

00354

No Cover Provided

No. 17

Mine Operator KAISER RESOURCES LTD.
 Mine Location Michel-Natal, East Kootenay District, British Columbia.
 Name of Mines and Seam Harmer (strip mine) Hydraulic and North Balmer Mines, No. 10 Seam

Date Sampled	2-10-72	2-10-72
Weight Sampled (approx.) tons	2000	250

Size: Mine Designation	Clean Coal Product Elkview Plant	Oxidized Coal Product Michel Plant
Screen Opening in.	Minus $1\frac{1}{2}$ sq	Minus $\frac{1}{2}$ sq

FRC Laboratory No.	4152-72	4151-72
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Proximate Analysis

Moisture	6.1	3.6
Ash	8.7	13.9
Volatile Matter	21.1	20.3
Fixed Carbon	64.1	62.2
Sulphur	0.4	0.4
Calorific Value Btu/lb.	13,230	12,240
Ash Fusibility		
Initial Temp.°F	2700+	2700+
Softening Temp: (a) Spherical°F	2700+	2700+
(b) Hemispherical. °F	2700+	2700+
Fluid Temp.°F	2700+	2700+
Grindability Index (Hardgrove)	92	
Free Swelling Index (ASTM)	7-7 $\frac{1}{2}$	1
Classification by Rank (ASTM)	Medium-volatile bituminous	

Remarks: The feed to the Elkview plant consists of about 80%. Harmer strip mine coal and 20% South Balmer hydraulic mine coal. The oxidized coal is from the outcrop of the Harmer mine.

Overburden at the Harmer mine is 40 to 50 ft of shale. Stripping ratio is 7:1.

K - Natal Ridge 72 (A)

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Kaiser Resources Inc.

#1 Confer - Meeting re introduction Sept. 26. - happened at Spirwood. Continued my terms of reference - study of coal resources of BC, embracing geology, exploration and evaluation procedures, mining practices, treatment, reserves and economics. - re anything relating to coal industry in BC. He expressed willingness to cooperate, seemed surprised that we didn't have more data. He said detailed mine plans were submitted regularly to Victoria, would give well disclosure if we quote for no. In reference to geology he has no objection to well disclosure, confer with Don Murphy. He wants letter stating no purpose in study, confidential will be held confidential. I said we didn't know as much as practice about operation so we would have informed for no framing policies which might be developed. He said I should contact Don Murphy re material requested.

Phone no - 425-5314

Don Murphy - Meeting on Sept 27 - he showed me some material as -

1. Map Michel - former mining area 1" = 1000'
2. Structural & sections 1" = 1000' (+1 Aug 10. 144-7-2)
3. Columnar section (have copy) - same
4. Small scale airphoto mosaic of Michel - former area.
5. Miscellaneous small scale mine details (ditto 4, Long 8 etc) on 8 1/2 x 11 size.
6. Report on quality control procedures, (August 1972 - for Japanese steel mission)

General discussion. Continued broad scope of project - part of mineral resource industry study. - attempt to prepare comprehensive report for Dept internal use - material will be kept confidential. On effect, more he can tell us about mineralization the better - we will depend on facture and technical basis if we get cooperation and well disclosure. He indicated he would help insofar as possible if he can get clearance from superiors.

Murphy presently busy, clearing up field program,

and will not likely have completed field up until
Christmas. Agreed better for me to wait in April for
February to get the details - they wouldn't be so
busy at that time.

In meantime - I should write to -
R. K. L. Wilson, Exploration Manager, Kaiser
Steel Corp. 300 Lakeside Drive Oakland, Calif. 94612
(946) 1212 to get clearance on release of -

① Specific material noted above. Also core logs,
KAPG core later sections, etc.

② Release of material sent to Saturn in 1970 - map 1" = 1 mi.
venture block. Also sections and reserve figures.

They are going to release this material - OK for Saturn release
cc. H. L. Miller to H. Murphy, Chief Geologist, Kaiser
Recommended to Box 2000 Springfield.

