GEOLOGICAL BRANCH
A.S.K. - Marten Ridge 72(2)A.T.

Maps & Cross Sections
Kaiser Resources Ltd.

00345

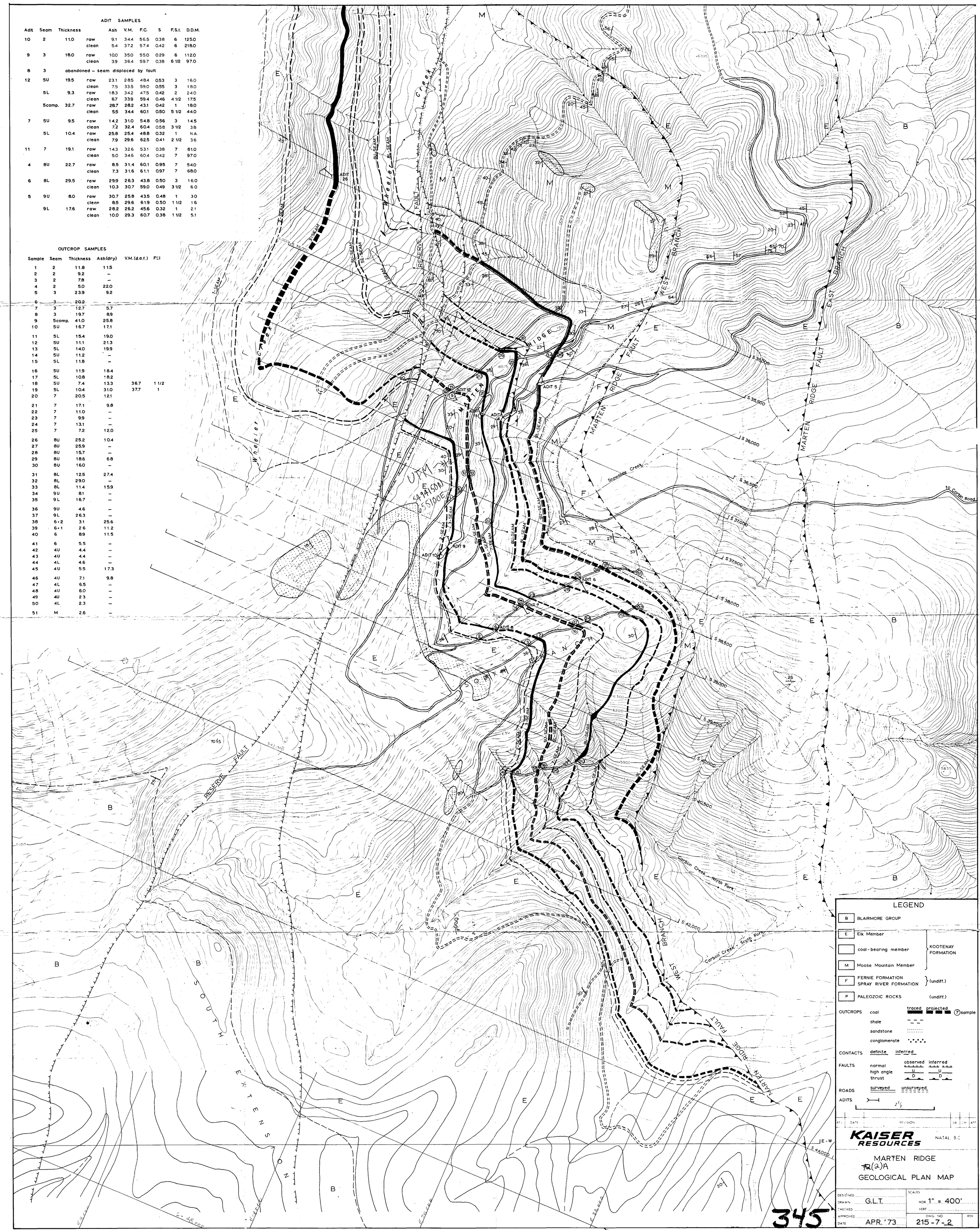
345
Part 2/3

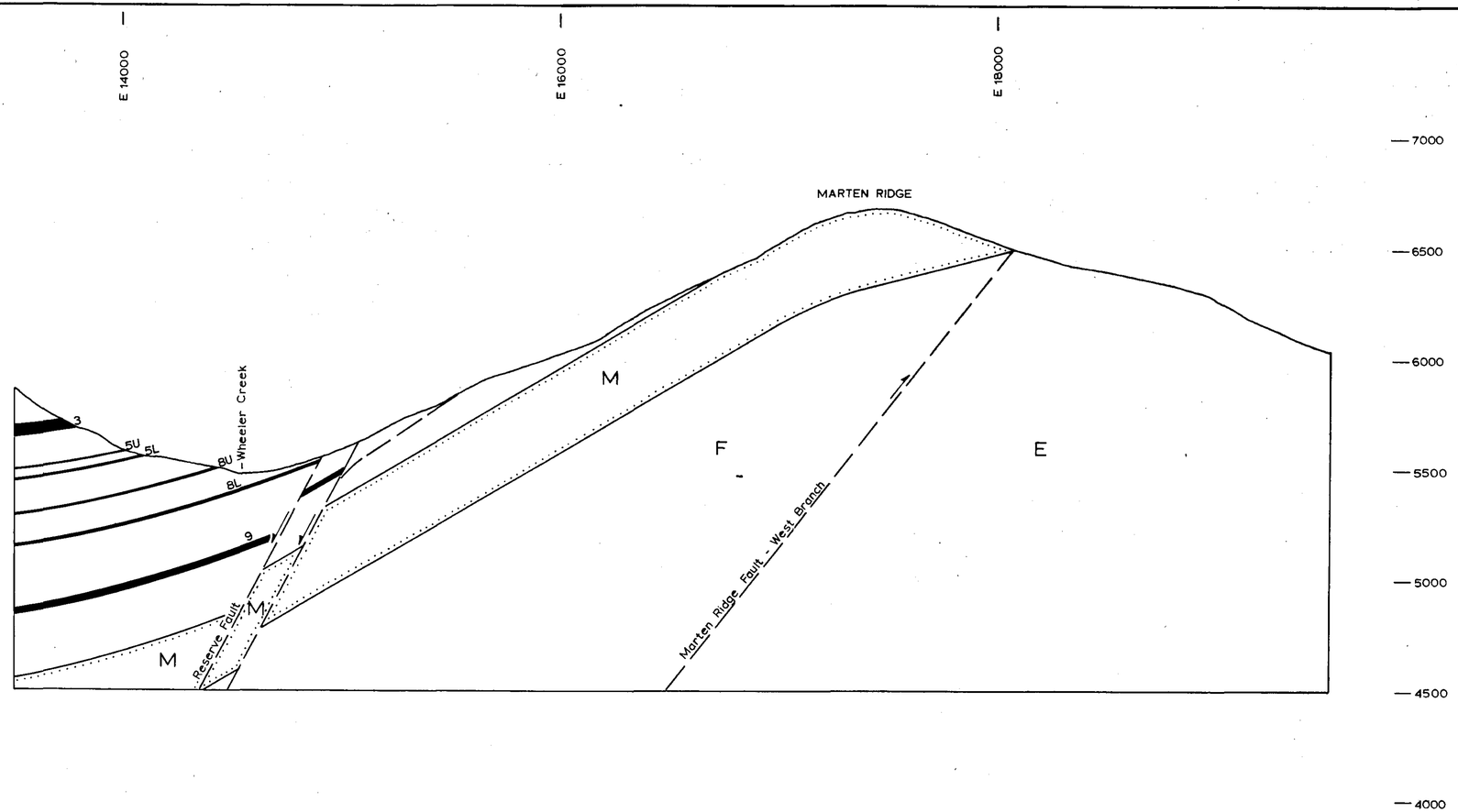
ADIT SAMPLES

Adit	Seam	Thickness		Ash	V.M.	F.C.	S	F.S.I.	D.D.M.
10	2	11.0	raw	9.1	34.4	56.5	0.38	6	125.0
			clean	5.4	37.2	57.4	0.42	6	218.0
9	3	18.0	raw	10.0	35.0	55.0	0.29	6	112.0
			clean	3.9	36.4	59.7	0.38	6 1/2	97.0
8	3	abandoned – seam displaced by fault							
12	5U	19.5	raw	23.1	28.5	48.4	0.53	3	16.0
			clean	7.5	33.5	59.0	0.55	3	18.0
	5L	9.3	raw	18.3	34.2	47.5	0.42	2	24.0
			clean	6.7	33.9	59.4	0.46	4 1/2	17.5
	5comp.	32.7	raw	28.7	28.2	43.1	0.42	1	18.0
			clean	5.5	34.4	60.1	0.50	5 1/2	44.0
7	5U	9.5	raw	14.2	31.0	54.8	0.56	3	14.5
			clean	7.2	32.4	60.4	0.58	3 1/2	3.8
	5L	10.4	raw	25.8	25.4	48.8	0.32	1	N.A.
			clean	7.9	29.6	62.5	0.41	2 1/2	3.6
11	7	19.1	raw	14.3	32.6	53.1	0.38	7	81.0
			clean	5.0	34.6	60.4	0.42	7	97.0
4	8U	22.7	raw	8.5	31.4	60.1	0.95	7	54.0
			clean	7.3	31.6	61.1	0.97	7	68.0
6	8L	29.5	raw	29.9	26.3	43.8	0.50	3	16.0
			clean	10.3	30.7	59.0	0.49	3 1/2	6.0
5	9U	8.0	raw	30.7	25.8	43.5	0.48	1	3.0
			clean	8.5	29.6	61.9	0.50	1 1/2	1.6
	9L	17.6	raw	28.2	26.2	45.6	0.32	1	2.1
			clean	10.0	29.3	60.7	0.38	1 1/2	5.1

OUTCROP SAMPLES

Sample	Seam	Thickness	Ash(dry)	V.M.(d.a.f.)	F.S.I.
1	2	11.8	11.5		
2	2	9.2	–		
3	2	7.8	–		
4	2	5.0	22.0		
5	3	23.9	9.2		
6	3	20.2	–		
7	3	12.7	5.7		
8	3	19.7	8.9		
9	5comp.	41.0	25.8		
10	5U	16.7	17.1		
11	5L	15.4	19.0		
12	5U	11.1	21.3		
13	5L	14.0	19.9		
14	5U	11.2	–		
15	5L	11.8	–		
16	5U	11.9	18.4		
17	5L	10.8	18.2		
18	5U	7.4	13.3	36.7	1 1/2
19	5L	10.4	31.0	37.7	1
20	7	20.5	12.1		
21	7	17.1	9.8		
22	7	11.0	–		
23	7	9.9	–		
24	7	13.1	–		
25	7	7.2	12.0		
26	8U	25.2	10.4		
27	8U	25.9	–		
28	8U	15.7	–		
29	8U	18.6	6.8		
30	8U	16.0	–		
31	8L	12.5	27.4		
32	8L	29.0	–		
33	8L	11.4	15.9		
34	9U	8.1	–		
35	9L	16.7	–		
36	9U	4.6	–		
37	9L	26.3	–		
38	6+2	3.1	25.6		
39	6+1	2.6	11.2		
40	6	8.9	11.5		
41	6	5.5	–		
42	4U	4.4	–		
43	4U	4.4	–		
44	4L	4.6	–		
45	4U	5.5	17.3		
46	4U	7.1	9.8		
47	4L	6.5	–		
48	4U	6.0	–		
49	4U	2.3	–		
50	4L	2.3	–		
51	M	2.6	–		





LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal-bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

fault

00345 Pt. 2/3

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

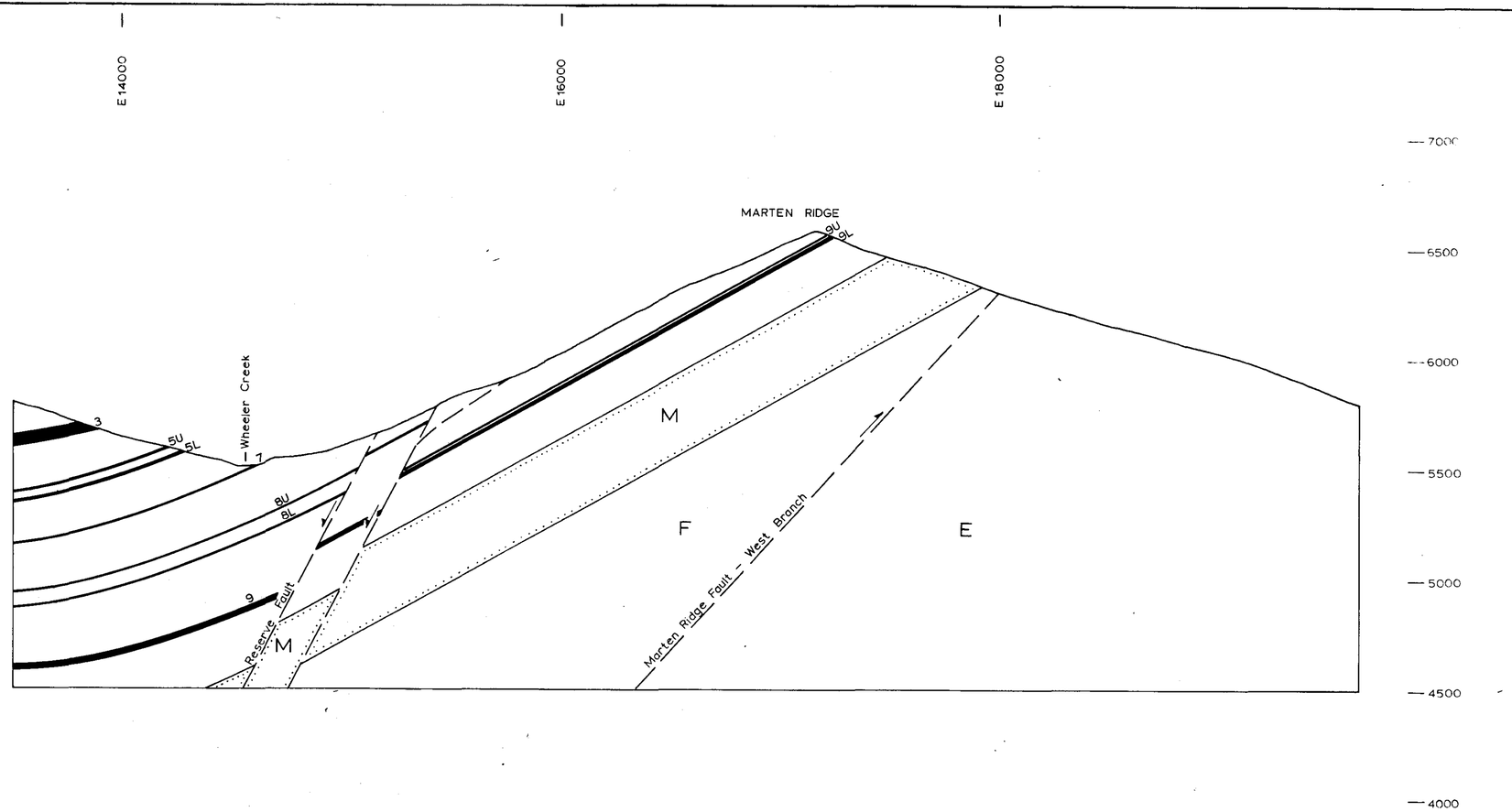
SECTION S 35,000

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. '73

SCALES
HOR. 1" = 400'
VERT. 1" = 400'

DWG. NO. 215-7-3

REV.



LEGEND

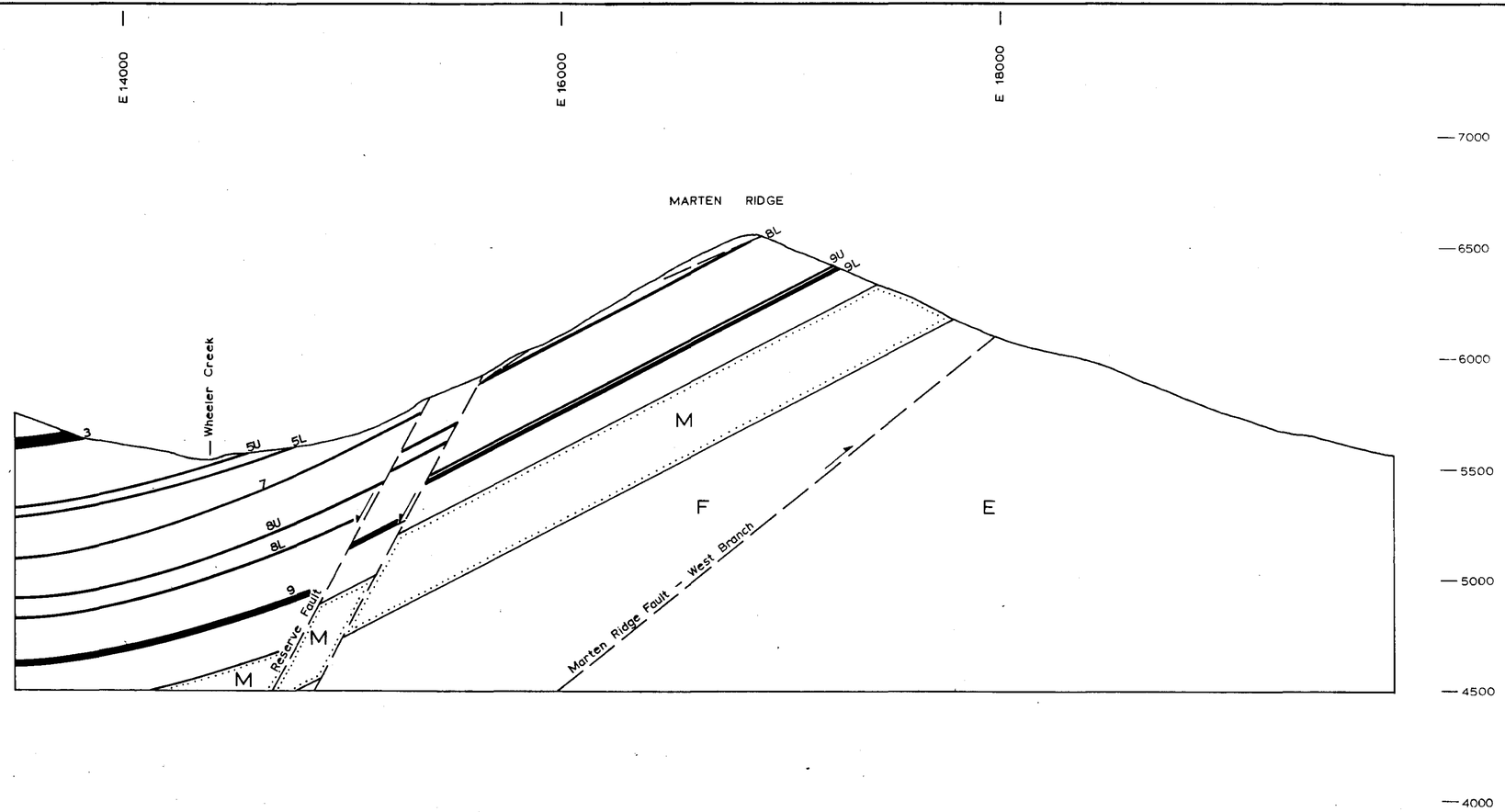
- B — BLAIRMORE GROUP
- E — Elk Member
- coal bearing member
- M — Morse Mountain Member
- KOOTENAY FORMATION
- F — FERNIE FORMATION, SPRAY RIVER FORMATION — undiff.
- coal
- fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

SECTION S 35,500

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. '73
SCALES	HOR. 1" = 400' VERT. 1" = 400'
DWG. NO.	215 - 7 - 4
REV.	



