

# MAR 19690001: LUBICON LUBICON EV

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ECONOMIC MINERALS

FILE REPORT No.

CU-AF-001(1)

GEOLOGICAL REPORT

ON

LUBICON LUBICON EV 2-21-87-13, W5M.

OILFIELD CONSULTANTS LTD.

INDEXING DOCUMENT NO. 700210



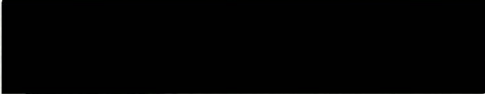
GEOLOGICAL REPORT

ON

LUBICON LUBICON EV 2-21-87-13

Lsd. 2, Sec. 21, Twp. 87, Rge. 13, West of the 5th Meridian.

REPORT Prepared and Submitted By:

  
K. A. Matheson, P. Geol.

FEBRUARY, 1969.



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## SUMMARY OF WELL DATA

## GENERAL

Name of Company Lubicon Mining Ltd.

Name of Well Lubicon Lubicon EV 2-21-87-13

Location Lsd. 2-21-87-13, W 5 Mer. 861' N. of S. Bdy., Section 21.  
Co-Ord. 1989' W. of E. Bdy., Section 21.

Elevation: Grd. 2149' Elevation: K.B. 2163'

Drill Out: Spudded 7:00 P.M., February 2, 1969. Completed Drilling 6:30 A.M., February 10, 1969.

Drilling Contractor Commonwealth Drilling (Northern) Limited, Rig #10.

Total Depth 3656' Plugged Back to Surface - Abandoned.

Hole Size 12 1/2 inch 0 to 620' (Initial Hole) inch to  
7 7/8 inch 620' to 3656' inch to

Rig Released at 12:00 P.M., February 11, 1969.

## CASING RECORD

Size	Weight Lb./ft.	Make	Type	Grade	Shoe at	Sacks Cement	Amount Used	New or Used
8 5/8"	24#/ft.		Seamless	J-55	618'	350 / 3%CaCl <sub>2</sub>		New

## LOG RECORD - See K.C.L. Midwest Lubicon #2-21-87-13

Company	Type	Interval

## DEVIATION SURVEYS - Lubicon Lubicon EV 2-21-87-13

Depth	Degrees Incl.	Depth	Instrument Deg. Incl.	Depth	Degrees Incl.	Instrument
773	5	1429	1 1/2	2468	1 1/2	
805	4 1/2	1584	2	2769	1	
866	4	1769	2	2866	1 1/2	
1023	2 3/4	1986	2	3130	1 1/2	
1243	1 1/2	2173	1			



# SUMMARY OF GEOLOGICAL MARKERS, TESTS, CORES

## GEOLOGICAL MARKERS

K.B. 2160'

Formation Markers	Depth	Elevation
<u>MARKERS FROM K.C.L. MIDWEST LUBICON 2-21-87-13 - INDUCTION ELECTRIC LOG:</u>		
Base Fish Scales	962'	+1198'
Viking Sand	812'	+1348'
Blairmore Formation	1000'	+1160'
Mississippian - Banff	1718'	+ 442'
Wabamun Formation	2643'	- 483'
Winterburn Formation	3558'	-1398'
Woodbend Formation	3988'	-1828'
Total Depth	5478'	-3318'

## ~~TESTS~~ DEVIATION SURVEYS FROM K.C.L. MIDWEST LUBICON 2-21-87-13

No.	Дата	Грунт	Глубина	№	Грунт	Глубина	№
Depth	Deviation	Depth	Deviation	Depth	Deviation	Depth	Deviation
161	1 1/8	571	1 7/8	1650	1 1/2	2289	1/4
221	1	620	2	1811	3/4	2496	3/4
281	3/4	920	2 1/8	2012	1 3/4	2722	1
398	1	1136	2	2070	1 1/4	2915	1/2
511	2	1352	1 1/8	2190	3/4	3156	1/2
						3391	1/4
						3634	1/4
						4576	3/4

## CORES - FROM LUBICON LUBICON EV 2-21-87-13

Formation	Interval	Rec.	Coring Equip.
#1 Winterburn	3579' - 3614'	35'0"	Eastmen Surveys 7 13/16"x4"
#2 Winterburn	3614' - 3645'	27'1"	
#3 Winterburn	3645' - 3656'	9'6"	



A P P E N D I X

27'0"  
27'1"  
27'6"

7/15/10



RE-ENTRY PROGRAMLUBICON 2-21-87-13LOCATION:

Lsd. 2-21-87-13, W 5 Mer.

