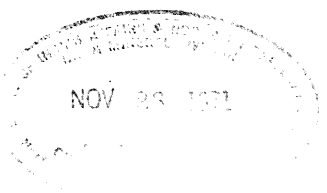
CHEVRON SOBC WM BIRCH YT C-53

GEOLOGICAL PROGRAM



CONFIDENTIAL

The status of this well will be "Tight" therefore, all information regarding the well will be restricted to Chevron Standard personnel and authorized representatives of Western Minerals.

Elevations

Ground Elevation (estimated) - +2100'
K.B. Elevation (estimated) - 2110'
K.B. Elevation (surveyed) -

A. Estimated Depth and Elevation of Significant Markers

	Est. Elevation	Est. Depth
Cretaceous	+2100	Surface
Eagle Plain Formation	+2100	Surface
Blackie Sandstone Member	+1760	350
Lower Cretaceous Shale Unit	+1460	650
Orange Marker	+1270	840
Basal Siltstone Unit	+ 740	1370
Paleozoic Unconformity (Permian)	+ 590	1520
Permian Sandstone	+ 590	1520
Pennsylvanian Siltstone	- 130	2240
Total Depth	- 910	3010

Note: These depths are based on seismic events and regional cross sections and are subject to revision based on good sample picks and a surveyed K.B.

B. Objective Horizons

Primary - Permian Sandstone

Secondary -

C. Ditch Samples

Two sets of bagged samples are required, one for Chevron and one for the Geological Survey. One set of washed bottled samples and one set of washed enveloped (double volume) samples are required for Chevron and one set of washed bottled samples is required for Western Minerals. These cuts may be taken from Chevron's bagged set.

Sample interval is as follows:

Surface to T.D. - 10' samples

Five foot samples should be caught at the wellsite geologist's discretion.

D. Penetration Rate Records

A mechanical drilling time recorder should be used on this well.

E. Sample Description

An up-to-date written sample description and a plotted rock log chart must be maintained by the wellsite geologist. A copy of the written description is required by the government. Through cored and/or oil stained intervals a detailed written description of the reservoir characteristics and hydrocarbon shows must be made.

F. Gas Analyzer

A gas detector will be used on this well.

G. Formation Evaluation

General

Well control is sparse in this region and it is possible that reservoir conditions could develop almost anywhere in the section. The wellsite geologist must, therefore, be prepared to evaluate potential reservoirs other than those listed under objective horizons.

Any shows in the section above the Permian Sandstone will be evaluated after logging unless there is substantial porosity and hydrocarbon indications. Substantial meaning 15' plus porosity, with positive indications of hydrocarbons (live oil, staining, fluorescence or gas in the mud). Consult Calgary if the "substantial" should occur.

1. Coring and Testing Program

It is intended to evaluate the Permian sandstone while drilling with foam, if it is mechanically feasible, in order to minimize formation damage.

As soon as Permian sandstone is recognized in samples commence diamond coring in foam, cut a 60' core and report the results to the Calgary office. If mechanical difficulties are encountered while coring in foam contact the Calgary office for instructions and a decision on whether to mud up, continue drilling or continue attempts to core with foam.

If samples conditions are poor due to foam drilling and Permian sandstone has not been recognized by an elevation of 600' above sea level, commence diamond coring as outlined above.

2. Logging Program

Use Schlumberger

One logging run will be made at T.D.

(a) Dual Induction Laterolog/S.P.

Try a 10 m.v. S.P. scale.
Run from T.D. to surface casing.
Vertical scales:
2" = 100' - run linear scale using 0-100 scale on resistivity and 0-100-200 scale on conductivity.
5" = 100' - use logarithmic scale on resistivity.
Both scales will be run from T.D. to surface casing.
A 200' repeat will be run at T.D. or over the zone of interest.

(b) B.H.C. Sonic/Gamma/Caliper (Integrated)

Run from T.D. to surface casing.
Run Caliper 50' inside surface casing.
Run Gamma Ray to surface.
Transit time scales 40-70-100.
Gamma Ray scale 0-150 API units.
Vertical scales: 2" = 100' and 5" = 100' from T.D. to surface casing.
A 200' repeat will be run at T.D. or over the zone of interest.

