

EB-2020-0105

SUBMISSION BY: DOUG HENDERSON
KIMBALL COLINVILLE RESERVOIR
IN RESPONSE TO MY OPENING COMMENTS
INCREASE TO WORKING CAPACITY

REFER TO: TABL 27 - ENCLOSED

REFER TO: ENBRIDGE PAMPHLET TG.035,601 (PNT AUG.04)
ALSO ENCLOSED

	PRESSURE PSI _g	WORKING CAPACITY IN " B.C.F.	
ORIGINAL RESERVOIR PRESSURE	919	29.7	
+ DELTA PRESSURE INCREASE	1323	42.75	
+ NEW FUTURE AVAILABLE PRESSURE INCREASE OF 500 PSI _g	1823	58.90	→ 38% INCREASE OVER DELTA
PER OVERBURDEN STRESS MAX ALLOWABLE CUSHION	20045 181.5	X FACTOR .0323 B.C.F PER 1 PSI INCR + ADDITIONAL 5.86 B.C.F	
AT 100% OF OVER BURDEN STRESS	TOTAL POTENTIAL INCREASE TO 64.76 B.C.F BEING A 52% INC TO WORKING CAP.		

NOTE: THIS IS JUST 1 OF A TOTAL OF 33 RESERVOIRS c/w WELLS
(YOU DO THE MATH)

NOTE: SEE ATTACHMENT (A)

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DUE TO THE "FACT" THAT THE USE AND USEFULNESS ^{OF} HORIZONTAL BORED N.G. STORAGE WELLS INCLUDING NEW HIGH TECH CAPABILITY CURRENTLY UNDER WAY, ARE OPENING THE TRUE POTENTIAL OF SUPERIOR PERFORMANCE IN MANY WAYS. THIS INCLUDES POSITIVE ADVANCEMENTS IN OPERATIONAL KNOWHOW AND EXECUTION. BY INCREASING WORKING CAPACITIES ~~THAT~~ ^{VIA} ALL INFRASTRUCTURE CHANGES TAKING PLACE NOW AND FUTURE AS DEMANDED BY OUR REQUIREMENT FOR CLEAN ENERGY, IS GROWING EXPONENTIALLY. THIS NEW ERA OF SUPPLY TO MEET DEMAND WE ARE IN, IS CONVENIENTLY BEING FACILITATED IN N.G. ENERGY THROUGH THE ADVENT OF STATE OF THE ART HIGH TECHNOLOGY AND STORAGE GAS RESERVOIRS ^{OVERBURDEN} OF SEALED SUBSURFACE CORAL ROCK CAMBRIAN ~~AND~~ STORAGE CHAMBERS.

THIS NEW ERA OF OPERATION IN STORAGE HAS GREATLY EXPANDED OUR OPERATIONAL CAPABILITIES. SOME BEING A 13 FOLD INCREASE IN TOTAL WORKING CAPACITY FROM 7 B.C.F. TO 97.1 B.C.F. DURING INJECTION, AND AT 12 FOLD RATE WHEN BEING WITHDRAWN.

THESE INCREASES ARE NOW ACHIEVABLE BY SPEEDING UP IN/OUT TURNAROUND TIME COMBINED WITH INCREASES IN PRESSURE. IT VASTLY INCREASES/ENABLES A MUCH DESIRED REDUCTION TIME IN THE TURNAROUND TIME REQUIRED WHEN EITHER ^{FILLING OR EMPTYING} _{INJECTING} _{WITHDRAWING} N.G. STORED IN A RESERVOIR.

N.G. STORAGE TECHNIQUES USED TODAY AND IN THE FUTURE ^{COULD} AS SPELL AN END TO THE ~~FUTURE~~ OF THE NEED OF OLD VERTICAL BORED N.G. STORAGE RESERVOIRS TECHNOLOGY.

