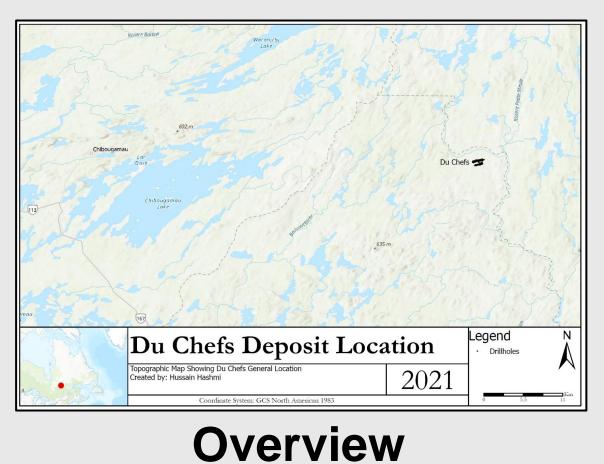


Reid Dauphinee Manuel Manero

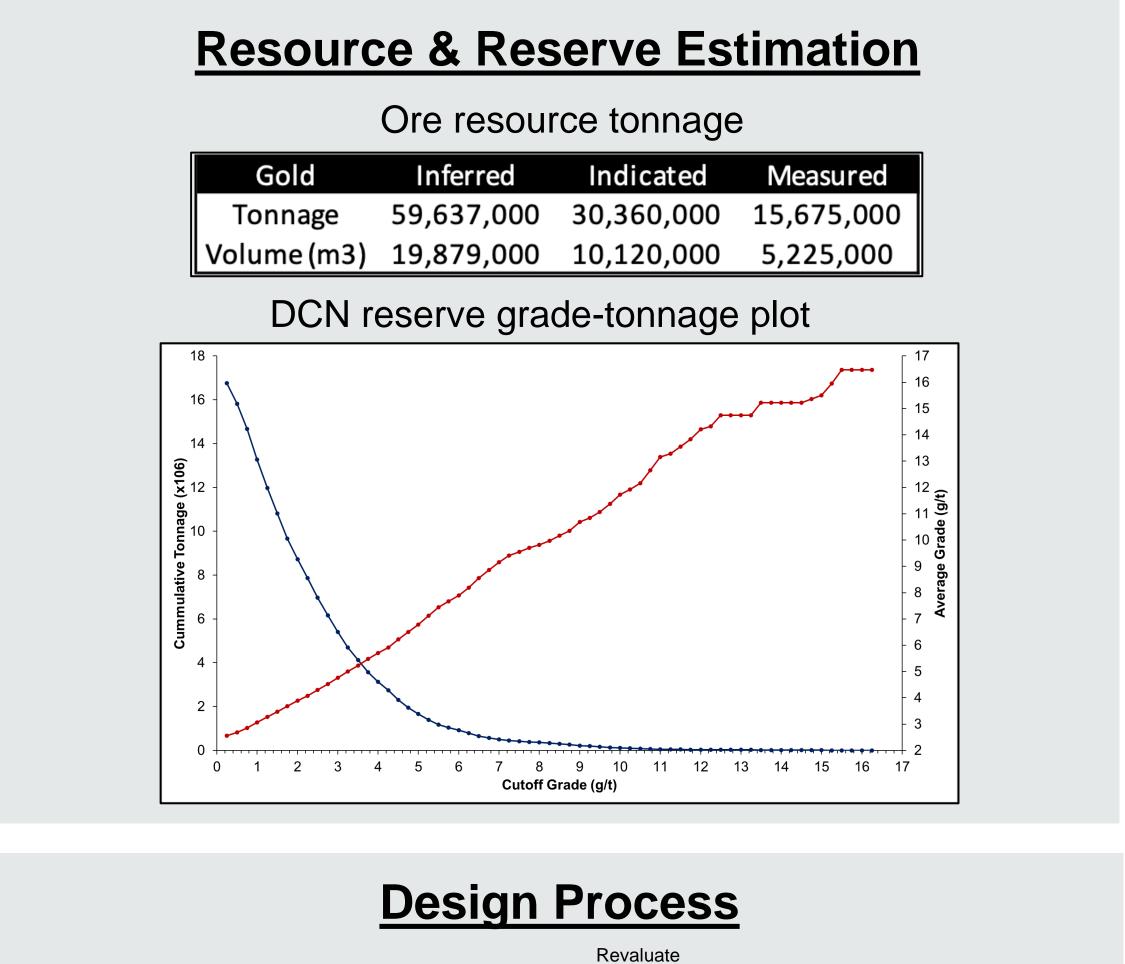
Department of Civil & Resource Engineering

