

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

12,089

DRILLING REPORT

ON THE

JOY GROUP

NTS 82E/2

GREENWOOD MINING DIVISION

LATITUDE -  $49^{\circ} 07' N$

LONGITUDE -  $118^{\circ} 58' W$

for

World Cement Industries Inc.

#915 - 470 Granville Street

Vancouver, B.C. V6C 1V5

March 10, 1983  
Box 63  
Westbridge, B.C.

R.D. Kroposky  
B.Sc. Geology

## TABLE OF CONTENTS

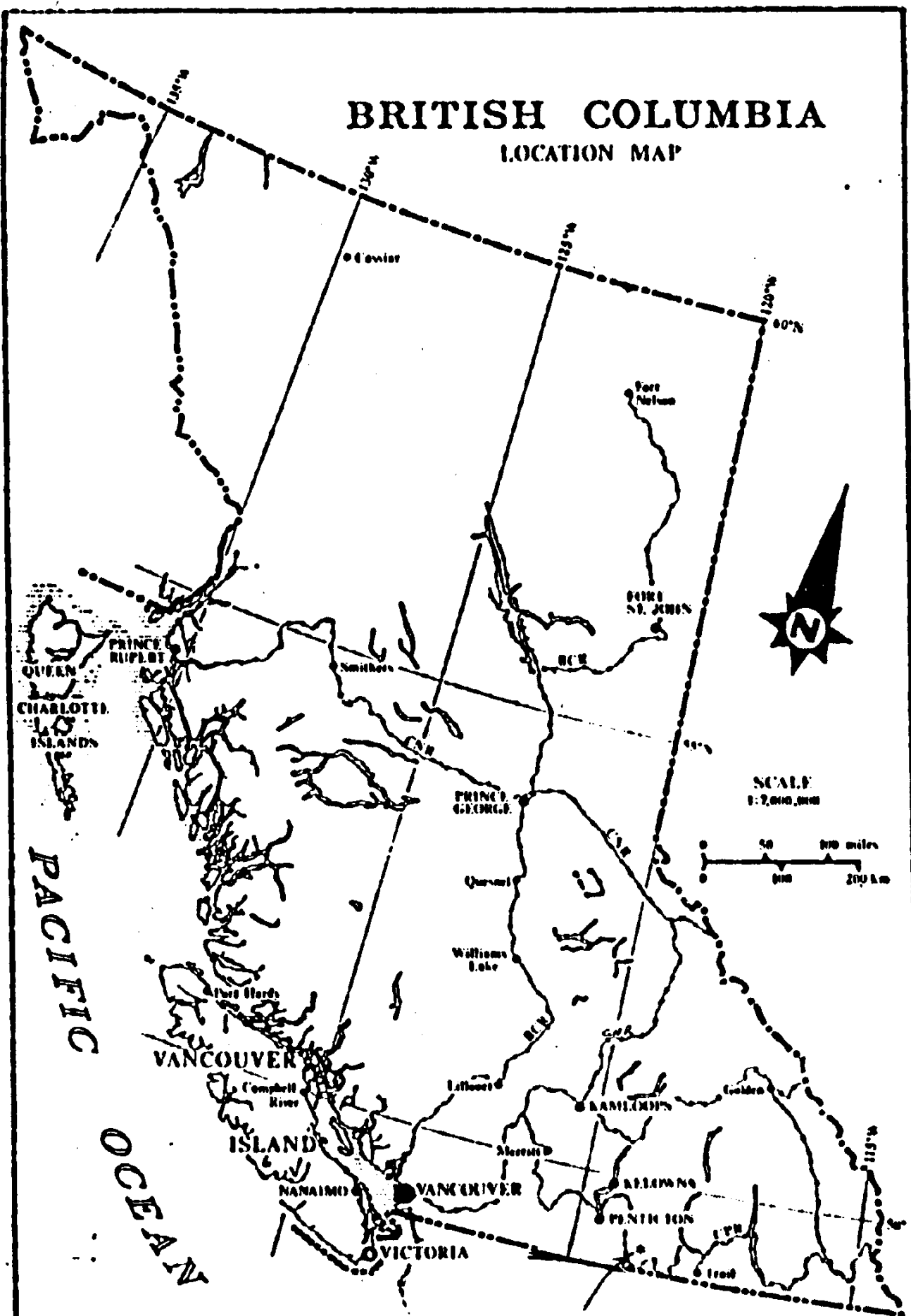
Introduction.....	Page 25
Property History.....	Page 25
Property Geology.....	Page 27
Drilling Program.....	Page 27
Technical Data and Interpretation,.....	Page 28
Conclusion.....	Page 32
Itemized Cost Statement.....	Page 32
Author's Qualifications.....	Page 33

### Illustrations

Location Map (Plate 1).....	Page 1
Claim Location Map (Plate 2).....	Page 2
DDH Location Map (Plate 3&4).....	Page 3 & 4
Underground DDH (Plate 5).....	Page 5
Geological Map - Incline (Plate 6).....	Page 6
Chip Sample Location Map (Plate 7).....	Page 7
DDH logs (Plate 8-25).....	Page 8 - 25

