

UNITED LINCOLN RESOURCES INC.

885712

LOG NO:	JAN 11 1988	VAN
ACTION:	TGS	
FILE NO:	MT. MILLIGAN	

TELEPHONE: (604) 684-6365

FACSIMILE: (604) 684-8092

FACSIMILE TRANSMISSION

From: J P Franzen
 Date: Jan 11/88 Time: 8:50 am
 To: Geological Survey Branch
 Attn: T. Schroeter
 Facsimile Number: 660-2653

Comment: Copy of FAX sent to Ron.

Not for public distribution
Back of envelope feasibility at
\$45 410 gold + \$45 4 copper
Assay results 88-68

Number of Pages (excluding this one): 18

NOTE:
 IF THIS TRANSMISSION IS NOT FULLY OR LEGIBLY RECEIVED, PLEASE
 TELEPHONE THE OPERATOR AT THE ABOVE NUMBER.

RON

Some preliminary estimates —
Mt. Milligan project.

Highlights

1. With moderate success in currently defined zone can see \approx 100 million tons
2. Open at both ends
3. Significant targets elsewhere in circular system.
4. Additional IP required to evaluate other geochem targets.
5. Rock has recoverable payable value of \$13.26 / ton milled (US \$1/lb copper)
 - must mine + mill + treat conc in \$6.00 - \$7.00 / ton milled
 - need 35000 tpd or 13000000 tpy operation
 - need 175000000 → 225000000 tons reserves
6. Production estimated at 35000 tpd
 - 200,000 ounces gold
 - 41000 tons copper metal

