Eagle Consulting, LLC
152 Zimmer Road, Gibson, Louisiana 70356 (985) 631-3278 Fax: (985) 631-3281

March 29, 2011

Mr. Kjel Brothen
DEPT. OF NATURAL RESOURCES
Office of Conservation
617 North 3 rd. Street
Baton Rouge, Louisiana 70802

RE : **Revision to Original Application**
JGC Energy Development (USA), Inc. (J098)
Little Lake Field (6084)
Little Lake Commingling Facility No. 1
Name Changes

Dear Mr. Brothen :

Please find attached revisions to the original application to commingle the above referenced well. As per your e-mail dated 2/14/2011, I have revised the application in answer to your questions and comments concerning the name changes to VUD and VUE that I made back in 4/29/2010 as per information provided to me by JGC. I have corrected those changes to reflect the proper well name listed by the state.

I ask that you place the revised written description of the name changes, the revised process flow drawing, and this request letter in the hard back binder for the Little Lake Commingling Facility No. 1. If you have any questions or concerns concerning this request, please give me a call at (800) 256-8068 or e-mail me at hmelton@eagle-facilities.com.

Best Regards,

Hank Melton

HM/hm
Attachments
cc: Mr, Cris Goodnight
File

JGC ENERGY DEVELOPMENT (USA), INC.

LITTLE LAKE COMMINGLING FACILITY No. 1
PROCESS FLOW DESCRIPTION

Revised 03 / 29 / 2011

There are ten (10) Low Pressure wells and one (1) High Pressure well that flow or are gas lifted to a common production facility on the JGC Energy Development (USA), Inc., Little Lake lease. They are as follows :

JGC Energy Development (USA), Inc.

Low Pressure Wells

The S/L 2453, No. 1 Well	**S/N 54410**	**Gas Lift Well**
The JEFF. SCH. LD. S/L 2453, No. 4 Well	**S/N 54070**	**Gas Lift Well**
The VUB; JEFF. SCH. LD. S/L 2453, No. 8 Well	**S/N 54461**	**Gas Lift Well**
The VUB; JEFF. SCH. LD. S/L 2453, No. 21 Well	**S/N 207900**	**Gas Lift Well**
The VUB; JEFF. SCH. LD. S/L 2453, No. 22 Well	**S/N 236701**	**Gas Lift Well**
The VUB; JEFF. SCH. LD. S/L 2453, No. 22 - D Well	**S/N 237122**	**Gas Lift Well**
The VUB; JEFF. SCH. LD. S/L 2453, No. 23 Well	**S/N 236782**	**Gas Lift Well**
The E – 3 RA VUC; JEFF. SCH. LD. S/L 2453, No. 23 - D Well	**S/N 237123**	**Gas Lift Well**
The S/L 2453, No. 25 Well	**S/N 236931**	**Flowing Well**
The TP 6 RA SUA; S/L 2383, No. 2 Well	**S/N 62600**	**Flowing Well**

High Pressure Well

The L TP 6 RA SUA; S/L 19864, No. 1 Well	**S/N 239208**	**Flowing Well**

All eleven (11) wells commingle oil, gas, and water at this LITTLE LAKE COMMINGLING FACILITY No. 1

The description for each wells commingling structure are as follows :

The JGC Energy Development (USA), Inc., S/L 2453, No. 1 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) low pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TPS RA SUA; S/L 19864, No. 1 High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., JEFF. SCH. LD. S/L 2453, No. 4 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., VUB; JEFF. SCH. LD. S/L 2453, No. 8 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., VUB; JEFF. SCH. LD. S/L 2453, No. 21 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., VUB; JEFF. SCH. LD. S/L 2453, No. 22 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., VUB; JEFF. SCH. LD. S/L 2453, No. 22 - D well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., VUB; JEFF. SCH. LD. S/L 2453, No. 23 well is a low pressure oil well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., E-3 RA VAC; JEFF. SCH. LD. S/L 2453, No. 23 - D well is a low pressure gas well which is gas lifted and flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility. The reason this well is gas lifted is to produce a small amount of formation gas as well as a small amount of condensate from an otherwise depleted well.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., S/L 2453, No. 25 well is a low pressure oil well which flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., TP 6 RA SUA; S/L 2383, No. 2 well is a low pressure oil well which flows into a Low Pressure Bulk / Test Header System with the other nine (9) Low Pressure wells flowing to this CF No. 1 Facility. This well is produced only when the pressure will allow it to flow to the production facility.

