BEFORE THE RAILROAD COMMISSION OF TEXAS

APPLICATION OF **JEFFERSON** BLOCK 24 OIL AND GAS, LLC FOR WAIVER PURSUANT TO 49 CFR 192 AND RULE 8 OF THE TAC, TITLE 16, PART 1 FOR INSTALLATION OF REINFORCED THERMOPLASTIC PIPE FOR DELIVERING GAS NEEDED TO ACHIEVE A GAS LIFT PROCESS FOR PROLONGING THE LIFE OF A CERTAIN WELL WITHIN THEIR HIGH ISLAND BLOCK 24-L PRODUCING FIELD, LOCATED IN STATE WATERS. **JEFFERSON** COUNTY, TEXAS

GAS UTILITIES DOCKET No. 9995

FINAL ORDER

Notice of Open Meeting to consider this Order was duly posted with the Secretary of State within the time period provided by law pursuant to Tex. Gov't Code Ann. Chap 551, et seq. (Vernon 2004 & Supp. 2010). The Railroad Commission adopts the following findings of fact and conclusions of law and orders as follows:

FINDINGS OF FACT

- On July 6, 2010, Jefferson Block 24 Oil & Gas, LLC (JB24) filed this application for a waiver of CFR 192.59 and 192.123 to allow JB24 to operate a single gaslift/oil gathering line constructed using a concentric pipe configuration. The line will be constructed using an outer 4" pipe made of carbon steel and an inner 1 ½" reinforced thermoplastic pipe (RTP).
- 2. Notice of the application was provided by certified mail, return receipt requested to all affected persons entitled to notice pursuant to Pipeline Safety Rule 8.125(e)(1).
- Notice of the application was published in compliance with Pipeline Safety Rule 8.125(e)(2) in the *Beaumont Enterprise*.
- 4. No protests were filed in response to the notice of application.
- 5. On December 3, 2010, the Commission's Pipeline Safety Division, filed a memorandum recommending approval of JB24's waiver application.

- 6. High Island Block 24-L (HI-24) is a producing oil and gas field that was originally developed by Arco in the late 1960's and early 70's. Jefferson Block 24 Oil & Gas, LLC (JB24) acquired the field in 2007 and continues to develop the field.
- 7. The HI- 24 field is located in Jefferson County, in the Gulf of Mexico and in Texas State Waters. It is located approximately 16 miles southeast from the town of High Island, Texas. The field is comprised of 16 wellbores occupying five State Leases.
- 8. There are two primary production facilities, Platform A and Platform B. The wells are satellite "caisson" structures that flow to either platform through buried gathering, or flow lines. The "A" wells flow to Platform A and the "B" and "C" wells all flow to Platform B. Platform A is a manned, fully operational facility where all the produced fluids are treated and separated. Platform B serves as a collection and transfer point where the produced fluids are sent to Platform A. Once treated and separated, the liquids are transported back to Platform B through a 12" pipeline with high pressure gas where it is again separated, metered, and recombined for export sales. The combined fluid and gas stream is transported through an 8" Gas Pipeline to a subsea tie-in in High Island Block 33L with Transco Operations System No. 4.5.
- 9. Within the 720 acre State lease M-103389 the High Island 24 C-10s/t well was drilled and completed in July, 2008. It is a single-well caisson structure that flows to HI-24 Platform B facility via a 4" buried flow-line 5,915' in length.
- 10. A June 4, 2010, well test for High Island 24 C-10s/t well measured the latest production rates at 93.3 BOPD, 135 Mcfd, and 384 BWPD at 290 psi FTP. Estimated total production from the HD Sand, to date, is 71,400 Mcf gas, 100,700 barrels oil, and 75,400 barrels water. The well ceased flowing on June 30, 2010, and now needs artificial lift to continue producing.
- 11. JB24 proposes to install a concentric 1-1/4" Reinforced Thermoplastic Pipe (RTP) inside the existing carbon steel 4" flow-line that connects "C-10" well to Platform B, rather than install another pipeline to accommodate the gas needed for the gas lift process of well "C-10". This particular RTP is a three-component pipe comprising a thermoplastic liner, reinforcing layers, and a thermoplastic outer cover.
- 12. The RTP product that is to be used for the interior gas piping was chosen primarily because of the following:
 - > Its superior permeation resistance and corrosion resistance in the most severe of environments.
 - > The reinforcement is an interwoven polyaramid fiber, also known as Kevlar.

