ARIS SUMMARY SHEET

District Geologist, Prince George Off Confidential: 89.05.06 ASSESSMENT REPORT 17636 MINING DIVISION: Cariboo L'PROPERTY: Spanish Mountain 52 35 17 121 27 43 LAT LONG LOCATION: UTM 10 5827339 604199 NTS 093A11W CAMP: 036 Cariboo - Quesnel Belt CLAIM(S): CPW, Peso, Don OPERATOR(S): Pundata Gold -AUTHOR(S): Campbell, K.V.; Honsinger, E.G. 1988, 1175 Pages **REPORT YEAR:** COMMODITIES SEARCHED FOR: Gold GEOLOGICAL SUMMARY: The claims are underlain by Middle Triassic to Early Jurassic fine-grained volcaniclastic and sedimentary rocks, which are part of the northeast limb of a northwest trending anticline. Silicification including silica flooding and quartz veining is a common feature. Gold occurs in quartz veins and stockworks in oxidized shaley siltstones and as disseminations in graphitic shaley siltstone. WORK DONE: Drilling, Geochemical, Physical 37 hole(s);HQ DIAD 4510.0 m , NQ Map(s) - 11; Scale(s) - 1:2500,1:500,1:200 ! | 100.0 ha GEOL 6 Map(s) - 1; Scale(s) - 1:200011 sample(s) META PERD 848.0 m 15 hole(s) Γ PETR 50 sample(s) Ĺ SAMP 5350 sample(s) ;AU,AG,AS Map(s) - 2; Scale(s) - 1:2000, 1:125050 sample(s) ;AU,AG,AS SILT 100 sample(s) ;AU,AG,AS SOIL Map(s) - 4; Scale(s) - 1:50 000,1:5000,1:1000 TREN 815.0 m 34 trench(es) Map(s) - 19; Scale(s) - 1:50, 1:25, 1:20LATED REPORTS: 12811,14468 093A 043

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RESULTS OF THE 1987/88 DRILL & TRENCH EXPLORATION PROGRAMME

SPANISH MOUNTAIN PROJECT

CARIBOO MINING DIVISION, B.C.

Claim	Record	Recorded	Claim	Record	Recorded
Name	No.	Owner	Name	No.	Owner
CPW	4541	Pundata	MEY 1	7656	D.V.Mickle
PESO	487	D.V.Mickle	MEY 2	7657	D.V.Mickle
DON 1	1383	D.V.Mickle	JUL 2	1853	D.V Mickle
DON 2	1384	D.V.Mickle	APRIL FRACTION	4771	D.V.Mickle
DON 3	1385	D.V.Mickle	MIK	8562	Pundata
DON 4	1386	D.V.Mickle	JAZZ	89Ø2	Pundata
MY 1	4861	D.V.Mickle	RALPHIE II	8697	Pundata

NTS 93A/11W Latitude 52° 36' N Longitude 121° 28' W

FILMED

FOR

OPERATOR: PUNDATA GOLD CORPORATION 201 - 141 Victoria Street Kamloops, B.C. V2C 125 JOINT VENTURE PARTNER: TRIO GOLD CORP. 1170, 700-4th Avenue S.W. Calgary, Alberta T2P 3J2

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R. Honsinger, B.Sc. K.V. Campbell, Ph.D.



VOLUME 1

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May 1988

Written permission from the undersigned author is required before any technical information or conclusion contained in this report on the Spanish Mountain property of PUNDATA GOLD CORPORATION is used in a News Release, Statement of Material Facts or Prospectus.

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Campbell K.V. Campbell May 31, 1988

PREFACE

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This report has been assembled from technical data provided by geologists who worked for PUNDATA GOLD CORPORATION during the 1987/88 field programme on the Spanish Mountain (CPW) property. Four of the five principal geologists who worked on the project were no longer with, or in the process of leaving, PUNDATA GOLD CORPORATION at the time the undersigned was requested to compile this report. These geologists produced a great amount of highly detailed technical data and freely imparted this information and their ideas on the nature of mineralization to the undersigned.

Due to time constraints and the large scale of the project, no attempt was made to verify field mapping or drill logs. Preparation of the report focused on data compilation and tying together observations and notes of the project geologists, modified by this author's experience in the Cariboo district with deposits of a similar nature.

Feltow and

K.V. Campbell May 31, 1988

SUMMARY

The CPW Spanish Mtn. property consists of 109 claim units and one fraction located east of Likely in the Cariboo Mining Division of central British Columbia. The 1987/88 exploration programme, jointly ventured by PUNDATA GOLD CORPORATION and TRIO GOLD CORP., included reconnaissance prospecting, diamond and reverse circulation drilling, trenching and mapping of disseminated gold mineralization.

The property is situated on the eastern margin of the Quesnel Trough and is underlain by middle Triassic to early Jurassic lithic and crystal tuffs, flows, siltstone, graphitic shaley siltstone and nodular phyllite. Silicification is locally well developed. A massive siltstone unit is commonly carbonate altered and a crystal tuff unit is thoroughly bleached and flecked with mariposite.

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All units are extensively sheared and several faults have been identified. The majority of these belong to a northwest trending axial plane shear set or to a conjugate fracture system developed about a northeast-southwest axis.

Gold mineralization occurs in guartz vein stockworks in shears, oxidized, vuggy pyritic shaley siltstone, and disseminated in graphitic shaley siltstone. Two zones were drill tested in the 1987/88 programme, the Main (or Madre) and LE Zones. The northeast trending Main Zone is about 17m wide, has a drill indicated length of 150m, and extends to at 70m depth, dipping steeply northwest. least It crosses lithologic boundaries and has a tabular-like form. It is thought to be developed alonq а zone of fracturing and silicification. In contrast, the configuration of the LE Zone suggests the mineralization is restricted to either folded or domed strata or to a lopsided mushroom-shaped cap. It is possible that mineralization extends between the two zones.

A computer evaluation of the two zones calculated a total estimated 924,000 tons with an average grade of 0.057 oz/ton. The Main Zone contains about 693,000 tons (10 to 15% probable, balance possible) grading 0.057 oz/ton gold and the LE Zone contains about 231,000 tons (20 to 25% probable, balance possible) grading 0.058 oz/ton gold. Both zones are open to depth, to the northwest, northeast and southwest and there is a potential for tonnages to be upgraded in the order of 50%. Computer evaluations also indicate the potential for 2.75 million tons of mineralized ground grading an average of 0.021 oz Au/ton.

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A three stage programme is recommended. Stage I (\$45,000) is primarily a field and drill core examination to address some technical concerns left from the 1987/88 programme. Stage II (\$550,000) would be circulation to verify the pattern and extent of vertical reverse mineralization, drilling and trenching of other areas of known mineralization, and reconnaissance surveys of the remainder of the property. Stage III (\$550,000) would be additional development work; drilling, bulk testing and further metallurgical tests.

TABLE OF CONTENTS

PREFACE

 $\left[\right]$

[]

 $\left[\right]$

[]

 $\left[\right]$

[]

[]

[]

[]

 $\left[\right]$

SUMMARY

•

.

1.	INTRO	DUCTION	1
	1.1	LOCATION, ACCESS AND TERRAIN	1
	1.2	CLAIMS STATUS	3
		1.2.1 CPW Claim	3
		1.2.2 Peso Group	5
	1.3	HISTORY	6
	1.4	SUMMARY OF THE 1987/88 EXPLORATION PROGRAMME	16
2.	GEOLC	XGY	2Ø
	2.1	REGIONAL	2Ø
	2,2	PROPERTY	22
		2.2.1 Lithology	22
		2.2.2 Structure	26
		2.2.3 Mineralization	28
3.	RESUL	TS OF 1987 RECONNAISSANCE SURVEYS	36
	3.1	INTRODUCTION	36
	3.2	RESULTS	36
	3.3	DISCUSSION	37
4.	TRENC	CHING	41
	4.1	INTRODUCTION	41
	4.2	SAMPLING METHOD AND ANALYTICAL PROCEDURE	41
	4.3	RESULTS	42
	4.4	DISCUSSION	45
5.	REVER	RSE CIRCULATION DRILLING	47
	5.1	INTRODUCTION	47
	5.2	SAMPLING METHOD AND ANALYTICAL PROCEDURE	47
	5.3	RESULTS	49
	5.4	DISCUSSION	51

TABLE OF CONTENTS (cont'd)

[]

[]

 $\left[\right]$

10.2

10.3

10.4

10.5

STRUCTURE

METALLURGY

MINERALIZATION

ESTIMATE OF ORE POTENTIAL

77

78

6.	DIAMO	ND DRILLING	53
	6.1	INTRODUCTION	53
	6.2	SAMPLING METHOD AND ANALYTICAL PROCEDURE	53
	6.3	RESULTS	56
	6.4	DISCUSSION	59
7.	METAL	LURGY	
	7.1	INTRODUCTION	61
	7.2	RESULTS	63
		7.2.1 Bacon, Donaldson & Associates Ltd.	63
		7.2.2 Scotia Systems Inc.	65
		7.2.3 Giant Bay Biotech Inc.	67
8.	DISCU	SSION	69
	8.1	SLUDGE VS CORE ASSAYS	69
	8.2	HQ VS NQ DIAMOND DRILLING	69
	8.3	REVERSE CIRCULATION VS DIAMOND DRILLING	7Ø
9.	ESTIM	ATE OF ORE POTENTIAL	72
	9.1	PREVIOUS ESTIMATES	72
	9.2	RESULTS OF 1987 PROGRAMME	72
		9.2.1 Empirical Method	72
		9.2.2 Computer Analysis	74
10.	CONCL	USIONS	76
	10.1	LITHOLOGY	76
	10.2	STRUCTURE	76

TABLE OF CONTENTS (cont'd)

 $\left[\right]$

 $\left[\right]$

 $\left[\right]$

[]

 $\left[\right]$

[]

[]

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 \Box

.

11.	PROPOSAL FOR FURTHER DEVELOPMENT	8Ø
	11.1 RECOMMENDATIONS	8Ø
	11.2 COST ESTIMATE	85
12.	BIBLIOGRAPHY	88
13.	STATEMENTS OF QUALIFICATIONS	90
14.	ITEMIZED COST STATEMENT	92

PAGE

TABLES

Table l	Claim Status	5
Table 2	Summary of CPW Mineralized Zones	11
Table 3	1985 Drill Intersection Summary	13
Table 4	1987/88 Work Summary	18
Table 5	Reconnaissance Sampling Results	38
Table 6	Description of 1987 Trenches	43
Table 7	Summary of Significant Trench Samples	44
Table 8	Summary of 1987/88 Reverse Circulation Drilling	48
Table 9	1987/88 Reverse Circulation Intersection Summary	5Ø
Table 10	1987 HQ Diamond Drill Hole Data Summary	54
Table ll	1987 NQ Diamond Drill Hole Data Summary	56
Table 12	1987/88 Diamond Drill Hole Intersection Summary	57
Table 13	Metallurgical Samples for 1988 Testing	62
Table 14	Carbon-in Leach Test Results	64
Table 15	Summary of Test Results, Sample 110	65
Table 16	Results of Re-sampling 1985 Reverse	
	Circulation Chip Samples	71.
Table 17	Empirical Estimate of Main Zone Width and Grade	74

 $\left[\right]$

TABLE OF CONTENTS (cont'd)

FIGURES

PAGE	

Figure 1	Project Location Map	2
Figure 2	Claim Location Plan	4
Figure 3	Mineralized Zones	lØ
Figure 4	Regional Geology	21
Figure 5	Depositional Environments	27
Figure 6	LE and Main Zone Geology and Mineralization	29

PLATES

Plate l	Drill Hole & Trench Location Map	Volume 1
Plate 2	Regional Au Anomaly Map	Volume 1
Plate 3	CPW & Don Claims Soil Geochemistry	Volume 1
Plate 4	CPW Detailed Soil Geochemistry	Volume 1
Plate 5	CPW VLF Electromagnetic Survey	Volume 1
Plate 6	Don/Jul Reconnaissance Survey Sample Location Map	Volume 1
Plate 7	Peso Reconnaissance Survey Sample Location Map	Volume 1
Plate 8	Geology, SW CPW	Volume 1
Plate 9	Sample Location Map, SW CPW	Volume 1
Plate 1Ø	Trench A (Don)	Volume 2
Plate 11	Trench B (Don)	Volume 2
Plate 12	Trench C (Don)	Volume 2
Plate 13	Trench Y - North End (Peso/CPW)	Volume 2
Plate 14	Trench Y - South End (Peso)	Volume 2
Plate 15	Trench BD - West Half (CPW)	Volume 2

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 $\left[\right]$

PLATES (cont'd)

(v)

Trench 1A (CPW)	Volume 2
Trench L (CPW)	Volume 2
Trench Ml - East Half (CPW)	Volume 2
Trench Ml - West Half (CPW)	Volume 2
Trench MlB (CPW)	Volume 2
Trench MlC (CPW)	Volume 2
Trench M1C2 (CPW)	Volume 2
Trench S2 (CPW)	Volume 2
Trench South A, B - East Half, J (CPW)	Volume 2
Trench South B - West Half (CPW)	Volume 2
Trench SS Survey.Plan (CPW)	Volume 2
Trench SW (CPW)	Volume 2
Trench SW2 (CPW)	Volume 2
Trench SZ Survey Plan (CPW)	Volume 2
Trench X, XA, XB, XC, XD (CPW)	Volume 2
Trench Rl (Ralphie II)	Volume 2
Trench R2 (Ralphie II)	Volume 2
Section A-A', Main Zone CPW	Volume 2
Section B-B', Main Zone CPW	Volume 2
Section C-C', Main Zone CPW	Volume 2
Section D-D', Main Zone CPW	Volume 2
Section E-E', Main Zone CPW	Volume 2
Longitudinal Section Z-Z', Main Zone CPW	Volume 2
Section AA-AA', LE Zone, CPW	Volume 2
Section BB-BB', LE Zone, CPW	Volume 2
Longitudinal Section CC-CC', LE Zone, CPW	Volume 2
	Trench L (CPW) Trench Ml - East Half (CPW) Trench Ml - West Half (CPW) Trench MlB (CPW) Trench MlC (CPW) Trench MlC2 (CPW) Trench S2 (CPW) Trench S2 (CPW) Trench South A, B - East Half, J (CPW) Trench South B - West Half (CPW) Trench SS Survey.Plan (CPW) Trench SS Survey.Plan (CPW) Trench SW2 (CPW) Trench SZ Survey Plan (CPW) Trench X, XA, XB, XC, XD (CPW) Trench R1 (Ralphie II) Section A-A', Main Zone CPW Section B-B', Main Zone CPW Section D-D', Main Zone CPW Section E-E', Main Zone CPW Section A-AA', LE Zone, CPW Section BB-BB', LE Zone, CPW

APPENDICIES

Appendix I	Geochemical Analytical Procedures	Volume 3
	-	
Appendix II	Trench Assays	Volume 3
Appendix III	Reverse Circulation Drill Hole Assays	Volume 3
Appendix IV	Diamond Drill Hole Assays	Volume 3
Appendix V	Diamond Drill Hole Ag Assays	Volume 3
Appendix VI	Diamond Drill Hole Rerun Assays	Volume 3
Appendix VII	Diamond Drill Hole Sludge Assays	Volume 3
Appendix VIII	ICP Assays	Volume 3
Appendix IX	MT. CALVERY Check Assays	Volume 3
Appendix X	SW CPW Grid Assays	Volume 3
Appendix XI	Reconnaissance Survey Assays & Sample Descriptions	Volume 3
Appendix XII	Assay Certificates	Volume 5
Appendix XIII	Diamond Drill Hole Logs	Volume 4
Appendix XIV	Reverse Circulation Drill Hole Logs	Volume 4
Appendix XV	1987 Petrographic Report	Volume 4
Appendix XVI	Coastech & Lakefield 1985 Metallurgical Report	Volume 4
Appendix XVII	1988 Bacon, Donaldson & Associates Ltd.	
	Preliminary Metallurgical Report	Volume 4
Appendix XVIII	1988 Scotia Systems Inc.	
	Preliminary Metallurgical Report	Volume 4
Appendix XIX	1988 Giant Bay Biotech Inc.	
	Preliminary Metallurgical Report	Volume 4
Appendix XX	1988 Geostatistical Computer Resources	
	Preliminary Report	Volume 4

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1. INTRODUCTION

The CPW Spanish Mountain property of PUNDATA GOLD CORPORATION lies in the Cariboo Mining Division of central British Columbia. The property consists of 13 mineral claims and one fraction owned by PUNDATA or held under option from D. Wallster and Robert and Dianna Mickle. The current programme is a joint venture with TRIO GOLD CORP. of Calgary, Alberta.

The exploration target is a fracture and possibly stratacontrolled gold orebody or series of orebodies, first seriously prospected and explored by between 1982 and 1985.

PUNDATA GOLD CORPORATION undertook an extensive programme of trenching and drilling between May 1987 and January 1988. The objectives of this programme were to determine the grade and tonnage of known mineralization zones, to test extensions of these zones and to explore and define other targets. This report describes the results and conclusions of the work along with a proposal for further development.

1.1 LOCATION, ACCESS AND TERRAIN

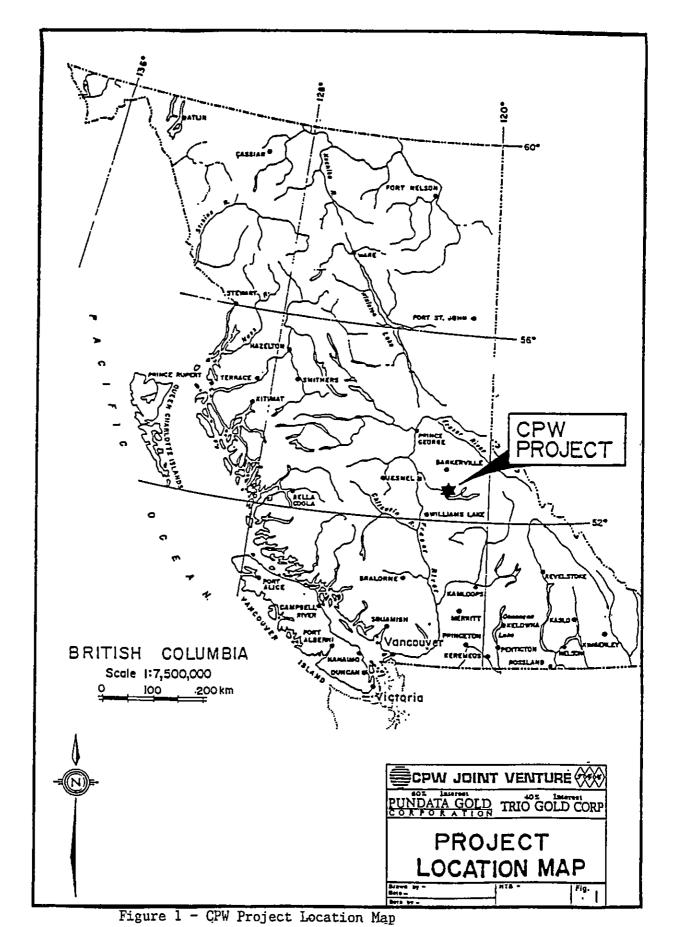
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The property is located in the vicinity of Spanish Lake, about 6 km east-southeast of the village of Likely in east-central British Columbia (Figure 1). The claims lie within National Topographic Series map areas 93A/11W and are centered at 52° 36' N latitude and 121° 28' W longitude (Figure 2).

The 1300 road, a well maintained, gravelled, B.C. Forest Service road extends along the south side of Spanish Lake cutting across the NE portion of the claim, providing ready access to the property from Likely. Secondary logging roads have been upgraded and extended to give access throughout the claim block. С

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The CPW property is situated on the western edge of Quesnel Highland physiographic subdivision, and lies on the northwesterly facing, moderate slope of Spanish Mountain. Elevations range from 3000 ft (914m) along Spanish Creek to 4700 ft (1432m) on Spanish Mountain.

3

Approximately three-quarters of the CPW claim has been clear-cut logged and is now covered by a heavy growth of alder. Mature stands of fir, spruce, alder and cottonwood remain in the southwest quarter of the claim block and consequently this portion has undergone relatively little exploration.

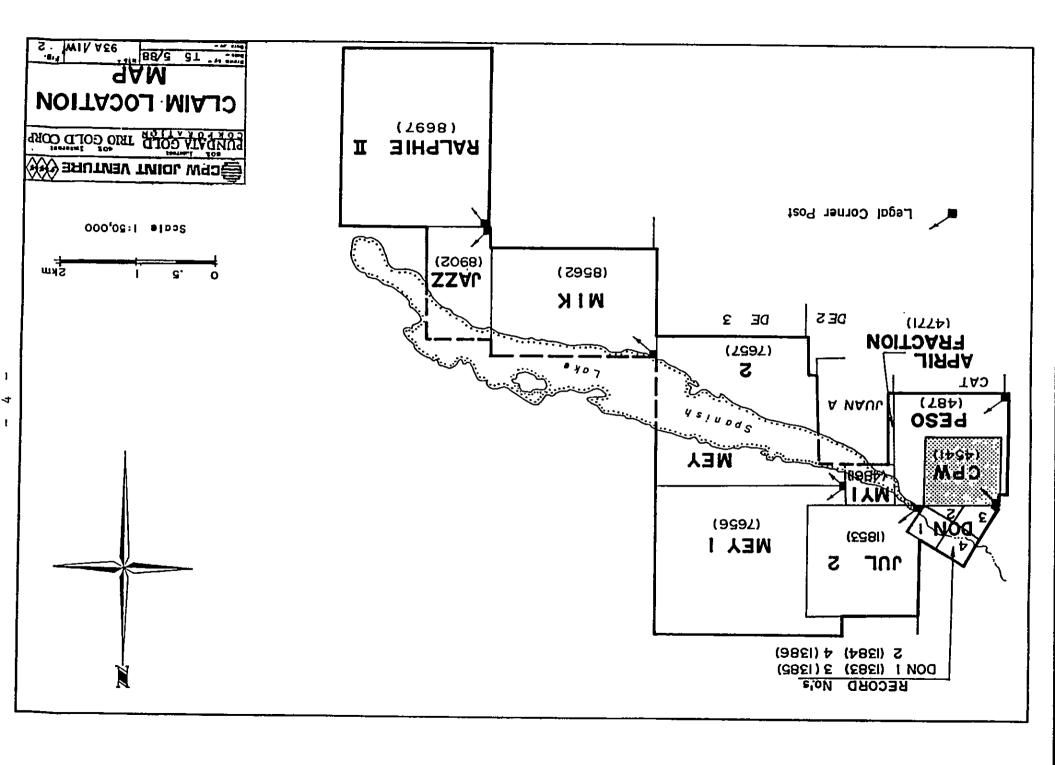
1.2 CLAIMS STATUS

Figure 2 is a claim plan of the property with Table 1 summarizing the claim particulars. The property consists of 13 mineral claims (109 units) and one fraction. The property can be divided into two separate claim blocks, the CPW claim and Peso Group, as these are covered under two separate option agreements and groupings.

1.2.1 CPW Claim

The four unit CPW claim, previously known as the Mariner II claim, was staked in October 1982 by D.E. Wallster, as agent for C.P. Wallster, trustee for the Mariner Joint Venture. On March 18, 1983, the CPW claim was optioned to WHITECAP ENERGY INC., who completed a soil geochemical survey in August and September of that year.

Under a letter of agreement dated November 2, 1983, MT. CALVERY RESOURCES LTD. (Welcome North Mines Ltd.) acquired the CPW claim from WHITECAP ENERGY and the Mariner Joint Venture. With funding provided by TECK CORPORATION, they completed a comprehensive two phase trenching and drilling programme between June 1 and October 1, 1985.



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Claim	Record	Units	Recording	Expiry	Recorded
Name	No.		Date	Date	Owner
CPW	4541	4	Nov. 1/82	Nov. 1/93	D.E.Wallster
PESO	487	9	Sept.21/77	Sept.21/91	D.V. Mickle
DON 1	1383	1	Dec.24/79	Dec.24/89	D.V. Mickle
DON 2	1384	1	Dec.24/79	Dec.24/89	D.V. Mickle
DON 3	1385	1	Dec.24/79	Dec.24/89	D.V. Mickle
DON 4	1386	1	Dec.24/79	Dec.24/89	D.V. Mickle
MY 1	4861	2	May 30/83	May 30/90	D.V. Mickle
MEY 1	7656	20	May 8/86	May 8/97	D.V. Mickle
MEY 2	7657	2Ø	May 8/86	May 8/91	D.V. Mickle
JUL 2	1853	9	Aug.8/8Ø	Aug.8/97	D.V. Mickle
APRIL FRACTION	4771	1	Apr.22/83	Apr.22/91	D.V. Mickle
MIK	8562	15	July 30/87	July 30/88	Pundata
JAZZ	89Ø2	6	Nov.26/87	Nov.26/88	Pundata
RALPHIE II	8697	2Ø	Sept.28/87	Sept.28/88	Pundata
		110			

In September 1986, PUNDATA GOLD CORPORATION acquired the CPW mineral claims from Dale E. Wallster, representative for the Mariner Joint Venture Group under a four year option agreement. By agreement dated January 22, 1987, the Company entered into a Joint Venture with TRIO GOLD CORP. (60% and 40% interests respectively) for the purpose of exploring the CPW property. PUNDATA acts as operator.

