55	3	-0.05
	19 180-190'	45	4	-0.05
8-	20 190-200'	40	4	-0.05
9-	1 0-10'	50	10	-0.05
	2 10-20'	155	8	-0.05
	3 20-30'	135	3	-0.05
	4 30-40'	40	3	-0.05
	5 40-50'	110	3	-0.05
	6 50-60'	80	-1	-0.05
	7 60-70'	45	1	-0.05
	8 70-80'	55	4	-0.05
	9 80-90'	70	4	-0.05
AF 9-	10 90-100'	35	3	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 9-	11 (100-110')	30	2	-0.05
	13 (120-130')	25	10	-0.05
	14 (130-140')	45	3	-0.05
	15 (140-150')	50	3	-0.05
	16 (150-160')	40	3	-0.05
	17 (160-170')	40	2	-0.05
	18 (170-180')	45	3	-0.05
	19 (180-190')	45	3	-0.05
	20 (190-200')	50	3	-0.05
9-	20.1 (200-201')	50	3	-0.05
10-	1 (0-10')	60	3	-0.05
	2 (10-20')	175	2	-0.05
	4 (30-40')	110	2	-0.05
	5 (40-50')	90	1	-0.05
	6 (50-60')	75	-1	-0.05
	7 (60-70')	45	-1	-0.05
	8 (70-80')	30	1	-0.05
	9 (80-90')	20	6	-0.05
	10 (90-100')	35	11	-0.05
	11 (100-110')	40	5	-0.05
	13 (120-130')	40	5	-0.05
	14 (130-140')	40	4	-0.05
	15 (140-150')	40	3	-0.05
AF 10-	16 (150-160')	45	2	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 10-	17 160-170'	35	3	-0.05
	18 170-180'	120	4	-0.05
	19 180-190'	45	5	-0.05
	20 190-200'	50	10	-0.05
	21 200-210'	40	13	-0.05
	22 210-220'	55	13	-0.05
	23 220-230'	65	10	-0.05
	24 230-240'	50	10	-0.05
	25 240-250'	55	10	-0.05
	26 250-260'	50	11	-0.05
	27 260-270'	60	10	-0.05
	28 270-280'	55	3	-0.05
10-	28.7 280-287'	50	4	-0.05
11-	1 0-10'	5	-1	-0.05
	2 10-20'	10	-1	-0.05
	3 20-30'	5	-1	-0.05
	4 30-40'	5	-1	-0.05
	5 40-50'	20	-1	-0.05
	6 50-60'	15	-1	-0.05
	7 60-70'	20	-1	-0.05
	8 70-80'	20	-1	-0.05
	9 80-90'	15	-1	-0.05
	10 90-100'	65	-1	-0.05
AF 11-	11 100-110'	85	-1	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 11-	13 120-130	65	-1	-0.05
	14 130-140	75	-1	-0.05
	15 140-150	85	1	-0.05
	16 150-160	50	4	-0.05
	17 160-170	65	10	-0.05
	18 170-180	90	17	-0.05
	19 180-190	50	16	-0.05
	20 190-200	25	15	-0.05
	21 200-210	35	16	-0.05
	22 210-220	25	4	-0.05
AF 11-	23 220-230	40	15	-0.05

By Gary M. Fechko

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada August 27, 1974

6000 0041 (0540)

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET • SPARKS-RENO, NEVADA 89431 • PHONE: (702) 359-6311

RENO OFFICE

Certificate of Analysis

RMGC Numbers:
Local Job No.: 74-25-14R
Foreign Job No.:
Invoice No.: 9139

Date: August 28, 1974

Client: Idaho Mining Corporation
P. O. Box 2183
Grand Junction, Colorado

Client Order No.: None

Report On: 138 drill cutting samples

Submitted by: John H. Volgamore

Date Received: August 12, 1974

Analysis: Copper, Molybdenum, and Sensitive Gold

Analytical Methods: Molybdenum analysis is determined colormetrically.
All other analyses are determined by atomic absorption.