ELEVATIONS:Ground:

2149 feet.

K. B.:

2160 feet. (estimated.)

MARKER HORIZONS:

<u>Markers</u>	<u>Depth</u>	<u>Sea Level</u>
Peace River	812'	/1348'
Spirit River	926'	/1234'
Banff	1718'	/ 442'
Wabamun	2643'	- 483'
Winterburn	3558'	-1398'
Propective Horizon	3640'	-1480'
Woodbend	3988'	-1828'
Beaverhill Lake	5005'	-2845'
Slave Point	5238'	-3078'
Watt Mountain	5383'	-3223'
Gilwood	5392'	-3232'
Muskeg	5418'	-3258'
Precambrian	5466'	-3306'
Total Depth	5478'	-3318'

DRILL STEM TESTS:

- D.S.T. #1, 1763' to 1818', recovered 20 feet mud.
- D.S.T. #2, 2649' to 2722', recovered 10 feet mud.
- D.S.T. #3, 5235' to 5320', recovered 60 feet mud.

PRESENT STATUS:

- Abandoned - surface casing cut-off three feet below ground level.

PURPOSE OF RE-ENTRY:

- While drilling the well initially a junk sub was run to a depth of 3640 feet and when pulled it was found to contain several pieces of native Copper. Chemical Analysis revealed 98.34% to 99.15% Copper with traces of Cobalt, Iron, Nickel, Lead and Sulphur. This program is designed to test for this Copper using first, side wall coring and if any encouragement is found then a side-track up the hole and a diamond core cut over the entire interval of interest.

Continued on Page 2 .....



RE-ENTRY PROGRAM:

1. Move on drilling rig and rig up to drill out plugs. Weld on nipple to 8 5/8" casing and install casing bowl.
2. Drill 7 7/8" hole through plugs to 3700 feet.
3. Treat out contaminated mud and have Viscosity 80 to 100 sec. at drill out depth.
4. Run Schlumberger Formation Density Compensated Gamma and Side Wall Neutron Porosity Logs, 2" and 5" (Minimum) over prospective zone.
5. Take side wall cores 1 per foot over prospective zone and over other interesting sections as indicated on logs (estimated total of 20 cores).

If Schlumberger logs indicate nothing positive and the side wall cores get full or near full recovery, but are lacking any mineralization it is recommended the well be abandoned. Should no recovery be made in the side wall cores prepare to sidetrack as follows:

- a. Set a 150' plug, 3650 feet to 3500 feet, using 20% sand and Oilwell cement (slurry 16# plus).
- b. Wait on cement 36 hours.
- c. Polish off plug and set whipstock and drill off to 3625 feet.
- d. Cut a 40 foot diamond core 6 1/8"x3 3/4" from 3625 feet to 3665 feet.
- e. If no further coring is necessary run abandonment plugs as requested by the Oil and Gas Conservation Board.
- f. Release rig.

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K. A. Matheson, P. Geol.

KAM/d1

ABANDONMENT PLUGS AS FOLLOWS:

Plug #1, 5478' to 5185'	- 122 sacks	- not felt for.
Plug #2, 3678' to 3465'	- 81 sacks	- top of plug at 3465 feet K.B.
Plug #3, 2693' to 2593'	- 106 sacks	- top of plug at 2578 feet K.B.
Plug #4, 930' to 570'	- 257 sacks	- top of plug at 584 feet K.B.