# BRITISH COLUMBIA

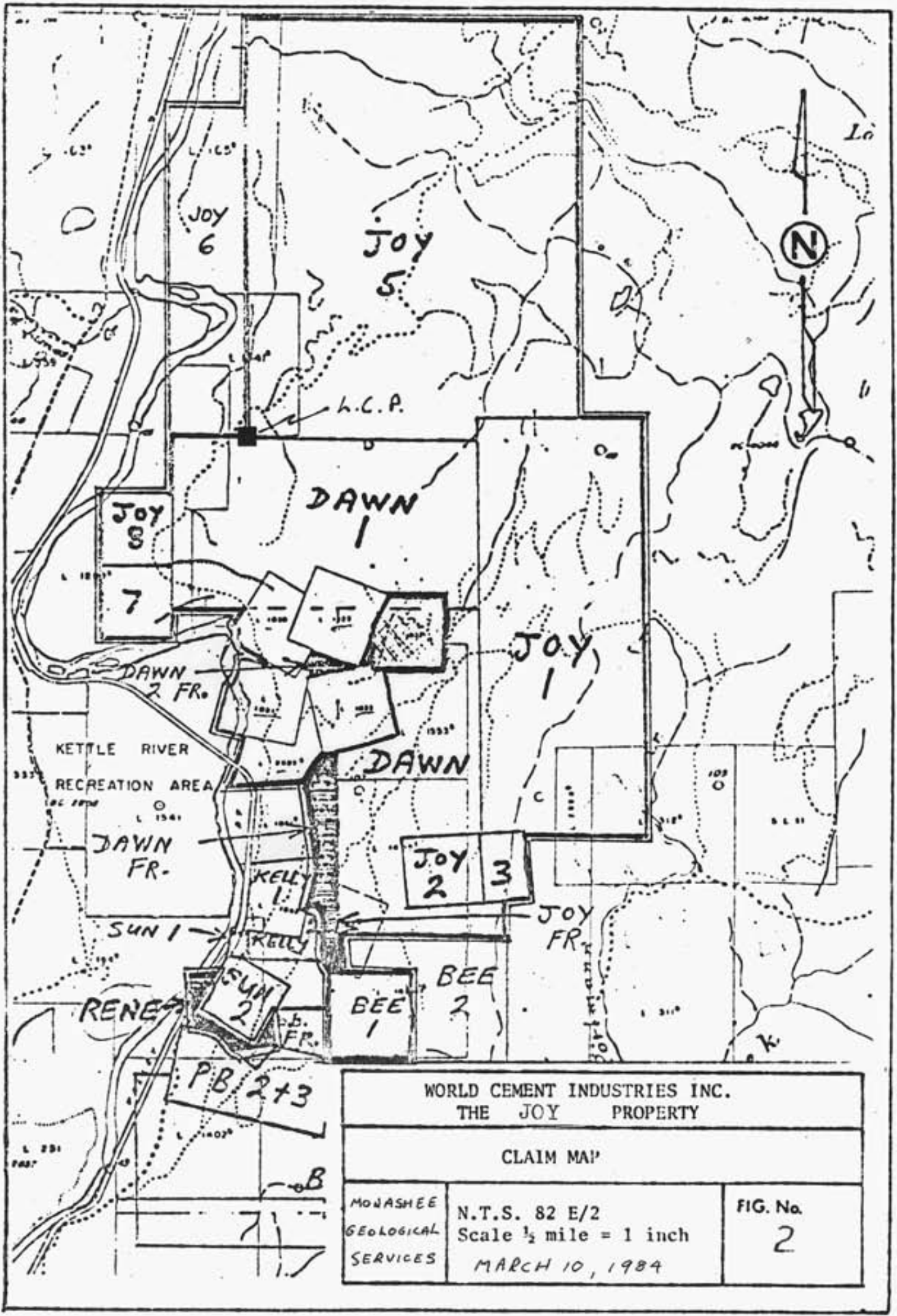
## LOCATION MAP



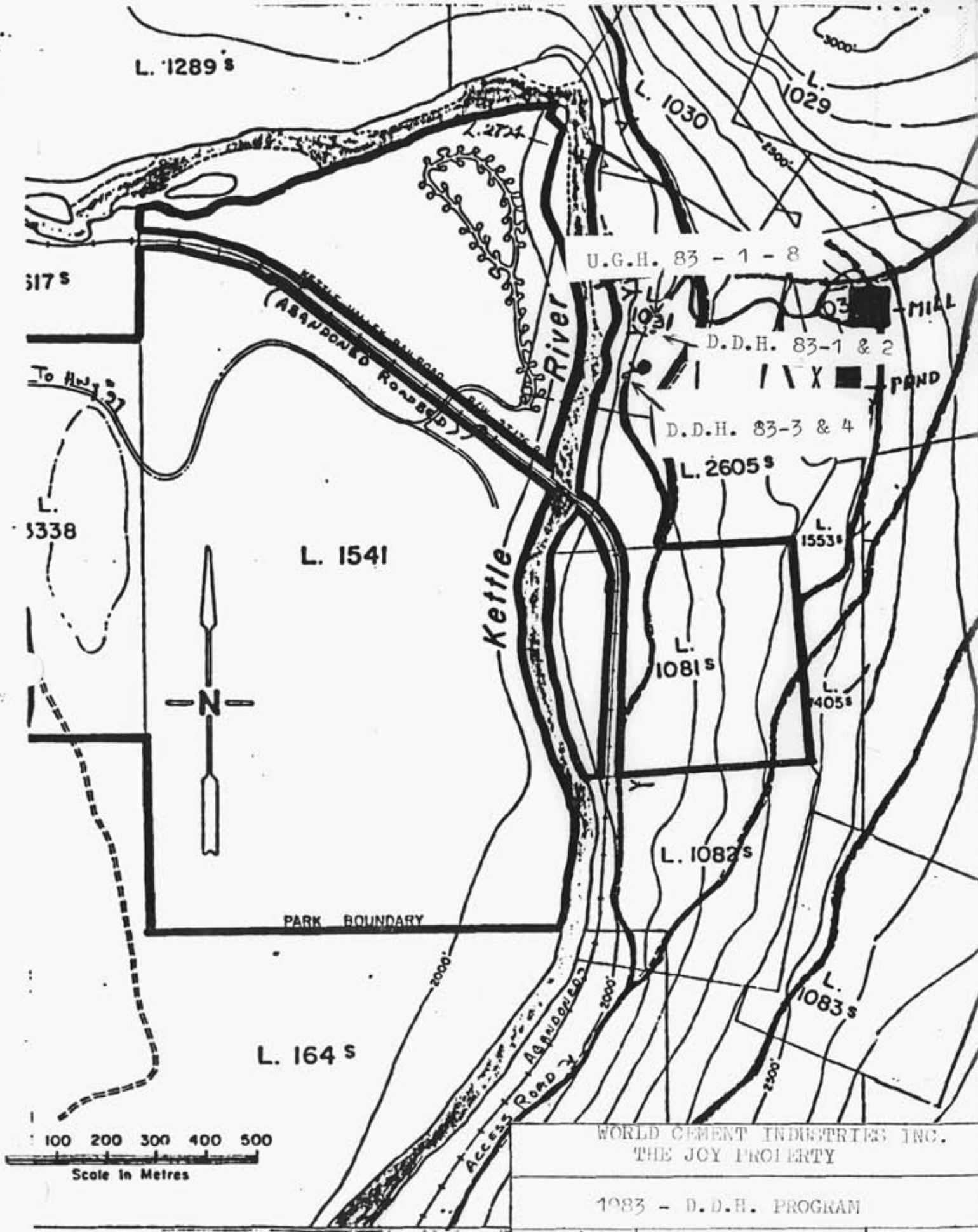
Monashee  
Geological  
Services

WORLD CEMENT INDUSTRIES INC.  
  
THE JOY PROPERTY

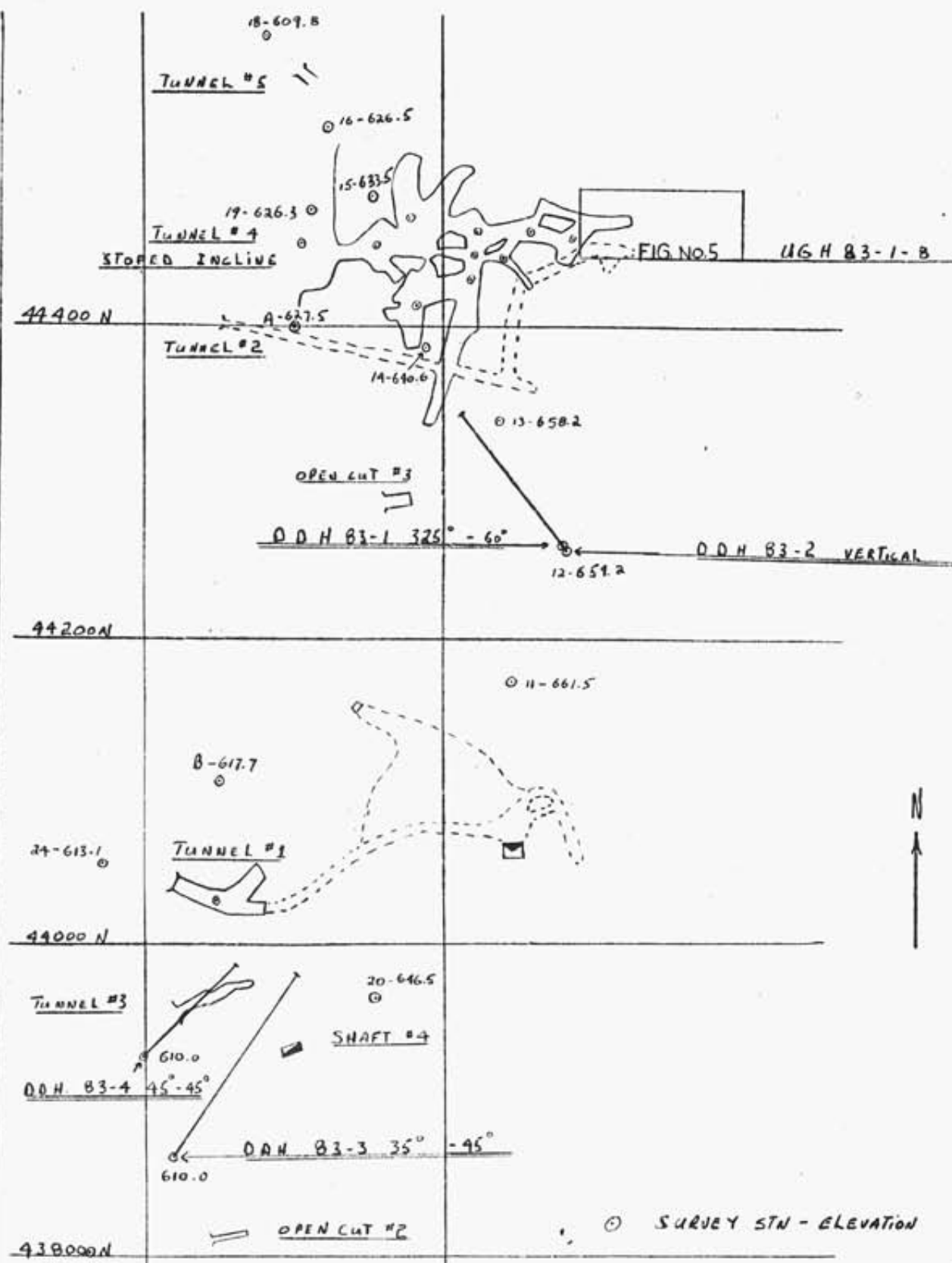
DATE  
March 10/84  
FIG. No.  
1



WORLD CEMENT INDUSTRIES INC. THE JOY PROPERTY		
CLAIM MAP		
MOJASHEE GEOLOGICAL SERVICES	N.T.S. 82 E/2 Scale 1/2 mile = 1 inch MARCH 10, 1984	FIG. No. 2