Said that generally we wished to get any data
which would clarify their operation - and
wanted to be able to talk to them so that we could
depend their actions and informed those - so
then extent, after him whatever he considered
relevant.

Re KRL. Lower license block in Ewin Creek
area - they have done some surface geology -
but waste management people have been opposed to
them cutting trails etc. - Said let us have
details and proposed program -

Also letter to H. L. Corder confirming
what we want.

tasks.

1. Mine floor 1" = 1000' min.
 - Himer Ridge
 - Palmer N & S.
2. Detailed maps re all exploration areas. - p
3. Drill hole logs. - core holes? rotary? - GRN logs? density logs? etc.
4. Stratigraphic X sections - along & across strike - pref. correlation of GRN logs.
5. Structural X sections - (along) & across strike.
6. Local isopach maps?
7. Relief maps?
8. Large scale maps and sections?
9. Exploration

Kaiser Resources Ltd.

- Aug. 28 1972

Don Murphy - Exploration geologist (miner?)

1. Introduction - and terms of reference -
 1. Regional and detailed geology of BC coal deposits.
 2. Exploration and valuation procedures.
 3. Mining practice - surface and underground - ^{pit mine} design and operation - incl. treatment and grading
 4. Reserves - in place, mineable (surface and underground) - metallurgical, thermal & oxidized coal etc.
 5. Economics - utilization, transportation, marketing, financing, role in BC energy, policies and Dept. admin. policies

2. Grass - because operating on Crown Forest grant lands, doesn't come under Coal Act - and apart from mine inspection and reclamation aspects, we have really nothing at all with respect to ecology and landscape. This is the major gap in any comprehensive study, and my first request is to solicit the Co. collaboration - and advice. Offl. your personal cooperation in these aspects.

Second that, we should also know what is relevant about Kaiser's entire operation; including, for example, extrajurisdiction - so that we have a properly informed basis on assessment of the company's operation and activities - These are our long term

Of course - at this stage, we want to establish a basis of liaison with you, and for the moment, get some preliminary ideas of the possible way to approach these long term aspects.

3. My time is rather limited - and I wish to do just one is to have a - or two - ~~computer~~ ^{and I assume you're heavily committed to your} exploration program before winter - otherwise, what I propose is to spend perhaps 1 day, ~~to see the point~~ to get an idea of your current ^{spec} fit ~~to~~ and processing capabilities - and one or two of your exploration setups - shapers, drillers etc -

and we are
happy to see
the way in
which value to
indicate can be
argued.

Assurance
that all
these
aspects
will be in
agreement

We want to know whether

4. Suggest that - to get a general idea of the data which could be made available for a ~~more detailed study of the data~~ ~~just for~~ more detailed review during the winter.

5.

Kaiser

1. Producing areas - Harmer Ridge, Palmer mine N.S.
Former - Spruwood Ridge, Michel area surface mine,
Homer area, etc. -
" Have they general map (about 1" or 2" = 1 mile or larger)
showing mine areas - with typical structural
and stratigraphic X sections? Is any isograd map
showing total mineable coal (> 5' seam thickness
or whatever cutoff they use). Reserve maps?
2. What seams have suitable metallurgical properties, which
is it true that volatiles increase substantially in ^{percentage} ~~which~~ ^{upper part of} section?
- e.g. progressive increase in volatile content from
west to east?
Have they stratigraphic section across the mine
area showing seam correlations? - any structural
reconstructions giving clue depositional environment?
3. Exploration areas - 1969-1972 - (see incl. n.p.)
- presently very comprehensive - what results?
- stratigraphic, structural, defined reserves
4. Exploration and sampling procedures - see att. sheet.
Quaternary.
5. Reserves - what data? - how compiled? -
by mining method (surface, underground); dip?
rank - or metallurgical - or metallurgical eval?
6. What cutoffs?
Seam thickness - single - 5'
multiple -
Partings -
Depth cores (underground)
Core rank - ie re volatiles ash FSI etc
Strip ratio - how defined? What max? what average
operating ratio?
Dip limits (surface & underground) broken ground etc.

