Oreswap

The sustainable alternative to commodity ownership.

Decentralized Holdings

***Abstract**: Oreswap is the logical solution for the ownership of gold, and other commodities, as we move into the digital age. Through Decentralized Holdings products, users are provided a solution to access their subterranean commodities, bringing gold, silver, platinum, etc to market by identifying ore body density signatures through seismographic reflection; verifying and empowering the transfer of mineral right ownership without disruption to the ecosystem. Simply, our AI and DEX solution tokenizes and marketizes unearthed commodity rights, without the detrimental effects of open pit mining. Through a three-part-dex series, the several trillion dollar gold investment & mining industries, along with the multitudes of injustices, will be effectively eradicated through the use of AI and cryptography. The demand for minerals and metals, as an investment, will likely diminish by ~25-55% while bypassing the plethora of ecological and humanitarian atrocities/liabilities directly imposed by these primitive business practices as we look to provide the sustainable alternative to commodity ownership.*

1. Introduction:

Gold has persisted throughout history as the world's most desirable commodity, becoming the foundation layer of the financial system. From the earliest conception of paper currency, trusted banks worked with governmental entities to create and supervise ledgers; tracking and verifying the records of rapid transactions within an economy. Today, the next iteration of finance is being developed, which will inevitably create governmentally administered, central bank, digital currencies, prolonging the fiat standard and allocating more control to authoritative figures. What is needed from this division of finance and defi is true forms of value where currencies are backed by the real world, physical commodities. Of course, with all new things, an ideological change is needed to realize the gravity, compared to the digitization of money and stocks.

Through Oreswap, Decentralized Holdings plans on bridging the gap between value and digital coins through a decentralized exchange. Unlike stable coins, that are coins backed by a stable asset, we are creating a exchange, for the transfer of commodity rights, allowing commodities to enter the market without the need for these ores to be excavated, eliminating trillions of dollars worth of waste, and solving a plethora of both environmental and humanitarian issues through 100 sustainable method, in turn, providing the green alternative to commodity ownership.

2. **Problem:**

The environment is the most influential system on Earth, providing all living organisms the ability to survive, therefore, the preservation of this fleeting natural harmony is of the highest importance for the continuation of life and the growth of societies in the future. A major contributing factor to this decay is the technique of open pit mining, which directly correlates to a plethora of negative effects to occur within the land, water, air, and beyond, causing a vast array of secondary and tertiary liabilities, resulting in negative ecological changes to our world. The gold derived from these practices highly influences our global socio-political, and economical spheres by which harvesting commodities is the lifeblood of national reserves. Because of this power, humanity has been willing to turn a blind eye and often support some of the darkest acts, in modern history, for the conquest of obtaining these precious commodities. With the advent of new technologies, it is only natural for simplicity and efficiency of future advancements to form and empower the ability to create greener, cheaper, and smarter alternative solutions, changing the world for the better.

Firstly, The land is the most apparent and shocking account of these negative environmental effects. Currently, there are over 10,000 active mines in America excavating over 5000 square miles of land (1). Each mine can remove upwards of a few thousand metric tons of "waste," per day, while the highest yielding excavation sites uncover over 1,000,000 metric tons of waste every day (2). In Missouri alone, there are 500 open pit mines that together waste 50,000,000 metric tons of waste each year (3). For the average gold mining site, there is roughly 20 metric tons of waste for .333 oz of gold, which is equivalent to the size of 1 gold ring (4). In 2021, between 11 states, there was 190,000kg (6,702,052.7704oz) of gold excavated which equates to roughly 4,025,256,917 Tons of waste at a ratio of .333oz to 20T. Not only does the destruction of land to create pits cause catastrophic loss of ecological sustainability, but also the waste pulled up from the ground causes various second hand effects, such as windstorms and landslides. In April of 2013, there were 2 landslides that displaced 140M tons of waste material, causing several 100M$ worth of damages and earthquake readings for the local area (5). Although no one was hurt or killed in the landslide, roughly 43.94 mining personnel have been killed in mining accidents each year over the past 17 years (6). Furthermore, there is a calculable decreased life expectancy for locals living within 100 miles of a dig site with high concentrations of ammonia in urine,