DAILY DRILLING PRECISLUBICON LUBICON EV 2-21-78-13

<u>Date</u> 1969	<u>From</u>	<u>To</u>	<u>Ftge.</u>	<u>Remarks</u>
Jan. 29	--	--	--	Locate top of surface casing and start to move rig.
Jan. 30	--	--	--	Move camp and rig.
Jan. 31	--	--	--	Move rig and start to rig up.
Feb. 1	--	--	--	Rig up.
Feb. 2	--	--	--	Rig up and head up.
Feb. 3	503	992	484	Drill rat hole and mouse hole, 8:00 A.M. to 3:00 P.M., February 2, 1969. Pressure test blind rams and Hydril to 1000 psi for 15 minutes, okay, from 3:00 P.M. to 7:00 P.M., February 2, 1969. Drill cement at 503 feet at 7:00 P.M., February 2, 1969. Bit went of original hole between base of surface casing at 618 feet to first survey depth of 773 feet. Survey at base of surface casing in original hole 2° and at 920' - 2 1/8°, while in the present hole first survey at 773' - 5°. On bottom drilling 7 7/8" hole, 12 1/2 hours. Rig service, 1/4 hour. Check motor shut-off, 1 hour. Pick up drill collars, 2 hours. Surveys, 3/4 hour.
Feb. 4	992	1835	843	On bottom drilling 7 7/8" hole, 15 3/4 hours. Tripping, 5 1/2 hours. Rig service, 1/2 hour. Surveys, 1 hour. Pick up drill pipe and drill collars, 1 1/2 hours.
Feb. 5	1835	2240	405	On bottom drilling, 20 1/2 hours. Tripping, 2 1/2 hours. Rig service, 3/4 hour. Survey, 1/2 hour.
Feb. 6	2240	2770	530	On bottom drilling, 19 1/2 hours. Tripping, 3 hours. Surveys, 1/4 hour. Conservation Board rig check, 1/2 hour.
Feb. 7	2770	3130	360	On bottom drilling, 18 1/2 hours. Tripping, 4 1/2 hours. Rig service, 3/4 hour. Surveys, 1/2 hour.
Feb. 8	3130	3400	270	On bottom drilling, 17 3/4 hours. Tripping, 4 hours. Rig service, 3/4 hour. Clean to bottom, 1/2 hour. Clean suction, 1 hour.



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Feb. 9	3400	3608	208	On bottom drilling, 11 hours. Tripping, 4½ hours. Rig service, 1/2 hour. Circulating sample, 3/4 hour. Coring, 4 3/4 hours. Handle core barrel, 2 hours. Clean to bottom, 1/2 hour.
Feb. 10	3608	3656	48	Coring, 8½ hours. Core #1, 3579'-3614', recovered 35'0". Core #2, 3614'-3645', recovered 27'1". Core #3, 3645'-3656', recovered 9'6". Lost circulation at 3640 feet. Tripping, 5 hours. Handle core and core barrel, 2 3/4 hours. Run in and clean 6 stand and 2 singles to bottom, 3½ hours. Circulate core barrel, 1 hour. Wait on water trucks, 2 hours. Pump out core barrel, pull 1 stand and 8 singles, 1½ hours.
Feb. 11	3656	F.T.D.		Pump out 22 single, 2½ hours. Circulate to clean hole, 1/2 hour. Pull out remaining drill pipe and core barrel, 1 hour. Handle core and lay down core barrel, 1½ hours. Lay down drill collars and pick up 55 singles, run in open end, 8 hours. Circulate to bottom 3 hours. Run Plug #1, 3656' to 3456', cemented with 100 sacks construction cement plus 3% CaCl <sub>2</sub> . Plug down at 12:45 A.M., February 11, 1969. Wait on cement 7 hours.
Feb. 12				Run in and feel Plug #1, 1 hour. Pull out and run Plug #2, 930' to 570', cemented with 225 sacks construction cement plus 2% CaCl <sub>2</sub> . Plug down at 11:25 P.M., February 11, 1969, 2½ hours. Wait on cement, 7½ hours. Run in and feel plug #2 at 500 feet K.B., 1/2 hour. Lay down remaining drill pipe, remove B.O.P.'s, cut casing off and weld on steel plate, 4 hours.

Rig Released at 12:00 P.M., February 11, 1969.

Daily Drilling Precs taken  
from Driller's Log 8:00 A.M.  
to 8:00 A.M.



## CORE RECORD

Name of Well Lubicon Lubicon EV 2-21-87-13

Core No.	Depth Cored		Rec.	Description
	From	To		
1	3579	3614	35'0"	
				8'0" Dolomite, buff and light grey, very finely crystalline to crystalline, granular, stylolitic, blebs of gypsum, crystalline pyrite lined fractures and associated with gypsum, <u>tight to good fine vuggy to vuggy porosity, no oil staining.</u>
				2'6" Shaley dolomite, light apple green to light grey, dense, earthy, argillaceous, some silty, green shale partings, scattered pyrite crystals, <u>tight.</u>
				2'10" Dolomite, light buff, very finely crystalline, granular, earthy, argillaceous, some fracturing, pyrite lined in parts, <u>scattered vuggy porosity, no permeability.</u>
				4'0" Interbedded dolomite as above in 2'10" interval and shaley dolomite, as above in 2'6" interval, some good bedding grading to rubbly, some thin green shale partings and bands, silty in parts, <u>tight.</u>
				3'8" Dolomite, mainly light grey, some mauve and light apple green, shaley in parts, green shale partings, some