1.2.2 Peso Group

Between December 1979 and May 1986, the Peso, Don 1-4, My 1, Mey 1, Mey 2, Jul 2 and April Fraction claims, (a portion of the Peso Group), were staked by various individuals. By May 27, 1986, all interests in the above claims has been transferred to Dianna V. Mickle. Previous companies who had acquired an interest in the Peso group included HYCROFT RESOURCE AND DEVELOPMENT LTD., LACANA MINING CORPORATION, MT. CALVERY RESOURCES LTD. and MANDUSA RESOURCES LTD.

By agreement dated March 26, 1987, the Company acquired an option to purchase the above portion of the Peso Group of mineral claims and seven placer leases covering parts of the CPW, Don, Peso, Jul 2 and My 1 mineral claims, from Robert and Dianna V. Mickle.

During the 1987 field programme, the 15 unit Mik, 6 unit Jazz and 20 unit Ralphie II claims were staked by PUNDATA GOLD CORPORATION extending the claim block to the SE corner of Spanish Lake.

By agreement dated April 2, 1987, the Company entered into a Partial Option Assignment Agreement, whereby TRIO GOLD CORP. was assigned a 40% proportionate beneficial interest in the Peso Group of mineral claims. The 1987-88 drill and trench programme is thus often referred to as the CPW Joint Venture.

1.3 HISTORY

The presence of placer gold in creeks draining Spanish Mountain has been known since the first prospectors reached the area in 1859. Holland (1950) reports 37,784 ounces of placer gold was taken from Cedar Creek which drains the southern flanks of the Spanish Mountain, between 1881 and 1945. Placer gold removed from Spanish Creek between 1876 and 1945 amounted to 3706 ounces (Holland, S.S., 1950).

The CPW property was staked as the Mariner II claim in 1933, owned by F. Dickson and A. Bailey of Likely. Sampling results of surface exposures by R.E. Legg in 1938 as per his letter dated July 12, 1938 to N.A. TIMMINS CORPORATION were as follows (after Tribe, N.L., 1979):

Sample	<u>Width</u>	Oz Au/ton	Remarks
1.	21"	•68	Rusty quartz showing many vugs. Was formerly well mineralized. No visible gold.
2.	-	5.6Ø	Sample of heavily oxidized material which was probably originally solid sulphides. This sample was taken from numerous places along flat lying vein. Panning did not show gold, but it was probably too fine to see.
3.	8"	.28	Narrow quartz vein dipping steeply. Sample very slightly mineralized. Trace of galena.
4.	7"	.32	Narrow quartz vein dipping steeply. Sample was barren quartz except that one piece showed a little fine pyrite.

This resulted in short adits and hand-trenches made at this time by N.A. TIMMINS CORPORATION.

PREMIER GOLD MINES sampled a quartz vein on the property with the following results in 1940.

Location Al	long Vein	Wi	<u>dth</u>	Oz Au/ton	Oz Ag/ton
Ø' NE	3	1.2	feet	.42	Trace
4' NE	6	1.35	feet	•46	Trace
7'NE	3	1.65	feet	.42	Trace
12' NE	6	1.4	feet	.16	Trace
17' NE	3	1.5	feet	.92	.10
22' NE	6	1.35	feet	.12	.Ø8
27' NE	C	2.Ø	feet	•Ø2	Trace
32' NE	6	1.6	feet	.16	Trace
37' NE	E	1.5	feet	• Ø8	Trace

(After Wallster, D.E., 1984)

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In 1947, the veins were tested with a limited diamond drill programme, totalling about 2600 feet by EL TORO, B.C. MINES LTD. Dr. S.S. Holland of the B.C. DEPARTMENT OF MINES examined the property in 1947 collecting five samples whose description and assay results were as follows:

1	1. Selected sample of quartz well	Au (oz/ton)	<u>Ag (oz/ton)</u>
Τ.	mineralized with pyrite & galena.	Ø.3Ø	nil
2.	Selected sample of pieces of quartz containing about 25% pyrite.	1.12	Ø.4
3.	4 to 6 inch quartz vein mineralized with pyrite, galena & chalcopyrite.	4.43	2.3
4.	Selected honeycomb quartz containing pyrite.	Ø.52	nil
5.	Selected sample of quartz, well mineralized with galena and containing some sphalerite and small amounts of		
	pyrite and chalcopyrite.	5.88	32.Ø

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(After Dawson J.M., 1983)

In late 1947, EL TORO shipped 4 tons of picked ore to the Tacoma smeltor with net returns of 8 oz. gold, 40 oz. silver and 82 lbs. of copper.

There was little further hard rock interest in the area until the late 1970's when the surrounding Peso claims were staked. A geological and geochemical exploration programme carried out in 1979 covered much of the CPW claim. In 1981, the release by the Provincial Government of a regional geochemical silt survey for map sheet 93A touched off a staking rush and unprecedented mineral exploration throughout the Cariboo. Plate 2 shows the regional gold soil anomaly trend with data adapted from MT. CALVERY.

The four unit CPW claim (previously covered by the Mariner claim) was staked in October, 1982 by D.E. Wallster for the Mariner Joint Venture. In March of 1983 the claim was optioned to WHITECAP ENERGY INC. Grid soil sampling in 1983 outlined large areas of anomalous gold values in soil (Plate 3, 4).

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In the summer of 1985, MT. CALVERY completed a two phase programme of trenching (1,420 m) and rotary percussion drilling (37 holes, 3,176 m) (McClintock, 1985).

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The 1985 work programme on the CPW claim was successful in identifying several zones of structural and strata-controlled gold mineralization that are potentially mineable by an open pit method. The zones are shown in Figure 3. Table 2 summarizes the mineralized zones discovered during the programme and gives a brief description (after McClintock, 1985) of their character, average grade and extent. Table 3 summarizes the results of MT. CALVERY'S 1985 reverse circulation drill programme. At this stage, PUNDATA GOLD CORPORATION acquired the property and completed an extensive drill and trench programme designed to test the grade and extent of the Main and LE zones discovered by MT. CALVERY.

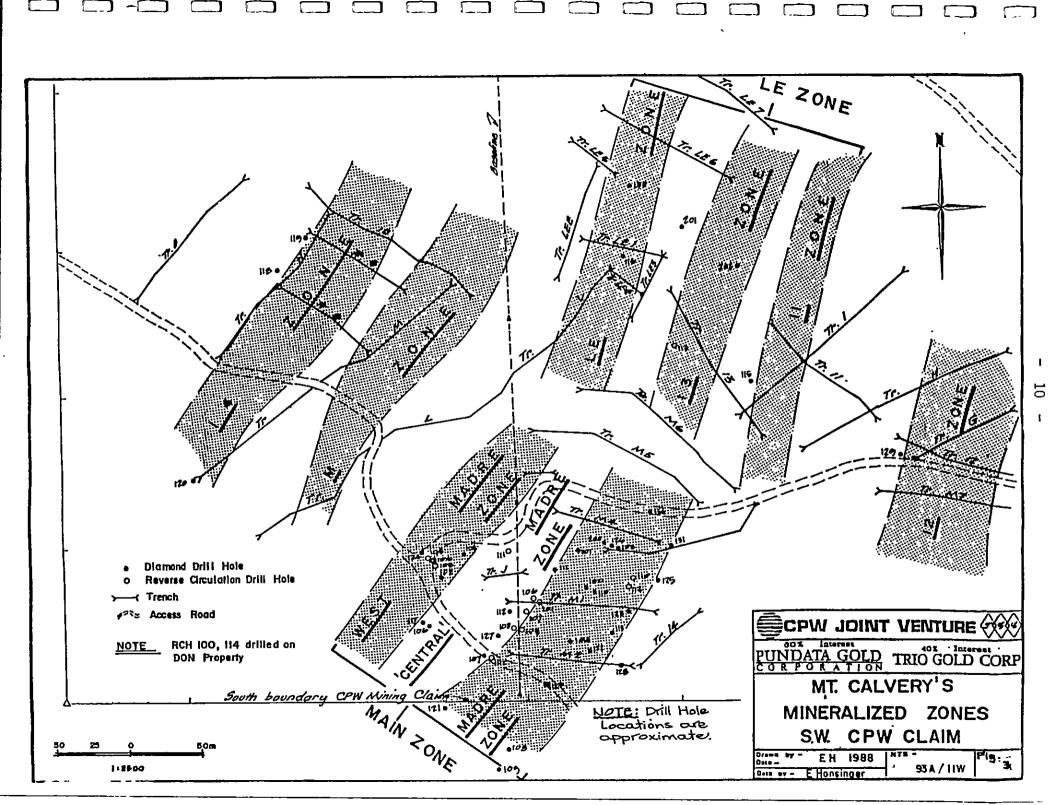


TABLE 2

SUMMARY OF CPW MINERALIZED ZONES, from McClintock, 1985

Zone	Description	Dimensions	Significant <u>Mineralization</u> (oz Au/ton)	Source
Madre West	 Gold bearing quartz stockwork zones in shears, located in "aerobar" zones in pyritic siltstone 		Ø.Ø95 across 49' Ø.Ø2 over 85'	South trench MR-7
	 gold in anastomosing veins in sheared shale and in "aerobar" type in shaley siltstone 		Ø.Ø8 over 72' incl. 36' of Ø.143 and 23' of Ø.Ø67 Ø.Ø6 over 23'	North trench MR-5
			Ø.Ø5 over 36'	MR-6
	3) quartz-veined shale in shear zone		Ø.05 over 46' Ø.05 over 29'	North trench MR-6
Madre	1) "aerobar" type	1600'(490m) 30-100'thick (10-30m)	Ø.108 over 33' Ø.083 over 30' Ø.06 over 33' Ø.05 over 16' Ø.08 over 26' Ø.10 over 20'	Trench L Extension MD-7 MD-8 MD-9 MR-9
	2) "aerobar" type	300' long	Ø.Ø63 over 23'	Trench I

TABLE 2 (cont'd)

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Zone	<u>Description</u>	Dimensions	Significant <u>Mineralization</u> (oz Au/ton)	Source
Madre Main Zone	Northeast trending zone of anastomosing quartz veins that spread out into a mushroom-shaped manto beneath a cap rock of massive siltstone	150m strike length stockwork zone has a width of 10-20m, widening to 30m in manto	Probable reserve 400,000 tons grading 0.1 oz/ton (McClintock, 1985)	
11, 12, 13, LE	separate, but parallel zones of anastomosing quartz vein stockworks	individual zones with average widths of 8m, 90m strike length	Grades ranged from Ø.l to Ø.05 oz/ton	
М	anastomosing quartz vein stockwork	'70m strike length	In the order of Ø.10 oz/ton over 5m.	
14 Oz	gold-bearing veins	5cm - 1m thick	Assays to 14.7 oz/ton	

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DRILL HOLE	DEPTH (metres) (from - to)	(metres)	WIDTH (feet)	(oz/t gold)
MR-2	39 - 42	3	lØ	Ø . Ø34
MR-3	28 - 3Ø	2	6	Ø.Ø31
MR-4	11 - 21 14 - 19	10	33	Ø.Ø47
including	14 - 19 30 - 35	5 5	16 16	Ø.Ø59 Ø.Ø39
MR-5	23 - 3Ø	7	23	Ø.Ø55
	35 - 37	2	6	Ø.Ø43
	39 - 42	2 3 2 1	10	Ø.Ø34
	53 - 54	2	6	Ø.Ø31
	58 - 59	1	3	Ø.Ø47
MR-6	42 - 51	9	ЗØ	Ø.Ø46
MR-7	8 - 14	6	2Ø	Ø.Ø49
	24 - 51	27	88	Ø.223
including	39 - 43	4	13	Ø.567
MR-8	8 - 12	4	13	Ø . Ø36
	14 - 16	2	6	Ø.Ø45
	4Ø – 42	2 2 3	6	Ø.Ø36
	45 - 48	3	10	Ø.Ø43
MR-9	2 - 11	9	3Ø	0.057
	13 - 16	3	lØ	Ø.Ø6Ø
	17 - 24	7	23	Ø.081
MR-1Ø	11 - 16	5	16	Ø.10
MR-11	4 - 21	17	56	Ø.114
	24 – 2 5	1	3	0.094
	52 - 53	1 1	3 3 3	Ø.Ø44
	104 - 105	1	3	Ø.Ø72
MR-12	5 - 13	8	26	Ø.119
MR-13	10 - 12	2	6	Ø.Ø98
14(10	18 - 22	4	13	Ø.Ø5Ø
	10 22	-	10	0.000
MR-14	63 - 66	3	1Ø	Ø.Ø61
MR-15	11 - 26	15	49	Ø.1Ø8
	28 - 29	1	3	Ø.Ø49
including	15 - 22	7	23	Ø.167
MR-16	6 - 12	6	2Ø	Ø.Ø39

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Table 3 1985 Drill Intersection Summary (McClintock, 1985)

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Table 3	(cont'd)

DRILL HOLE	<u>DEPTH (metres)</u>	WIDTH	WIDTH	ASSAY
	(from - to)	(metres)	(feet)	(oz/t gold)
MR-17	28 - 30	2	6	Ø.110
	39 - 41	2	6	Ø.132
	71 - 74	3	1Ø	Ø.Ø43
MR-18 including	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	13 4 2 2 5	43 13 6 6 16	Ø.Ø86 Ø.158 Ø.Ø39 Ø.Ø33 Ø.Ø73
MR-19	21 - 24	3	1Ø	Ø.Ø29
	26 - 27	1	3	Ø.1Ø9
	29 - 31	2	6	Ø.114
	49 - 50	1	3	Ø.Ø92
MR-20	28 - 34	6	2Ø	Ø.Ø51
	48 - 53	5	16	Ø.123
	55 - 58	3	1Ø	1.3Ø4
MR-21	9 - 1Ø	1	3	0.085
MR-22	13 - 15	2	6	Ø.Ø53
	18 - 20	2	6	Ø.Ø65
	21 - 22	1	3	Ø.Ø88
	26 - 29	3	1Ø	Ø.Ø72
MR-23	72 – 79	7	23	Ø.Ø45
MR-24	16 - 23	7	23	Ø.Ø56
	40 - 44	4	13	Ø.382
	65 - 67	2	6	Ø.Ø43
MR-25	8 - 10	2	6	Ø.306
	35 - 36	1	3	Ø.102
	52 - 54	2	6	Ø.153
	63 - 64	1	3	Ø.162
MR-26	24 - 27	3	1Ø	Ø.Ø34
	33 - 34	1	3	Ø.Ø61
	47 - 48	1	3	Ø.2Ø4
MR-27	47 - 49	2	6	0.055
MR-28	8 - 11	3	10	Ø.Ø33
	14 - 15	1	3	Ø.Ø49
	68 - 74	6	20	Ø.Ø54
	79 - 82	3	10	Ø.116

Table 3 (cont'd)

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DRILL HOLE	DEPTH (metres)	WIDTH	WIDTH	ASSAY
	(from - to)	(metres)	(feet)	(oz/t gold)
MR-29	77 - 78	1	3	Ø.Ø78
	105 - 107	2	6	Ø.Ø37
MR-30	59 - 6Ø	1	3	Ø.Ø46
	63 - 79	16	2Ø	Ø.Ø38
MR-31	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	4 2 8 1 2 2 2 6	13 6 26 3 6 6 6 20	Ø.Ø29 Ø.Ø37 Ø.Ø66 Ø.58 Ø.Ø41 Ø.11Ø Ø.Ø36 Ø.Ø32
MR-32	17 - 18	1	3	Ø.Ø6Ø
	21 - 23	2	6	1.Ø8
	78 - 80	2	6	Ø.Ø42
	118 - 120	2	6	Ø.Ø37
MR-33	2 - 3	1	3	Ø.Ø46
	9 - 14	5	16	Ø.Ø41
	86 - 89	3	10	Ø.1Ø7
MR-34	16 - 17	1	3	Ø.226
	68 - 69	1	3	Ø.132
MR-35	51 - 60	9	3Ø	Ø.270
	64 - 65	1	3	Ø.145
	71 - 72	1	3	Ø.219
MR-36	72 – 75	3	10	Ø.113
MR-37	12 - 14	2	6	Ø.Ø53
	34 - 36	2	6	Ø.Ø49
	41 - 45	4	13	Ø.Ø53
MR-38 including	2 - 27 4 - 15 41 - 43	25 11 2	82 36 6	Ø.Ø47 Ø.Ø58 Ø.Ø29
MR-39	27 - 30	3	1Ø	Ø.Ø46
	71 72	1	3	Ø.Ø53
	75 - 77	2	6	Ø.Ø46
MR-4Ø	57 – 59	2	6	Ø.Ø33

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Table 3 (cont'd)

DRILL HOLE	DEPTH (metres)	WIDTH	WIDTH	<u>ASSAY</u>
	(from - to)	(metres)	(feet)	(oz/t gold)
MR-41	4 – 5	1	2	Ø.Ø8Ø
	34 – 44	10	33	Ø.Ø44
including	49 - 63	14	46	Ø.Ø44
	55 - 59	4	13	Ø.Ø51
	69 - 7Ø	1	3	Ø.Ø48
	73 - 75	2	6	Ø.Ø42
MR-42	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	6 2 9 3 1 13	20 6 30 10 3 43	Ø.Ø55 Ø.Ø77 Ø.Ø35 Ø.Ø46 Ø.Ø92 Ø.Ø61
including	69 - 75	6	2Ø	Ø.Ø97
MR-43	No signific	ant intersecti	ons	
MR-44	-	ant intersecti		
MR-45	20 - 22	2	6	Ø . Ø36
MR-46	18 - 2Ø	2	6	Ø.Ø35
	33 - 35	2	6	Ø.Ø68
MR-47	No signific	ant intersecti	ons	

1.4 SUMMARY OF THE 1987/88 EXPLORATION PROGRAMME

A total of 4,510m (14,797 ft) of diamond and reverse circulation drilling and 848m (2,674 ft) of trenching was completed on the CPW and surrounding claims during the 1987/88 exploration programme conducted between May 18, 1987 and January 25, 1988. Plate 1 is a compilation of drill and trench data of the southern portion of the CPW claim, where the vast majority of the work was performed. The programme was designed to determine the grade and tonnage of Main (Madre) Zone, test for its extensions and to evaluate and explore the potential of other known (eg. LE) and unknown mineralized zones. Prior to and concurrent with the drill and trench programme, work also included reconnaissance sampling of surrounding claim blocks, grid mapping and sampling (25 x 25m grid) of the southern portion of the CPW claim, and staking of the Mik, Jazz and Ralphie II claims.

The work was outlined and supervised by J.S. Bending, former President, Director and Senior Geologist of PUNDATA GOLD CORPORATION. Staff Geologists included E.R. Honsinger, W. Hewgill and W.G. Scales, with G. Demers and M. Rowse as field assistants. P.C. Nisbet, Consulting Geologist was hired later in the programme on a contract basis. Acknowledgements are made to numerous individuals and firms in the town of Likely whose infrastructure is well designed to support and accommodate large mineral exploration programmes.

In May of 1987, at the onset of the programme, W. Garraway of CROWFOOT DEVELOPMENTS LTD. was contracted to survey all previous drill holes and trenches on the CPW claim block. At this time, reverse circulation splits left on the hill during previous exploration efforts were collected, stored and selectively re-assayed by PUNDATA. In general, the previous re-assayed values correlated quite well. However, high Au grade samples did prove somewhat erratic confirming the problem associated with particulate gold and the necessity of establishing the optimum sampling methods for trenching and drilling.

Approximately 3/4 of the drilling was done on the Main Zone (Madre West, Central and Madre Zones) with the remaining holes concentrating on the LE Zone and other exploration targets as outlined in Table 4.

- 17 -

	MAIN	LE	11, 12, 13	14	M	PESO	DON	OTHER	TOTAL
TRENCHING	198	42	234	62	58	116	90	48	848
DRILLING:									
HQ Drill	2187	267	44	32Ø	1	18Ø	/	1	2998
NQ Drill	118	157	/	/	1	1	1	/	275
RC Drill	1Ø48	/	/	1	1	/	189	1	1237

Table 4: 1987/88 Work Summary (all values in metres)

Trenching on other areas included 15 metres opened in the SW corner of the CPW claim block and 33 metres on the Ralphie II claim block.

The primary goal of the exploration programme was to prove up reliable tonnage figures for the Main (Madre) Zone and to test its extensions to depth and along strike. To that extent, the programme was only partially successful. The high degree of shearing and structural deformation within the Main Zone has made structural interpretation and stratigraphic correlation extremely difficult. The hiqh level of confidence to accompany such interpretations in order to determine ore grades and tonnages by conventional methods (irregular polygons) was not possible. To compound the problem, many holes were angled to maintain a consistent drill direction (120' - 300') to that of MT. CALVERY'S with the intent of incorporating their data base into PUNDATA'S. However, the 1987/88 section directions have been modified to crosscut the mineralized horizon perpendicular to strike (approximately 65') and hence the majority of the drill holes are not in the plane of the sections.

The complexity of the situation necessitated an independent computer evaluation of the deposit. This evaluation is presently ongoing and a final report is not expected to be completed until mid June, 1988.

- 18 –

The potential of the LE Zone, which for the purposes of this report includes the 11 and 13 Zones, has been greatly expanded by the 1987/88 programme. This zone contains rocks which are similar in lithology and alteration assemblages to those found in the Main Zone, but lacks the pervasive quartz veining associated with high grade Au Independent computer evaluation of this area has also intersections. been undertaken. Limited reconnaissance sampling, trenching and drilling the Don Claim group has discovered rocks extremely similar in on lithologies and grade to those of the LE Zone, and further targets have yet to be explored.

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Metallurgical studies commenced late in the programme on ores from the Main and LE Zones on both surface (trench) material and reverse circulation drill chips (Section $7.\emptyset$). The recovery procedures tested included bulk sulphide flotation and concentrate cyanidation, direct CIL cyanidation of whole ore, direct bromine leach of whole ore, the incorporation of a gravity concentration step, and bioleaching. 2. GEOLOGY

2.1 REGIONAL

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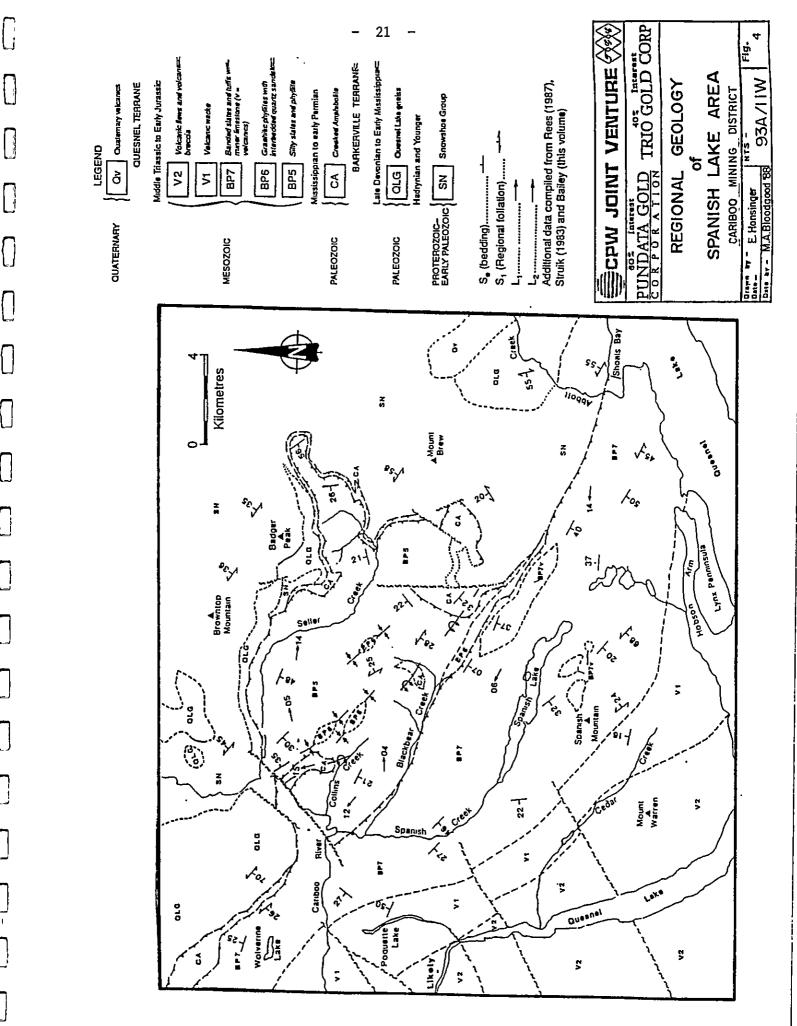
Figure 4 illustrates the regional geology of the Spanish Lake area (Bloodgood, 1988), which lies within the Quesnel terrane of the Intermontane belt, east of the boundary with the Omineca Belt.