7. Mining recoveries - large max-min av.
Single seam
Multiple seam
Dip.

Underground - optimizing seam thickness
(all min-max range for continuous mining)

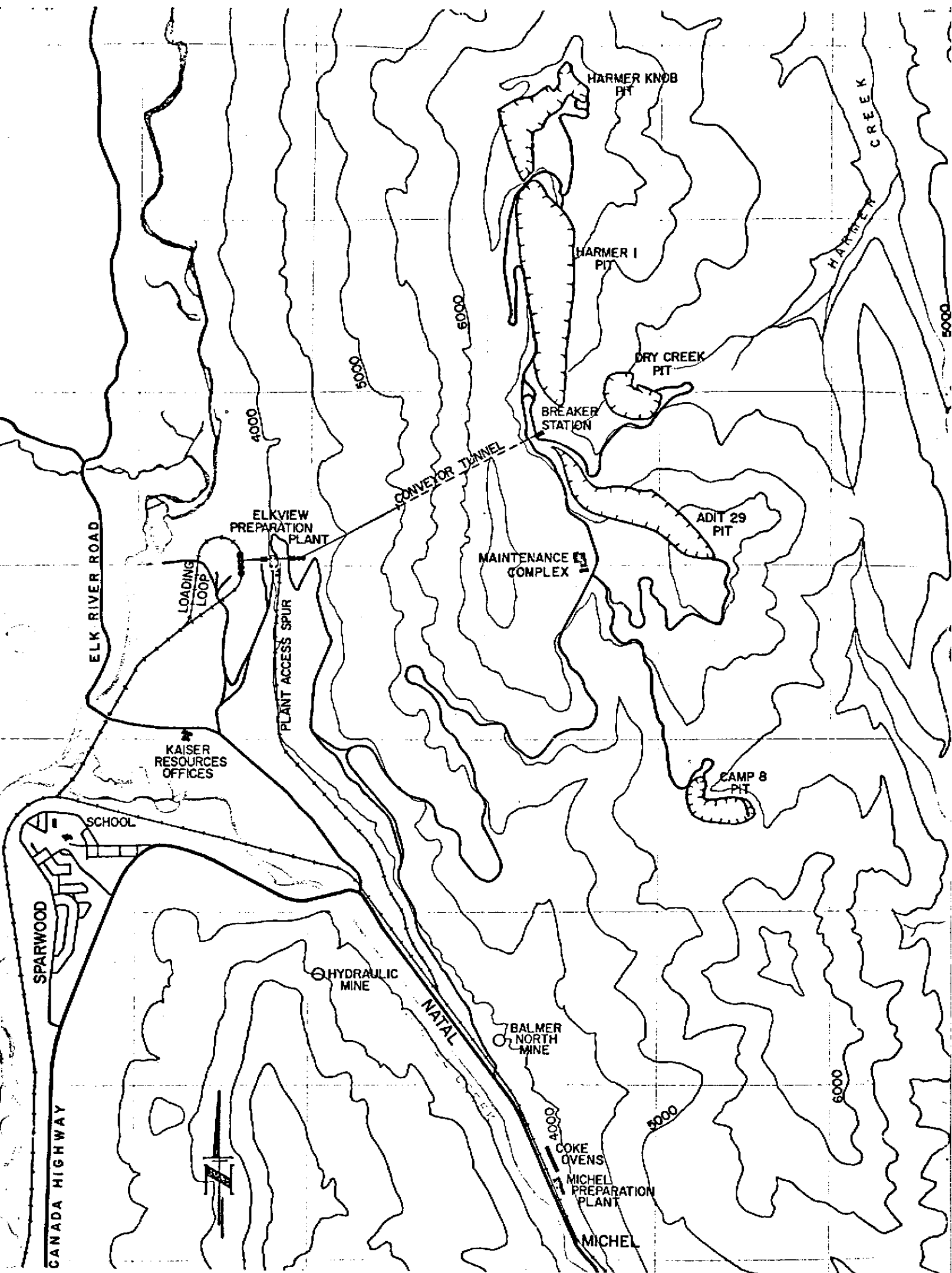
8. Workability characteristics - what relation fines to mining method, broken ground, areas of coal squeeze etc? -