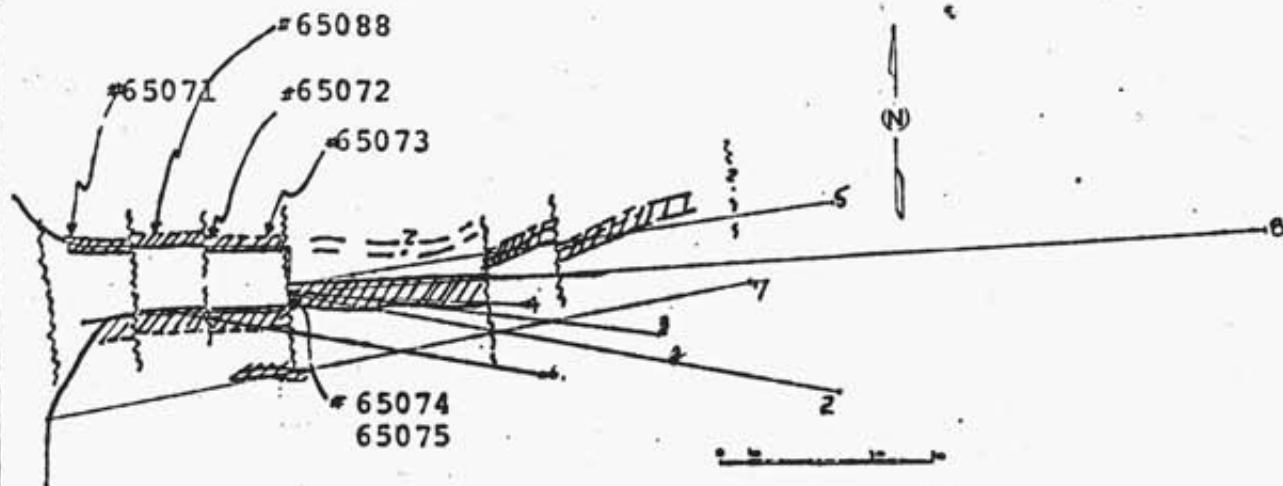
WORLD CEMENT INDUSTRIES INC. THE JOY PROPERTY		
1983 - D.D.H. PROGRAM		
monashee geological services	N.T. ... PPE/2W Scale 1:100 March 10, 1984	FIG. 3




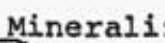

WORLD CEMENT INDUSTRIES INC.  
THE JOY PROPERTY

1983 - D.D.H. PROGRAM

monashee geological services	N.T.S. 82E/2W Scale appr. 1:1200 March 10, 1984	FIG. 4
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**LEGEND**

-  UGH 83-8 (underground drill hole)
-  Mineralized vein
-  #65071 Sample location

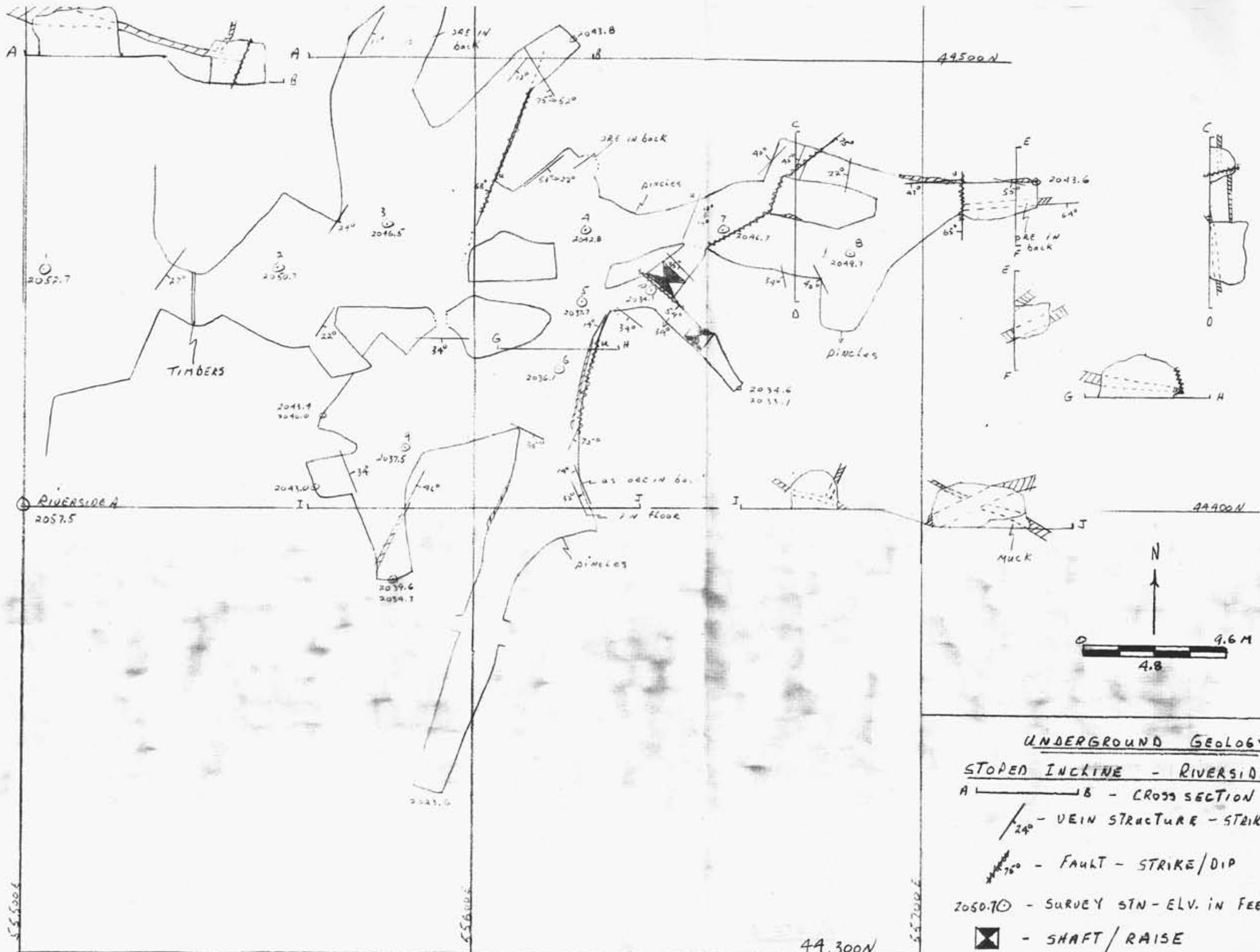
WORLD CEMENT INDUSTRIES INC.  
THE JOY PROPERTY

UNDERGROUND DRILLING 1983

**IGNA**  
engineering &  
consulting ltd.

N.T.S. 82 E/2  
Scale 1:250  
Aug. 18, 1983

FIG. No.  
**5**



UNDERGROUND GEOLOGY

STOPED INCLINE - RIVERSIDE C.G.

A ——— B - CROSS SECTION

$\frac{\text{---}}{27^\circ}$  - VEIN STRUCTURE - STRIKE/DIP

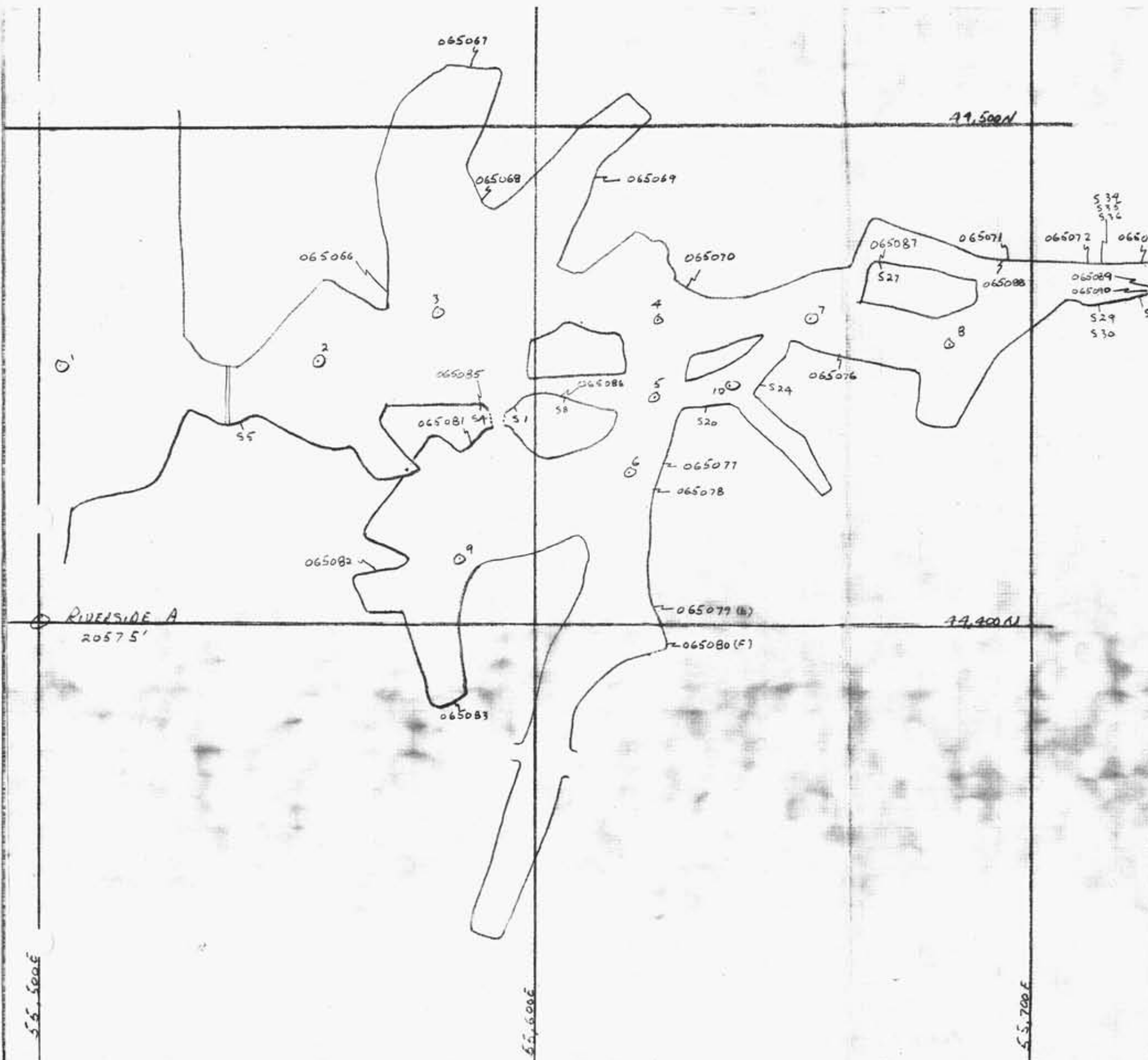
$\frac{\text{---}}{75^\circ}$  - FAULT - STRIKE/DIP

