



Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

000745

MINFILE

U3

GEOLOGICAL SURVEY BRANCH

MINFILE

X IDENTIFICATION

MINFILE NO. 082ENW053 NATIONAL MINERAL INVENTORY NO. 82E14 U2

NAMES HYDRAULIC LAKE TYEE KETTLE PB

CLAIMS Kettle 12 PB 180-182, 251, 252
OWNER New Type Resources Ltd.; PNC Exploration (Canada) Co. Ltd.

OPERATOR
STATUS [] SHOWing [] PROSpect [X] DEVELOped PROspect [O] [U] PRODucer [O] [U] PAst PROducer

LOCATION NTS 082E14E MINING DIVISION GRWD
LATITUDE 49° 47' 45" LONGITUDE 119° 11' 50" ELEVATION 1250 metres
UTMZONE NORTHING EASTING
LOCATION CERTAINTY [X] WITHIN 500m [2] WITHIN 1km [3] WITHIN 5km

4 COMMENT ON IDENTITY Centre of deposit

MINERAL OCCURRENCE

COMMODITIES UR listed according to economic importance

RESERVES TYPE TONNES GRADES
OR BEST ASSAY DATA
COMMENTS

PRODUCTION YEARS TONNES MINED
METALS RECOVERED

MINERALOGY ECONOMIC MINERALS NGYT

GANGUE MINERALS MRCS

ALTERATION MINERALS
COMMENTS

ALTERATION TYPE
AGE OF MINERALIZATION 121 ISOTOPIC AGE

- DATING METHOD: 01 VEIN, 02 STOCKWORK, 03 PORPHYRY, 04 PIPE, 05 IGNEOUS, 06 SKARN, 07 PEGMATITE, 08 STRATABOUND, 09 STRATIFORM, 10 CONCORDANT, 11 PLACER, 12 PRECIPITATE, 13 DISSEMINATED, 14 MASSIVE, 15 UNKNOWN, 16 UNCLASSIFIED
GENETIC TYPE: 1 REPLACEMENT, 2 MAGMATIC, 3 VOLCANOGENIC, 4 SEDIMENTARY, 5 SYNGENETIC, 6 EPIGENETIC, 7 HYDROTHERMAL, 8 RESIDUAL, 9 UNKNOWN (UNCLASSIFIED)

(hydrogenic) paleochannel

SHAPE OF DEPOSIT [X] REGULAR [2] TABULAR [3] CYLINDRICAL [4] BLADED [5] IRREGULAR
MODIFIER [1] FOLDED [2] FAULTED [3] FRACTURED [4] SHEARED [5] OTHER
DIMENSION 1000 200 50
ATTITUDE 150 2 [1] STRIKE/DIP [X] TREND/PLUNGE

COMMENT ON STRUCTURE Structure-controlled paleochannel

✓ HOST ROCKS

A. DOMINANT ROCK TYPE SEDIMENTARY VOLCANIC METAPLUTONIC METAMORPHIC
 PLUTONIC METASEDIMENTARY METAVOLCANIC

B. SUPERGROUP _____ GROUP _____
 FORMATION Plateau Basalt 242 MEMBER _____
 AGE 122 ISOTOPIC AGE _____
 DATING METHOD _____ MATERIAL DATED _____
 ROCK TYPE CNGL SNDS
 LITHOLOGY CGLM

C. IGNEOUS/METAMORPHIC/OTHER Monashee Group 338 Shuswap Metamorphic Complex
 AGE 200 ISOTOPIC AGE _____
 DATING METHOD _____ MATERIAL DATED _____
 ROCK TYPE GNSS
 LITHOLOGY _____

COMMENT ON HOST ROCK _____

✓ GEOLOGICAL SETTING

TECTONIC BELT INSular XMineca TERRANE T (SKT)
 Coast Crystalline EAstern CPC
 InterMontane

