



## Archer Exploration Advances Winter Exploration Program at Grasset

**VANCOUVER, BC, April 6, 2023** – Archer Exploration Corp. (CSE: RCHR) (the “Company” or “Archer Exploration”) is pleased to provide an update on its 2023 winter drilling program at its 100% owned Grasset Nickel Project (“Grasset”) located in the Abitibi Greenstone Belt of Quebec, Canada. The Company is progressing with its winter exploration program, including drilling, geophysics and basal till sampling (see new release dated February 1, 2023).

### Highlights

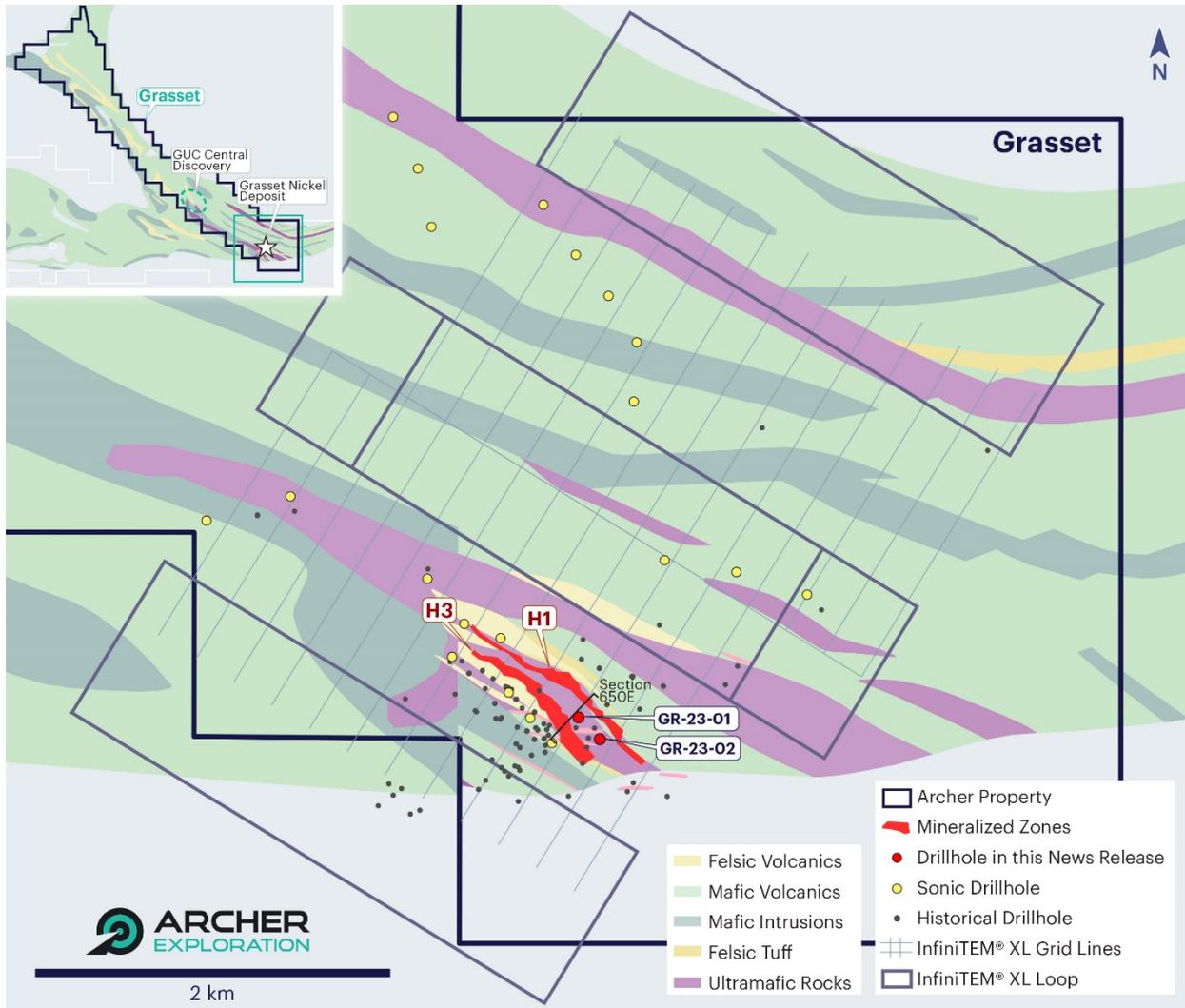
- Hole GR23-02 intersected 3m true thickness of barren volcanogenic massive sulphides close to H1 horizon at a depth of 795m, confirming the presence of an important source of sulphur required for Ni-Cu-PGE magmatic sulphide mineralization.
- The newly intersected massive sulphides are only 35m from the deepest historical (2018) high-grade mineralized intercept (GR18-102A: 2.76% NiEq over 0.51m) while targeting an area 70m below this intercept.
- An earlier than expected winter thaw has paused pilot hole drilling as the Company adds additional support for spring drilling conditions.
- A drill rig is being mobilized to test high-priority shallower targets immediately northwest of the defined resource.
- Continued sonic drilling and geophysics programs will assist in generating other targets.

