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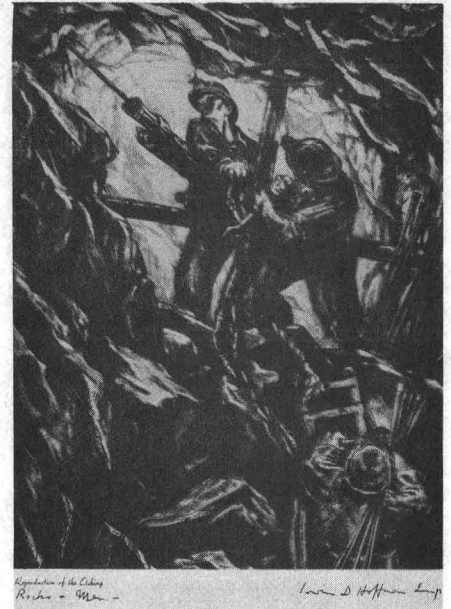
DEL TIERRA ENGINEERING & MINING CORP.

HARVEY W. SMITH, E.M. PRESIDENT

Registered Mining Engineer U.S. Mineral Surveyer
U.S. Approved Title Abstracter
Member Board of Governors
Arizona Dept. of Mines & Mineral Resources

4310 North Brown Avenue / Suite 3 Scottsdale, Arizona 85251
Tel. 602 / 946-3996

March 22, 1988



Ms. Carol O'Brien
DMEA Ltd.
7340 E. Shoeman Lane
Scottsdale, AZ 85251

Dear Carol:

Enclosed are revised coordinates for most of the stations on the 950 level of the UVX Mine. These were developed from the closed traverse that we completed on March 3 & 4, 1988. The changes are miniscule, thus I did not re-calculate new coordinates for the collars of the holes previously surveyed.

Also enclosed are the collar coordinates and elevations, inclination and bearings of 8 holes from the 911 Drill Station. Also included are the coordinates of the raise beyond the drill station.

If you have any questions, please call.

Thank you for asking us to assist on this project. My statement is enclosed.

Sincerely,

Harvey W. Smith, E.M.
President

HS/hm
Enclosures

A. F. BUDGE (MINING) LTD.

UVX MINE

Revised Coordinates

STATION	COORDINATES		ELEVATION
	N.	E.	
101	11,695.583	7,763.731	4,187.40
102	11,696.639	7,542.454	4,183.87
103	11,697.230	7,317.445	4,184.05
104	11,654.641	7,268.015	4,184.74
105	11,553.056	7,077.089	4,186.60
106	11,513.975	7,056.776	4,186.75
107	11,455.015	7,069.582	4,187.67
108	11,415.897	7,099.903	4,187.09
109	11,383.062	7,130.545	4,188.14
110	11,334.679	7,159.730	4,186.04
901	11,720.419	7,785.467	4,185.68
901-6	11,444.353	7,783.551	4,180.87
902-W2	11,251.702	7,560.967	4,179.49
902-W3	11,270.493	7,543.875	4,184.63
902-W4	11,278.258	7,513.059	4,181.19
907 DDS	11,269.067	7,309.139	4,184.32
202	11,248.830	7,608.729	4,178.85
W-19	11,292.310	7,347.480	4,182.10

A. F. BUDGE (MINING) LTD.

UVX MINE

Drill Hole Coordinates - DDS 911

DDH #	COORDINATES		ELEVATION	INCLINE	BEARING
	N.	E.			
901-9	11,197.021	7,560.215	4,178.87		
901-10	11,158.942	7,548.364	4,179.16		
901-11	11,117.131	7,575.569	4,179.04		
901-12	11,040.209	7,648.494	4,178.84		
DDS-911	11,026.386	7,659.745	4,183.06		
DDH-1	11,020.300	7,659.963	4,180.06	+20°22'	S.00°10'10"W.
DDH-2	11,020.666	7,659.972	4,175.75	-25°29'	S.00°38'36"E.
DDH-3	11,022.391	7,657.071	4,179.71	+21°18'30"	S.50°43'W.
DDH-4	11,022.584	7,657.257	4,176.12	-26°43'10"	S.49°40'34"W.
DDH-5	11,017.072	7,669.028	4,174.27	-25°09'	S.29°52'E.
DDH-6	11,023.152	7,665.061	4,172.96	-41°16'20"	S.30°03'E.
DDH-7	11,021.109	7,658.876	4,174.06	-24°19'15"	S.22°46'35"W.
DDH-10	11,023.292	7,656.350	4,174.69	-26°15'10"	S.71°05'33"W.
Raise	11,013.044	7,688.140	4,181.00		

A. F. BUDGE (MINING) LTD.

UVX MINE

DDH #	COORDINATES		ELEVATION	INCLINE	BEARING
	N.	E.			

DRILL HOLES

902-1	11,378.428	7,208.794	4,189.85	+38°31'	S.13°29'E.
902-2	11,377.113	7,206.076	4,186.99	+14°40'	S.12°42'W.
902-3	11,378.431	7,202.862	4,188.03	+25°52'	S.42°50'W.
902-4	11,377.356	7,209.104	4,186.84	+14°22'	S.11°02'E.
902-5	11,380.937	7,202.159	4,187.81	+24°07'	S.65°50'W.
902-6	11,381.451	7,202.971	4,190.41	+43°29'	S.67°06'W.
902-7	11,380.155	7,203.865	4,190.81	+44°53'	S.43°56'W.

901 DDS (Station 101)

901-1	11,690.036	7,754.639	4,182.86	+11°43'	S.42°31'W.
901-2	11,689.821	7,754.692	4,180.06	-19°19'	S.40°10'W.