(c) Formation Density Log (Compensated)/Gamma/Caliper

Run a minimum of 1500' of log over the zones of interest.
Run first 5" = 100' scale on bulk density with correction curve.
Run second 5" = 100' scale on porosity curve using a sandstone scale.
A 200' repeat will be run at T.D. or over the zone of interest.

(d) Sidewall Neutron Porosity Log

This log may be run over the zones of interest at the discretion of the Formation Evaluation Geologist.

(e) Microlog Caliper

This log may be run over the zones of interest at the discretion of the Formation Evaluation Geologist.

(f) Dipmeter should be available if needed.

H. Fluid Samples

1. Representative fluid samples from all DST recoveries are required for lab analysis. Samples are required from the top, middle and bottom of the fluid column. One sample is sufficient for recoveries under 60'. A set of water samples is required by the logging company for Rw determinations.

2. An extra quart sample of any clean oil, or oil cut liquids obtained on DST is to be taken and forwarded to the Northern Task Force office. The wellsite personnel should have on hand a supply of special containers for these samples.

3. Three one quart mud samples should be collected at 15 minute intervals from the flowline prior to each logging run for Rm and Rmf measurements at the wellsite.

4. Stainless steel containers are to be available to collect a sample of any gases obtained on test.

Approved: _____
W. S. CAMPBELL

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J. P. LEESON

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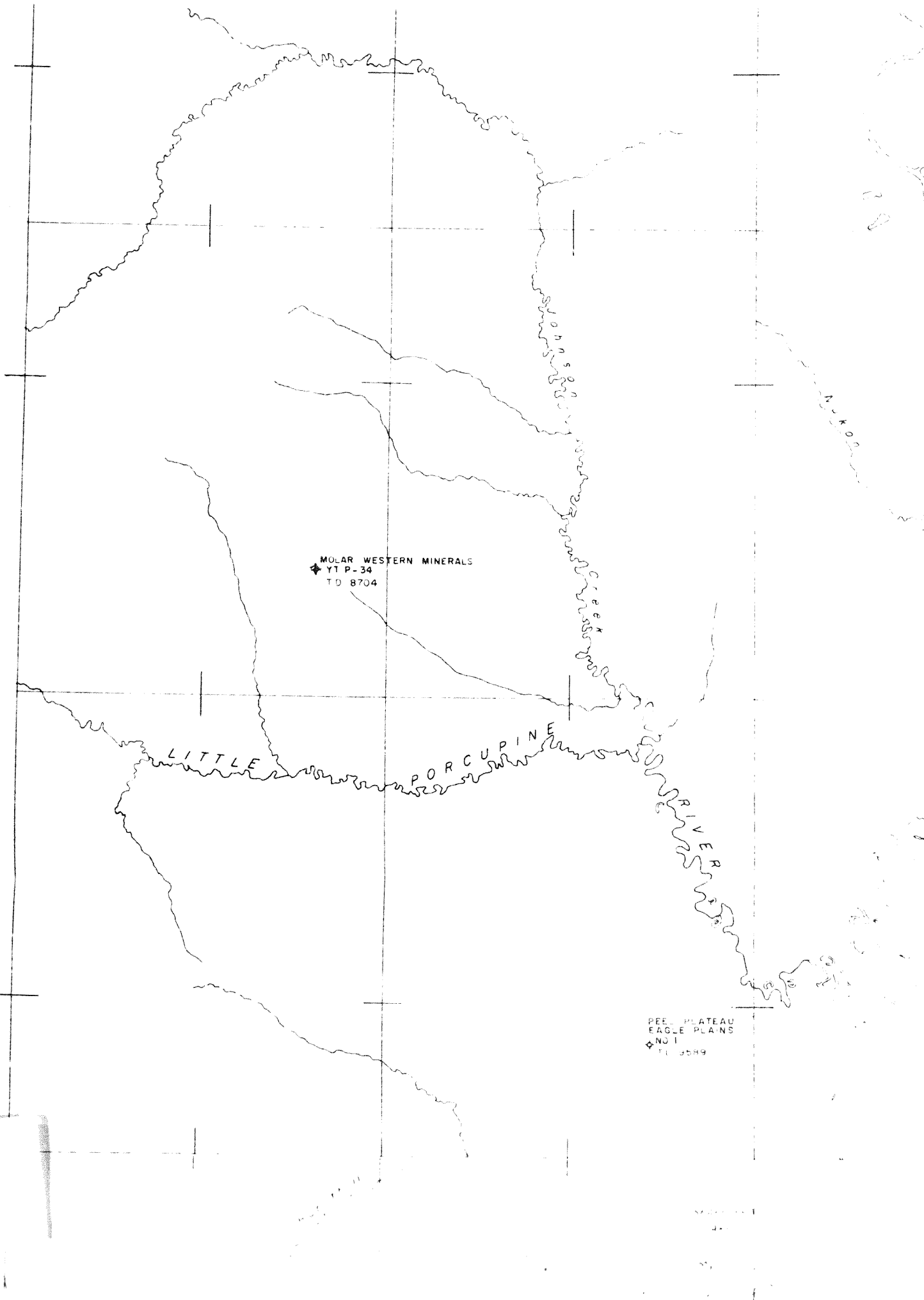
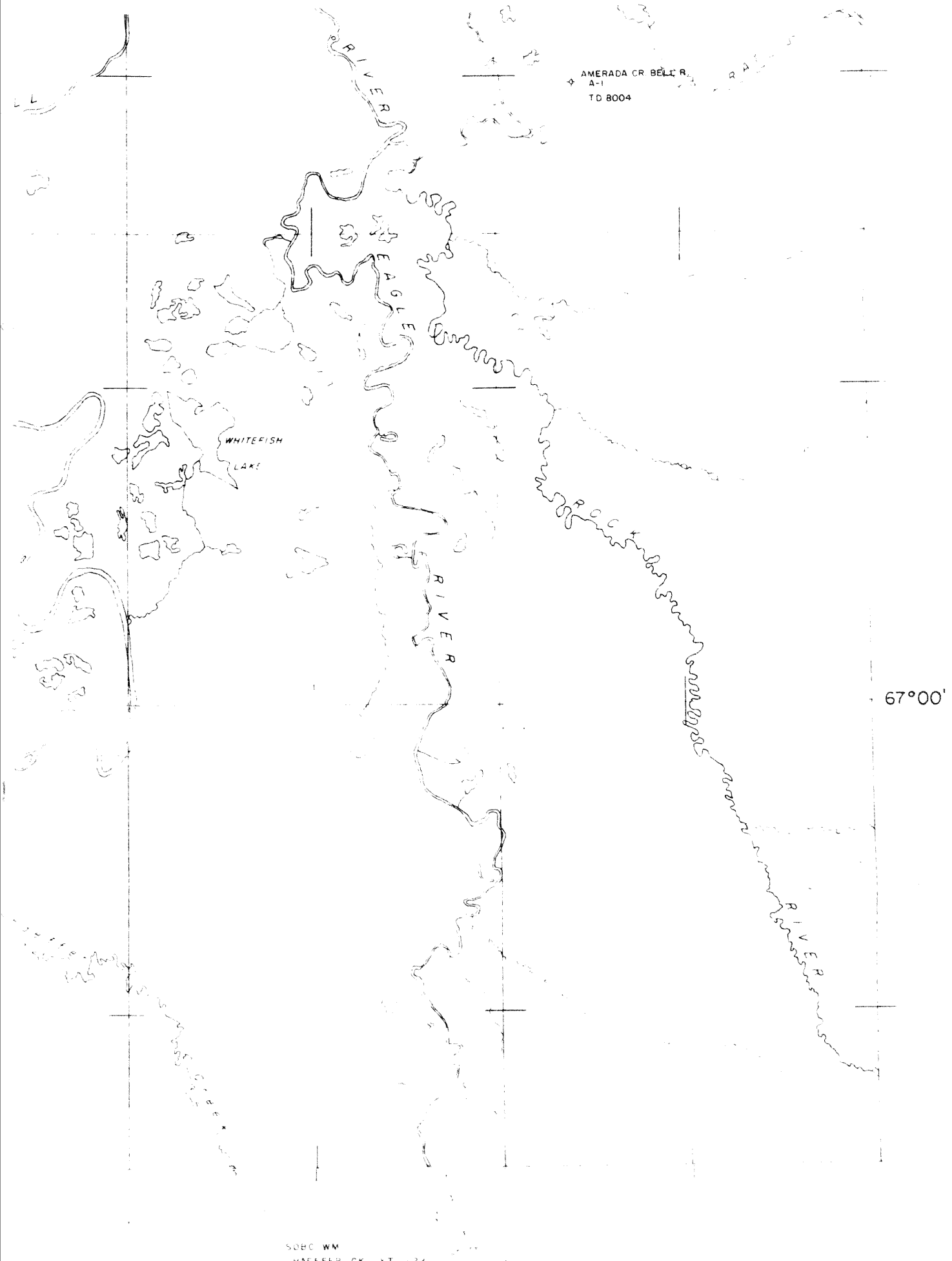
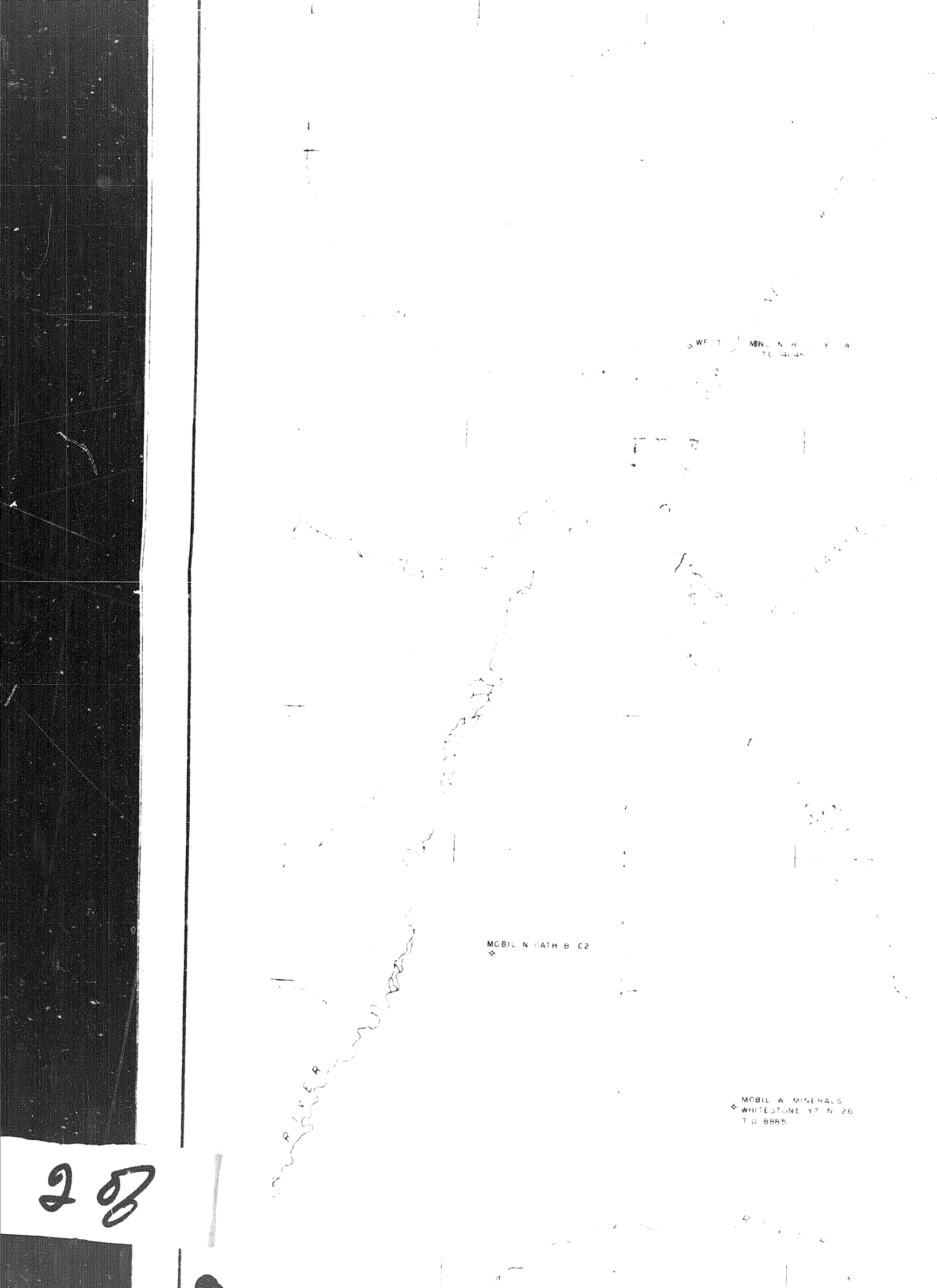
Calgary, Alberta
November 1971