Tom Meyer, Chief Executive Officer, commented: *“The information collected to date is not only very encouraging but will prove invaluable in guiding the remainder of our winter drilling program at Grasset. We will now test high-priority shallow targets with the objective of discovering nickel sulphide mineralization immediately northwest of the current Grasset resource. We look forward to updating our shareholders as we advance the pilot hole deep drilling program.”*

Jack Gauthier, VP Exploration, commented: *“Despite challenging drilling conditions, we are pleased with the progress we’ve made at Grasset. Our first two holes of the winter program were highly encouraging, particularly at depth below the current resource. GR23-02 intersected more than 3m (true thickness) of barren massive sulphides at a depth of 795m and only 35m away from the deepest high-grade nickel intercept to date. While mostly pyrite with trace pyrrhotite, volcanogenic sulphides are an essential element in the metallogenetic model for the formation of high-grade nickel magmatic sulphides. These results provide further evidence of the potential to expand the nickel resource at Grasset and validate our targeting approach.”*

The primary objective of the winter program at Grasset is to test the vertical continuity of the H1 and H3 mineralized zones at depth and to explore for additional high-grade Ni-Cu-PGE magmatic massive sulphide lenses proximal to the current resource. Early geological interpretations led us to conclude that the most efficient and cost-effective method of exploring the sub-vertical ultramafic host unit was to drill a vertical pilot hole between the H1 and H3 zones and utilize directional drilling to control several ‘branch holes’ that would test the H1 and H3 zones at depth. In addition to the pilot hole and directional drilling program at Grasset, a 20-hole sonic drilling program and ground geophysical survey are now underway and progressing as planned (Figure 1).

**Figure 1:** Grasset Pilot Hole Locations, Proposed Sonic Drill Holes, Geophysical Survey Coverage



### GR23-01

Drilling of the initial pilot hole, GR23-01, began in early February with an ultimate vertical depth target of 1,500m. As GR23-01 progressed at depth, a zone of steeply dipping faults was encountered, which led to caving within the hole and placed significant additional pressure on the drilling rods. As drilling continued,

the down-hole debris created several technical challenges and ultimately reduced the pace at which drilling could continue.