Morgan DDS (Station 105)

			4,186.54		
M-10	11,546.382	7,079.130	4,188.63	+23°42'	S.37°03'E.
M- 5	11,544.291	7,077.772	4,187.23	+11°42'	S.20°45'E.
M- 7	11,544.582	7,070.631	4,188.97	+25°52'	S.45°20'W.

Case

A. F. Budge (Mining) Ltd.
UVX
Engineering Summary Sheet
December 24, 1987

MORGAN DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
M-1	11549.7	7069.6	4189.7	S47.5°W	+45°
M-2	11550.6	7070.6	4190.8	S49°W	+60°
M-3	11547.2	7076.3	4188.4	S15°E	+20°
M-4	11548.8	7075.6	4190.6	S16°E	+50°
M-5	11547.3	7076.1	4187.3	S20.5°E	+11°
M-6	11548.9	7076.2	4189.0	S22°E	+28°
M-7	11547.7	7069.5	4188.3	S46.5°W	+25°
M-8	11547.1	7073.2	4189.7	S17.5°W	+43°
M-9	11545.5	7074.2	4189.5	S6°W	+22°
M-10	11549.6	7077.1	4188.1	S36°E	+22°
M-11	11549.1	7077.2	4188.1	S23.5°E	+25°

Notes: Station Control Point Coordinates: 11555.83N, 7075.47E

A. F. BUDGE (MINING) LTD.

UVX MINE

STATION	COORDINATES		ELEVATION
	N.	E.	
95B	11,931.714	7,850.792	
95C	12,006.092	7,953.746	
95D	11,999.262	7,992.377	
902DDS	11,393.166	7,208.792	4,190.11
901-6	11,444.326	7,783.54	4,180.87
201	11,233.908	7,592.655	4,182.73
202	11,248.776	7,608.706	4,183.12
902W-1	11,251.262	7,533.117	4,184.29
(Old) 852	11,727.75	7,785.89	4,177.21 (Track)
(New) 852	11,727.619	7,785.784	4,185.64 (Spad)

800 LEVEL

EDITH SHAFT

Wire	11,998.641	7,787.799	4,333. (Sill)
800S	11,954.816	7,780.675	4,342.59
28	11,869.896	7,030.657	4,331.54
(Old) 64	11,835.88	6,965.86	
(New) 64	11,834.323	6,965.837	4,330.16
(Old) 67	11,870.23	6,940.90	
(New) 67	11,868.700	6,940.830	
(Old) 72	12,026.16	7,081.38	
(New) 72	12,024.57	7,081.259	
800DDS	11,792.183	6,911.871	4,332.57

A. F. BUDGE (MINING) LTD.

UVX MINE

STATION	COORDINATES		ELEVATION
	N.	E.	

Starting Coordinates:

S-1 (Surface)	12,038.22	7,787.07
S-2 (Surface)	12,022.26	8,085.76

Distance and Bearing from above coordinates: S.86°56'29"E., 299.116 ft.

Coordinates determined by Del Tierra Engineering & Mining Corp:

Edith Shaft wire (Surface)	11,998.641	7,787.799
Audrey Shaft wire (Surface)	12,004.365	8,000.576

Distance and Bearing from above coordinates: N.88°27'33"E., 212.854 ft.

Edith Shaft wire (Underground)	11,998.641	7,787.799
Audrey Shaft wire (Underground)	12,004.361	8,000.463

Distance and Bearing from above coordinates: N.88°27'33"E., 212.741 ft.

95A	11,869.449	7,785.626	4,184.98
901	11,720.419	7,785.467	4,185.68
101 (901DDS)	11,695.588	7,763.733	4,187.38
102	11,696.666	7,542.466	4,183.84
103	11,697.280	7,317.466	4,184.01
104	11,654.698	7,268.039	4,184.69
105 (Morgan DDS)	11,553.135	7,077.123	4,186.54
106	11,514.040	7,056.846	4,186.68
107	11,455.086	7,069.655	4,187.59
108	11,415.973	7,099.978	4,187.00
109	11,383.143	7,130.622	4,188.04
110	11,334.766	7,159.809	4,186.93
111	11,287.031	7,271.246	4,183.60
112	11,266.937	7,317.902	4,182.61

DDH #	Co-ordinates		Elevation	Inclination	Bearing	
	North	East				
902-1	HS	11378.4	7208.8	4189.9	38.5	166.5
	AJF	11383.6	7208.6	4189.8	42.0	165.5
Difference		-5.2	0.2	.0	-3.5	1.0
902-2	HS	11377.1	7206.1	4187.0	14.7	192.7
	AJF	11383.2	7205.9	4186.9	14.0	192.0
Difference		-6.1	0.2	0.1	0.7	0.7
902-3	HS	11378.4	7202.9	4188.0	25.9	222.8
	AJF	11384.5	7202.4	4188.0	25.0	221.5
Difference		-6.0	0.4	.0	0.9	1.3
902-4	HS	11377.4	7209.1	4186.8	14.4	169.0
	AJF	11383.7	7208.9	4186.8	14.0	168.5
Difference		-6.3	0.2	.0	0.4	0.5
902-5	HS	11380.9	7202.2	4187.8	24.1	245.8
	AJF	11386.6	7201.8	4187.8	25.0	243.5
Difference		-5.7	0.4	0.1	-0.9	2.3
902-6	HS	11381.5	7203.0	4190.4	43.5	247.1
	AJF	11386.5	7202.0	4190.3	45.0	245.0
Difference		-5.0	1.0	0.1	-1.5	2.1
902-7	HS	11380.2	7203.9	4190.8	44.9	223.9
	AJF	11385.9	7203.4	4190.5	47.0	223.0
Difference		-5.8	0.5	0.3	-2.1	0.9
Overall		-5.7	0.4	0.1	-0.9	1.3