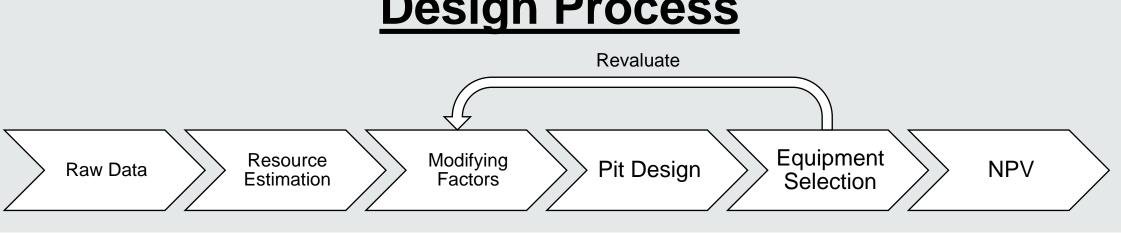
Introduction

The Du Chef Gold Mine property is located approximately 54 km east of the town of Chibougamau, in the eastern part of the Abitibi Region, Quebec. The mine claim spans 2500 hectares and is subject to the Mining Act of Quebec.



- Du Chefs is a disseminated, open-pit gold deposit.
- Geological data has been extracted from 355 drillholes, with 45,793m drilled.
- Mineralization of the deposit is in quartz vein ranging from 50m to 450m below surface.
- The Du Chefs project has an expected mine life of 14 years, with a stripping ratio of 11:1 and a total ore production capacity of 5500 tpd and average grade of 2.38 g/t.





Environmental, Social & Governance

- Du Chefs Project will create upwards of 136 direct jobs.
- Engagement with Chibougamau, Quebec, and Cree Governing bodies.
- \$35,000,0000 reclamation bond posted.
- Pit Closure, Tailings Facility, Building Removal, Comprehensive Monitoring Program Pre & Post-closure.