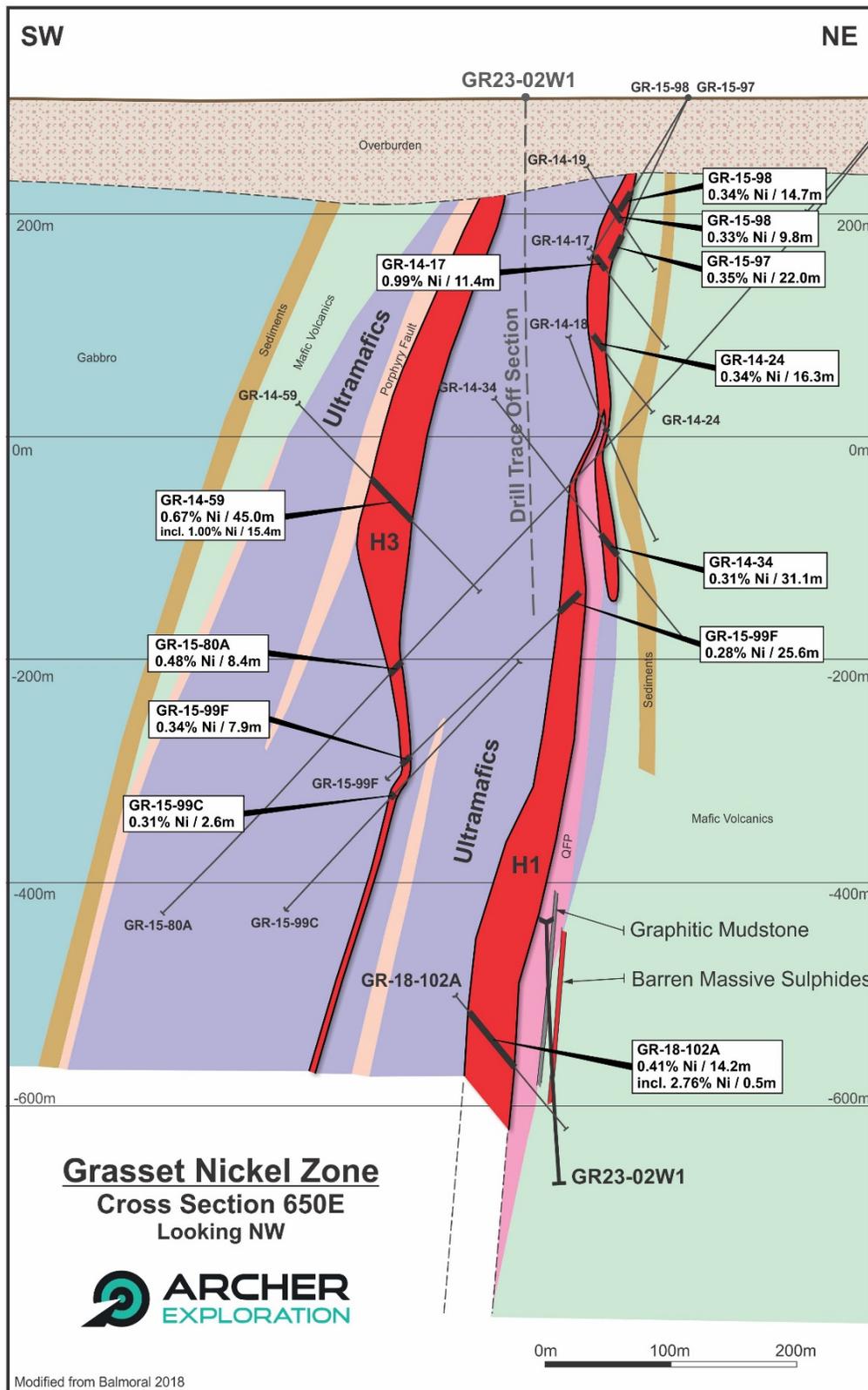
Notwithstanding the challenges with the fault zone, horizons of softer soapstone and altered ultramafic rocks were also encountered that prevented the precise course correction of the hole when required. The deviation of the hole through the fault and the softer rock was too extensive to warrant continuing, and the decision to abandon the hole was made after reaching a depth of 446m.

### **GR23-02**

A second pilot hole, GR23-02, was collared 130m southeast of GR23-01 with an 87-degree dip and a northwest azimuth, aligned to favour the natural deviation tendencies within the softer rock units (Figure 2). As with GR23-01, the objective of GR23-02 was to target potential zones of high-grade nickel mineralization beneath the thickest, richest part of the current mineral resource. In addition, GR23-02 was also targeting a potential extension of H1, 70m below the deepest mineralized intersection to date, which is approximately 775m below the surface (GR18-102A: 2.76% Ni over 0.51m within 0.41% Ni over 14.15m).