DDH #/ Station	Co-ordinates		Elevation	Inclination	Bearing
	North	East			
902-1 HS	11378.4	7208.8	4189.9	38.5	166.5
	AJF 11383.6	7208.6	4189.8	42.0	165.5
Difference	-5.2	0.2	.0	-3.5	1.0
902-2 HS	11377.1	7206.1	4187.0	14.7	192.7
	AJF 11383.2	7205.9	4186.9	14.0	192.0
Difference	-6.1	0.2	0.1	0.7	0.7
902-3 HS	11378.4	7202.9	4188.0	25.9	222.8
	AJF 11384.5	7202.4	4188.0	25.0	221.5
Difference	-6.0	0.4	.0	0.9	1.3
902-4 HS	11377.4	7209.1	4186.8	14.4	169.0
	AJF 11383.7	7208.9	4186.8	14.0	168.5
Difference	-6.3	0.2	.0	0.4	0.5
902-5 HS	11380.9	7202.2	4187.8	24.1	245.8
	AJF 11386.6	7201.8	4187.8	25.0	243.5
Difference	-5.7	0.4	0.1	-0.9	2.3
902-6 HS	11381.5	7203.0	4190.4	43.5	247.1
	AJF 11386.5	7202.0	4190.3	45.0	245.0
Difference	-5.0	1.0	0.1	-1.5	2.1
902-7 HS	11380.2	7203.9	4190.8	44.9	223.9
	AJF 11385.9	7203.4	4190.5	47.0	223.0
Difference	-5.8	0.5	0.3	-2.1	0.9
Overall	-5.7	0.4	0.1	-0.9	1.3
M-5 HS	11544.3	7077.8	4187.2	11.7	159.3
	AJF 11547.3	7076.1	4187.3	11.0	159.5
Difference	-3.0	1.7	-0.1	0.7	-0.3
M-7 HS	11544.6	7070.6	4189.0	25.9	225.3
	AJF 11547.7	7069.5	4188.3	25.0	226.5
Difference	-3.1	1.1	0.7	0.9	-1.2
M-10 HS	11546.4	7079.1	4188.6	23.7	143.0
	AJF 11549.6	7077.1	4188.1	22.0	144.0
Difference	-3.2	2.0	0.5	1.7	-1.1

-3.1

1.6

901-1	HS	11690.0	7754.6	4182.9	11.7	222.5
	AJF	11690.0	7753.9	4182.7	11.0	221.5
Difference		.0	0.7	0.2	0.7	1.0
901-2	HS	11689.8	7754.7	4180.1	-19.3	220.2
	AJF	11689.4	7753.4	4179.6	-20.0	221.5
Difference		0.4	1.3	0.5	0.7	-1.3

Carol O'Brien
Page -2-
December 31, 1987

On the 800 level we were unable to establish a separate bearing, therefore, we ran a traverse from the Edith shaft wire to old stations Nos. 64, 67 and 72. Using the bearing from earlier surveys between Nos. 67 and 72, I calculated the traverse from the Edith shaft wire to Station 72. From these calculations there appears to be about a 1.5 ft. error in the north coordinate of Stations 64, 67 and 72.

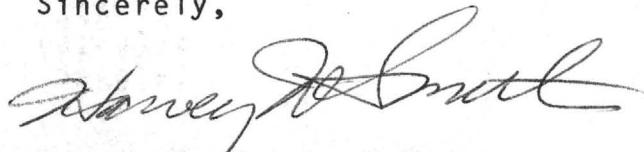
From our tabulated results you will note we have a fairly good comparison with the present coordinates of your drill holes. However, at the 902 Station there appears to be a discrepancy in the north coordinates of the drill holes of approximately 5 ft. and some differences in the collar coordinates of the 3 drill holes we located at the Morgan Station.

I have reviewed all of my calculations and don't believe we have an error, however, I shall be glad to compare notes with Joe should you desire.

If you have any questions, please do not hesitate to call.

Thank you for asking us to assist on this project, my statement is enclosed.

Sincerely,



Harvey W. Smith, E.M.
President

HWS/hm
Enclosures

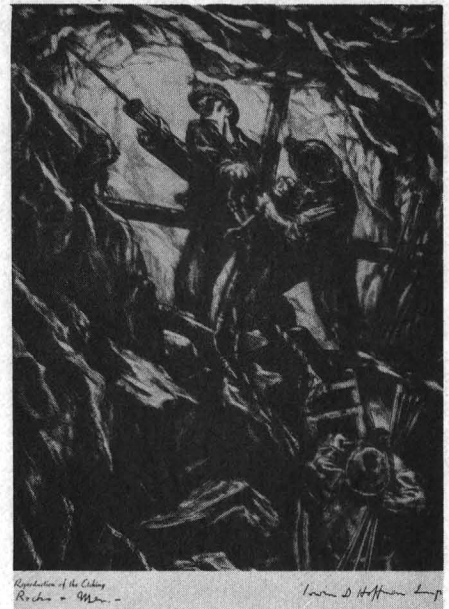
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4310 North Brown Avenue / Suite 3 Scottsdale, Arizona 85251
Tel. 602 / 946-3996

December 31, 1987



Ms. Carol O'Brien
DMEA Ltd.
7340 Shoeman Lane
Scottsdale, AZ 85251

Dear Carol:

We have completed a check survey of the current underground workings and some of the drill holes at the UVX Mine. The following procedures were used in completing the survey:

The coordinates of the surface stations S-1 and S-2 are the basis for the control of survey. From these two stations a traverse was completed between the wires in the Edith and Audrey shafts to establish a control bearing for the underground work.

Underground on the 950 level a traverse was completed between the wires of the two shafts. By comparing the two traverses - surface and underground - we established a bearing for further underground work. While the wire in the Audrey shaft had a considerable swing to it, we were able to match the distance underground between the two wires with the surface distance between wires within 0.11 ft. Conceivably, if we could stabilize the wire in the Audrey shaft we could improve on the comparison.