Remarks: None

cc: Enclosed
Idaho Mining--Reno, Nevada
Idaho Mining--Eureka, Nevada
RMGC
File

GMF:sp

ND = None Detected | 1 ppm = 0.0001% | 1 Troy oz./ton = 34.286 ppm | 1 ppm = 0.0292 Troy oz./ton

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 12- (	1 0-10'	75	1	-0(.05
	2 10-20'	90	2	-0(.05
	3 20-30'	30	4	-0(.05
	4 30-40'	25	11	-0(.05
	5 40-50'	20	5	-0(.05
	6 50-60'	25	10	-0(.05
	7 60-70'	15	13	-0(.05
	8 70-80'	20	15	-0(.05
	9 80-90'	20	17	-0(.05
	10 90-100'	30	20	-0(.05
	11 100-110'	45	20	-0(.05
	12 110-120'	45	11	-0(.05
	13 120-130'	45	4	-0(.05
	14 130-140'	35	6	-0(.05
	15 140-150'	30	8	-0(.05
	16 150-160'	35	13	-0(.05
	17 160-170'	45	3	-0(.05
	18 170-180'	45	5	-0(.05
	19 180-190'	55	6	-0(.05
	20 190-200'	50	4	-0(.05
	21 200-210'	55	-1(	-0(.05
	22 210-220'	40	-1(	-0(.05
	23 220-230'	35	-1(	-0(.05
AF 12-	(23.4 230-234'	40	-1(	-0(.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 13-	1 0-10'	65	-1	-0.05
	2 10-20'	50	1	-0.05
	3 20-30'	55	29	-0.05
	4 30-40'	80	25	-0.05
	5 40-50'	50	6	-0.05
	6 50-60'	50	15	-0.05
	7 60-70'	90	-1	-0.05
	8 70-80'	75	1	-0.05
	9 80-90'	80	2	-0.05
	10 90-100'	50	1	-0.05
	11 100-110'	40	2	-0.05
	12 110-120'	45	4	-0.05
	13 120-130'	40	5	-0.05
	14 130-140'	40	3	-0.05
	15 140-150'	40	6	-0.05
	16 150-160'	45	10	-0.05
	17 160-170'	45	-1	-0.05
	18 170-180'	45	1	-0.05
	19 180-190'	40	2	-0.05
	20 190-200'	40	3	-0.05
	21 200-210'	55	4	-0.05
	22 210-220'	40	5	-0.05
	23 220-230'	50	8	-0.05
AF 13-	24 230-240'	50	3	-0.05

Client Idaho Mining Corp. Date August 28, 1974 RMGC Job No. 74-25-14R

Sample No.	ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 13- 25 240-250	40	3	-0.05
AF 13- 25.6 250-256	85	19	-0.05
AF 14- 1 0-10	70	1	-0.05
2 10-20	75	2	-0.05
3 20-30	60	2	-0.05
4 30-40	95	1	-0.05
5 40-50	110	1	-0.05
6 50-60	85	2	-0.05
7 60-70	50	2	-0.05
8 70-80	50	4	-0.05
9 80-90	895	10	-0.05
10 90-100	500	2	-0.05
11 100-110	270	-1	-0.05
12 110-120	50	1	-0.05
13 120-130	40	1	-0.05
14 130-140	55	11	-0.05
15 140-150	175	15	-0.05
16 150-160	80	10	-0.05
17 160-170	75	13	-0.05
18 170-180	55	8	-0.05
19 180-190	75	3	-0.05
20 190-200	55	5	-0.05
21 200-210	50	8	-0.05
AF 14- 22 210-220	50	10	-0.05