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

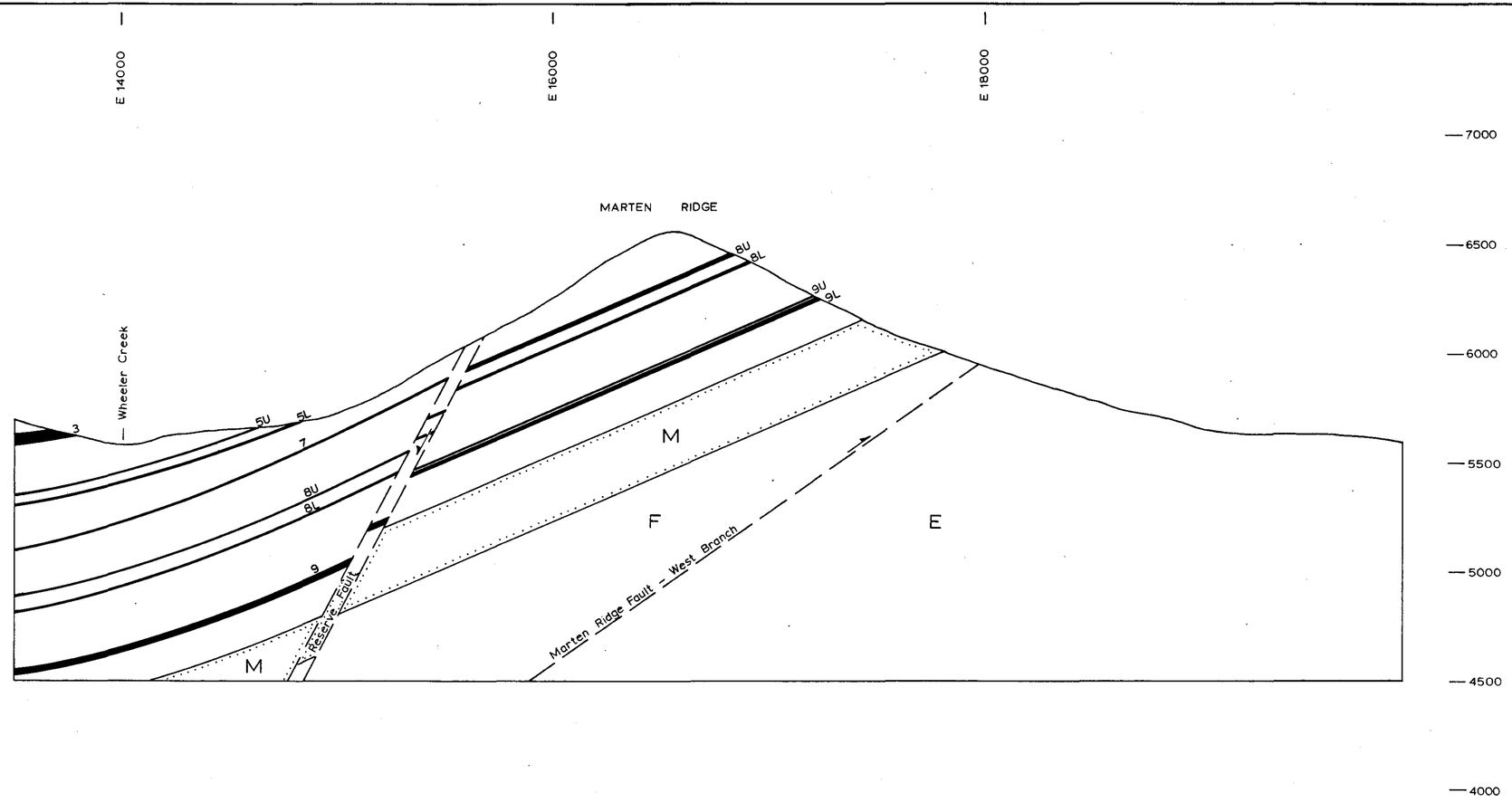
fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

SECTION S 36,000

DESIGNED		SCALES	
DRAWN	G.L.T.	HOR. 1" = 400'	
CHECKED		VERT. 1" = 400'	
APPROVED		DWG. NO.	REV.
DATE	FEB '73	215-7-5	



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff

coal

fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

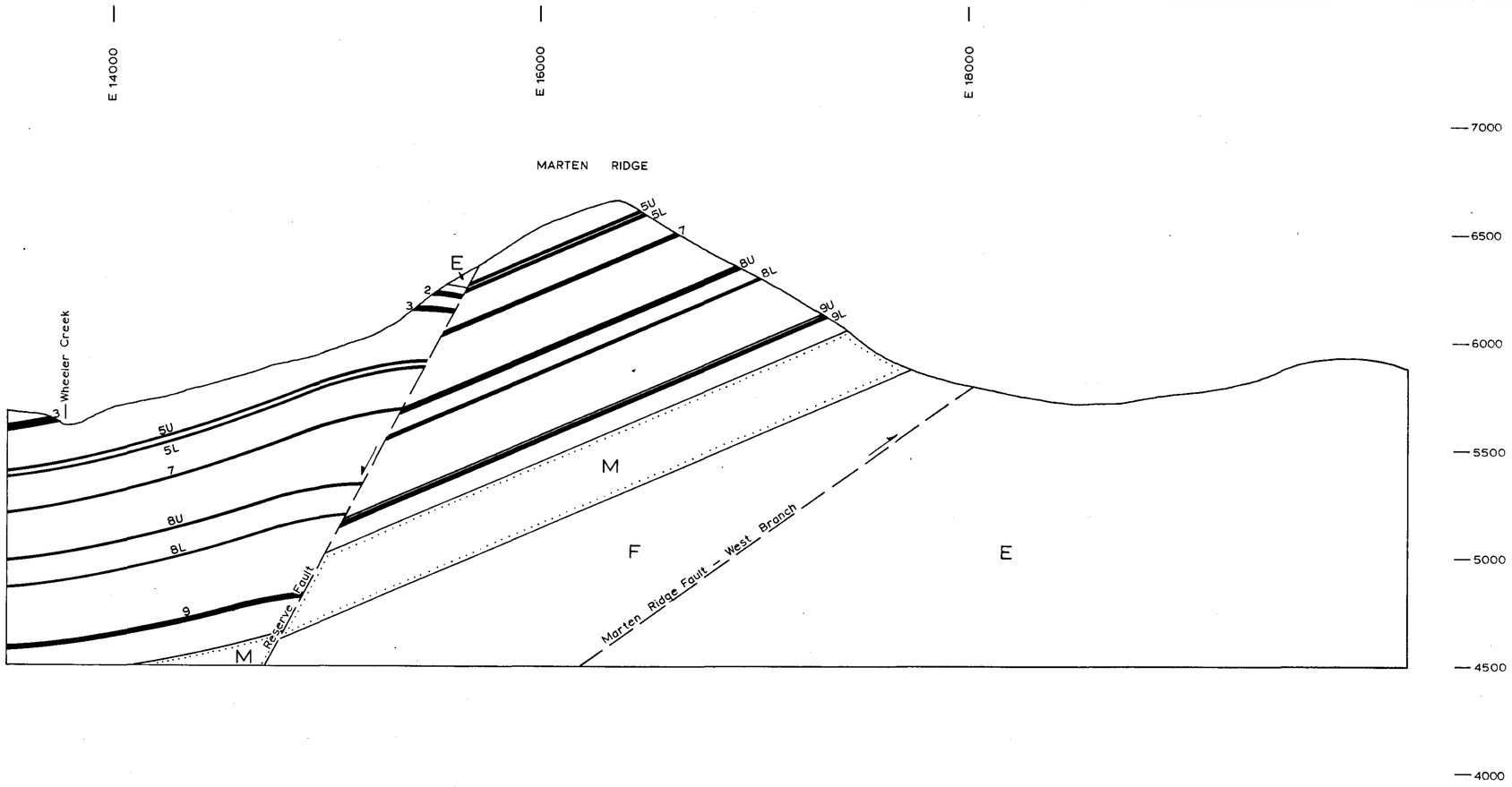
SECTION S 36,500

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. '73

SCALES
HOR. 1" = 400'
VERT. 1" = 400'

DWG. NO. 215-7-8

REV.



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	
M	Moose Mountain Member	
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff

coal

fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

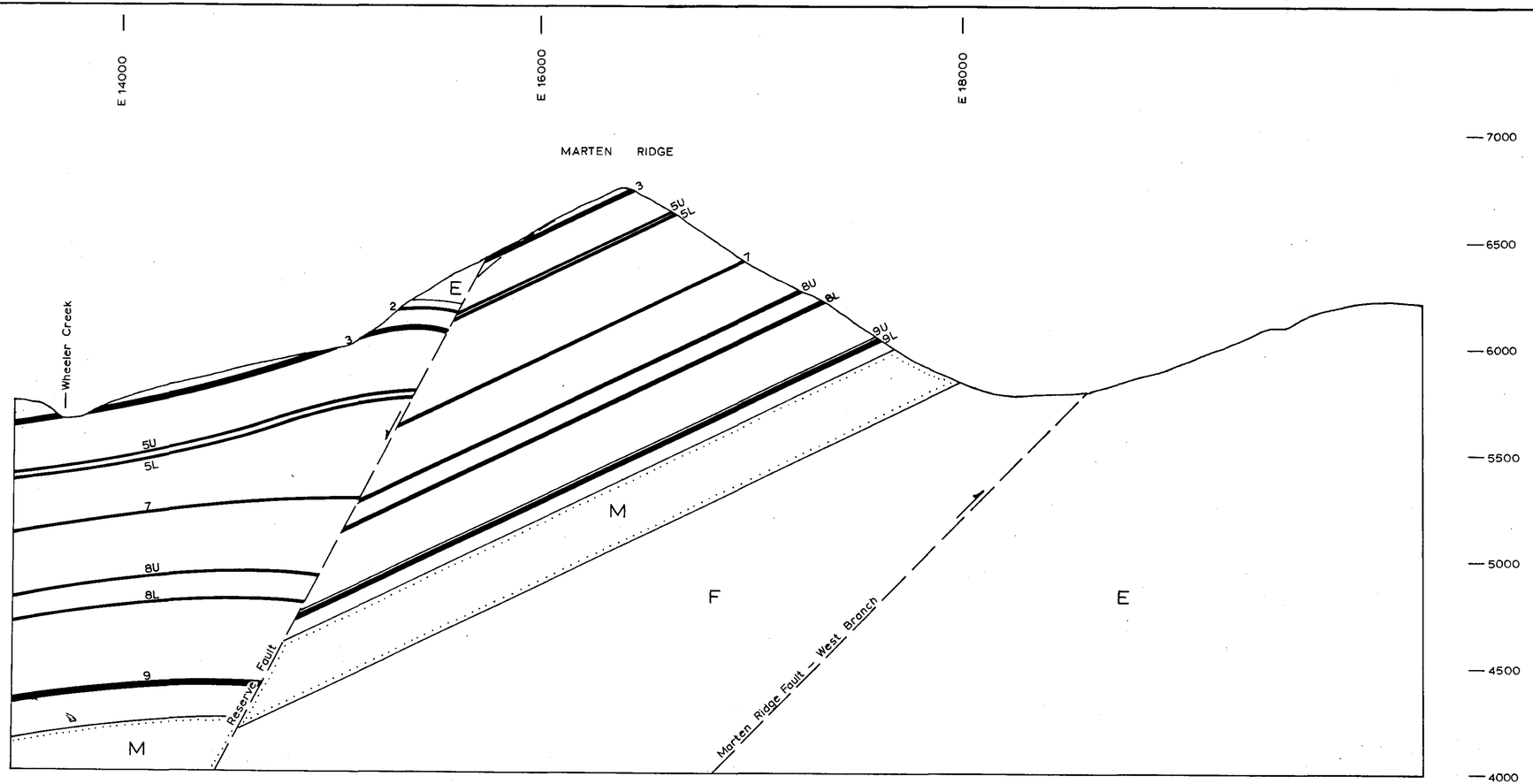
SECTION S 37,000

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. '73

SCALES
HOR. 1" = 400'
VERT 1" = 400'

DWG. NO. 215-7-7

REV.