Using the established bearing we proceed to run a traverse out to the 902 diamond drill station and on to the face. We also ran a traverse out to 902W. In the traverse we located an old station, 852. We checked with the old coordinates for this station within 0.16 ft. Using our control traverse we surveyed the location of 7 drill holes at the 902 station, 3 holes at the Morgan station and 2 holes at the 901 station. The results are tabulated on the enclosed data sheets.


In doing our work, we turned all angles in both directions - right and left - and balanced them. All distances were taped both directions and vertical angles were noted for both directions.

CARD 1

MEMO

Date: December 21, 1987

To: Don White

From: A. J. Fernandez 

RE: 911-1 DDH

Longyear is currently drilling 911-1. The location of the rig and drill hole collar have been surveyed. The following is a tabulation of the available information.

DDH	Collar Data		Bearing	Inclin.
911-1	11019.76N	7656.99E	S0°26'W	

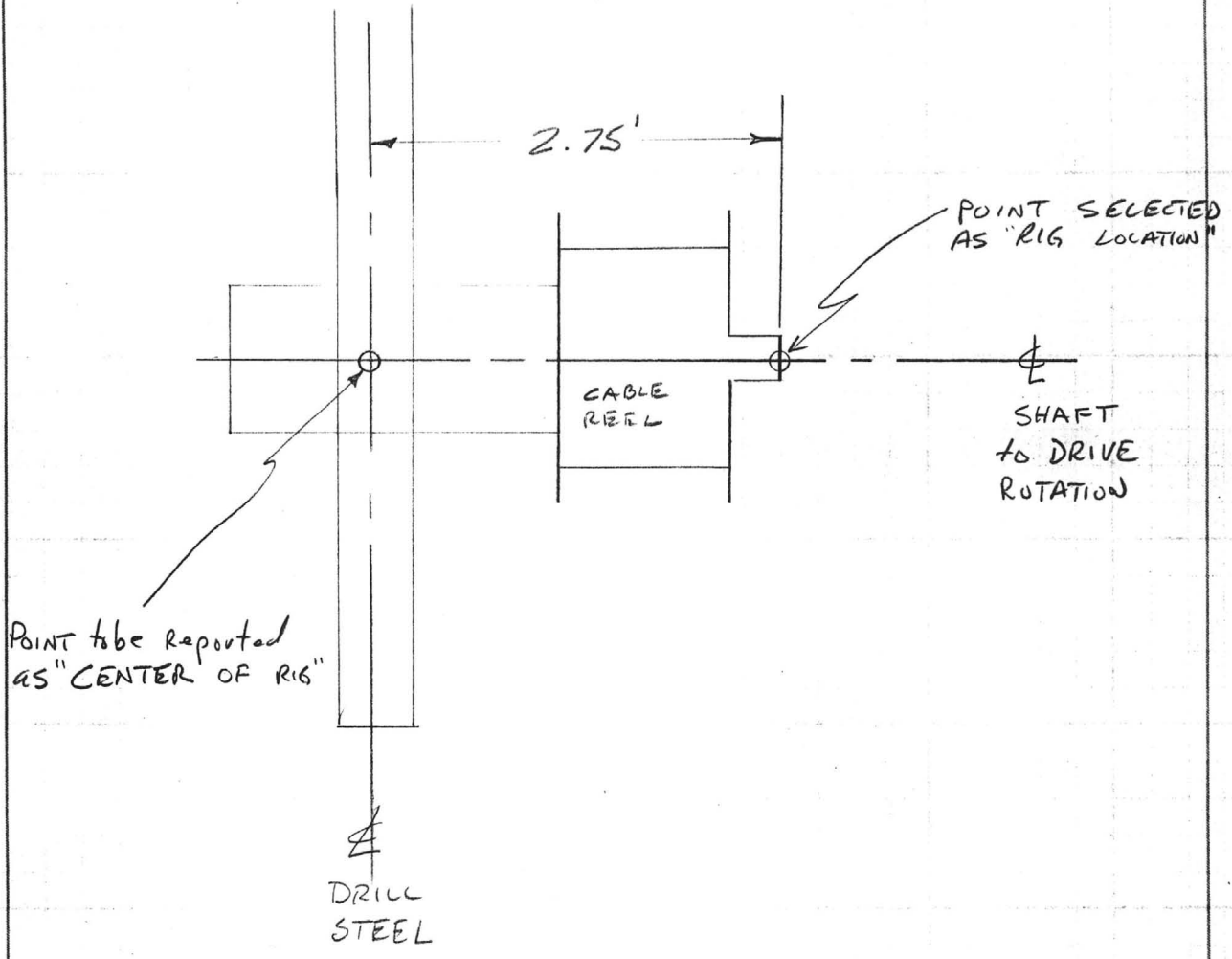
The "center of rig" is located at 11025.65N, 7657.06E. An explanation of "center of rig" is attached. The elevations and inclination will follow as they become available.

The coordinates of the station control points are:

901-12 (spad in last cap) 11040.35N, 7645.55E

901-13 (point in back of station) 11026.49N, 7656.73E

- RIG NOMENCLATURE -



TO REPORT "CENTER OF RIG" DO THE FOLLOWING:

- ① DETERMINE "RIG LOCATION"
- ② DETERMINE "BEARING OF DRILL HOLE"
- ③ ELEVATION AT "RIG LOCATION" EQUALS ELEVATION AT "CENTER OF RIG"
- ④ CALCULATE "CENTER OF RIG" FROM BEARING PERPENDICULAR TO HOLE BEARING & FIXED 2.75 FEET OFFSET.

