

**Geological Assessment Report  
for**

**Claim Group:**

**HAT 1-20, YB57537-YB57556  
HAT 21-26, YB58021-YB58026  
HAT 27-32, YB58049-YB58054  
HAT 33-34, YB58055-YB58056  
HAT 35-36, YB58139-YB58140  
HAT 37-40, YB66395-YB66398**



**NTS:**

**105 D/11, 105 D/14**

**Located at:**

**N 60 47', W 135 10'**

**Registered Owner:**

**Rob Hamel  
Norwest Enterprises Inc.**

**Whitehorse Mining District**

**Prepared by:**

**Owen Peer, Geologist  
Cordilleran Resource Company, Ltd.**

**August 8-9, 1997.**

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## **Summary:**

**At the requested of Jim Coyne of H. Coyne and Sons Ltd., Whitehorse, Yukon the author visited the HAT group of claims owned by Rob Hamel of Norwest Enterprises Ltd. The purpose of the visit was to inspect, map, and sample trenching work already completed. The trenching was undertaken to explore significant gold and copper mineralization discovered in 1995 and outlined in an October 1995 property visit report by C. Schulze.**

**Mr Hamel worked in three areas. HAT 31, located approximately 300 meters NNW (343°) of the War Eagle Pit. HAT 28 and 30, the Swamp Showing, located approximately 1.2 km NNE (15°) of the War Eagle Pit. HAT 1, the Landfill showing located 1.5 km NE (43°) of the War Eagle Pit.**

**The HAT 31 trenches reveal two mineralized limestone exoskarns surrounded by a mineralized granodioritic endoskarn. HAT 28 and 30 trenches reveal altered and mineralized granodiorite dykes intruding Lewes River Group greywacke. The HAT 1 trenching reveals mineralized and altered porphyritic Whitehorse biotite granodiorite batholith. Geochemical sampling was focused on the HAT 31 trenches.**

## **Methodology and Equipment:**

List of  
Claims  
Being  
Renewed:

Claim Name	Grant Num ber	Registered Owner	For Whom Work Performed	Expiry Date
HAT 1	YB 57537	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 2	YB 57538	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 3	YB 57539	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 4	YB 57540	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 5	YB 57541	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 6	YB 57542	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 7	YB 57543	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 8	YB 57544	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 9	YB 57545	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 10	YB 57546	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 11	YB 57547	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 12	YB 57548	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 13	YB 57549	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 14	YB 57550	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 15	YB 57551	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 16	YB 57552	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 17	YB 57553	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 18	YB 57554	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 19	YB 57555	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 20	YB 57556	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 21	YB 58021	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 22	YB 58022	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 23	YB 58023	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 24	YB 58024	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 25	YB 58025	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 26	YB 58026	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-97
HAT 27	YB 58049	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 28	YB 58050	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 29	YB 58051	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 30	YB 58052	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 31	YB 58053	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 32	YB 58054	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 33	YB 58055	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 34	YB 58056	Norwest Ent. Inc.	H. Coyne & Sons	11-Nov-98
HAT 35	YB 58139	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97

HAT	36	YB 58140	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97
HAT	37	YB 66395	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97
HAT	38	YB 66396	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97
HAT	39	YB 66397	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97
HAT	40	YB 66398	Norwest Ent. Inc.	H. Coyne & Sons	16-Nov-97

**The Landfill showing trenches where excavated using a D-6 Caterpillar tractor. The remainder of the trenches where excavated using a 225 Caterpillar excavator. The trenches in all cases were excavated to and into bedrock using the mechanical equipment. The trenches were then cleaned by hand to expose the bedrock. Surface rock was then removed to expose fresh rock for sampling. All samples taken were channel samples with a minimum length of 2 meters. Samples were taken using hammer and chisels.**

### **Data Collected:**

**Geochemical sampling was undertaken to determine elemental indicators of mineralization and to reveal grades for the different rock units. The samples were used to assess the combination of elements that are indicative of alteration, mineralization, and mineralization types on the property. Samples were collected from bedrock in exposed trenches. Sampling was focused on HAT 31 as this claim had exposed skarn mineralization showing retrograde alteration. The different rock units were identified, then channel sampled. The channels were first cleaned to expose fresh rock (no localized surface weathering or enrichments). The samples were collected and delivered to Northern Analytical Laboratory the same day by the author.**

**The assay results from the material sampled indicate that the skarns are similar in nature to known and classified precious metal enriched skarns (PME). The HAT 31 skarns, based on limited sampling fall within the gold skarn class.**

### **Geology:**

**The focus of the geological investigation was to determine gold and copper distribution within the exposed mineralized zones on the HAT claims.**

**The skarns examined were formed from a limestone protolith as characterized by the wollastonite, and the green pyroxenes and garnets. Epidote and amphibole retrograde mineralization was also observed. Retrograde mineralization is consistent with gold occurrences in other skarn deposits. Tenney (1981) indicates that there is no correlation between gold and copper grades from producing pits in the Whitehorse**

