**Prompt 1 and Results: (we extracted many features to be added from the news)**

Extract phrasal features (not one word), company names, and industry-related terms that may affect the cement sector stock exchange. From the news articles i am providing below, some examples are as follows:

- Tax reforms

- Housing schemes

- Loans for housing

- Loans for industrial development

- International pacts about industrial/infrastructure/building related development

- Tax policy changes

- Dam construction halting or starting

- Big projects where cement is used stopping or starting

- Laborer/worker protests

- Factors affecting or reinforcing peace

- Security of sea/harbors/trade routes

- IMF or FATF policies enforcement

- Increase in exports related to the cement sector

- Projects leading to an increasing demand for cement

- Stock news related to company growth in the cement sector

- Improved cement sales or price gains

- Strengthening of the brokerage industry by government reforms

- Government announcements to build new roads, houses, hospitals

- Anarchy and high political unrest

- Protests blocking roads in major cities or country-wide

- Increase or decrease in the export of cement

- Government amnesty schemes for the construction sector

- Government housing schemes or mega projects within the country

- KSE boost or gains

- Tax on the construction sector

Your extracted features should include all relevant details about companies and industry-related terms connected to the cement sector.  
  
**Article Used for all prompts(for this report purpose to see difference):**   
MANSEHRA: Clerics in Upper Kohistan district have assured the administration that they will not allow anyone to block work on the Dasu hydropower project and will help protect foreign workers.Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½The ulema backed by all local tribes have announced that the residents wonÃ¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½t be allowed to hamper smooth execution of the Dasu energy project. Those challenging the governmentÃ¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½s writ will be taken to task,Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½ deputy commissioner Arif Khan Yusufzai told reporters at the end of a jirga in Dasu, the district headquarters of Upper Kohistan, on Thursday. The event was attended largely by the clerics. Work on the dam was suspended last month when WapdaÃ¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½s guards opened fire on a group of people, who attempted to enter an under-construction tunnel of Dasu dam. Five of them had suffered injuries. The deputy commissioner said the land acquired for Dasu dam was the public property and nobody could make anensure brotherhood among tribes settled across the district and that they be given an equal opportunity for project jobs. Mr Yusufzai warned that those creating hurdles to the project would be dealt with strictly under the law. Meanwhile, the deputy commissioner gave away Rs220 million cheques to the people, whose land was acquired for the Dasu dam. He said the project would help meet the countryÃ¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½s electricity shortfall but develop Upper Kohistan district.  Also in the day, the office-bearers of the Pakistan Tehreek-i-Insaf WomenÃ¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½s Wing visited the King Abdullah Teaching Hospital and expressed satisfaction with the services offered to patients, especially pregnant mothers. Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½The Sehat Sahulat Programme is a revolutionary healthcare initiative of the PTI government and expecting mothers are availing themselves of it for free services including care by skilled birth attendants and medicines,Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½Ã¯Â¿Â½ PTI WomenÃ¯Â¿Â½Ã¯Â¿Â½anme down to around 150 after its wards were destroyed by the 2005 earthquake, had been enhanced to 350. Another PTI leader, Tahira Jabeen, blamed high mother and infant mortality rate in the district at the deliveries handled by unskilled health workers and said the rate would plunge due to the Sehat Sahulat Programme, which provided free gynaecological services to visitors.Published in Dawn, March 5th, 2021

**Results:**

## Extracted Features from Article 1:

\*\*Phrasal Features:\*\*

\* \*\*Dasu hydropower project:\*\* This is a major construction project with potential impact on the cement sector due to its demand for cement.

\* \*\*Work on the dam was suspended:\*\* This event directly impacts the cement sector as it signifies a decrease in demand for cement.

\* \*\*Smooth execution of the Dasu energy project:\*\* This indicates a potential increase in cement demand if the project proceeds smoothly.

\* \*\*Land acquired for Dasu dam:\*\* Acquisition of land often precedes construction and suggests future cement demand.

\* \*\*Project jobs:\*\* These jobs represent a positive impact on the local economy, potentially boosting construction and cement demand.

\* \*\*Creating hurdles to the project:\*\* This phrasing implies potential delays or cancellations, negatively impacting cement demand.

\* \*\*Sehat Sahulat Programme:\*\* This healthcare initiative could indirectly impact the cement sector by driving construction of new hospitals and medical facilities.

\* \*\*High mother and infant mortality rate:\*\* This highlights a need for improved healthcare infrastructure, potentially leading to increased construction and cement demand.

\*\*Company Names:\*\*

\* \*\*Wapda:\*\* Water and Power Development Authority, a major player in Pakistan's energy sector, directly involved in the Dasu hydropower project.

\*\*Industry-Related Terms:\*\*

\* \*\*Hydropower project:\*\* Construction of hydropower projects requires significant amounts of cement.

\* \*\*Dam construction:\*\* A direct driver of cement demand.

\* \*\*Electricity shortfall:\*\* The need to address electricity shortages often leads to construction of power plants, boosting cement demand.

\* \*\*Foreign workers:\*\* Their presence at the Dasu project may indicate international investment, potentially influencing the cement sector.

\* \*\*Local tribes:\*\* Their involvement in the project suggests potential labor and economic impact on the region.

