

# DEMO

1. Download the attached reservoir documents in a folder .

## 2. Semantic Pipeline Request

```
{
  "collectors": [
    {
      "backend": {
        "files": {
          "root_path": "/home/nishantg/querent-main/reservoir/querent-api-testing"
        }
      },
      "name": "knowledge_graph_openai"
    }
  ],
  "config": {
    "fixed_entities": {
      "entities": ["Carbonate", "Clastic", "Porosity", "Permeability", "Oil saturation", "Water saturation", "Gas saturation", "Depth", "Size",
        "Temperature", "Pressure", "Oil viscosity", "Gas-oil ratio", "Water cut", "Recovery factor", "Enhanced recovery technique", "Horizontal drilling",
        "Hydraulic fracturing", "Water injection", "Gas injection", "Steam injection", "Seismic activity", "Structural deformation", "Faulting", "Cap rock
        integrity", "Compartmentalization", "Connectivity", "Production rate", "Depletion rate", "Exploration technique", "Drilling technique", "Completion
        technique", "Environmental impact", "Regulatory compliance", "Economic analysis", "Market analysis", "oil well", "gas well", "oil field", "Gas
        field", "eagle ford shale", "ghawar", "johan sverdrup", "karachaganak", "maracaibo"]
    },
    "sample_entities": {
      "entities": ["rock_type", "rock_type", "reservoir_property", "reservoir_property", "reservoir_property", "reservoir_property",
        "reservoir_property", "reservoir_characteristic", "reservoir_characteristic", "reservoir_characteristic", "reservoir_characteristic", "reservoir_property",
        "reservoir_property", "production_metric", "production_metric", "recovery_technique", "drilling_technique", "recovery_technique",
        "recovery_technique", "recovery_technique", "geological_feature", "geological_feature", "geological_feature",
        "reservoir_feature", "reservoir_feature", "reservoir_feature", "production_metric", "production_metric", "exploration_method", "drilling_method",
        "completion_method", "environmental_aspect", "regulatory_aspect", "economic_aspect", "economic_aspect", "hydrocarbon_source",
        "hydrocarbon_source", "hydrocarbon_source", "hydrocarbon_source", "reservoir", "reservoir", "reservoir", "reservoir", "reservoir"]
    },
    "is_confined_search": true,
    "ner_model_name": "botryan96/GeoBERT",
    "user_context": "Query: Your task is to analyze and interpret the context to construct semantic triples. The above context is from a geological
    research study on reservoirs and the above entities and their respective types have already been identified. Please Identify the entity which is the
    subject and the entity which is object based on the context, and determine the meaningful relationship or predicate linking the subject entity to the
    object entity. Determine whether the entity labels provided match the subject type and object type and correct if needed. Also provide the predicate
    type. Answer:"
  },
  "name": {
    "knowledge_graph_using_openai": {
      "openai_api_key": "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"
    }
  },
  "storage_configs": [],
  "version": 0.0
}
```

3. This request will produce around 130 – 150 triples.

#### 4. Start Discovery session

```
{
  "agent_name": "test",
  "max_message_memory_size": 1000,
  "max_query_tokens_size": 1000,
  "openai_api_key": "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",
  "semantic_pipeline_id": "df9a1386b16b425ab23d1acc40006b9a",
  "session_type": "Retriever",
  "storage_configs": [
    {
      "postgres": {
        "name": "querent_test",
        "storage_type": "vector",
        "url": "postgres://querent:querent@localhost/querent_test?sslmode=prefer"
      }
    }
  ]
}
```

#### 5 . Make Discovery

```
{
  "query": "What is the porosity and permeability of eagle ford shale reservoir ?",
  "session_id": "ab0b705386aa4a7cb3100fb9977cbc86"
}
```