**Copper Belt. The Little Chief pit produced the majority of the ore for the belt. According to Tenney (1981) the Little Chief pit graded 1.29 % Cu, and 496 ppb Au. The Whitehorse Copper Belt skarns were collectively considered as copper class skarns. The War Eagle pit formed the northern most producing pit of the Belt. According to Hart (1995) the pit produced approximately 900 000 tonnes of 1.25% Cu, 0.22 g/t Au, 8.6 g/t Ag, and 0.005% Mo. These grades places it within the gold skarn (PME) field. There is a definite increase in gold mineralization with proximity to the Whitehorse batholith. Sample TR-97-02-11 a two meter channel sample was taken from the western most exoskarn. The copper/silver and copper/gold ratios place this sample within the gold skarn class. Gold skarns show a spacial and temporal relationship to porphyry copper deposits. The nature of the dykes in the Swamp showing and the alteration present in the Landfill showing would suggest exploration for a porphyry style deposit.**

**Mineralization within the HAT 31 trenches is both banded and disseminated. The majority of mineralization present is in the form of chalcopyrite. However bornite, azurite, pyrrhotite, arsenopyrite, pyrite, and sphalerite are observed. Assay results suggest that gold mineralization is related to sulphide content. A correlation between gold and bismuth, silver, zinc, stibnite, and copper has been observed.**

#### **Assay Methods:**

**Samples where sent to Northern Analytical Laboratory where they were dried, crushed to -10 mesh, split, and a 250 gram sample pulverized to -150 mesh. A portion of the pulp, (60 g) was fire assayed and then measured using atomic-absorbtion spectrophotometry in Whitehorse for copper and gold. The remainder of the pulp was assayed in Vancouver by International Plasma Laboratories by 30 element inductively coupled-plasma atomic emission spectrometry (ICP). The pulps were initially aqua-regia acid dissolved (HCl-HNO<sub>3</sub>). This acid dissolution of samples method does result in a partial determination of some elements.**

#### **Plans and Maps:**

**The following plans and maps are attached to this report: Map A showing the location of the claims with respect to the Alaska Highway, Porter Creek subdivision, and the Whitehorse city limits. The map**

Initially prepared by C. Schulze also indicates gross geological features and 1995 sample locations. Supper imposed on Map A are the locations of Plan B, C, and D. Plan B is a sketch of the trenches from HAT 31. Plan C is a sketch of the trenches from HAT 28 and 30. Plan D is a sketch of the trenches from HAT 1.

**Statement of Account:**

**Excavation of the Landfill cell by D-6 Caterpillar tractor:**

<b>20 Hours @ \$110/hr</b>	<b>\$2200</b>
<b>mobilization/demobilization</b>	<b>\$ 200</b>

**Excavation of the Landfill trenches by excavator:**

<b>10 Hours @ 125/hr</b>	<b>\$1250</b>
<b>a proportion of mob/demob</b>	<b>\$ 70</b>

**Excavation of Swamp showings by excavator:**

<b>25 Hours @ \$125/hr</b>	<b>\$3125</b>
<b>a proportion of mob/demob</b>	<b>\$ 70</b>

**Excavation of Hat 31 trenches by excavator:**

<b>40 Hours @ \$125/hr</b>	<b>\$5000</b>
<b>a proportion of mob/demob</b>	<b>\$ 70</b>

**Geological services:**

<b>4 days @ \$350/day</b>	<b>\$1400</b>
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<b>Assay costs:</b>	<b>\$ 675.90</b>
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<b>Total:</b>	<b>\$14060.90</b>
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**References:**

Hart, C., 1995, A visit to the HAT property of Rob Hamel, unpublished report; available from the Canada/Yukon Geoscience Office, 2 p.

Meinert, L.D., 1989, Gold Skarn Deposits: Geology and Exploration Criteria, Economic Geology, monograph 6, p 537-552.

Schulze, C., 1995, Results of October, 1995 Property Visit: HAT Claim Block, unpublished report; available from Hemlo Gold Mines Inc., 5 p.

**Tenney, D., 1981, Whitehorse Copper Belt: Mining, Exploration, and Geology (1967-1980), Department of Indian and Northern Affairs Canada, Bulletin 1, 29 p.**



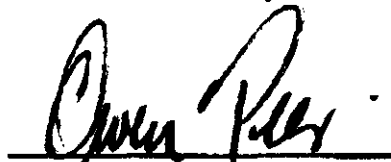
**Certificate:**

**I, Owen Peer do hereby certify that I am an independent Consulting Geologist with offices at Fox Farm Road, Whitehorse, Yukon Territory.**

**I further certify that:**

- 1. am a Physics and Earth and Ocean Sciences graduate of the University Of Victoria.**
- 2. I have practiced in my profession for over 10 years both as an independent consultant and as a geologist for mining companies in Canada and overseas.**
- 3. I have no personal interest in the properties, nor do I expect to receive directly or indirectly any interest in such properties.**
- 4. I have based this report on field work carried out directly by myself during the period between August 8, 1997 and August 9, 1997.**

**Dated this 30 day of October, 1997 in La Paz, Bolivia.**

A handwritten signature in black ink, appearing to read "Owen Peer", is written over a horizontal line.