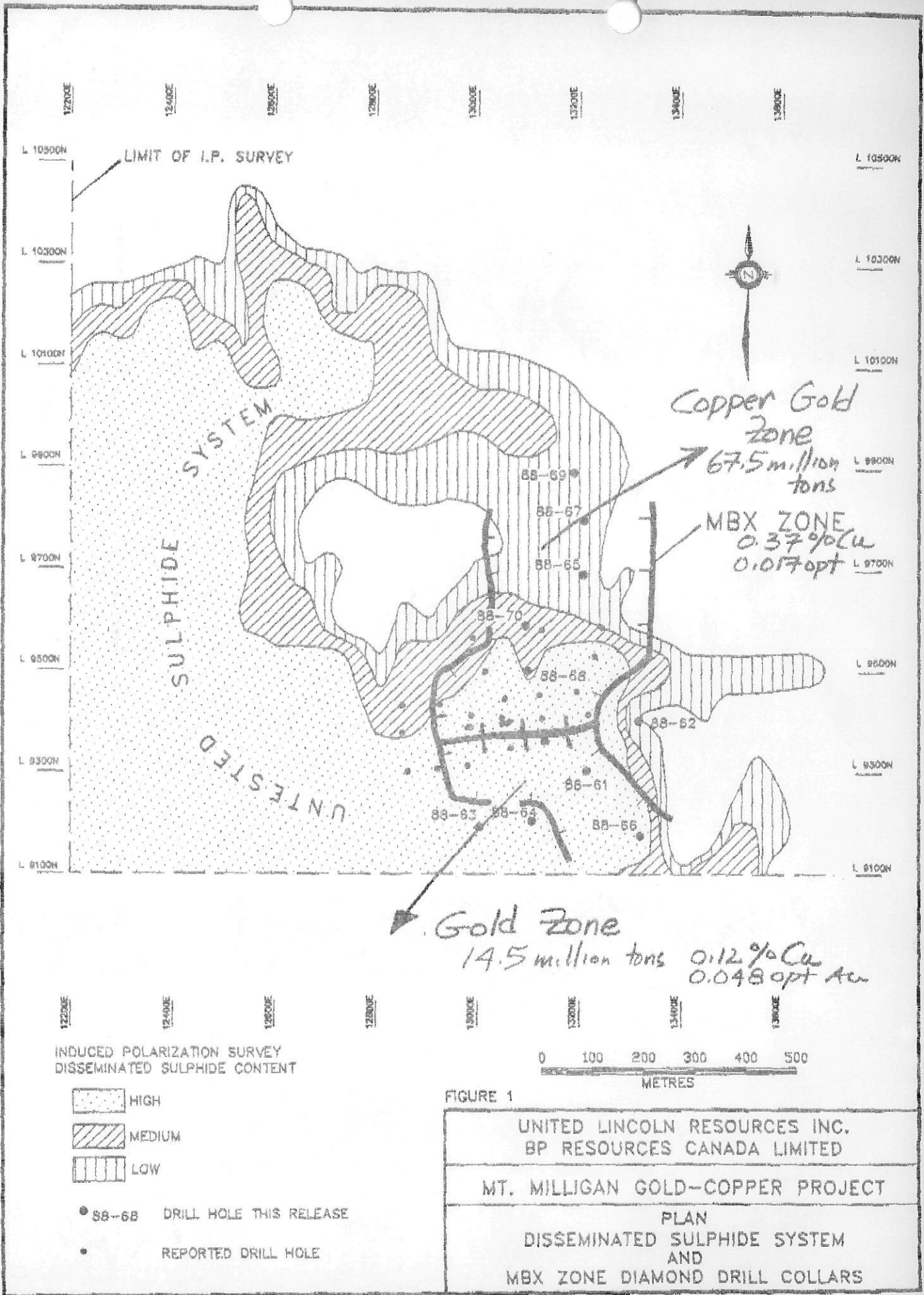
PP 11/1/89

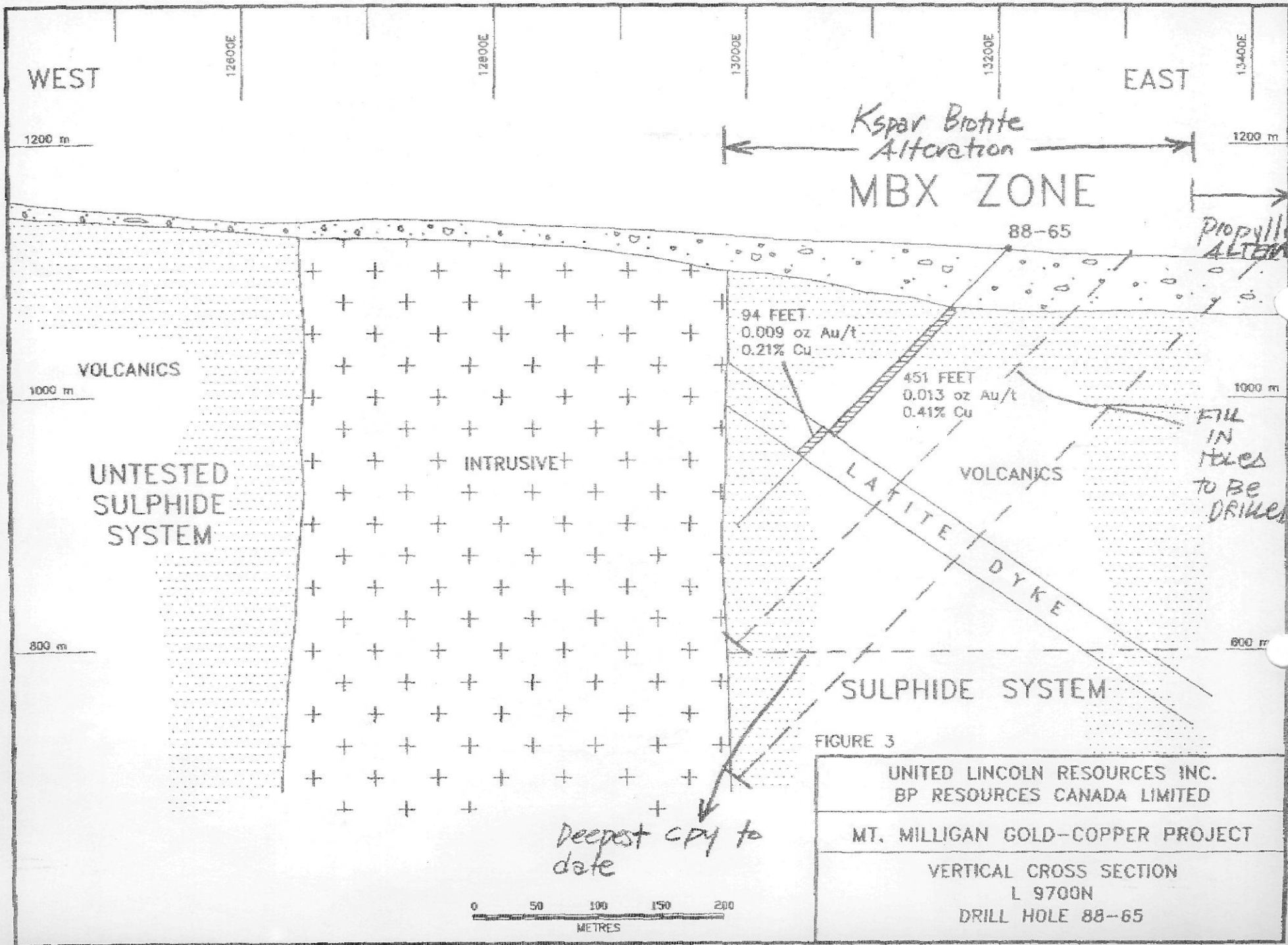
Mt. Milligan Inventory

<u>Section Hole</u>	<u>Tons</u>	<u>Cu %</u>	<u>Au opt</u>	<u>Remarks</u>
67	11,000,000	0.29	0.013	open to east and at depth (+25%)
65	15,700,000	0.41	0.013	open to east and at depth (+75%)
70	12,000,000	0.38	0.016	open to east and at depth (+75%)
68	16,900,000	0.39	0.017	open to east
50	6,100,000	0.35	0.021	open to east and at depth (+75%)
62	5,800,000	0.32	0.034	closed to east - open at depth (+25%)
44	2,400,000	0.17	0.038	open to east and at depth (+50%)
61	9,500,000	0.13	0.047	open to east (+25%)
<u>66</u>	<u>2,200,000</u>	<u>0.05</u>	<u>0.060</u>	open (+100%)
<u>TOTAL</u>	<u>82,000,000</u>	<u>0.32</u>	<u>0.022</u>	

100,000,000 IF DRILLING (+%)

JPF
25/12/88





01/11/1989 09:54 CONTINENTAL GOLD CORP. 604 684 8092 P.05

Mt Milligan Model

35,000 tpd 13,000,000 tpy

To date reserves say:

	% Cu	opt Au
67 500 000	0.37	0.017
14 500 000	0.12	0.048

Need another 100,000,000 tons to justify 35,000 tpd.

Copper Conc Revenue

