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James Doyle Sell Mining Collection

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AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

August 28, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
OXIDE PIT, AUGUST, 1969

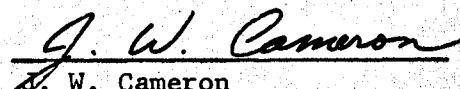
One truck mounted drill was operated from August 1st to August 12th. Drilling progressed two shifts per day, six days per week. The last 260.9 feet of DDH F-208 were completed. F-208 was an angle hole (45° N 0° E).

The footage drilled and the average direct drilling costs for August, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Truck	260.9	13.5'	\$ 6.79

F-208

This angle hole was drilled due north at 45°. Fine grained, tan to green hornfels with thin intervals of quartzite and small patches of garnet extended to 51 feet. Relatively uniform light tan to olive green hornfels with locally strong epidote continued to 133 feet. Accessory minerals included siderite, smithsonite, and wulfenite. Below 133 feet the sediments were cut by several thin weakly altered syenodiorite porphyry dikes. Marble and dolomite were first encountered at 211 feet and from there to the bottom of the hole the metasediments consisted of limey hornfels mixed with marble and dolomite. Two thin low grade ore intercepts were encountered in the hornfels. Chalcopyrite was the only copper mineral noted in the hole.

  
J. W. Cameron  
Resident Geologist

JWC:jca

cc: TASnedden

CPPollock A/M

REMeen

JHCourtright (2)

DRJameson (2)

File

DIAMOND DRILLING PROGRESS REPORT

<u>Hole No.</u>	<u>Approx. Elevation</u>	<u>Approx Coordinates</u>		<u>+0.40% Copper Lenses</u>				<u>Ft. Drill. During Mo.</u>	<u>Depth End Mo.</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick-ness</u>	<u>Avg. % Cu Total</u>	<u>N.S.</u>			
F-208	2661.41	29,996.51	27,117.94	211.0 238.8	10.0 9.0	0.44 0.45	0.01 0.01	260.9	414.4	414.4
								<u>TOTAL</u>	<u>260.9</u>	

29500 N

S ——— N

30500 N

2900

2800

2700

2600

2500

2400

2300

(1-30')

F 207

HF

MZ

HF

MZ

BX

HF

MZ

HF

MZ

0.44  
C.U.I.

SECTION 26870 E

SECTION 27120 E

S ——— N

29500 N

30500 N

3000

2900

2800

2700

2600

2500

2400

F 208

HF B OTZ

SP

HF

SP

HF

SP

HF

SP

HF

SP

HF

HF

B

MB

SP

HF

SP

HF

HF

B

MB

SP

HF

HF

B

MB

SP

HF

HF

B

MB

SP

HF

HF

B

MB

SP

HF

AMERICAN SMELTING & REFINING CO.  
SILVER BELL UNIT

OXIDE PIT  
DRILL HOLE PROJECTIONS

█ + 0.4% Total Copper  
| Advance for month  
Note: Rock Types Generalized  
Cu Assay is Total Cu/Non Sul Cu

SCALE

1" = 200'

DRAWN

RCE

DATE

FILE

S 121

A



AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
SEP 5 - 1969

August 28, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
OXIDE PIT, AUGUST, 1969

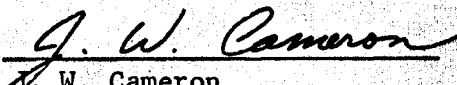
One truck mounted drill was operated from August 1st to August 12th. Drilling progressed two shifts per day, six days per week. The last 260.9 feet of DDH F-208 were completed. F-208 was an angle hole ( $45^{\circ}$  N  $0^{\circ}$  E).

The footage drilled and the average direct drilling costs for August, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Truck	260.9	13.5'	\$ 6.79

F-208

This angle hole was drilled due north at  $45^{\circ}$ . Fine grained, tan to green hornfels with thin intervals of quartzite and small patches of garnet extended to 51 feet. Relatively uniform light tan to olive green hornfels with locally strong epidote continued to 133 feet. Accessory minerals included siderite, smithsonite, and wulfenite. Below 133 feet the sediments were cut by several thin weakly altered syenodiorite porphyry dikes. Marble and dolomite were first encountered at 211 feet and from there to the bottom of the hole the metasediments consisted of limey hornfels mixed with marble and dolomite. Two thin low grade ore intercepts were encountered in the hornfels. Chalcopyrite was the only copper mineral noted in the hole.

  
J. W. Cameron  
Resident Geologist

JWC:jca

cc: TASnedden

CPPollock A/M

REMeen

JHCourtright (2)

DRJameson (2)

File

DIAMOND DRILLING PROGRESS REPORT

<u>Hole No.</u>	<u>Approx. Elevation</u>	<u>Approx Coordinates</u>		<u>+0.40% Copper Lenses</u>				<u>Ft. Drill. During Mo.</u>	<u>Depth End Mo.</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick-ness</u>	<u>Avg. % Cu Total</u>	<u>N.S.</u>			
F-208	2661.41	29,996.51	27,117.94	211.0 238.8	10.0 9.0	0.44 0.45	0.01 0.01	260.9	414.4	414.4
<b>TOTAL</b>								<u>260.9</u>		

29500 N

S ——— N

30500 N

2900  
2800  
2700  
2600  
2500  
2400  
2300

(-30')  
F 207

HF  
MZ  
HF  
MZ  
BX  
HF  
MZ  
HF  
MZ

0.4  
C 4  
1/4

SECTION 26870 E

SECTION 27120 E

S ——— N

29500 N

30500 N

3000  
2900  
2800  
2700  
2600  
2500  
2400

F 208

HF B Q72  
SP HF  
SP HF  
SP HF  
SP HF  
HF B MB  
SP  
HF B MB  
SP HF

AMERICAN SMELTING & REFINING CO.  
SILVER BELL UNIT

OXIDE PIT  
DRILL HOLE PROJECTIONS

■ +0.4% Total Copper  
Advance for month  
Note: Rock Types Generalized  
Cu Assay is Total Cu/Non Sul Cu

SCALE 1" = 200'	DRAWN RCE	DATE	FILE S 121 A
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AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

August 4, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
PORTLAND RIDGE AND OXIDE PIT AREAS, JULY, 1969.

One drill was operated throughout the month of July and a second was in use only from the first through the twelfth. Drilling was carried out two shifts per day, six days per week throughout the month. Drill Hole F-204 was completed on Portland Ridge. Holes F-203, 205 and 206 were completed east of Oxide Pit and Portland Ridge. The first of two holes intended to test the altered Paleozoic sediments in Oxide Pit, F-207, was completed, while the second, F-208, an angle hole, was in progress at the end of the month.

No further diamond drill holes are planned at the present and the diamond drilling can be expected to end in early August.

The footage drilled and the average direct drilling cost for July, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>*Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	812.1	26.2	\$ 6.86
Diamond - Skid	<u>523.5</u>	23.8	<u>10.21</u>
TOTAL	<u>1,335.6</u>	Combined Average	<u>\$ 8.17</u>

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

  
\_\_\_\_\_

R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TAsnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT - JULY, 1969

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-203	2751.59	27,847.78	31,185.46	No plus 0.40% intervals				78.5	271.5	271.5
F-204	2976.22	28,796.99	29,539.48	176.3	30.4	0.53	0.03	370.0	370.0	370.0
F-205	2764.22	28,506.14	30,585.34	No plus 0.40% intervals				195.0	195.0	195.0
F-206	2984.56	30,169.23	29,547.27	"	"	"	"	209.0	209.0	209.0
F-207	2660	30,085	26,870	251.6	11.4	0.44	0.01	329.6	329.6	329.6
*F-208	2660	30,000	27,100	No plus 0.40% intervals				153.5	153.5	153.5

\* Angle Hole. Bearing due north at  $-45^{\circ}$

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

August 4, 1969

W.E.S.  
AUG 7 1969  
J.H.C.  
AUG 12 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
PORTLAND RIDGE AND OXIDE PIT AREAS, JULY, 1969.