2050.70 - SURVEY STN - ELV. IN FEET

☒ - SHAFT/RAISE

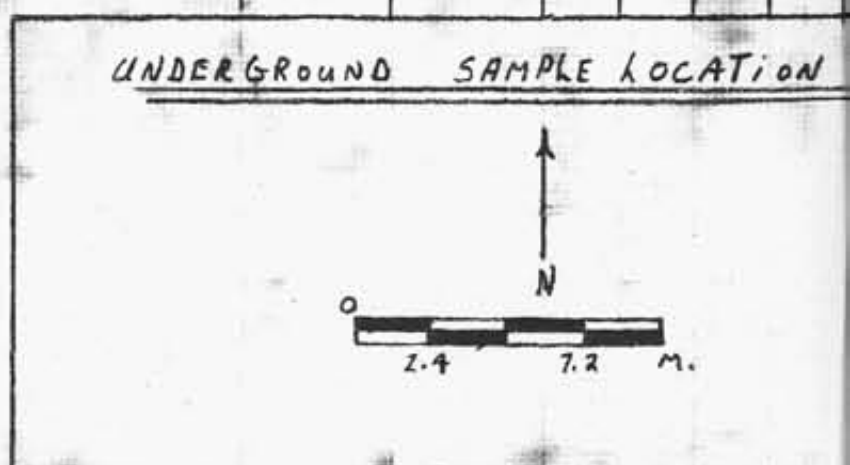
44,300N





	METERS				
065066	.92	.006	1.78	.19	.59
065067	1.83	.007	.81	.13	.26
065068	.76	.012	7.15	.49	1.68
065069	.61	.011	2.58	.62	1.31
070	.61	.004	1.92	.42	.68
071	.61	.027	7.45	.42	1.39
072	.46	.057	7.62	.37	2.38
073	.46	.064	5.56	.56	1.34
074	.46	.016	16.98	2.66	4.32
075	.76	.009	3.79	.87	1.33
076	.61	.082	1.23	.12	.19
077	.31	.012	7.80	.88	1.34
078	.46	.004	2.54	.52	.54
079	.61	.008	3.38	.70	1.24
080	.61	.005	2.03	.53	.48
081	.46	.012	4.82	.48	.73
082	.46	.007	2.39	.33	.78
083	.61	.003	.09	.01	.01
084	Grab	.008	.83	.15	.05
S1	2'	.10	30.09	1.80	
S4		.16	82.52	8.10	
S5		.04	10.08	2.50	
S8		.44	136.76	9.00	
S20		7%	3.36	0.50	
S24		.06	41.40	3.00	
S27	9"	.10	122.64	6.50	
S29		.16	88.10	11.00	
S30		.06	8.24	2.00	
S34	6"	.14	58.42	6.25	
S35	10"	.04	12.12	0.80	
S36		.16	12.48	0.60	
S39	7'8"	.07	12.18	1.25	
065085	.25	.051	22.85	2.32	1.78
086	.46	.035	31.70	1.65	3.46
087	.20	.037	24.40	1.36	2.16
088	.31	.112	49.80	2.72	3.54
089	.31	.021	11.80	3.46	5.93
090	.28	.009	3.09	.86	1.72

COMINCO LTD.  
1924  
SAMPLES



<b>MONASHEE</b>		CLIENT:		DDM No.	
<b>GEOLOGICAL SERVICES</b>		WORLD CEMENT INDUSTRIES INC.		83-1	
LOCATION: <u>RIVERSIDE PROPERTY</u>		NTS: <u>8 2E/2</u>	DATE COLLARED: <u>APRIL 1/83</u>	COMPLETED: <u>APRIL 9/83</u>	
BEARING: <u>325°/-60°</u>	ELEVATION: <u>659 M.</u>	LAT. <u>44, 262 N</u>	LONG. <u>55, 683 E</u>	CORE SIZE: <u>8 Q</u>	
GEOPHYSICAL LOG BY:			DATE:		
DATE CORE LOGGED: <u>APRIL 5/83</u>		LOGGED BY: <u>ROY KREGOSKY</u>		SCALE: <u>1:200</u>	

m	core depth	% rec.	description	tot.	stra.	miner.	alter.	sample no	assay results					
									Pb	Zn	Ag	Au	Cu	
	4.5		CASING											
	9.5		DARK green, altered volcanic-greenstone (qast.) soft, chloritic, calcareous				propylitized							
	11.3		Siliceous				pyritic silicified	38120	.01	.01	.01	.001		
	12.7	90%	Calc. qast.											
	14.3		Siliceous fracture @ 13m.				pyr. sp. py. calc.	38121	.01	.01	.01	.001		
	16.8		17.1, 18.3, 18.9, 21m. RECENTED WITH silica (Tuffaceous)				pyritic							
	18.3							38122	.01	.01	.01	.001		
	21.4		Epidote + pyrite stringers @ 22.9m.	10% to cube										
	22.9	85%							38123	.01	.03	.15	.002	
	27.5													
	28.1							38124	.01	.01	.01	.001		
	32.6													
	34.2	95%					MAR- posite pyr.							
	35.7						pyrochlore	38125	.01	.01	.01	.001		

70	m	core depth %	description	101	stra.	miner.	alter.	sample no	assay results				
									Pb	Zn	Ag	Au	Cu
	41.5		10CM. QZ STRINGER	60% CORE		MARAPOSITE PYRITE		38126	.01	.03	4.72	.005	
	41.8												
	44.8		TUFFACEOUS GREENSTONE			PYRITE STRINGERS		38127	.01	.01	.03	.001	
			SILICEOUS										
		90%					propylitic						
			PYRITE AS DISSEM- INATIONS + ON FRACTURE SURFACES			MINOR PYRITE							
	63.1	85%	30CM. MASSIVE SULPHIDE URIN	70% CORE		GALNA SPHALERITE		38128	1.76	4.92	0.50	.016	
	63.4												
	71.2		30 CM. SEMI-MASSIVE Pb			GALNA Sphal- erite pyrite.		38129	.19	.69	1.44	.050	
	71.5												
	73.2												
	75					DISSEMINATED PYRITE		38130	.04	.15	.17	.002	
	77.2		MARAPOSITE + EPIDOTE			MINOR PYRITE							
		95%	SILICEOUS TUFFACEOUS GREENSTONE										