**Owen Peer, B.Sc.  
Consulting Geologist**

**Mailing address:  
P.O. Box 3866  
Whitehorse, Yukon Territory  
Canada  
Y1A-5M6  
tel: (867) 393-1997  
fax: (867) 668-4142**

## **Appendix A:**

### **Certificates of Analyses:**

**Following are two pages of assay results. First a gold and copper certificate from NAL Ltd. Secondly a 30 element ICP certificate from IPL Ltd.**

- TR-97-01-01** cross bedding secondary veinlette 1-2 cm wide, includes endoskarn wall rock, Py, Cpy, Pyrr, Bnt
- TR-97-01-02** eastern exoskarn, 10-15% interstitial and banded Py, Cpy, Aspy, Bnt
- TR-97-01-03** cross bedding oxidized vein 5-10 cm wide, no recognizable mineralization
- TR-97-01-04** same as -03
- TR-97-01-05** endoskarn, trace mineralization, Py, Cpy, Pyrr, Aspy, moderate retrograde alteration
- TR-97-01-06** heavily oxidized version of -05
- TR-97-01-07** endoskarn, trace mineralization, moderate to no alteration
- TR-97-01-08** endoskarn, chlorite, epidote, garnet, trace mineralization, Py, Cpy, Pyrr, Bnt.
- TR-97-01-09** western exoskarn, 4 m channel, 10 % mineralization, Py, Cpy, Pyrr, Bnt,
- TR-97-02-10** eastern exoskarn, 3.5 m channel, 10-15 % mineralization, Py, Cpy, Bnt, Aspy
- TR-97-02-11** western exoskarn, 3 m channel, 10 % mineralization, Cpy, Pyrr, Py, Aspy, Bnt
- TR-97-02-12** oxidized version of -11

**TR-97-03-13**      **endoskarn, trace mineralization, Py, Cpy, Aspy, Bnt**

**TR-97-03-14**      **eastern exoskarn, 5-8 % mineralization, Py, Cpy, Aspy**

**TR-97-03-15**      **endoskarn, trace mineralization, Aspy, Cpy, Bnt**

FROM : GLOBAL GOLD INC. S.A.

PHONE NO. : 360569

13741 0000 NAL WHITEHORSE 1-483-668-4898



08/09/97

Assay Certificate

Page 1

Coyne & Sons

W0407004

Certified by

Sample #	Au ppb	Cu %
TR-97-01-1	86	3.89
TR-97-01-2	1006	9.58
TR-97-01-3	284	2.42
TR-97-01-4	820	1.84
TR-97-01-5	55	1.32
TR-97-01-6	301	1.63
TR-97-01-7	57	0.15
TR-97-01-8	188	0.36
TR-97-01-9	912	5.58
TR-97-02-10	1700	18.7
TR-97-02-11	>7000	8.91
TR-97-02-12	4035	8.43
TR-97-03-13	82	0.58
TR-97-01-14	458	1.58
TR-97-01-15	6	0.01

Note: Poor reproducibility of replicate Au analyses was noted, indicating probable nugget effects from coarse gold.





158442. CERTIFICATE OF ANALYSIS  
IPL 97H0837  
ATTN OWEN.

2086 Columbia Street  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7888

Client: Northern Analytical Laboratories  
Project: PO#332330 WDF7894

15 Samples  
15-Pulp

[083712:15:53:79082897]