Sample No.	ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF 14- 23 220-230	40	5	-0.05
24 230-240	115	8	-0.05
14- 24.7 240-247	235	10	-0.05
15- 1 0-10	20	2	-0.05
2 10-20	20	5	-0.05
3 20-30	120	11	-0.05
4 30-40	50	6	-0.05
5 40-50	40	5	-0.05
6 50-60	65	8	-0.05
7 60-70	180	5	-0.05
8 70-80	200	5	-0.05
15- 8.7 80-87	225	11	-0.05
16- 1 0-10	310	11	-0.05
2 10-20	380	3	-0.05
3 20-30	175	8	-0.05
4 30-40	140	5	-0.05
5 40-50	335	30	-0.05
6 50-60	395	66	-0.05
7 60-70	200	28	-0.05
8 70-80	590	28	-0.05
16- 9 80-90	200	26	-0.05
17- 1 0-10	205	25	-0.05
2 10-20	315	8	-0.05
17- 3 20-30	95	5	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF	17- 4 30-40	80	16	-0.05
	5 40-50	145	8	-0.05
	6 50-60	110	8	-0.05
	7 60-70	50	10	-0.05
	8 70-80	35	-1	-0.05
	9 80-90	60	4	-0.05
	10 90-100	270	3	-0.05
	11 100-110	240	6	-0.05
	12 110-120	235	8	-0.05
	13 120-130	220	11	-0.05
	14 130-140	90	3	-0.05
	15 140-150	120	3	-0.05
	16 150-160	95	4	-0.05
	17 160-170	245	3	-0.05
	18 170-180	405	5	0.05
	19 180-190	370	8	0.10
	20 190-200	130	8	-0.05
	21 200-210	240	13	-0.05
	22 210-220	95	28	-0.05
	23 220-230	65	19	-0.05
	24 230-240	105	4	-0.05
	17- 25 240-250	100	8	-0.05
	18- 1 0-10	60	20	-0.05
AF-	18- 2 10-20	50	5	-0.05

Sample No.		ppm Copper	ppm Molybdenum	ppm Sensitive Gold
AF- 18-	3 20-30	295	2	-0.05
	4 30-40	475	13	-0.05
	5 40-50	875	44	-0.05
	6 50-60	650	49	-0.05
	7 60-70	0.13%	44	-0.05
	8 70-80	675	20	-0.05
	9 80-90	330	22	-0.05
	10 90-100	555	17	-0.05
	11 100-110	320	3	-0.05
	12 110-120	360	4	-0.05
	13 120-130	370	16	0.05
	14 130-140	260	19	-0.05
	15 140-150	110	8	-0.05
	16 150-160	160	6	0.05
	17 160-170	100	3	-0.05
	18 170-180	95	8	-0.05
	19 180-190	70	5	-0.05
AF 18-	19.8 190-198	125	19	-0.05

By Gary M. Fechko

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada August 28, 1974

6000 0041 (0540)

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET • SPARKS-RENO, NEVADA 89431 • PHONE: (702) 359-6311

RENO OFFICE

Certificate of Analysis

RMGC Numbers:

Local Job No.: 74-31-21R

Foreign Job No.:

Invoice No.: 9410

Date: October 10, 1974

Client: Idaho Mining Corporation

P. O. Box 2083

Grand Junction, Colorado 81511

Client Order No.: None

Report On: 82 Drill cutting samples

Submitted by: W. L. Wilson

Date Received:

Analysis: Molybdenum, Copper and Gold

Analytical Methods: Molybdenum analysis is determined colorimetrically.
All other analyses are determined by atomic absorption.

Remarks: None

cc: Enclosed
Idaho Mining Corp. Reno, Nevada
Idaho Mining Corp. Eureka, Nevada
RMGC
File

GMF:er

See Memo

AFE

E-W

ND = None Detected 1 ppm = 0.0001% 1 Troy oz./ton = 34.286 ppm 1 ppm = 0.0292 Troy oz./ton

Sample No.		ppm Copper	ppm Molybdenum	Oz/T ~~Silver~~ Gold
AF-19-1	0-10'	100	-1	-0.003
2	10-20'	85	-1	-0.003
3	20-30'	75	-1	-0.003
4	30-40'	110	-1	-0.003
5	40-50'	70	-1	-0.003
6	50-60'	97	-1	-0.003
7	60-70'	80	-1	-0.003
8	70-80'	65	-1	-0.003
9	80-90'	75	-1	-0.003
10	90-100'	75	-1	-0.003
11	100-110'	75	-1	-0.003
12	110-120'	75	-1	-0.003
13	120-130'	60	-1	-0.003
14	130-140'	75	-1	-0.003
15	140-150'	65	-1	-0.003
16	150-160'	60	-1	-0.003
17	160-170'	100	-1	-0.003
18	170-180'	60	-1	-0.003
19	180-190'	60	-1	-0.003
20	190-200'	75	-1	-0.003
AF-19-20.8	200-208'	75	-1	-0.003
AF-20-1	0-10'	50	-1	-0.003
2	10-20'	55	-1	-0.003
3	20-30'	50	-1	-0.003
4	30-40'	125	-1	-0.003