MOLAR WESTERN MINERALS
YT P-34
TD 8704
LITTLE PORCUPINE RIVER
PEEL PLATEAU
EAGLE PLAINS
NO 1
TD 9589


AMERADA CR BELL R
A-1
TD 8004
EAGLE
RIVER
WHITEFISH
LAKE
RIVER
RIVER
67°00'



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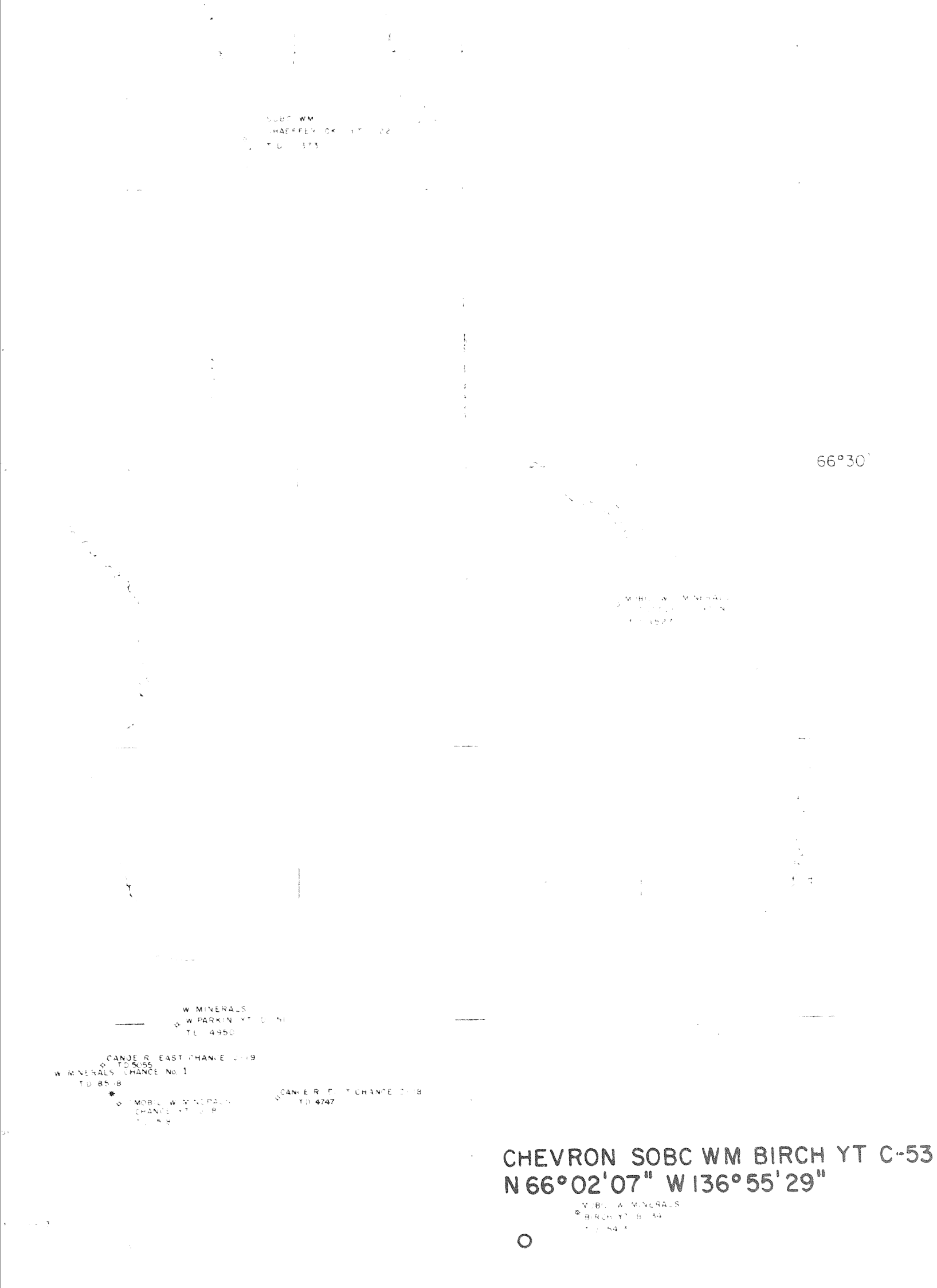