Out: Aug 28, 1997  
In: Aug 25, 1997

Page 1 of 1  
Section 1 of 1

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Zn ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
TR-97-01-01	3.2	3.5	7	58	<	<	<	4	<	<	0.2	6	6	12	14	59	20	369	2	86	7	1	0.02	0.64	0.43	4.80	0.83	0.01	0.02	0.70
TR-97-01-02	0.1m	9.2	84	163	8	<	<	2	<	230	2.3	6	6	12	28	45	7	834	2	18	3	1	<	0.27	1.38	2.86	0.27	0.02	0.02	0.23
TR-97-01-03	3.4	2.3	13	95	33	<	<	14	<	<	<	15	13	25	210	65	23	688	11	276	8	2	0.02	1.55	1.28	4.65	1.44	0.04	0.02	0.19
TR-97-01-04	4.2	17472	6	45	63	<	<	7	<	<	<	13	7	30	119	72	17	210	<	22	8	1	0.33	0.78	2.56	5.80	0.27	0.02	0.02	0.99
TR-97-01-05	5.6	12133	3	35	12	<	<	13	<	<	0.6	10	5	16	8	36	5	807	3	58	4	1	0.31	0.30	1.42	2.70	0.23	0.01	0.02	0.88
TR-97-01-06	6.2	14666	3	45	28	<	<	18	<	<	<	26	7	21	60	65	16	97	<	16	6	<	<	0.26	0.64	1728	1.7	<	0.01	0.06
TR-97-01-07	0.8	1503	<	13	<	<	<	3	<	<	<	11	4	14	13	79	12	370	<	38	11	<	0.03	0.77	4.92	4.35	0.11	0.04	0.02	0.93
TR-97-01-08	3.5	3410	7	37	<	<	<	13	<	<	<	128	13	20	33	62	32	216	4	26	40	3	0.08	0.95	1.62	1430	0.46	0.04	0.02	0.88
TR-97-01-09	19.6	4.5	<	126	<	<	<	175	<	<	<	38	33	12	24	55	7	250	7	22	20	1	0.04	0.37	3.46	7.61	0.15	0.02	0.02	0.23
TR-97-02-10	0.2m	16X	50	252	13	10	<	4	<	229	2.6	5	4	14	35	23	4	925	3	25	2	2	<	0.11	1.42	2.77	0.18	0.01	0.02	0.48
TR-97-02-11	0.1m	7.2	28	130	19	49	<	7	<	509	0.9	6	7	12	24	37	9	346	2	50	4	1	0.01	0.29	8.26	3.04	0.13	0.02	0.02	0.23
TR-97-02-12	0.1m	6.9	17	120	8	6	<	3	<	309	1.2	3	3	12	25	37	3	907	3	57	2	1	<	0.19	1.42	2.32	0.28	0.02	0.02	0.23
TR-97-03-13	2.6	5675	29	22	13	<	<	3	<	50	0.1	3	6	27	48	8	8	241	2	86	3	1	0.02	0.51	0.78	1.05	0.16	0.06	0.04	0.98
TR-97-03-14	14.8	13126	13	48	13	78	<	11	<	8	0.3	10	13	99	95	51	144	12	50	4	6	0.11	0.82	1.30	1.43	1.10	0.33	0.06	0.15	
TR-97-03-15	0.2	470	8	42	28	<	<	11	<	4	0.3	16	24	191	<	180	104	224	10	83	2	10	0.14	1.88	1.32	2.99	2.49	0.56	0.06	0.12

Mg Limit 8.1 1 2 1 5 3 1 30 0.1 1 1 2 1 2 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01

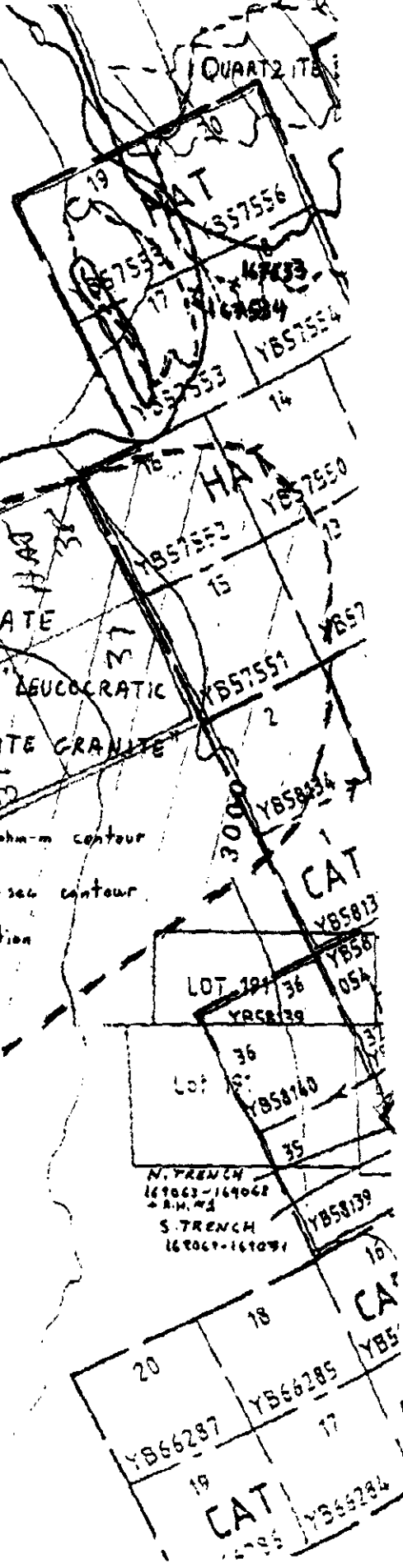
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PHONE NO. : 360569

Y91738 Y91734 Y91735

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		1 BEE Y91728	2 Y91729



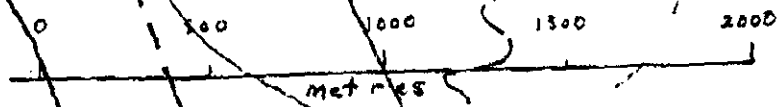
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CITY LIMITS

APPROXIMATE  
LOCATION OF LEUCOCRATIC  
GRANITE, BIOTITE GRANITE

- Resistivity : 2000 ohm-m contour
- Chargeability : 20 m-sec contour
- X - Rock sample location