9. What are Kaiser's main operational problems?
- Excessive fines content: - with problems of fines?
- Equipment too large for method operation.
- Other? financial?

10. What proposals might B. Murphy have as to ways in which Govt could assist in exploration sense? - to what extent would regional studies be of value to them? - (Fed & Prov.) & other special

11. While here like to get general idea of operation and what stratigraphy and structure look like in field. - Get a few representative samples of coal types

12. What access to Eggsboro Ridge and other areas?



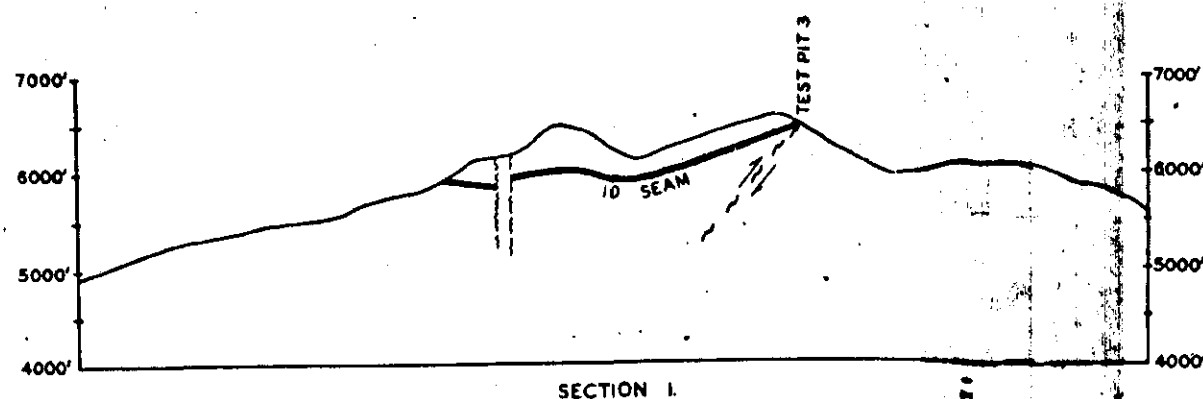
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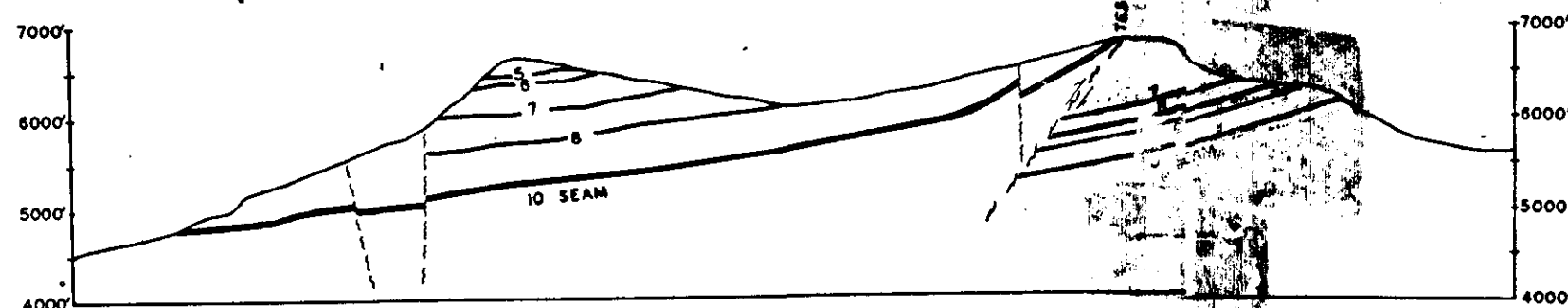
①