Group 2

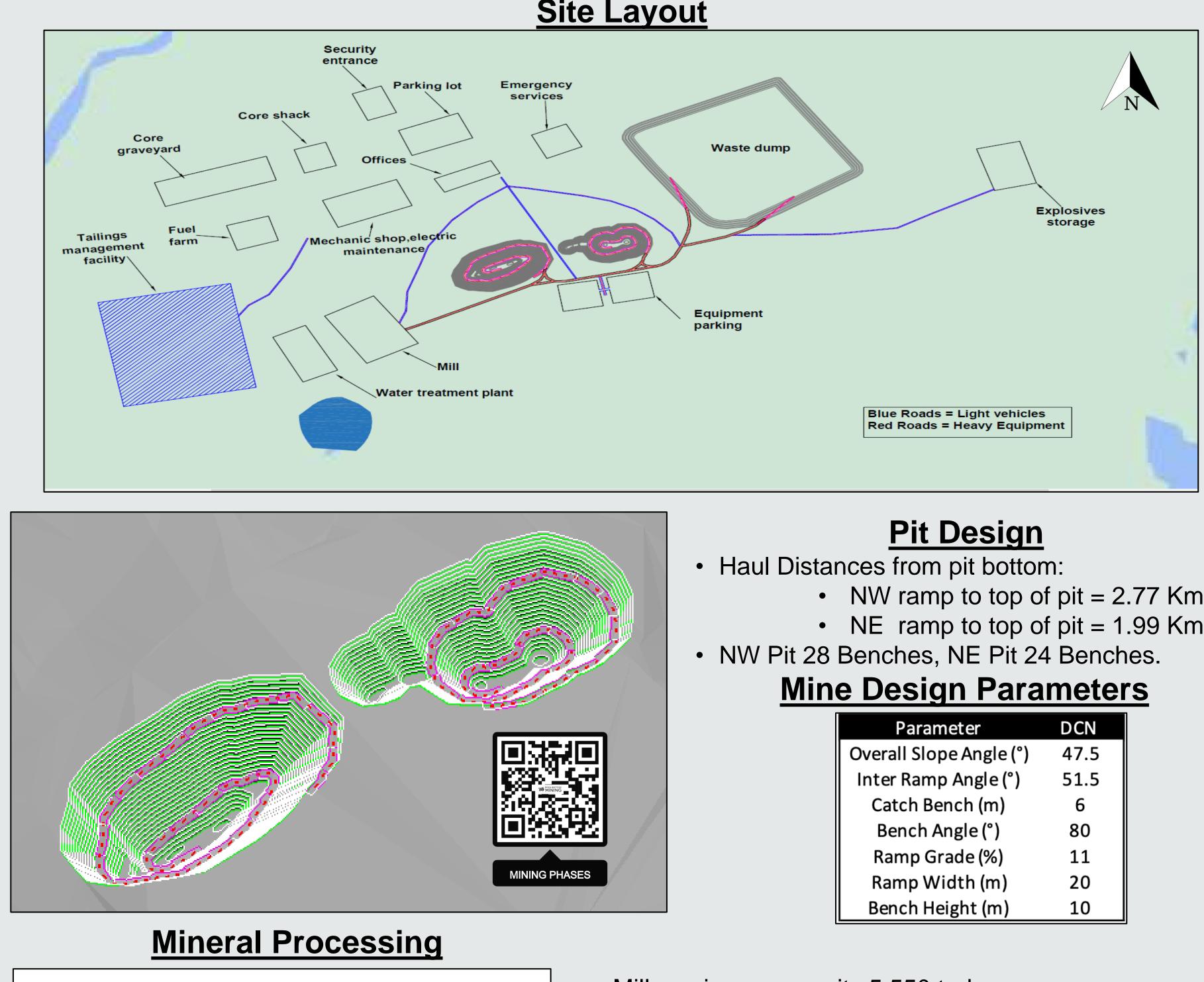
Hussain Hashmi **Ethan Densmore** Luis Fernando Gomez de Alba