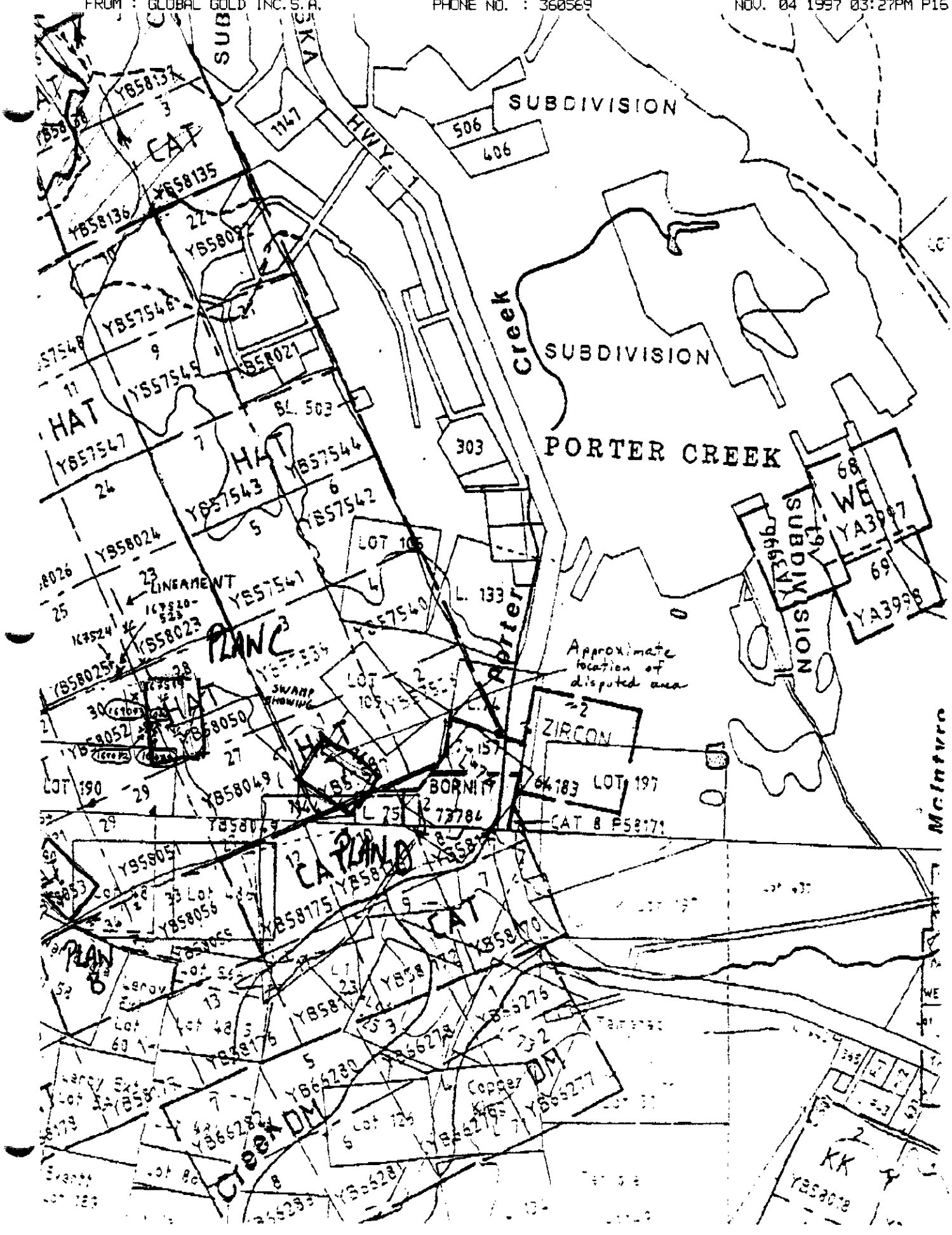
4702 LOT 511

LOCKOUT RES 2890  
TOWER



N-FRENCH  
16903-16908  
- N.M. #2  
S-FRENCH  
16907-16909

20 YB66287	18 YB66285	16 CAT YB5813
19 CAT YB58139	17 YB58140	15 YB58134