**MONASHEE  
GEOLOGICAL SERVICES**

CLIENT: **WORLD CEMENT INDUSTRIES INC.**

DDM No. **83-2**  
Sheet **1** of **3**

LOCATION: **RIVERSIDE PROPERTY** NTS: **B2E/2** DATE COLLARED: **APRIL 4/83** COMPLETED: **APRIL 7/83**

BEARING: **VERTICAL** ELEVATION: **659 M.** LAT. **44,262 N** LONG. **55,683 E** CORE SIZE: **6Q**

GEOPHYSICAL LOG BY: \_\_\_\_\_ DATE: \_\_\_\_\_

DATE CORE LOGGED: **APRIL 8/83** LOGGED BY: **ROY KREGOSKY** SCALE: **1:200**

m	core depth	% rec.	description	vol	stra.	miner.	alter.	sample no	assay results								
									Pb	Zn	Ag	Au	Cu				
	3.7		CASING														
	7.8	95%	ALTERED ANDESITIC IX - MODERATELY SILICEOUS, QTZ STRINGERS @ 6.2 M.			Amphib Through out	propilitic										
	8.8		pyrite as dissemm- inations +					038131	.01	.01	.01	.001					
	10.1		ON FRACTURES					38132	.01	.01	.01	.001					
	12.2		MARAPPOSITE, Epidote rock bleached			pyr. sulf.		38133	.01	.01	.01	.001	.04				
	13.1																
			fractured @ 16.8, 19.5 M.			diss. pyr. + c.p.											
	23.8	90%	SOFT, BLACK-GREEN GREENSTONE F.9.			diss. c.p.											
	24.7																
	28.9		S.M. MASSIVE ZONE			galena c.p.		38134	.3	.36	.34	.002	.02				
	29.6																
			M.g. greenstone														

to	m	core % depth rec.	description	to:	stra.	miner.	alter.	sample no	assay results					
									% Pb	% Zn	oz/t Au	% Ag	% Cu	
			M. g. GREENSTONE				prop. litic							
	43.9		} Qtz zone.	45° to core		diss. pyr.	↓	38135	.01	.01	.01	.001	.00	
	47	65%						3 cm. MASSIVE stringer	45°	pyr. cpr.	38136	.03	.13	.73
	54													
	57.2		F. g. Tuff. qast. Minor cpy. with epidote altered zones			pyritic								
		95%	M. g. - r.c. g. qast.											
	65.2													
	67.4		} Qtz stringers					38137	.01	.02	.05	.001	.01	
	70	100%												
			F. g. Tuff. qast.	45°										
			M. g. qast. silicified.											
			pyrite mainly on fracture surfaces											
91.4	82.5	70%	} 6 cm. massive stringer			pyr. galena		38138	.04	.11	.39	.008		
	82.7	80%						brecciated zone. qtz stringers		maerposite pyr.	38139	.01	.04	.17
	87.1													
	89.4							38140	.01	.01	.01	.001		

90 m	core depth % rec.	description	loc.	stra.	miner.	alter.	sample no	assay results						
	95.6	M. g. Chalkitic, CALCAREOUS GREENSTONE.				propilitic								
	96	}				Strongly pyritic								
	102.8													
	104.3		104.7				diss. pyr. +	38141	.01	.01	.01	.001	.21	
	106.1	F. g. TuFFaceous GREENSTONE				CPY.	38142	.01	.01	.01	.001	.18		
	109.8	}												
			END OF HOLE 83-2 109.8 M.											
		SLUDGE SAMPLES												
							103.1-104.6 M. 38148		.01	.001				
							104.6-106.8 38149		.01	.001				
							106.8-108.6 4856		.01	.001				
							108.6-109.8 4857		.01	.001				
		Ray Keganey +												

LOCATION: RIVERSIDE NTS: B2E DATE COLLARED: APRIL 8/83 COMPLETED: APRIL 9/83

BEARING: 35°/45° ELEVATION: 610 M. LAT. 43,865N LONG. 55,419E CORE SIZE: BQ

GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED: APRIL 10/83 LOGGED BY: ROY KREGOSKY SCALE: 1:200

m	core depth	% rec.	description	dip	stra.	miner.	alter.	sample no	assay results				
									Pb	Zn	Ag	Au	
			CASING										
	6.8		GREEN F.G. CALCAREOUS GREENSTONE CAL. ON FRACTURE SURFACES				propilitic						
	16.6		16.2	65°		pyrite	Silicified	38173	.01	.01	.02	.001	
	17.1		SHEAR & SILICIFIED M.G. PYRITIC QNST.					38174	.01	.01	.01	.001	
	18.3												
	18.6												
20.1	20.3	75%	22.3	65°		pyritic MINOR GALENA SPHALERITE		65062	.80	1.65	8.51	.012	
			F.G. TUFFACEOUS QNST. SILICEOUS										
						MINOR DISS. PYR.							
	32.3												
	33.2							38145	.01	.01	.01	.001	
	34.2												
	35.7							38146	.01	.01	.01	.001	
			37	40°		pyritic							
			F.G. TUFF DISS. + ON FRACTURES										

70 m	core depth % rec	description	10     	stra.	miner.	alter.	sample no	assay results			
								Pb	Zn	Ag	Au
	41.2	Fg. Tuff OFTEN WITH BRECCIA CLASTS AND LAMINATED	66° bedding Lamination		PYRITIC		38147	.01	.01	.01	.001
	42.7										
	53.1	GREY-GREEN DIKE ROCK PORPHYRITIC	45° CONTACT		PYRITIC						
	60.1										
	61	Fg. Tuff	35° CONTACT								
		END OF DDH 83-3 61 M.									
		SLUDGE SAMPLES									
							47.9-49.7M	4858	.01	.001	
							49.7-50.3M	4859	.01	.001	
		ROY KEGORLY *									



MONASHEE  
GEOLOGICAL SERVICES

CLIENT: WORLD CEMENT INDUSTRIES INC

DDM No. 83-4  
Sheet 1 of 1

LOCATION: RIVERSIDE NTS: B2E/2 DATE COLLARED: APRIL 14/83 COMPLETED: APRIL 14/83

BEARING: 45°-45° ELEVATION: 610 M. LAT. 43935 N LONG. 55,400 E CORE SIZE: BCX

GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED: APRIL 11/83 LOGGED BY: ROY KREGOSKY SCALE: 1:200

m	core depth	% rec.	description	tot.	stra.	miner.	alter.	sample no	assay results				
									Pb	Zn	Ag	Au	
			CASING										
9.8	9.5	70%	SEMI-MASSIVE MINERAL QTZ. VEIN MAINLY PYRITE.	55°	cont	SPHALERITE PYRITE	prop. litic	65051	.01	.01	.07	.001	
13.3	13.1	95%	M. G. GREENSTONE										
	13.7		SEMI-MASSIVE MIN. QTZ VEIN	62°	CONTACT			65052	.03	.12	2.14	.006	
	14.4			60°	CONTACT			65053	.01	.03	.14	.001	
			M. G. GREENSTONE		CONTACT		diss. pr.						
		95%											
25	25.6	85%		58°	CONTACT			65054	.01	.01	.01	.001	
	27.2		F. G. TUFF SILICEOUS				pyritic	65055	.01	.01	.01	.001	
		40%											
	31.7												
	33.3							65056	.01	.02	.12	.001	
			END OF DDH 83-1 36.6 METERS										
			Roy Kregosky										

LOCATION: **RIVERSIDE, HDT # 4** N.T.S.: **82 E** DATE COLLARED: \_\_\_\_\_ COMPLETED: \_\_\_\_\_

BEARING: **100° Horiz** ELEVATION: \_\_\_\_\_ LAT. \_\_\_\_\_ LONG. \_\_\_\_\_ CORE SIZE: **BQ**

GEOPHYSICAL LOG BY: \_\_\_\_\_ DATE: **J**

DATE CORE LOGGED: **JULY 4, 1988** LOGGED BY: **I. BOROVIC** SCALE: **1:100**

m	core depth	% rec.	description	tol.	stra.	miner.	alter.	sample no	assay results								
									Pb	Zn	Ag	Au					
1			QUARTZ VEIN WITH FINE GRAINED PYRITE, GALENA DISS. MINERALIZATION														
2	2.44	45	GREEN MARIPOSITE IN FRACTURES					065105									
3	2.74	100	294m END OF MASSIVE MIN.					065106									
4	3.96	65	LIGHT GREEN, ALTERED VOLCANIC, W. QUARTZ, CALCITE VEINS (TUFF!)														
5	4.60	95	4.60 <del>4.80</del> VEIN														
6	5.50	60	5.55 <del>5.72</del> CHEALT TUFF DISC. PY (PB) THROUGHOUT														
7	7.31	20															
8	8.51	65	GREEN - DARK GREEN COARSE-GRAINED TUFF FR'S WITH CHL (CHI), (HEM) ALT.														
9	9.44	60															
10	9.74	100															
11	11.30	100															
12		100															
13	12.20																
			EOH UG 483-1														
			By <i>[Signature]</i> as agent for <i>[Signature]</i>														