- > It has extremely good fatigue properties and resistance to chemical attack and hydrolysis.
- > The aramid fibers offer resistance to hydrocarbon degradation.
- > The outer jacket is nylon which has better abrasion resistance than steel to remove the risk of damage to pipe during pull through installation.
- 13. JB24 intends to use ThermoflexR™ pipe manufactured by Polyflow, Inc.™ for the concentric line installation. The 1 ¼" ThermoflexR™ line pipe that will be used in this installation will have a high pressure rating of a minimum 1500 psi. This rating will be certified by the Bureau Veritas and be derived using the methods prescribed in Test Method D1598 and D1599. This is a 1000 hour hold test and short bursts. The Bureau Veritas certification representing the specific pipe used in this project will be provided prior to installation
- 14. The existing 4-inch flow-line from well C-10 was hydro-tested on August 17, 2008 to 2160 psi for eight hours. The gas injection line will operate at +/- 800 psi, with the pressure not to exceed 1000 psi. The proposed gas injection line will have a maximum inside diameter of 1.08" and will be compression-sealed into the existing flow-line pipe at either end with an integrated double-face "RTJ" bolted flange resulting in a designed installation with one piece construction to create a joint-less system between each terminus within the 4-inch flow-line.
- 15. The produced fluids (oil, water, and gas) of "C-10" would continue to return to Platform B through the annular space between the outside surface of the proposed 1-1/4" RTP line and the internal wall of the existing 4" flow-line, while the gas used in the gas lift process will utilize the newly installed RTP line pipe.
- 16. Periodic Integrity Management Program pressure testing will be done separately on both the steel and the interior RTP line at prescribed time intervals between tests. In the case of the RTP line, the RTP line will be pressured up to test pressure and held for the appropriate amount of time while monitoring the steel/RTP annulus for 0 pressure increase. The steel line will be tested by applying pressure and monitoring the RTP line for 0 pressure increase provided that test pressure of the steel line does not exceed the collapse pressure of the RTP line. If a test of the steel line is needed that exceeds the collapse of the RTP, adequate pressure to prevent collapse must be applied to the RTP and monitored during the testing of the steel pipe. In no case will the pressure applied to the steel line and RTP line be equal.
- Additional continuous integrity assurance monitoring will be accomplished by adding a strainer in the concentric ThermoflexRTM pipe as it leaves the altered flow-line and before well C-10, and another strainer downstream of the altered flow-line at Platform B. These strainers will be examined at prescribed intervals as a means of monitoring the integrity of the concentric RTP pipe. If an excessive amount of thermoplastic pipe, nylon or aramid fiber is caught in either strainer, remedial action will then be taken.

- 18. A segment of exposed ThermoflexRTM as the line leaves the head of the newly modified flow line in route to the well will be installed in such a manner that it can be periodically blocked in and removed for physical examination to ensure that the line's integrity has not degraded during operation.
- 19. JB24 will provide certifications, or other documented proof all construction personnel involved during all phases of installation and inspection of the ThermoflexR™ pipe were trained in accordance with all necessary JB24 project and installation processes and procedures.
- JB24 will provide documented records that a minimum of 50 feet of the ThermoflexRTM pipe pulled beyond its final destination for visual inspection. The records should indicate an examination was performed by a certified PolyflowTM technician for any possible damage that may have occurred during the pulling and pushing of the ThermoflexRTM through the 4" flow-line. If any compromising damage had occurred during the pulling process, the records should indicate the cause of damage, and how it was addressed to the satisfaction of all onsite personnel including representatives of ThermoflexRTM/PolyflowTM ensuring that its future operation is not in any way compromised.
- 21. JB24 will pressure test the final installation in accordance with CFR 49 Part 192 Subpart "J" (more specifically §§192.505 and 192.619(a)(2)(ii)), while monitoring and periodically documenting pressures and temperatures during the pressure test.
- 22. Before this gas lift system installation is put into operation written operations and maintenance process and procedure pertinent to the operation and maintenance of the concentric ThermoflexRTM pipe installation will be provided for approval by Railroad Commission personnel.
- 23. At a minimum, the above mentioned written process and procedure will be added to JB24's existing operation and maintenance manual that will specify all necessary time intervals mentioned in these findings of fact
- 24. Before any modifications or work toward this request can begin TRRC personnel will need to provide approval, and this approval will not come before Pipeline Hazardous Materials Safety Administration (PHMSA) has had ample time to review and declare no objections.