## CORE RECORD

Name of Well Lubicon Lubicon EV 2-21-87-13

Core No.	Depth Cored		Rec.	Description
	From	To		
				fractures, argillaceous, minor pyrite, tight to some fair vuggy porosity, no staining.
			4'2"	Dolomite, light buff, finely crystalline, some fragmental, not as argillaceous as above, crystalline pyrite lined fractures, some poor to good fine vuggy to vuggy porosity, strong sulphur odor on breaking core.
			9'10"	Dolomite, buff to brown, very fine to finely crystalline, granular, highly fractured, crystalline pyrite lined, some veining and blebs of crystalline pyrite at 3606'6", scattered vuggy porosity, strong sulphurous odor on breaking core.
				Base Core #1.
2	3614	3645	27'1"	15'6" Dolomite, buff brown to brown, dense to finely crystalline, granular, argillaceous in parts, traces of silty to shaley, stylolitic, trace of gypsum inclusions, minor fractures, mainly tight, some scattered poor vuggy porosity.
			3'10"	Dolomite, brown, finely crystalline,



## CORE RECORD

Name of Well Lubicon Lubicon EV 2-21-87-13

Core No.	Depth Cored		Rec.	Description
	From	To		
				<u>granular, some poor intercrystalline</u>
				<u>porosity.</u>
			6'6"	Dolomite, as above in 15'6" interval.
			1'3"	Dolomite, buff brown to brown, fine
				to medium crystalline, granular, frac-
				tured, <u>very good vuggy to cavernous poro-</u>
				<u>sity, caverns up to 2" in parts lined</u>
				<u>with crystals and massive pyrite and</u>
				<u>some amber quartz crystals.</u>
				Base Core #2.
3	3645	4656	9'6"	9'6" Dolomite, light buff grey to buff,
				mainly finely crystalline granular, some
				argillaceous, minor fracturing, several
				bands of colonial coral, <u>tight to some</u>
				<u>vuggy to cavernous porosity, minor</u>
				<u>amounts of crystalline pyrite in vugs</u>
				<u>and fractures.</u>
				Base Core #3.



## SAMPLE RECORD

Name of Well Lubicon Lubicon EV 2-21-87-13

SAMPLE INTERVAL		LITH. %	DESCRIPTION
From	To		
3490	3530	100	Limestone, light grey to light buff, dense to very finely crystalline, some calcite veining, <u>tight.</u>
3530	3540	100	Limestone, mainly light buff, dense, calcite veining, <u>tight.</u>
3540	3550	90	Limestone, as above.
		10	Dolomite, light grey to grey, finely crystalline, granular, <u>faint trace poor intercrystalline porosity.</u>
3550	3560	80	Limestone, as above.
		20	Dolomite, as above.
			Trace blue grey massive chert.
			WINTERBURN 3560' -1397'
3560		70	Dolomite, light grey to grey, some buff, finely crystalline, granular, silty in parts, gypsum inclusions, <u>tight to some fair fine vuggy porosity.</u>
		30	Limestone, mainly buff, dense, dolomitic, <u>tight.</u>
			Trace blue-grey chert.
			Trace light grey, fine to medium grained, quartzose, sandstone.



Name of Well Lubicon Lubicon EV 2-21-87-13

Form 9A-2M-11-61



# MUD RECORD

Name of Well Lubicon Lubicon EV 2-21-87-13

[illegible]



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## TIME DRILLING and CORING RECORD

WELL Lubicon EV 2-21-87-13

BIT RECORD

SHEET No. 1

TYPE and SIZE

DATE February 9, 1969

CONDITION

Depth		Time — o'Clock		Time Elapsed Minutes	Weight Points Table Speed	REMARKS Time Out, Nature and Depths of Drilling, Breaks, Shoes, etc.
From	To	From	To			
CORE #1						
3579	3580			8		
3580	3581			8		
3581	3582			9		
3582	3583			6		
3583	3584			11		
3584	3585			10		
3585	3586			8		
3586	3587			8		
3587	3588			9		
3588	3589			25		Connection.
3589	3590			8		
3590	3591			6		
3591	3592			7		
3592	3593			5		
3593	3594			6		
3594	3595			7		
3595	3596			8		
3596	3597			8		
3597	3598			7		
3598	3599			6		
3599	3600			7		
3600	3601			8		
3601	3602			7		
3602	3603			17		
3603	3604			10		
3604	3605			8		
3605	3606			9		
3606	3607			11		
3607	3608			12		
3608	3609			11		
3609	3610			10		
3610	3611			10		
3611	3612			16		
3612	3613			18		
3613	3614			52		Base Core #1.
CORE #2	February 9, 1969.					
3614	3615			8		
3615	3616			13		
3616	3617			9		
3617	3618			11		
3618	3619			10		
3619	3620			10		
3620	3621			9		
3621	3622			9		

DRILLERS, PLEASE NOTE: This is to be kept for each ..... Foot interval. Record time and depth at which drilling stopped  
and time drilling started. SAMPLES to be taken at ..... Foot intervals. Time lag is ..... minutes.