Sample No.	ppm Copper	ppm Molybdenum	Oz/T ~~Silver~~ GOLD
AF-20-5 40-50	85	-1	-0.003
6 50-60	75	-1	-0.003
7 60-70	95	-1	-0.003
8 70-80	75	-1	-0.003
9 80-90	70	-1	-0.003
10 90-100	95	-1	-0.003
11 100-110	75	-1	-0.003
12 110-120	50	-1	-0.003
13 120-130	35	-1	-0.003
14 130-140	85	-1	-0.003
15 140-150	60	-1	-0.003
16 150-160	60	-1	-0.003
17 160-170	95	-1	-0.003
18 170-180	75	-1	-0.003
19 180-190	80	-1	-0.003
20 190-200	75	-1	-0.003
AF-20-20.8 200-208	75	-1	-0.003
WD-243-1			0.018
2			0.006
3			0.003
WD-243-3.6			0.006
WD-244-1			0.035
WD-245-1			0.053
WD-246-1			0.009
WD-246-2			0.012

where

Sample No.	Oz/T Gold
WD246-3	0.006
WD247-1	0.026
2	0.009
3	-0.003
4	-0.003
WD247-5	0.003
WD248-1	0.012
2	0.012
3	0.009
WD249-1	0.029
2	0.003
3	0.009
4	0.003
WD249-5	0.006
WD250-1	0.015
2	0.006
3	0.009
4	0.015
WD250-5	0.018
WD251-1	0.038
2	0.012
3	0.015
4	0.035
WD251-5	0.018
WD252-1	0.020

Sample No.	Oz/T Gold
WD252-2	0.003
3	0.012
WD252-5	0.023
WD253-1	0.026
2	0.061
3	0.163
WD253-4	0.023

By Gary M. Fechko

Gary M. Fechko

Rocky Mountain Geochemical Corporation
Sparks, Nevada October 10, 1974

6000 0041 (0540)

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET • SPARKS-RENO, NEVADA 89431 • PHONE: (702) 359-6311

RENO OFFICE

Certificate of Analysis

RMGC Numbers:
Local Job No.: 74-23-36R
Foreign Job No.:
Invoice No.: 9008

Date:	August 7, 1974
Client:	Idaho Mining Corporation 521 Gordon Avenue Reno, Nevada 89502
Client Order No.:	None
Report On:	6 rock samples
Submitted by:	J. Volgamore
Date Received:	August 2, 1974
Analysis:	Copper, Molybdenum, and Gold
Analytical Methods:	Molybdenum analysis is determined colorimetrically. All other analyses are determined by atomic absorption.
Remarks:	None
cc:	Enclosed (2) RMGC File

GMF:sp

ND = None Detected 1 ppm = 0.0001% 1 Troy oz./ton = 34.286 ppm 1 ppm = 0.0292 Troy oz./ton

6000 0041 (0041)

RENO OFFICE

ROCKY MOUNTAIN GEOCHEMICAL CORP.

840 GREG STREET · SPARKS-RENO, NEVADA 89431 · PHONE: (702) 359-6311

Certificate of Analysis

RMGC Numbers:

Local Job No.: 74-21-33R

Foreign Job No.:

Invoice No.: 8940

Date:	July 27, 1974
Client:	Idaho Mining Corporation 521 Gordon Avenue Reno, Nevada
Client Order No.:	None
Report On:	40 cutting samples
Submitted by:	John Volgamore
Date Received:	July 23, 1974
Analysis:	Copper, Molybdenum, and Gold
Analytical Methods:	Molybdenum analysis is determined colorimetrically. All other analyses are determined by atomic absorption.
Remarks:	None
cc:	Enclosed (2) RMGC File

GMF:sp

6000 0041 (0541)