SUBDIVISION

SUBDIVISION

PORTER CREEK

SUBDIVISION

Approximate location of disputed area

McIntyre

ZIRCON

BORNIT

CAT 8 P58171

CAT PLAN 3

PLAN 8

Creek DM

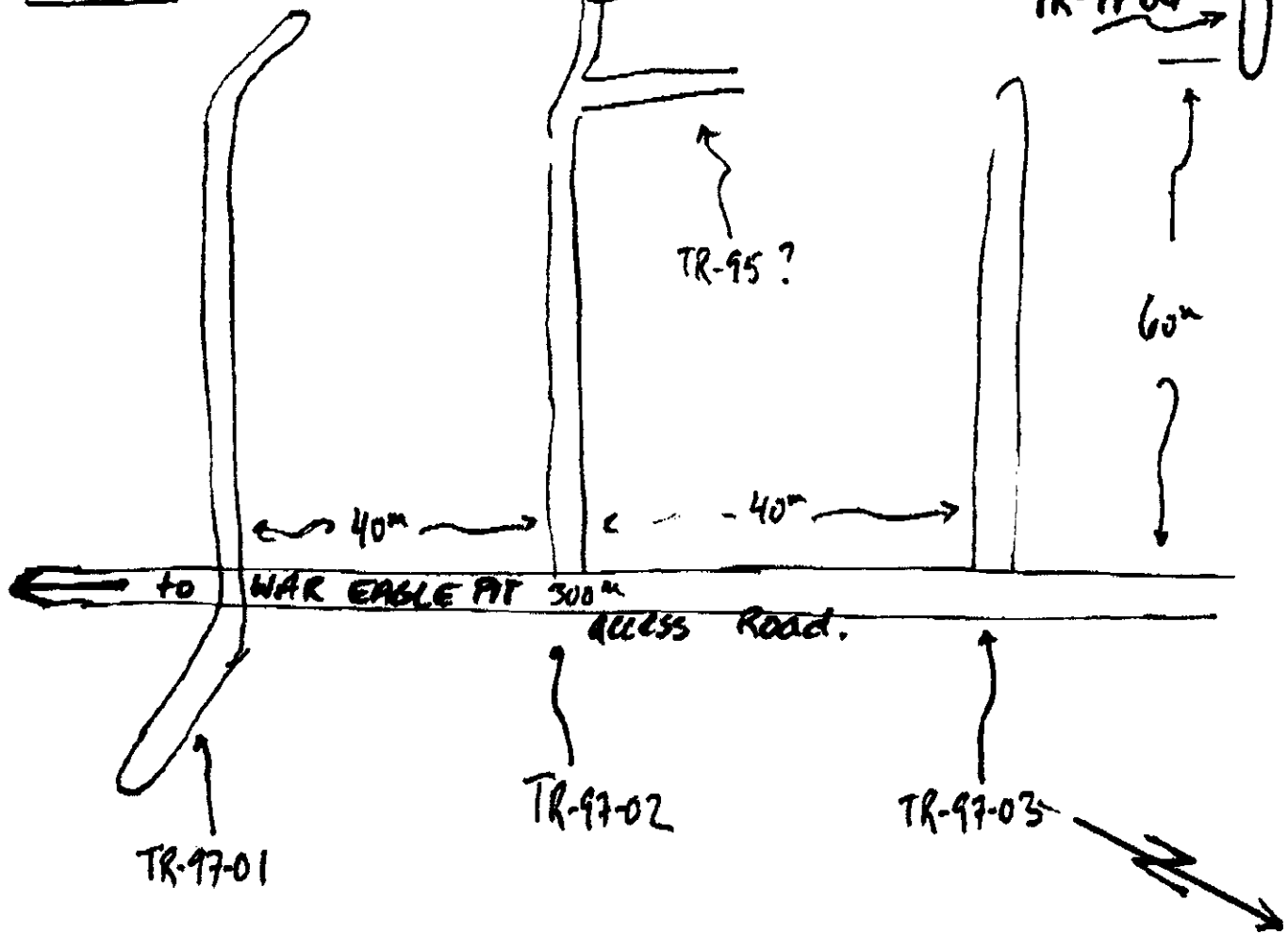
Copper DM

KK

HAT 31:

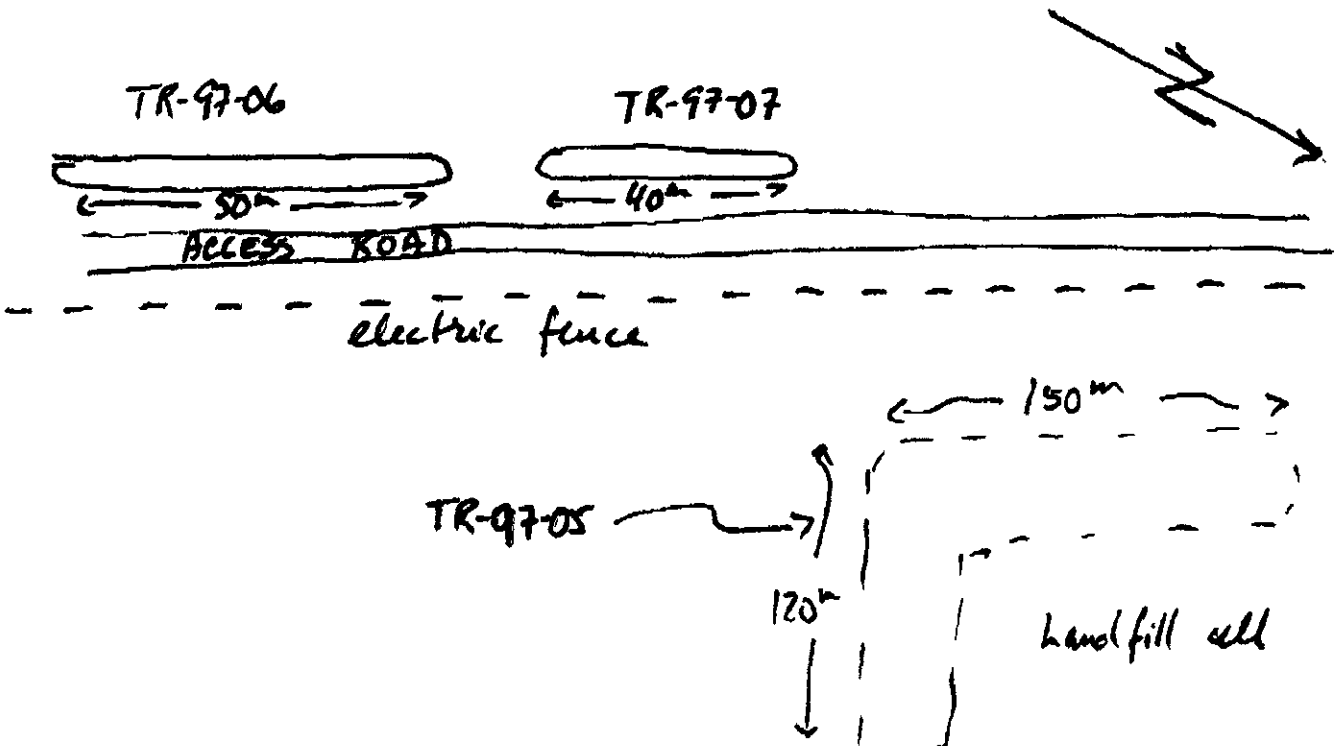
PLAN B

TR-97-04



HAT 1:

PLAN D





91735

1733

31

15

contour

contour

N. TRENCH  
161063-161068  
S. TRENCH  
161061-161071

Road  
Buck 194

628

19

628

QUARTZITE ?

CAT

5

SUBDI

SKA

HWY

506

SUBDIV

406

Plan B

Plan D

SUBDIV

PORTEI

Creek

Approximate  
location of  
disputed area

ZIRCON

64183 LOT 197

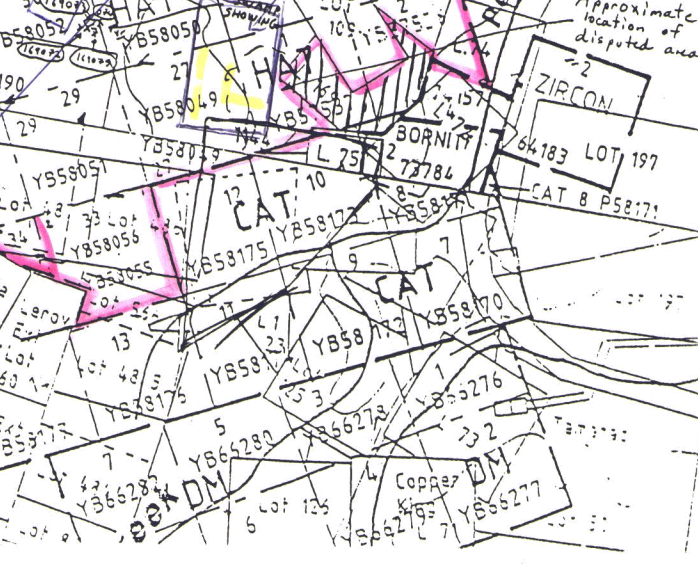
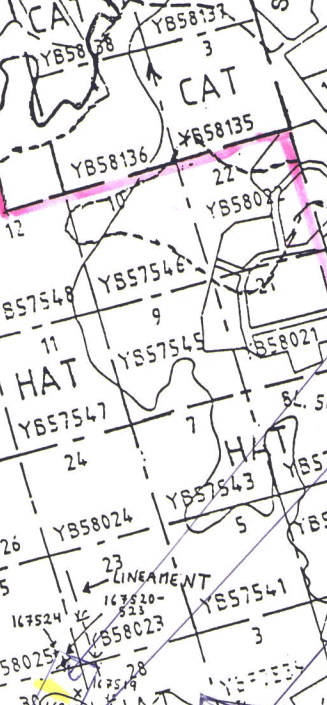
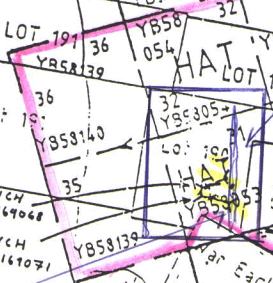
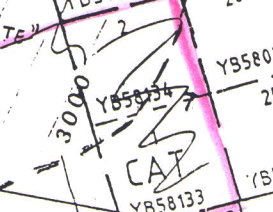
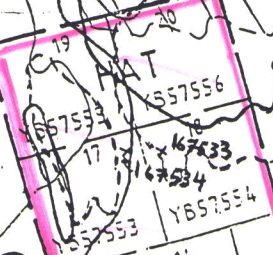
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YB58170