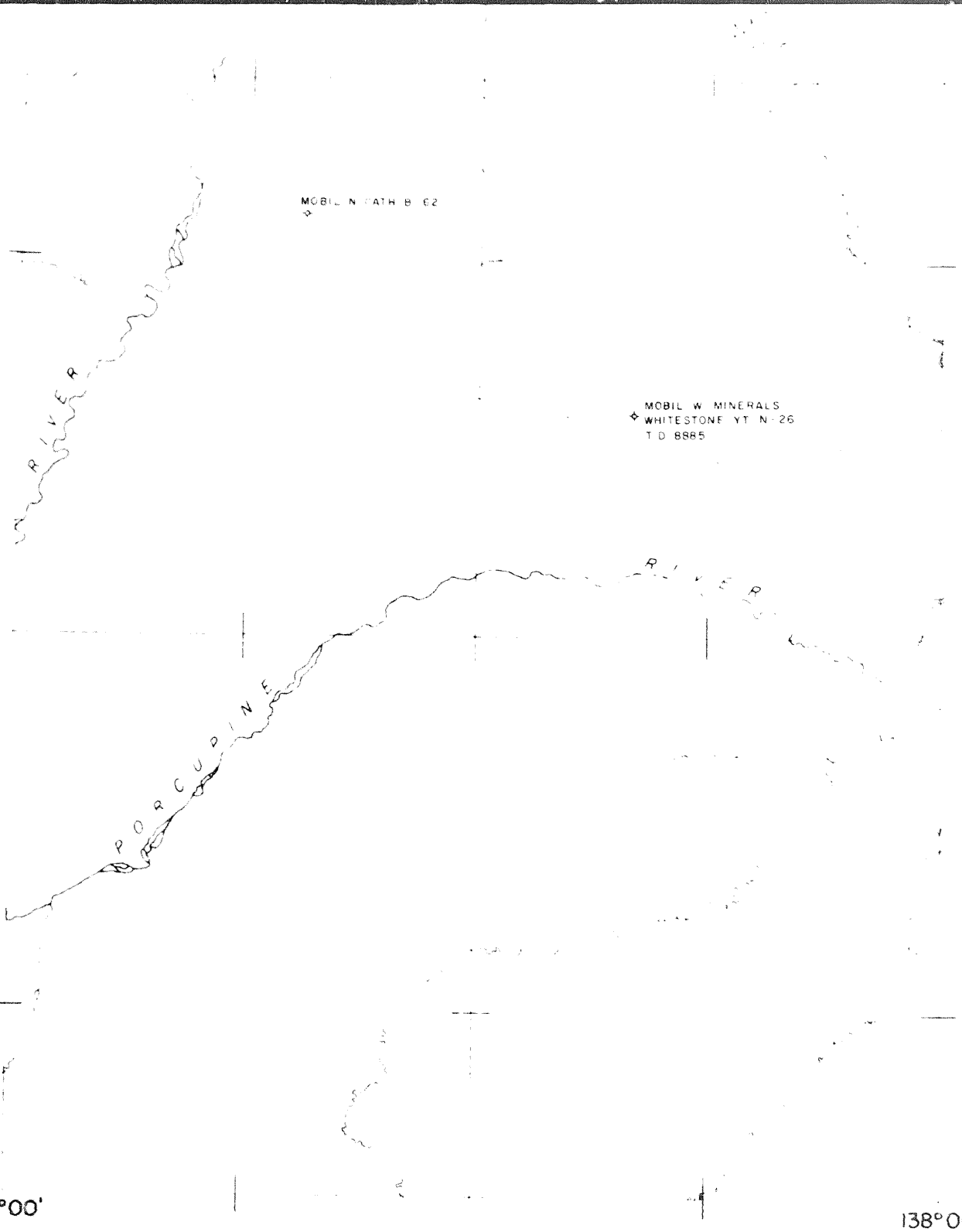
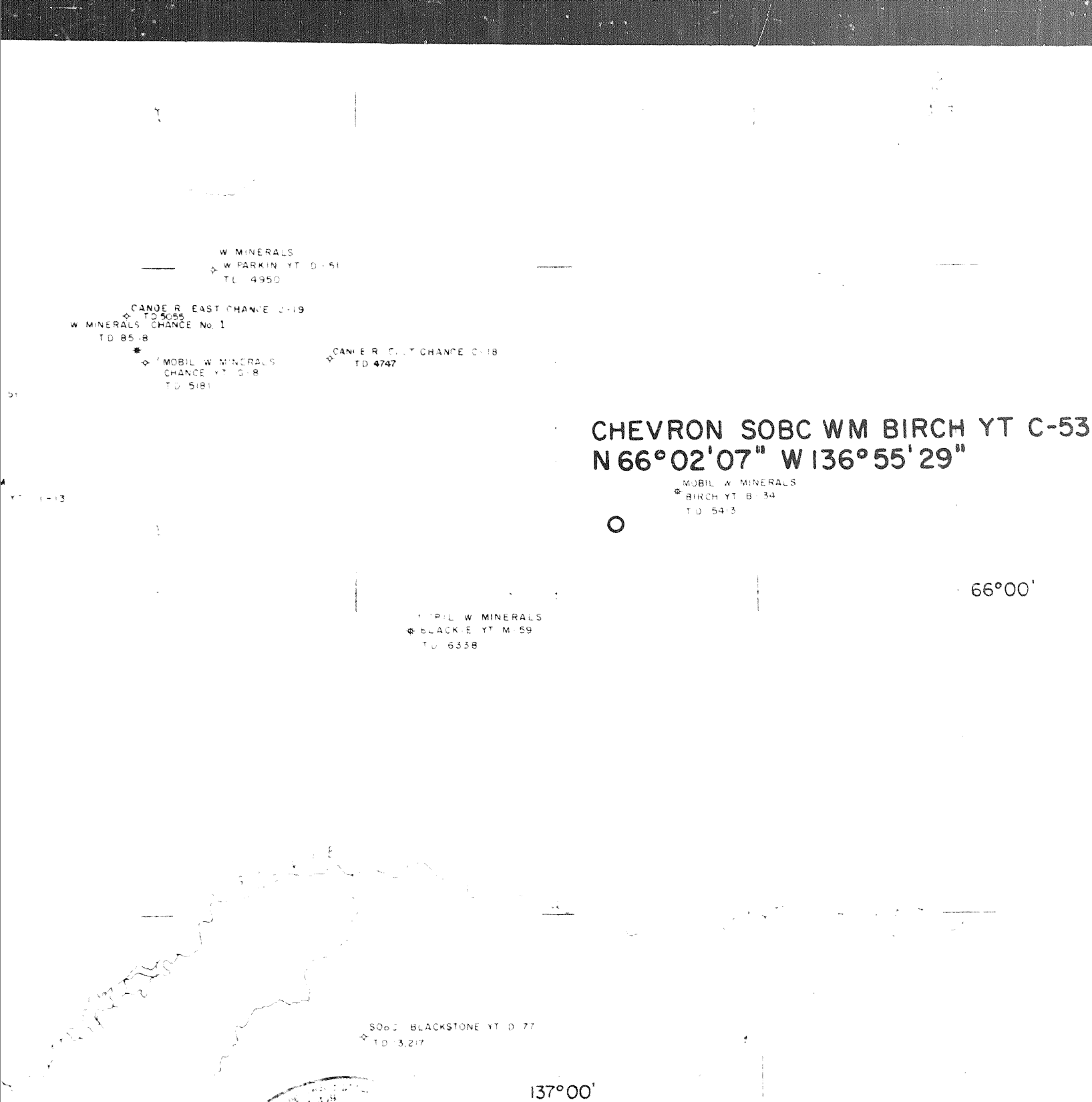

66°30'
W MINERALS
W PARKIN YT D-51
T.D. 4950
CANOE R. EAST CHANCE D-19
T.D. 5055
W MINERALS CHANCE No. 1
T.D. 8518
CANOE R. EAST CHANCE D-18
T.D. 4747
CHEVRON SOBC WM BIRCH YT C-53
N 66°02'07" W 136°55'29"


MOBIL N PATH B 62
MOBIL W MINERALS
WHITESTONE YT N-26
T D 8885
MOBIL PORCUPINE
T D 8500
RIVER
PORCUPINE
RIVER
139°00'
138°00'

3



REVISIONS

CHEVRON STANDARD LIMITED

EAGLE PLAINS AREA

SHOWING PROPOSED LOCATION

CHEVRON SOBC WM BIRCH YT C-53