PHYSIOGRAPHIC AREA OKHL

METAMORPHISM: TYPE CONTACT RELATIONSHIP PRE-MINERALIZATION
 REGIONAL SYN-MINERALIZATION
 POST-MINERALIZATION
 GRADE Hornfels BlueSchist Amphibolite EClogite SubBituminous
 Zeolite GreenSchist Granulite Lignite Low Vol. bituminous
 Med. Vol. bituminous Hi Vol. bituminous SemiAnthracite ANthracite

COMMENT ON GEOLOGICAL SETTING _____

✓ CAPSULE GEOLOGY Layered gneissic rocks of the Paleozoic Monashee Group, early Cenozoic and Mesozoic Valhalla and Conwell intrusive rocks, and volcanic-sedimentary rocks of the Eocene Kettle River Formation underlie the area. The deposit occupies the northern part of a southeast trending, structure-controlled paleochannel which overlies the metamorphic rocks. The Miocene paleochannel varies in width from 100 to 200 metres and is mineralized for a length of approximately 1000 metres, although ore-grade material is confined to a length of 500 to 600 metres. The average thickness of the deposit is 50 metres. The paleohydrologic gradient is from northwest to southeast at about 2 percent. The basalt formerly covering the deposit has been stripped off as result of uplift and glaciation and the deposit is now covered by relatively impermeable beds of varved glacial clays and till. The diorite basalts and the fluvial sediments form the Miocene-Pliocene Plateau Basalt Formation.

✓ BIBLIOGRAPHY (place 'best' or most recent source first)
 EMPR ASS RPT 5090, *5570, 5972, 6011, 6288, *6390, 6418 cont.
 EMPR P *1979-6, pp. 31, 36, 37, 47
 *EG Vol. 77, 1982, pp. 1189 - 1193
 EMPR GEM 1974 - 64
 EMPR EXPL 1975 - 29-30; 1976 - 30, 33; 1977 - 37-38; 1978 - 42-43
 *EMPR GEOL ^{1976 pp. 13-17;} 1977 - 1981, pp. 12-16
 EMPR FIELDWORK 1976 - 11-14 cont.

CODED BY LDT initials FIELD CHECKED: YES NO DATE CODED 1987 yr 02 mo 28 day
 REVISED BY _____ initials FIELD CHECKED: YES NO DATE CODE _____ yr _____ mo _____ day

Conglomerate blankets the entire basement complex and also comprises thick horizons throughout the sedimentary sequence. Interbedded within the conglomerate units are much thinner horizons of fine- to coarse-grained sandstone and minor mudstone. Fragments of slightly decomposed and carbonized wood and other forms of vegetal material are abundantly scattered throughout the sediments. Organic material within iron sulfide-rich zones of the deposit has been completely broken down to form humic acids which have precipitated together with uranium in voids within the conglomerate.

Although marcasite is scattered throughout the mineralized paleochannel, there are two zones, corresponding to two small depressions in the basement complex, where the mineral is in sufficient quantity to cement the conglomerate. The marcasite is premineralization and probably diagenetic since the massive portions ~~do not~~ contain uranium mineralization.

The only uranium-bearing mineral identified is ringyoite. It occurs mainly as star-shaped concretions and accretionary masses surrounding clasts and marcasite grains in carbonaceous filled voids. The uranium content of the sediments gradually increases with depth, the basal conglomerate often containing more than 0.1 percent uranium.

Ore reserves of the southern part of the deposit are estimated at 2055697 tonnes averaging 0.031 percent uranium ^(0.036% U₃O₈) to give 638,00 kilograms of uranium. Reserves of the northern part are estimated, by wide-spaced drilling, at over 1000000 tonnes at 0.02% U (EMPR P 1979-6).

uranium oxide

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52
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* Sawyer, D.A., A.T. Turner, P.A. Christopher, and O.R. Boyle (1981):
 * Basal Type Uranium Deposits, Okanagan Region, South
 Central British Columbia; Field Guides to Geology &
 Mineral Deposits, Calgary '81, GAC, MAC, CGU 1981,
 p.69-77.