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SUBMISSION TO QUESTION #1

BEING: WOULD THE Q.E.B. AND ENBRIDGE AGREE
TO THE FACT THAT WE ALL ARE NOW IN THE MIDST OF
A "NEW ERA" OF NATURAL GAS STORAGE + TRANSMISSION
DUE TO RECENT PAST + FUTURE PROSPECTS OF TECHNOLOGICAL
CHANGE. CHANGE AND METHODS OF NATURAL GAS STORAGE
AND PARTICULARLY THAT OF ENGAGING THE LATEST
IN HORIZONTAL BORING KNOW HOW?

RESPONSE:

RESPONSE
YOUR ANSWER DID NOT ANSWER
THE QUESTION TO YOU! REFERRING ~~THE~~ YOUR
RESPONSE TO THE "BOARD" IS NOT WHO
I ASKED THE QUESTION TO!

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SUBMISSION TO QUESTION #2

QUESTION #2

AS THE NATURE OF THE ROCK FORMATIONS
ALLOW STORAGE RESERVOIRS TO BE SAFELY PRESSURIZED
AND WITH HORIZONTAL BORING, WHAT PERCENTAGE OF
WELLS ARE BEING INCREASED IN PRESSURE TODAY
AND WHAT IS THE PERCENTAGE OF INCREASE IN PRESSURE?

RESPONSE

YOUR RESPONSE DID NOT ANSWER
THE QUESTION. AS WAS TAKEN & ANSWERED
TO BE MORE SPECIFIC OUT OF CONTEXT.

I UNDERSTAND THAT ALL WELLS
IN THE SAME POOL ARE SUBJECT TO
THE SAME PRESSURE. IN JUST THE KIMBAL COLINVILLE
RESERV. WHAT WILL THE OPERATING PRESSURE BE AFTER
THE WELLS ARE SUBJECTED TO THE NORMAL
PEAK PRESSURE WHEN IN NORMAL OPERATING MODE?

NOTE: PLEASE READ ATTACHED ANALOGY
FROM AN ENGINEER/LAND OWNERS PERSPECTIVE

SUBMISSION BY: DOUG HENDERSON
ON QUESTION #2.

WHEN DEALING WITH RISK

ONE CAN DRAW PARALLES OF EQUIVANCY
BETWEEN MAJOR CONTRIBUTIONS TO UNDERSTANDING
LAWS OF PHYSICS

EG SIR ISAAC NEWTONS 1ST LAW.

$$\underline{\text{UNBALANCED FORCE} = \text{MASS} \times \text{ACCELERATION}}$$

∴ WHEN APPLYING SEISMIC EXPOSER TO THE GROUND

$$\underline{\text{SEISMIC RISK} = \text{SEISMIC HAZZARD} \times \text{VULNERABILITY}}$$

∴ WHEN APPLYING HORIZONTAL BORED CORAL ROCK
UNDER PRESSURE, A SIMILAR LOGIC APPLIES

$$\underline{\text{CORAL BORED ROCK} = \text{HORIZONTAL BORE} \times \text{VULNERABILITY}} \\ \text{UNDER PRESSURE} \quad \text{HAZZARD}$$

NOTE: WHAT IS THE DESIGN STRENGTH
OF CORAL ROCK

STRUCTURAL MATERIAL
MOST ALL KNOWN HAVE A KNOWN STRUCTURAL STRENGTH
AND CAN BE FOUND IN A

"STRENGTH OF MATERIALS MANUAL"

DOES ONE EXIST FOR THIS TYPE OF APPLICATION?

AND ALSO WHAT ARE THE VULNERABILITIES

I.E. - FAULT LINE

- EARTH QUAKE

- TO GROUND LIGHTNING STRIKES

- ETC,

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SUBMISSION TO QUESTION #3

QUESTION #3

IS THERE A FORMAL LONG RANGE PLAN FOR FUTURE YEARS OF BUSINESS EXPECTATIONS AND IF SO, DO THEY INCLUDE LAND OWNERS IN ANY WAY?

RESPONCE

YOUR RESPONCE DID NOT ANSWER THE QUESTION.

