

K- Natal Ridge 67(6)A

RESERVE ESTIMATE CHARTS

Kaiser Resources Ltd.

~~CONFIDENTIAL~~

GEOLOGICAL BRANCH
ASSESSMENT REPORT

00 351

MMA 67(2)A
KAISER STEEL CORP

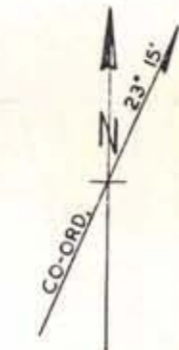
351

EXPLORATION 10 SEAM & 7 SEAM
MICHEL AREA, B.C.

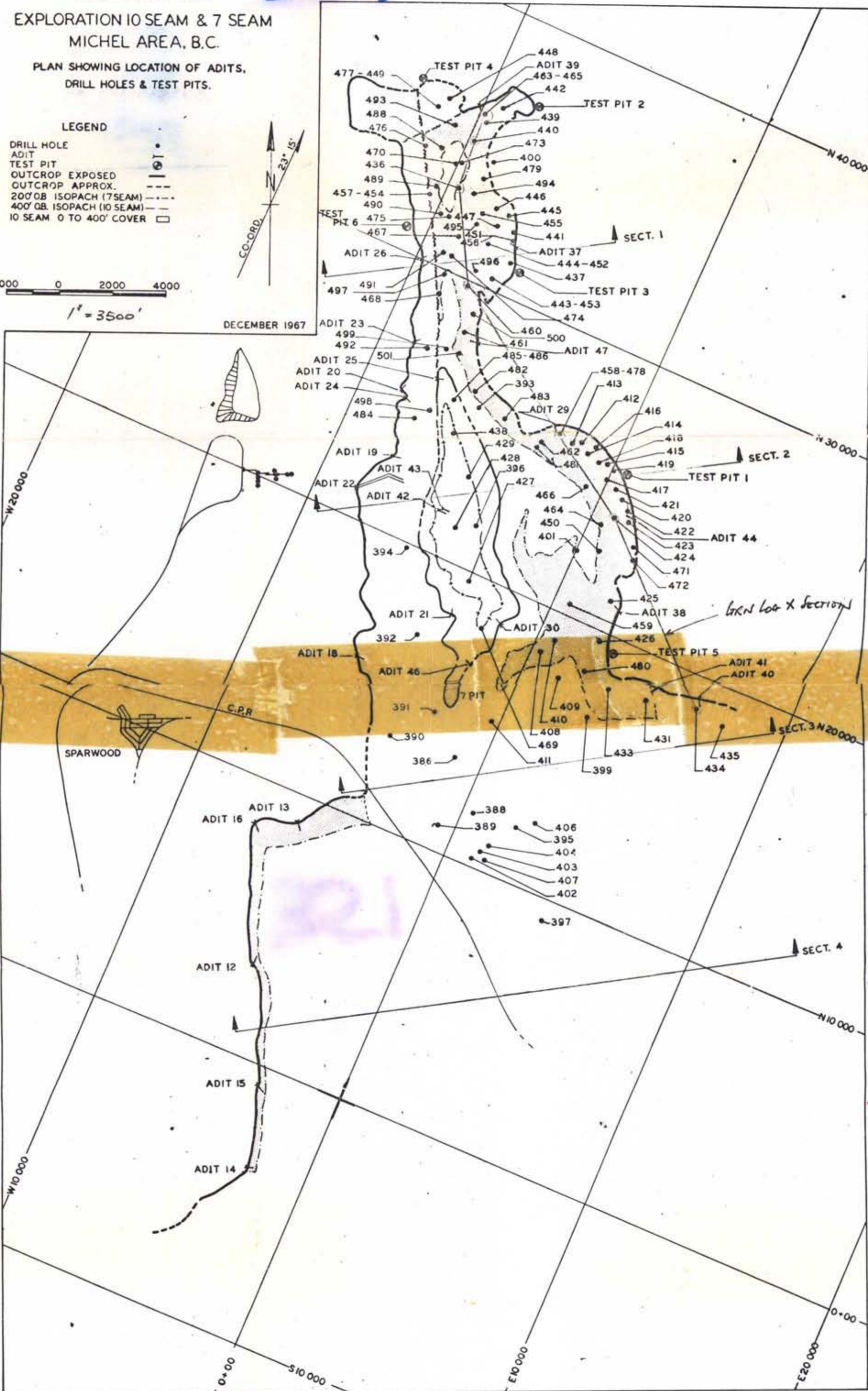
PLAN SHOWING LOCATION OF ADITS,
DRILL HOLES & TEST PITS.