$$13,000,000 \text{ tpy} \times \frac{2000 \text{ lb}}{\text{ton}} \times \frac{0.37}{100} \times \frac{85}{100} = 8,177,000 \text{ lbs Cu/year}$$

$$13,000,000 \text{ tpy} \times 0.017 \times \frac{70}{100} = 154,700 \text{ ounces Au/year}$$

$$\text{Cu Conc} = 26\% \text{ Cu or } \frac{520 \text{ lb}}{\text{ton conc}}$$

$$\therefore \text{produce } 8,177,000 \div 520 = 15,725 \text{ tons conc}$$

$$\text{Grade} = 26\% \text{ Cu}$$

$$= 0.984 \text{ ounces Au/ton}$$

Payable Metals Conc

$$\text{Cu} = \left(\frac{26-1}{100} \right) \left(\frac{2000 \text{ lb}}{\text{ton}} \right) \left(\frac{\$1.20}{\text{lb}} \right) = \frac{\$600}{\text{ton conc}}$$

$$\text{Au} = \frac{90}{100} (0.984 - 0.029) \left(\frac{\$494}{\text{ounce}} \right) = \frac{\$425}{\text{ton conc}}$$

$$\text{TOTAL} = \text{\$} \overset{\text{Cu}}{600} + \text{\$} \overset{\text{Au}}{425} = \text{\$}1025$$

$$\begin{aligned} \text{TOTAL REVENUE} &= 157250 \text{ tons conc} \times \frac{\text{\$}1025}{\text{ton}} \\ &= \text{\$}161,180,000 \end{aligned}$$

$$\text{TOTAL TONS MINED} = 13,000,000$$

$$\frac{\text{TOTAL REVENUE}}{\text{TON}} = \frac{\text{\$}161,180,000}{13,000,000 \text{ TONS}}$$