MAY I REPEAT - IS THERE A LONG RANGE PLAN FOR FUTURE YEARS OF BUSINESS EXPECTATIONS? IF THE ANSWER IS YES

DO THEY INCLUDE THE POOL LAND OWNERS IN ANY WAY?

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SUBMISSION TO QUESTION 4

QUESTION 4

THERE HAS BEEN NO SUCH MEETING DUE TO
COVID-19 THEREFORE, ^{NO} VOICE REGARDING OUR ISSUES
ONE OF THEM BEING JUST + EQUITABLE COMPENSATION?

RESPONSE

I UNDERSTAND THESE TYPES OF ISSUES
DO NOT RELATE TO THE EB-2020-D10B PROJECT
IN PARTICULAR

POINT TAKEN

HOWEVER IT DOES RELATE TO ALL LANDOWNERS
FUTURE IN MANY WAYS ^{THAT ARE} ~~NOT~~ BEING ADDRESSED

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SUBMISSION TO QUESTION 5.

QUESTION 5.

IN REFERENCE TO:

A VERY IMPORTANT ISSUE THAT NEEDS
RESOLVE IS THAT OF DECLARING OLD STORAGE POOLS
THAT WERE SIGNED IN THE 1940'S, 50'S & 60'S BE
DECLARED OBSOLETE AS THEY ARE REDUNDANT AND
NOT RELEVANT IN TODAY'S CHANGING TECHNOLOGICAL WORLD
THE LEASES NEED TO BE CHANGED/RENEGOTIATED AND
UPDATED TO MODERN TIMES. WHAT PROCEDURE SHOULD BE
RESPONSE " THIS MATTER, FOLLOWED BY PROPERTY OWNERS TO HAVE A VOICE ON
IS THERE A PROCEDURE?

PLEASE READ ATTACHED ANALOGY
FROM THE LANDOWNERS PERSPECTIVE.

THE "RIGHTS" TO CHANGE FROM VERTICAL TO
HORIZONTAL BORE WAS NEVER BROACHED WITH
THE LANDOWNERS, IT WAS JUST TAKEN / ~~STOLEN~~ / ^{ASSUMED} / ^{VIRTUAL} / ^{STOLEN}.

IT IS OPENLY A MAJOR EXPLOITATION OF
THE WEALTH GENERATION ^{FACTOR} OF THE CAVERNS
WITH ~~NO~~ KNOWLEDGE ^{MADE} AVAILABLE TO THE LAND
OWNER TO WHICH HE SHOULD BE ENTITLED TO
PRIOR TO SEEKING FINAL APPROVAL. THE OLD
LEASES HAD NO CLUE ABOUT INCREASING THE
WEALTH GENERATION CAPABILITY. A WEALTH-
GENERATION INCREASE MULTIPLIED BY 13 FOLD
WHEN INJECTING THE GAS AND 12 FOLD RETREIVING
NAT GAS - THE USE & USEFULNESS OF HORIZONTAL BORE

TECHNOLOGY WAS NOT INCLUDED WHEN THE OLD
LEASES WERE SIGNED. & THE ENBRIDGE CO. HAS
VIRTUALLY STOLEN THE RIGHTS UNDER THE
GUISE OF THE OLD OUT DATED LEASES. BUT THE

DEFINITION (THE OUTWARD APPEARANCE, IMAGE, ^{LIKENESS})
NEW HORIZONTAL WELLS ARE NOT AN IMAGE OR LIKENESS TO THE
VERTICAL WELLS IN ANY WAY INCLUDING GREATLY INCREASED
OPERABILITY AND INCREASED RISK ^{HAZARD} TO THE SAFETY
OF SURFACE DWELLERS BY WAY OF ^{AN UNKNOWN} CAMBRIN CORAL ROCK
EXPLOITATION / WEAKENING FACTOR / LITTLE KNOWN
ABOUT STRENGTH OF MATERIALS IN CORAL ROCK
ITS NOT IN THE HANDBOOKS!