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TIME DRILLING and CORING RECORD

ELL Lubicon Lubicon EV 2-21-87-13

BIT RECORD

HEET No. 2

TYPE and SIZE

TE CONDITION

Depth		Time — o’Clock		Time Elapsed Minutes	Weight Points Table Speed	REMARKS Time Out, Nature and Depths of Drilling, Breaks, Shoes, etc.
From	To	From	To			
3622	3623			9		
3623	3624			9		
3624	3625			9		
3625	3626			9		
3626	3627			10		
3627	3628			11		
3628	3629			9		
3629	3630			7		
3630	3631			9		
3631	3632			8		
3632	3633			7		
3633	3634			6		
3634	3635			7		
3635	3636			9		
3636	3637			7		
3637	3638			9		
3638	3639			7		
3639	3640			7		
3640	3641			9		
3641	3642			7		
3642	3643			8		
3643	3644			6		
3644	3645			5		Base Core #2.
ORE #3 - February 10, 1969.						
3645	3646			6		
3646	3647			7		
3647	3648			7		
3648	3649			9		
3649	3650			11		
3650	3651			9		
3651	3652			8		
3652	3653			8		
3653	3654			8		
3654	3655			11		
3655	3656			8		Base Core #3.

REMARKS, PLEASE NOTE: This is to be kept for each ..... Foot interval. Record time and depth at which drilling stopped

and time drilling started. SAMPLES to be taken at ..... Foot intervals. Time lag is ..... minutes.



ABANDONMENT PLUGS

Plug #1, 3665' to 3456'

Cemented with 100 sacks construction cement plus 3%  $\text{CaCl}_2$ .  
Displaced with 44.8 barrels water.  
Plug down at 12:45 A.M., February 11, 1969.  
Felt for and found top at 3292 feet K.B.

Plug #2, 930' to 570'

Cemented with 225 sacks construction cement plus 2%  $\text{CaCl}_2$ .  
Displaced with 7 barrels water.  
Plug down at 11:25 A.M., February 11, 1969.  
Felt for Plug #2 at 7:30 P.M., February 11, 1969.  
Found top of same at 500 feet K.B.

Cut casing off three feet below ground level,  
and welded a steel plate on top.

Rig Released at 12:00 P.M., February 11, 1969.



## INSPECTION DISTRICT

(W 5 MER)

**BOARD OFFICE**

GREEN • FIELD OFFICE;



DISTRIBUTION

The original and four copies of the Geological Report on Lubicon Lubicon EV 2-21-87-13 have been completed. The original and three copies will be forwarded to Lubicon Mining Ltd., and the remaining copy will be retained in Oilfield Consultants Ltd.'s files.



19690001

# QUARTZ MINERAL EXPLORATION PERMIT No. 1

(84C/8+9  
and 84B/12)

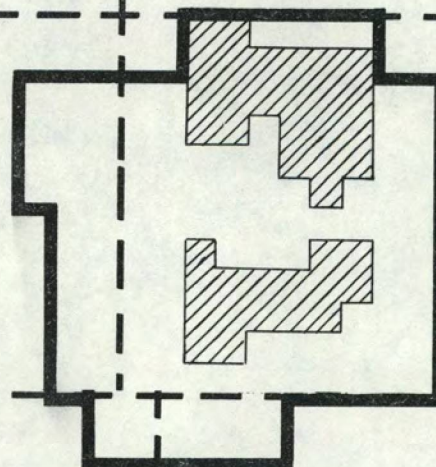
CANCELLED  
PREVIOUSLY TRANSFERRED TO:  
LUBICON MINING LTD., (N.P.L.)  
SUITE 1502- CAMBRIDGE BLDG.  
10024- JASPER AVENUE,  
EDMONTON 15, ALBERTA

DATE OF ISSUE - OCTOBER 16, 1967

AREA - 17,440 ACRES

////-NOT IN RESERVATION

NO LEASES SELECTED



TP. 87

TP. 86

R.14

R.13

R.12 W.5 M.