increased levels of arsenic and mercury in blood, and high concentrations of deadly pollutants found within local food/water. All these effects have been proven to lead to an increased cancer rate for local populations with cancers of the trachea, bronchus, lung, stomach, and liver being higher than most areas (7). Not only that but, excavation companies dig up harmful radioactive substances, such as uranium and plutonium, that later enter both the ground water and air, further causing various cancers to occur (8). With this being said, there is a direct link of unearthing Chlorine and Bromine to degrading the integrity of the Ozone layer, as these compounds are the main ingredient in CFCs.

As gold is the foundational layer of value, water is the precursor to civilization, however H2O is a highly compatible compound and found in all states within America. Subsequently, the areas with low precipitation and low water tables are the most efficient areas for accurate geological surveys with Nevada, Utah, Wyoming, and Artizon being the most suitable and cheapest land per acre (9). Because of this, open pit mines are exposed to small amounts of water, which coagulates and forms an amalgam of various bonds creating hazardous compounds. Pyrite or "fool's gold" is a common, naturally occurring mineral combination where iron and sulfur bind creating FeS2. When water is introduced in these hot and arid conditions, the compound is created under natural earth processes where iron and oxygen bind and create oxidation in the form of rust while the Sulphur binds with hydrogen and oxygen to create H2SO4 (Sulphuric Acid). When heated and evaporated, this highly acidic compound, will inevitably fall as precipitation and amounts for upwards of 60% of all acid rain; directly correlating acid rain to open pit mine, which expanded in volume in 1925 (10) This compound is so acidic, China released a figure detailing the corrosive properties, stating that it has been known to erode concrete (11). To add to this, H2SO4 is only 1 of 3 highly acidic compounds found in acid rain, with Nitric Acid (NHO3) and Hydrochloric Acid (HCL) which contribute to the majority of the remaining roughly 40% of the acidic compounds (12). In 2016, roughly 10,000 geese died due to a partially frozen Montana open pit mine where the birds were suspected to have landed to seek shelter during a winter storm. (13) To add to this, the Berkeley pit had originally been commissioned in 1955 and closed on Earth day in 1982, however, no cleanup efforts were made, even with 1000s of geese dying due to similar perdicatments from 1987 to 2017. In 2019, the clean up process was set to begin and is estimated to cost around 20M USD (14). Although the issue of animals dying due to open pit mines directly, the health catastrophe pales in comparison to the next figure, which is US mines contaminate 28 Billion gallons of water a day and is estimated to require 67 Billion USD a year to clean up (15). Areas surrounding open pit mines

are often within 30 miles of the excavation site, with many forming towns around the mine to facilitate the mining operation, such as the Berkeley mine (16). Often, the deadly water will make its way into the groundwater supply with environmental groups, such as the EPA, estimating contaminations from open pit mines reaching upwards to a 100 mile radius with one of the oldest open pit mines, Bingham Canyon, polluting 72 square miles (192km^2) of previously drinkable water, infecting plants, animals, and locals for over 100 years (17). Being that the demand for water in arid locations is already exceedingly high, consider the fact that open pit mines often require water for extraction processes to occur, further pushing the demand for companies to acquire water over the needs of the individual citizens. For instance, a water war has been brewing on the west coast, predominantly to mitigate the expansion of forest fires, however, an average open pit mine can require between 16 million and 26 million gallons of water, a day, for gold extraction (18). In comparison, the average person uses between 150-200 gallons of water per day or ~63,000 gallons per year while 1 large gold mine uses 412.69 people's yearly water consumption in one day or over 150,600 peoples yearly water consumption to run 1 open pit mine for 1 year. In fact, roughly 4 trillion gallons of water were pumped into USA based open pit mine projects, per day (19). forest fires. In 2020, 4,303,379 acres were decimated, 11,116 buildings were burnt down, 33 lives were lost; an estimated cost of 45.9Bn USD (20.A&20.B). The estimated total water needed per minute to put out a forest fire is roughly 80,000 GPM (gallons per minute) per acre and at 4T gallons per day, that is roughly 7.6M GPM or 11.6 times more than what was needed to put out all of California's yearly forest fires and roughly 4.82 times the nations total forest fire amount, in just 1 day of open pit mining consumption. This is an absurd cost to maintain a small aspect of the mining process.