A. F. Budge (Mining) Ltd.
UVX
Engineering Summary Sheet
December 24, 1987

901 DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
901-1	11690.0	7753.9	4182.7	S41.5°W	+11°
901-2	11689.4	7753.4	4179.6	S41.5°W	-20°
901-3	11691.3	7750.9	4184.8	S62.5°W	+18°

MEMO

To: Don C. White

From: A. J. Fernandez

Date: December 28, 1987

RE: Elevations of 911-1 DDS



The collar elevation of 911-1 DDS is 4178.6 and the center of the rig is 4176.6. This completes the data on the 911-1 DDS collar. To summarize:

DDH	Collar Data			Bearing	Inclin.
911-1	11019.8N	7657.0E	4178.6Z	S0.5°W	+20

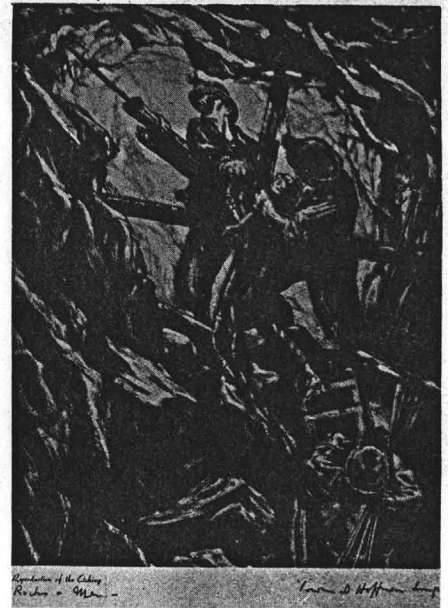
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Tel. 602 / 946-3996

December 31, 1987



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DMEA Ltd.
7340 Shoeman Lane
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Underground on the 950 level a traverse was completed between the wires of the two shafts. By comparing the two traverses - surface and underground - we established a bearing for further underground work. While the wire in the Audrey shaft had a considerable swing to it, we were able to match the distance underground between the two wires with the surface distance between wires within 0.11 ft. Conceivably, if we could stabilize the wire in the Audrey shaft we could improve on the comparison.

Using the established bearing we proceed to run a traverse out to the 902 diamond drill station and on to the face. We also ran a traverse out to 902W. In the traverse we located an old station, 852. We checked with the old coordinates for this station within 0.16 ft. Using our control traverse we surveyed the location of 7 drill holes at the 902 station, 3 holes at the Morgan station and 2 holes at the 901 station. The results are tabulated on the enclosed data sheets.

In doing our work, we turned all angles in both directions - right and left - and balanced them. All distances were taped both directions and vertical angles were noted for both directions.

Carol O'Brien
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December 31, 1987

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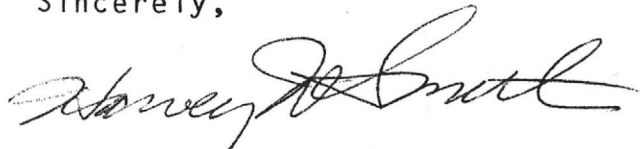
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I have reviewed all of my calculations and don't believe we have an error, however, I shall be glad to compare notes with Joe should you desire.

If you have any questions, please do not hesitate to call.

Thank you for asking us to assist on this project, my statement is enclosed.

Sincerely,



Harvey W. Smith, E.M.
President

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A. F. BUDGE (MINING) LTD.

UVX MINE

STATION	COORDINATES		ELEVATION
	N.	E.	
<u>Starting Coordinates:</u>			
S-1 (Surface)	12,038.22	7,787.07	
S-2 (Surface)	12,022.26	8,085.76	
Distance and Bearing from above coordinates: S.86°56'29"E., 299.116 ft.			
<u>Coordinates determined by Del Tierra Engineering & Mining Corp:</u>			
Edith Shaft wire (Surface)	11,998.641	7,787.799	
Audrey Shaft wire (Surface)	12,004.365	8,000.576	
Distance and Bearing from above coordinates: N.88°27'33"E., 212.854 ft.			
Edith Shaft wire (Underground)	11,998.641	7,787.799	
Audrey Shaft wire (Underground)	12,004.361	8,000.463	
Distance and Bearing from above coordinates: N.88°27'33"E., 212.741 ft.			
95A	11,869.449	7,785.626	4,184.98
901	11,720.419	7,785.467	4,185.68
101 (901DDS)	11,695.588	7,763.733	4,187.38
102	11,696.666	7,542.466	4,183.84
103	11,697.280	7,317.466	4,184.01
104	11,654.698	7,268.039	4,184.69
105 (Morgan DDS)	11,553.135	7,077.123	4,186.54
106	11,514.040	7,056.846	4,186.68
107	11,455.086	7,069.655	4,187.59
108	11,415.973	7,099.978	4,187.00
109	11,383.143	7,130.622	4,188.04
110	11,334.766	7,159.809	4,186.93
111	11,287.031	7,271.246	4,183.60
112	11,266.937	7,317.902	4,182.61

A. F. BUDGE (MINING) LTD.

UVX MINE

STATION	COORDINATES		ELEVATION
	N.	E.	
95B	11,931.714	7,850.792	
95C	12,006.092	7,953.746	
95D	11,999.262	7,992.377	
902DDS	11,393.166	7,208.792	4,190.11
901-6	11,444.326	7,783.54	4,180.87
201	11,233.908	7,592.655	4,182.73
202	11,248.776	7,608.706	4,183.12
902W-1	11,251.262	7,533.117	4,184.29
(Old) 852	11,727.75	7,785.89	4,177.21 (Track)
(New) 852	11,727.619	7,785.784	4,185.64 (Spad)

800 LEVEL

EDITH SHAFT

Wire	11,998.641	7,787.799	4,333. (Sill)
800S	11,954.816	7,780.675	4,342.59
28	11,869.896	7,030.657	4,331.54
(Old) 64	11,835.88	6,965.86	
(New) 64	11,834.323	6,965.837	4,330.16
(Old) 67	11,870.23	6,940.90	
(New) 67	11,868.700	6,940.830	
(Old) 72	12,026.16	7,081.38	
(New) 72	12,024.57	7,081.259	
800DDS	11,792.183	6,911.871	4,332.57

A. F. BUDGE (MINING) LTD.

UVX MINE

DDH #	COORDINATES		ELEVATION	INCLINE	BEARING
	N.	E.			