LOCATION: **RIVERSIDE, ADIT #4** NTS: **82 E** DATE COLLARED: \_\_\_\_\_ COMPLETED: \_\_\_\_\_

BEARING: \_\_\_\_\_ ELEVATION: \_\_\_\_\_ LAT. \_\_\_\_\_ LONG. \_\_\_\_\_ CORE SIZE: **BQ**

GEOPHYSICAL LOG BY: \_\_\_\_\_ DATE: \_\_\_\_\_

DATE CORE LOGGED: **JULY, 4, 1983.** LOGGED BY: **1 BOROVIC** SCALE: **1:100**

m	core		description	vol	stra.	miner.	alter.	sample no	assay results					
	depth	% rec.												
1		60	BROWNISH GRAY, WHITE QUARTZ, PYRITE, MINOR VEIN			P <sub>2</sub> , Pb, MARIPOS. IN FR. OF CORE		065113 120						
2	2.44		2.16 MASSIVE SULF. VEIN MARIPOS, CHL, Q, PY - Pb			(MINOR ?)		065114 5.72						
3	1.90	90	DISSECT. FINE, THROUGH THE ROCK			DISS. PY								
	3.35	100												
4	3.96	100	10cm MASSIVE SULF.			P <sub>2</sub> , Pb								
	4.30m													
5		100	4.75m Q, CHL, P <sub>2</sub> , Pb			VEIN								
	5.50		COARSE-GRAINED TURN GRAY TO GREENISH			DISS. PY								
6	5.80	100	W. CHL, QUARTZ VEINS											
	6.40	100	FRAGT. W FOCIS											
7	7.00	90	SLICED SLIDES W. CHLORITE MINERALIZATION											
8	7.90	75	DISS. PY/Pb (MARIP)											
	8.50	95	CHL, QUARTZ.											
9	9.43	100												
10		95												
	10.35													
11		95												
12	11.90													
13	13.00	100												
14	14.00	100	12.60			P <sub>2</sub> , Pb MARIP.		14						
	14.60	95	14.00			DISS PY (Pb)								
15		95												
16	15.33													
	16.44	90												
17	17.05	100												
18	18.30					0.5m.								
19														
20			EAH 83-2,											

*Rory Regan*

SPLIT 140 TO SAMPLES. - ADIT #4

LOCATION: **RIVERSIDE ADIT #4** NTS: **82 E** DATE COLLARED: **JULY 3/82** COMPLETED: **JULY 4/82**

BEARING: ELEVATION: LAT. LONG. CORE SIZE: **BQ**

GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED: **JULY, 4, 1983** LOGGED BY: **I. BOROVIC** SCALE: **1:100**

m	core % depth rec.	description	lith.	stra.	miner.	alter.	sample no	assay results			
								Pb	Zn	Ag	Au
1	80	QUARTZ, (CALC) VEIN WITH Pb, Pb, BIARIT. MASSIVE			Pb, Pb, BIARIT		065101				
2	2.44						2065102				
3	3.35						3065103				
4	4.30	4.00					4065104				
5	5.50	100 COARSE TUFF W. CALC, QUARTZ VEINS MINOR CHL, FELDSP.									
6	6.40	100									
7	6.70	100									
	7.20	100									
8	7.90	95									
9	9.13	100									
10	10.65	100									
11	11.90	95									
12	12.20	95									
		EOH UGH 83-3									
		<i>Ray Gregory</i>									

CALC

LOCATION: **RIVERSIDE**      NTS: **82 E**      DATE COLLARED: **JULY 4/83**      COMPLETED: **JULY 4/83**

BEARING:      ELEVATION:      LAT.      LONG.      CORE SIZE:

GEOPHYSICAL LOG BY:      DATE:

DATE CORE LOGGED: **JULY 5, 1983.**      LOGGED BY: **I. BOROVIC**      SCALE: **1:100**

m	core depth	% rec.	description	tot.	stra.	miner.	alter.	sample no	assay results				
1		75	QUARTZ (CALCITE) VEIN WITH MASSIVE PYRITE, GALENA, MALACHITE MINERALIZATION										
2	2.13							2 065107					
3		90						3 065108					
4	3.65							4 065109					
5	4.87	100						5 065110					
6	5.78	100						6 065111					
		100						6.3 065112					
7	6.85		GREEN COARSE TUFF W. CALC. (QUARTZ) VEINETS										
		95											
	7.61												
			E04 UGH 83-4										
			<i>Ray Hegarty</i>										

- CALCITE -

LOCATION: **RIVERSIDE, ADIT #4** N.T.S.: **82E** DATE COLLARED: **JULY 5/83** COMPLETED: **JULY 6/83**  
 BEARING: ELEVATION: LAT. LONG. CORE SIZE: **59**  
 GEOPHYSICAL LOG BY: DATE:  
 DATE CORE LOGGED: **JULY 6 & 7 1983** LOGGED BY: **I. BOROVIC** SCALE: **1:100**

m	core depth	% rec.	description	101	stra.	miner.	alter.	sample no	assay results
1		50	GRAYISH, DARK GREEN FINE GRAINED TUFFS WITH QUARTZ - GALE. VEIN.				MAJORITY CHLORITIC AZT. VEINS WITH QUARTZ & (CALCITE)		
2	2.44		THE ROCK IS SOFT AND FRAGILES ARE		VEIN - IDY			06515	
3	3.35	100	MINES WITH QUARTZ (CALC), HYDRATED. AIRR. AROUND VEINS.		VEIN - IDY			06516	
4	4.30	90	MINE: MAJORITY DISS. PY WITH SOME GALENA.		20° Q vein				
5	5.50	95							
6	5.80	100							
7	6.40	100							
8	7.21	100			VEIN - IDY			06517	
9	7.81	100			Q			06518	
10	8.90	100	290 Q, CHL, MAJORITY. Py VEIN. ENDS CONTAINS AT 150 TO 200.		0°		Q DISSECT BY 20° TO CORE QUARTZ VEINS	06519	
11	9.74	100	FINE GRAINED GREEN TUFF W. CHL				DISS. PY		
12	10.65	100	AIR. AROUND FEW QUARTZ.						
13	12.00	95	Q, MAJORITY, PY (PB) VEIN				PY, MAJORITY	06520	
14	13.10	100	FINE GRAINED TUFF						
15	14.30	95							
16	15.00	100							
17		100					STRONG HYDRATED AZT. // TO VEINS		
18	16.00				Q, CHL VEIN		cutting main STR.		
					0° Q VEINS (CHL)				

CHL CITE - THROUGHOUT

EDM UGH 83-5

*Roy Gregory*

**IGNA** engineering & consulting ltd.

CLIENT: *WORLD CEMENT IND*

DDH No. *UG4 23-6*  
Sheet *1* of *1*

LOCATION: *RIVERSIDE, A217-7* N.T.S.: *823* DATE COLLARED: *JULY 6 83* COMPLETED: *JULY 7/83*  
 BEARING: ELEVATION: LAT. LONG. CORE SIZE: *BQ*  
 GEOPHYSICAL LOG BY: DATE:  
 DATE CORE LOGGED: *JULY 7 & 8 1983* LOGGED BY: *I. BOROVIC* SCALE: *1:100*

m	core depth	% rec.	description	vol.	stra.	miner.	alter.	sample no	assay results				
1			<i>15m CASING</i>										
2	<i>2.44</i>	<i>50</i>	<i>GREEN TUFFS W. R. (CALC) VENS &amp; VEINIS WITH PH. CAL.</i>	<i>30</i>		<i>16% S, PL</i>	<i>CHLORITIC ACT.</i>	<i>065121</i>					
3	<i>3.04</i>	<i>100</i>	<i>MARIP, CHL.</i>										
4	<i>4.00</i>	<i>85</i>	<i>STRONGER CHL. ALT AROUND SVAPA. VENS</i>										
5	<i>4.90</i>	<i>90</i>		<i>20</i>		<i>4-20 Py, Pl MAR.</i>		<i>065122</i>					
6	<i>5.20</i>	<i>100</i>				<i>5-20</i>							
7	<i>6.10</i>	<i>90</i>		<i>40</i>		<i>5-12 Py, Pl</i>		<i>065123</i>					
	<i>7.30</i>	<i>85</i>		<i>3</i>		<i>7-20 Py, Pl</i>		<i>065124</i>					
8	<i>7.90</i>	<i>95</i>											
	<i>8.20</i>	<i>100</i>											
9	<i>9.00</i>	<i>100</i>		<i>3</i>		<i>8-30 S, PL</i>							
10	<i>10.00</i>	<i>100</i>			<i>20-20</i>	<i>Q, CHL</i>	<i>CHL</i>						
11	<i>11.00</i>	<i>90</i>											
12	<i>11.60</i>	<i>95</i>											
	<i>12.00</i>	<i>50</i>											
	<i>12.50</i>	<i>100</i>											
13	<i>13.10</i>	<i>100</i>											
			<i>END UG4 23-6</i>										
			<i>Ray Keady</i>										

LOCATION: RIVERSIDE, ADT #4

N.T.S.: 83E/2

DATE COLLARED: JULY 8/83

COMPLETED: JULY 10/83

BEARING:

ELEVATION:

LAT.

LONG.