The area is underlain by middle Triassic to early Jurassic sedimentary and volcanic rocks of the Quesnel River Group which are correlated with the Takla and Nicola Groups (Campbell, 1978; Rees, 1981). Figure 5 (after Rees, 1987) illustrates the depositional environments of the various facies of the Takla Group volcanics.

Bloodgood (1987) has subdivided sedimentary rocks of the Quesnel River Group into seven units, the upper three of which crop out in the Spanish Lake area. These are silty slates, graphitic phyllites with interbedded quartz sandstone, and banded slates and tuffs with minor limestone. In general, these rocks dip at moderate angles to the southwest, and a few kilometers west of Spanish Lake the sediments are overlain by green, coarse grained volcanic wackes and volcanic flows, which make up the middle part of the Quesnel River Group.

Gold mineralization is noted at several places within the fine grained black clastics of the lower Quesnel River Group. In addition to the CPW property, examples are the Frasergold deposit of EUREKA RESOURCES INC. in the MacKay river valley to the southeast and the gold occurrences near Hixon to the northwest.

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The CPW claim has been mapped by MT. CALVERY RESOURCES LTD. (Schmidt et al, 1985) at a scale of 1:1000. While some details of the geology have been revised, the descriptions summarized here are from that earlier work. Plate 8 is a 1:2000 geology map of the southern portion of the CPW claim block.

2.2.1 Lithology

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The area of exploration interest is underlain by interbedded tuffs and debris flows with rare pillow lavas. These are considered to represent a submarine delta at the margin of an alkalic island arc eruptive centre (Rees, 1987). Gray lithic tuff (siltstone, phyllitic siltstone) is most abundant. Black graphitic, phyllitic siltstones with rounded fragments of lighter gray tuffaceous rocks are thought to represent debris flow material. Mariposite-altered crystal tuff and carbonate-bearing volcanic wackes are subordinate.

Rocks previously mapped (Schmidt et al, 1985) as light gray feldspar porphyry dykes are now considered to be mariposite-altered crystal tuffs. All of the rocks have been regionally metamorphosed to the greenschist facies.

Lithologies - Main Rock Types

- 1. Jmt mariposite altered tuff
- 2. Jlts medium grey lithic tuff/siltstone
- 3. Jst massive siltstone, medium to dark gray
- Jgst graphitic shaley siltstone, usually interbedded with light grey tuff, debris flow material
- 5. Jpst phyllitic shaley siltstone (nodular phyllite)

Each rock unit can be divided into various subunits, depending on extent of shearing, mineralization, silicification, alteration and clast size.

1. Jmt - Mariposite altered tuff

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This unit underlies the graphitic shaley, silty sediments, cropping out primarily on the southwestern portion of the CPW claim block (Trench X, Trench South). It was previously mapped as an intrusive unit composed of rhyolitic dykes and sills (McClintock, 1985). A petrographic report (Soux, 1986, Appendix XV) supports this interpretation, however the intense alteration of the samples submittal prevented SOUX from definitely classifying the protolith of some of the samples,

> "Due to the intense alteration, it is difficult to assess the original composition of the rock. However, the presence of some potassic feldspars indicate that the original rock probably had a rhyolitic composition. ROCK CLASSIFICATION: "ALTERED RHYOLITE?""

> > (After Soux, 1987, Sample WH-L)

Mariposite flecks, generally 1-2 mm, give the rock a pale, light greenish grey color. The intensity of mariposite alteration varies dramatically, resulting in rock colors from pale creamy white to light Occasionally, heavily silicified and epidote olive green. altered varities are found (end of DDH-87-104, DDH-87-118 at 19.00m). Pyrite generally occurs as embedded pyritohedrans up to 2 cm across, heavily oxidized near surface. The rock is usually crosscut by numerous <1mm talc/chlorite stockwork microveining, so intense in areas that the rock resembles a breccia. Gypsum is often found on fracture surfaces. Gold mineralization within the unit is invariably associated with strong silicification, quartz veining or along contacts with more phyllitic units (for example; DDH-87-101, 86.42 m, 0.060 oz/t; 88.63m - 89.63 m, Ø.029 oz/t). These rocks may grade to agglomeratic tuff (DDH-87-121, 46.63m).

2. Jlts - medium grey lithic tuff/siltstone

Generally, dark grey in color, occasionally mildly graphitic. Elongate quartz fragments are common, as are pre-deformational stringers. Massive sulphides are locally developed, but not gold mineralized unless associated with intense silicification (DDH-87-111, 28.20 m - 30% quartz). Fine grained disseminated pyrite is almost ubiquitous. Lithic fragments often contain 4 mm bleached creamy white, soft microveinlets horsetailing perpendicular to the fragment's long Tuffaceous interbeds are lenticular. Matrix resembles coarse axis. grained siltstone in some areas and mafic lapilli tuff in other places. Some lithic fragments are calcareous, others are carbonaceous. The rocks are often crosscut by chlorite stringers, or more rarely large 5 - 15 cm quartz veins (DDH-87-114, 28.00 m). In some areas pyroclastic fragments are large enough to classify the rock as agglomerate. These are often highly sheared but generally not gold mineralized, other than to low background levels.

3. Jst - massive siltstone, medium to dark grey

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Found commonly as interbedded lenses in unit 2. Grain sizes range from very fine to fine grained, and in some areas the rocks are Occasional elongated and contorted graphitic shale clasts are psammitic. The siltstone often contains very fine grained disseminated found. pyrite, as well as occasional, sheared, light lapilli grey tuff Cross cutting guartz microveinlets are common. Near surface, fragments. the siltstone contains oval, 3 by 2mm, rusty brown ankerite nodules. Local areas of low grade Au mineralization (DDH-87-131, 17.40 - 19.40 m, Ø.Ø28 oz/t) are reported but these are not widespread. Chlorite, talc, and rarely gypsum are found on fracture surfaces.

> 4. Jgst - graphitic shaley siltstone, interbedded with with light grey tuff (debris flow)

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These rocks are the main constituent of the Main Zone and LE Zone ore grade material. In the Main Zone, this unit is commonly crosscut by post-deformational high grade Au bearing quartz veins (DDH-87-104, 45.60m - 1.310 oz/t; 48.75m - 1.050 oz/t).

The rocks are dark grey to black, moderately to intensely graphitic with disseminated pyrite throughout, generally highly sheared and contorted with graphitic slickensides. Tuffaceous interbeds (often mariposite speckled) exhibit brittle behaviour. In contrast, graphitic siltstones have behaved in a ductile fashion, exhibiting soft sediment style deformation (Bloodgood, M.A., personal communication, 1987). Local contain well developed pyrite crystal aggregates, which are areas sheared, elongated and often rimmed with guartz. Abundant discordant quartz stringers within elongated clasts running 1–2mm truncated perpendicular to shear direction are common.

Gold bearing concordant quartz veins often contain galena, chalcopyrite, pyrite and honey amber colored sphalerite. At surface the oxidized counterpart often has pyrite completely weathered out, leaving siliceous rimmed, honeycomb vugs which often carry visible gold. This material is referred to as "aerobar". Talcose, chloritic fracture surface coatings are common.

The widespread shearing and soft sediment style of deformation suggests that this unit was a Jurassic deltaic debris flow. Ree's (1987) interpretation of the regional stratigraphy lends credence to such an interpretation (Figure 5). No evidence of graded bedding has been identified.

- 25 -

5. Jpst - phyllitic shaley siltstone

These rocks are similar to Jgst unit, although they contain no tuffaceous interbeds. Generally slatey or phyllitic with a distinct foliation but not a true slate or schist. Previously mapped as shale by MT. CALVERY (McClintock, 1985). Near surface, this unit often contains distinct oval 4x 7mm rusty brown ankerite "nodules" and hence has been termed "nodular phyllite" in some 1987/88 diamond drill logs.

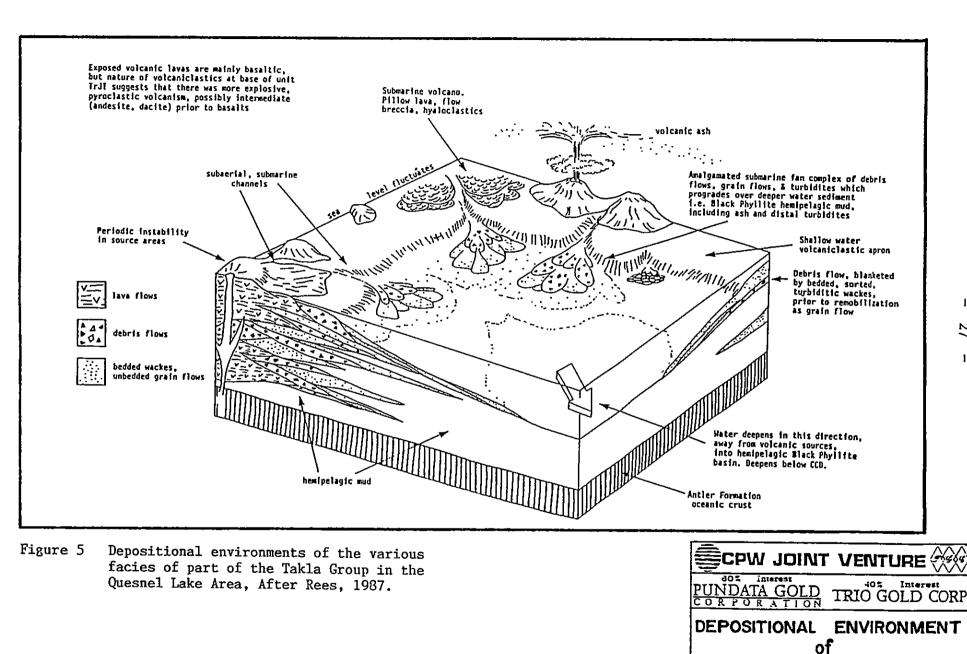
This siltstone generally contains disseminated pyrite and is moderately graphitic. Grain sizes vary between shale and fine grained the siltstones are crosscut by post siltstone. Occasionally, oxidized, vuggy gold-bearing quartz veins (DDH-87-114, deformational 43.84m - 1.10 oz/t Au). This unit crops out in the southwest portion of CPW and Peso, as well as on the Don claims (see Trench A map, Plate 10). Generally, these rocks exhibit little alteration other than locally developed talc and chlorite. Mineralized horizons contain low grade (about Ø.Ø3Ø oz/ton) gold.

2.2.2 Structure

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Unfortunately, many surface exposures on the CPW claim, especially in the Main Zone, have been destroyed by surface operations (drill pads, bulldozer activity). As a result there is no clear understanding of major fault and shear structures, which are believed to be a contributing factor in the control of mineralization within the Main Zone. The present state of geological mapping does not permit correlation between the location of mineralized zones and mappable zones of structure.

The geological map, Plate 8, illustrates the northwest trending, but rather disorganized, distribution of units. The stratigraphy is not readily apparent and units repeat themselves across the map but not in the same order. In the northwest corner of the geological map unit Jlts (lithic tuff and sandstone) shows an unconformable relation to other units.



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Fig.

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QUESNEL LAKE AREA

NTS -

93A /11 W

Drawn by -

Date by -

REES

1987

Date -

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Most exposures dip at moderate angles to the northwest but there are numerous northwest trending folds which have locally reversed the dip direction. It is thought that, in general, Spanish Mountain lies near an anticline axis (Bloodgood, personal communication, 1988) but no major fold axis has yet been recognized.

Conjugate shears, axial plane shears and sheared rock contacts are locally well developed. They are considered to be caused by a compressional regime oriented northeast-southwest. Subvertical axial plane shear zones, up to 15m wide, trend about 150°. Graphitic shears, quartz veinlets and fine disseminated pyrite with gold often occur in these zones (to 7400 ppb, Trench ADL composite, panels 1 & 2).

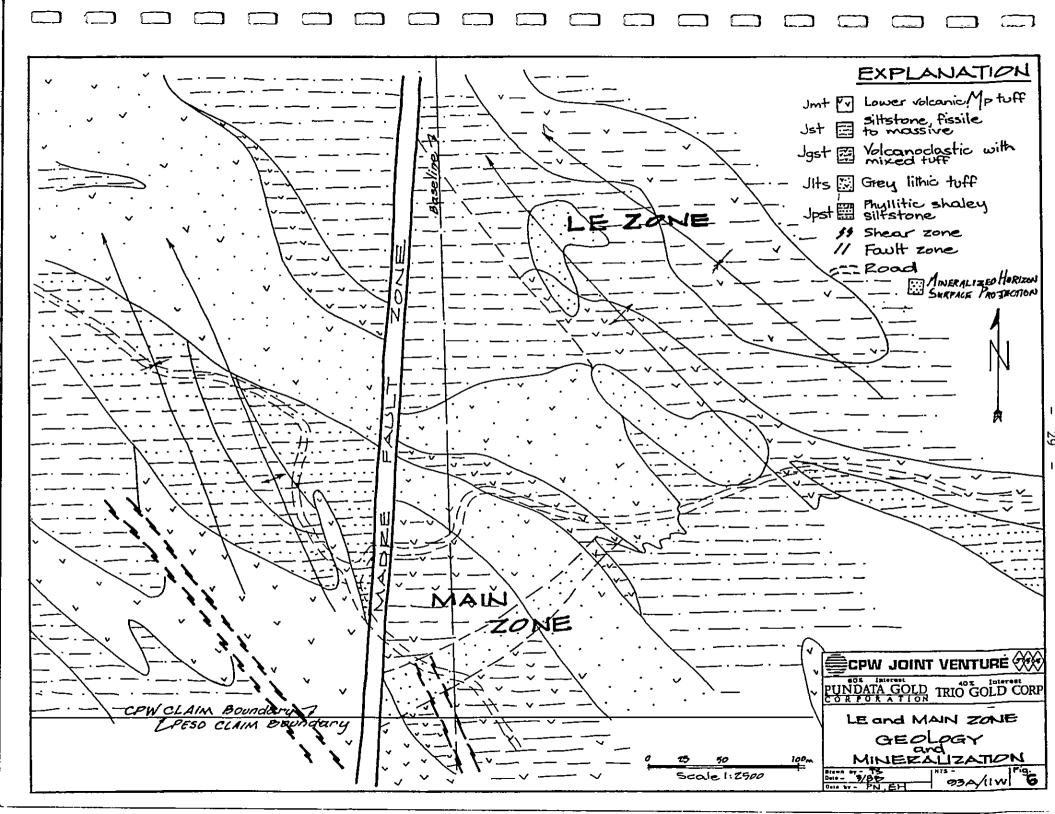
Conjugate shears trending Ø35 (steep northwest dip) and Ø90 to 115 are common. The northeast trending set is often marked by quartz stringers and veinlets that contain coarse visible gold.

Major shears and faults trend north-northeast (Madre fault), northwest (wide shear zone in southwest corner of map) and northeast (fault crossing Main or Madre Zones).

The steeply west-dipping Madre fault has a gouge and breccia zone approximately 10m wide.

2.2.3 Mineralization

The early work on the CPW claim outlined several zones of mineralization, as shown in Figure 3, after the work by MT. CALVERY RESOURCES. The 1987 programme simplified the terminology for the Madre Zones, which are now referred collectively to as the Main Zone. Most of the 1987 drill and trench programme took place in the LE and Main Zones. Figure 6 is a simplified geological map showing the two zones.



Gold occurs on the property in three forms:

- Type 1 Gold in anastomosing quartz vein stockworks occupying northeasterly and easterly trending, steeply dipping shear zones in graphitic shaley siltstone.
- Type 2 Gold particles and fine wires in oxidized and leached pyrite honeycomb vugs, invariably with associated quartz in pyritic shaley siltstone. This type was aptly called "aerobar" by the MT. CALVERY prospector who first discovered it.
- Type 3 Free gold associated with minor galena in northeasterly and easterly trending, steeply dipping, 2cm to 1m wide quartz veins in massive siltstone, and intensely silicified and carbonate altered tuff. The tuff was previously mapped (Schmidt et al, 1985) as altered porphyry dike rock.

An earlier mineralization model, after McClintock (1985) is as follows:

"The three forms of gold mineralization are thought to have been deposited by hydrothermal fluids localized in northeasterly trending fracture and shear zones formed by compressional shearing during folding of the strata. Compressional stress caused the more competent massive siltstones and altered dykes to fail along a limited number of fractures, while wide zones of fracturing developed in the shale.

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The auriferous, hydrothermal fluids migrated up these structures forming discrete vein-fillings in the massive siltstone, but horsetailed into an anastomosing vein system on passing into the fractured shale. Ponding of the hydrothermal fluids occurred as the upwardly migrating solutions attempted to pass from the structurally more permeable shale into the overlying less permeable siltstone. As ponded fluids spread laterally through the pyritic shaley siltstone, gold was deposited as replacements of pyrite rims forming manto-like replacement zones beneath the less permeable siltstone".

An alternative model has been proposed by PUNDATA'S geologists as a result of the 1987 field programme. It places more emphasis on a origin, with subsequent deformation and hydrothermal syngenetic activity. This model proposes that disseminated (and particulate) gold was initially deposited in permeable graphitic shaley siltstone of a deltaic sequence (possibly debris flows). The area then experienced folding which resulted in formational thickening of the gold-bearing clastic rocks at fold crests. Post-folding hydrothermal remobilization of silica (accompanied by galena, pyrite and native gold) then occurred, with silica moving into a conjugate fracture system.

The original, disseminated gold mineralization is confined to the more permeable, coarse clastics. Typical values in these rocks are $\emptyset.\emptyset1$ to $\emptyset.1\emptyset$ oz/ton gold, as exemplified by 5 and 11m intersections in the LE Zone encountered in DDH-87-2 \emptyset 2 and DDH-87-2 \emptyset 1, respectively.

Little or no silver or base metal values are associated with the early disseminated mineralization. The ratio of gold to silver is most often 1:1 or less.

From what data is available at present, gold occurs in the native state, partly as micron gold and partly (10-40% based on metallurgical data) as coarse gold. The coarse fraction may be related to post depositional metamorphic remobilization.

- 31 -

During regional metamorphism and folding, it is considered that the coarser clastic horizons have been physically forced into folds. During the same stress regime, a conjugate fracture system (sets trending northeast and east) was created.

At least part of the coarse gold and some of the increased gold content in gold crests may be attributable to folding and lower greenschist facies metamorphism. Evidence for metamorphic remobilization include micro-veins cutting flattened siltstone clasts and rolled pyrite blebs, bull-quartz veining on contacts between units, with little or no gold content, save at the fold crests, and increased gold content in the most complexly refolded zones.

Post-metamorphic remobilization of gold resulted from an episode (or episodes) of hydrothermal activity, possibly a regional intrusive event in late Cretaceous to early Paleocene times. The main effects of this activity were silicification, pyritization and hydrofracturing, both of which affected not only the coarse clastic rocks but also lithic tuffs under and overlying the clastic rocks. Both silicified tuff and sulfide replaced beds acted as caps over the more permeable units. Gold appears to have been deposited during pressure release subsequent to hydrofracturing of cap horizons and boiling. Within the coarse clastics, early silicification followed by replacement by fine pyrite occurred, generally reducing permeability and further channeling late gold-bearing hydrothermal convection into vein fracture systems.

Silicia moved into the conjugate fracture system, particularly well developed near fold crests, with sets striking at about 030° and 100°. Unlike the veins in low grade zones in the shaley siltstone the veins found in fold crests contain a proportionally higher content of base metals. Large segregated blebs of steel gray galena with exolution lamina of tetrahedrite, honey-coloured sphalerite and coarse grained pyrite are found in milky white quartz veins. The veins have limited strike length and do not appear to be extensive in depth.

Gold associated with the conjugate fracture system is invariably coarse and often seen as visible gold associated with either galena or sphalerite blebs and rarely with pyrite. Where the conjugates converge, small shoots have been observed, some ranging to 4 metres in width. Though the Ø30 axis often contains most the most persistent mineralization, in some cases, as at the Green Pit on the Peso Claim, the 100 axis is stronger. The persistence of individual fractures is not high but they may occur in some locations in sufficient numbers to generally increase grade.

Gold values in the veins can be very high, but are generally very erratic. This is a reflection of their particulate nature. The vein for which the 14 Oz Zone was named is 15 cm wide and carried 1.7 oz/t Au on initial samples. Later sampling indicated a wide degree of variability in gold content for this vein ranging from $\emptyset.05$ oz/t to 14.7 oz/t gold on a number of samples. The same appears to be true of almost all the conjugate veins encountered on the property. In the Main Zone, near the confluence of the $\emptyset30$ fracture and its southeast conjugate, RCH-88-112 returned values of 1.07 oz/t Au over 8m representing 4m of true thickness. Other veins like this may exist, but insufficient data is available to evaluate their significance.

post-metamorphic, conjugate fracture The hiqh grade, unique gangue minerals, mineralization often contains such as flourapatite. The fractures are best developed in shaley siltstone but also persist into overlying tuff beds and can be found even in the older phyllite unit south of the CPW/Peso claim boundary. The increased base metal content and the larger amount of contained silver in rare instances, up to 15 oz/t Ag (Sample WH7R-18, Don Claim, Plate 6) are also unique to these veins.

The main zone mineralization consists of gold-bearing quartz stockwork in sheared shaley siltstone and the "aerobar" type of mineralization near surface. The Main Zone has a length of at least 70m trends northeast and has a width of 10-20m spreading out upwards to a width of 30m. McClintock gave the Main Zone a length of 150m.

LE Zone mineralization is somewhat different, with less abundant quartz stockworks and lack of abundant "aerobar" mineralization. Mineralization is characterized by disseminated gold in the graphitic shaley siltstones.

Another potential indicator of the extent and origins of the deposit area is given by soil geochemistry and EM-VLF data collected by MT. CALVERY in 1985 (Plates 4, 5). The conductivity response from thick units of sulphide-rich and carbonaceous debris flow horizons is quite Two of PUNDATA'S geologists (S. Bending and P. Nisbet) hypothesize high. that there has been a second period of folding along northeast axes which has resulted in a pattern of constructive and destructive interference, as expressed by anticline-anticline, syncline-syncline and synclineanticline pairs as outlined by the dome and bowl pattern seen in soil geochemistry and EM-VLF survey results. The same pattern has been interpreted by these geologists in drill results. Size and shape of the varying domes and bowls vary, but most have a longitudinal axis in the 32Ø direction. Surface mapping has not yet identified folds with the northeast orientation.

The north end of the LE Zone, (possibly a syncline-syncline pair) appears to be 60m wide and 160m in length and contains three distinct debris flows horizons with the delta facies unit (Jgst). In its thickest proportion, the body contains 40m of mineralization in 100m of mixed tuff and deltaic facies sediments. The southern portion of LE Zone, (possibly an outcropping anticline-anticline dome) is approximately 50m wide and 150m long, as indicated by both geophysics and drilling.

The thickening of the dome is skew toward the southwest and plunges to the northwest. Greatest observed mineralization for the sequence is only slightly less than for the LE Zone North, but lower horizons then observed in that body have been intersected. At least some of the mineralization observed in the more northerly body has been removed by erosion.

Numerous other debris flow hosted zones occur both on trend with the LE Zone and in other fold axis locations. Their presence has been indicated by surface sampling and trenching, soils grids, geophysics and limited drilling. The extent of these other occurrences can only be estimated from geophysical data, however, the potential for other large bodies of debris flow hosted mineralization appears to be significant.

Though post metamorphic veins are high in grade, their limited extent makes them a less promising target. Their effect on enriching certain zones of the deposit area has not been fully established, but they may act as a substantial addition to the total mineral inventory. Bulk testing will be required to fully assess their value. Other then a role as a 'sweetener', the conjugate veining has little value when compared to the larger bulk tonnage potential of the debris flow hosted disseminated target.

3. RESULTS OF 1987 RECONNAISSANCE SURVEYS

3.1 INTRODUCTION

Concurrent with the drill and trench programme on the CPW, prospecting and sampling was performed on the Don, Jul and Peso claims with trenching on the Ralphie II, Don and Peso claims. The Don and Peso claims also underwent limited exploratory drilling.

Diamond drill holes DDH-87-108 and 109 totalling 179.8 metres were drilled on the Peso claims (Plate 7), while drill holes RCH-87-100 and 114 totalling 189 metres were drilled on the Don (Plate 6). Limited trenching, totalling 239 metres was done on the Peso, Don and Ralphie II claim blocks. A total of 132 grab, chip and soil samples were collected from the Peso, Don, Jul, Mey 2, Mik and Jazz claims with the vast majority taken from the Peso and Don claims.