DRILL HOLES

902-1	11,378.428	7,208.794	4,189.85	+38°31'	S.13°29'E.
902-2	11,377.113	7,206.076	4,186.99	+14°40'	S.12°42'W.
902-3	11,378.431	7,202.862	4,188.03	+25°52'	S.42°50'W.
902-4	11,377.356	7,209.104	4,186.84	+14°22'	S.11°02'E.
902-5	11,380.937	7,202.159	4,187.81	+24°07'	S.65°50'W.
902-6	11,381.451	7,202.971	4,190.41	+43°29'	S.67°06'W.
902-7	11,380.155	7,203.865	4,190.81	+44°53'	S.43°56'W.
<u>901 DDS (Station 101)</u>					
901-1	11,690.036	7,754.639	4,182.86	+11°43'	S.42°31'W.
901-2	11,689.821	7,754.692	4,180.06	-19°19'	S.40°10'W.
<u>Morgan DDS (Station 105)</u>			4,186.54		
M-10	11,546.382	7,079.130	4,188.63	+23°42'	S.37°03'E.
M- 5	11,544.291	7,077.772	4,187.23	+11°42'	S.20°45'E.
M- 7	11,544.582	7,070.631	4,188.97	+25°52'	S.45°20'W.

January 19, 1988

To: A. F. Budge

From: A. J. Fernandez

RE: Survey Instrument

I have decided to test the new Nikon NE-10 instrument before making a purchase decision. The NE-10 reads out to a liquid crystal display to the nearest 10 seconds. It comes equipped with a reticle illuminator and optical plummet. It is about half the price of the Wild T-16. Therefore, I believe it is worth the expense of rental (\$150 per week) to test the NE-10 for a week or two.

I have checked on the availability of used T-16's of the newest model (20 second reading). None are currently available from sources in Phoenix or Tucson.

DEL TIERRA ENGINEERING & MINING CORP.

HARVEY W. SMITH, E.M. PRESIDENT

Registered Mining Engineer U.S. Mineral Surveyer
U.S. Approved Title Abstracter
Member Board of Governors
Arizona Dept. of Mines & Mineral Resources

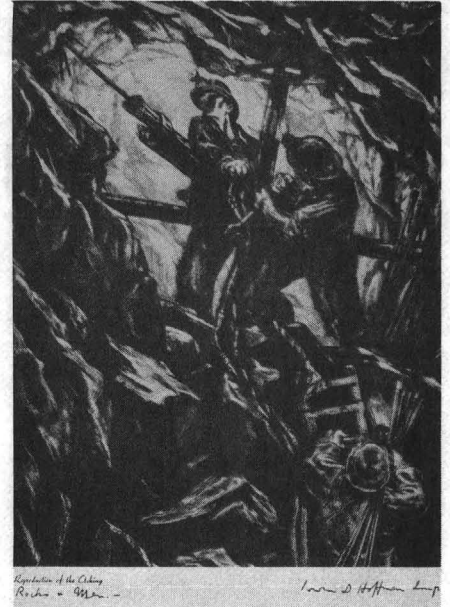
4310 North Brown Avenue / Suite 3 Scottsdale, Arizona 85251
Tel. 602 / 946-3996

January 18, 1988

DMEA LTD.

JAN 21 1988

RECEIVED



Ms. Carol O'Brien
DMEA Ltd.
7340 Shoeman Lane
Scottsdale, AZ 85251

Dear Carol:

Joe F. called today and asked me to check the elevations on Stations 201, 202 and 902W-1. Unfortunately, I made an error in the calculations of the elevations of those points.

My original computations were based on the elevation of Station 901 and should have been on Station 901-6. The corrected elevations are as follows:

Station 201	4,177.92
Station 202	4,178.85
Station 902W-1	4,180.02

I apologize for the error and hope it didn't cause any inconvenience.

If you have any questions, please do not hesitate to call me.

Sincerely,

Harvey W. Smith, E.M.
President

HWS/hm

A. F. Budge (Mining) Ltd.
UVX
Engineering Summary Sheet
December 24, 1987

809 & 806 DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
809-1	11785.4	6909.3	4328.0	S22°W	+25°
809-2	11785.0	6911.9	4328.1	Due South	+27°
809-3	11784.5	6913.1	4325.2	S14°E	-5°
809-4	11786.5	6907.8	4327.7	S40°W	+25°
809-5	11784.6	6911.6	4327.1	S1.5°W	+15°
809-6	11786.3	6908.3	4327.8	S33°W	+25°
809-7	11786.2	6907.5	4327.2	S40.5°W	+18°
809-8	11785.5	6911.8	4329.0	S1.5°W	+35°
809-9	11785.1	6916.8	4325.2	S36°E	-5°
806-1	11899.0	7331.9	4332.4	S31°W	-4°

ENGINEERING MEMO

February 2, 1988

Attached are the results of reconciling Del Tierra's survey and A. F. Budge's survey of the existing drill holes. Drill hole collar coordinates have been adjusted to agree with Del Tierra's survey. Where Del Tierra did not survey drill holes, their control points were used to adjust A. F. Budge's survey. Elevations were found to be in reasonably good agreement, therefore little adjustment was required. Drill hole bearings were also left for the most part unadjusted, because of the high variance in repeated measurements. The same is true of the hole inclinations. The exception to this is the 902 drill holes, here Del Tierra's survey was used.