CORE SIZE: B-Q

GEOPHYSICAL LOG BY:

DATE:

DATE CORE LOGGED: JULY 10/1983

LOGGED BY: I. BOROVIC

SCALE: 1:100

m	core		description	vol.	stra.	miner.	alter.	sample no	assay results				
	depth	% rec.											
1	0.90	30	GREENISH GRAY FINE GRAINED TUFF W. NUMEROUS Q, CHL & CALO. VEINS AND VEINLETS.				al, epi R, cmc						
	1.70	70											
	1.50	90											
2	2.10	90											
	2.44	95											
3	2.74	95											
	3.65	100											
4													
5	5.00	90											
6	6.00	90											
	6.60	100											
7	7.30	100											
8	8.22	90	Q, CHL, R, PL, KALIF. A VEIN			Pl, R, HMT		065133					
	9.44	100											
9	9.44		GREENISH GRAY, FINE TO MED. GRAINED TUFF				al, epi alt						
	10.00	100											
10	10.65	100	STRONG, CHL (EPI) ALT. NUM. VEINS & VEINLETS W. Q, CALO, CHL.			Strong DSS Ry							
	11.30	100											
11	11.30	100											
	12.50	100											
12	12.50	100											
	13.10	95											
13	13.10	95											
	14.00	100											
14	14.00	100											
15	15.50												
16	16.90	15											
	16.70	110											
17													
18	18.20	100	FINE GR. CRISTALL. (?) (TUFF?) MORILL										
	18.30	95											
19	19.80	100											
20													





LOCATION: RIVERSIDE - ABT #4

N.T.S. 82E/2

DATE COLLARED: JULY 10/83

COMPLETED: JULY

BEARING:

ELEVATION:

LAT.

LONG.

CORE SIZE: 80

GEOPHYSICAL LOG BY:

DATE:

DATE CORE LOGGED: JULY 11, 1983.

LOGGED BY: I. BOROVIC

SCALE: 1:100

m	core		description	101.	stra.	miner.	alter.	sample no	assay results				
	depth	% rec.											
1	0.00	75	QUARTZ, Py, GALENA, SPH, MARIC. VEIN			Py, Pb, Sph, MARIC	CHL (epi)	065135					
2	1.83	85						065136					
		100											
3	2.74							065137					
	3.35	100	3.15 FINE GRAINED ACT. 100% W. (15%)	X				065138					
4	4.00	95	Q. vein	X				065139					
5	4.60	95	4.60 FINE GRAINED	Y									
	5.20	85	5.20 SLIGHT. MAR. TUFF										
6	6.10	100	QUARTZ, PYROXITE, GALENA, SPH. MARIC. VEIN										
7	7.30	95	GREEN CHANSE. TUFF SAME ZEPHYRUS. MARIC. TUFF										
8	7.90	95											
9	9.44	100											
10													
11	11.00	100				Py, Pb		065141					
12	12.20	100											
13		100											
14	12.70												
15		100	TUFF MARIC. W. Py, Pb, Sph, MARICUS. STRONG ACT.	35		Py, Pb, Sph, MARIC.	CHL (epi)	065142					
16	15.25												
17		100	FERRY TUFF, QUARTZ VEIN WITH MARIC.	30		MARIC	CHL	065143					
18	16.74		DARK GREEN CORAL TO MED. CR. TUFF WITH QUARTZ VEIN										
19	17.70		MARIC. QUARTZ AND CHL (epi) ACT.										
20	19.20	75											

m	core		description	fol.	stra.	miner.	alter.	sample no	assay results				
	depth	% rec.											
20	20.70	100	GREEN, FINE TO COARSE TUFF, WITH NUMEROUS VEINS & VEINLETS OF QUARTZ, OPI, CHL.			((Py)) IN SUCCESSION - PL, ZPI VEINS							
21	21.60	100											
22													
23	22.89	100											
24	24.40	100											
25		100											
26	25.20	100	FINE GRAINED GREEN TUFF W. VEINLETS OF QUARTZ, OPI.										
27	26.80	100	(SAND EQUIVALENT)										
28	28.00												
29	28.60	85	GREEN SAND TO FINE TUFF. N. NUMEROUS OPI, CHL. VEINS.										
30	30.00				20°		epi-chl						
31	30.75	20			40°		epi-chl						
	31.66	20			10°		epi-chl						
			E011 UG1103-8										
			Ray Kennedy #										

# Monashee Geological Services

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Westbridge, B.C. V0H 2B0

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Page 25

## INTRODUCTION

The 'Joy' property is located approximately 8 kilometers north of Rock Creek, B.C. (Plate 1&2) on the east bank of the Kettle River. Access is from B.C. Highway 33 across the Kettle River bridge in Rock Creek and then along a Forestry development road. A number of old logging roads provide good access throughout the claims.

The topography on the property (plate 2) is moderate to steep with elevations being 610 meters along the Kettle river to more than 1 kilometer in the eastern portions. Exposure is generally westerly with slopes being covered in secondary growth coniferous forests. There is ample timber and water resources available for exploration and development work. Basic facilities and services are provided in Rock Creek with major commercial centres being Osoyoos to the west and Grand Forks to the east.

## PROPERTY HISTORY

In 1982, the 'Joy' property was acquired by World Cement Industries Inc. of Vancouver, B.C. by location and option. The property consists of the following mineral claims;

<u>Name of claim</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>No. of Claims</u>
Commonwealth	1440	July 28, 1988	1 claim
Dawn	3811	July 8, 1985	8 units
Dawn 1	3812	July 8, 1985	8 units
Dawn FR	3813	July 8, 1984	1 claim
Dawn 2 FR	3814	July 8, 1984	1 claim
Joy FR	3488	Feb. 17, 1984	1 claim

<u>Name of claim</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>No. of Claims</u>
Joy 1	3185	July 28, 1985	10 units
Joy 3	3490	Feb. 17, 1984	1 claim
Joy 5	3487	Feb. 17, 1985	20 units
Joy 6	3702	Apr. 14, 1984	4 units
Joy 7	3718	Apr. 26, 1984	1 claim
Joy 8	3719	Apr. 26, 1984	1 claim
Rene	3688	Mar. 31, 1984	1 claim

Total Units .....58

World Cement holds option to purchase from Andrew Babiy

the following mineral claims:

Riverside	1671	July 19, 1986	1 claim
Riverside FR	1672	July 19, 1986	1 claim
HR Claim	1421	Jan. 25, 1987	1 claim
Bee 1	2583	Dec. 22, 1986	1 claim
Imperial 1 FR	2396	Aug. 27, 1987	1 claim
Big Eddie	1430	Mar. 5, 1987	1 claim

Total Units.....6

The 'Joy' group of claims acquired by World Cement Industries Inc. was staked on the Northeasterly trending extensions of the mineralized shear/vein structures that are exposed in the Crown Grants, Riverside (L1031), Big Eddy (L1030), H.R. (L1033) and Commonwealth (L1029). Exploration and development commenced on these Crown Grants in 1898 and progressed intermittently throughout the years and is well documented in the B.C.M.M. reports. Development work in the form of adits, crosscuts, raises and shafts indicates that lead, zinc, silver and gold mineralization ranges from .1% to 16.6% Pb, .1 to 7.8% ZN, 1 oz. to 324.7 oz. Ag and .03 oz. to .3 oz. AU. The most recent exploration work was carried out by World Cement Industries Inc. in 1982 and consisted of geophysical, geological and geochemical (I. Borovic, 1982) surveys. In the spring of 1983, World Cement Industries Inc. commenced a diamond drill program, both surface and underground, in an attempt to trace

possible extensions of the mineralized veins to the east.

### PROPERTY GEOLOGY

According to H.W. Little's geological map 6, 1957, the property is underlain by greenstones, greywackes and limestones of the Permian Anarchist Group. These rocks represent the oldest rocks in the area and are covered by sediments (conglomerate, sandstone, and shale) and acid volcanic rocks (dacite tuff and rhyolite flows and intrusions) of the Kettle River formation. Andesites, trachytes, tuffs and shales of the Phoenix Volcanic Group outcrop in the northern and eastern sectors of the property. Exploration has indicated that the 'Riverside' property is underlain almost exclusively by massive altered volcanic flows and fine to coarse grained tuffs. The altered flows and tuffs are classified as greenstones. These rocks when observed in the drill core vary from fine to coarse grained chloritic tuffs and flows of andesitic composition. Propylitization is the common form of alteration with chlorite, calcite and minor epidote being the major metamorphic minerals. The wall rocks exhibit contact metamorphism and are silicified due to the injection of the mineralizing hydrothermal fluids.

### DRILLING PROGRAM

The diamond drill program (Plate 684) was carried out during the month of April, 1983. During this period a total of four holes were collared for a total length of 298.9 meters.

<u>DDH</u>	<u>Azimuth</u>	<u>Dip</u>	<u>Length in Meters</u>
83-1	325 <sup>o</sup>	60 <sup>o</sup>	91.5
83-2	-	90 <sup>o</sup>	109.8
83-3	35 <sup>o</sup>	45 <sup>o</sup>	61.0
83-4	45 <sup>o</sup>	45 <sup>o</sup>	<u>36.6</u>
		Total	298.9

This program was supervised by Mr. D. Pringle, P. Eng. of Oliver, B.C. The field work and core logging was conducted by the author.