The low pressure gas is measured wet when it leaves either the L. P. Bulk or the L. P. Test Separators. It is then commingled with the gas from the other nine (9) low pressure wells and the gas from the Low Pressure Separator from the L TP 6 RA SUA; S/L 19864, No. 1 well High Pressure gas well. The wet gas flows to a natural gas compressor where it is compressed to sales gas pressure and then flows to a glycol dehydration unit where it is commingled with the high pressure gas from the L TP 6 RA SUA; S/L 19864, No. 1 well before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The oil is metered as it is dumped from either the L. P. Bulk or the L. P. Test Separator and flows to one of two Bulk Heater Treaters where it is commingled with the oil from the other nine (9) low pressure wells and the oil from the L TP 6 RA SUA; S/L 19864, No. 1 well. The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from either the L. P. Bulk or L. P. Test Separator and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other nine wells and the L TP 6 RA SUA; S/L 19864, No. 1 well.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The JGC Energy Development (USA), Inc., L TP 6 RA SUA; S/L 19864, No. 1 well is a High Pressure gas well which flows into a High Pressure Bulk / Test Header System. At this time it is the only high pressure well that flows into the CF No. 1 Facility.

The high pressure gas is measured wet when it leaves the H. P. Test or Bulk Separator and then flows to a Glycol Dehydration Tower for drying. The gas is commingled with the compressed high pressure wet gas from the other ten (10) wells before drying. Dry gas for fuel and gas-lift are metered and removed from the total gas stream. The remainder of the gas is remeasured before flowing to the Enbridge gas sales point.

The total fluid from the two phase High Pressure Test Separator is dumped to the No. 2 three phase Low Pressure Test Separator where the flash gas, oil, and water are separated. The oil is metered as it is dumped from the No. 2 L. P. Test Separator to the Bulk Heater Treaters where it is commingled with the oil from the other ten (10) wells.

The total fluid from the High Pressure Bulk Separator is dumped to the No. 1 Low Pressure Bulk Separator where the flash gas and fluid are separated. The oil is metered as it is dumped from the L. P. Bulk Separator to the Bulk Heater Treaters where it is commingled with the oil from the other ten (10) wells.

The oil from the Bulk Heater Treaters is dumped to four (4) 1,500 bbl. Oil Storage Tanks. The commingled oil is measured for sales in the tank and then transferred to an oil transport barge.

The water is metered as it is dumped from the L. P. Separators and Bulk Heater Treaters and flows to four (4) 1,500 bbl. SW Storage Tanks where it is commingled with water from the other three wells.

The commingled water is measured in the tank and then injected in to the S/L 2453 No. 11 or 12 SWD wells for disposal.

The flash gas from the L. P. Separator is metered and flows to a Natural Gas Compressor where it is commingled with the low pressure gas from the other ten (10) wells. It then flows with the wet compressed gas to the Glycol Tower were it is commingled with the high pressure wet gas and dried.

PRODUCTION NOTES

All current low pressure wells that flow into the JGC Energy Development (USA), Inc. CF No. 1 facility flow into a L. P. Bulk Header / L. P. Test Header System and will be tested monthly for at least a 24 hour period.

The high pressure gas well flows into a H. P. Bulk Header / H. P. Test Header System and will be tested monthly for at least a 24 hour period.

The total daily oil production will be determined by strapping the four (4) 1,500 Oil Storage Tanks. Oil will be sold to Plains Marketing, LP by the tank strapping method and shipped by barge from the location.

The produced water from all wells is injected in the S/L 2453 SWD wells.

All fluid meters are turbine meters. As per State of Louisiana requirements they will be proved monthly by exchanging calibrated meters for the meters that are in service.

All gas recorders are EGM's and will be tested on a quarterly basis as per State of Louisiana requirements.

Both gas and fluid meters will be proved and calibrated by a third party.

The low pressure flash gas from the heater treater is being vented to a 1,500 bbl. tank at this time due to it not being economical to compress and sell. The total low pressure flash gas will be tested by a third party.

NOTE : As part of the reconstruction plans, a flare scrubber and burner flare will be added in the future as production is increased! Testing will be conducted after production is commenced on the new high pressure gas well to determine if it is necessary add the equipment.

Compressor fuel gas will be allocated based upon total gas / oil production for each well.

Compressor scrubber fluid and glycol tower fluid is determined to be of such a small quantity as not being required to be measured.