One drill was operated throughout the month of July and a second was in use only from the first through the twelfth. Drilling was carried out two shifts per day, six days per week throughout the month. Drill Hole F-204 was completed on Portland Ridge. Holes F-203, 205 and 206 were completed east of Oxide Pit and Portland Ridge. The first of two holes intended to test the altered Paleozoic sediments in Oxide Pit, F-207, was completed, while the second, F-208, an angle hole, was in progress at the end of the month.


No further diamond drill holes are planned at the present and the diamond drilling can be expected to end in early August.

The footage drilled and the average direct drilling cost for July, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>*Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	812.1	26.2	\$ 6.86
Diamond - Skid	<u>523.5</u>	23.8	<u>10.21</u>
TOTAL	<u>1,335.6</u>	Combined Average	<u>\$ 8.17</u>

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - JULY, 1969

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-203 ✓	2751.59	27,847.78	31,185.46	No plus 0.40% intervals ✓				78.5	271.5	271.5
F-204	2976.22	28,796.99	29,539.48	176.3	30.4	0.53	0.03	370.0	370.0	370.0
F-205	2764.22	28,506.14	30,585.34	No plus 0.40% intervals				195.0	195.0	195.0
F-206	2984.56	30,169.23	29,547.27	" "	" "	" "	" "	209.0	209.0	209.0
F-207	2660	30,085	26,870	251.6	11.4	0.44	0.01	329.6	329.6	329.6
*F-208	2660	30,000	27,100	No plus 0.40% intervals				153.5	153.5	153.5

\* Angle Hole. Bearing due north at -45°

JHC Desk

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

July 3, 1969

W.E.S.  
JUL 8 1969

J.H.C.  
AUG 8 - 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
PORTLAND RIDGE AREA, JUNE, 1969

During the month of June, 1969, one skid and one truck mounted diamond drill were operated two shifts per day, six days per week. All drilling was done on the east end of Portland Ridge. Eight holes were completed and one additional hole was in progress at the end of the month. Only one hole, F-202, contained enough ore to carry the overburden. Three or four more holes are planned to complete the drilling south and east of Oxide Pit for the present time.

The footage drilled and the average direct drilling costs for June, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	1,310.8	26.8	\$ 7.11
Diamond - Skid	<u>853.4</u>	25.9	<u>9.09</u>
TOTAL	<u>2,164.2</u>	Combined Average	<u>\$ 7.89</u>

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		<u>+0.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-194	2967.41	28,325.17	29,339.99	No plus 0.40% intervals				187.5	281.0	281.0
F-196	2858.31	28,351.43	29,803.07	"	"	"	"	105.6	105.6	105.6
F-197	2859.77	28,335.69	29,771.50	125.7	56.3	0.48	Nil	228.5	228.5	228.5
F-198	3050	28,450	29,400	229.2 274.9	18.4 18.5	0.73 0.46	Nil .01	306.2	306.2	306.2
F-199	2820.32	28,980.42	29,803.41	No plus 0.40% intervals				265.8	265.8	265.8
F-200	2826.05	28,619.45	29,917.87	134.1	8.9	0.74	Nil	247.4	247.4	247.4
F-201	2931.43	28,665.81	29,637.27	247.2	8.5	1.76	Nil	359.7	359.7	359.7
F-202	2830.31	28,441.98	29,887.53	75.8	114.3	1.12	0.04	270.5	270.5	270.5
F-203	2750	27,850	31,200	No plus 0.40% intervals				<u>193.0</u>	193.0	-
							TOTAL	<u>2,164.2</u>		

W.E.S.  
JUL 8 1969

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

July 3, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
PORTLAND RIDGE AREA, JUNE, 1969

During the month of June, 1969, one skid and one truck mounted diamond drill were operated two shifts per day, six days per week. All drilling was done on the east end of Portland Ridge. Eight holes were completed and one additional hole was in progress at the end of the month. Only one hole, F-202, contained enough ore to carry the overburden. Three or four more holes are planned to complete the drilling south and east of Oxide Pit for the present time.

The footage drilled and the average direct drilling costs for June, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	1,310.8	26.8	\$ 7.11
Diamond - Skid	<u>853.4</u>	25.9	<u>9.09</u>
TOTAL	<u>2,164.2</u>	Combined Average	<u>\$ 7.89</u>

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca  
cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		<u>+0.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-194	2967.41	28,325.17	29,339.99	No plus 0.40% intervals				187.5	281.0	281.0
F-196	2858.31	28,351.43	29,803.07	"	"	"	"	105.6	105.6	105.6
F-197	2859.77	28,335.69	29,771.50	125.7	56.3	0.48	Nil	228.5	228.5	228.5
F-198	3050	28,450	29,400	229.2 274.9	18.4 18.5	0.73 0.46	Nil .01	306.2	306.2	306.2
F-199	2820.32	28,980.42	29,803.41	No plus 0.40% intervals				265.8	265.8	265.8
F-200	2826.05	28,619.45	29,917.87	134.1	8.9	0.74	Nil	247.4	247.4	247.4
F-201	2931.43	28,665.81	29,637.27	247.2	8.5	1.76	Nil	359.7	359.7	359.7
F-202	2830.31	28,441.98	29,887.53	75.8	114.3	1.12	0.04	270.5	270.5	270.5
F-203	2750	27,850	31,200	No plus 0.40% intervals				193.0	193.0	-
							TOTAL	<u>2,164.2</u>		

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
JUN 6 - 1969

June 5, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
West Oxide and Portland Ridge Areas, May 1969

Two skid and one truck mounted diamond drills were operated two shifts per day, six days per week, throughout the month of May, 1969. Holes F-183 and F-189 were completed in the West Oxide area. All of the remaining eight holes were drilled on Portland Ridge. Five holes on Portland Ridge, three on the east end and two on the west, contained enough mineralization to carry the overburden.

The footage drilled and the average direct drilling costs for May, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	1,275.7	27.7	\$ 7.00
Diamond - Skid	<u>1,682.7</u>	26.7	<u>9.27</u>
TOTAL	<u>2,958.4</u>	Combined Avg:	<u>\$ 8.29</u>

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		<u>+0.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to top	Thick-ness	Avg. % Cu Total	N.S.			
F-183	2762.22	28,033.96	24,207.67	No +0.40% intervals				101.0	301.0	301.0
F-185	3136.62	28,449.22	27,669.85	114.0 260.5	54.6 65.2	0.46 0.66	Nil Nil	431.0	451.2	451.2
F-188	2981.16	28,582.01	29,487.86	82.6 311.5	190.4 76.6	0.67 0.61	0.01 0.01	456.2	456.2	456.2
F-189				164.0	27.0	1.06	0.55	229.0	229.0	229.0
F-190	2916.13	29,047.20	29,483.24	94.1 165.4	12.9 20.5	0.52 1.14	Nil 0.03	247.0	247.0	247.0
F-191	3035.10	28,531.79	27,210.27	206.0	52.7	0.71	0.02	391.2	391.2	391.2
F-192	2907.20	28,858.92	29,657.05	105.0 229.0	69.0 46.0	0.79 0.71	0.01 0.01	386.0	386.0	386.0
F-193	3017.04	28,905.09	29,332.60	67.0 135.7	7.8 9.3	0.66 0.51	0.01 0.01	310.8	310.8	310.8
F-194	3000	28,360	29,350	No +0.40% intervals				93.5	93.5	
F-195	2950	28,460	29,620	132.0	151.5	1.01	0.01	312.7	312.7	312.7
							TOTAL	<u>2,958.4</u>		

*Portland Ridge*

*West Oxide*

S-11.1

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

June 5, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
West Oxide and Portland Ridge Areas, May 1969

Two skid and one truck mounted diamond drills were operated two shifts per day, six days per week, throughout the month of May, 1969. Holes F-183 and F-189 were completed in the West Oxide area. All of the remaining eight holes were drilled on Portland Ridge. Five holes on Portland Ridge, three on the east end and two on the west, contained enough mineralization to carry the overburden.