3.2 RESULTS

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Significant drill results are contained in Table 12 and discussed in Sections 5 and 6.

Trench data and significant intersections are summarized in Tables 6 and 7. The best trenched interval on the Peso claim was $\emptyset.\emptyset67$ oz Au/ton over 9m (Cabin Trench) in sheared phyllitic shaley siltstones. Higher grade assays were reported from LB Trench ($\emptyset.149$ oz Au/ton over 2m and $\emptyset.209$ oz Au/ton over 1m) and LD Trench ($\emptyset.\emptyset96$ oz Au/ton over 1m) associated with quartz veining. On the Don claims, Trench A includes 21m of highly fractured graphitic siltstones averaging $\emptyset.\emptyset8$ oz/ton Au (Plate 1 \emptyset). Trench B (Plate 11) returned values of 13m of $\emptyset.\emptyset43$ oz Au/ton in similar material. Trenching on on the Ralphie II claim (Plates 31, 32) failed to intercept significant Au mineralization.

Rock chips and grab sampling on the Don, Jul and Peso claims revealed areas of significant surface Au mineralization, mainly confined to quartz veins. No significant values were found on the Mey 2, Mik, Jazz and Ralphie II claims although these surrounding claims received (only 20 samples between them). Table 5 only cursory attention summarizes the results of the 1987 reconnaissance sampling survey. Sample numbers JS-87-02 and JS-87-78 returned Au assays of 10.13 g/tonne gold and 10.86 g/tonne gold respectively, taken from the Peso claim (Plate 7), from an oxidized quartz vein and silica-enriched, shaley siltstone material. On the Don claims, samples numbers WH7R1-5 and -18 returned values of 7.86 g/tonne gold, 395.5 g/tonne silver and 0.35 g/tonne gold, 524.2 g/tonne silver respectively. GD7R1-22 and 27, from Don 2 claim, returned gold values of 12.49 and 1.16 g/tonne the respectfully. A description of reconnaissance sample lithologies is presented in Appendix XI.

3.3 DISCUSSION

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Gold mineralization appears to be mainly confined to quartz veins and quartz stockworks in permeable shaley clastics on claims surrounding the CPW. The limited work performed on the Mey 2, Mik, Jazz and Ralphie II claims precludes any evaluation of their exploration potential.

Table	5	Reconnaissance	Sampling	Results

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Sample #	Au (g/t)	Ag (g/t)	Sample #	Au (g/t)	Ag (g/t)
WH7R1-1	.003	Ø.11	GD7R1-22	12.49	2.3
-2	. Ø7	2.6	-24	• 24	.4
-3	. Ø8	5.4	-25	.17	.4
-4	1.5 Ø	1.3	-26	.Ø3	N/A
-5	7.86	395.5	-27	21.16	N/A
6	.78	64.4	-28	.67	N/A
-7	.18	4.8	-29	.99	N/A
-8	•65	3.6	-30	.16	N/A
-9	.05	1.2	31	1.54	N/A
-1 Ø	1.68	1.8	-32	•6 5	N/A
-11	.91	1.4	-33	1.51	N/A
-12	.21	2.1	-34	. Ø8	N/A
-13	. Ø3	•6	-35	. 68	N/A
-14	.75	•9	-36	.91	N/A
-15	N/A	.2	-37	.Ø8	N/A
-16	. Ø5	2.0	-39	1.36	•8
-17	.85	1.4	-40	1.16	1.2
-18	•35	524.2	-41	.Ø3	.7
-19	.19	10.3	-42 (S)	1.86	7.0
WH7R1-2Ø	<.Ø3	5.1	-42(L)	•35	1.0
-21	.04	1.0	-43 (S)	<.Ø3	1.4
-22	.23	18.8	-43(L)	.16	1.2
-23	.03	1.3	-44	.Ø7	1.0
-24	<.Ø3	4.8	-45	•51	.9
-25	.49	2.9	-46	<.Ø3	.9
-27	.Ø4	1.3	-47	<.Ø3	.4
-28	.11	1.9			
-3Ø	.30	N/A	JM7R1-1	<.Ø3	•4
-31	.69	1.2	-2	. 2Ø	•5
-32	.Ø8	1.0	-3	< . Ø3	.4
-33	•22	N/A	-4	<.Ø3	.3
-34	<.Ø3	•2	-5	.Ø7	•8
-35	< . Ø3	.9	-6	.84	18.7
-36	.10	.9			
-37	<.Ø3	•3			
-37A	<.Ø3	1.2			
-38	<.ø3	2.0			

DON/JUL CLAIM

PESO CLAIM

Sample #	Au (g/t)	As (ppm)	Sample #	Au (g/t)	As (ppm)
JS-87-Ø1	.Ø6	14	JS-87-11	.15	3
Ø2	10.13	35	-12	.Ø4	105
ØЗ	.26	38	-13	.11	13
Ø4	.07	22	-14	.Ø9	39
Ø5	.Ø4	12	-15	. Ø4	33
Ø6	.05	4Ø	-16	.Ø6	21
Ø7	.12	38	-17	1.33	125
Ø8	.Ø4	34	-18	.Ø6	22
Ø9	.11	14	-19	.Ø6	145
1Ø	<.Ø3	41	-2Ø	. Ø5	128

Table 5 (cont'd)

PESO CLAIM

		LP00			
Sample #	Au (g/t)	As (ppm)	Sample #	Au (g/t)	
JS-87-21	.ø9	127	JS-87-51	.Ø3	
22	. Ø5	135	-52	.Ø3	
23	.90	23	-53	<.Ø3	
24	.11	51	-54	<.Ø3	
25	<.Ø3	15	55	.Ø4	
26	.24	12	-56	. Ø6	
27	.09	28	-57	.11	
28	<.Ø3	21	-58	.12	
29	.09	22	-59	. Ø5	
31	.27	3Ø	-6Ø	.Ø8	
32	.Ø6	2Ø	-61	.05	
33	•1.4	12	-62	<.Ø8	
34	.14	12	-63	<.16	
36	.22	7	-64	.09	
37	.05	14	-65	.11	
38	.05	19	-66	.06	
39	.Ø4	30	-67	2.36	
4Ø	.Ø6	32	-68	.99	
41	<.03	4	-69	.07	
42	<.Ø3	5	-7Ø	.Ø5	
43	•Ø3	12 16	-71	<.Ø3	
44	.10		-72 -73	<.Ø3 .Ø4	
45 46	.Ø4 .Ø5	N/A	-74	.ø4 .ø7	
46 47	.øs .ø3	N/A N/A	-74 -75	.ø7 .ø4	
47	.03	N/A N/A	-76	•04 •Ø6	
40 49	•17 •Ø4	N/A	-77	.øc .øc	
49 5Ø	.04	N/A	-78	10.86	
MEY 2 CLAIM	S		MIK CLAI	м	
Sample #	Au (g/t)	Sample #	Au (g/t)	Sample #	Au (g/t
WH7R1-39	<.Ø3	WH7R1 -41	<.ø3	-46	. Ø6
-4Ø	ヽ •₽J	MULAT	NeD J		
-40					6 12
	<.Ø3	-42	< . Ø3	-47	•Ø3
		-42 -43	<.Ø3 <.Ø3	-47 -48	.10
		-42	< . Ø3	-47	
RALPHIE II (<.ø3	-42 -43 -44	<.Ø3 <.Ø3 <.Ø3	-47 -48 -49 -5Ø	.1Ø .Ø9
RALPHIE II Sample #	<.ø3	-42 -43 -44	<.Ø3 <.Ø3 <.Ø3 <.Ø3	-47 -48 -49 -5Ø	.10 .09 <.03
Sample #	<.03 CLAIM Au (g/t)	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u>	-47 -48 -49 -5Ø GRABS <u>Au (g</u>	.10 .09 <.03
Sample #	<.03 CLAIM <u>Au (g/t)</u> .22	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8	.10 .09 <.03
Sample # TRR1-1 -1A	<.03 CLAIM <u>Au (g/t)</u> .22 .25	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52 -53	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8 .Ø8	.10 .09 <.03
Sample # TRR1-1 -1A -2	<.03 CLAIM Au (g/t) 22 25 28	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8 .Ø8 .Ø3	.10 .09 <.03
Sample # TRR1-1 -1A -2 -3	<.03 CLAIM <u>Au (g/t)</u> .22 .25 .28 .28 .28	-42 -43 -44	<.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52 -53 -54	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8 .Ø8 .Ø3 .13	.10 .09 <.03
Sample # TRR1-1 -1A -2	<.03 CLAIM Au (g/t) 22 25 28	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52 -53 -54 -55	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8 .Ø8 .Ø3 .13	.10 .09 <.03
Sample # -1A -2 -3 -4	<.03 CLAIM <u>Au (g/t)</u> .22 .25 .28 .28 .28 .28 .26	-42 -43 -44	<.03 <.03 <.03 <.03 JAZZ CLAIM <u>Sample #</u> WH7R1-52 -53 -54 -55	-47 -48 -49 -5Ø GRABS <u>Au (g</u> .Ø8 .Ø8 .Ø3 .13	.10 .09 <.03

The most promising exploration target outside the CPW claim was revealed in Trench A on the Don claim, which was cut in rocks with extremely similar lithologies to those found in the LE and Main Zones (graphitic, sheared, shaley siltstones). Reverse circulation hole RCH-87-100 was initially targeted to collar just north of Trench A with the intention of drilling 210 to crosscut the 120 shear observed in Trench A. Access restrictions prevented this, and the hole was drilled at 120 just NW of the trench. Significant assay returns are outlined in Table 9, and include 6 metres of 0.035 oz Au/ton.

Trench C (Plate 12) was put in to further evaluate the high silver credit (524.2 g/tonne) of sample number WH7R-18. No significant gold or silver values were returned. Lab error was suspected, however elevated As, Cd, Zn and Pb levels were also reported for this sample (Appendix VII, ICP Analysis).

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A detailed evaluation of the potential of the Don and Peso group of claims, based on a thorough review of all past and current exploration data, is strongly recommended in order to clearly define future exploration targets for drilling. The presence of gold mineralization in rocks with extremely similar structure and lithologies to those found on the CPW claim warrant such action.

It is recommended that the potential of the remaining claims be evaluated with an EM-VLF survey, and more detailed prospecting in order to determine if it is in PUNDATA's best interest to maintain such a large claim block. - 41 -

4. TRENCHING

4.1 INTRODUCTION

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Plate 4 shows the location of the trenches opened on the CPW during the 1987 work programme. Thirty four trenches, totalling 815m (2,674 ft) were opened on the CPW, Peso and Don claims using a Kabota backhoe contracted from Bob Mickle in Likely, B.C. Thirty three metres of hand trenching was also done on the Ralphie II claim block on an old cut. Table 6 lists the trenches, their length, location and mapping status.

4.2 SAMPLING METHOD AND ANALYTICAL PROCEDURE

Prior to the commencement of the trench programme, Trench 12 was sampled by three methods, panel, chip and grab. It had also been sampled by MT. CALVERY in 1985. The following data summarizes the results of the various sampling methods in Trench 12. All values are in g/tonne.

Panel														
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	
PANEL	3.52	1.52	1.44	1.65	3.74	7.04	1.10	Ø.23	Ø.48	Ø.94	2.18	1.34	1.04	A
CHIP	3.12	Ø.84	1.92	Ø.8Ø	4.59	6.94	2.23	Ø.31	1.10	Ø.85	3.17	2.14	2.21	в
GRAB	2.22	1.35	1.75	1.72	4.11	4.31	2.36	Ø.41	1.12	Ø.73	1.77	2.32	1.Ø4	С
1985	Ø.58	1.Ø3	1.40	Ø.1Ø	8.Ø7	7.Ø4	7.28	Ø.92	Ø.89	Ø.72	2.56	1.40	1.3Ø	
	PAI	NEL:	Ø.5 x	0.5 x 1.0 metre sample of entire face.										
	CH	TP:	1.0 metre horizontal linear chin sample											

CHIP: 1.Ø metre horizontal linear chip sample.
GRAB: Random grab composite sample within panel.
1985: Mt. Calvery 1985 trench results.

- 42 -

Although no one method was found to best reproduce the 1985 results, panel chip sampling was selected due to its optimum sample size and its representive area of coverage. Mapping of select trenches was done at a scale of 1:50 or 1:20 (Plates 10 - 32).

The trenches were sampled by removing chips from the entire face of $\emptyset.5 \times 1.0$ panel. Fluorescent orange spray paint and a metre stick were used to outline $\emptyset.5$ m (vertical) by 1.0m (horizontal) panels on outcrop exposed in linear trenches ($\emptyset.5$ metres wide) ranging in depth from 1.0 to 2.5m. All trenches were mucked prior to labelling and sampling. Four inch spikes were then used to affix flagging tape bearing the sample number to permanently mark each panel sample location. Great care was taken in ensuring samples were not contaminated in any way. For example, if heavy rains had fallen on a previously mucked trench, the trench was re-mucked prior to sampling.

All samples were analysed for gold by ECO-TECH LABORATORIES LTD. of Kamloops, B.C. Analytical procedures are given in Appendix I. Selected trenches were analysed for Ag and As. Multi-element ICP analysis was performed on certain trench grab samples (Appendix VIII).

4.3 RESULTS

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Results of the trenching are listed in Appendix II. Trench plans are given in Plates 10 through 32. Table 6 is a summary description of trench details.

Significant values are summarized in Table 7. These are also compiled in Plate 4 (Drill Hole and Trench Location Map).

Name	CPW	DON	PESO	RALPHIE II	ZONE	PLATE #
TRENCH 12	13				12 Zone	_
TRENCH A (DON)	±.4	36			Don Claim	10
TRENCH AD (PESO/CPW)	15	20			Central Madu	
TRENCH ADL	29				West Madre	
TRENCH B (DON)	~~~	19			Don Claim	11
TRENCH BD	58	17			M Zone	15
TRENCH BR	7				12 Zone	~
TRENCH C (DON)	•	lØ			Don Claim	12
TRENCH CABIN (PESO)		10	17		West Madre	-
TRENCH FICKLE (DON)		25			Don Claim	-
TRENCH 1A	19	~~			11 Zone	16
TRENCH L	21				LE Zone	17
TRENCH LB (PESO/CPW)	3		2		SW CPW	
TRENCH LC (PESO)	5		7		SW CPW/PESO	BORDER -
TRENCH LD (PESO/CPW)	12		5		SW CPW/PESO	
TRENCH LE 1	21		5		LE Zone	-
TRENCH M	62				S 14 Zone	
TRENCH ML	41				Madre Zone	18,19
TRENCH MIB	4				Madre Zone	20
TRENCH MIC	8				Madre Zone	21
TRENCH M1C2	4				Madre Zone	22
TRENCH PESO	-		34		S Madre	_
TRENCH PESO B			10		S Madre	-
TRENCH RL				25	Ralphie II	31
TRENCH R2				8	Ralphie II	32
TRENCH S2	24			Ū	11 Zone	23
TRENCH SOUTH A	7				West Madre	24
TRENCH SOUTH B	45				West Madre	24,25
TRENCH SOUTH J	5				West Madre	24
TRENCH SP	20				13 Zone	-
TRENCH SQ	24				13 Zone	_
TRENCH SS	36				11 Zone	26
TRENCH SW	29				11 Zone	27
TRENCH SW 2	25				11 Zone	28
TRENCH SZ	37				12 Zone	29
TRENCH X	7				Madre	3Ø
TRENCH XA	3				Madre	3Ø
TRENCH XB	12				Madre	3Ø
TRENCH XC	4				Madre	3Ø 3Ø
TRENCH XC	4 4				Madre	3Ø
TRENCH XD TRENCH Y (PESO/CPW)	1Ø		41		Madre	13
INENCO I (PESO/ CPW)	<u></u> мт		47			
TOTALS	6Ø9m	9Ø m	116m	33m	TOTAL 841	3т

Table 6 Description of 1987 Trenches (length in metres)

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Table 7 Summary of Significant Trench Samples

TRENCH N	O. LOCATION	INTERVAL (metres)	WIDTH (metres)	WIDTH (feet) (<u>ASSAY</u> oz Au/t)
12	DDH-87-129	1 - 13	13	43	Ø.Ø59
A	Don Claim	16A- 36	21	69	Ø.Ø85
AD	DDH-87-121	13 - 20		26	Ø.Ø98
ADL	Trench AD	1 - 2	2	 7	Ø.218
		13 - 15	3	10	Ø.183
		20	l	3	Ø.2Ø4
В	Don Claim	1 - 11	13	43	Ø.Ø43
BD	SW M Zone	13 - 21	9	3Ø	Ø.Ø3Ø
BR	MR 43	No	significant Au	intersection	s
С	Don Claim	No	significant Au	intersection	s
Cabin	Peso	9 - 17	9	3Ø	Ø.Ø59
E		1- 1Ø	10	33	Ø.Ø26
Fickle	Don Claim	5 - 19	15	49	Ø.Ø41
IA	LE Zone	6 - 11	6	2Ø	Ø.Ø38
\mathbf{L}	LE Zone	1 - 21	21	69	Ø.Ø52
\mathbf{LB}	Peso/CPW	26 - 27	2	7	Ø.149
		32	1	3	Ø.2Ø9
LC	Peso Claim		significant Au		
LD	Peso Claim	1	1	3	Ø.Ø96
LE-1	LE Zone	1 - 1Ø	lØ	33	Ø.Ø33
М	DDH-87-120	2Ø - 43	24	79	Ø.Ø37
Ml	Main Zone	1 – 4Ø	4Ø	131	Ø.Ø5Ø
MlB	Main Zone		significant Au		
MIC	Main Zone	1 - 8	8	26	Ø.Ø39
Peso	Peso	24	1	3	Ø.Ø44
Rl	Ralphie No. 2	No	significant Au		
R2	Ralphie No. 2	No			
S2	Main Zone	12 - 22	11	36	0.031
S 3	_	7	1	3	Ø.Ø84
South A	W Main Zone	Ø – 7	8	26	Ø.Ø39
South B	W Main Zone	17 - 27	11	36	Ø.Ø31
SP	E of LE Zone	17	1	3	Ø.Ø32
SS	E of LE Zone	3	1	3	Ø.Ø49
SW	E of LE Zone	18	1	4	Ø.Ø3Ø
SW2	E of LE Zone	24 - 25	2	6	0.041
SZ	E of LE Zone	36 - 37	2	6	Ø.Ø57
Z,XA,XC	South Main		significant Au		
XB	South Main	1 - 9	9	26	Ø.Ø23
XD	South Main	16 - 19	4	13	0.044
Y	South Main	32 - 40	9	26	Ø.Ø34

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Main Zone

The best intersection in the Main Zone was in 40m of shaley siltstone in Trench M1 (Plates 18, 19) carrying 0.050 oz Au/ton. Some very high assays (to 10.4 oz/ton over lm) are reported from highly sheared shaley siltstone with vein hosted aerobar mineralization. Trench plan of M1 east half, typifies the extent of shearing and the disrupted nature of rocks in the Main Zone.

LE Zone

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Trench L reports 21m averaging 0.052 oz Au/ton, but generally assays are somewhat lower, in the 0.03 to 0.04 oz Au/ton range. Fractured, oxidized shaley siltstones occur in this trench. This area received only minor trenching. Further trenching to the east and northeast is recommended to test surface extension of the mineralization discovered to date.

Numerous exploratory trenches outside the LE and Main Zones were also sampled, the most notable of which was Trench A on the Don, which returned assays of 0.085 oz Au/ton over 21m (Plate 10).

4.4 DISCUSSION

Trenching of the northeast 11, 12 and 13 zones by Trenches SP, SW, SS, SW, SW2 and SZ showed that surface gold mineralization is sporadic and limited in this area (Table 7) although rocks of similar lithologies to those gold mineralized in other areas of the property were present (Plates 27, 28, Trench SW, SW2). Hence no drill targets have developed in this area to date.

Trenching elsewhere on the property uncovered previously undiscovered areas of low grade Au mineralization. These areas include the southwest extension of the M Zone (Trench BD, Plate 15, $\emptyset.\emptyset3\emptyset$ oz Au/ton over 9 metres) and the southwest corner of the CPW claim (Trench LB, $\emptyset.149$ oz Au/ton over 2 metres). Both areas are yet to be drill tested. Trenches that intersected significant mineralization on the Don claims were Trench A (Plate 10, 21m of 0.085 oz Au/ton) and Trench B (Plate 11, 13m of 0.043 oz Au/ton). Their locations are indicated on Plate 6. A shear running approximately 135 is postulated to exist in the vicinity of Trench A with 030 trending, gold-bearing quartz veins filling tension gashes (Sample number GD7R1-27, 21.16 g/tonne Au, Plate 6, Appendix XI). A similar structural setting is seen in the southwest corner of the CPW claim (Plate 8).

The mineralization discovered in Trench A was followed up with drilling, reverse circulation holes RCH-87-100, 114 (see section 5.0).

Almost all trench rock faces displayed significant clay, limonite and lesser amounts of gypsum, talc and chlorite alteration contorted shearing, discontinuous Pervasive quartz assemblages. stringers, fine grained disseminated pyrite and strong foliation was observed in almost all of the shaley siltstone horizons, which varied widely in graphitic content and extent of oxidation. The more competent tuffaceous horizons were typically massive, blocky and often crosscut by post deformational guartz veins of varying thicknesses. Mineralization was generally observed to be restricted to sulphides, in the form of well developed euhedral pyrite crystals ranging in size from one to tens of Alteration in the form of mariposite flecks, gypsum millimetres. fracture surface coatings, talc/chlorite stockworked microveining and light, pervasive carbonatization, was commonly found. rarely more Contacts were interpreted as generally concordant (example, Trench South B, Plate 25) with no chilled margins observed.

5.0 REVERSE CIRCULATION DRILLING

5.1 INTRODUCTION

Fifteen reverse circulation holes (2 3/8" ID) totalling 1215m (3,986 ft) were drilled by SDS Drilling of Vancouver, B.C. Drilling commenced on Nov. 28, 1987 and finished on Jan. 18, 1988. Particulars of the holes are given in Table 8, which are located in Plate 1. Drill logs are presented in Appendix XIV. Difficulties in manoeuvering the wheeled vehicles in winter conditions were encountered, and necessitated employing an ice-lugged D-9 cat to assist in drill moves.

The reverse circulation holes were sited with the objective of providing infill data in the main zone and to test the mineralized extent of the LE Zone. Two holes, RCH-87-100 and RCH-88-114 were drilled on the Don property to further evaluate the mineralization discovered while trenching, where Trench A reported 21m averaging 0.085 oz Au/ton (Plate 6).

5.2 SAMPLING METHOD AND ANALYTICAL PROCEDURE

A Tandem water and pipe truck, and one truck mounted CSR drill using $4 \frac{1}{2}$ x 2 3/8" double wall drill pipe, was used to bring up percussion cuttings of the formation by air or water lifting through the center pipe, drilling with a downhole hammer. Compressed air was used until the water table was reached (generally quite shallow, 5 - 10metres), at which time water was used as a carrying medium. The cuttings were separated from their carrying medium in the cyclone situated at the drill, then dropped into a tiered Jones riffle splitter, splitting the sample 1 in 8. The 1/8 representative split was then bagged and labelled by two assistants and sent to ECO-TECH LABORATORIES of Kamloops, B.C. and analysed for Au (Appendix III).

- 47 -

RCH	LOCATION	ELEV. (m)	DEPTH (m)	AZM	DIP	SAMPLES TAKEN	CROSS SECTION
100	TRA DON	***	128	12Ø	60	3-128m	Don Claim
101	TRM1 west	1250.00	128	-	v	3-128m	C-C',D-D', &C-&C'
102	TRX (107)	1255 . 1Ø	98	-	v	3-98m	A-A',Z-Z'
1Ø3	MR33 (124)	1248.Ø8	105	300	6Ø	4-105m	A-A '
1Ø4	MR33 (124)	1248.Ø8	100	-	v	5-100m	A-A '
1Ø5	MR33 (124)	1248.Ø8	110	12Ø	6Ø	6-11Øm	A-A',B-B'
106	TRM1 west	1250.00	3Ø	300	6Ø	7-23m	C-C',Z-Z'
107	5m 234' from RCH-106	1250.00	110	300	6Ø	7 -11 Øm	C-C',Z-Z'
108	10m 196° from DDH-104	1252.50	37.5	300	6Ø	8-37.5m	Abandoned
109	5.5m 120° from RCH-108	1252.50	37.5	300	6Ø	5-37.5m	B-B',Z-Z'
110	23m Ø77 [°] from DDH-1ØØ	1253.53	52	300	6Ø	8-3Øm	D-D',E-E' Z-Z'
111	25m Ø90 from DDH-103	1243.15	100	-	v	10-100m	CC'
112	19.7m Ø82 from DDH-100	1253.53	75	-	v	8-75m	E-E',Z-Z'
113	30m 160° from MR 37	1206.50	65	-	v	8-65m	œ-œ',
114	20m 120° from RCH-87-100	***	61	-	v	6-61m	Don Claim

Table 8 1987/88 Reverse Circulation Summary of Drilling

TOTAL RC FOOTAGE: 1,237m (4,058 ft)

- 49 -

Chip cup specimens were taken from the 7/8+ splits, which were also collected and stored in PUNDATA GOLD's core storage facility in Likely, B.C. Each chip cup specimen was sieved, washed and logged in detail, taking note of lithologies, mineralization, alteration and veining.