Chalcopyrite Reserves	=	$\frac{\text{\$}12.40}{\text{ton}}$
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Assume Pyrite - Au ore treated on-site CIP plant.

Make py flotation: Assume recover

50% OF pyrite
FROM WHICH RECOVER
80% OF gold.

$$\text{Grade} = 0.048 \text{ opt Au}$$

$$\frac{80}{100} \times \frac{50}{100} \times 0.048 = 0.035$$

$0.035 \text{ opt} \times \frac{\text{\$}494}{\text{ounce}}$	=	$\frac{\text{\$}17.29}{\text{ton}}$	py reserves
--	---	-------------------------------------	-------------

Assume mill feed \propto to current "reserves"

$$\left[\frac{14.5}{82} \times \frac{\text{Gold-py } \$17.29}{\text{ton}} \right] + \left[\frac{67.5}{82} \times \frac{\text{Gold-cpy } \$12.40}{\text{ton}} \right]$$

= Average blended revenue / ton

$$= \$3.06 + \$10.20$$

$$= \$13.26 / \text{ton}$$

Projected Costs

\$5/ton milled (site)

Conc Freight Smelter, Refining
= \$200/ton

Gibraltar = \$4.00
Brenda = \$4.19
Similkameen = \$4.62

$$\therefore \text{TOTAL COSTS} = 13,000,000 \text{ tons} \times \frac{\$5}{\text{ton}} = \$65,000,000$$

$$157250 \text{ tons} \times \frac{\$200}{\text{ton}} = \$31,450,000$$

$$\text{TOTAL} = \$96,450,000$$

$$\text{COSTS/TON} = \$96,450,000 \div 13,000,000$$

$$= \$7.42 \text{ Chalcopyrite ore}$$

\$10/ton milled
gold-pyrite ore

Leach CIP Plant

TOTAL COSTS

$$\boxed{\text{gold-py}} = 2,299,000 \frac{\text{tons}}{\text{year}} \times \frac{\$10}{\text{ton}}$$

$$= \$22,990,000$$

$$\boxed{\text{chalcopyrite-gold}} = 10,701,000 \frac{\text{tons}}{\text{year}} \times \frac{\$7.42}{\text{ton}}$$

$$= \$79,401,000$$

$$\boxed{\text{TOTAL}} = \$102,390,000$$

$$\frac{\text{TOTAL COST}}{\text{TON MILLER}} = \frac{\$102,390,000}{13,000,000 \text{ tons}} = \frac{\$7.88}{\text{ton}}$$

$$\text{CAPITAL COST} = \$200,000,000$$

$$\frac{\text{OPERATING PROFIT}}{\text{YEAR}} = 13,000,000 \frac{\text{tons}}{\text{year}} \left[\frac{\$13.26 - 7.88}{\text{ton}} \right]$$

$$= \$69,940,000$$

$$\text{Pay BACK} = \frac{\$200,000,000}{\$69,940,000} = 2.9 \text{ years}$$

Annual Gold Production

13 000 000 TPY

$$\text{Assume } \frac{14.5}{82.0} \times 13,000,000 = \text{py-gold milling} \\ = 2,299,000 \text{ tons/year}$$

$$\text{and } \frac{67.5}{82.0} \times 13,000,000 = \text{chalcopyrite - gold milling} \\ = 10,701,000 \text{ tons/year}$$

$$\text{Tons Conc in 1 year} = \frac{67.5}{82.0} \times 157,250 \frac{\text{tons conc}}{\text{year}} \\ = 129,444 \frac{\text{tons}}{\text{year}}$$