To elaborate on cost, the average mining facility uses 700 (GWh/Y)^3 to run 1 open pit mine. At the most efficient and environmentally friendly solutions possible, the electricity usage can be provided at .05/GWh/Y; committing the average sized open pit mine to utilize a yearly cost of 6.13M USD in electricity alone (21). In America, the average open pit miner salary is 54,000 USD base and can range upwards to 80,000 USD with higher experience levels (22). Barrick gold, one of the largest open pit mining companies, employs over 22,500 employees and has a company wide average salary of 84,441 USD, amounting to a total payout of 1.899B USD in salary (23). The average total expense for an open pit mine is roughly 800M USD to maintain, setting the breakeven point at ~433,600 oz of gold to be extracted. In 2021, Barrick gold produced 4.43M oz of gold or ~8,192,920,500USD (24). Based on the estimations of land having roughly 42.665

oz of Au/A (gold per acre) in average quantities and upwards to 99.5oz of gold in higher quantities. In comparison, we know there is roughly 900 metric tonnes of gold, based on empirical data from the past and excavation practices estimated by companies yearly production. Conversely, scientists estimate that the Earth holds between 115-125 billion tons of gold based on mass, size, density, estimated gravity, and various other factors. Mathematically, we can show the gold per acre and why scarcity occurs in gold.

Mathematics:
Total avg of gold ~120B Tons (average)
World total miles: 196,900,000m^2 (126,000,000,000acres^2)
Percentage of land: 28%
Earth Crust: .5% (minable)

*X = (total gold/(total acres * land% * Crust%))*
*X = (120,000,000,000,000/(126,016,000,000 * 28% * .5%))*
X = .001333 tons/acres
X = 42.6656 oz/acre.

This means gold is not a “rare geological phenomena" but rather, gold is a highly abundant commodity with barriers to enter the industry, harsh competition, and can only net revenues with locations in the top 1% of highest yielding gold concentrations. With that being said, Carlin (the US largest gold producing mine) yields roughly 947,700 oz, per year and the crater is only ~3.75 miles. In 2020 alone, the top 40 gold mining companies netted revenues of 656B USD. Based on the previous math, that would require 354,240,000 oz excavated per year, the average Earth gold/acre rate, this would require a yearly waste of 8,302,707.56 acres (12,972.98) miles. Even at the top 1% of gold concentrated deposits (~400oz/acre) this would require the annihilation of 885,600 acres (1,383.75M^2) per year to sustain equal revs. Fortunately, in 1925, techniques were made to read subterranean ore densities, prior to digging, allowing companies to locate the top 1% of gold yielding land, allowing the companies access to average ~400+ oz/acre. Less fortunately, the majority of the world does not have the tech and industrial strength to be as “efficient” as American companies. Therefore, gold production, globally, is ran nearly 100% on slave labor. In fact Brazil, India, Zimbabwe, Madagascar, Japan, South Korea, China, and the Democratic Republic of the Congo are currently utilizing slave labor to run their mining operations, where it is reported that 40,000 DRC children are actively exploited for work and even have forced child sex prostitution, on these sites (25&26).