The footage drilled and the average direct drilling costs for May, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Truck	1,275.7	27.7	\$ 7.00
Diamond - Skid	<u>1,682.7</u>	26.7	<u>9.27</u>
TOTAL	<u>2,958.4</u>	Combined Avg:	<u>\$ 8.29</u>

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden

CPPollock A/M

RBMeen

JHCourtright (2)

DRJameson (2)

File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		<u>+0.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to top	Thick-ness	Avg. % Cu Total	N.S.			
F-183	2762.22	28,033.96	24,207.67	No +0.40% intervals				101.0	301.0	301.0
F-185	3136.62	28,449.22	27,669.85	114.0 260.5	54.6 65.2	0.46 0.66	Nil Nil	431.0	451.2	451.2
F-188	2981.16	28,582.01	29,487.86	82.6 311.5	190.4 76.6	0.67 0.61	0.01 0.01	456.2	456.2	456.2
F-189				164.0	27.0	1.06	0.55	229.0	229.0	229.0
F-190	2916.13	29,047.20	29,483.24	94.1 165.4	12.9 20.5	0.52 1.14	Nil 0.03	247.0	247.0	247.0
F-191	3035.10	28,531.79	27,210.27	206.0	52.7	0.71	0.02	391.2	391.2	391.2
F-192	2907.20	28,858.92	29,657.05	105.0 229.0	69.0 46.0	0.79 0.71	0.01 0.01	386.0	386.0	386.0
F-193	3017.04	28,905.09	29,332.60	67.0 135.7	7.8 9.3	0.66 0.51	0.01 0.01	310.8	310.8	310.8
F-194	3000	28,360	29,350	No +0.40% intervals				93.5	93.5	
F-195	2950	28,460	29,620	132.0	151.5	1.01	0.01	<u>312.7</u>	312.7	312.7
								TOTAL	<u>2,958.4</u>	

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
MAY 12 1969

May 6, 1969

MEMORANDUM TO: Mr. D. R. JAMESON, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
Portland Ridge, West Oxide, and North Silver  
Bell Areas, April, 1969.

Two skid and one truck mounted diamond drills were operated two shifts per day, six days per week, throughout the month of April, 1969. Drill holes F-180, 182, and 184 were completed on Portland Ridge. Holes F-181, 183, 186, and 187 were completed in the west oxide area, north of the Precipitation Plant. Two holes, D-313 and D-314, were completed in the North Silver Bell Area for assessment work.

Two holes on Portland Ridge, F-180 and F-184, and one hole in the west oxide area, F-183, encountered economic ore thicknesses.

The footage drilled and the average direct drilling costs for April, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>*Advance Per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Truck	1,176.7	30.2	\$ 6.72
Diamond - Skid	<u>1,223.4</u>	25.0	<u>11.69</u>
TOTAL	<u>2,400.1</u>	Combined Avg.	<u>\$ 9.26</u>

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth	
		North	East	Depth to Top	Thick-ness	Avg. % Cu					
						Total	N.S.				
F-180	3050	28,545	29,340	160.4 357.2	130.5 46.8	0.67 0.70	Nil Nil	455.8	455.8	455.8	
F-181	2761.92	27,998.10	24,408.92	14.0 59.1	45.1 32.2	1.30 1.59	0.74 0.07	246.5	246.5	246.5	
F-182	3075	28,330	27,380	258.6	9.1	0.45	Nil	397.0	397.0	397.0	
F-183	2762.22	28,033.96	24,207.67	62.9 80.7	17.8 89.3	0.59 0.54	0.39 0.01	200.0	200.0		
F-184	3055	28,710	29,350	90.2	221.2	0.42	0.01	350.4	350.4	350.4	
F-185	3140	28,440	27,700	No plus 0.40% intervals					20.2	20.2	
F-186	2770	28,100	24,000	69.0 96.8 121.0	18.7 24.2 19.0	0.74 0.61 0.61	0.60 0.35 0.01	180.0	180.0	180.0	
F-187	2730	27,850	24,250	85.4 115.7 135.2	11.3 11.8 6.5	0.42 0.71 0.42	0.01 0.02 0.01	141.2	141.7	141.7	
D-313	2510	42,940	15,960	20.0 93.0 164.5 199.9	30.6 5.5 8.5 9.1	0.57 0.73 0.40 1.15	0.34 Nil Nil Nil	209.0	209.0	209.0	
D-314	2620	41,410	17,540	52.0	26.5	0.56	Nil	200.0	200.0	200.0	

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

May 6, 1969

MEMORANDUM TO: Mr. D. R. JAMESON, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
Portland Ridge, West Oxide, and North Silver  
Bell Areas, April, 1969.

Two skid and one truck mounted diamond drills were operated two shifts per day, six days per week, throughout the month of April, 1969. Drill holes F-180, 182, and 184 were completed on Portland Ridge. Holes F-181, 183, 186, and 187 were completed in the west oxide area, north of the Precipitation Plant. Two holes, D-313 and D-314, were completed in the North Silver Bell Area for assessment work.

Two holes on Portland Ridge, F-180 and F-184, and one hole in the west oxide area, F-183, encountered economic ore thicknesses.

The footage drilled and the average direct drilling costs for April, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>*Advance Per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Truck	1,176.7	30.2	\$ 6.72
Diamond - Skid	<u>1,223.4</u>	25.0	<u>11.69</u>
TOTAL	<u>2,400.1</u>	Combined Avg.	<u>\$ 9.26</u>

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

R. C. Edmiston

R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth	
		North	East	Depth to Top	Thick-ness	Avg. % Cu					
						Total	N.S.				
F-180	3050	28,545	29,340	160.4 357.2	130.5 46.8	0.67 0.70	Nil Nil	455.8	455.8	455.8	
F-181	2761.92	27,998.10	24,408.92	14.0 59.1	45.1 32.2	1.30 1.59	0.74 0.07	246.5	246.5	246.5	
F-182	3075	28,330	27,380	258.6	9.1	0.45	Nil	397.0	397.0	397.0	
F-183	2762.22	28,033.96	24,207.67	62.9 80.7	17.8 89.3	0.59 0.54	0.39 0.01	200.0	200.0		
F-184	3055	28,710	29,350	90.2	221.2	0.42	0.01	350.4	350.4	350.4	
F-185	3140	28,440	27,700	No plus 0.40% intervals					20.2	20.2	
F-186	2770	28,100	24,000	69.0 96.8 121.0	18.7 24.2 19.0	0.74 0.61 0.61	0.60 0.35 0.01	180.0	180.0	180.0	
F-187	2730	27,850	24,250	85.4 115.7 135.2	11.3 11.8 6.5	0.42 0.71 0.42	0.01 0.02 0.01	141.2	141.7	141.7	
D-313	2510	42,940	15,960	20.0 93.0 164.5 199.9	30.6 5.5 8.5 9.1	0.57 0.73 0.40 1.15	0.34 Nil Nil Nil	209.0	209.0	209.0	
D-314	2620	41,410	17,540	52.0	26.5	0.56	Nil	200.0	200.0	200.0	

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

April 1, 1969

J. H. C.

APR 5 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE, MARCH, 1969

Two skid mounted diamond drills were operated two shifts per day, six days per week throughout the month of March, 1969. In addition, one truck mounted drill was in use the last week of the month. Five vertical holes and one angle hole were completed, all on Portland Ridge. Only one hole, F-175, encountered an economic thickness of chalcocite ore.

The footage drilled and the average direct drilling costs for March, 1969, are:

<u>Drill</u>	<u>Footage</u>	<u>*Advance per Shift</u>	<u>Avg. Direct Cost/Foot</u>
Diamond - Truck	390.5	32.6	\$ 7.00
Diamond - Skid	<u>1,631.6</u>	18.4	<u>8.97</u>
Total	2,022.1	Combined Avg.	\$ 8.59

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

*R. C. Edmiston*

R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
REMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-174	3016.42	28,241.76	28,030.81	No plus 0.40% intervals				42.0	300.0	300.0
F-175	3164.82	28,500.01	27,581.14	254.0	160.9	0.66	0.01	421.4	468.4	468.4
*F-176	3016.42	28,241.76	28,030.81	45.2	34.3	0.44	0.01	325.3	325.3	325.3
F-177	3016.87	28,266.78	27,901.60	317.4 352.2	9.4 19.8	0.63 0.53	0.02 0.10	406.5	406.5	406.5
F-178	3098	28,380	27,540	216.6 315.5	32.9 56.4	0.55 0.48	Nil Nil	436.4	436.4	436.4
F-179	2841.23	28,541.44	26,836.32	No plus 0.40% intervals				390.5	390.5	390.5
							TOTAL	<u>2,022.1</u>		

\* F-176 drilled S80°E from F-174 at an angle of -55°.