Please note also that the coordinates and elevations have been rounded to the nearest tenth of a foot. The hole bearings have been rounded to the nearest half degree. The hole inclinations have been rounded to the nearest degree. These roundings are consistent with the precision to which we can measure these quantities.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

A. F. Budge (Mining) Ltd.
UVX
Engineering Summary Sheet
February 2, 1988 (replaces summary dated 12/24/87)

MORGAN DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
M-1	11547.0	7071.3	4189.7	S47.5°W	+45°
M-2	11547.9	7072.3	4190.8	S49°W	+60°
M-3	11544.5	7078.0	4188.4	S15°E	+20°
M-4	11546.1	7077.3	4190.6	S16°E	+50°
M-5	11544.6	7077.8	4187.4	S20.5°E	+11°
M-6	11546.2	7077.9	4189.0	S22°E	+28°
M-7	11545.0	7071.2	4189.0	S46.5°W	+25°
M-8	11544.4	7074.9	4189.7	S17.5°W	+43°
M-9	11542.8	7075.9	4189.5	S6°W	+22°
M-10	11546.9	7078.8	4188.6	S36°E	+22°
M-11	11546.4	7078.9	4188.1	S23.5°E	+25°

A. F. Budge (Mining) Ltd.

UVX

Engineering Summary Sheet

February 2, 1988 (replaces summary dated 12/24/87)

902 DDS DRILL HOLE DATA

DDH		Collar Data		Bearing	Inclin.
902-1	11378.4	7208.8	4189.9	S13.5°E	+39°
902-2	11377.1	7206.1	4187.0	S12.5°W	+15°
902-3	11378.4	7202.9	4188.0	S43°W	+26°
902-4	11377.4	7209.1	4186.8	S11°E	+14°
902-5	11380.9	7202.2	4187.8	S66°W	+24°
902-6	11381.5	7203.0	4190.4	S67°W	+43°
902-7	11380.2	7203.9	4190.8	S44°W	+45°

A. F. Budge (Mining) Ltd.
 UVX
 Engineering Summary Sheet
 February 2, 1988 (replaces summary dated 12/24/87)

809 & 806 DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
809-1	11784.0	6909.3	4328.0	S22°W	+25°
809-2	11783.5	6911.9	4328.1	Due South	+27°
809-3	11783.0	6913.1	4325.2	S14°E	-5°
809-4	11785.0	6907.8	4327.7	S40°W	+25°
809-5	11783.0	6911.6	4327.1	S1.5°W	+15°
809-6	11784.8	6908.3	4327.8	S33°W	+25°
809-7	11784.7	6907.5	4327.2	S40.5°W	+18°
809-8	11784.0	6911.8	4329.0	S1.5°W	+35°
809-9	11783.6	6916.8	4325.2	S36°E	-5°
806-1	11897.4	7331.9	4332.4	S31°W	-4°

A. F. Budge (Mining) Ltd.
UVX
Engineering Summary Sheet
February 2, 1988 (replaces summary dated 12/24/87)

901 DDS DRILL HOLE DATA

DDH	Collar Data			Bearing	Inclin.
	Northing	Easting	Elevation		
901-1	11690.0	7754.6	4182.9	S42.5°W	+12°
901-2	11689.8	7754.7	4180.1	S40°W	-20°
901-3	11691.3	7751.7	4184.8	S62°W	+18°

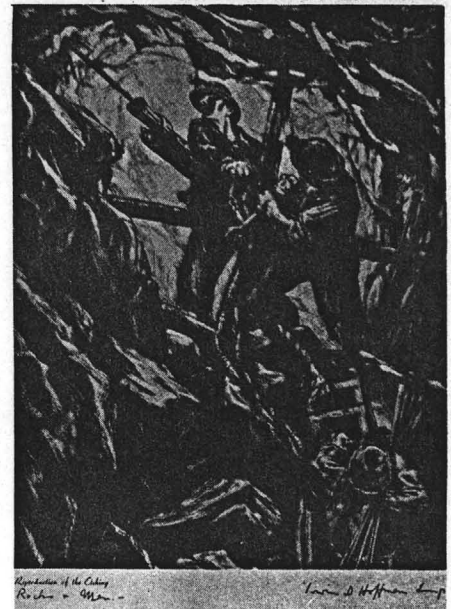
DEL TIERRA ENGINEERING & MINING CORP.

HARVEY W. SMITH, E.M. PRESIDENT

Registered Mining Engineer U.S. Mineral Surveyer
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Arizona Dept. of Mines & Mineral Resources

4310 North Brown Avenue / Suite 3 Scottsdale, Arizona 85251
Tel. 602 / 946-3996

December 31, 1987



Ms. Carol O'Brien
DMEA Ltd.
7340 Shoeman Lane
Scottsdale, AZ 85251

Dear Carol:

We have completed a check survey of the current underground workings and some of the drill holes at the UVX Mine. The following procedures were used in completing the survey:

The coordinates of the surface stations S-1 and S-2 are the basis for the control of survey. From these two stations a traverse was completed between the wires in the Edith and Audrey shafts to establish a control bearing for the underground work.

Underground on the 950 level a traverse was completed between the wires of the two shafts. By comparing the two traverses - surface and underground - we established a bearing for further underground work. While the wire in the Audrey shaft had a considerable swing to it, we were able to match the distance underground between the two wires with the surface distance between wires within 0.11 ft. Conceivably, if we could stabilize the wire in the Audrey shaft we could improve on the comparison.