In addition to the above program, Mr. J. Stitt, P. Eng., surveyed, by transit, the surface workings (Plate 4) located on the 'Riverside' Crown Grant as well as some underground surveying (Plate 6&7) of a stoped incline. This incline was the location of the most recent development having been undertaken in 1980-81. It was worked by the room and pillar method using trackless equipment. To assist in the interpretation of the geology, structures and mineralization exposed in the incline, a number of days were spent wasing down the walls followed by geological mapping (Plate 6) and channel sampling of the mineralization (Plate 7).

In the first part of July, 1983, an underground drilling program (Plate 5) was conducted under the supervision of Mr. I. Borovic, P. Eng., Igna Engineering and Consulting Ltd. from Vancouver, B.C. A total of eight holes (BQ) were collared for a combined length of 138.67 meters.

<u>UGH</u>	<u>Azimuth</u>	<u>Dip</u>	<u>Length in Meters</u>
83-1	100°	0°	12.80
83-2	100°	-5°	18.30
83-3	97°	+4°	12.20
83-4	93°	0°	7.61
83-5	82°	0°	18.00
83-6	100°	-20°	13.30
83-7	85°	-20°	25.00
83-8	87°	0°	<u>31.66</u>
		Total	138.67

#### TECHNICAL DATA AND INTERPRETATION

The 1983 geological and drilling programs were conducted

in an attempt to ascertain the nature of the mineralized structures that are exposed in the underground workings of the Riverside C.G. as well as to trace the possible eastward extensions of the vein systems.

The geological mapping (Plate 5) of the underground incline has outlined the vein systems that have been intruded into the Permian Anarchist Group greenstones. These veins which vary in width from 20 cm. to 2.0 meters carry good silver values with low values in gold. Mineralization consists of pyrite, galena and sphalerite with frequently the distinctive colorings of mariposite. The system can be divided into two sets of structures. One structure strikes northwesterly with dips to the south while a second structure strikes northeasterly and has flat dips to the southeast. Mineralized zones range up to 3.5 meters in thickness where these two structures intersect. Both of the structures are frequently offset and displaced by N-S trending fault/shear zones. This displacement ranges from a few centimeters to over one meter. The results of the chip samples (Plate 7) indicates a considerable precious metal content giving the property a potential economic feasibility. Even though a number of the 1983 samples were obtained from sites almost identical to those sampled by Cominco Ltd. in 1924, this years assays were unable to compare with the high values (up to 136.76 oz/ton Ag.) obtained by the previous developers.

The surface drilling program was conducted in the vicinity of the old underground workings in an attempt to find eastward extensions of the mineralized veins. Diamond drill holes 83-1 and 83-2 (Plate 3&4) were collared to the southeast of the stoped incline with D.D.H. 83-3 and 83-4 (Plate 3&4) being



collared in the vicinity of tunnel #1 attempting to locate a down dip extension of the known structures. As can be seen from the core logs and assay results 83-1 (Plate 8&9) intersected three vein zones at 41.5 to 41.8, 63.1 to 63.4 and 71.2 to 71.5 meters. Assays range from 1.49 to 10.58 oz/ton Ag and .005 to .018 oz/ton AU. Diamond drill hole 83-2 (Plate 10-12) intersected three zones of low grade mineralization at 28.9 to 29.6, 47.0 to 47.3 and 80.5 to 81.1 meters. Assays range from 0.34 to 0.73 oz/ton Ag and from 0.002 to 0.008 oz/ton AU. Diamond drill hole 83-3 (Plate 13&14) intersected one narrow vein at 20.1 to 20.3 meters with 8.51 oz/ton Ag and 0.012 oz/ton AU. Diamond drill hole 83-4 (Plate 15) cut a zone from 13.1 to 14.4 meters, two core samples assayed .14 to 2.14 oz/ton Ag and 0.001 to 0.006 oz/ton AU.

The country rock as observed in the drill core consisted of medium to coarse grained altered andesitic (greenstone) flows and fine grained tuffs which frequently display breccia/agglomerate textures. The greenstones and tuffs exhibit propylitic alteration with chlorite, clacite and minor epidote being the major metamorphic elements. Mineralization consists of pyrite, galena and sphalerite in the vein zones whereas the country rock has, in general, disseminations of pyrite and occasionally chalcopryrite. Pyrite also occurs as fine stringers associated with fracture surfaces. On occasions, small 1 cm. to 8 cm. semi-massive veinlets of mineralization were encountered in the drill core. Observations indicated a predominance of pyrite in these occurences which, when assayed, carried little economic values.

The underground drill program (Plate 5) was conducted in July, 1983 and was located on the eastern face of the stoped incline where geological mapping indicated a 50 cm. wide quartz vein that was striking to the east with steep dips to the south. Chip samples (Plate 7) taken from this location assayed: Pb, .86-3.46%; ZN, 1.33-5.93%; Ag, 3.09-16.98 oz/ton; AU, .009-.021 oz/ton. Similar assays (sample 65071/73 and 65088) were obtained from a parallel vein on the north wall. This program was supervised by Mr. I. Borovic, P. Eng., who states in his 1983 'Summary Report' to World Cement Industries Inc. that: "The (underground) holes were drilled in July, 1983 on the eastern face of Adit #4 (stoped incline), where a 50 cm. wide quartz, pyrite, galena, sphalerite, mariposite vein strikes to the east and dips at 64° to the south. The holes were drilled in order to follow and intersect, if possible, the vein zone to the east. The vein zone was extended for about six meters in holes UGH 83-4 & 8. Hole UGH 83-5 actually intersected the offset vein and probably an additional vein for about 11.5 meters. Physical conditions in the adit did not allow for better located drilling. Drill holes UGH 83-6&7 drilled at -20°, crossing each other intersected the vein at depth. Assays on UGH 83-6 show, also, considerable increase in gold content. Existing mineralized zones or veins were repeatedly faulted and displaced. Fault displacement is evident in Adit #4 and ranges from a few centimeters to one meter. The recent drilling in the east face of Adit #4 indicated a strong north-south faulting pattern, horizontally offsetting the mineralized vein by about 20 cm. to 1.0 meters (Plate 5)."

The core from the underground drilling program is currently being stored at Mr. M. Schram's residence in Ollala, B.C. Storage of the surface drilling core is located at the author's residence in Westbridge, B.C.

CONCLUSION

The results of the 1983 exploration program on the Riverside (11031) Crown Grant confirm both strike and dip extensions of the mineralized structures that are exposed in the underground workings. Both geological mapping and surface and underground diamond drilling indicate a strong though faulted and offset continuation of the vein systems. It is reasonable to assume that additional mineralized structures and veins could be encountered in the same stratigraphic level on other areas of the property with potential values ranging from 1.5% to 3.5% of Pb, 1.3% to 6.01% of Zn. 2.0 to 50 oz/ton Ag and 0.01 to 0.11 oz/ton Au. These results give the property an economic potential and therefore the necessity of further exploration work. It is recommended that the Joy property undergo an extended program of geophysical (VLF-EM) and geochemical surveying in an attempt to locate hidden vein structures and continuations of the veins that are exposed in the old workings.

ITEMIZED COST STATEMENT

1. B & M Drilling Inc., 437.57 meters of BQ core.....\$27,669.90  
(includes mobilization, accommodation & boxes)
2. D. Pringle, P. Eng., Surface diamond drilling  
program and contingencies @\$350.00/day.....\$ 3,707.04
3. J. Stitt, P. Eng., Underground surveying and  
contingencies 7 days @ \$250.00/day.....\$ 1,887.51
4. I. Borovic, P. Eng., Underground diamond drilling  
program and contingencies 16 days @ \$250.00/day.....\$ 5,994.85

5. R. Kregosky, BSc. Geology, 29 days @ \$150.00/day.....	\$ 4,350.00
6. M. Donahue, field assistant, 10 days @ \$50.00/day ..	\$ 500.00
7. Joker Mining & Exploration, Keremeos, Underground shift boss 14 days @ \$120.00/day.....	\$ 1,680.00
8. Drill site preparation & equipment moving.....	\$ 906.00
9. Core, sludge and chip sample assays	
101 Au @ 6.50/sample.....	\$ 656.50
96 Ag @ 3.50/sample.....	\$ 336.00
82 Pb @ 3.50/sample.....	\$ 287.00
81 Zn @ 3.50/sample.....	\$ 283.50
4 Cu @ 3.50/sample.....	\$ 14.00
101 Preparation @ 2.50/sample.....	\$ 252.50
10. Accommodation and meals combined total.....	\$ 709.16
11. Core splitter rental.....	\$ 330.57
12. Core shed (2).....	\$ 245.15
13. Report preparation 3 days @ \$200.00/day.....	\$ 600.00
	<hr/>
TOTAL	\$50,409.68

#### AUTHOR'S QUALIFICATIONS

I declare, that I, Roy D. Kregosky am a practising Geologist having graduated from the University of Calgary in 1971 with a Bachelor of Science degree in Geology.

*Roy Kregosky*