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

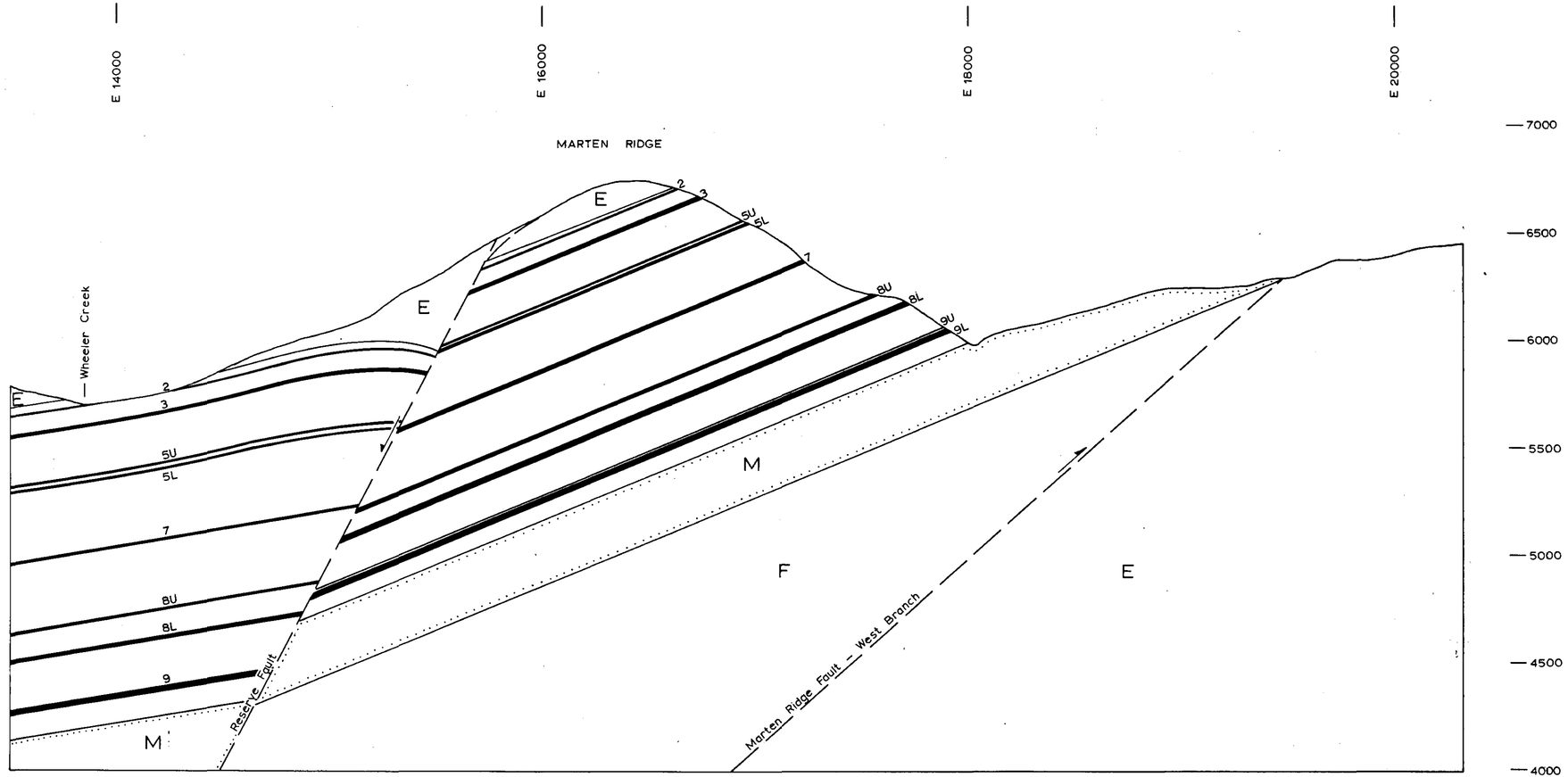
fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

SECTION S 37,500

DESIGNED		SCALES	
DRAWN	G.L.T.	HOR.	1" = 400'
CHECKED		VERT.	1" = 400'
APPROVED		DWG. NO.	REV.
DATE	FEB. '73	215-7-8	



LEGEND

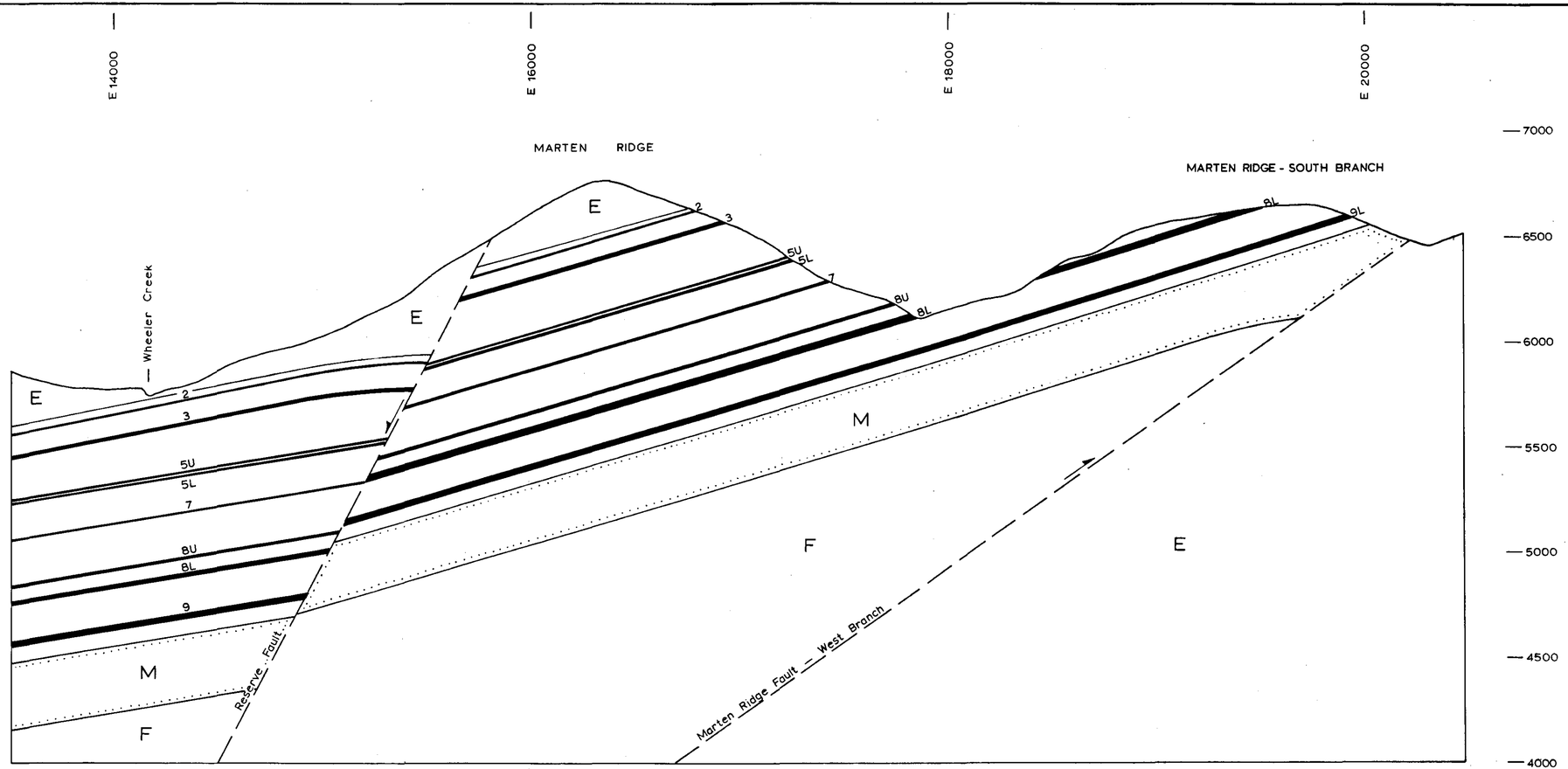
B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.
	coal	
— —	fault	

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

SECTION S 38,000

DESIGNED		SCALES	
DRAWN	G.L.T.	HOR.	1" = 400'
CHECKED		VERT.	1" = 400'
APPROVED		DWG. NO.	REV.
DATE	FEB. '73	215-7-9	



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

fault

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

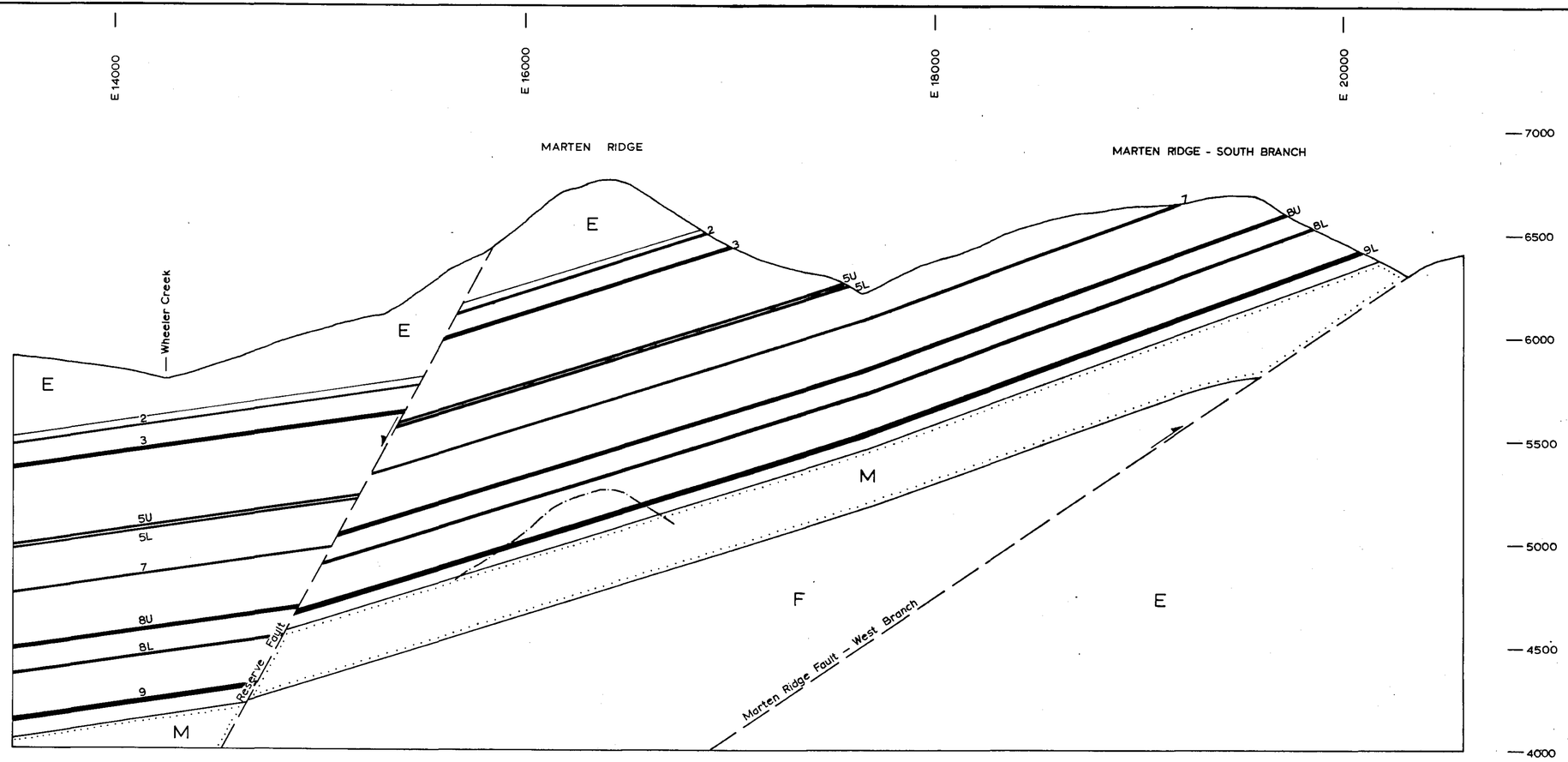
SECTION S 38,500

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. 73

SCALES
HOR. 1" = 400'
VERT. 1" = 400'

DWG. NO. 215 - 7 - 10

REV.