The global atrocities attributed to the mining industry is increasingly harmful, as the market remains lucrative, therefore, governing entities will allow the barbarity to occur, with no repercussions to their actions. Take for instance the Nazi party in world war 2; as they needed funding for the war effort, because the world would not accept the Reinchmark following WW1 as the currency became incredibly weak from post war debts, this forced Germany to pay the war effort entirely in gold. This primarily and directly caused the Jewish people to become the scapegoat, as they were the wealthy minority in Germany, and through the exploitation of these people, the Germans were able to seize over 600 tons of gold from all occupied territories, people, and reserves (27). In other words, physical gold is liable for confiscation, directly powers warfare, and enabled ethnic based, systematical genocide where forced labor was used in various activities, including mining throughout Europe. Of course, This was endorsed by the heinous Nazi party throughout Eruope, however, seizing of gold and other precious commodities is not contained to authoritarianism, as the land of the free and home of the braves experienced the gold confiscation acts of 1933 and 1934 (28). Previously, Executive order 6102 was penned, constraining the American people, until the mid 70s, to make “hoarding gold” illegal. The rationale was because the Federal Reserve must back the currency in gold and during the economic pressures of the great depression, people were forced into the single largest theft of American private property, where an estimated 500 tons were serized (29). To add to the terror, various individuals cited that gold was confiscated out of safety deposit boxes during this time, as individuals defaulted during the great depression. However there is no definitive proof from state administered investigations, safety deposit boxes remain non-FDIC insured to this day. In the past 100 years, sums of gold and precious commodities over 1B USD in valuation have been seized in Russia (1922), Germany (1929), Nazi Germany & occupied territories (1933-1945), USA (1933&1934), Czechoslovakia (1939), Australia (1959), Great Britain (1966), Citibank: Venezuela (2016), Turkey (2017).

Although gold has been the foundational basis of the world’s monetary system, Platinum is proven to be a far better basis of value due to the purity, industrial demand, and scarcity, which is exceptionally greater than gold to the point that all the mined platinum can fit in the average sized 2 door garage (30). Furthermore, when digging in these pits, there are hundreds of varying ores amounting to several thousand tons that, inevitably, are tossed aside but hold value. Even then, the full area of land is not utilized to 100% capacity and there are no clean up regulations, but only fines granting lump sums to the EPA whenever there are public liability concerns.

3. Solution

With such atrocities stemming from the inhumane practices of the mining industry, tech needs to advance to surpass the primitive business practices of the past. At our disposal is the expeditiously growing usage of digitized ownership through various consensus mechanisms and tokenization systems. Prior to digging, seismographic analysis of land is conducted to visualize what the subterranean environment consists of. Through the science of seismology coupled with AI, we can determine, within a 99.99% certainty, exactly what the geological deposits are and the volume of space these specified ore bodies reside in, underground, without disruption to the ecosystem. The final .01% is physically holding the object. The solution is simple: combine the green portions of the mining industry to a ledgering system and the world will bypass the negative attributes produced from the need for investing in the physical commodity, in turn, removing the liability of the physical matter, almost entirely. From there, the AI will enable all data to be presented in an open source medium with on-chain data provided to quantify said data from origin to wallet, verifying the unique serialization of this commodity for redemption. Through Oreswap, the tokenization of mineral rights is enabled and the marketization of these assets bypass the primitive nature of physically mining. Oreswap provides the ESG/SGD friendly alternative to commodity ownership while reducing the liability of marketizing gold, in a physical form.

4. Conclusion

Oreswap is the enterprise portion and stand alone project of a three part dex series; providing a logical response to the destructive practices of open pit mining. The main goal of this project is to increase the utility of gold by enabling users the ability to buy, sell, and hold their unearthed commodities, in the form of mineral rights. This DEX, at its very least, will act as a transactional layer of the metaverse and greater crypto ecosystem by following the rules of limited supply, causing increased demand backed by real-world assets, in turn, enacting one of the first implementations of scarcity within the endless creation possibilities within web3.