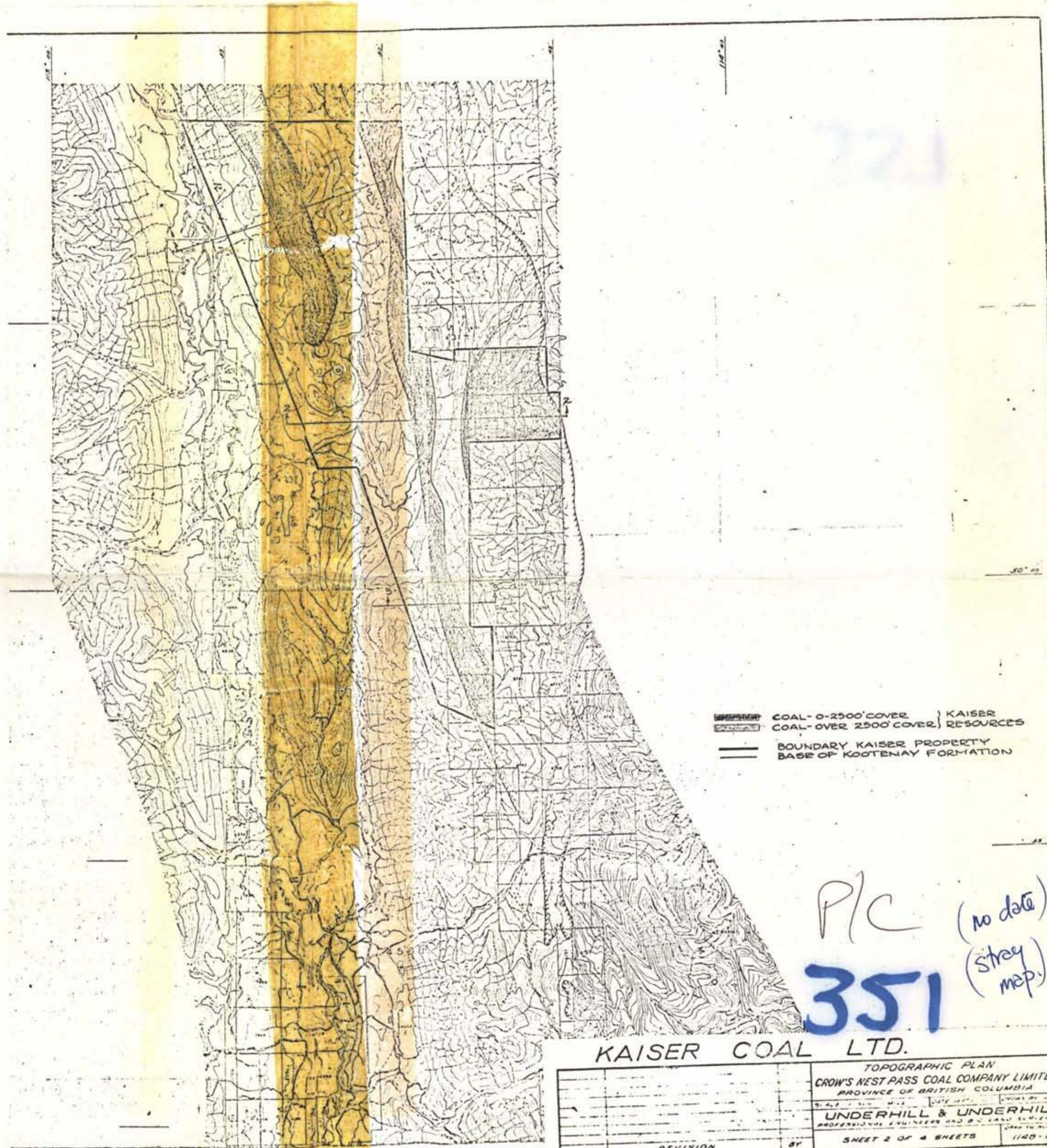
- LEGEND
- DRILL HOLE
 - ADIT
 - TEST PIT
 - OUTCROP EXPOSED
 - OUTCROP APPROX.
 - 200' QB. ISOPACH (7 SEAM)
 - 400' QB. ISOPACH (10 SEAM)
 - 10 SEAM 0 TO 400' COVER

2000 0 2000 4000
1" = 3500'



DECEMBER 1967





321

P/C (no date)
 (stacy map)
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KAISER COAL LTD.