CONCLUSIONS OF LAW

- 1. The Commission has original jurisdiction to consider Applicant's application pursuant to TEX. UTIL. CODE ANN. §121.201 and 49 U.S.C. §60105.
- 2. Proper legal notice was timely given to all persons and entities entitled to notice under applicable statutes and rules.
- 3. All things have occurred and have been accomplished to give the Commission jurisdiction in this case. The Commission has jurisdiction under statutes and rules, including 49 CFR 192.53, 55, 105, 107, 109, 111, 113, 221, 455, 503(b) and 619, to authorize the requested special permit and use of pipe not manufactured in accordance with a listed specification in those rules.
- 4. Applicant is required to comply with all other minimum safety standards set forth in 49 C.F.R. Part 192 as they apply to normal operation and maintenance.
- 5. The application for this special permit was not filed to avoid the expense of safety compliance, or to correct an existing violation.
- 6. Granting the requested special permit is not inconsistent with pipeline safety.

Therefore, IT IS ORDERED by the Railroad Commission of Texas that the application of Jefferson Block 24 Oil and Gas, LLC, for a waiver pursuant to 49 CFR 192 for installation of "ThermoflexR" pipe for use in their Gas Lift Process, located in Texas Waters, Jefferson County, Texas be GRANTED ONLY as to the insertion of the 1-1/4-inch ThermoflexR liner into the existing 4-inch flow-line at the location specified subject to the special provisions outlined below. No further waivers for installation within any system or pipeline are granted.

IT IS FURTHER ORDERED that JB24 is required to submit annual reports to the Commission regarding any leaks or problems associated with the operation of this pipeline. Should any unforeseen problems occur, the Commission may request the removal and/or replacement of the approved Reinforced Thermoplastic Pipe.

IT IS FURTHER ORDERED that JB24 is required to prepare a process and procedure for operation, maintenance and integrity management assurance of the concentric ThermoflexRTM pipe installed for this gas lift process.

All requested findings of fact and conclusions of law which are not expressly adopted herein are denied. All pending motions and requests for relief not previously granted or granted herein are denied.

UPON THE PASSAGE of sixty (60) days from the date this order is signed and no objection from the Secretary of Transportation having been received as provided for in 49

U.S.C. §60118(c)(1), this order shall become final and effective. However, no work is to be preformed towards this waiver without approval from the Railroad Commission's Pipeline Safety Division.

SIGNED this 8th day of February, 2011.

RAILROAD COMMISSION OF TEXAS

CHAIRMAN ELIZABETH A. JONES

COMMISSIONER MICHAEL L. WILLIAMS

COMMISSIONER DAVID PORTER

ATTEST:

SECRETARY

INSTALLATION PROCEDURE

Upon your approval of this proposal, a detailed prognosis containing technical information and step-by-step installation procedure will be provided for your review. See Appendix 4 for sketches of our proposed operation. Briefly, the process is as follows:

- 1) Mobilize equipment to location via liftboat. Perform site surveys @ "B" and "C-10" structures. Hold safety meetings, including a review of the entire operation and specific JSA's.
- 2) Thermoflex spool and fluid tanks will be placed on "B". Fluid pump, pulling unit (winch), and pigging equipment will remain on the liftboat, which will travel to C-10.
- 3) Flush the 4" line with seawater, displacing the fluid in the line to "A" for treatment.
- 4) Hydro-Test 4" line to 2000 psi. (Note: Line was last tested to 2160 psi in August 2008).
- 5) Pig the 4" line from C-10 to "B". The last pig will be attached to a rope, connected to the pulling cable.
- 6) Modify the ends of each riser to accept the flanges for termination of the Thermoflex line.
- 7) Connect the Thermoflex (spooled @ "B") to the pulling cable. Begin pulling the line from "B" to C-10.
- 8) Install termination connections and flanges on each end of the line(s).
- 9) Flange up and test the lines. Prepare for production.