Using the established bearing we proceed to run a traverse out to the 902 diamond drill station and on to the face. We also ran a traverse out to 902W. In the traverse we located an old station, 852. We checked with the old coordinates for this station within 0.16 ft. Using our control traverse we surveyed the location of 7 drill holes at the 902 station, 3 holes at the Morgan station and 2 holes at the 901 station. The results are tabulated on the enclosed data sheets.

In doing our work, we turned all angles in both directions - right and left - and balanced them. All distances were taped both directions and vertical angles were noted for both directions.

Carol O'Brien
Page -2-
December 31, 1987

On the 800 level we were unable to establish a separate bearing, therefore, we ran a traverse from the Edith shaft wire to old stations Nos. 64, 67 and 72. Using the bearing from earlier surveys between Nos. 67 and 72, I calculated the traverse from the Edith shaft wire to Station 72. From these calculations there appears to be about a 1.5 ft. error in the north coordinate of Stations 64, 67 and 72.


From our tabulated results you will note we have a fairly good comparison with the present coordinates of your drill holes. However, at the 902 Station there appears to be a discrepancy in the north coordinates of the drill holes of approximately 5 ft. and some differences in the collar coordinates of the 3 drill holes we located at the Morgan Station.

I have reviewed all of my calculations and don't believe we have an error, however, I shall be glad to compare notes with Joe should you desire.

If you have any questions, please do not hesitate to call.

Thank you for asking us to assist on this project, my statement is enclosed.

Sincerely,



Harvey W. Smith, E.M.
President

HWS/hm
Enclosures

A. F. BUDGE (MINING) LTD.

UVX MINE

STATION	COORDINATES		ELEVATION
	N.	E.	
<u>Starting Coordinates:</u>			
S-1 (Surface)	12,038.22	7,787.07	
S-2 (Surface)	12,022.26	8,085.76	
Distance and Bearing from above coordinates: S.86°56'29"E., 299.116 ft.			
<u>Coordinates determined by Del Tierra Engineering & Mining Corp:</u>			
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UVX MINE

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(Old) 852	11,727.75	7,785.89	4,177.21 (Track)
(New) 852	11,727.619	7,785.784	4,185.64 (Spad)

800 LEVEL

EDITH SHAFT

Wire	11,998.641	7,787.799	4,333. (S111)
800S	11,954.816	7,780.675	4,342.59
28	11,869.896	7,030.657	4,331.54
(Old) 64	11,835.88	6,965.86	
(New) 64	11,834.323	6,965.837	4,330.16
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A. F. BUDGE (MINING) LTD.

UVX MINE

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902-4	11,377.356	7,209.104	4,186.84	+14°22'	S.11°02'E.
902-5	11,380.937	7,202.159	4,187.81	+24°07'	S.65°50'W.
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<u>Morgan DDS (Station 105)</u>					
			4,186.54		
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M- 5	11,544.291	7,077.772	4,187.23	+11°42'	S.20°45'E.
M- 7	11,544.582	7,070.631	4,188.97	+25°52'	S.45°20'W.

To: D. C. White

From: Arthur J. Fernandez

Date: November 18, 1987

Subject: Engineering and Surveying at UVX

Comments in two of your recent memos deserve response.

First, the memo dated Oct. 31.

Your and Dr. Hodder's comments, where they apply to your work, on M. Janeck's letter are well taken. We may have expected too much from his brief visit.

Fire, underground, is never a "non-issue." The possibility of spontaneous combustion of massive sulfides at the UVX is an issue to be considered. Experience of past operators does not make the UVX immune to fire. Old sulphide stopes may be inaccessible to us, but air is capable of going where no man can. And we are helping that process by re-opening old drifts anywhere in the mine.

The hoisting capability of the Edith shaft is yet unproven. We can only estimate what tonnage could be brought to the surface in a full production mode. Right now we are not lowering material and supplies at a rate remotely resembling the quantities required for production. Mr. Janeck's estimate was based on the time required to hoist one drift round and a conservative figure for lowering supplies. It does not seem to me that Mr. Janeck is suggesting a new shaft, only an "enlarged mining plant."

As to the Recommendations. (Your numbers)

1. I am also concerned about the location problem in the Morgan Drill station area. Work has been in progress to reconcile the problem. In greater earnest since we broke into the Audrey. May I suggest that you check the preparation of the existing base maps for errors while our work proceeds. Revisions will be made on the basis of all our work.
2. Jose may be available for this work.
3. The definition of ore is always economic.

Our short term goal has to be the determination of "geologic reserves." (The term ore is purposely left out.) From that reserve, mineable reserves will be determined by a feasibility study. The various project and marketing schemes conceivable at this point rely on understanding the "total potential." Reserve estimates, for now, need to be concerned with the chemical make up of the rock. How much Au? Ag? SiO₂? Fe? Al? So far, the gold we have found can be extracted (technically), therefore no rock type should be favored over another.

To: DCW
November 18, 1987

The danger here is to reduce the exploration potential by saying this or that may not be economic to mine. In other words, it is too early to apply a mining cutoff to the mineral deposit.

Regarding your memo of Nov. 15.

I take particular exception to comment number 3. You and Dan were there when Jose and I were marking the drift. You and Dan were there when I was explaining to Pete what the marks meant. Knowing what we were doing, it seems to me that you did not have to include this comment in the memo. A plan to control track grade at the face and to connect the 902w are in place. Also, I do not think Dan would have worded the comment quite the way you did. In fact, in conversations the day after his visit to the mine we discussed all the issues your memo raised and more and I did not sense the same tone from him in person that you relay in the memo. Besides, how Pete, Jose and I plan to control drift headings is not pertinent to the geology of the UVX.

In closing, maybe you should pay attention to your own writing; ". . . it is not our place to comment on direct mining issues."