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

fault

COVER LINE
1500'

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

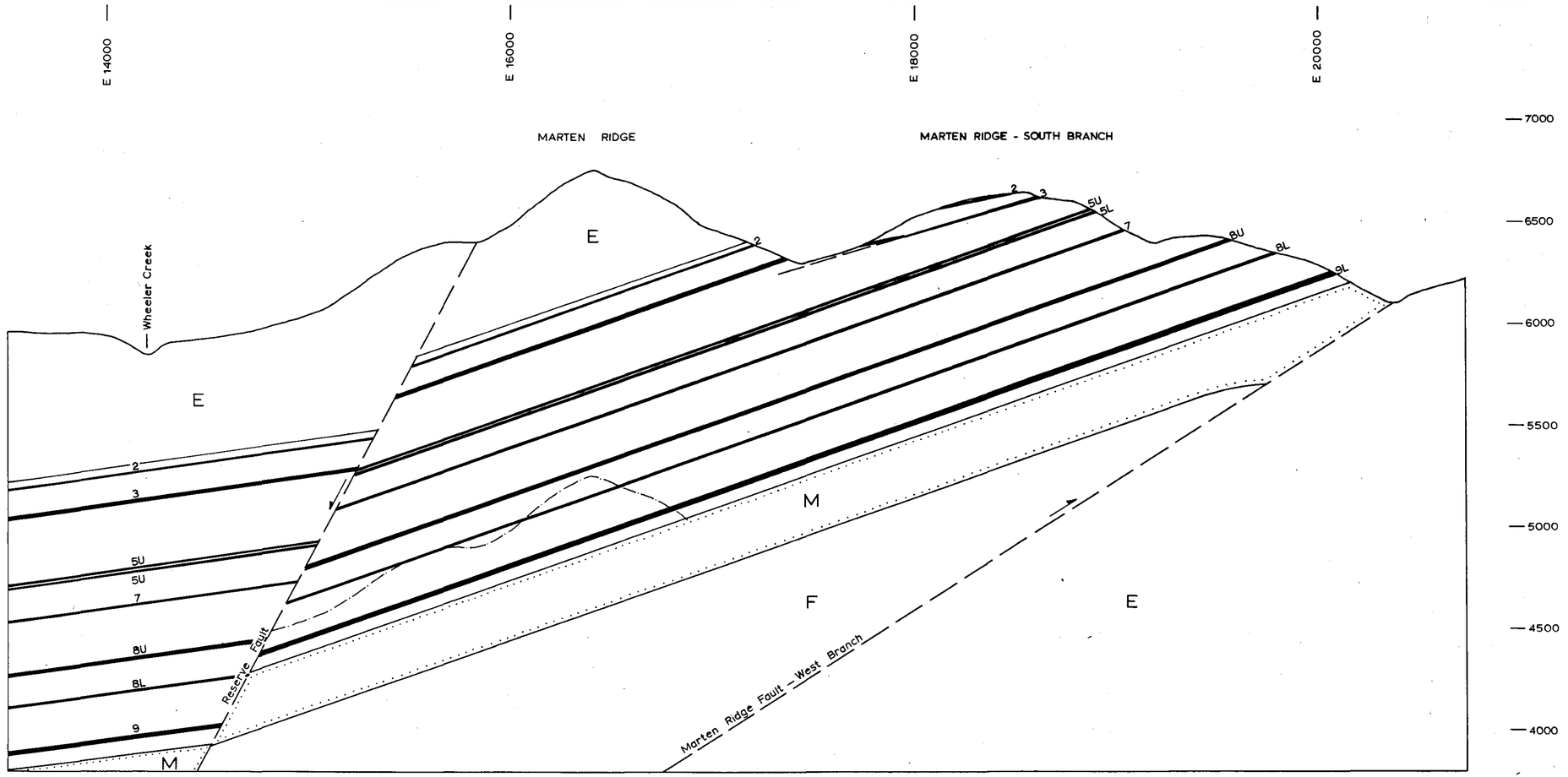
SECTION S 39,000

DESIGNED	
DRAWN	G.L.T.
CHECKED	
APPROVED	
DATE	FEB. '73

SCALES
HOR. 1" = 400'
VERT. 1" = 400'

DWG NO. 215 - 7 - 11

REV.



LEGEND

B	BLAIRMORE GROUP	
E	Elk Member	KOOTENAY FORMATION
	coal - bearing member	KOOTENAY FORMATION
M	Moose Mountain Member	KOOTENAY FORMATION
F	FERNIE FORMATION SPRAY RIVER FORMATION	undiff.

coal

fault

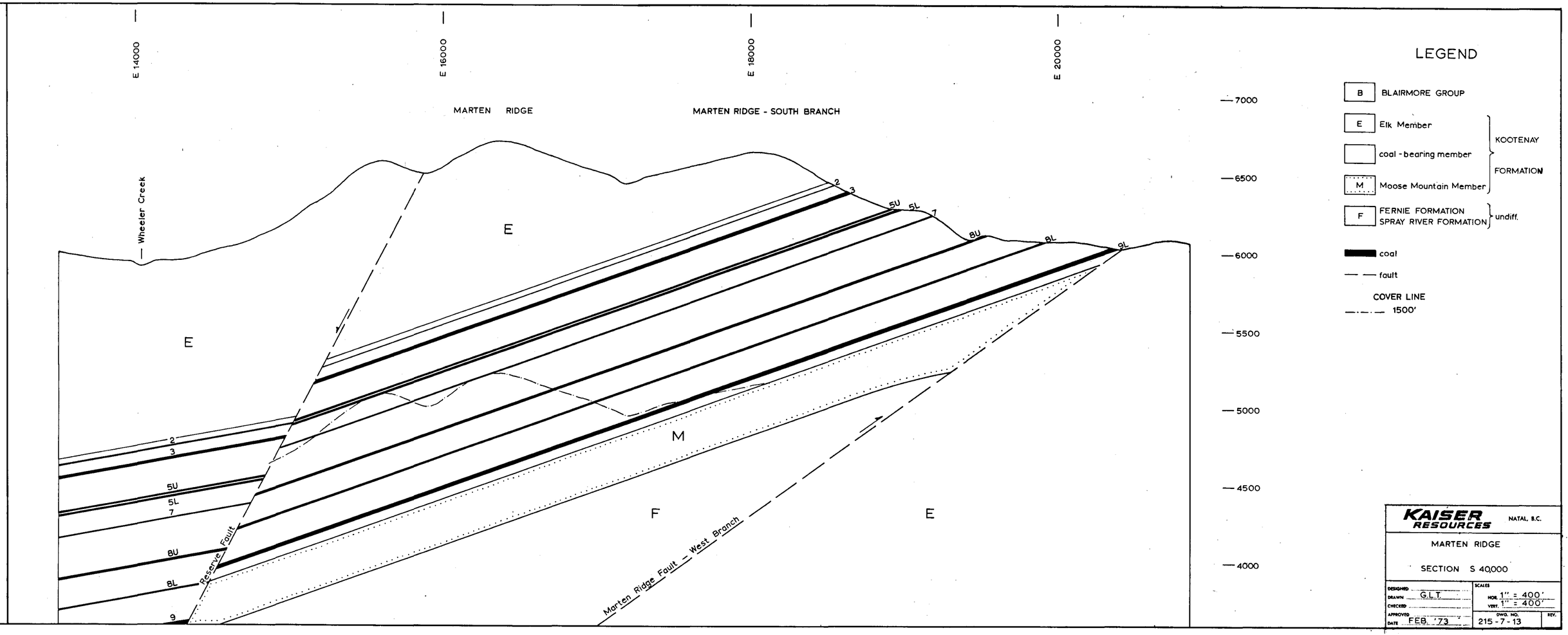
COVER LINE
1500'