5.3 RESULTS

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Table 9 summarizes significant reverse circulation intersections. A complete list of assays is given in Appendix III, and drill logs are presented in Appendix XIV. The highest grades, across the longest widths, are in the Main Zone. Cross sections A-A' to E-E', AA-AA', BB-BB' and longitudinal sections Z-Z', CC-CC' (located in Plate 1) are presented in Plates 33 to 41. Notable gold mineralized sections are 19m of $\emptyset.\emptyset45$ (RCH-87-1 \emptyset 5), 23m of $\emptyset.\emptyset51$ (RCH-87-1 \emptyset 6), 6m of $\emptyset.159$ (RCH-88-11 \emptyset), 1 \emptyset m of $\emptyset.848$ (RCH-88-112) and 8m of $\emptyset.\emptyset74$ oz Au/ton (RCH-87-1 \emptyset 7).

Table 9 1987/	88 Reverse Circul	ation Interse	ction Summary	
HOLE NO.	INTERVAL (metres)	WIDTH (metres)	WIDTH (feet)	ASSAY (oz Au/ton)
RCH-87-100	4 - 8 15 - 17 97 - 103 105 - 109	4 2 6 4	13 6 2Ø 13	Ø.Ø37 Ø.Ø60 Ø.Ø35 Ø.Ø27
RCH-87-101	No	significant	intersections	
RCH-87-102	20 - 21 31 - 35	1 4	3 13	Ø.Ø83 Ø.12Ø
RCH-87-103	5 - 6 12 - 14 24 - 26 52 - 55	1 2 2 3	3 6 6 10	Ø.Ø81 Ø.Ø5Ø Ø.Ø53 Ø.Ø49
RCH-87-105 including	7 - 26 17 - 18 21 - 23 34 - 35	19 1 2 1	62 3 6 3	Ø.Ø45 Ø.Ø49 Ø.192 Ø.Ø81
RCH-87-106 including	7 - 3Ø 13 - 15	23 2	75 6	Ø.Ø51 Ø.24Ø
RCH-87-107 including	7 15 9 11 28 53	8 2 25	26 6 82	Ø.074 Ø.240 Ø.035
RCH-88-109	$5 - 7 \\ 16 - 18 \\ 27 - 32 \\ 34 - 36$	2 2 5 2	6 6 16 6	Ø.Ø31 Ø.Ø76 Ø.Ø41 Ø.Ø49
RCH-88-110 including	39 - 49 39 - 45 48 - 49	1Ø 6 1	33 2Ø 3	Ø.107 Ø.159 Ø.094
RCH-88-111	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	2 1 5	6 3	Ø.Ø59 Ø.23Ø Ø.Ø34
RCH-88-112 including	17 - 27 38 - 39 17 - 21 24 - 25	10 1 4 1	33 3 13 3	Ø.848 Ø.126 1.698 1.505
RCH-88-113	18 - 23	15	49	Ø.Ø34
RCH-88-114	No	significant	intersections	

RCH-88-114

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No significant intersections

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RCH-87-112 was drilled vertically in the centre of the Main Zone, and the intersection of Ø.848 oz Au/ton over 10m (33 feet) is a close approximation of the true width of the southeast tapering portion of the mineralized zone in this vicinity (Plate 37). As the intention of the reverse circulation drilling was primarily to provide infill data for the Main Zone, a portion of the drill holes were collared between the section lines, eg. RCH-88-112. Portions of the drill results that were out of the plane of influence of a particular section were not included in that section.

Two holes were drilled on the Don property; RCH-87-100 and RCH-87-114. Both were targeted to intersect the mineralization discovered at surface in Trench A (Plate 10). These locations are given in Plate 6. RCH-87-100 could not be targeted as planned (see Section 3.3), however, it did intersect significantly mineralized areas including 20m of 0.035 (Table 9). RCH-87-114, collared approximately 30m to the northwest of Trench A, did not find an extension of mineralization of this trench to the northwest.

5.4 DISCUSSION

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The reverse circulation drill programme was successful in intersecting significant mineralization in eleven of the fourteen holes (Table 9). The rate of drilling was approximately three times faster than diamond drilling, generally one hundred metres per twelve hour shift. Sampling was done at one metre intervals, and as such, provided a challenge for two assistants to keep up with. If one metre sample intervals are to be maintained in future RC drilling, it is recommended that three assistants participate in the collection and labelling of samples and chip cups, otherwise one and a half metre sample intervals is recommended. Ensuring that a consistent, reliable sampling method is maintained is of prime importance in assuring that confident assay values are returned. Emphasis should be placed on enclosing the riffle splitter in some sort of windbreaking structure, especially under dry conditions. As the vast majority of drilling was done under wet (ie: water as a carrying medium) conditions, this was not a major concern, except on extremely windy days.

Angled holes (60°) required that the drill and pipe truck be orientated end to end, parallel to each other, with the rear of the drill truck approximately in line with the front of the pipe truck. This required extremely large drill pads, and prevented access to a few preferred sites. With vertical holes, the drill and pipe truck can be placed side by side cutting the drill site size requirement in half. This should be kept in mind when bids for future drill contracts are being received and drill sites prepared.

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6. DIAMOND DRILLING

6.1 INTRODUCTION

Thirty four HQ (2 1/8") size holes totalling 2,998m (9,836 ft) were drilled by Core Enterprises of Clinton, B.C. Drilling commenced on July 15, 1987 and finished on December 8, 1987.

Three NQ (1 7/8") size holes totalling 275m (902 ft) were drilled by Core Enterprises of Clinton, B.C. Drilling commenced on November 27, 1987 and finished on December 9, 1987.

Most of the drilling on the CPW claim was focused on the Main Zone. Table 6 summarizes the HQ drilling information and Table 7 summarizes the NQ drill data. Holes are located in Plate 4.

6.2 SAMPLING METHOD AND ANALYTICAL PROCEDURE

Drill core samples for both HQ and NQ size were placed in core boxes on the drill pad site with driller marked footage blocks indicating the end of each run. These distances were subsequently converted to metric (nearest cm) and core recoveries were then calculated. The core was then logged in detail (in 1:50 or 1:25 accompanying strip logs) and lithological taking note of structure, mineralization, veining Sample intervals were then determined, (Appendix XIII). changes mineralization and depending on structure, generally one metre, lithology. Sample intervals were tagged with orange flagging and labelled according to tag books supplied by Eco-Tech Laboratories. Core was then wetted down and photographed. One half of the core was split, placed in plastic sample bags and shipped to Eco-Tech Laboratories of Kamloops with checks to Bondar Clegg of Vancouver for analysis (Appendices IV to VII). The remaining core was stored in PUNDATA GOLD's Likely warehouse in racks.

Where recovery was less than 80%, sludge samples were taken where possible at 5 to 10 foot intervals and placed in oil-sand sample bags, dried and shipped to Eco-Tech Laboratories for analysis (Appendix VII). Where possible, down-hole acid tests were performed on all diamond drill holes. Their results listed in Table 10 are corrected values.

- 53 -

DDH	LOCATION	ELEV. (m)	DEPTH (m)	AZM	DIP	ACID	SAMPLES NUMBERS	CROSS SECTION
100	MR-7	1252.15	70.40	300	6Ø	N/A	14501 -145 50 14601-14613	DD'
101	16m N of MR7	1245.50	103.93	21Ø	57	N/A	14551-14600 14701-14746	Z-Z'
1.Ø2	MR-2Ø	1255.50	30.78	120	6Ø	N/A	14620-14635	в-в'
1Ø3	20m NNE of MR 20	1247.00	53.34	155	57	58	14854-14892	B-B'
1Ø4	MR-14	1252.50	116.12	300	55	59	14645-14650 14651-14700 14901-14950	B-B',Z-Z'
1Ø5	MR-15	1245.35	108.80	120	6Ø	65	14751-14800 14801-14850 14851-14853	E-E',Z-Z'
106	MR-35	1257.45	105.76	120	6Ø	65	15001-15050 15051-15092	A-A',Z-Z'
107	MR-34	1255.10	39.93	34Ø	55	N/A	14893-14900 14951-14979	A-A',Z-Z'
108	Green Pit Peso		89 . ØØ	50	45	48	15101-15150 36001-36032	Peso Claim
1Ø9	17 11		90.83	140	6Ø	59	14980–15000 15151–15200	Peso Claim
11Ø	MR-12	1252.12	1Ø4.87	120	6Ø	62	36Ø43-36Ø5Ø 36Ø51-361ØØ 361Ø1-36143	D-D'
111	Between MR7 & MR-19	1245.50	89.00	-	9Ø	-	15201–15250 15251–15282	D-D',Z-Z'
112	MR-13	1248.00	80.11	-	9Ø	-	153Ø1-1535Ø 15351-15367	B-B',Z-Z'
113	MR-47	1259.45	118.59	120	6Ø	65	15368-15400 15401-15450 15451-15481	ם-ם'
114	MR-24	1229.39	109.12	120	6Ø	65	15482-15500 36151-36200 36201-36232	Z+Z '

Table 10 1987 HQ Diamond Drill Hole Data Summary

DDH	LOCATION	ELEV. (m)	DEPTH (m)	AZM	DIP	ACID TEST	SAMPLES NUMBERS	CROSS SECTION
115	1A TRENCH	1197.00	61.60	4Ø	8Ø	N/A	36251-363ØØ 3633Ø1-363Ø7	D-D',Z-Z'
116	LE ZONE	1193.50	9Ø . 22	3Ø	65	61	36308-36350 36351-36392	AA-AA,BB-BB' CC-CC'
117	MR 35	1257.45	116.43	300	6Ø	61	364Ø1-3645Ø 36451-365ØØ 365Ø1-3655Ø	
118	14 Oz	1216.00	93.90	12Ø	6Ø	N/A	36551-366ØØ 366Ø1-36628	14 Oz Zone No Section
119	14 Oz	1214.00	115.51	120	6Ø	N/A	36234-36250 36651-36700 36701-36743	14 Oz Zone No Section
199A	14 Oz	1214.00	3.66	120	6Ø	N/A	36233	14 Oz Zone
120	TR M	1247 . 5Ø	107.28	12Ø	6Ø	59	425ø1-42589	No Section
121	CPW/PESO	1277.00	91.09	300	6Ø	N/A	42601-42681	Peso Claim No Section
122	30m E of 104	1245.35	108.81	300	6Ø	65	42701-42750 42751-42798	C-C'
123	Junction TR X & Y	1262.10	107.30	300	65	64	42901-43000 42890-42894	B-B'
124	MR-33	1248.00	40.20	120	65	65	43001-43028	A-A '
125	MR-46	1258.00	110.64	34Ø	65	100'69 200'71 300'61	43151-43200 43201-43250 43029-43034	Z-Z '
126	5m W of 105	1245.35	96.93	-	v	-	43050-43100 43101-43140	E-E',Z-Z'
127	20m NNE of MR 34	1253.00	110.33	-	v	-	43251-43300 43301-43350 43351-43358	B-B',Z-Z'
128	6M E of TRM2/TRMK	1262.00	99,97	300	65	200'63	43401-43450 43451-43500	D-D'
129	Rḋ junction MR 39	1200.00	43.59	7Ø	6Ø	58	20251-20290	

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DDH	LOCATION	ELEV. (m)	DEPTH (m)	AZM	DIP	ACID TEST	SAMPLES NUMBERS	CROSS SECTION
13Ø	le MR 41	1176.77	115.21	-	v	90	20901-21000 21075-21084	аа-аа', œ-œ'
131	TRM 4 east	1237.22	112.47	300	65	200'63	20451-20500 21001-21059	Z-Z '
132	Between MR 16 & 22	1232.87	61.87	-	v	-	20351-20400 20401-20406	DD'
TOTAL	l hq footage		2,998 me	tres	(9,836	feet)		
TOTAL Table		iamond Dr. ELEV.	·			feet) ACID	SAMPLES	CROSS
Table	e 11 1987 D		ill Hole D	ata Sur	mary		SAMPLES NUMBERS	CROSS
Table	e 11 1987 D	ELEV.	<u>ill Hole D</u> DEPTH	ata Sur	mary	ACID		
<u>Tabl</u>	e 11 1987 D LOCATION	ELEV. (m)	ill Hole D DEPTH (m)	ata Sur AZM	mary DIP	ACID TEST 150'65	NUMBERS 20201-20250 20301-20350	SECTION

- 56 -

TOTAL NO FOOTAGE 275 metres (902 feet)

6.3 RESULTS

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The analytical results are listed on the drill logs (Appendix XIII) and in Appendices IV to VIII.

Table 12 summarizes significant results for both HQ and NQ drilling. Assays more than $\emptyset.\emptyset1\emptyset$ are also shown in the cross sections (Plates 33-41). The best results are 15m averaging $\emptyset.155$ oz Au/ton (DDH-1 \emptyset 5) in the Main Zone and a similar thickness and average grade in the LE Zone (DDH-116). Other favourable results are 7m averaging $\emptyset.115$ oz/ton in the Main Zone (DDH-2 \emptyset 0) and 11.55 m averaging $\emptyset.071$ oz/ton in the LE Zone (DDH-1 $3\emptyset$).

DRILL HOLE HQ	DEPTH (me (from -		WIDTH (metres)	WIDTH (feet)	<u>ASSAY</u> (oz/t gold)	
DDH-100	6.1Ø - 39.2Ø -		5.4 1Ø	18 33	Ø.Ø97 Ø.Ø66	
DDH-101	24.63 -	29.63	5.0	16	0.066	
DDH-102			No significant intersections			
DDH-103	36.95 - 48.95 -		4 4	13 13	Ø.Ø51 Ø.Ø61	
DDH-104	32.75 - 39.75 - 44.75 - 59.75 -	42.75 51.75	6 3 7 4	20 10 23 13	Ø.Ø66 Ø.Ø79 Ø.53Ø Ø.Ø56	
DDH-105 including	11.24 - 19.24 -		16 2	52 6	Ø.116 Ø.635	
DDH-106	45.45 -	49.45	4	13	Ø.315	
DDH-107			No significant	: intersection	IS	
DDH-108	8.66 -	9.66	1	3	Ø.517	
DDH-109			No significant	: intersection	IS	
DDH-110	6.79 -	12.79	6	2Ø	Ø.Ø39	
DDH-111	20.23 -	27.20	6.97	23	0.035	
DDH-112	14.32 - 46.30 -	20.11 54.38	5.79	19	Ø.167	
including	48.00 -	52.42	8.Ø8 4.42	26 14	Ø.114 Ø.169	
DDH-114	41.00 - 64.84 - 74.84 -	66.84	3.84 2.Ø 1.Ø	12 6 3	Ø.3Ø1 Ø.Ø58 Ø.19Ø	
DDH-115	5.31 - 29.31 - 53.31 -		8.Ø 2 8	26 6 26	Ø.Ø31 Ø.Ø31 Ø.Ø4Ø	
DDH-116 including	5.91 - 16.91 -	20.91 18.91	16 3	52 10	Ø.116 Ø.283	
DDH-117	112.27 - 1	13.27	1	3	Ø.Ø69	
DDH-118 including	36.96 - 38.96 - 3		3 1	1Ø 3	Ø.Ø45 Ø.Ø94	

Table 12 1987/88 Diamond Drill Hole Intersection Summary

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DRILL HOLE HQ	DEPTH (metres) (from - to)	<u>WIDTH</u> (metres)	WIDTH (feet)	ASSAY (oz/t gold)
DDH-119	31.44 - 32.44 40.44 - 41.44	1 1	3 3	Ø.Ø51 Ø.1Ø8
DDH-120		No significan	t intersection	ons
DDH-121		No significan	t intersection	ons
DDH-1.22	78.44 - 81.58	3.14	lØ	Ø.189
DDH-123	14.11 - 15.11 82.50 - 83.50	1 1	3 3	Ø.143 Ø.16Ø
DDH-124	14.58 - 23.15	8.57	25	Ø.Ø36
DDH-125	79.06 - 82.06	3	10	Ø.Ø44
DDH-126	20.66 - 27.66 31.66 - 34.15 87.50 - 92.50	7 2.49 51	23 8 16	Ø.Ø42 Ø.Ø55 Ø.Ø32
DDH-127	8.23 - 10.74 31.31 - 32.31	2.51 1	8 3	Ø.142 Ø.050
DDH-128	82.47 - 86.40	3.93	13	0.093
DDH-129	20.10 - 21.10	1	3	0.065
DDH-130	35.01 - 37.01 44.01 - 55.56	2 11.55	6 38	Ø.Ø23 Ø.Ø71
DDH-131	17.40 - 19.40	2	6	Ø . Ø28
DDH-132		No significan	t intersectio	ons
••••NQ				
DDH-200 including	42.36 - 49.36 43.36 - 48.36	7 5	23 16	Ø.115 Ø.154
DDH-201	14.96 - 17.85 23.85 - 27.85 40.85 - 46.85	2.89 4 6	9 13 2Ø	Ø.059 Ø.052 Ø.045
DDH-202	4.88 - 10.07 38.07 - 41.07	5.19 3	17 10	Ø.Ø44 Ø.Ø41

- 59 --

6.4 DISCUSSION

Diamond drilling on the CPW was initiated with the intent of utilizing drill core to discern the structural details of the Main and other zones of the CPW. The information was then to be used to assist in the calculation of the resource base of the property via interpretation of the structural and/or strata controlled nature of the deposit. Logging of the core was done in considerable detail (1:50, Appendix XIII). The attention to detail resulted in a large volume of structural information, which somewhat compromised the discernment of 'the big picture'. Emphasis shifted to recognizing gross lithological breaks, veining, structural trends, mineralized and altered horizons. Although this was possible for individual drill holes, correlation between drill holes and sections could not be done with any degree of confidence. This proved to confirm the highly disrupted nature of the rocks in the Main Zone and to a somewhat lesser degree, in the LE Zone. Consequently, projection of mineralized horizons into areas not explored by drilling was not attempted.

However, a conservative empirical estimation of the potential reserves was attempted for the Main Zone utilizing all available drill data (ie: Mt. Calvery 1987-88 reverse circulation and diamond drilling). A figure of about 590,000 tons grading 0.067 oz/ton Au was estimated. Estimation of potential reserves in the LE Zone was not attempted. The method used to arrive at this figure is discussed in Section 9. Computer evaluated reserve figures, conducted independently by ARTHUR C. EHRENBERG, of Couer d'Alene, Idaho, are also presented in Section 9.

HQ diamond drilling was chosen for the bulk of the drilling due to its optimum sample size in an attempt to minimize the effect of the particulate nature of the gold on assay values. Based on re-runs of holes DDH-87-100, 106 and 110 (Appendix VI), it appears this was successful.

Diamond drilling in the Main Zone was successful in outlining the presence of two subordinate splay faults of the Madre Fault in the Main Zone, trending Ø6Ø (Plate 8). Evidence for these faults can be deduced from brecciated and fault gouge zones in drill holes DDH-87-105 (32 - 40m), DDH-87-100 (25 - 33m), DDH-87-125 (68.5m), and DDH-87-114 (32 - 41m). The faults appear to dip steeply (80) to the northwest and are between 2 - 5m in width. Horizontal offsets are not known. The northern most fault contains zones of low grade (0.01 - 0.08 oz/ton) gold mineralization. Numerous other minor brecciated, sheared and fault gouged zones were evident in almost all diamond drill holes (Appendix XIII), but were too scattered to allow for meaningful interpretations of gross structural features.

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The authors recommend further structural interpretation of existing drill core prior to the commencement of any future work to arrive at the best possible structural evaluation of the property, and if possible, to re-evaluate ore reserves based on these efforts.

7. METALLURGY

7.1 INTRODUCTION

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A number of metallurgical tests have been performed on mineralized material from the CPW property. The earliest of these were by Coastech Research Inc., North Vancouver, B.C. and Lakefield Research, Lakefield, Ontario as described in a 1985 report for Teck Corporation (Appendix XV). This work concluded that direct cyanidation of the ore or of a flotation concentrate was not successful, due to presence of active carbon in the ore. By producing a flotation concentrate and using a carbon-in pulp cyanidation procedure, an overall recovery of 87.9% was achieved.

PUNDATA proceeded with the metallurgical testing during 1987-88. Three metallurgical research companies were contracted and a brief summary of their studies follow:

- Bacon, Donaldson & Associates Ltd. (Vancouver, B.C) Carbon-in-leach (CIL) test on ore and concentrates for initial flow sheet design. (Samples TRM 1, TRL, RCH-88-106,110,113).
- Scotia Systems Inc. (Salt Lake, Utah) Chlorinization and bromine-based leach studies as well as gravity recovery systems for coarse gold. (Samples RCH-88-106, 110, 113).
- 3. Giant Bay Biotech Inc. (Burnaby, B.C.) Bioleach tests to determine maximum recovery from biological pre-treatment. (Samples RCH-88-106,110,113).

Samples selected for metallurgical studies are given in Table 13.

Table 13 Metallurgical Samples for 1988 Testing

Main	Zone	Average Grade Oz/ton Au
1.	TRENCH Ml Composites (33 samples); "TRM 1"	Ø.Ø33 oz/t Au
2.	RCH-87-106, 7 to 30 metres; "RCH-88-106"	Ø.051 oz/t Au
3.	RCH-88-110, 39 to 49 metres; "RCH-88-110"	Ø.107 oz/t Au

LE Zone

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1.	TRENCH L Composites (19 samples); "TRL"	0.053	oz/t Au
2.	RCH-88-113, 11 to 23 metres; "RCH-88-113"	Ø.Ø35	oz/t Au

A description of the five submitted metallurgical samples is as follows:

TRENCH M1 Composites ("TR M1") This sample is a homogenized composite from Trench M1 in the Main Zone (Plate 1), specifically from panel numbers 1 to 2, 4 to 7, 9 to 12, 14 to 25, 27 to 29, 31 to 37 and 39 to 40 (Plates 18 and 19). The material is composed of oxidized highly fractured, mildly graphitic medium grey, fissile, limonitic shaley siltstone with numerous lmm quartz stringers, minor $CaCo_2$, locally silicified zones and less than one percent pyrite, average grade 0.033 oz Au/ton.

TRENCH L Composites ("TRL") This sample is a homogenized composite from Trench L in the LE Zone (Plate 1), specifically from panel numbers 1 to 3, 5 to 19 and 21 (Plate 17). The material is composed of highly oxidized, moderately fractured, well foliated dark grey siltstone with abundant aerobar patches and minor mariposite altered zones. Rare 2-5cm quartz veins are found (panels 2 and 11). Mineralization was noted to appear to be associated with 135° trending, local shear horizons. The average grade is Ø.Ø53 oz Au/ton.

- 62 -

RCH-87-106 This sample is a homogenized sample from reverse circulation drill hole RCH-87-106 collared in the Main Zone (Plate 1, tables 8 and 9), specifically from samples obtained from 7 to 30 metres depth, the entire hole. The material is composed of unoxidized black, highly graphitic siltstone with minor quartz stringers and 2 - 3% pyrite. The average grade is 0.051 oz Au/ton. A more detailed description of the lithologies is presented in Appendix XIV.

RCH-88-110 This sample is a homogenized sample from reverse circulation hole RCH-88-110 collared in the Main Zone (plate 1, tables 8 and 9), specifically from samples obtained from 39 - 49 metres depth. The material is composed of dark grey highly graphitic lithic tuff with fine grained pyrite (up to 5%0), minor talc, minor quartz fragments and rare mariposite altered zones. The average grade of this material is 0.107 oz Au/ton. A more detailed description of the lithologies is presented in the drill logs contained in Appendix XIV.

RCH-88-113 This sample is a homogenized sample from reverse circulation drill hole RCH-87-106 collared in the LE Zone (plate 1, Tables 8 and 9), specifically from samples obtained from 11 to 23 metres depth. The sample is composed of unoxidized graphitic shaley siltstone material, with occasional quartz fragments and minor pyrite. The average grade of this material is 0.035 oz Au/ton.

7.2 RESULTS

7.2.1 Bacon, Donaldson and Associates Ltd.

Of the five samples tested, two were of oxidized material from trenches and three of relatively unoxidized drill cuttings. Two of the latter had relatively high organic carbon (2.39 and 3.06%) as compared to the oxidized material (0.40 and 0.41%).