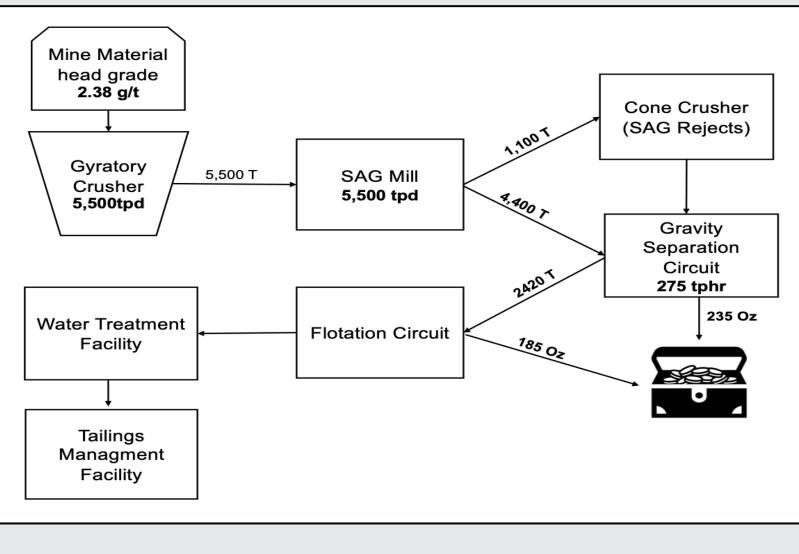


Faculty Advisor: Dr. Saleh Balideh

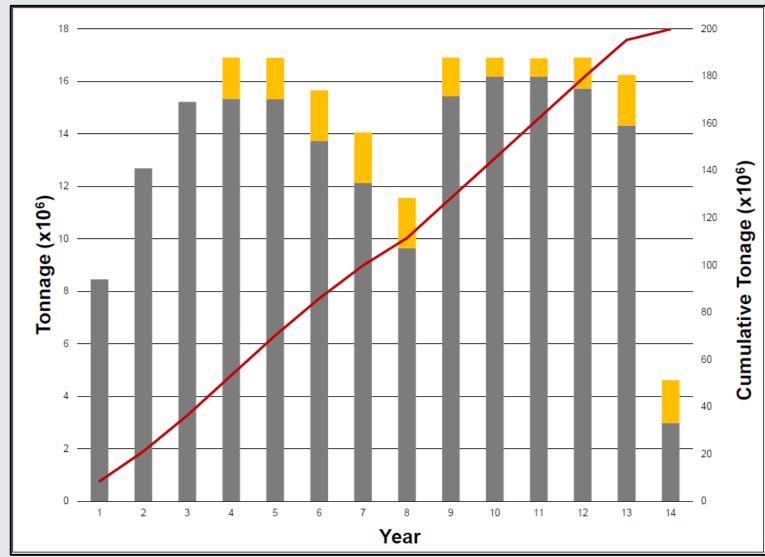
Du Chefs Gold Project



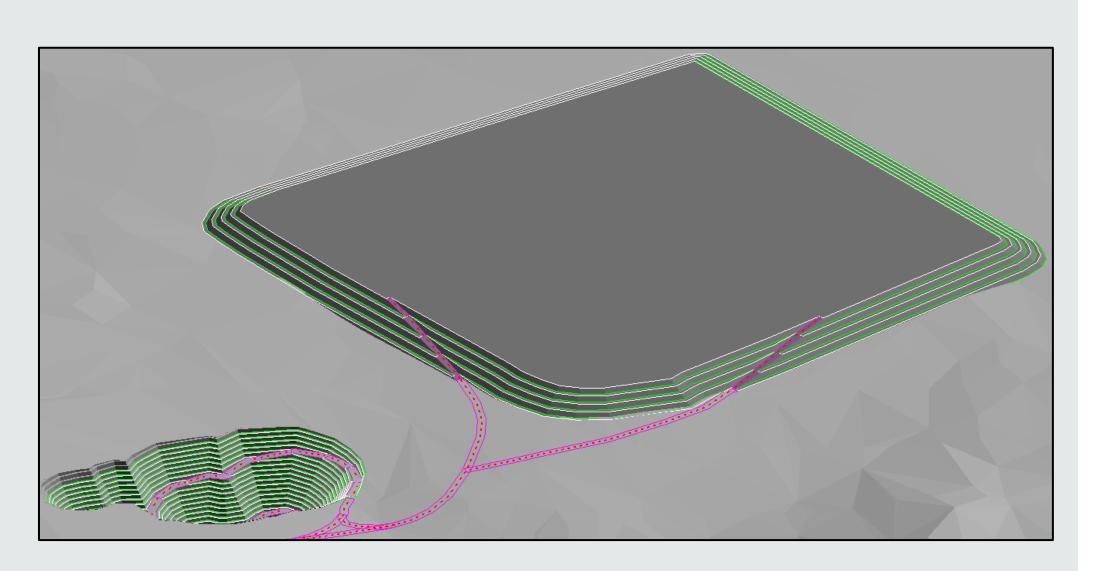




Annual Production



- Processing ore will require 6,172 m³ of water per day and will be sourced from Du Chefs River.
- 90% of the water will be recycled processing ore with some minimal losses at the TMF from evaporation. Site will employ fog dust suppression systems and cover
- open areas in the mill to save 86 m³ of water per day.







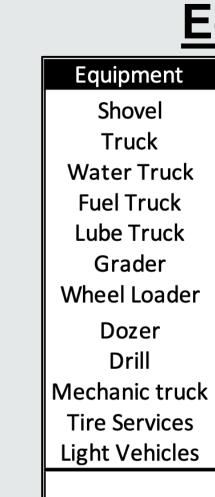
• NW ramp to top of pit = 2.77 Km • NE ramp to top of pit = 1.99 Km

| Parameter | | DCN |
|-----------|-----------------|------|
| Overall | Slope Angle (°) | 47.5 |
| Inter R | amp Angle (°) | 51.5 |
| Catcl | n Bench (m) | 6 |
| Bend | ch Angle (°) | 80 |
| Ram | p Grade (%) | 11 |
| Ram | o Width (m) | 20 |
| Benc | n Height (m) | 10 |

Mill maximum capacity 5,550 tpd.