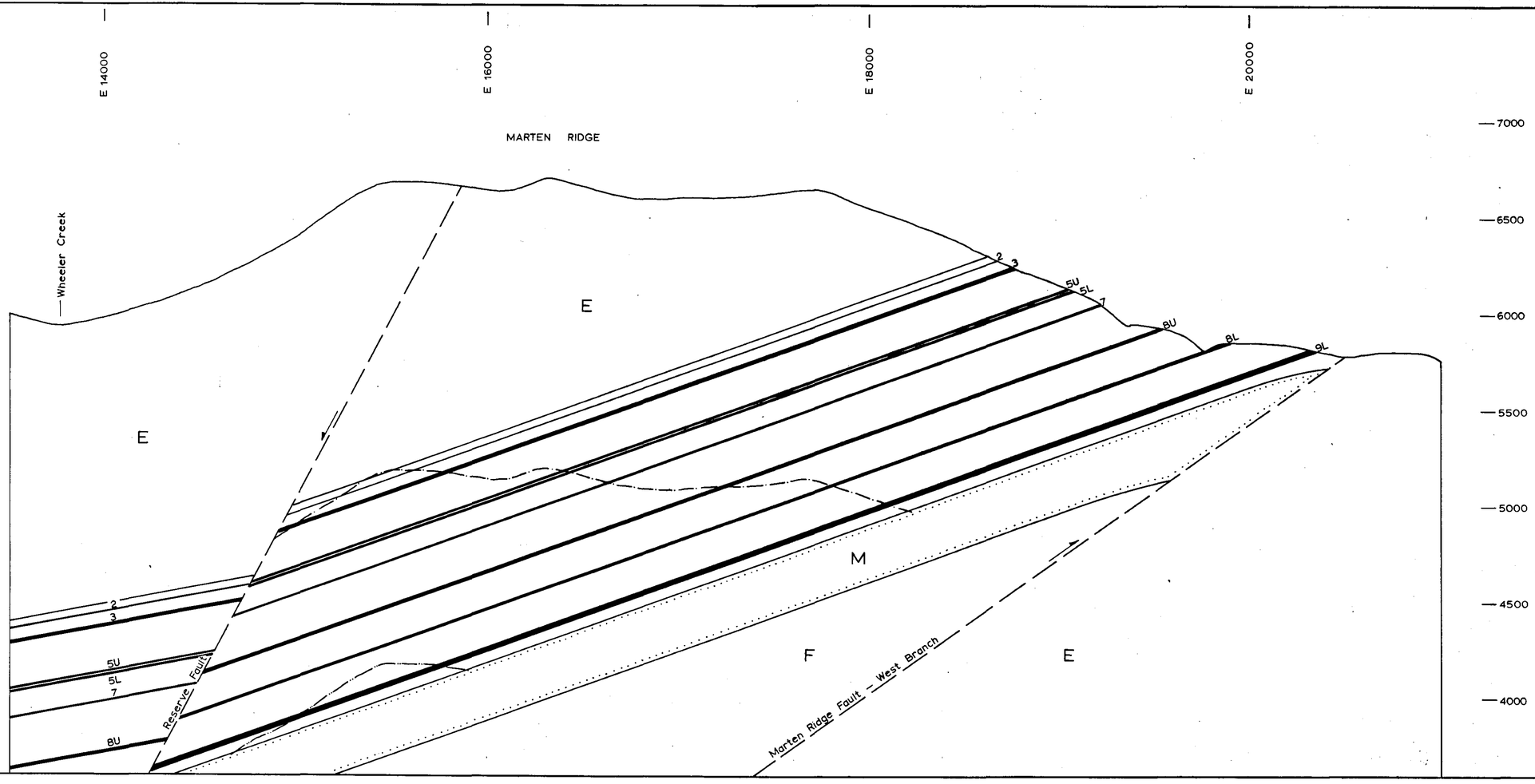
KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE

SECTION S 39,500

DESIGNED		SCALES	
DRAWN	G.L.T.	HOR. 1" =	
CHECKED		VERT 1" =	
APPROVED		DWG. NO.	REV.
DATE	FEB. '73	215 - 7 - 12	


E 14000
E 16000
E 18000
E 20000
MARTEN RIDGE
MARTEN RIDGE - SOUTH BRANCH
Wheeler Creek
7000
6500
6000
5500
5000
4500
4000
E
E
M
F
E
2
3
5U
5L
7
8U
8L
9
Reserve Fault
Marten Ridge Fault - West Branch
LEGEND
B BLAIRMORE GROUP
E Elk Member
coal - bearing member
M Moose Mountain Member
KOOTENAY FORMATION
F FERNIE FORMATION
SPRAY RIVER FORMATION
undiff.
coal
fault
COVER LINE
1500'
KAISER RESOURCES
NATAL, B.C.
MARTEN RIDGE
SECTION S 40,000
DESIGNED
DRAWN G.L.T.
CHECKED
APPROVED
DATE FEB. '73
SCALES
HOR. 1" = 400'
VERT. 1" = 400'
DWG. NO. 215 - 7 - 13
REV.



LEGEND

B	BLAIRMORE GROUP
E	Elk Member (KOOTENAY FORMATION)
	coal-bearing member (KOOTENAY FORMATION)
M	Moose Mountain Member (KOOTENAY FORMATION)
F	FERNIE FORMATION, SPRAY RIVER FORMATION (undiff.)

coal

fault

COVER LINES

1500'

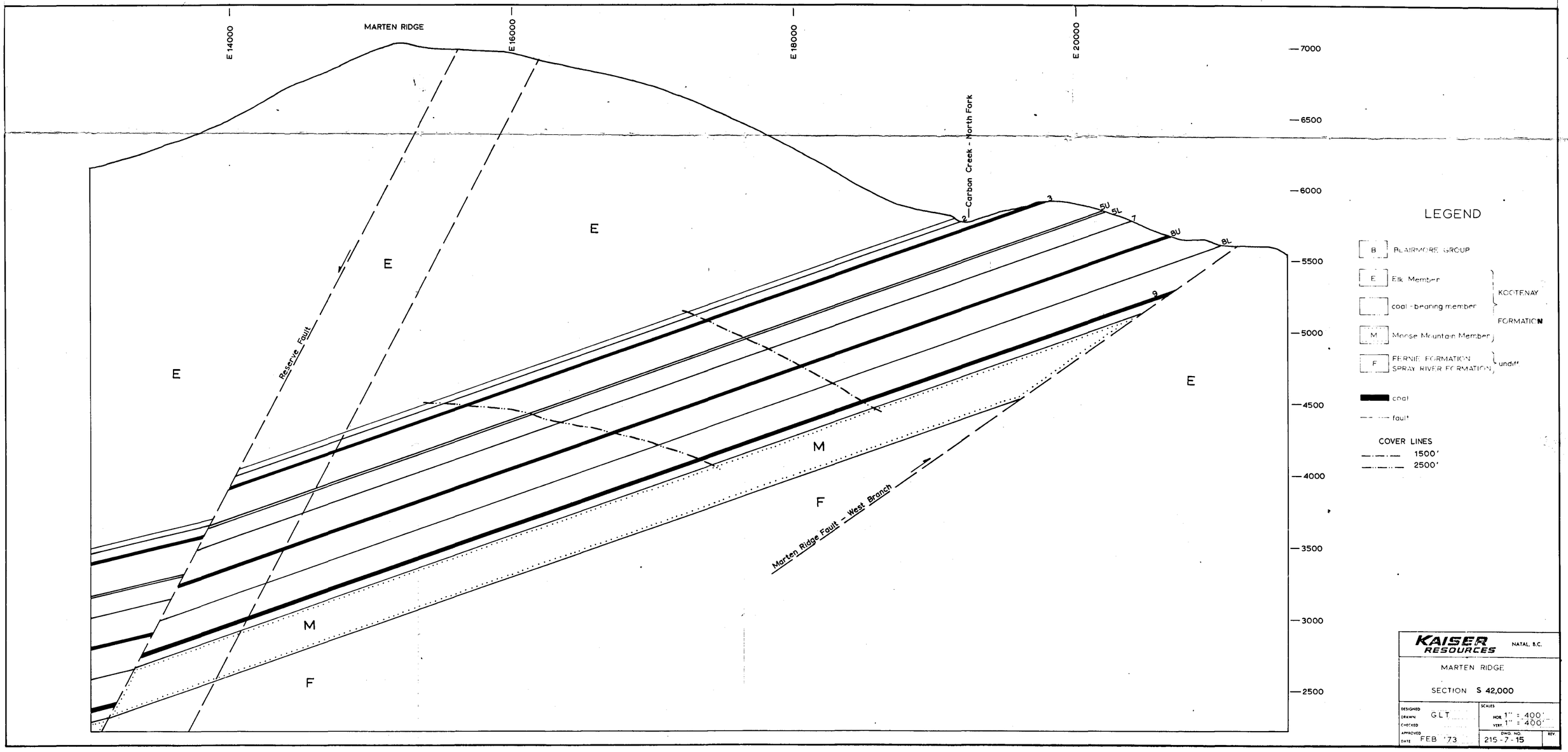
2500'

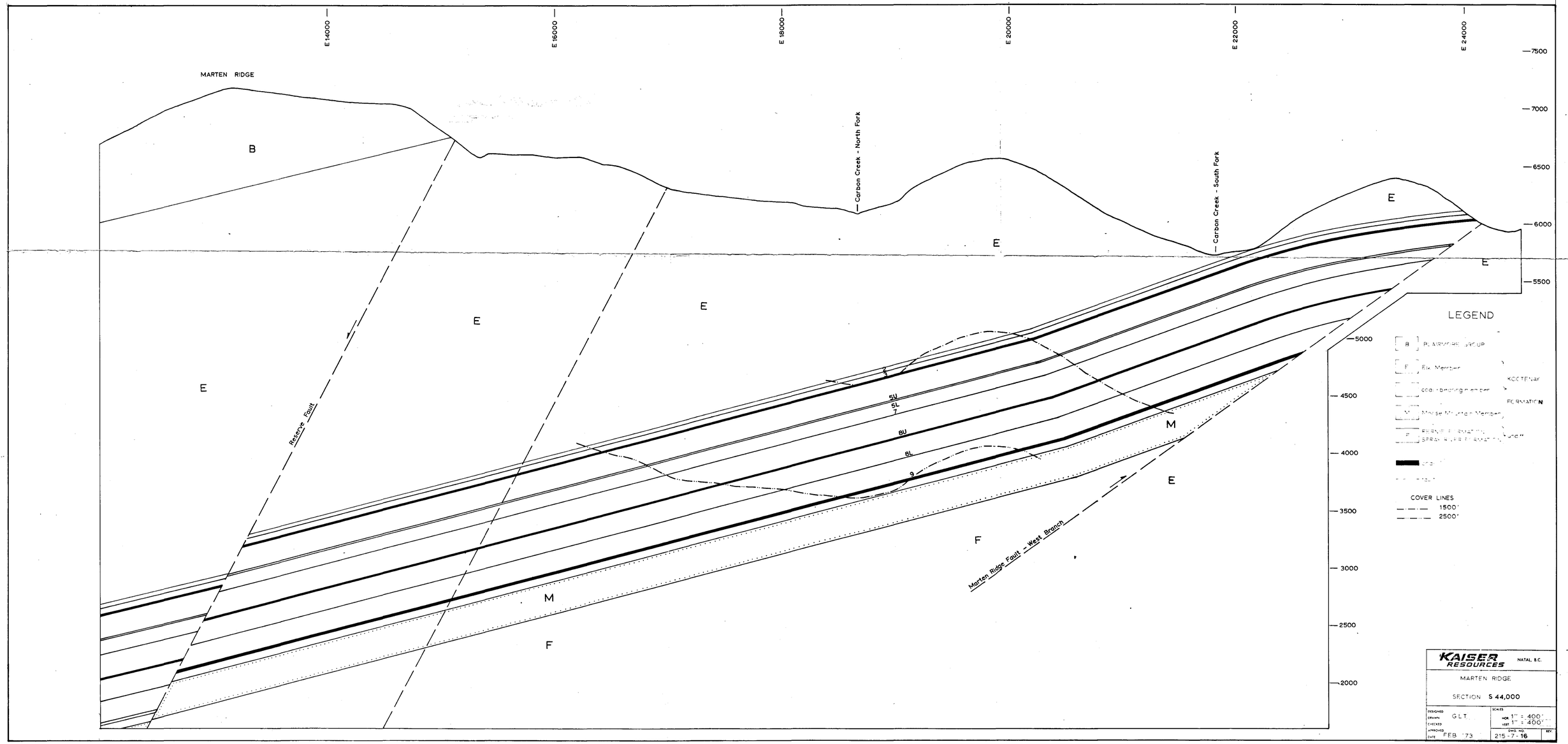
KAISER RESOURCES NATAL, B.C.