Floatation tests did not show much promise, concurring with earlier results by Coastech Research Inc. (1985).

Carbon-in-leach tests (Table 14) were more satisfactory with 93.6 and 97.5% extraction from oxidized material. The three unoxidized samples exhibited 39.2, 50.8 and 90.7% extraction, which is considered to correlate with their higher carbon content.

Table 14 Carbon-in-leach Test Results

Test <u>No.</u>	Sample	рH	۶ Solids	Carbon g/l	ہ Extraction	Head, Au Assay	oz/ton Calc	NaCN kg/t	Lime kg/t
1	TRL	1Ø.5	4Ø	2Ø	97.5	.082	. Ø78	2.4	5.7
2	TRM-1	10.5	5Ø	30	93.6	.024	.Ø47	2.3	4.5
3	88-113	10.5	5Ø	3Ø	90.7	.Ø28	.Ø43	2.8	Ø.3
4	88-1Ø6	10.5	5Ø	3Ø	39.2	.Ø45	.Ø79	2.9	Ø.8
5	88 -11 Ø	10.5	5Ø	3Ø	50.8	.026	.110	3.7	1.0

One sample (drill cutting from RCH-88-110) was subjected to five further tests, each of which included a jigging step following grinding. The results are presented in Table 15, with Test C8 producing the best results (95.4% recovery) and an overall gold recovery of 93%.

Test	Conditions	Jig		Recovery, Cyanide		Calc Feed Au oz/ton	Tailing Au oz/t
C6	Jig Feed float sulphur conc. cyanide conc (CIL)	27.9	39.2	72.1	56.2	.077	N/A
C7	Jig Feed float off carbon	26.3	(11.5)	67.8	68.4	.Ø38	.Ø1Ø
C8	Jig Feed condition with diesel cyanide (CIL)	80.1		15.4	95.4	.14ø	.006
C9	Jig Feed CIL 30 g/l carbon	64.2		16.6	80.8	.Ø62	.Ø12
ClØ	Jig Feed CIL 50 g/l carbon	63.2		24.4	86.7	.Ø86	.Ø11

The results indicate a common flow sheet for all samples tests. This includes gravity concentration (jig) followed by carbon-in-leach cyanidation.

A repeat test is being conducted on sample RCH-87-100 to confirm results and similar tests with the two other unoxidized samples.

Appendix XVII contains data provided by Bacon, Donaldson & Associates Ltd.

7.2.2 Scotia Systems Inc.

Scotia Systems Inc. tested three gold-bearing carbonaceous samples, RCH-88-106,110 and 113. Each sample contained significant amounts of carbonaceous material, RCH-88-110 being the most carbonaceous and RCH-88-113 the least carbonaceous. All samples contained significant amounts of pyrite.

Table 15 Summary of Test Results, Sample 110

The test work was performed to evaluate a flotation concentrate leach process developed by other laboratories, and to evaluate both direct carbon-in-leach cyanidation and bromine leaching on one ore sample (RCH-88-113).

The full report is given in Appendix XVIII. The following is a summary of the three tests performed and their results.

"Bulk sulfide flotation of samples RCH-88-106 and 113 recovered approximately 90 percent of the gold into cleaned concentrates assaying 0.321 and 0.225 oz/ton Au, respectively. Flotation tailings from these samples assayed 0.006 oz/ton gold. Only 60 percent of the gold was recovered from the highly carbonaceous sample RCH-88-110. The flotation tailings from this sample assayed 0.012 oz/ton gold. These samples were ball mill ground to 70-80 percent minus 200 mesh.

Carbon-in-leach cyanidation of each flotation concentrate after regrinding through 400 mesh extracted 83 to 96 percent of the contained gold. Concentrate leach residues assayed 0.034 to 0.005 oz/ton gold, depending upon the sample tested.

Direct carbon-in-leach cyanidation of whole ore sample RCH-88-113 indicated excellent gold extraction: A leach residue assaying less then $\emptyset.\emptyset05$ oz/ton gold was obtained from a $\emptyset.\emptyset39$ oz/ton calculated head.

A bromine "Bio'D" leach of whole ore sample RCH-88-113 under slightly basic conditions (pH 8.2) extracted only 52 percent of the gold in the sample: A residue assaying $\emptyset.\emptyset16$ oz/ton gold was obtained from a $\emptyset.\emptyset33$ oz/ton gold calculated head. Sodium bromide (Na Br) and "Bio-D" consumptions were extremely high at 693 and 291 lb/ton of ore, respectively. The carbonaceous material in this sample is probably responsible for the excessive reagent consumption." Scotia Systems concluded that direct carbon-in-leach of whole ore was the most promising procedure.

Bulk sulphide flotation was not as successful, although recoveries were generally high, due to excessive frothing caused by abundant carbon. Bromine leaching testing was not successful.

7.2.3 Giant Bay Biotech Inc.

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Giant Bay Biotech Inc. conducted preliminary bioleach amenability tests on samples RCH-88-106, 110 and 113. Details of the test and the results are given in Appendix XIX.

The tests were undertaken to see if sulphur metabolizing bacteria (Thiobacillus ferroxidans) could oxidize pyrite in the samples and deactivate carbonaceous constituents in preg-robbing areas.

Bioleaching achieved 92-93% sulphide oxidation in samples RCH-88-106 and 110, and 75% oxidation in RCH-88-113.

Standard 24 hour cyanide CIL bottle roll tests were then performed on unoxidized and bio-oxidized solids, as summarized below.

Sample No.		Calc. Au Hezd, g/t	ہ Au Extraction
RCH-88-106	Head	2.074	85.1
	Bio-ox	3.350	89.Ø
RCH-88-11Ø	Head	5.194	92.Ø
	Bio-ox	7.310	88.1
RCH-88-113	Head	1.068	87.2
	Bioox	1.430	93.0

The results indicate that fairly good recoveries, in the mid 80 to 90% range, are possible without bio-oxidation. Bio-oxidation results in a marginal improvement in gold recovery in 2 out of 3 cases.

Giant Bay concluded that a conventional CIL circuit should be able to recover 85-92% of the gold. The extent of improvement by bioleaching would not justify the additional capital and operating costs which would be incurred by a bioleach plant.

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8.Ø DISCUSSION

8.1 SLUDGE VS CORE ASSAYS

In general, sludge samples assays (Appendix VII), carried gold values up to 2.7 times greater than core from the same interval. For example, DDH-87-100 sludge returned gold values of 0.266 oz Au/ton over 20' from 6.09 to 12.19m, while core assays from 6.10 - 11.50m returned gold values of 0.097 oz Au/ton over 18 ft. Similar increases for sludge assays were observed for other holes including DDH-87-102 between 22.55 - 30.48m, where 0.025 oz Au/ton were returned for sludge assays while core assays over the same interval ran less than 0.010 oz Au/ton. Rarely, sludge samples did run lower than core assays, as was found for DDH-87-103 between 48.95 and 52.95m (0.031 vs 0.061 oz Au/ton).

It is believed that in sludge samples, the sulphides which carry some proportion of the gold are pulverized into finer fractions. Under optimum sampling conditions, it is felt that this decreases the nugget effect resulting in the likelihood of a more representative sample. Sludge sample assays were not incorporated into the assay data base utilized for reserve calculations.

8.2 HQ VS NQ DIAMOND DRILLING

As limited NQ diamond drilling was done on the property (275m, three holes), this precludes any comparative observations between HQ and NQ assay results. However, as the volume of HQ vs NQ core, metre per metre, is approximately 30% greater, and considering the particulate nature of the gold of the deposit, it is felt that HQ diamond drill core assays are more representative of gold content than NQ assay returns. NQ diamond drilling was undertaken solely to fulfill contract obligations of completing minimum footage in a reasonable amount of time. Drilling in both instances was difficult at best, with an average rate of 11.12m (36.5 ft) per 12 hour shift for the entire programme. This figure is extremely low considering that from November 27 to December 9, 1987, two rigs were drilling simultaneously. - 70 -

Drilling mud costs were in excess of \$10,000. The low average footage rate can be attributed to the pervasively sheared, brecciated and faulted formations, common heavy equipment breakdowns and to a lesser degree, the problem of freezing water lines later in the programme.

8.3 REVERSE CIRCULATION VS DIAMOND DRILLING

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As the majority of reverse circulation holes were targeted to provide infill data in the Main Zone, few comparisons can be made with core assays since none were collared adjacent to diamond drill holes. However, diamond drill hole DDH-87-124 and reverse circulation hole RCH-87-105 were collared within eight metres of each other in the southwestern portion of the Main Zone (Plate 1). RCH-87-105 returned assays of 0.045 oz Au/ton over 19m between 7 and 26m while DDH-87-124 returned Ø.Ø36 oz Au/ton over 8.57m between 14.58 and 23.15m. These two intersections are projected to occur at This data, although sparse, approximately the same location at depth. supports the consensus that reverse circulation assay results are generally of slightly higher grade and occur over longer intersections than diamond drill results. It is postulated that this is due to the same reasons outlined in Section 8.1, ie; that chip samples are more representative of average gold content than split diamond drill core, due to the effect of particulate qold. As well, sample weights per interval were significantly as such, considered to be more representative. Reverse and larger, circulation drilling was also more successful in penetrating difficult formations than was diamond drilling. Average drilling rates were 189 feet per 12 hour shift, a five-fold increase in rates over diamond drilling. These figures should be considered when evaluating the merits of obtaining future structural data via diamond drilling at the expense of significantly higher reverse circulation footage rates per shift.

Table 16 summarizes the results of resampling 1985 reverse circulation chips. Reproducability of Mt. Calvery's assays appeared to depend primarily on the grade of the sample. Better correlations were observed for lower grade samples (eg. sample numbers 25913, 24557). Higher grade samples varied widely in reproducability, again reflecting the particulate nature of the gold. The chip samples assayed were the reverse circulation splits left on the property from the 1985 programme, not the rejects of the original samples submitted for assay.

Sample No.	From (metre	To es)	1985 Assay Au Oz/t	1987 Assay Au Oz/t
1985 DRILL	HOLE MR 20	<u>3</u>		
25894	28	29	.128	.072
25895	29	3Ø	.053	.Ø33
25896	30	31	.Ø11	.024
25897	31	32	.007	.Ø14
25911	45	46	.Ø3Ø	.028
25912	46	47	.Ø16	.020
25913	47	48	.ØØ2	.003
25914	48	49	.211	.171
25919	53	54	.Ø11	. Ø25
25921	55	56	.280	.341
Sample	From	То	1985 Assay	1987 Assay
No.	(metre		Au Oz/t	Au Oz/t
1985 DRILL	HOLE MR 35	5		
1985 DRILL 24445	HOLE MR 35	5 <u>5</u>	. Ø87	.112
24445	··· - ·	-	•Ø87 •Ø82	.112 .123
24445 24446	51 52	- 52		
24445 24446 24447	51	- 52 53	.Ø82	.123
24445 24446 24447 24448	51 52 53	- 52 53 54	.Ø82 .Ø79	.123 .Ø55
24445 24446 24447 24448 24448 24449	51 52 53 54	- 52 53 54 55	.Ø82 .Ø79 .Ø55	.123 .Ø55 .Ø82
24445 24446 24447 24448 24449 24450	51 52 53 54 55	- 52 53 54 55 57	.Ø82 .Ø79 .Ø55 .Ø32	.123 .Ø55 .Ø82 .Ø69
24445 24446 24447 24448 24449 24450 24450	51 52 53 54 55 56	- 52 53 54 55 57 57 57	.Ø82 .Ø79 .Ø55 .Ø32 .Ø41	.123 .Ø55 .Ø82 .Ø69 .Ø64
24445 24446 24447 24448 24449 24450 24450 24451 24552 24552	51 52 53 54 55 56 57 58 63	- 52 53 54 55 57 57 58 59 64	.Ø82 .Ø79 .Ø55 .Ø32 .Ø41 .Ø17 .2Ø4 .ØØ6	.123 .Ø55 .Ø82 .Ø69 .Ø64 .Ø36 .Ø32 .ØØ8
24445 24446 24447 24448 24449 24450 24451 24552 24552 24557 24558	51 52 53 54 55 56 57 58 63 64	- 52 53 54 55 57 57 58 58 59 64 65	.Ø82 .Ø79 .Ø55 .Ø32 .Ø41 .Ø17 .2Ø4 .ØØ6 .145	.123 .Ø55 .Ø82 .Ø69 .Ø64 .Ø36 .Ø32 .ØØ8 .Ø65
24445 24446 24447 24448 24449 24450 24451 24552 24552 24557 24558	51 52 53 54 55 56 57 58 63	- 52 53 54 55 57 57 58 59 64	.Ø82 .Ø79 .Ø55 .Ø32 .Ø41 .Ø17 .2Ø4 .ØØ6	.123 .Ø55 .Ø82 .Ø69 .Ø64 .Ø36 .Ø32
24445 24446 24447 24448 24449 24450 24451 24552	51 52 53 54 55 56 57 58 63 64	- 52 53 54 55 57 57 58 58 59 64 65	.Ø82 .Ø79 .Ø55 .Ø32 .Ø41 .Ø17 .2Ø4 .ØØ6 .145	.123 .Ø55 .Ø82 .Ø69 .Ø64 .Ø36 .Ø32 .ØØ8 .Ø65

NOTE: 1985 assays were conventional fire assays 1987 assays were conventional fire assays

Results of Re-sampling 1985 Reverse Circulation Chip Samples

Table 16

9.0 ESTIMATE OF ORE POTENTIAL

9.1 PREVIOUS ESTIMATES

McClintock (1985) reported that the Madre Zone had a probable reserve of nearly 400,000 tons grading 0.1 oz/ton gold. The ultimate potential reserve of the zone to a depth of 70m and over a strike length of 350m was believed to be in excess of 1 million tons grading 0.1 oz/ton gold. McClintock also stated grades and widths of other zones as summarized in Table 2.

A review of McClintock's estimate by Seeber (1986) for PUNDATA GOLD CORPORATION concluded that too much low-grade material had been included in the above estimate. Using a cut-off of 0.05 oz Au/ton and adjusted horizontal widths, Seeber arrived at 85,000 tons grading 0.20 oz Au/ton.

9.2 RESULTS OF 1987 PROGRAMME

Two approaches were attempted in estimating potential ore volumes and grades for the Main and LE Zones. The first was empirical, based on a judgement as to configuration and average grade of mineralization. The second method was a computer technique.

9.2.1 Empirical Method

The drill pattern in both zones has not resulted in a thorough understanding of the distribution of mineralization. Several holes in the Main Zone appear to have been drilled in a down-dip direction. Only a few holes are oriented so as to represent an approximate true width of the zone. The distribution of mineralization in the LE Zone does not resemble the tabular-like Main Zone. The somewhat irregular LE Zone appears to be convex upwards, and possibly represents an antiformal or a cap-like structure. Main Zone

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Sections A-A' to E-E' (Plates 33 to 37) cross the Main Zone approximately 90 to its trend. This orientation is about 37 to the planes containing most of the drill holes and to the cross sections presented by MT. CALVERY RESOURCES (McClintock, 1985). Section Z-Z' (Plate 38) is a longitudinal section of the Main Zone. All sections are located in Plate 1.

The cross sections subparallel the strike of the lithologies and therefore no information regarding bedding is presented. An examination of the cross sections indicates some degree of continuity of the mineralization along the zone, which ranges from 12 to 21m and has an average width of 17m, dips about 65 to the north-northwest, and extends in the down dip direction about 75m (to a vertical depth of about 70m). Drilling indicates the presence of other smaller mineralized zones separate from the Main Zone. The average weighted grade across the zone is 0.067 oz Au/ton, calculated from selected mineralized intersections across the apparent true width of the zone. This is not a definitive average grade but does indicate a No distinction has been made on the results possible (best quess) value. from the two types of drilling or the different hole sizes. Table 17 shows the hole numbers, widths and weighted grades on which these estimates are based.

The predominant band of mineralization in the Main Zone appears to have been faulted by the north-northeast trending Madre Fault. The eastern side has been downfaulted, and displays an apparent vertical offset in the order of $4\emptyset$ -50m (Sections A-A', B-B').

The drill proven length of the Main Zone is about 100m (Section A-A' to E-E'). There is an additional 50m along strike as indicated by drill holes west of Section A-A' and east of Section E-E'.

Applying these estimated dimensions (150m length, 75m down-dip extension, 17m thickness) and drawing the inference that mineralization is continuous, there is a geological potential for about 535,500 tonnes (density 2.8 gm/cc) or 589,050 tons of material grading 0.067 oz Au/ton.

Section	Hole No.	•	Intersection	Weighted Grade oz Au/ton)
			(m)	
A - A'	RCH-87-105		18	•Ø45
	MR-35		20	.140
в-в'	DDH-87-1Ø3		21	.Ø31
C-C	MR-19		12	.Ø43
D-D'	MR-12		15	.106
E-E'	MR-15		16	.116
	DDH-87-105		21	.Ø83
		Average	17.3 m	.Ø67 (weighted)

Table 17 Empirical Estimate of Main Zone Width and Grade

LE Zone

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Sections AA-AA' and BB-BB' (Plates 39, 40) are oriented approximately right angles to the local strike. They indicate there may be an antiformal or cap-like zone of mineralization upwards of 25m thick. The seeming lack of continuity of mineralization between these two sections made simple volume and grade estimates impractical.

9.2.2 Computer Analysis

At the time of writing, Mr. Arthur Ehrenberg, of Coeur d'Alene, Idaho, was preparing a report on a computer evaluation of the property. When this report has been received, it will be included in Appendix XX.

An important part of the work was the production of a number of level plans, which indicate that both the Main and LE Zones exhibit continuity of mineralization in vertical and horizontal directions. The Main Zone consists of at least three northeast trending bands, 15 to 20m horizontal width, and extending in excess of 150m.

The LE Zone was a somewhat different aspect and could represent either domed or folded strata, concurring with observations of the cross sections. Preliminary results from Mr. Ehrenberg indicate that the Main Zone contains 693,000 tons (10 to 15% probable, balance possible) of 0.057 oz/ton gold and the LE Zone contains about 231,000 tons (20 to 25% probable, balance possible) of 0.058 oz/ton gold. The total tonnage of both zones is 924,000 tons with an average grade of 0.057 oz/ton gold. Both zones are open to depth, to the northwest, northeast and southwest.

10. CONCLUSIONS

10.1 LITHOLOGY

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The area of exploration interest is underlain by middle Triassic to early Jurassic fine grained volcaniclastic and sedimentary rocks. Black graphitic phyllite, siltstone, grey lithic tuff and light green mariposite altered tuff predominate.

These rocks commonly have a coarse fragmental aspect. Some of which could be due to soft sediment deformation and some to brecciation. Silicification, including silica flooding and quartz veining is a common feature.

10.2 STRUCTURE

The CPW claim lies on the northeast dipping limb of a northwest trending anticline, which has numerous minor folds of similar orientation. The geologists involved in the 1987/88 programme consider that there is a possiblity that early northwest folds have been refolded along northeast axes. This interpretation is based on the configuration of conductivity and geochemical anomalies. No minor structures have been recorded that substantiate this opinion but it can not be discarded at this time.

The rocks have been highly sheared, brecciated, and faulted. The predominant shear sets trend 120° and 035° . Other common sets trend 90° and about 150° . Disrupted quartz veins are a common feature in the shear zones, particularly the set trending 035° .

The Madre Fault trends about 05° dips steeply west and is on the order of 10° - 15m wide. The mineralization on the east side shows an apparent downward offset of 40 to 50m. The horizontal offset along the fault is unknown, and surface mapping gives ambiguous results (Plate 8).

The detailed structure of the Main Zone is not clearly defined, other than as a zone of shearing, disruption and quartz veining as seen in trenches and drill core. Structural interpretation of the zone from diamond drill core has been limited at best. Due to the high degree of structural deformation in the Main Zone, it is the opinion of the authors that emphasis in future drilling should be on the definition of a volumetric assessment of ore reserves by vertically oriented, close spaced (15 - 20m) grid drilling, utilizing a reverse circulation method, and that the interpretation of structure would be best facilitated by the re-examination of existing diamond drill core in order to best determine the stratabound nature of the deposit.

The structure of the LE Zone is also poorly defined. It does appear, from both manually drawn cross-sections and computer generated level plans, that there is a doming or antiformal structure, skew to the northwest.

10.3 MINERALIZATION

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quartz veins and quartz vein stockworks in Gold occurs in northeasterly and easterly shear zones and in oxidized shaley siltstone ("aerobar"), and as disseminations in graphitic shaley siltstone. A11 mineralization accompanied an episode of workers consider the gold post-metamorphic silicification, the silica moving into fractures. Earlier opinions were that the source of the hydrothermal fluids was deep-seated. An alternative idea is that the gold was originally disseminated in graphitic shaley siltstone (possibly debris flows), the gold then being mobilized during the waning stages of regional deformation into sheared and fractured rock.

Better trench samples include 40m of 0.050 oz/ton and 21m of 0.085 oz/ton gold. The best drill intersections across the Main Zone were 18m of 0.045 oz/ton gold (reverse circulation) and 21m of 0.083 oz/ton gold (diamond drilling). Several narrow widths (1-3m) were intersected where values exceeded 1.0 oz/ton.

10.4 ESTIMATE OF ORE POTENTIAL

A report describing a computer evaluation of ore potential will be given in an Appendum to this report. Some 924,000 tons (15% probable, balance possible) averaging 0.057 oz/ton gold are inferred from this evaluation of all drill results.

The computer study substantiates conclusions drawn from the cross sections that the mineralized zones (Main and LE) are open laterally and to depth. Both authors believe there is a strong potential for the inferred tonnages of mineralized material (>.05 oz gold/ton) to be increased by a factor of 50 to 100% within the Main and LE zones to a depth of 100m. Computer evaluations also indicate the potential for 2.75 million tons of mineralized ground grading an average of 0.021 oz Au/ton.

10.5 METALLURGY

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Metallurgical tests by three different laboratories were performed on the samples of dark grey to black, carbonaceous shaley siltstone with 2 -3% pyrite. Both oxidized and unoxidized material were tested. Three samples were tested by all three laboratories.

Bacon, Donaldson & Associates Ltd. recommend a common flow sheet for both oxidized and unoxidized materials. This would include gravity concentration followed by carbon-in-leach cyanidation. Gold recovery in the two unoxidized samples average 95.55%, whereas recovery in one unoxidized sample was 95%. Further tests are in progress.

Scotia Systems Inc. also concluded that direct CIL cyanidation was the most promising method, yielding 95% recovery on one sample, although there was no gravity step prior to cyanidation. Bromine-leaching was not as successful, yielding only 50% gold recovery from the same sample. Giant Bay Biotech Inc. concluded that although bioleaching was successful in oxidizing the pyritic carbonaceous siltstones, and achieved a marginal improvement in gold recovery, the extent of recovery improvement would not justify the additional costs of establishing a bioleach plant. Giant Bay achieved 85 to 92% recovery on the unoxidized material through direct CIL cyanidation, concurring with the results by the other labs.

The metallurgical tests indicate that both unoxidized and unoxidized material from the property could best be treated using a gravity concentration step followed by carbon-in-leach cyanidation. Much of the mineralized rock contains significant organic carbon which can retard gold recovery to as much as 40%. Unfortunately, the distribution of active carbon in the rocks is not yet predictable nor can active carbon be distinguished from deactivated carbon.

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11. PROPOSAL FOR FURTHER DEVELOPMENT

11.1 RECOMMENDATIONS

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Serious gaps remain in the understanding of the structural geology, controls of mineralization and potential tonnage and grade. Despite these limitations it is evident that there is a strong potential for the property to host a deposit exceeding 900,000 tons grading about 0.057 oz/ton gold to depths of 70m. A three stage programme is recommended to address the current technical concerns, quantify zones of known mineralizations and further explore this largely untested property.

<u>Stage I</u>: The first stage would consist of a two week field and drill core examination by a structural geologist in conjunction with a geologist familiar with the local stratigraphy. The objectives are to glean more structural data and to establish gross lithological boundaries. The south half of the CPW claim has been geologically mapped at a scale of 1:50. These working plans need to be rescaled and plotted on a surveyed base. Computerization of the data, including drill hole lithology and structure, is a necessity. Stage I should also include an independent review by a metallurgist on the test results from the 1987/88 programme.