WES

AMERICAN SMELTING AND REFINING COMPANY  
 SILVER BELL UNIT  
 Silver Bell, Arizona

J.H.C.  
 MAR 5 1969

March 4, 1969

W.E.S.  
 MAR 5 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: MONTHLY REPORT - SILVER BELL UNIT DRILLING PROGRAM  
 PORTLAND RIDGE, February, 1969

During February, 1969, two skid-mounted diamond drills were operated two shifts per day, six days per week, on the south side of Portland Ridge. Two vertical holes and one angle hole were completed and two vertical holes were in progress at the end of the month. Of the 1,311.2 feet drilled in February, 356.1 feet, or 27%, was drilled in ore.

The footage drilled and the average direct drilling costs for February, 1969, are:

- 1 Total Footage: 1,311.2 feet.
- 2 Average Advance per Shift: 19.0 feet.
- 2 Average Direct Cost per Ft. \$9.52

1 Does not include moving time but does include all other delays.

2 Increase in cost per foot due to a high ratio of moving to drilling time during the month and also an increase in moving and delay charges.

The attached table summarizes the drilling results.

R.C. Edmiston  
 R. C. Edmiston  
 Resident Geologist

RCE:jca  
 cc: TASnedden  
 CPPollock A/M  
 RBMeen  
 JHCourtright (2)  
 DRJameson (2)  
 File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		<u>+0.40% Copper Lenses</u>				Feet Drill. During Mo.	Depth at End Month	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	% N.S.			
F-171	3186.72	28,487.41	28,092.10	241.6	9.2	0.47	0.01	184.3	425.9	425.9
*F-172	3186.72	28,487.41	28,092.10	180.2	96.5	1.15	0.01	445.5	445.5	445.5
				296.7	9.4	0.43	Nil.			
				343.9	19.4	0.62	Nil.			
				404.0	13.0	0.69	0.05			
F-173	3165.16	28,458.02	27,848.32	96.0	198.6	0.63	0.01	376.4	376.4	376.4
F-174	3016.42	28,241.76	28,030.81	155.9	10.0	0.64	0.07	258.0	258.0	-
F-175	3130	28,450	27,600	No plus 0.40% intervals				47.0	47.0	
TOTAL								<u>1,311.2</u>		

\* F-172 drilled due east from F-171 at an angle of 60°.

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
FEB 4 1969

February 3, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE AREA.

During January, 1969, two skid-mounted diamond drills were operated two shifts per day, six days per week, on the south side of Portland Ridge. Angle holes F-166, F-169 and F-170, and vertical hole F-168 were completed while vertical hole F-171 was in progress at the end of the month. Of the 1,401.6 feet drilled in January, 527.1 feet, or 38%, was drilled in ore.


The footage drilled and the average direct drilling costs for January, 1969, are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>*Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond , Skid, Angle	1,026.5	18.0	\$ 8.85
Diamond, Skid, Vertical	<u>375.1</u>	34.1	<u>8.64</u>
Total	<u>1,401.6</u>	Combined Aver.	<u>\$ 8.79</u>

\* Does not include moving time but does include all other delays.

The difference in the advance per shift between vertical and angle holes is due mostly to the difference in hole depth and mechanical differences in the drills being used.

The attached table summarizes the drilling results.

  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Feet Drill. During Mo.	Depth at End Month	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
1 F-166	3153.14	28,532.15	28,571.02	No +0.40% intervals				110.0	747.0	747.0
→ F-168	3110.55	28,358.43	28,134.76	367.0	40.4	0.46	0.01	133.5	500.5	500.5
↘ 2 F-169	3110.55	28,358.43	28,134.76	<del>114.8</del> 175.7	<del>10.2</del> 169.8	<del>0.42</del> 0.46	<del>0.03</del> 0.01	490.8	490.8	490.8
↘ 3 F-170	3153.14	28,537.15	28,571.02	201.0	209.7	0.71	0.04	425.7	425.7	425.7
↘ F-171	3175	28,490	28,100	144.5	97.1	1.12	0.02	241.6	241.6	-
				97.1						
				241.6						
						TOTAL		1,401.6		

1. F-166 drilled due east from F-162 at an angle of  $-55^{\circ}$
2. F-169 drilled  $S75^{\circ}E$  from F-168 at an angle of  $-60^{\circ}$
3. F-170 drilled due north from F-162 at an angle of  $-60^{\circ}$

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.

JAN 9 1969

January 7, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE AREA.

During December, 1968, two skid mounted diamond drills were operated two shifts per day, six days per week on the south side of Portland Ridge. Angle holes F-165 and F-167 were completed while angle hole F-166 and vertical hole F-168 were in progress at the end of the month. Of the 1,523.2 feet drilled in December, 638.1 feet or 42%, was drilled in ore.

The footage drilled and the average direct drilling costs for December, 1968, are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>*Advance per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Skid - Angle	1,156.2	17.2	\$ 7.35
Diamond - Skid - Vertical	<u>367.0</u>	36.7	<u>10.41</u>
TOTAL	1,523.2		
	Combined Average		\$ 8.09

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results.

*R.C. Edmiston*  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Elevation	Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
<sup>1</sup> F-165	3113.26	28,388.59	27,996.32	No plus 0.40% intervals				43.9	575.2	575.2
<sup>2</sup> F-166	3153.14	28,532.15	28,571.02	324.9	8.9	0.50	0.02	637.0	637.0	637.0
				371.5	14.8	0.47	0.01			
				418.0	89.6	0.49	0.02			
				609.4	27.6	0.55	0.01			
<sup>3</sup> F-167	3113.26	28,388.59	27,996.32	98.7	342.7	0.61	0.02	475.3	475.3	475.3
F-168	3110.55	28,358.43	28,134.76	149.2	18.0	0.45	0.03	367.0	367.0	-
				230.5	136.5	1.04	0.05			
TOTAL								<u>1,523.2</u>		

1 F-165 drilled due east from site of F-163 at an angle of -48°  
 2 F-166 " " " " " " F-162 " " " " -55°  
 3 F-167 " " north " " " F-163 " " " " -50°

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

January 7, 1969

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE AREA.

During December, 1968, two skid mounted diamond drills were operated two shifts per day, six days per week on the south side of Portland Ridge. Angle holes F-165 and F-167 were completed while angle hole F-166 and vertical hole F-168 were in progress at the end of the month. Of the 1,523.2 feet drilled in December, 638.1 feet or 42%, was drilled in ore.

The footage drilled and the average direct drilling costs for December, 1968, are:


<u>Drill</u>	<u>Footage Drilled</u>	<u>*Advance per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Skid - Angle	1,156.2	17.2	\$ 7.35
Diamond - Skid - Vertical	<u>367.0</u>	36.7	<u>10.41</u>
TOTAL	1,523.2		
Combined Average			\$ 8.09

\* Does not include moving time but does include all other delays.

The attached table summarizes the drilling results;

R.C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)   
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT

Hole No.	Elevation	Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
<sup>1</sup> F-165	3113.26	28,388.59	27,996.32	No plus 0.40% intervals				43.9	575.2	575.2
<sup>2</sup> F-166	3153.14	28,532.15	28,571.02	324.9	8.9	0.50	0.02	637.0	637.0	637.0
				371.5	14.8	0.47	0.01			
				418.0	89.6	0.49	0.02			
				609.4	27.6	0.55	0.01			
<sup>3</sup> F-167	3113.26	28,388.59	27,996.32	98.7	342.7	0.61	0.02	475.3	475.3	475.3
F-168	3110.55	28,358.43	28,134.76	149.2	18.0	0.45	0.03	367.0	367.0	-
				230.5	136.5	1.04	0.05			
TOTAL								<u>1,523.2</u>		

1 F-165 drilled due east from site of F-163 at an angle of -48°  
 2 F-166 " " " " " " F-162 " " " " -55°  
 3 F-167 " " north " " " F-163 " " " " -50°

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
DEC 9 - 1968

December 4, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent


Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE AREA.