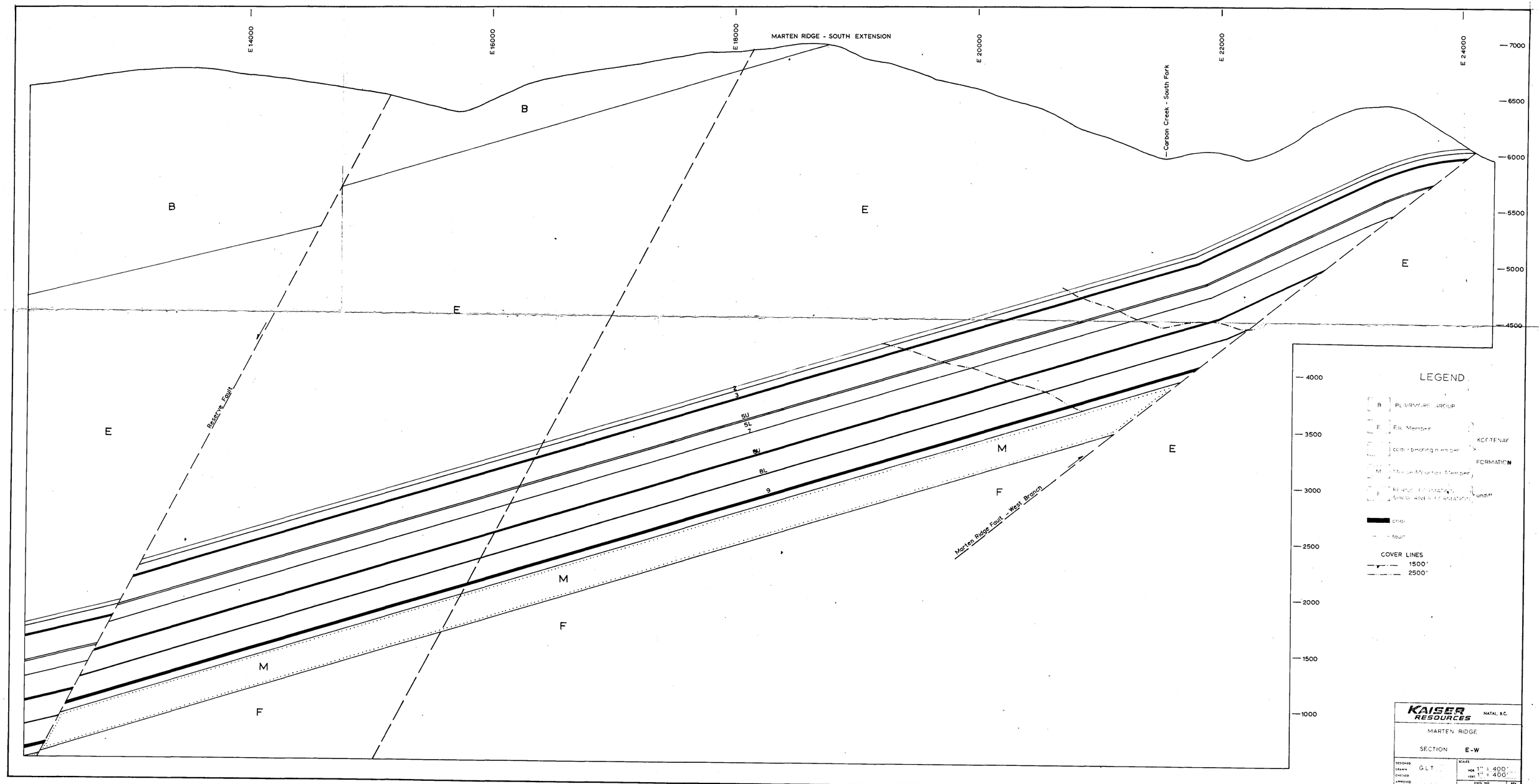
MARTEN RIDGE

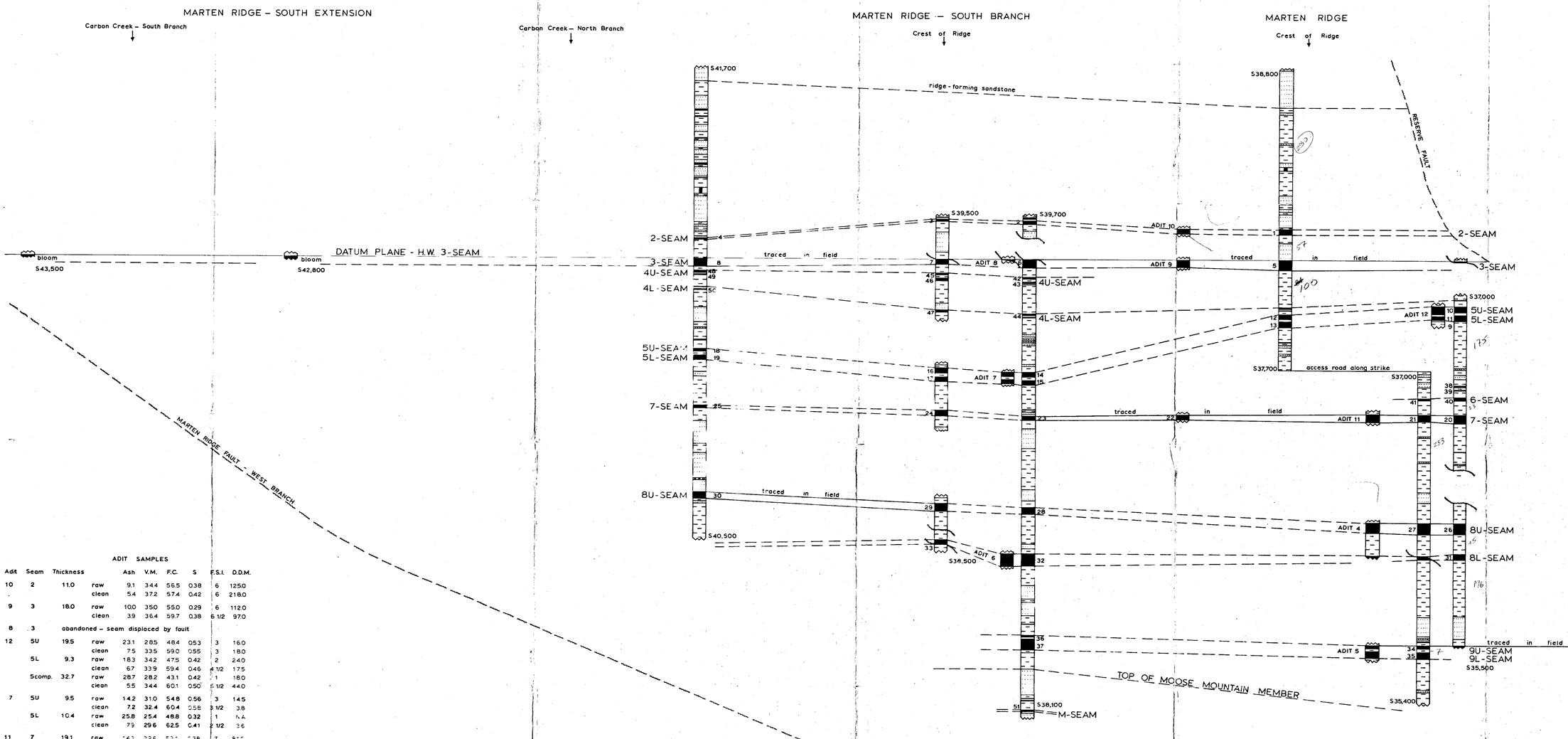
SECTION S 40,500

DESIGNED	
DRAWN G.L.T.	SCALES HOR. 1" = 400' VERT. 1" = 400'
CHECKED	
APPROVED	DWG. NO. 215-7-14
DATE FEB. '73	


MARTEN RIDGE
E 14000
E 16000
E 18000
E 20000
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
Carbon Creek - North Fork
Reserve Fault
Marten Ridge Fault - West Branch
E
M
F
2
3
5U
5L
7
8U
8L
9
LEGEND
B BLAIRMORE GROUP
E Elk Member
coal-bearing member
KOOTENAY FORMATION
M Moose Mountain Member
F FERNIE FORMATION
SPRAY RIVER FORMATION
undiff
coal
fault
COVER LINES
1500'
2500'
KAISER RESOURCES
NATAL, B.C.
MARTEN RIDGE
SECTION S 42,000
DESIGNED
DRAWN G.L.T.
CHECKED
APPROVED
DATE FEB '73
SCALES
HOR. 1" = 400'
VERT. 1" = 400'
DWG. NO. 215-7-15
REV.


E 14000
E 16000
E 18000
E 20000
E 22000
E 24000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
MARTEN RIDGE
Carbon Creek - North Fork
Carbon Creek - South Fork
Reserve Fault
Marten Ridge Fault - West Branch
B
E
F
M
5U
5L
7
8U
8L
9
LEGEND
B PLAIN YOHO GROUP
E Elk Member
KOOTENAY FORMATION
M Moyie Mountain Member
COVER LINES
1500'
2500'
KAISER RESOURCES
NATAL, B.C.
MARTEN RIDGE
SECTION S 44,000
DESIGNED
DRAWN G.L.T.
CHECKED
APPROVED
DATE FEB. '73
SCALES
HOR. 1" = 400'
VERT. 1" = 400'
DWG. NO. 215-7-16
REV.


MARTEN RIDGE - SOUTH EXTENSION
E 14000
E 16000
E 18000
E 20000
E 22000
E 24000
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
Carbon Creek - South Fork
Reserve Fault
Marten Ridge Fault - West Branch
B
E
M
F
Z
3
5U
5L
7
8U
8L
9
LEGEND
B PLAYMORE GROUP
E Elk Member
coal-bearing member
KOOTENAY FORMATION
M Marten Mountain Member
F Fernie Formation
Spray River Formation
undiff.
coal
fault
COVER LINES
1500'
2500'
KAISER RESOURCES
NATAL, B.C.
MARTEN RIDGE
SECTION E-W
DESIGNED
DRAWN G.L.T.
CHECKED
APPROVED
DATE FEB '73
SCALES
HOR. 1" = 400'
VERT. 1" = 400'
DWG. NO. 215-7-17
REV.