$$\text{Conc Payable gold} = 111,257 \frac{\text{ounces}}{\text{year}}$$

$$\text{CIP Gold Payable} = 2,299,000 \times 0.035 \text{ opt} = 80,465 \frac{\text{ounces}}{\text{year}}$$

$$\text{TOTAL PAYABLE GOLD} = 191,722 \frac{\text{ounces}}{\text{year}}$$

Cost to produce 1 ounce gold

TOTAL ANNUAL OPERATING COST

$$= 13,000,000 \text{ tpy} \times \frac{\$7.88}{\text{ton}} = \$102,440,000/\text{year}$$

TOTAL COPPER REVENUE

$$= 157,250 \frac{\text{tons conc}}{\text{year}} \times \frac{\$600}{\text{ton}} = \$94,350,000/\text{year}$$

OPERATING COST - COPPER REVENUE

$$= \$102,440,000 - \$94,350,000$$

$$= \$8,090,000$$

TOTAL OUNCES GOLD = 19,722

TOTAL COST = \$8,090,000

$$\frac{\text{COST}}{\text{OUNCE}} = \$42.20$$

ADP
9/1/89

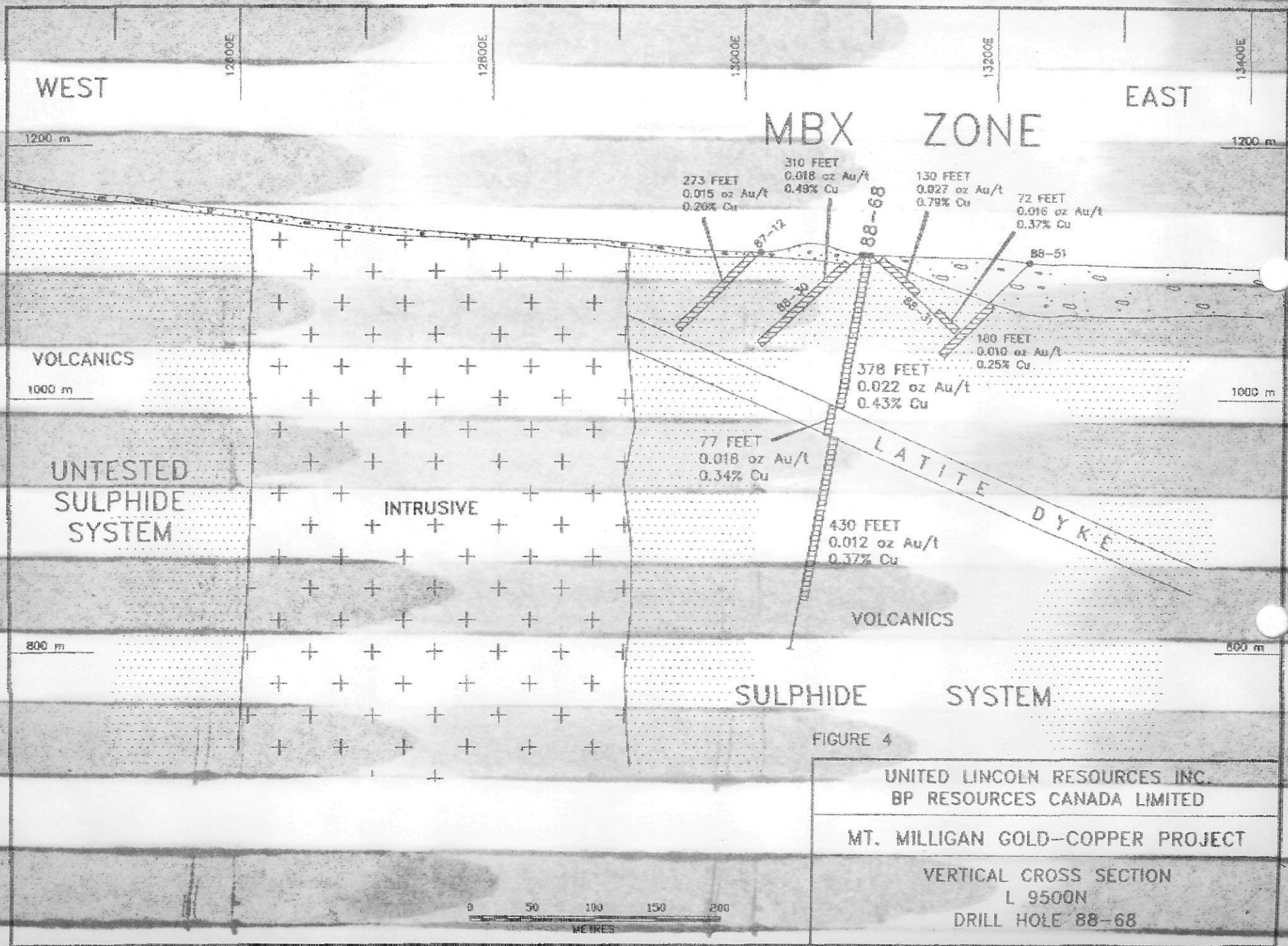


FIGURE 4

UNITED LINCOLN RESOURCES INC.
BP RESOURCES CANADA LIMITED

MT. MILLIGAN GOLD-COPPER PROJECT

VERTICAL CROSS SECTION
L 9500N
DRILL HOLE 88-68

01/11/1989 09:58 CONTINENTAL GOLD CORP. 604 884 8092 P. 12



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TELEPHONE: (705) 264-9998

Certificate of ASSAY

Company: UNITED LINCOLN RESOURCES INC.
Project: MT. MILLIGAN
Attention: J. FRANZEN/M. REBAGLIATI/R. M. CANN

File: 8-2222/P1
Date: DEC 21/83
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