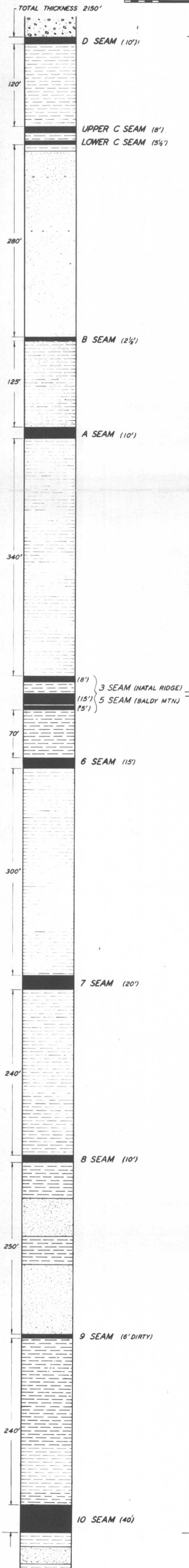
TOPOGRAPHIC PLAN CROW'S NEST PASS COAL COMPANY LIMITED PROVINCE OF BRITISH COLUMBIA		
UNDERHILL & UNDERHILL <small>PROFESSIONAL ENGINEERS AND SURVEYORS</small>		
DATE	REVISION	BY
SHEET 2 OF 4 SHEETS		1140-1

COMPOSITE STRATIGRAPHIC COLUMN
KOOTENAY FORMATION
BALDY MOUNTAIN-NATAL RIDGE AREA

JULY, 1967

LEGEND

COAL
SHALE
SANDSTONE
CONGLOMERATE



MEASURED SECTION - NATAL RIDGE, WEST SIDE.

COMPOSITE SECTION - D.H. 396 & D.H. 428.

AVERAGE ANALYSIS

H ₂ O	VOL.	F.C.	ASH	S.	F.S.I.	ADIT #
2.0	32.0	57.0	9.0		6 1/2	

0.9	31.0	58.1	9.0		7 1/2	C NORTH
1.4	29.5	60.1	9.0		8	C STRIP

0.5	25.0	65.5	9.0		8 1/2	A NORTH
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0.5	24.5	66.0	9.0		8	1 NORTH
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1.0	23.7	66.3	9.0		8 1/2	3 STRIP
-----	------	------	-----	--	-------	---------

1.5	22.3	67.2	9.0		8	ADIT 42
-----	------	------	-----	--	---	---------

1.2	20.4	69.4	9.0		7	STRIP
-----	------	------	-----	--	---	-------

1.0	20.0	70.0	9.0		6	ADIT 17
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1.0	19.8	70.2	9.0		7	BALNER NORTH
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AREA: NATAL RIDGE
 TABLE NO: 29
 RESERVE ESTIMATE - (0-1500' COVER)

OPEN FILE

SEAM NAME	AVG. THICK.	PITCH 0-15°							PITCH 15-30°							PITCH 30-90°							CUMULATIVE TOTALS - RECOVERABLE RESERVES									SEAM NAME								
		TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	OPEN PIT MINING			UNDERGROUND CONVENTIONAL			UNDERGROUND HYDRAULIC				TOTALS (000's TONS CLEAN)							
																							PROVEN	PARTIALLY EXPLORED	PROJECTED	PROVEN	PARTIALLY EXPLORED	PROJECTED	PROVEN	PARTIALLY EXPLORED	PROJECTED									
D	7.0	1,395	B	O	1,186	87.5	1.60	1,038																											1,038	D				
C	7.0	3,788	B	C	568	80.0	1.70	455																										455	C					
A	15.0	13,062	B	C	6,459	83.2	1.50	5,374																										5,374	A					
1	35.0	119,899	B	C	15,416	84.1	1.50	12,965																										12,965	1					
5	6.0	576	A	O	489	77.0	1.50	100																										100	5					
6	25.0	2,575	A	O	2,188	77.0	1.60	1,895																										1,895	6					
7	20	127,132	B	C, O	18,792	76.4	1.50	14,357	13,968	B	H	6,984	76.4	1.50	5,336																			5,400	4,259	10,035	19,694	7		
8	13.0	103,070	B	C	15,460	79.1	1.50	12,229	35,792	B	H	17,896	79.1	1.50	14,156																				12,229	14,156	26,385	8		
9	13.0								24,020	B	C	3,603	77.6	1.50	2,796																				2,796	2,796	2,796	9		
10	50	515,327	A, B	C, O	138,274	83.3	1.50	115,182	98,654	B	H	49,327	83.3	1.50	41,089																				61,676	5,013	48,493	41,089	156,271	10
10		6,503	A	(HARMER WEST SLUMP)																																				
PROVEN		130,104			83,749			69,779																											63,671	5,013		68,684		
PART. EXPL'D		793,223			115,083			93,816	172,434			77,810			63,377																					6,438	86,571	65,280	158,289	
PROJECTED																																								
TOTALS		923,327			198,832			163,595	172,434			77,810			63,377																							226,973		