<u>Stage II</u>: This stage is regarded as the critical evaluating phase which will determine the decision making of future work commitments. The details of Stage II would be determined by the work in Stage I, but the objectives of this stage are three-fold. First, to test the continuity and extension of the Main and LE Zones in view of the 1987/88 results with a programme of vertical reverse circulation drilling. Second, to test, in a similar manner, the other areas of known surface mineralization. Third, to perform reconnaissance surveys on those claims that remain to be evaluated. The reconnaissance work can be done concurrent with the drilling. As well, it is recommended that a high resolution topographic map (2m contour interval) be established for the CPW claim to provide a reliable base map to facilitate future exploration efforts. It has been suggested by a consultant of Trio Gold Corp. that some effort be made to physically process the oxidized mineralized surface material known to contain free gold via a simple wash plant in order to help provide cash flow for further exploration and development. The authors support this idea in light of the easy access, highly fragmented nature of the oxidized ore, abundance of visible gold on the property, and the supportive metallurgical results (see Table 15, jig \$ gold recoveries). This would be a small operation (50 - 100 cubic yards per day) and would process material from previously disturbed areas of known mineralization minimizing the impact on the environment. Tailings could be stockpiled for future chemical processing.

Most of the 1985 and 1987/88 holes on the Main and LE areas were drilled down the dip of the apparent zones of mineralization and have not provided an accurate configuration of the mineralized horizon(s).

Drilling should be on a 20m grid pattern. In the Main Zone, a 70m depth is sufficient, but in the LE Zone a depth of 100m is recommended. One or two deeper holes in the LE Zone, to the depth of about 200m, are recommended to test for possible stacking of mineralized lithologies, such as the culminations of debris flows hypothesized by some workers. Step-out drilling from both the Main and LE Zones is recommended.

As an adjunct study, it is recommended that after the results of conventional fire assays have been received, total metallic assays be performed on about 500 samples representing the range of conventional assay At the recommendation of J.S. Bending, senior project geologist, values. total metallic assays were done on all samples that were found to contain greater than one gram /tonne gold from the 1987/88 programme. Assay values reported were weighted averages of the initial fire assay, the entire +100 fraction and a rerun of the -100 mesh fractions (Appendix I). mesh Comparative studies of conventional versus total metallic assays was therefore not possible, and should be considered in the future. This author's (Campbell) experience with recommendation is based on one particulate gold of a very similar nature elsewhere in the district. It was found there that total metallic assays, which are considered to be a closer representation of particulate gold content, were 15 to 40% greater than conventional assays in the range of Ø.Ø5 to Ø.125 oz Au/ton.

The other areas of mineralization that should be trenched and drilled include the following:

1. "BD" Trench, West of the Main Zone

Drill holes MD 4 & 5 of the 1985 programme and DDH-87-120 failed to intersect surface mineralization noted to occur in their vicinity. The prevailing outcrop pattern and geological interpretation of ore occurrences suggests that holes drilled to the south and west may be more successful at intercepting mineralization. Trenching in this area indicates the presence of a thick unit of low grade ore, dipping southwest. The drilling of two holes is recommended to define down-dip continuity.

2. E Zone

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This zone, discovered by MT. CALVERY, is located approximately 300m NE of the 12 Zone. Mineralization indicated by trench values, soil anomalies, EM-VLF data and 1985 reverse circulation hole MR-10 require further investigation. Thick units of interbedded debris flows and graphite bearing grey lithic tuff, carrying gold values ranging to over 0.1 oz Au/ton over 10 metres occur within this zone. At least two reverse circulation drill holes are planned to determine the extent of mineralization.

3. West A Zone

The combination of strong geophysical, soil and surface rock anomalies indicate that mineralization targeted by drill holes in the "A" Zone, located 100m northwest of the LE Zone, occurs west and south of MT. CALVERY'S C Trench (not to be confused with PUNDATA'S Trench C on the Don property); follow up drilling (4 holes) is planned for this area. Interception of mineralization in this area would extend the north end of the LE Zone and vastly expand the potential of that zone. 4. Southwest CPW

Large and poorly defined geophysical and geochemical targets occur to the southwest of all previous exploration activity. Investigation of this area by trenching should be followed up by drilling two reverse circulation holes. Exploration of these anomalies may result in the addition of large resources to the mineral inventory as indicated by encouraging results of Trench LB.

5. Don Claim

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Four holes are recommended on the Don 2 claim block to evaluate the mineralization discovered in Trench A.

It is estimated that some 5,350m of drilling will be required in Stage II. Reconnaissance VLF electromagnetic geophysical surveys should be conducted on the surrounding claim blocks (all but CPW, Don and Peso) to evaluate potential exploration targets and the merit of maintaining the large surrounding claim block. One hundred metre line spacing with 50 metre sampling interval is recommended.

Limited trenching to test extensions of known mineralized zones and potential targets outlined by geophysical anomalies should also be undertaken. At least 200m should be allotted for.

<u>Stage III</u>: Contingent upon a complete and favorable evaluation of Stages I and II, bulk sampling, continuing metallurgical tests, and drilling of favorable targets could be recommended.

Bulk samples would be drawn from at least 6 locations of varying mineralogical character; three 1 to 5 ton pit samples and three reverse circulation metallurgical drill holes. Pit samples will be crushed and split to provide samples for metallurgical testing with the remainder stockpiled for future tests. Drill samples will be used almost exclusively for metallurgical evaluations of unoxidized ore. Stage III will undoubtedly require more drilling and trenching to expand upon the vaults of Stage I and II, and to explore other areas that are promising exploration targets but have received only cursory attention.

This could require up to 50 reverse circulation holes, with the intention of

bringing the property to a pre-feasibility stage.

11.2 COST ESTIMATE

Stage I - Geological Review, Data Analysis Crew Mobilization, demobilization 2,500 Field Work: Project Geologist & management 14 days @ \$450/day 6,300 Geologist 14 days @ \$235/day 3,290 Assistants 2 men, 14 days @ \$125 3,500 TOTAL WAGES \$15,590 Metallurgical Review 1,000 Computerization of data 5,000 2,500 Drafting, reprographics Data analysis, computer & plotting time 5,000 Programme planning & report preparation 7,000 Vehicle rental, fuel 1,500 500 Miscellaneous supplies Field accommodation 4 men, 15 days @ \$38/man/day 22,500 TOTAL COSTS 38,090 Contingency (10%) 3,809 41,899 ALLOW..... \$45,000 Stage II - Drilling, Reconnaissance Surveys Field Work: Field Supervision & management-14 days @\$450/day \$3,150 Project Geologist @ \$235 day x 30 days 7,050 5,550 Junior Geologist @ \$185 day x 30 days 6 Geological Assistants @ \$125 day x 30 days 22,500 TOTAL WAGES \$38,250 Accommodations, room & board 12 men @ \$38/day/man x 30 days 13,680 Drill site preparation 10,000 Trenching; 200m @ \$20/m 4,000 Reverse circulation drilling 267,500 5,350m @ \$50/m 67,500 Conventional fire assays; 4500 @ \$15 25,000 Total metallic assays; 500 @ \$50 8,000 Preparation of topographic base map 27,900 VLF Survey; 93 units @ \$300/unit Vehicle rental (2), fuel x 30 days 2,500 2,500 Equipment rental, radios, generator, etc. Miscellaneous supplies & equipment 1,250 Crew mobilization, demobilization 2,500 Data analysis and report preparation Office Supervision & mgmt. 14 days @ \$450/day 6,300 6,580 Project Geologist - 28 days @ \$235/day Word Processing, reprographics, drafting 4,000 and drafting supplies 5,000 Computer Statistical Evaluation \$492,460 TOTAL COSTS 49,246 Contingency (10%) 541,706

ALLOW......\$550,000

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Stage III - Drilling, Trenching, Bulk sampling and Metallurgical tests	
Field Work: Field Supervision & management-14 days @\$450/day Project Geologist @ \$235 day x 60 days Junior Geologist @ \$185 day x 60 days 6 Geological Assistants @ \$125 day x 60 days TOTAL WAGES	\$6,300 14,100 11,100 <u>45,000</u> \$76,500
Accommodations, room & board 12 men @ \$38/day/man x 60 days	27,360
Drill site preparation	10,000
Reverse circulation drilling 5,000m @ \$50/m	250,000
Conventional fire assays; 34000 \$15	51,000
Total metallic assays; 35000 \$50	17,500
Trenching - 200m @ \$20/metre	4,000
Vehicle rental (2), fuel x 60 days	5,000
Equipment rental, radios, generator, etc.	5,000
Miscellaneous supplies & equipment	2,500
Bulk sampling and metallurgical testing	20,000
Crew mobilization, demobilization	2,500
Data analysis and report preparation: Office Supervision & mgmt. 14 days @ \$450/day Project Geologist - 28 days @ \$235/day Word Processing, reprographics, drafting and drafting supplies	6,300 6,580 4,000
Computer Statistical Evaluation TOTAL COSTS	5,000 \$493,240
Contingency, 10%	<u>49,324</u> 542,564
ALLOW	\$550 , 000
TOTAL STAGE I, II and III	\$ 1,145,000

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13. STATEMENT OF QUALIFICATIONS

I, KENNETH VINCENT CAMPBELL, resident of Wells, Province of British Columbia, hereby certify as follows:

1. I am a Consulting Geologist with an office at #8-84 Lonsdale Avenue, North Vancouver, B.C.

- 2. I graduated with a degree of Bachelor of Science, Honours Geology, from the University of British Columbia in 1966, a degree of Master of Science, Geology, from the University of Washington in 1969, and a degree of Doctor of Philosophy, Geology, from the University of Washington in 1971.
- 3. I have practiced my profession for 23 years. I am a Fellow of the Geological Association of Canada (FØØ78).
- 4. I have no direct, indirect or contingent interest in the shares or business in the property of PUNDATA GOLD CORPORATION, nor do I intend to have any interest.
- 5. This report is based on my examination of the results of the geological staff of PUNDATA GOLD CORPORATION who performed the 1987/88 exploration programme on the Spanish Mountain property. Approximately two weeks were spent reviewing, compiling and writing the report with the assistance of Mr. E.R. Honsinger. The author is familiar with the geology of the Cariboo District, particularly the east side of the Quesnel Trough and the Cariboo Mountains.
- 6. Written permission by the author is required to use this report dated May 31, 1988 in any Prospectus or Statement of Facts of PUNDATA GOLD CORPORATION.

Dated at North Vancouver, Province of British Columbia this 31st day of May ,1988.

COM La Eou K.V. Campbell, Ph.D., F.G.A.C. Geologist

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STATEMENT OF QUALIFICATIONS

I, Eric G. Honsinger, of 456 West King Edward, Vancouver, British Columbia, hereby certify that:

- 1. I am a graduate of the University of British Columbia in 1985 with a B.Sc. in Geology.
- 2. I have been practicing my profession since graduation in 1985 and during the summer months of 1983 and 1984, mainly in central British Columbia, Alberta, Quebec and the State of Nevada.
- 3. I am a member of the Geological Association of Canada.
- 4. I am a graduate of the Geophysical Certificate Programme of the Southern Alberta Institute of Technology, Mathematics and Physics Department, 1982.
- 5. I have been employed with Pundata Gold Corporation of 201-141 Victoria Street, Kamloops, British Columbia for the past two years working on drill programmes and related geological activities. During the 1987/88 CPW project, I was employed as a project geologist and performed geological surface and trench mapping, drill supervision, core logging and related duties. This report reflects the results of that work.
- 6. I own some common shares of Pundata Gold Corporation.

Dated at North Vancouver, Province of British Columbia this 31st day of May ,1988.

Eric G. Honsinger, B/Sc. Geologist

- 91 -

14. ITEMIZED COST STATEMENT

NOTE: Figures supplied by Pundata Accounting Staff

Mob/Demob

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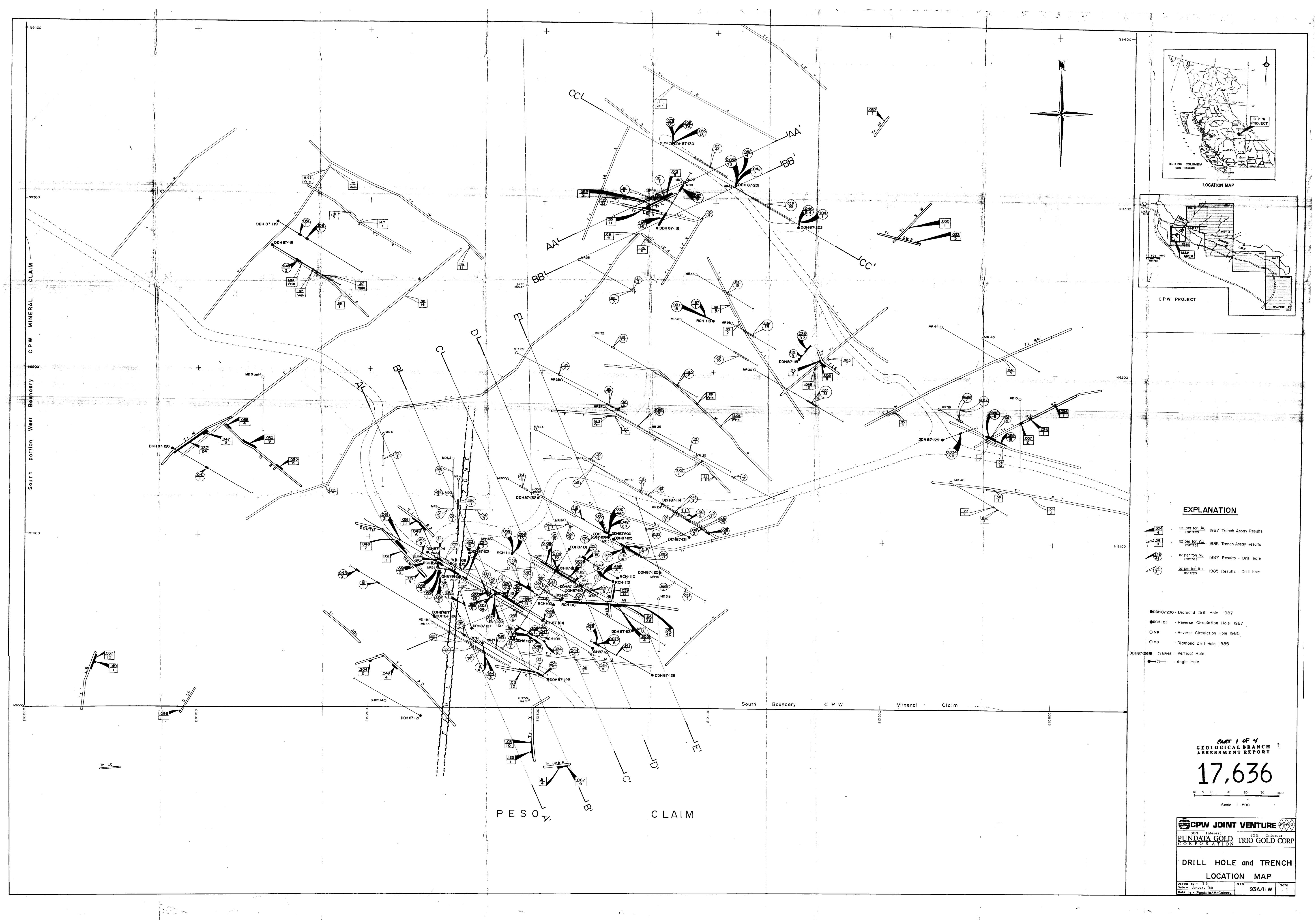
1. Field Costs

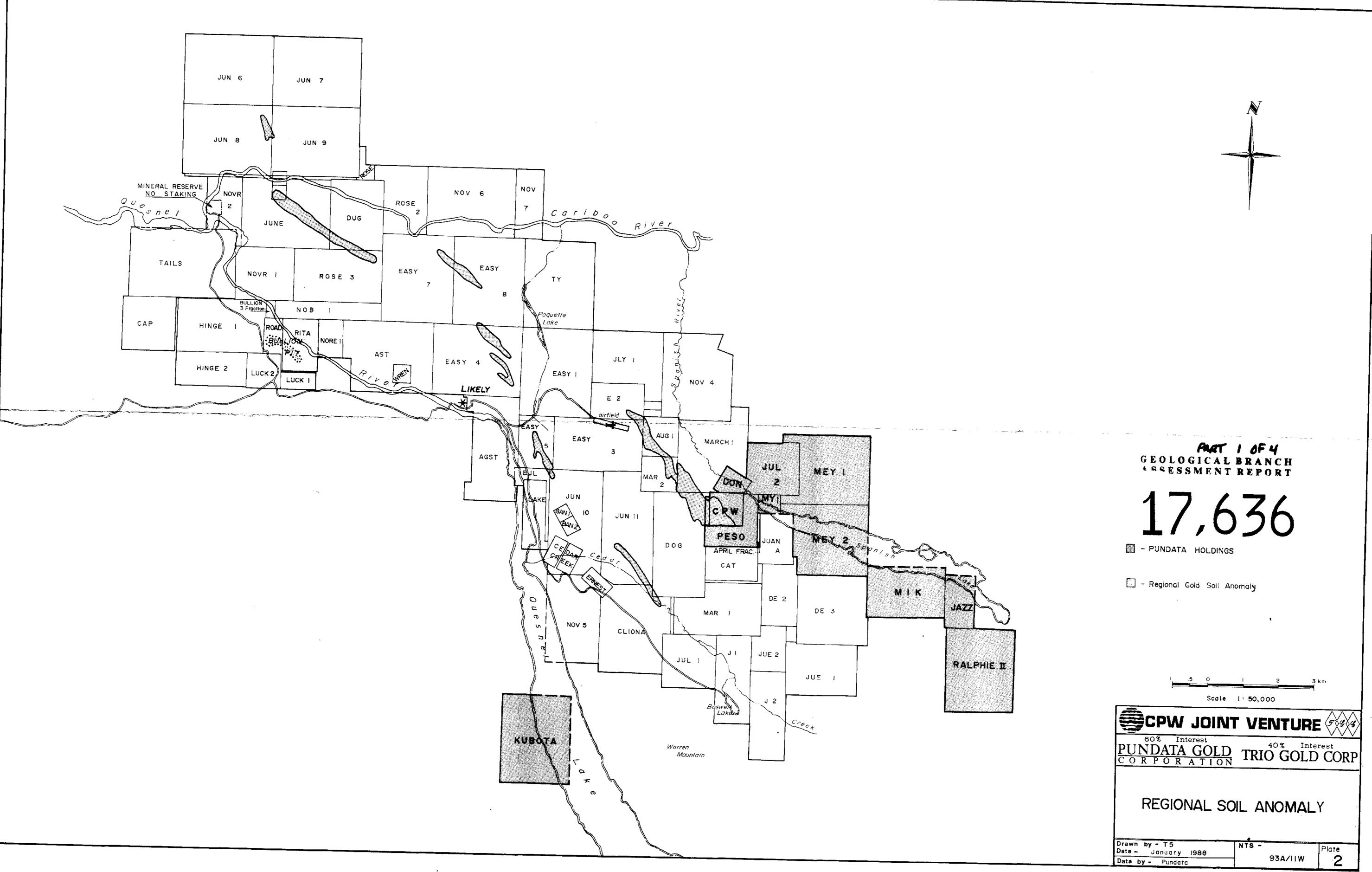
	Contract Geol. (1)-64 days @ \$175/manday	49,766.00- R. Honsinger - W. Hewgill 1,680.00- R. MacDonald 108.00 (Fox Geologist) 38,410.00-W.G. Scales J. McKray 16,390.00- G. Demers 7,040.00- M. Rowse
	Total Mandays: 1,097 days	
	Total Field Personnel Costs:	\$160,994.00
2.	Mob/Demob	
	Personnel:	
	6 men @ \$131.67/manday for 6.0 days	4740.00
	Vehicles: 3 @ \$36.67/day for 5.0 days	550.00
	Accommodation:	
	for 5 men for 6 days @ \$38.00/day Travel:	1,140.00 900.00
	Total Cost for Mob/Demob:	\$7,330.00
3. <u>SU</u>	PPORT COSTS	
Ac	commodation in town of LIKELY, B.C.:	
	om and Board \$38/day for 1827 mandays	69,426.00
Ov	erflow, board \$15/day for 10 mandays	150.00
Tr	ansportation:	
	4 truck-two for 172 days @ \$30/day	10,320.00
4 x	4 truck-one for 172 days @ \$25/day	4,300.00
	mmunications: Phone, radios, computer	4,500.00
	el, oil	8,000.00
	urier	1,000.00
	re Storage eld Supplies	3,000.00 3,000.00
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	Total Support Costs	\$103,696.00

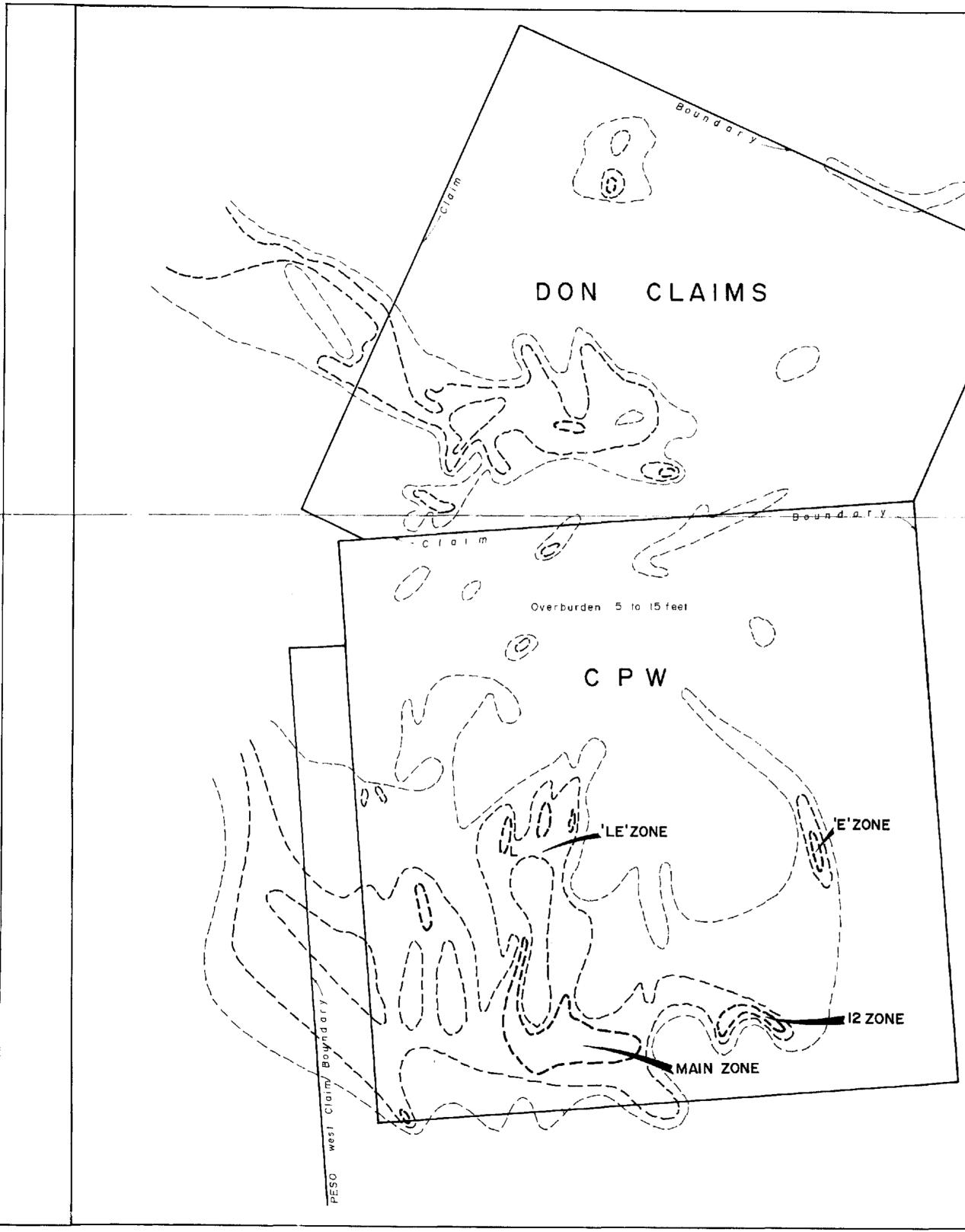
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4.	<u>Equipment Rental</u> Computer - 215 days @ \$15/day Diamond saw	3,225.00 350.00	
	Total Equipment Rental Costs		\$3,575.00
5.	Contract Services: Core Enterprises Drilling HQ (2998m), NQ (275m), total 3273m @ \$82.86/m all inclusive SDS Drilling	271,200.00	
	Reverse Circulation 1237m		
	@ \$44.38/m all inclusive Core Enterprises	54,900.00	
	Large Backhoe - 125 hr @ \$45/hr. D6 Cat - 30 hr @ \$55/hr D7 Cat - 2 months @ \$4,000/month Drill muds	5,625.00 1,650.00 8,000.00 10,000.00	
	Total Contract Costs		\$351,375.00
6.	Analyses		
	Rocks - geochemical Au, Ag, As 400 @ \$10.50/ea.	4,200.00	
	Rocks - assay	63,700.00	
	Au (oversize, screen) 4900 @ \$13.00/ea. - whole rock 50 @ \$12.00/ea.	600.00	
	- thin section 50 @ \$15.00/ea. Soils - geochemical	750.00	
	Au, Ag, As 100 @ \$8.00/ea. - silts	800.00	
	Heavy minerals 50 @ \$11.00/ea. Trenching & petrography Metallurgical studies Freight costs (air & surface)	550.00 36,152.00 31,000.00 6,000.00	
	Total Analyses Costs:		\$143,752.00
7.	Report Writing		
	Senior Geologist (1) 35 days @ \$260/day Engineer 6 days @ \$400/day Geologist (2) 39 days @ \$149/day Drafting 400 hrs. @ \$ 20/hr. Supplies, Typing, Copying	9,100.00 2,400.00 11,622.00 8,000.00 11,000.00	
	Total Report Writing Costs:		\$42,122.00
8.	Other Costs		
	Airfare costs Contingency	4,500.00 17,510.00	
	Total Other Costs:		\$22,010.00
	TOTAL PROJECT COST:		\$834,854.00