Telephone 363-3302

Hand
Sample Serial 7852-7866

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City, Utah 84110

Mail: Robert L. Redmond
1080 Pine Ridge
Reno, Nevada

RESULTS PER TON OF 2000 POUNDS

Sept. 17, 1965

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
807R				0.107				59.6			
808R				0.138				57.2			
809R				0.088				56.0			
810R				0.069	AF2	5-30'					
812R				0.050	Δ1	0-25'					
813R				0.025	Δ1	30-50'					
814R				0.037	Δ1	50-110'					
815R				0.018	Δ2	0-25'					
816R				0.088	Δ2	25-35'					
817R				0.012	Δ2	35-50'					
818R				0.037	Δ2	60-95'					
819R				0.012	Δ3	5-60'					
820RR				0.012	Δ3	60-75'					
821R				0.069	Δ3	75-80'					
822R				0.025	Δ3	80-105'					

Not Cu Hill?

Remarks

Charges $ 31.50

W. C. Wanlass

6000 0041 (0540)

After Thought
Drill
Pattern

July - August
1974

Distance		Depth
	O AF-11	230'
40'		
	O AF-10	287'
50'		
	O AF-12	234'
50'		
	O AF-9	201'
50'		
	O AF-13	256'
50'		
5'	O AF-8 — — — AF-3	200'
60'		
	O AF-4	247'
50'		
	O AF-7	200'
90'		
	• — — AF-1	
100'		
	O AF-15	87'
100'		
	• — — AF-2	
110'		
	O AF-18	198'
90'		
	O AF-17	250'
100'		
	O AF-16	90'

John H. Volgamore
Geologist

6000 0041 (0540)

SPEED MESSAGE

TO R. L. Redmond FROM W. L. Wilson

SUBJECT Geochemistry performed on DH AF 5 (Afterthought Prospect)

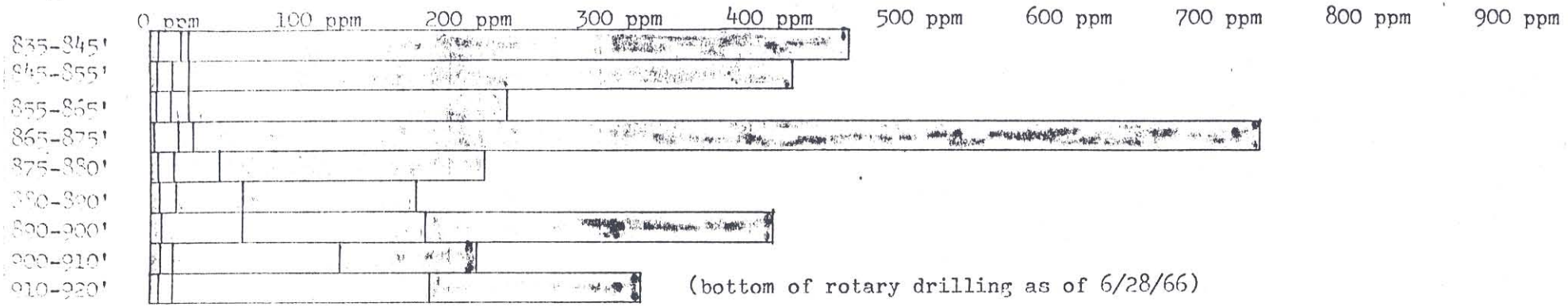
DATE August 3, 1966

Bob: The attached bar diagram shows the distribution of Mo, Pb, Cu and Zn in the rotary portion of drill hole AF 5 between 335 and 920'. This section was selected for analysis because it represents the contact between the volcanic cover and the Mesozoic section. Geochemically, this appears to manifest itself at about 875'. Below this, there is a marked increase in the copper content of the samples. The values should all be good as far as reliability is concerned, with the exception of Zinc, which may represent contamination of the samples by the use of zinc-base grease by the drilling contractor.