NOTE: (1) Average thickness computed from observations. (ie. drill holes, adit and outcrop measurements.)
 (2)(i) Tons in place (cu. yds.) determined from: (a) Area of unmined coal.
 (b) Average thickness as determined from (1)
 (ii) 1 cu. yd. of coal in place = 1.15 net tons raw.
 (iii) Slope correction applied to (2)(i)(a). (Area of unmined coal) as follows:
 (a) For 0°-15° pitch - correction of 7½° applied to area.
 (b) For 15°-30° pitch - correction of 22½° applied to area.
 (c) For 30°-90° pitch - correction of 45° applied to area.

(3) Reserve Classification - Definitions for KRL property.
 A - Proven Reserves - (In Place) -
 Tons of coal (1.15 nt/cu. yd.) in the ground computed from observations (ie. drill holes, adits, outcrops, mine workings) spaced at intervals of 0.5 miles or less in areas of good geological continuity, with seam thickness greater than 5 feet and under less than 2500 feet of overburden.
 B - Partially Explored Reserves - (In Place) -
 Tons of coal (1.15 nt/cu. yd.) in the ground computed partially from observations generally spaced at intervals from 0.5 to 1.5 miles apart and partially from reasonable geological projections. Minimum seam thickness is 5 feet, and maximum overburden 2500 feet. Generally equivalent to "Probable" or "Indicated" in other systems of nomenclature.
 C - Projected Reserves - (In Place) -
 Tons of coal (1.15 nt/cu. yd.) in the ground where little direct evidence is available but where geological studies have indicated the continuity of the coal bearing measures. Coal seam thickness projected from adjacent areas.

(4) Mining Method -
 H - Probably better suited to hydraulic mining method. Used 50% recovery.
 C - Probably suited to conventional room and pillar method. Used 15% recovery.
 R - Probably suited to selective mining because of splits or proximity to other seams. Used 15% recovery.
 O - Open Pit reserve. Assumed 85% recovery.
 (5) Reserves Recoverable -
 Proven Reserves (Recoverable) -
 Proven Reserves (In Place) adjusted by well substantiated factors for mining and washing recovery.
 Partially Explored Reserves (Recoverable) -
 Partially Explored Reserves (In Place) adjusted by generalized factors for mining and washing recovery.

(6) Calculated yield (laboratory) at defined specific gravity arrived at by (a) bulk sample wash tests from adits and/or test pits, or (b) micro sample wash tests from adits and/or test pits.

RESERVE ESTIMATE - (1500' - 2500' COVER)

SEAM NAME	AVG. THICK.	PITCH 0-15°						PITCH 15-30°						PITCH 30-90°						CUMULATIVE TOTALS - RECOVERABLE RESERVES									SEAM NAME								
		TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	OPEN PIT MINING			UNDERGROUND CONVENTIONAL				UNDERGROUND HYDRAULIC			TOTALS (000's TONS CLEAN)				
																							PROVEN	PARTIALLY EXPLORED	PROJECTED	PROVEN	PARTIALLY EXPLORED	PROJECTED		PROVEN	PARTIALLY EXPLORED	PROJECTED					
D	7.0																																			D	
C	7.0																																			C	
A	15.0																																			A	
1	30.0																																			1	
5	6.0																																			5	
6	25.0																																			6	
7	10.3																																			7	
8	13.0																																			8	
9	13.0																																			9	
10	50.0	136,684	B	C	20,503	83.3	1.50	17,079																								17,079			17,079	10	
PROVEN																																					
PART. EXPL'D		136,684			20,503			17,079																									17,079			17,079	
PROJECTED																																					
TOTALS		136,684			20,503			17,079																													

NOTE: (1) Average thickness computed from observations. (ie. drill holes, adit and outcrop measurements.)
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(6) Calculated yield (laboratory) at defined specific gravity arrived at by (a) bulk sample wash tests from adits and/or test pits, or (b) micro sample wash tests from adits and/or test pits.