\* \*\*Jirga:\*\* A traditional tribal council in Pakistan, their involvement indicates local community support for the project, potentially influencing its execution.

\* \*\*Ulema:\*\* Religious scholars, their support for the project suggests social acceptance and less potential for disruption.

\* \*\*Health workers:\*\* Their role in the Sehat Sahulat Programme highlights the need for healthcare infrastructure development.

\* \*\*Skilled birth attendants:\*\* This indicates a need for improved healthcare facilities and potential construction projects.

\* \*\*Gynaecological services:\*\* This signifies demand for hospitals and related healthcare infrastructure.

\*\*Overall Impact:\*\*

The article highlights the potential impact of the Dasu hydropower project on the cement sector, with both positive and negative factors influencing demand. The project's progress and support from local communities will be key factors in determining its effect on the sector. The Sehat Sahulat Programme also presents an indirect positive impact as it drives the need for healthcare infrastructure development.

**Analysis:**

The terms were not strictly related to cement sector, it gave out long term features e.g., electricity shortfall => build dams. It is relevant for long term but we need features for short term that may have immediate effects. Results are being explained I need them in a csv, analysis is being done at the end I don’t need it. Added cement related companies stock price increasing and CPEC development as features as well.

**Prompt 2 and results:**

Extract phrasal features (not one word), company names, and industry-related terms that specifically impact the cement sector stock exchange from news articles. Only include features that indicate immediate or short-term impacts such as:

- Tax reforms

- Housing schemes

- Loans for housing

- Loans for industrial development

- International pacts about industrial/infrastructure/building related development

- Tax policy changes

- Dam construction halting or starting

- Verified news of big projects where cement is used, stopping or starting, such as hospitals, power plants, or other infrastructure projects, provided there is confirmed funding or commencement of construction

- Laborer/worker protests

- Factors affecting or reinforcing peace

- Security of sea/harbors/trade routes

- IMF or FATF policies enforcement

- Increase in exports related to the cement sector

- Immediate or near-term demand for cement due to current projects

- Stock news related to growth specifically in cement companies

- Improved cement sales or price gains

- Strengthening of the brokerage industry by government reforms with immediate impacts

- Government announcements to build new roads, houses, hospitals, with verified construction commencement or approved funding

- Anarchy and high political unrest

- Protests blocking roads in major cities or country-wide

- Increase or decrease in the export of cement

- Government amnesty schemes for the construction sector

- Government housing schemes or mega projects within the country with imminent impact

- KSE boost or gains

- Tax on the construction sector

- Cement related companies stock price increasing

- CPEC development news

Focus only on confirmed, short-term, verifiable impacts specific to the cement sector.

Output the extracted features in the following format: "Extracted Feature, Company Name/Term" followed by a list of only the feature names and company names, if any.

**Results:**

```csv

Feature,Company,Industry Term

Dasu hydropower project,Wapda,Hydropower

Dasu dam,Wapda,Dam Construction

Sehat Sahulat Programme,PTI,Healthcare

King Abdullah Teaching Hospital,N/A,Hospital

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**Analysis:**  
Results were not stable, it depended on the Gemini’s mood sometimes it gave formatted results sometimes not, we thought it was a problem with the very long prompt and we had to reduce the size and to not use all the keywords rather let the LLM do it. We had some ideas about scores also the provided examples for oil really helped.

**Prompt 3**

In the above news article, parse the article above and extract phrases

The phrases should be highly specific phrases that may indicate immediate or short-term impacts on the cement sector stock market index. The phrases need to be directly related to the cement industry. We only want to address info that is highly related to cement industry specifically.

Additionally, identify whether each phrase has a positive or negative impact on the sector.

only show positive or negative ones, not neutral ones

Also, at the end, you will generate a number proportional to the directness of relation to the news with the stock market. the number will have range 0 to 1 where 1 being extremely directly related and 0 being extremely indirectly related

A question to ask yourself when you are parsing the article and looking for relevant phrases.

- can this phrase potentially impact the cement industry stock index?

Example Output:

user: Article

Model (That's You):

["sole mandate would be ÃƒÂ¢Ã‚â‚¬Ã‚Å“price control and to independently set monetary policy and exchange rate policyÃƒÂ¢Ã‚â‚¬Ã‚Â", Negative , Higher interest rates due to tighter monetary policy could impact borrowing costs for cement manufacturers, potentially affecting their expansion plans and profitability, 0.2],,

["The government shall not borrow or seek guarantees from the SBP for its operations", Positive,  Reduced government borrowing could alleviate pressure on interest rates, potentially benefiting the cement sector, 0.2]

generate in the exact format above so I can then convert to csv later on. Please don't deviate from the format, especially when it comes to the brackets

**Results:**

[["Work on the dam was suspended last month", "Negative", "Delays in infrastructure projects like dams can negatively impact cement demand, potentially affecting the cement sector's performance.", 0.7], ["the project would help meet the country’s electricity shortfall but develop Upper Kohistan district", "Positive", "Infrastructure development, including dams, often leads to increased cement demand, which could benefit the cement industry.", 0.8]]

**Analysis:**

The results were very good, consistent and had high quality features. A small prompt with exact instructions to the model is the way forward, writing too much and providing the details manually backfired.

**Challenges:**

It was a tedious task to make the output in a stable/similar format across different queries on the same model.