SECTIONS TO ACCOMPANY
EXPLORATION 10 SEAM & 7 SEAM

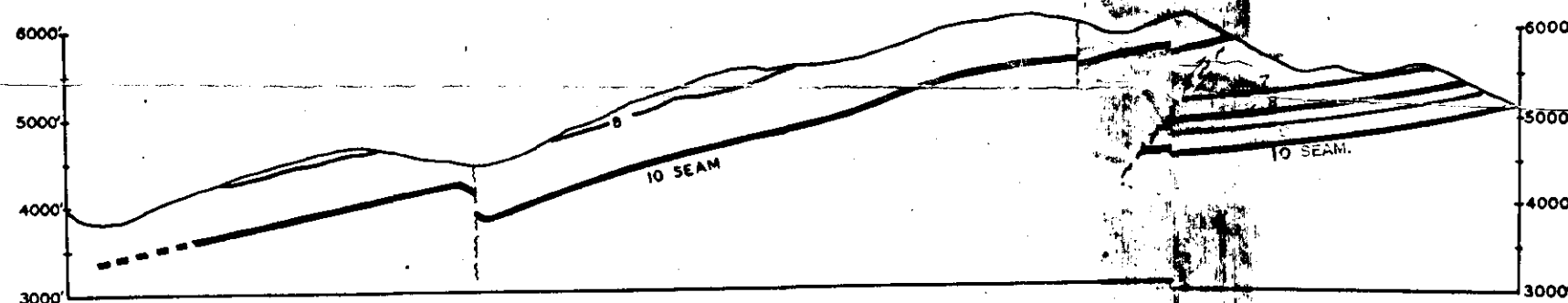
1000' 0 1000' 2000'



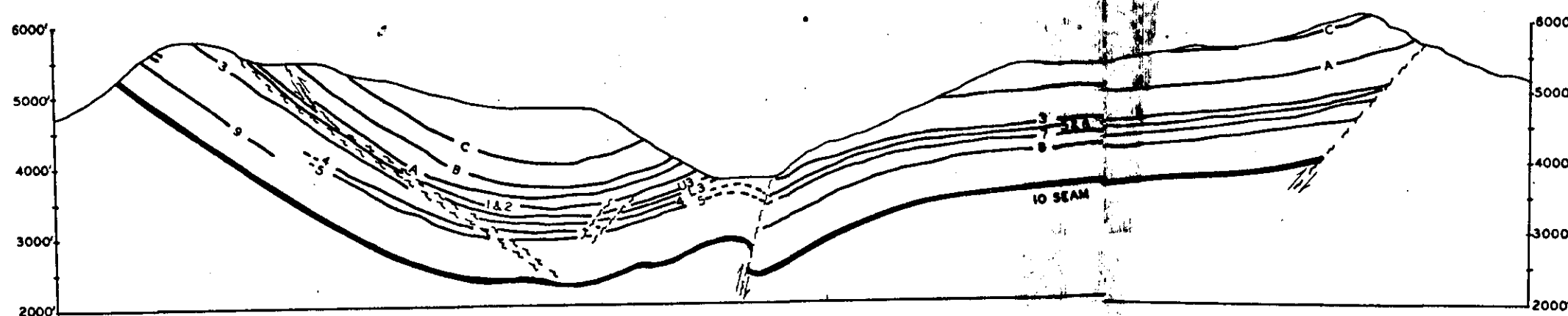
SECTION 1.



SECTION 2.



SECTION 3.



SECTION 4.

1" = 2000'



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**KAISER
RESOURCES**

NATAL, B.C.