2 metre sample intervals

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	CU %	CU %
38 339 <i>9.45m - 11.0</i>	.24	0.007			.280	.276
38 340	.73	0.021			.682	
38 341	1.22	0.036	1.21	0.035	.843	
38 342	.51	0.015			.550	
38 343 <i>17.0m - 19.2</i>	.43	0.013			.392	
38 344 <i>19.2m - 21.0</i>	.29	0.008			.256	
38 345	.37	0.011			.410	
38 346	.31	0.009			.333	
38 347	1.44	0.042	1.36	0.040	1.530	
38 348	.27	0.008			.250	
38 349	1.29	0.038			.688	.682
38 350	.45	0.013			.443	
38 351	.52	0.015			.274	
38 352	.21	0.006			.292	
38 353	.28	0.008			.261	
38 354	.39	0.011			.440	
38 355	.82	0.024			.843	
38 356	.63	0.018			.347	
38 357	.28	0.008			.350	
38 358	.20	0.006			.199	
38 359	.54	0.016			.435	.432
38 360	.61	0.018			.544	
38 361	.33	0.010			.402	
38 362	.23	0.007			.261	
38 363	.20	0.006			.216	
38 364	.76	0.022	.80	0.023	.345	
38 365	.82	0.024			.492	
38 366	.40	0.012			.494	
38 367	.60	0.018			.590	
38 368	.37	0.011			.420	

88-68
START

TUFF

Volcanics

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Certificate of Assay

Company: UNITED LINCOLN RESOURCES INC.
 Project: MT. MILLIGAN
 Attention: J. FRANZEN/M. REBAGLIATI/R.M. CANN

File: 8-2222/P2
 Date: DEC 21/88
 Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