OUTCROP SAMPLES

Sample	Seam	Thickness	Ash(dry)	V.M.(d.a.f.)	F.S.I
1	2	11.8	11.5		
2	2	9.2	–		
3	2	7.8	–		
4	2	5.0	22.0		
5	3	23.9	9.2		
6	3	20.2	–		
7	3	12.7	5.7		
8	3	19.7	8.9		
9	5comp.	41.0	25.8		
10	5U	16.7	17.1		
11	5L	15.4	19.0		
12	5U	11.1	21.3		
13	5L	14.0	19.9		
14	5U	11.2	–		
15	5L	11.8	–		
16	5U	11.9	18.4		
17	5L	10.8	18.2		
18	5U	7.4	13.3	36.7	1 1/2
19	5L	10.4	31.0	37.7	1
20	7	20.5	12.1		
21	7	17.1	9.8		
22	7	11.0	–		
23	7	9.9	–		
24	7	13.1	–		
25	7	7.2	12.0		
26	8U	25.2	10.4		
27	8U	25.9	–		
28	8U	15.7	–		
29	8U	18.6	6.8		
30	8U	16.0	–		
31	8L	12.5	27.4		
32	8L	29.0	–		
33	8L	11.4	15.9		
34	9U	8.1	–		
35	9L	16.7	–		
36	9U	4.6	–		
37	9L	26.3	–		
38	6+2	3.1	25.6		
39	6+1	2.6	11.2		
40	6	8.9	11.5		
41	6	5.5	–		
42	4U	4.4	–		
43	4U	4.4	–		
44	4L	4.6	–		
45	4U	5.5	17.3		
46	4U	7.1	9.8		
47	4L	6.5	–		
48	4U	6.0	–		
49	4U	2.3	–		
50	4L	2.3	–		
51	M	2.6	–		

ADIT SAMPLES

Adit	Seam	Thickness		Ash	V.M.	F.C.	S	F.S.I.	D.D.M.
10	2	11.0	raw	9.1	34.4	56.5	0.38	6	125.0
			clean	5.4	37.2	57.4	0.42	6	218.0
9	3	18.0	raw	10.0	35.0	55.0	0.29	6	112.0
			clean	3.9	36.4	59.7	0.38	6 1/2	97.0
8	3	abandoned – seam displaced by fault							
12	5U	19.5	raw	23.1	28.5	48.4	0.53	3	16.0
			clean	7.5	33.5	59.0	0.55	3	18.0
	5L	9.3	raw	18.3	34.2	47.5	0.42	2	24.0
			clean	6.7	33.9	59.4	0.46	4 1/2	17.5
	5comp.	32.7	raw	28.7	28.2	43.1	0.42	1	18.0
			clean	5.5	34.4	60.1	0.50	5 1/2	44.0
7	5U	9.5	raw	14.2	31.0	54.8	0.56	3	14.5
			clean	7.2	32.4	60.4	0.58	3 1/2	3.8
	5L	10.4	raw	25.8	25.4	48.8	0.32	1	N.A.
			clean	7.5	29.6	62.5	0.41	2 1/2	3.6
11	7	19.1	raw	[illegible]	32.6	53.[illegible]	0.38	7	[illegible]
			clean	5.[illegible]	34.5	59.4	0.42	7	9.7
4	8U	22.7	raw	8.5	31.4	60.1	0.95	7	54.[illegible]
			clean	7.3	31.6	61.1	0.97	7	55.[illegible]
6	8L	29.5	raw	29.9	26.3	43.8	0.50	3	16.0
			clean	10.3	30.7	59.0	0.49	3 1/2	6.0
5	9U	8.0	raw	30.7	25.8	43.5	0.48	1	3.0
			clean	8.5	29.6	61.9	0.50	1 1/2	1.6
	9L	17.6	raw	28.2	26.2	45.6	0.32	1	2.1
			clean	10.0	29.3	60.7	0.38	1 1/2	5.1

MR 72 (52)A

345

REV.	DATE	REVISION	DR.	CH.	APP.

KAISER RESOURCES NATAL, B.C.

MARTEN RIDGE
CORRELATION CHART

DESIGNED
DRAWN G.L.T.
CHECKED
APPROVED
DATE MAR. '73

SCALES
HOR.
VERT.

DWG. NO. 215-7-30

REV.

K-Marten Ridge 72(6)A
Reserves Estimate Charts.
Kaiser Resources Ltd.

OPEN FILE
CONFIDENTIAL

GEOLOGICAL BRANCH
ASSESSMENT REPORT

00 345

Part 3

AREA: MARTEN RIDGE
TABLE Nº: 70

RESERVE ESTIMATE — (0-1500' COVER)

SEAM NAME	AVG. THICK.	PITCH 0–15° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 15°–30° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 30°–90° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)
3U	9.0								863	B	O,R	410	92.1	1.50	379	4,195	B	C	629	92.1	1.50	580
3L	18.9								20,652	B	O,C,H	3,899	88.2	"	3,439	14,397	B	H	7,198	88.2	"	6,349
5U	11.7								7,936	C,B	O,R	787	70.9	"	558	5,931	B	C	890	70.9	"	631
5L	11.6								10,613	C,B	O,C	863	74.2	"	640	7,116	B	C	1,067	74.2	"	792
7	12.6								8,216	C,B	O,C	473	83.1	"	392	6,523	B	C	978	83.1	"	813
8U	20.7								17,834	C,B	H,O,C	1,914	92.7	"	1,775	12,506	B	C	1,876	92.7	"	1,739
8L	21.0								14,989	C,B	H,O	2,670	59.6	"	1,592	8,940	B	C,H	1,797	59.6	"	1,071
9U	8.0												63.1	"		1,884	B	O,C	300	63.1	"	190
9L	20.2								29,749	C,B	H,O	3,651	59.7	"	2,180	16,467	B	H,C	7,698	59.7	"	4,596
PROVEN																						
PART. EXPL'D									43,811			14,667			10,954	77,959			22,433			16,761
PROJECTED									67,041													
TOTALS									110,852			14,667			10,954	77,959			22,433			16,761

SEAM NAME	CUMULATIVE TOTALS — RECOVERABLE RESERVES: OPEN PIT MINING PROVEN	OPEN PIT MINING PARTIALLY EXPLORED	OPEN PIT MINING PROJECTED	UNDERGROUND CONVENTIONAL PROVEN	UNDERGROUND CONVENTIONAL PARTIALLY EXPLORED	UNDERGROUND CONVENTIONAL PROJECTED	UNDERGROUND HYDRAULIC PROVEN	UNDERGROUND HYDRAULIC PARTIALLY EXPLORED	UNDERGROUND HYDRAULIC PROJECTED	TOTALS (000's TONS CLEAN)	SEAM NAME
3U		344			613					957	3U
3L		799			2,483			6,507		9,789	3L
5U		496			693					1,189	5U
5L		577			855					1,432	5L
7		200			1,005					1,205	7
8U		381			1,778			1,355		3,514	8U
8L		300			682			1,680		2,662	8L
9U		25			165					190	9U
9L		367			137			6,271		6,775	9L
PROVEN											
PART. EXPL'D		3,489			8,411			15,813		27,713	
PROJECTED											
TOTALS											

NOTE: (1) Average thickness computed from observations. (i.e. 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 (1·15nt/cu.yd.) in the ground computed from observations (i.e. 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 litte 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.

AREA:
TABLE Nº:

AREA: MARTEN RIDGE
TABLE Nº: 71

RESERVE ESTIMATE — (1500'–2500' COVER)

SEAM NAME	AVG. THICK.	PITCH 0–15° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 15°–30° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 30°–90° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)
3U	9.0															2,936	B	R	440	92.1	1.50	406
3L	18.9								9,736	B	C	1,460	88.2	1.50	1,288	12,532	B	H	6,266	88.2	"	5,527
5U	11.7								3,152	C	C					3,001	B	C	450	70.9	"	319
5L	11.6								6,644	C	C					6,480	B	C	972	74.2	"	721
7	12.6								3,680	C	C					4,828	B	C	724	83.1	"	602
8U	20.7								8,178	C	C					10,735	B	C	1,610	92.7	"	1,493
8L	21.0								4,885	C, B	C	4	59.6	1.50	3	7,606	B	C	1,141	59.6	"	680
9U	8.0																					
9L	20.2								14,323	C, B	H	440	59.7	1.50	263	14,677	B	H	7,338	59.7	"	4,381
PROVEN																						
PART. EXPL'D									10,646			1,904			1,554	62,795			18,941			14,129
PROJECTED									39,952													
TOTALS									50,598			1,904			1,554	62,795			18,941			14,129

SEAM NAME	CUMULATIVE TOTALS — RECOVERABLE RESERVES: OPEN PIT MINING PROVEN	OPEN PIT MINING PARTIALLY EXPLORED	OPEN PIT MINING PROJECTED	UNDERGROUND CONVENTIONAL PROVEN	UNDERGROUND CONVENTIONAL PARTIALLY EXPLORED	UNDERGROUND CONVENTIONAL PROJECTED	UNDERGROUND HYDRAULIC PROVEN	UNDERGROUND HYDRAULIC PARTIALLY EXPLORED	UNDERGROUND HYDRAULIC PROJECTED	TOTALS (000's TONS CLEAN)	SEAM NAME
3U					406					406	3U
3L					1,288			5,527		6,815	3L
5U					319					319	5U
5L					721					721	5L
7					602					602	7
8U					1,493					1,493	8U
8L					683					683	8L
9U											9U
9L								4,644		4,644	9L
PROVEN											
PART. EXPL'D					5,512			10,171		15,683	
PROJECTED											
TOTALS											

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 litte 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.

00345 3/3

AREA:
TABLE Nº:

AREA: MARTEN RIDGE
TABLE Nº: 72

RESERVE ESTIMATE — (+2500' COVER)

SEAM NAME	AVG. THICK.	PITCH 0–15° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 15°–30° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)	PITCH 30°–90° TONS IN PLACE (000's)	RESERVE CLASS.	MINING METHOD	TONS RECOVERED (000's)	CALC. YIELD	AT SP. GR.	TONS WASHED (000's)
3U	9.0															5517	C	C				
3L	18.9								6,026	C	C					21,777	C	H				
5U	11.7								9,456	C	C					9,595	C	C				
5L	11.6								11,074	C	C					13,484	C	C				
7	12.6								8,587	C	C					10,165	C	C				
8U	20.7								19,082	C	C					26,180	C	C				
8L	21.0								14,566	C	C					23,198	C	C				
9U	8.0																					
9L	20.2								31,365	C	H					51,348	C	H				
PROVEN																						
PART. EXPL'D																						
PROJECTED									100,156							161,264						
TOTALS									100,156							161,264						

CUMULATIVE TOTALS — RECOVERABLE RESERVES										
OPEN PIT MINING			UNDERGROUND CONVENTIONAL			UNDERGROUND HYDRAULIC			TOTALS (000's TONS CLEAN)	SEAM NAME
PROVEN	PARTIALLY EXPLORED	PROJECTED	PROVEN	PARTIALLY EXPLORED	PROJECTED	PROVEN	PARTIALLY EXPLORED	PROJECTED		