During November, 1968, two skid mounted drills operated two shifts per day, six days per week on the south side of Portland Ridge. Vertical holes F-162 and F-163 and angle hole F-164 were completed. Angle hole F-165 was nearly completed and angle hole F-166 was started.

The footage drilled and the average direct drilling costs for November, 1968, are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Skid - Vertical	613.3	23.6	\$ 7.01
Diamond - Skid - Angle	<u>1,178.1</u>	21.8	<u>8.08</u>
TOTAL	1,791.4		
	Combined average		\$ 7.71

The attached table summarizes the drilling results.

  
\_\_\_\_\_  
L. J. Jansen  
Geologist

LJJ;jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - NOVEMBER, 1968

Hole No.	Elevation	Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth	
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.				
F-162	3153.14	28,532.15	28,571.02	389.8	17.9	0.49	0.03	195.2	525.9	525.9	
F-163	3113.26	28,388.59	27,996.32	125.7 441.8	183.0 27.7	1.10 0.53	0.02 0.01	418.1	521.5	521.5	
F-164	-47° angle hole, drilled due west from site of F-162			231.9 338.4 431.0 573.0	67.1 24.9 12.0 10.9	0.51 0.52 0.70 0.44	0.02 0.01 Nil 0.01	646.8	646.8	646.8	
F-165	45° Angle hole, drilled due East from site of F-163			196.5	118.3	0.56	0.01	531.3	531.3	-	
F-166	45° Angle hole, drilled due East from site of F-162							<u>0.0</u>			
TOTAL								<u>1,791.4</u>			

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

December 4, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent


Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
PORTLAND RIDGE AREA.

During November, 1968, two skid mounted drills operated two shifts per day, six days per week on the south side of Portland Ridge. Vertical holes F-162 and F-163 and angle hole F-164 were completed. Angle hole F-165 was nearly completed and angle hole F-166 was started.

The footage drilled and the average direct drilling costs for November, 1968, are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Advance Per Shift</u>	<u>Average Direct Cost Per Foot</u>
Diamond - Skid - Vertical	613.3	23.6	\$ 7.01
Diamond - Skid - Angle	<u>1,178.1</u>	21.8	<u>8.08</u>
TOTAL	1,791.4		
	Combined average		\$ 7.71

The attached table summarizes the drilling results.

  
L. J. Jansen  
Geologist

LJJ:jca

cc: TASnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROGRESS REPORT - NOVEMBER, 1968

Hole No.	Elevation	Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth	
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.				
F-162	3153.14	28,532.15	28,571.02	389.8	17.9	0.49	0.03	195.2	525.9	525.9	
F-163	3113.26	28,388.59	27,996.32	125.7 441.8	183.0 27.7	1.10 0.53	0.02 0.01	418.1	521.5	521.5	
F-164	-47° angle hole, drilled due west from site of F-162			231.9 338.4 431.0 573.0	67.1 24.9 12.0 10.9	0.51 0.52 0.70 0.44	0.02 0.01 Nil 0.01	646.8	646.8	646.8	
F-165	-45° Angle hole, drilled due East from site of F-163			196.5	118.3	0.56	0.01	531.3	531.3	-	
F-166	45° Angle hole, drilled due East from site of F-162							<u>0.0</u>			
TOTAL								<u><u>1,791.4</u></u>			

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
OCT 7 1968

October 4, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT  
EL TIRO PIT, OXIDE PIT AND PORTLAND RIDGE AREAS.

During September, 1968, two drills were operated two shifts per day, six days per week. A truck mounted diamond drill drilled throughout the month on hole D-312 in El Tiro Pit. Another truck mounted drill completed F-160 in Oxide Pit and was replaced by a skid mounted drill which began F-161 on Portland Ridge:

The footage drilled and the average direct drilling costs for September, 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Advance Per Shift</u>	<u>Average direct Cost Per Foot</u>
Diamond - Truck	1,166.4	16.7	\$ 8.47
Diamond - Skid	<u>81.2</u>	13.5	<u>22.42*</u>
TOTAL	1,247.6		
		Combined Aver.	\$ 9.35

\*High cost per foot due to dividing total moving cost by small footage drilled during month.

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPOLLOCK A/M  
REMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - September 1968

<u>Hole No.</u>	<u>Approx. Elevation</u>	<u>Approx. Coordinates</u>		<u>+0.40% Copper Lenses</u>				<u>Ft. Drill. During Mo.</u>	<u>Depth End Mo.</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick-ness</u>	<u>Avg. % Cu Total</u>	<u>N.S.</u>			
> D-312	2588.26	35,994.55	16,464.31	No +0.40% intervals				820.1	1385.7	-
> F-160	2664.30	29,646.85	27,731.34	"	"	"		346.3	1500.0	1500.0
> F-161	3120	28,400	27,750	"	"	"		81.2	81.2	-
							TOTAL		<u><u>1,247.6</u></u>	

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT

Silver Bell, Arizona

September 10, 1968

J. H. C  
SEP 11 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROCESS REPORT  
NORTHWEST SILVER BELL, EL TIRO PIT AND  
OXIDE PIT AREAS, August, 1968

During the month of August, 1968, two truck mounted drills were operated two shifts per day, six days per week. The first proposed deep hole was begun in El Tiro Pit after the completion of the third in a series of holes testing magnetic anomalies in the Northwest Silver Bell area. Work continued on the first deep hole in Oxide Pit throughout the month.

The footage drilled, average advance per shift and average direct cost per foot for the month of August, 1968 are:

Total Footage: 2,287.7 feet.  
Average advance per shift: 21.2 feet.  
Average direct cost per foot: \$7.52

The attached table summarizes the drilling results.

R. C. Edmiston  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TAsnedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - August 1968

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	% Cu N.S.			
> D-311	2770	38,700	14,700	119.0 572.5	16.4 26.4	1.05 0.52	0.10 0.01	658.4	658.4	658.4
D-312	2590	36,000	16,400	5.0 83.0 175.9 458.9	31.5 21.4 10.7 8.4	0.70 0.52 0.41 0.46	0.02 0.02 0.02 0.01	565.6 <u>1224.0</u>	565.6	
> F-160	2,664.30	29,646.85	27,731.34	90.0 782.0	9.0 9.4	0.42 0.90	0.01 0.01	1,063.7 2,063.5 <u>1,247.6</u> 4,374.8 1,224 <u>5,598.8</u>	1,153.7	

10 holes

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

August 5, 1968

J. H. C.  
AUG 19 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent


Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT-  
EL TIRO PIT, NORTHWEST SILVER BELL, NORTH BUTTE,  
AND OXIDE PIT AREAS, July, 1968

During the month of July, 1968, two truck mounted diamond drills were operated one or two shifts per day, six days per week. (The reduction in shifts was due to vacations.) At the beginning of the month one drill was completing D-308 in El Tiro Pit while the other was drilling magnetic anomalies in the Northwest Silver Bell area. The drill in El Tiro Pit was moved to North Butte, where F-158 and F-159 were drilled, and then to Oxide Pit where the first of two proposed 1,500 foot holes was collared on the 2660 level. The other drill remained in the Northwest Silver Bell area throughout the month.

The footage drilled and the average direct drilling cost for the month of July, 1968 are:

Total footage: 2,063.5 feet.  
Average advance per shift: 22.7 feet.  
Average direct cost per foot: \$7.22.

The attached table summarizes the drilling results.