GR23-02 also encountered challenging ground conditions. A second fault at a depth of 674m was crossed, and the hole could not be stabilized. Once again, caving into the hole added significant pressure to the drill rods and sent debris to the bottom of the hole. The hole was cemented to stabilize the fault zone, at which point directional drilling (GR23-02W1) was utilized to drill through the cemented fault from a depth of 674m (Figure 3). The drilling conditions continued to prove challenging, and the heavily fractured and blocky ground conditions caved into the hole. Additionally, the hole deviation increased at depth, as did the risk of losing the directional drilling device, and the hole was abandoned at a depth of 874m.

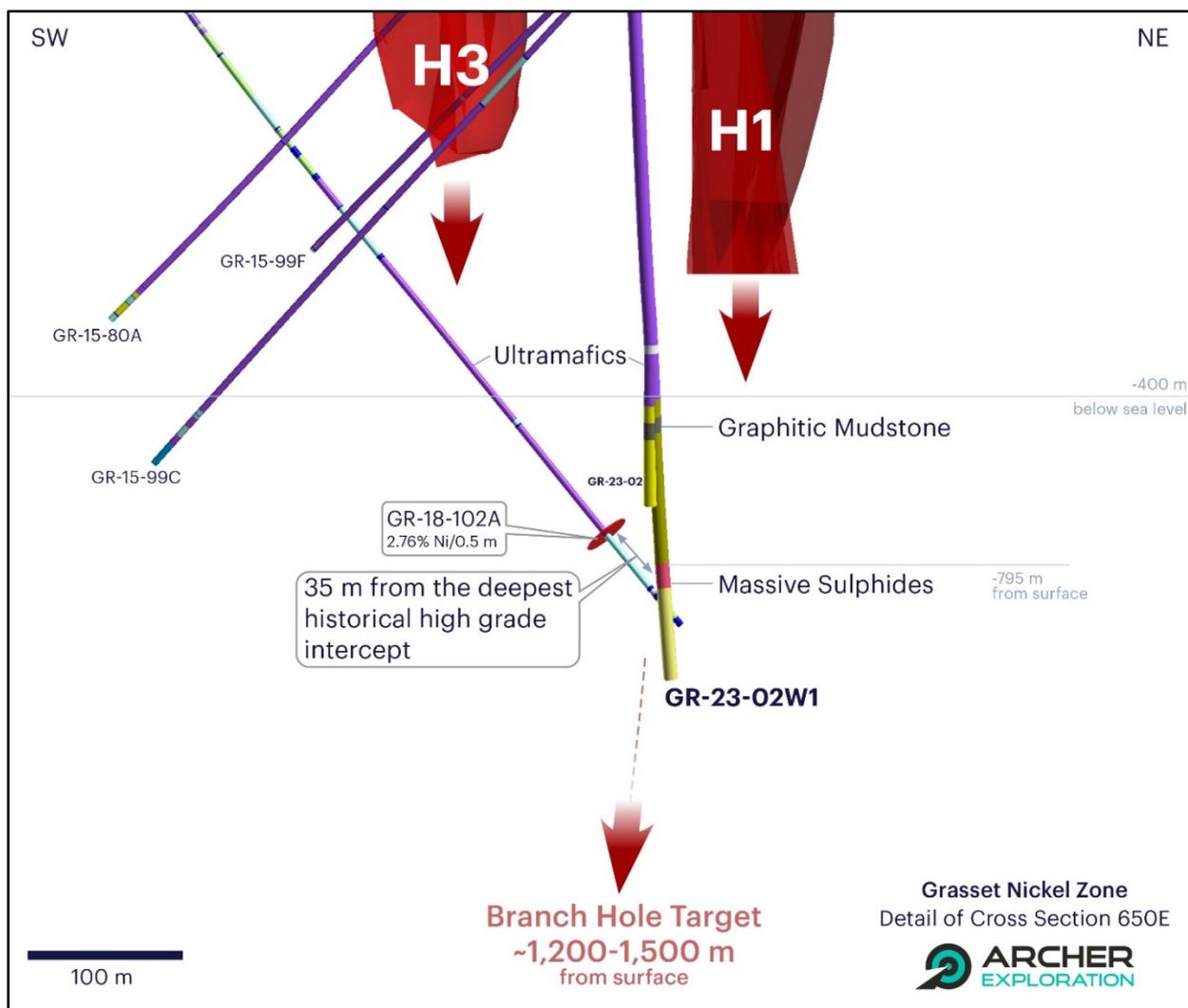
Figure 2: Grasset Nickel Zone Cross Section 650E – H3 & H1 with Second Pilot Hole Trace