88-68
 Contin

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	CU %	CU %
38 369	1.09	0.032			.700	.702
38 370	1.99	0.058	1.85	0.054	1.070	
38 371	.96	0.028			.603	
38 372	1.46	0.043			.498	
38 373	1.05	0.031			.380	
38 374	.38	0.011			.139	
38 375	.59	0.017			.347	
38 376	1.49	0.043			.630	
38 377	.61	0.018			.210	
38 378 87.0 - 89.15m	.73	0.021			.280	
38 379 89.15 - 91.0	.86	0.025			.450	.462
38 380 91.0 - 93.0	1.96	0.057	1.84	0.054	.510	
38 381 93.0 - 94.4	1.36	0.040			.422	
38 382 94.4 - 96.0	1.85	0.054			1.150	
38 383	1.61	0.047			.840	
38 384	.74	0.022			.235	
38 385	1.65	0.048	1.60	0.047	.436	
38 386	1.12	0.033			.343	
38 387	.29	0.008			.119	
38 388	.42	0.012			.212	
38 389	.31	0.009	105.3 metres		.183	.180
38 390	.41	0.012	0.022opt Au		.206	
38 391	.23	0.007	0.42% Cu		.163	
38 392	.38	0.011			.124	
38 393	.71	0.021			.080	
38 394	.90	0.026			.193	
38 395	.77	0.022			.221	
38 396	.34	0.010			.163	
38 397 124.0 - 124.5	1.49	0.043			.514	
38 398 124.5 126.0	.40	0.012			.117	

Volcanics
 (Continued)

105.3 metres
 0.022opt Au
 0.42% Cu

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[Handwritten Signature]

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Certificate of Assay

Company: UNITED LINCOLN RESOURCES INC.
 Project: MT. MILLIGAN
 Attention: J. FRANZEN/M. REBAGLIATI/R. M. CANN

File: 8-2222/P3
 Date: DEC 22/88
 Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

68-68
 Contin

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	Cu %	Cu %
38 399	.42	0.012			.182	.180
38 400	.60	0.018			.294	
38 401	.82	0.024			.380	
38 402	.85	0.025			.347	
38 403	.62	0.018			.273	
38 404	.69	0.020			.363	
38 405	1.02	0.030	.96	0.028	.662	
38 406	.68	0.020			.497	
38 407	.55	0.016			.402	
38 408	.28	0.008			.196	
38 409	146.0	148.0	.46	0.013	.398	400 V
38 410	148.0	150.0	1.72	0.050	1.50 0.044	1.120
38 411			1.23	0.036	1.23 0.036	.720
38 412			.92	0.027		.446
38 413			.80	0.023		.421
38 414	156.0	158.0	.45	0.013		.301
38 415	158.0	160.0	.35	0.010		.170
38 416			.32	0.009		.203
38 417			.25	0.007		.180
38 418			.06	0.002		.012
38 419	.19	0.006			.110	.111
38 420	.41	0.012			.220	
38 421	.17	0.005			.061	
38 422	.15	0.004			.086	
38 423	.20	0.006			.113	
38 424	.19	0.006			.110	
38 425	178.0 - 180.3	.02	0.001		.047	
38 426	180.3 - 182.0	.14	0.004		.064	
38 427		.20	0.006		.074	
38 428		.51	0.015		.252	

23.5 metres
 0.018 opt Au
 0.34% Cu

10.0 metres
 0.030 opt Au
 0.60% Cu

22.3 metres
 0.006 opt Au
 0.12% Cu

Late
 Dyke

Augite

Augite

Volcanics

Certified by *R. M. Cann*



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Certificate of Assay

Company: UNITED LINCOLN RESOURCES INC.
Project: MT. MILLIGAN
Attention: J. FRANZEN/M. REBAGLIATI/R. M. CANN

File: 8-2222/P4
Date: DEC 22/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	CU %	CU %
38 429	.63	0.018			.192	.197
38 430	.39	0.011			.282	
38 431	.07	0.002			.122	
38 432	.49	0.014			.500	
38 433	.31	0.009			.375	
38 434	1.05	0.031	1.11	0.032	.902	
38 435	.25	0.007			.242	
38 436	.30	0.009			.240	
38 437	.63	0.018			.680	
38 438	.80	0.023			.665	
38 439	.33	0.010			.287	.290
38 440	.59	0.017			.702	
38 441	.54	0.016	.60	0.018	.875	
38 442	.20	0.006			.328	
38 443	.18	0.005			.316	
38 444	.08	0.002			.201	
38 445	.18	0.005			.184	
38 446	.13	0.004			.201	Volcanics
38 447	.20	0.006			.216	(contin)
38 448	.18	0.005			.190	
38 449	.13	0.004			.168	.165
38 450	.41	0.012			.526	
38 451	.15	0.004			.179	
38 452	.41	0.012			.413	
38 453	.24	0.007			.223	
38 454	.42	0.012			.380	
38 455	.41	0.012			.315	
38 456	.57	0.017			.643	
38 457	.83	0.024			.940	
38 458	1.60	0.047	1.90	0.055	1.900	