LOCATION OF
PROPOSED EXPLORATION
1973 PROGRAM
(ELK VALLEY COALFIELD)

PIC

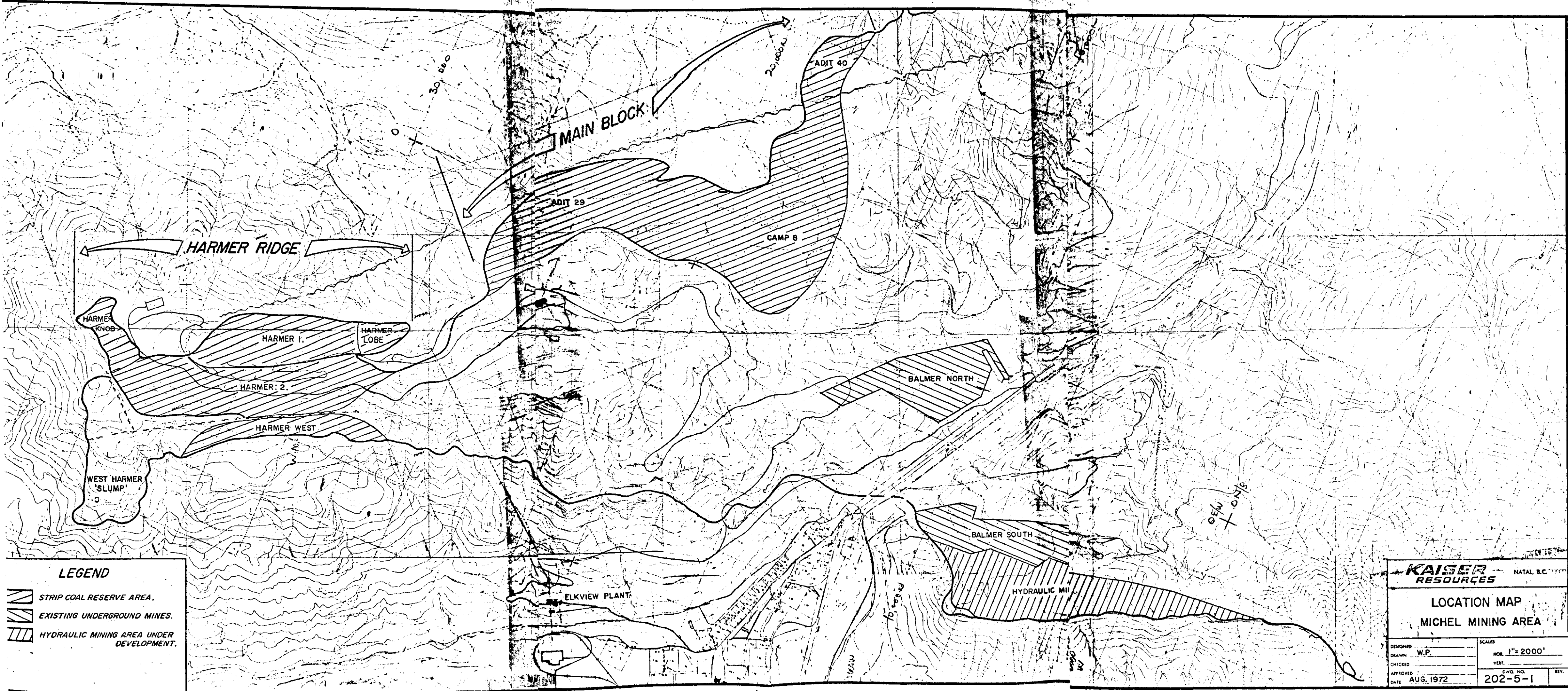
DESIGNED J.B.M.
DRAWN W.P.
CHECKED
APPROVED
DATE MARCH, 1973

2

SCALES
HOR. 1" = 1 Mile
VERT.

DWG. NO.
191-14-1

REV.



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LEGEND

- REPAIR EXISTING ROADS
- PROPOSED NEW ROADS
- PROPOSED TRENCHES
- PROPOSED ADITS