YB58170

YB58170



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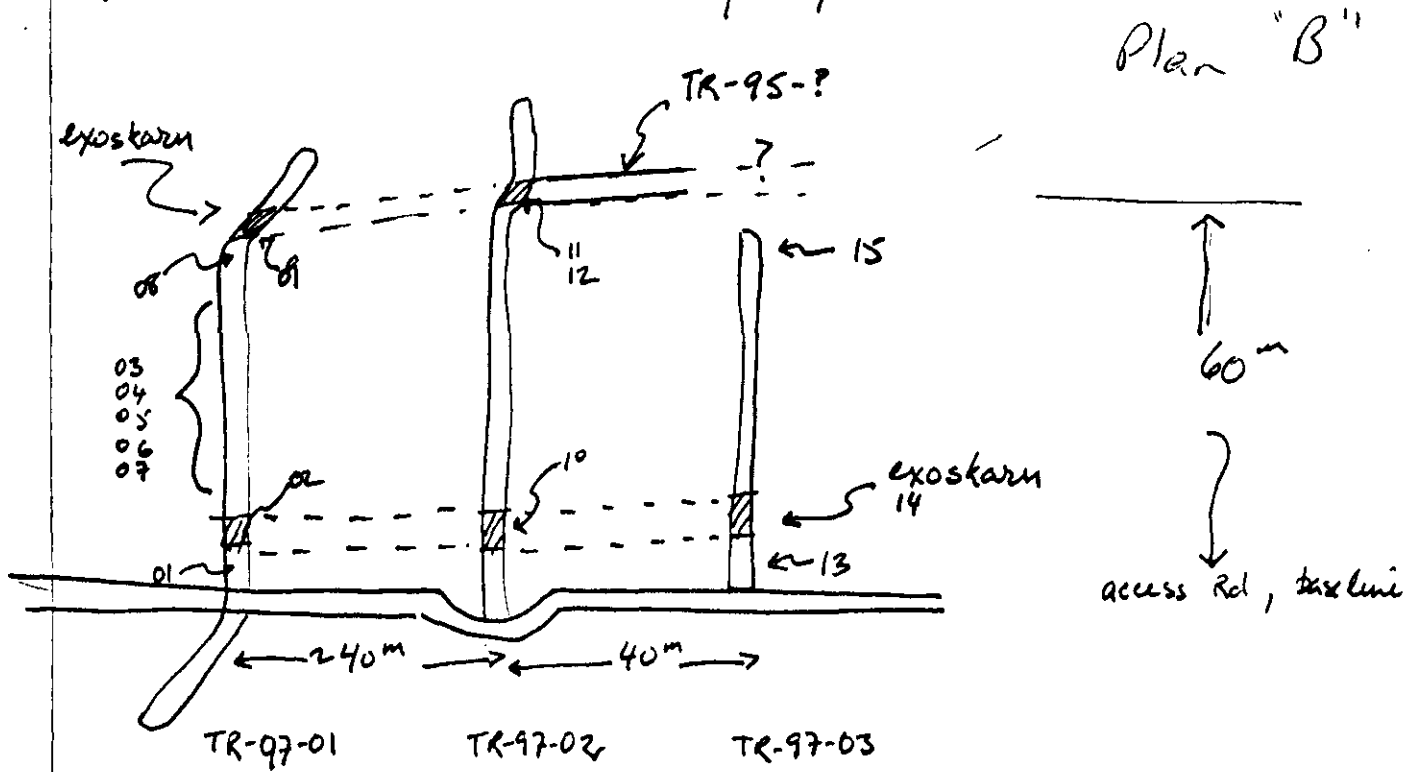
~~#14 WCP~~

#15-WCP

- SAMPLE # : description.
- TR-97-01-01 : channel sample, of secondary veinlet 1-2 cm perpendicular to stam bedding in diorite (altered, ~~exostam~~) with chlorite and epidote sample includes wall rock (~80%), mineralization interstitial + banded: py., cpy., pyr., bnt.
- TR-97-01-02 : channel sample, of stam 1.5 m long. (exostam) mineralization interstitial + banded ~10-15% py., cpy., bnt.
- TR-97-01-03 : channel sample, of oxidized vein 5-10 cm wide perpendicular to stam bedding (only vein material)
- TR-97-01-04 : same as -03
- TR-97-01-05 : channel sample, endostam, trace interstitial mineralization py., cpy., pyr.
- TR-97-01-06 : oxidized version of -05
- TR-97-01-07 : channel sample, granodiorite - diorite (little) moderate to no alteration
- TR-97-01-08 : channel sample, endostam - chlorite, epidote garnet, tr. Mineralization interstitial py., cpy., pyr., bnt.
- TR-97-01-09 : channel sample, exostam, 4 m long.
- TR-97-02-10 : channel sample, exostam, 3.5 m long. (same stam + mineralization as -02)

~~74WCP~~ (cont)  
71SWCP

- TR-97-02-11 : channel sample, exostern, 3<sup>m</sup> long  
same starn + mineralization as -09
- TR-97-02-12 : channel sample, oxidized version of -11
- TR-97-03-13 : channel sample, endostern, tr. mineralization  
interstitial
- TR-97-03-14 : channel sample, exostern.  
(same starn as -02)
- TR-97-03-15 : channel sample, endostern



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