84.7 metres
0.012 opt Au
0.42 % Cu

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Ben Frank

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Certificate of Assay

Company: UNITED LINCOLN RESOURCES INC.
Project: MT. MILLIGAN
Attention: J. FRANZEN/M. REBAGLIATI/R. M. CANN

File: 9-2222/P5
Date: DEC 22/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	CU %	CU %
38 459	.64	0.019			.810	.820
38 460	.40	0.012			.402	
38 461	1.03	0.030	1.12	0.033	.520	
38 462	.80	0.023			.491	
38 463	.20	0.006			.223	Volcanics
38 464	.72	0.021	.83	0.024	.760	
38 465	.22	0.006			.343	
38 466	.23	0.007			.233	
38 467	.28	0.008			.350	
38 468	263.0 - 265.0	.26	0.008		.182	
38 469	265.0 - 267.0	.32	0.009		.403	.400
38 470		.27	0.008		.236	
38 471		.31	0.009		.184	
38 472		.32	0.009		.293	
38 473		.58	0.017		.535	Tuff
38 474		.34	0.010		.320	
38 475	277.0 - 279.0	.20	0.006		.190	
38 476	273.0 - 281.0	.17	0.005		.040	
38 477		.19	0.006		.064	
38 478		.42	0.012		.168	
38 479		.19	0.006		.058	.056
38 480		.14	0.004		.114	
38 481		.35	0.010	.39	0.011	.293
38 482		.18	0.005		.172	Tuff
38 483		.19	0.006		.184	
38 484		.19	0.006		.175	
38 485		.11	0.003		.110	
38 486		.17	0.005		.069	
38 487		.18	0.005		.112	
38 488		.14	0.004		.150	

Certified by

[Signature]

TO EOH

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Certificate of Assay

Company: UNITED LINCOLN RESOURCES INC.
Project: MT. MILLIGAN
Attention: J. FRANZEN/M. REBAGLIATI/R. M. CANN

File: 8-2222/P6
Date: DEC 22/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON	AU G/TONNE	AU OZ/TON	CU %	CU %
38 489 305.0 - 307.0	.03	0.001			.112	.110
38 490	.09	0.003			.157	
38 491	.01	0.001			.065	
38 492	.02	0.001			.044	
38 493	.01	0.001			.063	
38 494	.05	0.001			.125	
38 495	.46	0.013	.45	0.013	.362	
38 496 319.0 - 319.74	.23	0.007			.264	ECH 88-68
41 623 64.0 - 64.93	.21	0.006			.267	
41 624 64.93 - 67.00	.07	0.002			.194	88-67
41 625	.21	0.006			.082	.081
41 626	.18	0.005			.180	
41 627	.21	0.006			.181	
41 628	.37	0.011			.380	
41 629	.26	0.008			.230	
41 630	.19	0.006			.192	
41 631	.44	0.013			.270	
41 632	.80	0.023	.82	0.024	.269	
41 633	.41	0.012			.152	Lake Dyke
41 634	.19	0.006			.130	
41 635	.11	0.003			.071	.072
41 636	.21	0.006			.142	
41 637	.22	0.006			.180	
41 638	.05	0.001			.182	
41 639	.42	0.012			.280	
41 640	.58	0.017			.297	
41 641	.80	0.023	.80	0.023	.272	
41 642	.42	0.012			.260	
41 643	.18	0.005			.173	
41 644	.15	0.004			.141	

48.2 metres
0.010 opt Au
0.22 % Cu

ECH 88-68

88-67

Lake Dyke

Certified by *Benjamin*