Waste Dump Design

95.5 m³ (187Mt) of available dump space, sloped at 3:1, with an overall footprint of 255 ha. Waste dump will be reclaimed via dry cover & revegetation



| | Capital Expend |
|-------------|----------------|
| ltem | Cos |
| Equipment | \$ |
| Milling | \$ |
| Engineering | \$ |
| Buildings | \$ |
| Total | \$ |
| | |

| Operational Exper | | | |
|----------------------------|-----|--|--|
| Item | Cos | | |
| Mining | \$ | | |
| Site Services | \$ | | |
| Reclamation/Closure | \$ | | |
| Total | \$ | | |
| | | | |

Parameter Inter Friction Angle (°) Cohesion (Mpa) UCS (Mpa) Tensile Strength (Mpa) **Poissons Ratio** Young Modulus (Gpa)

Conclusion and Recommendations

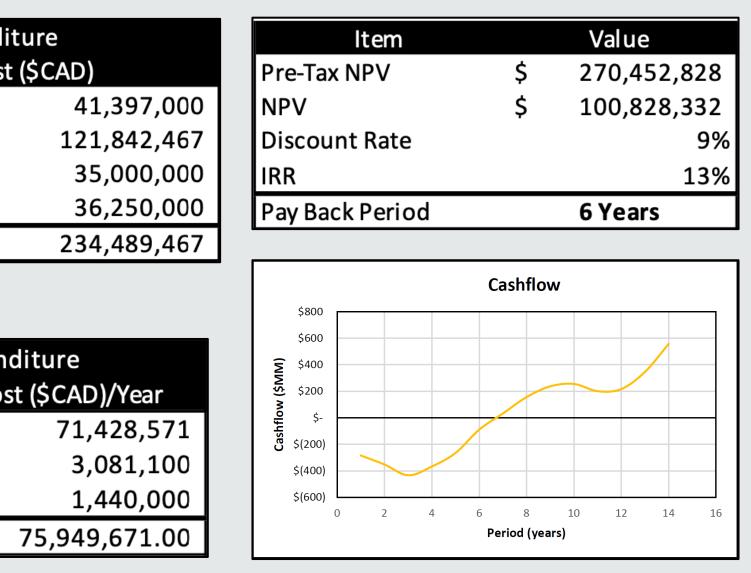
- IRR = 13%
- 14 years mining life.
- 16.7 Mt of ore mined at a 2.59 g/t average. • 1,242,000 Oz of gold recovered.
- Rock Bottom mining believes this project is feasible.
- Continued Exploration on the deposit is recommended, as the deposit is open at depth.



"Gold Standard"

| quipme | ent Se | lectio | 01 | <u>n</u> |
|---------------|------------------------|----------|----|--------------|
| Туре | Capacity | Quantity | | Cost (\$CAD) |
| CAT 6020 | 12 m ³ | 2 | \$ | 8,632,000 |
| CAT 777 | 100 t | 10 | \$ | 17,500,863 |
| CAT 770 | 9000 Gal. | 1 | \$ | 3,643,375 |
| CAT 725 | 3500 Gal. | 1 | \$ | 688,250 |
| CAT 725 | 3500 Gal. | 1 | \$ | 688,250 |
| CAT | 16ft. Blade | 2 | \$ | 1,269,263 |
| CAT 926M | 3 cu.yd | 1 | \$ | 300,750 |
| CAT D8 | 310 m ³ /hr | 5 | \$ | 1,875,000 |
| Sandvik D245X | 5-8" Rotary | 3 | \$ | 4,539,750 |
| F450 | | 2 | \$ | 556,750 |
| F450 | | 2 | \$ | 452,750 |
| F350 | 6 Persons | 10 | \$ | 1,250,000 |
| | | Total | \$ | 41,397,000 |

Economics



Geotechnical Conditions

| DCN | • |
|------|---|
| 58 | |
| 25 | • |
| 188 | • |
| 14 | |
| 0.12 | |
| 45 | |

Main failure mechanism: circular failure. Main rock type: Quartz diorite Geological structures and hydrogeology do not play a major role in slope stability.

• NPV = \$100,828,332 at a 9% Discount Rate.

References

