

OIL & GAS DOCKET NO. 08-0257013

THE APPLICATION OF WHITING OIL AND GAS CORPORATION TO CONSTRUCT AND OPERATE A 10 INCH AND 20 INCH HYDROGEN SULFIDE PIPELINE EXTENSION, WICKETT SOUR CO₂ PIPELINE, WARD COUNTY, TEXAS

Application reviewed by: Donna K. Chandler

Date Reviewed: July 7, 2008

Date application filed: May 9, 2008

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Whiting Oil and Gas Corporation requests Commission authority pursuant to Statewide Rules 106, 70 and 36 to construct and operate two hydrogen sulfide (H₂S) pipeline extensions in Ward County.

The Commission's Field Operations section has reviewed the application and has determined that the applications comply with the applicable provisions of Rule 36. In addition, the Commission's Gas Services Division recommends approval of the T-4 applications filed to operate the pipelines and the Commission's Safety Division has reviewed the applications. The proposed pipelines will be gathering lines for wells on several leases in the Ward-Estes, North Field. The examiner recommends approval of the application.

DISCUSSION OF THE EVIDENCE

Whiting Oil and Gas Corporation proposes construction of sour gas pipelines for distribution of sour CO₂ and gathering of produced gas from wells it operates in the Ward-Estes, North Field. Whiting will lay 4.25 miles of 8" line north of their Wickett gas plant and 3 miles of 10" line south of the gas plant. These two lines will be used to distribute CO₂ to various leases. The lines will operate at approximately 1,325 psi with a maximum daily capacity of 200 MMCF. The gas contains a maximum of 3,000 ppm H₂S. These two lines will be extensions of an existing 10" distribution line. Whiting will also lay 11 miles of 20" line extending 3 miles north and 8 miles south of the plant. This line will gather sour CO₂ from the leases and will operate at approximately 100 psi with a maximum daily capacity

of 200 MMCF of 3,000 ppm H₂S gas. The gathering and distribution lines will run approximately side by side.

For each line, the calculated 100 ppm radius of exposure is 5,519 feet and the calculated 500 ppm radius of exposure is 2,522 feet. These calculations are based on the Pasquill-Gifford equation assuming maximum release. Both the 500 ppm and 100 ppm radii of exposure include numerous residences and businesses within the city of Wickett. The 500 ppm radius of exposure includes portions of State Hwy 57, Interstate 20, State Hwy. 18 and FM 1219. The lines will operate under an existing Rule 36 contingency plan in accordance with the provisions of Rule 36(c)(9). The plan covers the sour CO₂ injection project to be operated by Whiting on the subject leases in the Ward-Estes, North Field.

The Mike Yoho and the Clements residences are approximately 1,200 feet from the distribution line. Whiting will place emergency shutdown valves on each side of these residences that will shut-in the line in the event of line pressure loss. ESD's will also be placed on both sides of Hwy. 57 and I-20. Both the Yoho and Clements residences will also have continuous H₂S monitors (remote terminal units) which are capable of detecting 0-25 ppm H₂S. RTU's will also be placed at various locations near road crossings and residential areas in the city of Wickett. If a level above 10 ppm is detected, an alarm is transmitted to the control room at the CO₂ plant which is manned 24 hours a day. The control room attendant will notify appropriate personnel to determine the next action required.

All materials for the lines will satisfy the requirements described in the latest editions of NACE Standard MR 0175 and API standards. H₂S warning signs compliant with Rule 36(c)(6)(A) and (c)(6)(B) will be posted at intervals along the pipeline frequent enough as to provide warning to avoid accidental rupture of the line by excavation. The signs will indicate poison gas and information regarding ownership of the lines.

Whiting published notices of the applications in a newspaper of general circulation in Ward County. The notice was published in *The Monahans News* on April 24, 2008. The application was filed with the Ward County Clerk and the Winkler County Clerk on June 4, 2008.

FINDINGS OF FACT

1. On May 9, 2008, Whiting Oil and Gas Corporation filed application for a permit to construct two hydrogen sulfide gas pipelines in Ward County.
2. Whiting Oil and Gas Corporation published notice of the application in a newspaper of general circulation in Ward County. The notice was published in *The Monahans News* on April 24, 2008. A copy of the application was filed with the Winkler County Clerk and the Ward County Clerk on June 4, 2008.

3. No protest to the application was filed with the Commission and no hearing was held.
4. Whiting Oil and Gas Corporation proposes construction of sour gas pipelines for distribution of sour CO₂ and gathering of produced gas from wells it operates in the Ward-Estes, North Field.
 - a. An 8" line approximately 4.25 miles in length and a 10" line approximately 3 miles in length will be used to distribute CO₂ to various leases.
 - b. A 20" line approximately 11 miles in length will gather sour CO₂ from the leases.
 - c. The gathering and distribution lines will be approximately side by side.
 - d. The distribution lines will be extensions of an existing 10" distribution line.
5. Pipeline materials and construction will meet the NACE standards as required by Statewide Rule 36 for hydrogen sulfide service.
6. The maximum volume delivery design for each line is 200 MMCFD. The maximum hydrogen sulfide concentration of the gas to be transported is 3,000 parts per million.
7. For each line, the 100 ppm radius of exposure is 5,519 feet and the 500 ppm radius of exposure is 2,522 feet.
 - a. Both the 500 ppm and 100 ppm radii of exposure include numerous residences and businesses within the city of Wickett.
 - b. The 500 ppm radius of exposure includes portions of State Hwy 57, Interstate 20, State Hwy. 18 and FM 1219.
8. The lines will operate under an existing contingency plan for the overall Ward-Estes, North Field CO₂ project.
9. The pipelines will be constructed subject to Commission inspections for compliance with the appropriate Commission Rules.
10. The Commission's Field Operations section and the Commission's Gas Services Division have reviewed the applications and recommend approval.

CONCLUSIONS OF LAW

1. Proper notice was timely given to all parties entitled to notice pursuant to applicable statutes and rules.
2. All things have occurred and have been accomplished to give the Commission jurisdiction in this case.
3. The application complies with Statewide Rules 36, 70 and 106.
4. Approving the application for a permit to construct and operate the proposed gas pipelines is consistent with the rules and safety standards adopted by the Commission.

EXAMINER'S RECOMMENDATION

The examiner recommends approval of the application of Whiting Oil and Gas Corporation to construct and operate the proposed pipeline extensions.

Respectfully submitted,

Donna K. Chandler
Technical Examiner