SIGNED W. L. Wilson

AFTERTHOUGHT PROSPECT

Distribution of Mo, Pb, Cu, and Zn in rotary cuttings of Drill Hole AF-5 in parts per million
(Total values)



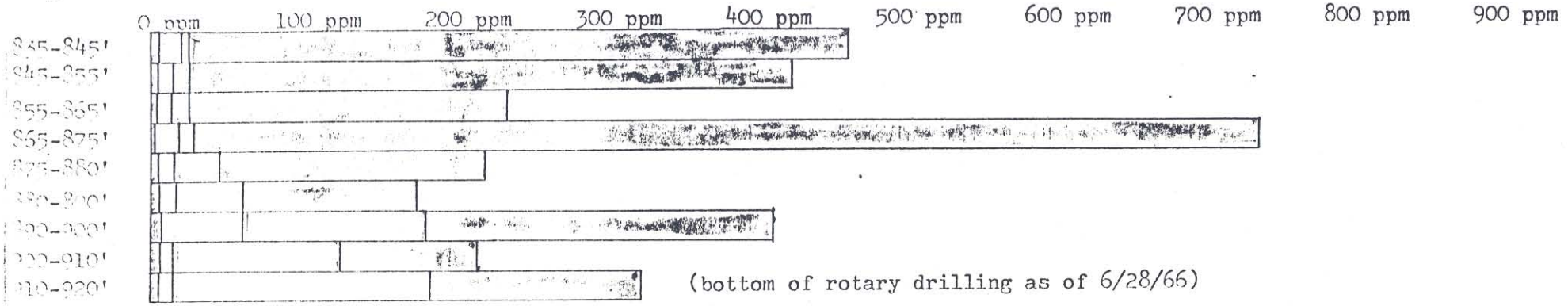
(bottom of rotary drilling as of 6/28/66)

Mo
Pb
Cu
Zn

compiled by W. L. Wilson 8/8/66

AFTERTHOUGHT PROSPECT

Distribution of Mo, Pb, Cu, and Zn in rotary cuttings of Drill Hole AF-5 in parts per million
(Total values)



(bottom of rotary drilling as of 6/28/66)

Mo

Pb

Cu

Zn

compiled by W. L. Wilson 8/8/66

60000041 (0540)

AFL

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City, Utah 84110

Telephone 363-3302

Hand Sample Serial 40537-40547

Mine Robert L. Redmond
1080 Pine Ridge Drive
Reno, Nevada 89501
2

RESULTS PER TON OF 2000 POUNDS

August 4, 1966

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
										Tag Lost	WC-1 ?
23 WM	0.010	None		0.056							
24 WM	None	None		0.094	1680	1700			DH	CA-4	
25 WM	Trace	None		0.012	300	3105	DH	AF-6			
26 WM	Trace	None		0.018	363	379					
27 WM	2162	2178 5		0.069				27.1			
28 WM	2178 5	2183		0.037				6.8		DH	
29 WM	2183	2190		0.107				48.7			
30 WM	2190	2207		0.056				15.2		CA-4	
31 WM	2207	2224		0.094				45.5			
32 WM	2224	2236		0.163				47.1			
33 WM	2236	2243		0.119				52.7			

Remarks

Charges $ 43.50

Glen P. Williams

AF6

Telephone 363-3302 Hand Sample Serial 40035-40045

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President
L. G. HALL, Vice President
G. P. WILLIAMS, Treasurer
LILY M. HOTTINGER, Secretary
P. O. Box 1528
Salt Lake City, Utah 84110

Mine Robert L. Redmond
1000 Pine Ridge Drive
Reno, Nevada 89502

RESULTS PER TON OF 2000 POUNDS August 1, 1966

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
1	↑			0.088				60.3	1277	1275	
2				0.075				48.3	1279	1281	
3	DH			0.088				60.7	1281	1248	
4	CA-4			0.056				16.0	1291	1292	
5				0.075				62.3	1292	1299	
6				0.081				55.9	1311	1319	
7	↓			0.025				12.4	1319	1333	
8	↑ Trace	0.1		0.012	642	654					
9	DH None	None		0.012	654	666					
10	AF-6 Trace	None		0.018	666	678					
11	↓ 0.005	None		0.018	678	690					

Remarks

Charges $ 43.50

Glen P. Williams

	AF-1 Mod + Strong Mag.	AF-3 Slight Mag.	
Fe	65.0	65.6	
SiO_2	3.19	2.21	
Al_2O_3	1.22	1.67	
CaO	.4	.7	
MgO	.10	.12	
S	.09	.12	HIGH
P	.056	.062	
As	.01	.01	
Cu	02	.01	
Ni	.02	.02	
Ti	.20	.25	

Results via phone.
3/13/67

Run by U.S. Steel - Provo.