  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc TAsneden  
CFFollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File

MINERAL DRILLING PROGRESS REPORT - July, 1968

Hole No.	Approx. Elevation	Approx. Coordinates		<u>0.40% Copper Lenses</u>				Ft. Drill. During No.	Depth End No.	Final Depth
		North	East	Depth to Top	Thickness	Avg. % Cu Total	N.S.			
<i>El Tiro</i> D-308	2,712.51	37,463.49	15,951.56	No plus 0.40% this interval				296.4	947.9	947.9
D-309	2,694.46	39,701.14	14,456.14	"	"	"	"	436.2	510.0	510.0
} D-310	2700	39,480	14,900	402.3	35.7	0.89	0.01	590.4	590.4	590.4
				518.9	15.1	4.46	0.01			
<i>North Butte</i> F-158	2910	30,660	22,850	No plus 0.40% Cu this interval.				297.8	297.8	297.8
" F-159	2900	30,900	23,050	"	"	"	"	352.7	352.7	352.7
<i>Oxide</i> F-160	2660	29,650	27,800	"	"	"	"	90.0	90.0	-
							<b>Total</b>	<u>2,063.5</u>		

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT

Silver Bell,

Arizona

J. H. C.

JUL 11 1968

July 8, 1968

W.E.S.  
JUL 12 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
NORTH EL TIRO HILL AND DANUBE AREAS, June, 1968

During the month of June 1968, two drills were operated, two shifts per day, six days per week. A skid mounted angle hole drill completed hole F-154 and was then replaced by a truck mounted drill which drilled two vertical holes, F-156 and F-157 in the Danube area. This drill has now been moved to the North El Tiro area to drill Magnetic Anomalies. An attempt was made to deepen churn drill hole 200E, but this failed due to bad hole conditions and the drill was then moved to the west end of El Tiro Pit, 2710 level, to drill an additional deep hole.

The footage drilled and the average direct drilling costs for June, 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance per Shift</u>	<u>Avg. Direct Cost/Foot</u>
Diamond - Truck	1,724.6	19.7'	\$ 7.36
Diamond - Skid, angle	<u>27.3</u>	27.3'	<u>11.79</u>
Total:	<u>1,751.9</u>	Combined Avg:	<u>\$ 7.43</u>

The attached table summarizes the drilling results.



R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASNedden  
CPPollock A/M  
RBMeen  
JHCourtright (2)  
DRJameson (2)  
File



DIAMOND DRILLING PROCESS REPORT - June 1968

+0.40% Copper Lenses

Hole No.	Approx. Elevation	Coordinates		Depth to Top	Thick-ness		Avg. % Cu		Pt. Drill. During No.	Depth End No.	Final Depth
		North	East				Total	M.S.			
✓ * F-154	2880.75	30,638.04	23,372.93	No plus	0.40% Cu this interval				27.3	678.8	678.8
✓ F-156	} testing sediments Although some ore grade intercepts not enough continuity to be minible			350.1	9.9	0.68	M1		451.9	451.5	451.5
✓ F-157				77.6	9.8	0.50	0.01	456.1	456.1	456.1	
				114.3	23.3	0.45	0.02				
				300.1	19.7	0.91	0.02				
				347.9	19.6	0.48	M1				
D-308				77.8	17.2	0.99	0.07		651.5	651.5	-
				141.3	20.2	0.43	0.02				
				285.5	9.2	0.43	0.02				
				370.9	9.3	0.86	0.02				
				431.1	45.7	0.52	0.01				
				552.0	38.0	0.49	M1				
In El Tiro Pit deep hole to test sediments has been in and out of sediments best maganom #6 grade is low.				No plus	0.40% Cu this interval				73.8	73.8	-
D-309											
D-200E	2887.68	37,955.39	15,937.31	No plus	0.40% Cu this interval				91.7	538.7	538.7

TOTAL 1,751.2

cut on by alaskite  
w/ estimated 2-3% magnetite as dissem  
trace up to 30%

\* Angle hole - 52° plunge; N30° E

deepening old churn drill  
hole 200 E

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

July 8, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
NORTH EL TIRO HILL AND DANUBE AREAS, June, 1968

During the month of June 1968, two drills were operated, two shifts per day, six days per week. A skid mounted angle hole drill completed hole F-154 and was then replaced by a truck mounted drill which drilled two vertical holes, F-156 and F-157 in the Danube area. This drill has now been moved to the North El Tiro area to drill Magnetic Anomalies. An attempt was made to deepen churn drill hole 200E, but this failed due to bad hole conditions and the drill was then moved to the west end of El Tiro Pit, 2710 level, to drill an additional deep hole.

The footage drilled and the average direct drilling costs for June, 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance per Shift</u>	<u>Avg. Direct Cost/Foot</u>
Diamond - Truck	1,724.6	19.7'	\$ 7.36
Diamond - Skid, angle	<u>27.3</u>	27.3'	<u>11.79</u>
Total:	<u>1,751.9</u>	Combined Avg:	<u>\$ 7.43</u>

The attached table summarizes the drilling results.

*R. C. Edmiston*

R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASNedden  
CPPollock A/M  
RMEen  
JHCourtright (2)  
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - June 1968

Hole No.	Approx. Elevation	Coordinates		<u>+0.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
* F-154	2880.75	30,638.04	23,372.93	No plus 0.40% Cu this interval				27.3	678.8	678.8
F-156				350.1	9.9	0.68	Nil	451.5	451.5	451.5
F-157				77.6	9.8	0.50	0.01	456.1	456.1	456.1
				114.3	23.3	0.45	0.02			
				300.1	19.7	0.91	0.02			
				347.9	19.6	0.48	Nil			
D-308				77.8	17.2	0.99	0.07	651.5	651.5	-
				141.3	20.2	0.43	0.02			
				283.5	9.2	0.43	0.02			
				370.9	9.3	0.86	0.02			
				431.1	45.7	0.52	0.01			
				552.0	38.0	0.49	Nil			
D-309				No plus 0.40% Cu this interval				73.8	73.8	-
D-200E	2887.68	37,955.39	15,937.31	No plus 0.40% Cu this interval				<u>91.7</u>	538.7	538.7
							TOTAL	<u>1,751.9</u>		

\* Angle hole - 52% plunge; N30°E

S-1.1

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.  
JUN 11 1968

June 7, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent


Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
North El Tiro Hill and Danube Areas, May, 1968.

During the month of May, 1968, two drills were operated at Silver Bell, working two shifts per day, six days per week. A truck mounted diamond drill was used to deepen churn drill hole 215-E on North El Tiro Hill and then was moved to Danube Hill, west of oxide pit, to drill a vertical hole. An angle hole skid mounted diamond drill completed one hole and began another on Danube Hill.

The footages for each drill and the average direct drilling costs for May 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance per Shift</u>	<u>Aver. Direct Cost/Foot</u>
Diamond - Truck	1,021.5	23.2'	\$ 7.68
Diamond - Skid, Angle	937.9	22.9'	8.00
TOTAL	1,959.4	Combined avg:	7.84

The attached table summarized the drilling results.

  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: EASnadden

CFPollock A/M

R. B. Meen

JHCourtright (2)

DRJameson (2)

File

DIAMOND DRILLING PROGRESS REPORT - MAY, 1968

Hole No.	Elevation	Coordinates		<u>10.40% Copper Lenses</u>				Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu Total	N.S.			
F-153*	2897.26	30,528.85	23,849.04	230.3	9.9	0.46	0.02	286.4	507.4	507.4
				273.7	18.8	0.75	0.03			
				401.8	9.5	0.54	Nil			
F-154**	2880.75	30,638.04	23,372.93	316.6	12.5	0.47	0.01	651.5	651.5	
				390.2	20.9	0.71	0.11 ←			
				428.3	86.4	0.48	0.01 ←			
F-155	3039.06	30,830.27	24,043.02	155.3	59.9	0.63	0.03 ←	573.5	573.5	573.5
				246.1	15.6	1.21	0.14 ←			
				261.9	57.0	0.52	0.33 ←			
D216E	2722.42	37,735.38	15,807.10	558.6	59.2	0.47	0.01	<u>448.0</u>	903.9	903.9
TOTAL								<u>1,959.4</u>		

\* Angle hole - 30° plunge; N30°E  
 \*\* Angle hole - 45° plunge; N30°E

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

June 7, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
North El Tiro Hill and Danube Areas, May, 1968.

During the month of May, 1968, two drills were operated at Silver Bell, working two shifts per day, six days per week. A truck mounted diamond drill was used to deepen churn drill hole 216-E on North El Tiro Hill and then was moved to Danube Hill, west of oxide pit, to drill a vertical hole. An angle hole skid mounted diamond drill completed one hole and began another on Danube Hill.