51
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* Bates, D.V., J.W. Murray, and V. Randssepp (1980): Royal
 Commission of Inquiry, Health and Environmental
 Protection, Uranium Mining; Commissioners' Report
 October 30, 1980, Volume 1, pp. 32-34, ~~1-12~~

N Miner ^{Sept 8, Nov 17, 1977;}
^{Jan 26, Sept 21, 1978; Aug 16, 1979}

GCLN #223, 1976; #7, 38, 45, 104, 172, 1977; #15, ^{220,} 142, 172, 1978;
 #150, 1979

W Miner

53

Canadian Mineralogist, 1981, Vol. 19, pp. 325-331

GSC P 79-1A, pp. 349-356; 81-23, pp. 37-47

53

CIM BULL ^{Dec, 1978 p 64; March 1979, Vol 72, No 803, p 96;}
^{Aug 1980, Vol 73, No. 820, pp 89-108}

* EMPR PRELIM MAP 29

* CIM Special Volume 33, pp. ³⁰⁹⁻³²⁰ 311-319, 1986, (Uranium Deposits of Canada)
 BCPG Vol. 25, No 6 (Dec 1977) p1246



MINFILE RESERVES

MINFILE NUMBER 082ENW053

NAME Hydraulic Lake

ORE ZONE NAME South part

CATEGORY: MR MG IN IF UN BA

If BA, sample type =

✓

CONFID. FACTOR	YEAR	QUANTITY (TONNES)	COMMODITY/GRADE (PRECIOUS METALS IN GRAMS, ALL OTHERS PER CENT)
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A	① 2 3	<u>1977</u>	<u>2055697</u>	<u>UR1</u>	<u>0.031</u>	<u> </u>	<u> </u>	<u> </u>
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COMMENTS Defined by grid drilling. Conversion grades: 0.0366 % U₃O₈, 0.37 kg/tonne U₃O₈
0.73 lb/ton U₃O₈

REFERENCE EMPR P 1979-6 p 47

B	1 2 3	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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COMMENTS

REFERENCE

CODED BY L.P.J. (initials)

DATE CODED 1987 yr 02 mo 28 day

CONFIDENCE FACTOR:
1 Probably reliable
2 Possibly reliable
3 Unknown

SAMPLE TYPES:
GRAB Grab
CHIP Chip
CHNL Channel
BULK Bulk Sample
ROCK Rock Geochemistry
DIAD Drill

NOTE: For any given reserve category only two figures for any given year per ore zone may exist.



MINFILE RESERVES 4

MINFILE NUMBER ... 082E NW 053

NAME ... Hydraulic Lake

ORE ZONE NAME ... North part

CATEGORY: MR MG IN IF UN BA

If BA, sample type =

CONFID. FACTOR	YEAR	QUANTITY (TONNES)	COMMODITY/GRADE (PRECIOUS METALS IN GRAMS, ALL OTHERS PER CENT)
A 1 <input checked="" type="radio"/> 3	1979	> 1,000,000	UR ₁ 0.017
COMMENTS	Estimate by wide-spaced drilling. Conversion grades: 0.02% U ₃ O ₈ , 0.20 kg/tonne U ₃ O ₈ , 0.40 lb/ton U ₃ O ₈		
REFERENCE	EMPRP 1979-6 p 47		

B 1 2 3			
COMMENTS			
REFERENCE			

CODED BY ... L.D.J. (initials)

DATE CODED ... 1987 ... yr ... 02 ... mo ... 28 ... day

CONFIDENCE FACTOR:
1 Probably reliable
2 Possibly reliable
3 Unknown

SAMPLE TYPES:
GRAB Grab
CHIP Chip
CHNL Channel
BULK Bulk Sample
ROCK Rock Geochemistry
DIAD Drill

NOTE: For any given reserve category only two figures for any given year per ore zone may exist.