Prior to ending the hole, GR23-02 cut 14.25m (true thickness of 3m) of volcanogenic massive sulphides, mainly barren pyrite with traces of pyrrhotite, within felsic tuffs. This is an extremely important geological feature as it confirms that the ultramafic rocks were intruded within sulphide-rich volcanics. The assimilation of volcanogenic sulphides by a nickel-rich ultramafic magma is an essential element for the precipitation of nickel sulphides in the magmatic-nickel metallogenetic model. These results highlight the importance of completing our testing of this deep target zone below the historical nickel intercept within GR-18-102A as it may represent the upward tip of a building zone of magmatic massive sulphides at depth.

Although the first two drilling attempts did not reach their targets, valuable geological information was collected. The holes intersected graphitic mudstones 60-80m farther to the southwest than expected, indicating that the entire stratigraphic sequence, including H1 and H3, is displaced in that direction at depth.

**Figure 3:** Grasset Nickel Zone Detail of Cross Section 650E



## **Next Steps**

An early winter thaw has temporarily paused the deep pilot hole program as the Company shifts to a program more suitable for spring drilling. A drill is being mobilized and will test high-priority shallow targets immediately northwest of the current Grasset resource.

Large loop, high-power downhole electromagnetic and gravity surveys are also planned to assist in targeting mineralized extensions of H1 and H3 at depth.

The development of our deep directional drilling techniques at Grasset will grant Archer cost-effective exploration avenues as we further explore the 23km ultramafic-rich corridor of Grasset.

## **Grasset Sonic Drilling**

The Grasset mineral resource is situated at the southeastern end of an underexplored 23km long belt containing abundant favourable ultramafic rocks. A sonic drill program is underway to sample the base of the glacial till (60-90m thick), which renders the Grasset deposit and other mineralization blind to conventional surface geochemical sampling techniques. In addition, the first few meters of the bedrock will be included in the sample gathering, essentially developing an approach to identifying areas with underlying, geochemically anomalous, bedrock ultramafic rocks along the more prospective parts of the 23km long belt (Figure 1). This technique is commonly used with success in exploration campaigns for detecting mineral deposits under thick overburden.

The sonic drilling program commenced in early March and a total of four sonic holes have been completed to date. The till thickness is between 75 and 85m and is mostly composed of sand and clay with local one-metre-thick horizons of silty clay and silt. The basal till, in the last 8-12m, is typically composed of sub-angular ultramafic clasts with some felsic clasts in a silty-sand matrix.

This initial orientation program of 20 sonic drill holes is progressing well and is expected to be completed in 3-4 weeks. Laboratory assays should be received 4-6 weeks thereafter.