The footages for each drill and the average direct drilling costs for May 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance per Shift</u>	<u>Aver. Direct Cost/Foot</u>
Diamond - Truck	1,021.5	23.2'	\$ 7.68
Diamond - Skid, Angle	937.9	22.9'	8.00
TOTAL	1,959.4	Combined avg:	7.84

The attached table summarized the drilling results.

  
R. C. Edmiston  
Resident Geologist

ROE:jca

cc: BASnedden  
OPPollock A/M  
R. B. Meen  
JECourtright (2)   
DRJameson (2)  
File

DIAMOND DRILLING PROGRESS REPORT - MAY, 1968

<u>Hole No.</u>	<u>Elevation</u>	<u>Coordinates</u>		<u>10.40% Copper Lenses</u>				<u>Ft. Drill. During Mo.</u>	<u>Depth End Mo.</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick-ness</u>	<u>Avg. % Cu Total</u>	<u>N.S.</u>			
F-153*	2897.26	30,528.85	23,849.04	230.3 273.7 401.8	9.9 18.8 9.5	0.46 0.75 0.54	0.02 0.03 Nil	286.4	507.4	507.4
F-154**	2880.75	30,638.04	23,372.93	316.6 390.2 428.3	12.5 20.9 86.4	0.47 0.71 0.48	0.01 0.11 0.01	651.5	651.5	
F-155	3039.06	30,830.27	24,043.02	155.3 246.1 261.9	59.9 15.6 57.0	0.63 1.21 0.52	0.03 0.14 0.33	573.5	573.5	573.5
D216E	2722.42	37,735.38	15,807.10	558.6	59.2	0.47	0.01	<u>448.0</u>	903.9	903.9
TOTAL								<u>1,959.4</u>		

\* Angle hole - 30° plunge; N30°E  
 \*\* Angle hole - 45° plunge; N30°E

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

May 3, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
Mt. Expectation, North El Tiro Hill and Danube Areas,  
April, 1968

During the month of April four types of drills were operated at Silver Bell. A truck mounted diamond drill operated throughout the month deepening churn drill hole 198E in the North El Tiro Hill area. A skid rig worked from the 1st to the 15th on Mt. Expectation. An angle hole skid rig was brought in the 15th to drill an angle hole near the Danube Adit. A Failing Rotary drill was used to clean out two churn drill holes for deepening with a diamond drill in the North El Tiro Hill area.

The footages for each drill and the average direct drilling costs for April, 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance Per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Truck	593.8	10.2'	\$ 7.33
Diamond - Skid	400.0	15.4'	8.94
Diamond - Skid, Angle	<u>221.0</u>	<u>8.5'</u>	<u>11.46</u>
TOTAL	1,214.8'	Combined average:	\$ 8.61

The two churn drill holes were cleaned and cased by the Failing Rotary Drill at a cost of \$2.36 per foot.

<u>Hole No.</u>	<u>Approx. Elevation</u>	<u>Approx. Coordinates</u>		<u>+0.40% Cu Lenses</u>				<u>Ft. Drill. During Month</u>	<u>Depth of Month</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick- ness</u>	<u>Avg. % Total</u>	<u>% Cu</u>			
D198E	2820.59	38,102.17	15,751.91	315.0 543.6	18.9 27.7	1.11 0.72	.02 .03	593.8	908.8	908.8'
D-307	3111.64	35,411.17	16,127.05	182.1	34.9	0.58	.01	400.0	400.0	400.0
F-153	2897.26	30,528.85	23,849.04	No significant thickness				<u>221.0</u>	221.0	-
TOTAL								<u>1,214.8'</u>		

*R. C. Edmiston*  
R. C. Edmiston  
Resident Geologist

RCE:jca

cc: TASnedden  
CPPollock A/M  
RBMeen

JHCourtright (2)  
DRJameson (2)  
File



**AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona**

May 3, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

**Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT -  
Mt. Expectation, North El Tiro Hill and Danube Areas,  
April, 1968**

During the month of April four types of drills were operated at Silver Bell. A truck mounted diamond drill operated throughout the month deepening churn drill hole 198E in the North El Tiro Hill area. A skid rig worked from the 1st to the 15th on Mt. Expectation. An angle hole skid rig was brought in the 15th to drill an angle hole near the Danube Adit. A Failing Rotary drill was used to clean out two churn drill holes for deepening with a diamond drill in the North El Tiro Hill area.

The footages for each drill and the average direct drilling costs for April, 1968 are:

<u>Drill</u>	<u>Footage Drilled</u>	<u>Average Advance Per Shift</u>	<u>Average Direct Cost per Foot</u>
Diamond - Truck	593.8	10.2'	\$ 7.33
Diamond - Skid	400.0	15.4'	8.94
Diamond - Skid, Angle	<u>221.0</u>	<u>8.5'</u>	<u>11.46</u>
<b>TOTAL</b>	<b>1,214.8'</b>	<b>Combined average:</b>	<b>\$ 8.61</b>

The two churn drill holes were cleaned and cased by the Failing Rotary Drill at a cost of \$2.36 per foot.

<u>Hole No.</u>	<u>Approx. Elevation</u>	<u>Approx. Coordinates</u>		<u>+0.40% Cu Lenses</u>				<u>Ft. Drill. During Month</u>	<u>Depth End of Month</u>	<u>Final Depth</u>
		<u>North</u>	<u>East</u>	<u>Depth to Top</u>	<u>Thick- ness</u>	<u>Avg. % Total</u>	<u>Cu NS.</u>			
D198E	2820.59	38,102.17	15,751.91	315.0 543.6	18.9 27.7	1.11 0.72	.02 ✓ .03 ✓	593.8	908.8	908.8
D-307	3111.64	35,411.17	16,127.05	182.1	34.9	0.58	.01 ✓	400.0	400.0	400.0
F-153	2897.26	30,528.85	29,849.04	No significant thickness				<u>221.0</u>	221.0	-
<b>TOTAL</b>								<b><u>1,214.8'</u></b>		

*R. C. Edmiston*  
R. C. Edmiston  
Resident Geologist

RCE:jca  
cc: TASnedden  
CPPollock A/M  
REHeen  
JHCourtright (2)  
DRJameson (2)  
File

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C

APR 3 1968

April 2, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT - Mt. Expectation and North El Tiro Hill Areas - March, 1968.

During the month of March we had one skid mounted drill which was worked throughout the month and one truck mounted drill which worked only from the 1st thru the 18th. A Failing rotary was also on the property cleaning out old churn drill holes from the 28th on.

A total of 1,466.2' of diamond core drilling was done; 782.7' with the truck mounted rig and 683.5' with the skid rig. Without taking any delays into account the average advance per shift was 26.9' for the truck rig and 14.9' for the skid rig. One 315' churn drill hole was cleaned out and cased with the Failing rig.

The average direct drilling cost for the month was \$8.25 per foot with the skid rig costing \$9.79 per foot and the truck rig \$7.23 per foot. The cost of cleaning the old churn drill hole was \$1.49 per foot.

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses			Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick- ness	Avg. % Cu Total N.S.			
D-301	2,845.54	38,326.64	16,532.07	159.6	47.1	0.55 0.03 ✓	229.9	304.9	304.9
D-302	2,849.56	38,231.67	16,593.79	140.2	75.9	0.72 0.07 ✓	175.8	265.8	265.8
D-303	2,843.28	38,322.58	16,684.54	No significant thickness			186.2	276.2	276.2
D-304	3,065.48	35,309.76	16,313.72	"	"	"	275.6	275.6	275.6
D-305	2,745.43	38,031.76	16,669.21	"	"	"	195.0	195.0	195.0
D-306	3,050	35,490	16,009	193.2	107.6	0.50 0.01 ✓	428.7	428.7	428.7

TOTAL 1,466.2'

148

2068

4982

*N. R. Nuttycombe*  
N. R. Nuttycombe

NRN:jca

- cc: TASnedden
- CPPollock A/M
- REMeen
- JHCourtright (2)
- DRJameson (2)
- File

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

April 2, 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT DRILLING PROGRESS REPORT - Mt. Expectation  
and North El Tiro Hill Areas - March, 1968.