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EXPLANATION

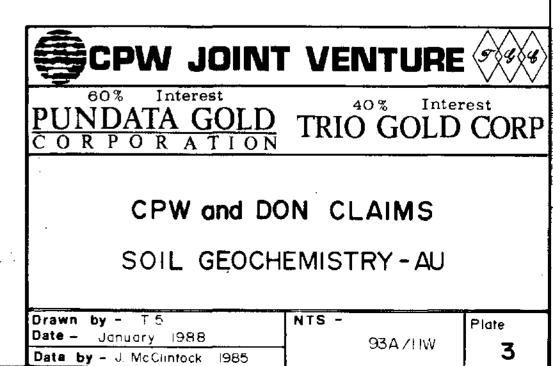
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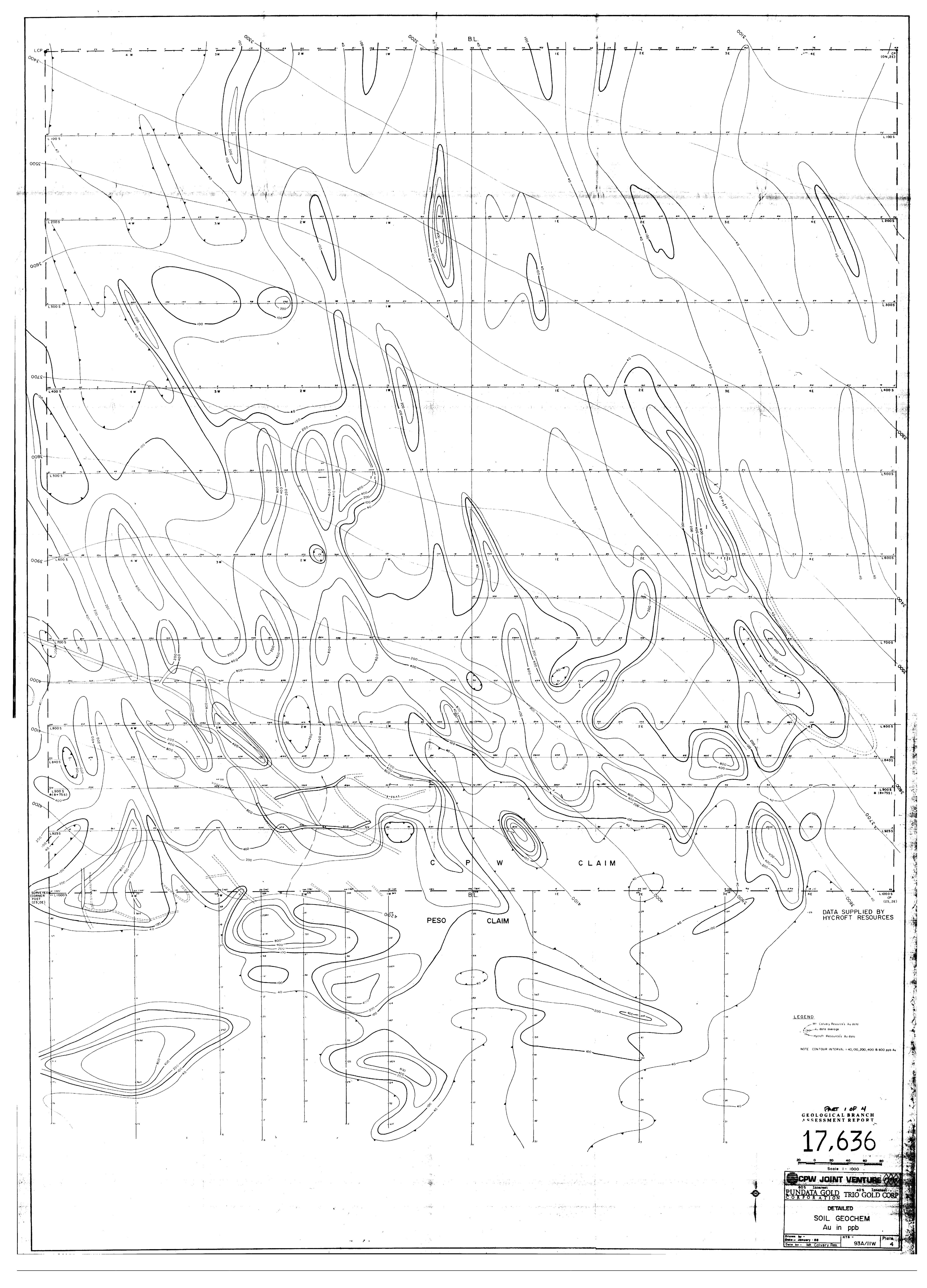
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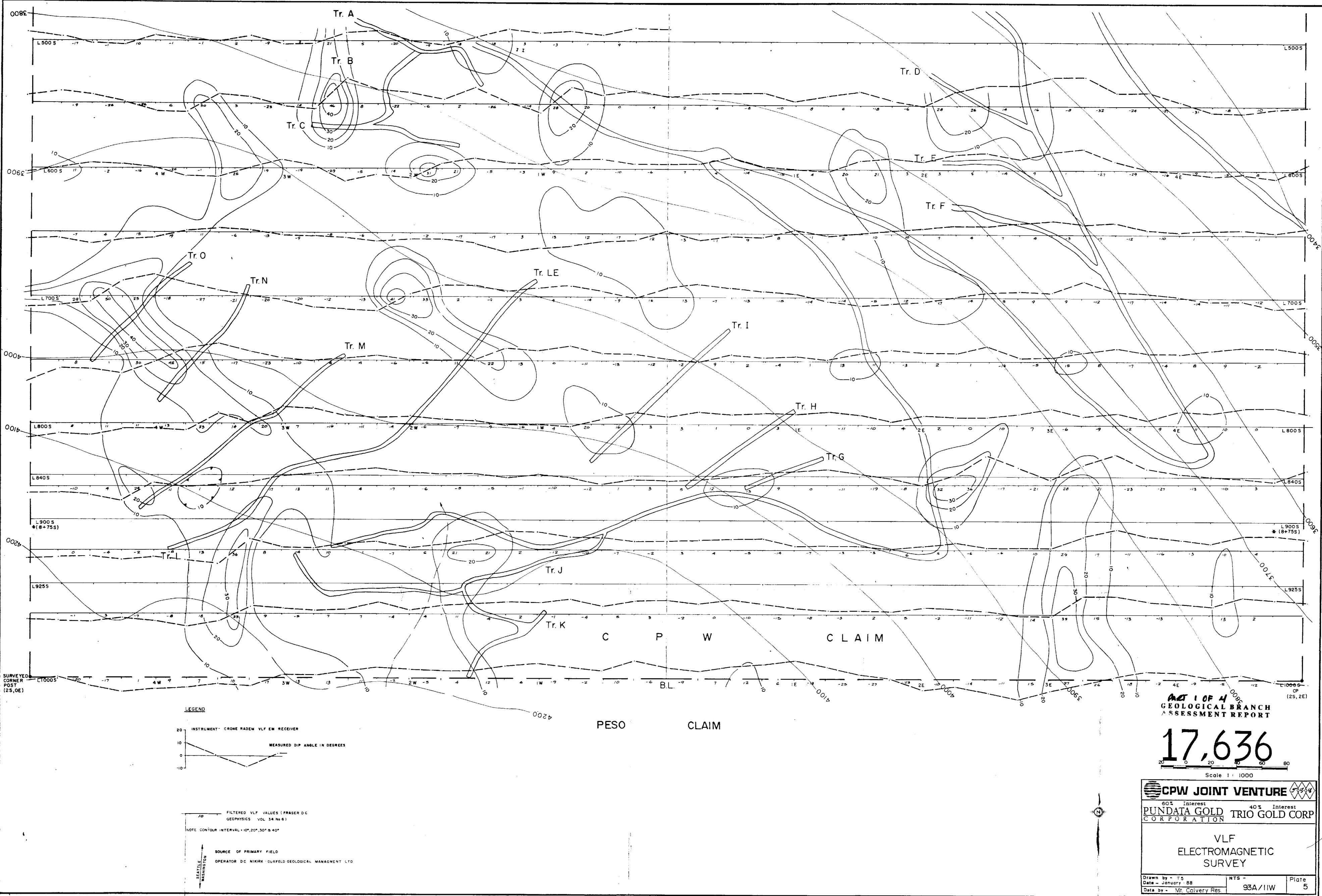
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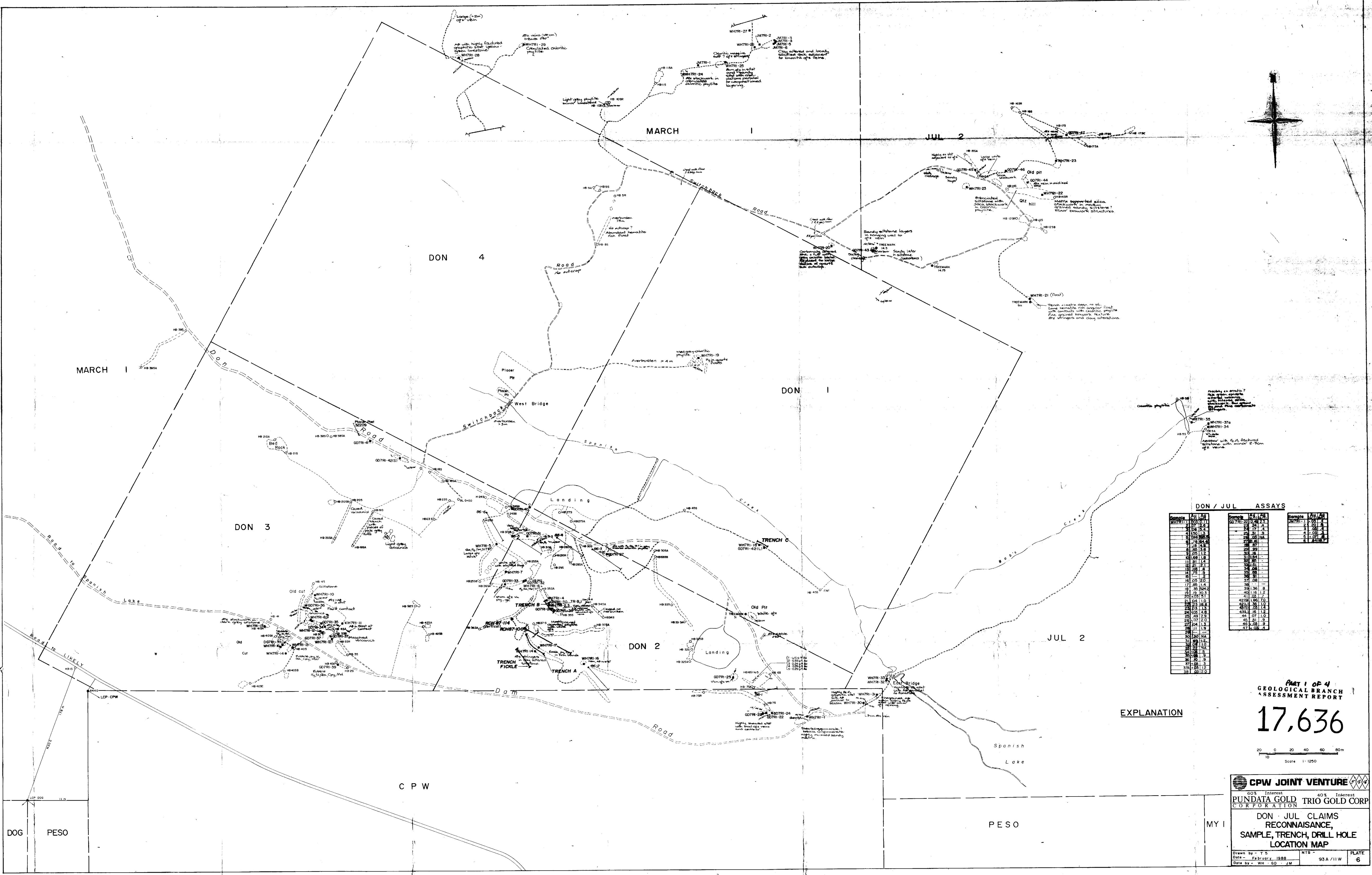
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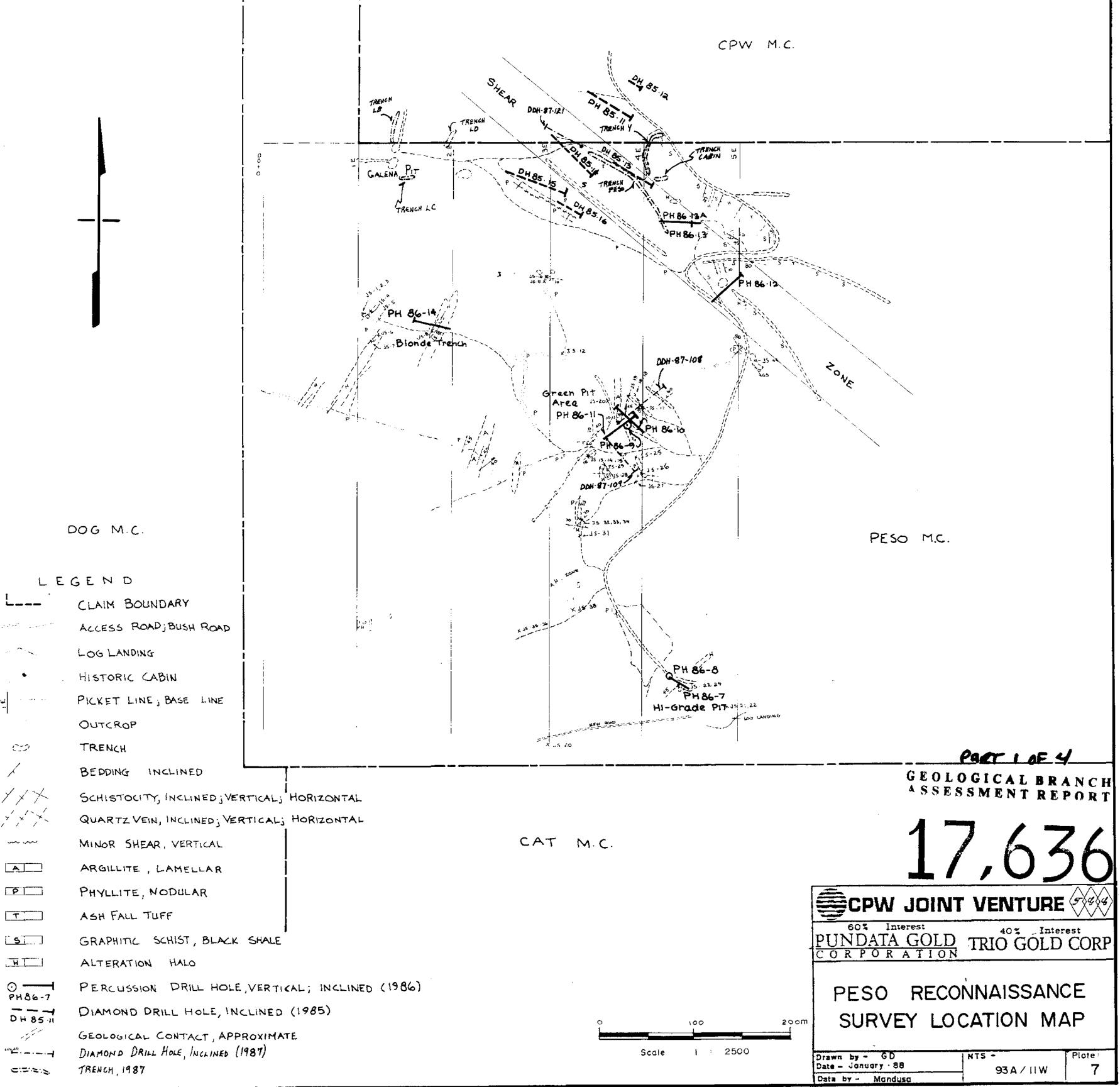
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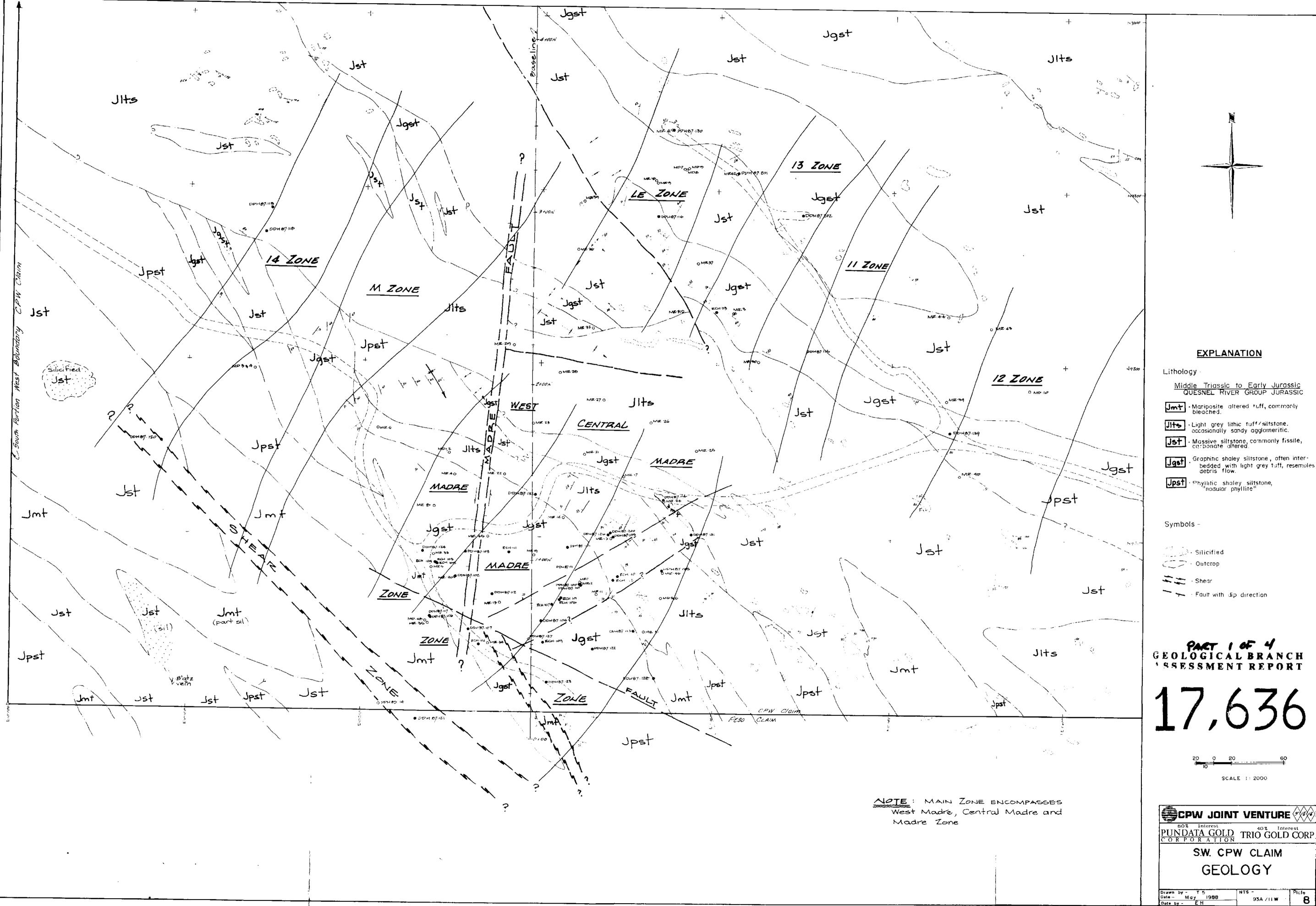


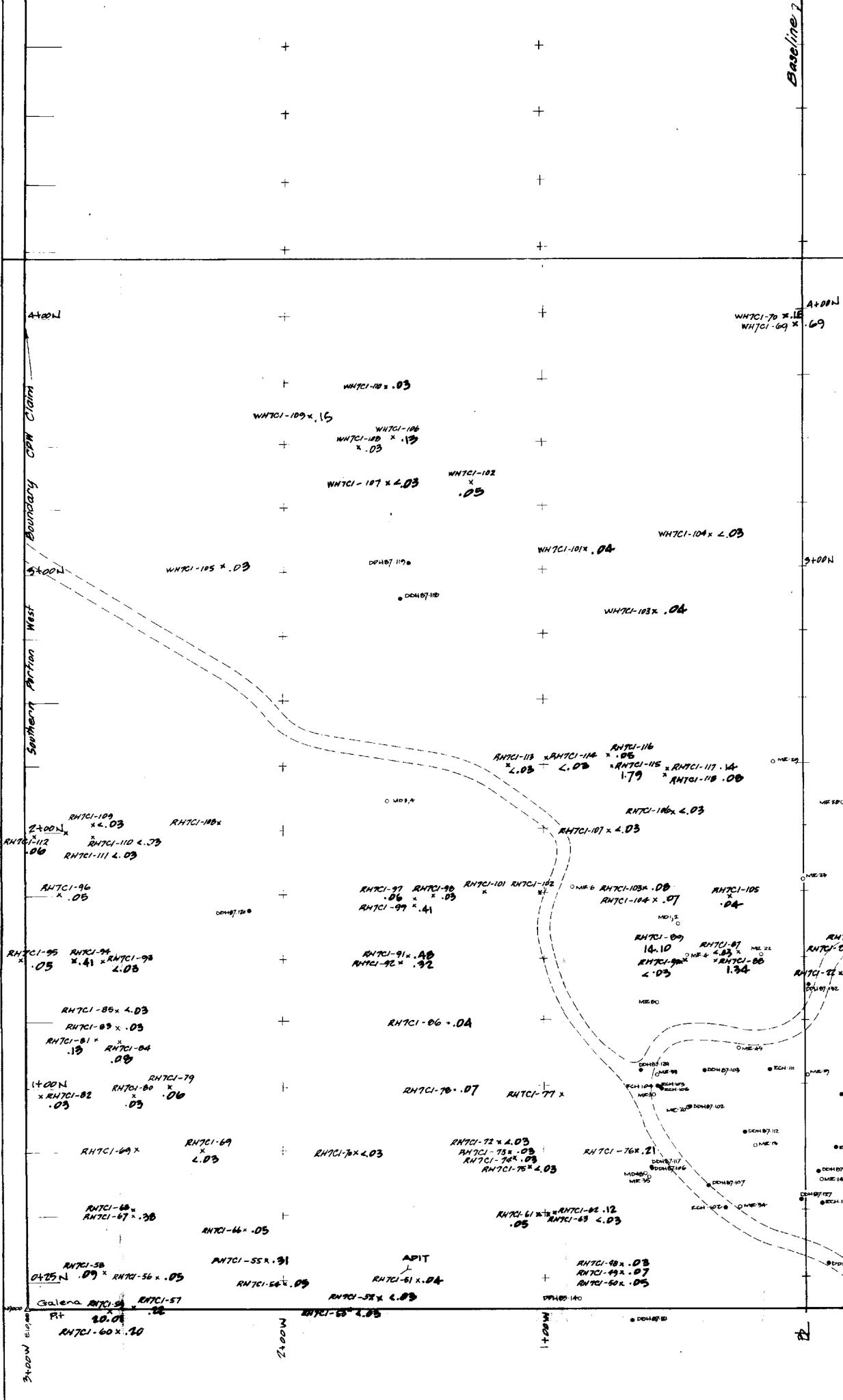












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Assay results in grams per tonne Au Assay results in parts per billion Au SAMPLE LOCATION MAP Drewn by - T.5 NTS -Date - April 98 93A/11W Pla Date by - Pyndata Gold Inc.