## **Grasset Geophysics**

Judicious use of downhole geophysics and deep penetration geophysical surveys are underway at Grasset. The effectiveness of conventional geophysical approaches is hampered by the conductive nature of the glacial overburden (thick clay), multiple types of conductive stratigraphic and mineralized rock units (graphitic mudstones, barren volcanogenic massive sulphides and nickel-mineralized massive to semi-massive magmatic sulphides) and the potential for deeper nickel sulphide targets on the property (400 to 600m below surface). In some parts of the deposit, graphite and barren volcanogenic sulphides are very close to the H1 lens, making it difficult to differentiate between the two with conventional geophysical surveys. To that end, Abitibi Geophysics' InfiniTEM® XL system was chosen as one of the geophysical techniques to aid in exploration as it has one of the better performance measures in this type of challenging environment.

In order to detect anomalous conductors (massive sulphides) at a depth of 800-1,000m, a 53km grid line (Figure 1) is being cut to allow the installation of two 0.8 by 2.5km high-power fixed loops for maximum coupling. The same InfiniTEM® XL system will also be used for large-volume borehole exploration on the property. New drill holes and six historic boreholes at the edge of the known nickel mineralization are

currently under investigation using the large dual loop configuration. Similar type surveys in North-Central Quebec have detected mineralization more than 600m from the borehole.

Conductors identified with the borehole InfiniTEM® XL survey will be further investigated using the unique GraviLOG slim hole gravity sensor to better identify the nature of the potential targets. Graphite and massive sulphides are both very good conductors, although graphite has a significantly lower density (~2.3kg/m<sup>3</sup>) relative to massive sulphides (~4.5kg/m<sup>3</sup>). A downhole gravity survey will assist in differentiating the graphite from the massive sulphides, owing to this marked difference in density.

The geophysical program is progressing well, and initial results are anticipated in the coming weeks.

### **The Grasset Project**

The Grasset Deposit, discovered in 2012, comprises two subparallel, and sub-vertically dipping zones (H1 and H3) of disseminated to locally semi-massive sulphide mineralization and is located at the southern end of the Grasset Ultramafic Complex. The H1 and H3 zones both remain open at depth and along strike to the northwest.

In 2021 an updated mineral resource estimate, using a 2016 drilling cutoff, was completed with an Indicated Resource Estimate of 5.5 Mt grading 1.53% nickel equivalent (NiEq) and an Inferred Resource Estimate of 217,000 tonnes grading 1.01% NiEq.

The vast majority of the Grasset Ultramafic Complex is underexplored and limited exploration prior to 2016 resulted in the discovery of several significant nickel sulphide showings along the entire 23km long belt. Most notable is the GUC Central discovery, 7km northwest of the Grasset Deposit, which hosts a 950m thick ultramafic sequence with several horizons of nickel sulphides and a best mineralized intercept of 4.14% Ni over 0.65m, within 7.58m of 1.05% Ni.

The Grasset deposit is one of the largest nickel sulphide deposits in Canada's Abitibi region and the only North American nickel sulphide deposit, with more than 50,000 contained tonnes of nickel and an average NiEq grade of over 1.5%, not controlled by a major mining company.

### **Qualified Person**

The scientific and technical content of this press release has been reviewed and approved by Mr. Jacquelin Gauthier, P.Geol, Vice President, Exploration, who is a "Qualified Person" as defined by National Instrument 43-101 - *Standards of Disclosure for Mineral Projects*.

### **About Archer**

Archer Exploration is a Canadian Ni-Cu-Co-PGE focused exploration and development company with an extensive portfolio of assets in Quebec and Ontario, Canada. The Company's flagship asset is the Grasset Project, located within the Abitibi Greenstone Belt, with an Indicated Resource of 5.5Mt @ 1.53% NiEq. In addition, the Company holds a strategically significant portfolio of 37 properties and over 300 km<sup>2</sup> in the world-class mining district of Sudbury, Ontario.

The Company's growth strategy is focused on the exploration and development of its nickel sulphide properties within its portfolio, as well as other battery metal assets it may acquire that fit its strategic

criteria. Archer's vision is to be a responsible nickel sulphide developer in stable pro-mining jurisdictions. Archer is committed to socially responsible exploration and development, working safely, ethically, and with integrity.

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