During the month of March we had one skid mounted drill which was worked throughout the month and one truck mounted drill which worked only from the 1st thru the 18th. A Failing rotary was also on the property cleaning out old churn drill holes from the 28th on.

A total of 1,466.2' of diamond core drilling was done; 782.7' with the truck mounted rig and 683.5' with the skid rig. Without taking any delays into account the average advance per shift was 26.9' for the truck rig and 14.9' for the skid rig. One 315' churn drill hole was cleaned out and cased with the Failing rig.

The average direct drilling cost for the month was \$8.25 per foot with the skid rig costing \$9.79 per foot and the truck rig \$7.23 per foot. The cost of cleaning the old churn drill hole was \$1.49 per foot.

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses			Ft. Drill. During Mo.	Depth End Mo.	Final Depth
		North	East	Depth to Top	Thick- ness	Avg. % Cu Total N.S.			
D-301	2,845.54	38,326.64	16,532.07	159.6	47.1	0.55 0.03	229.9	304.9	304.9
D-302	2,849.56	38,231.67	16,593.79	140.2	75.9	0.72 0.07	175.8	265.8	265.8
D-303	2,843.28	38,322.58	16,684.54	No significant thickness			186.2	276.2	276.2
D-304	3,065.48	35,309.76	16,313.72	"	"	"	275.6	275.6	275.6
D-305	2,745.43	38,031.76	16,669.21	"	"	"	195.0	195.0	195.0
D-306	3,050	35,490	16,009	193.2	107.6	0.50 0.01	428.7	428.7	428.7
TOTAL							<u>1,466.2'</u>		

*N. R. Nuttycombe*  
N. R. Nuttycombe

NRN:jca

cc: TAsnedden  
CFFollock A/M  
RMEen  
JHCourtright (2)  
DRJameson (2)  
File

AMERICAN SMELTING AND REFINING COMPANY  
SILVER BELL UNIT  
Silver Bell, Arizona

J. H. C.

March 5, 1968

MAR 6 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT - Mt. Expectation, North El Tiro Hill and East Quartzite Peak Areas Drilling Progress Report, February, 1968.

During the month of February we had one skid mounted rig which drilled throughout the month and one truck mounted rig which drilled from the 1st to the 21st of the month. A Failing Rotary drill rig was also on the property drilling holes through dump material on the 28th and 29th of the month.

A total of 1,447.9' of diamond core drilling was done; 701.4' with the truck mounted rig and 746.5' with the skid rig. In addition to the core drilling 150' of dump material was drilled with the rotary drill. Without taking any delays into account the average advance per shift was 20' for the truck rig and 16.4' for the skid mounted rig.

The averaged direct drilling cost for the month was \$8.25 per foot with the skid rig costing \$9.05 per foot and the truck rig \$7.43 per foot.

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End No.	Final Depth
		North	East	Depth to Top	Thick-ness	Avg. % Cu	Total N.S.			
D-297	2,950	35,400	16,505	69.7	20.8	1.94	0.08 ✓	392.9	392.9	392.9
				112.0	111.8	0.998	.02 ✓			
D-299	2,900.35	39,333.93	18,818.47	No significant thickness			701.4	911.4	911.4	
D-300	3,000	35,800	16,410	"	"	"	353.6	353.6	353.6	
							TOTAL	1,447.9		

*N. R. Nuttycombe*  
N. R. Nuttycombe

NRN:jca

- cc: TAsnedden
- CPPollock A M
- RMMeen
- JHCourtright (2)
- DRJameson (2)
- File

Mr. J. H. Courtright  
 AMERICAN SMELTING AND REFINING COMPANY  
 SILVER BELL UNIT  
 Silver Bell, Arizona

37A.1

February 5, 1968

J. H. C.  
 FEB 6 1968

MEMORANDUM TO: Mr. D. R. Jameson, Superintendent

Subject: SILVER BELL UNIT - Mt. Expectation, North El Tiro Hill and East Quartzite Peak Areas, Drilling Progress Report - Jan. 1968

During the month of January we had one truck mounted and one skid mounted diamond drill rig drilling. Both drills worked two shifts per day, six days/week.

A total of 2,068.6' of core drilling was done; 1,471.3' with the truck rig and 597.3' with the skid rig. Without taking any delays into account the average advance per shift was 11.9' for the skid rig and 28.3' for the truck rig.

The averaged direct drilling cost for the month was \$8.01/ft., with the skid rig costing \$10.72 per foot and the truck rig \$6.91 per foot.

Hole No.	Approx. Elevation	Approx. Coordinates		+0.40% Copper Lenses				Ft. Drill. During Mo.	Depth End Mo	Final Depth
		North	East	Depth To Top ness	Thick-	Avg. % Cu	Total N.S.			
D-291	2,847	38,200	15,300	No significant thickness				379.0	379.0	379.0
D-292	2,810	35,930	15,625	" " "				231.0	231.0	231.0
D-293	2,900	35,340	16,685	162.2	34.9	0.45	0.01	249.5	249.5	249.5
D-294	2,840	35,830	15,710	150.2	87.3	0.58	Ni1	366.3	366.3	366.3
				269.5	37.2	0.47	0.02			
D-295	2,970	35,620	18,010	50.0	126.4	0.75	0.50	450.0	450.0	450.0
D-296	2,905	39,405	18,945	No significant thickness				92.7	92.7	92.7
D-297	Drilling not started									
D-298	2,905	39,415	18,930	No significant thickness				90.1	90.1	90.1
D-299	2,895	39,350	18,885	" " "				210.0	210.0	-
TOTAL							<u>2,068.6'</u>			

*N. R. Nuttycombe*  
 N. R. Nuttycombe

NRN:jca  
 cc: TAsnedden  
 CFPollock A/M  
 RMEeen  
 JHCourtright (2)  
 DRJameson (2)  
 File

**AMERICAN DRILLING AND REFINING COMPANY**  
**SILVER HILL UNIT**

Silver Hill,

Arizona

J. H. C.

January 2, 1968

JAN 3 - 1968

**MEMORANDUM TO: Mr. D. E. Jensen, Superintendent**

**Subject: SILVER HILL UNIT - North El Tiro Hill, West El Tiro Leach Camp, and Mr. Exposition Area, - Drilling Summary Report - December, 1967.**

During the month of December we had one truck mounted and one skid mounted diamond drill rig drilling. Both rigs worked two shifts per day, six days per week.

A total of 2,225.0' of core drilling was done; 843.9' with the skid rig and 1,381.1' with the truck rig. Without taking any delays into account the average advance per shift was 16.9' for the skid rig and 27.6' for the truck rig.

Hole No.	Approx. Elevation	Approx. Coordinates		Drill Log Summary				Pt. Drill. Run-in No.	Depth End No.	Final Depth
		North	East	Depth	Thick-	App. L. Co.	Final H.H.			
D-281	2,700	36,167	15,190	202.9	28.8	0.43	H11 ✓	214.7	232.1	252.1 ✓
D-283	2,809.82	38,666.28	16,142.27	188.7	20.4	0.51	0.21	87.6	268.3	268.3 ✓
D-284	2,749.44	38,677.40	16,505.18	No significant thickness				147.6	167.6	167.6 ✓
D-285	2,760	36,325	15,282	186.2	27.9	0.52	0.01 ✓	397.9	397.9	397.9 ✓
D-286	2,770	38,068	16,509	98.7	33.7	0.50	0.16 ✓	183.6	183.6	183.6 ✓
D-287	2,835	35,342	16,865	209.2	49.8	0.47	0.02 ✓	287.3	287.3	287.3 ✓
				206.2	28.3	0.68	0.00 ✓			
D-288	2,830	36,640	15,030	No significant thickness				398.5	398.5	398.5 ✓
D-289	2,820	36,480	15,190	No significant thickness				231.3	231.3	231.3 ✓
D-290	2,817	38,058	16,190	202.4	22.6	0.70	0.06 ✓	256.5	256.5	256.5 ✓
<b>TOTAL</b>								<b>2,225.0</b>		

*H. R. Nuttycombe*  
 H. R. Nuttycombe

MR:jan  
 cc: JACadden  
 GFWLeach A/E  
 KRMom

JHCourtright (3)  
 HJensen (3)  
 File