SAMPLING OPERATIONS

Once a month, a third party will collect an oil sample from all wells. The specified sample will be taken downstream of the three separator and upstream of the wells oil meter. Within this area, no reduction or enlargement in pipe size will be made to ensure an accurate meter reading. The samples will be collected in a single chamber cylinder filled with water, at least 300 cubic centimeters in volume constructed of stainless steel, as specified by API Chapter 20 - Allocation Measurements. The sample bottle and manifold equipment will be constructed as follows :

1. **Manifold valve from sampling port.**
2. **Purge line to drain.**
3. **Inlet valve to sample bottle.**
4. **Pressure gauge downstream of inlet valve and upstream of sample bottle.**
5. **=> 300 cubic centimeter stainless steel sampling bottle filled with water.**
6. **Rupture disc or pressure safety valve downstream of sample bottle and upstream of outlet valve.**
7. **Outlet valve to drain.**

Samples of oil will be taken in accordance with API Chapter 20 - Allocation Measurement. Listed below is a description of how the samples will be taken :

1. **Connect the sample cylinder to the cylinder manifold which includes an inlet valve, purge valve, manifold valve, and pressure gauge downstream of the inlet valve.**
2. **Open the manifold valve.**
3. **Open the purge valve slowly.**
4. **Purge the line to ensure all debris is free of system. Close the purge valve slowly .**
5. **Hold cylinder at approximately a 45 deg. angle downward.**
6. **Slowly open the sample cylinder inlet valve.**
7. **Slowly open the cylinder outlet valve. Record the displaced water into a graduated cylinder for measurement of the volume to be sampled.**
8. **Slowly close the sample cylinder outlet valve.**
9. **Slowly close the sample cylinder inlet valve.**
10. **Slowly close the manifold valve.**
11. **Disconnect the sample cylinder from the manifold.**
12. **Record line temperature and line pressure as close to the sampling point as possible.**

All samples will be taken to a third party laboratory for shrinkage determination. The method in which shrinkage factors are determined will meet or exceed recommendations of API Chapter 20 - Allocation Measurements. The testing procedures which will meet API are as follows :

1. **Determine the temperature of the sample fluid when sample is obtained and record pressure.**
2. **With cylinder in upright position, slowly bleed sample into a clear calibrated graduated cylinder that is open to atmospheric pressure.**
3. **Allow sample to stabilize until no bubbles are visible.**
4. **Record total volume of sample remaining in graduated cylinder. Record temperature of sample.**
5. **If water is present in the final sample, determine the water cut.**
6. **Obtain a sample of water free hydrocarbon and determine the API gravity at 60 deg. F.**
7. **Compute the shrinkage factor using the following equations :**

$$\text{Shrinkage Factor} = \frac{(Vf - (Vf \times Xw)) \times (CTL)f}{(Vi - (Vi \times Xw)) \times CTL)i}$$

where : Vf = total volume of final sample in graduated cylinder
Vi = total volume of initial sample in sample cylinder
Xw = volume fraction of water in final sample
(CLT)f = volume correction factor based on temperature of final sampling.
(CLT)i = volume correction factor based on temperature during sampling.

A gas flash factor will also be determined when the oil sample is flashed to atmospheric pressure. This factor will be presented in a SCF/STB correction unit used to determine the total flash gas recovered per well.

Gas Allocation

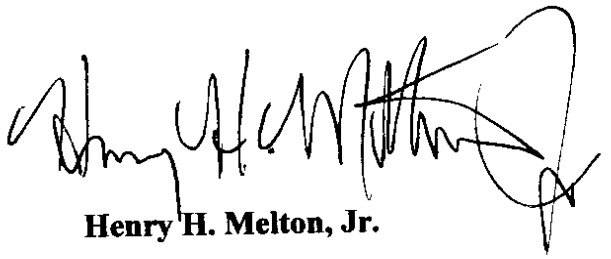
1 Each day each well is allocated their share of the daily production based on well tests.
2 At the end of the month, the total gas production from each field (based on well test) is listed.
3 These figures are totaled.
4 The gas percentage for each well is calculated.
5 The Enbridge Statement is converted from 14.73 to 15.025 pressure base.
6 Each well's percentage is applied to the sales total for their share of the sales.
7 The same is done to the monthly lease use figure to obtain each well's share of the lease use (fuel).
8 The lease use figure plus the sales equals the calculated production. The percentages are applied to the pipeline retainage and added to the calculated production for each well. This is the production reported on the OGP for each well.
9 The pipeline retainage figures are added to the sales. This is what is reported on the R5D as total sales.

Oil Allocation

1. Each day, each well is allocated their share of the daily oil production based on well tests. (Production is typically calculated by adding closing stock with the sales and then subtracting opening stock.)
2. When the oil statement is received at the end of the month, the GROSS field production figures are converted to NET production. This is done by calculating total production for the month using the NET BBLS and then calculating the gross to net factor.
3. This factor is applied to each well's field production to give the net production for the month.
4. Calculate the % of each well's net production.
5. Each well's share of the sales is calculated by subtracting the month's total opening stock from the statement sales, multiplying this difference times each well's %, and then adding the well's opening stock to the figure.
6. Each well's closing stock is then calculated by adding the well's opening stock to the well's production and subtracting the well's share of the sales. The sum will equal the total ending stock.

APPLICANT'S STATEMENT

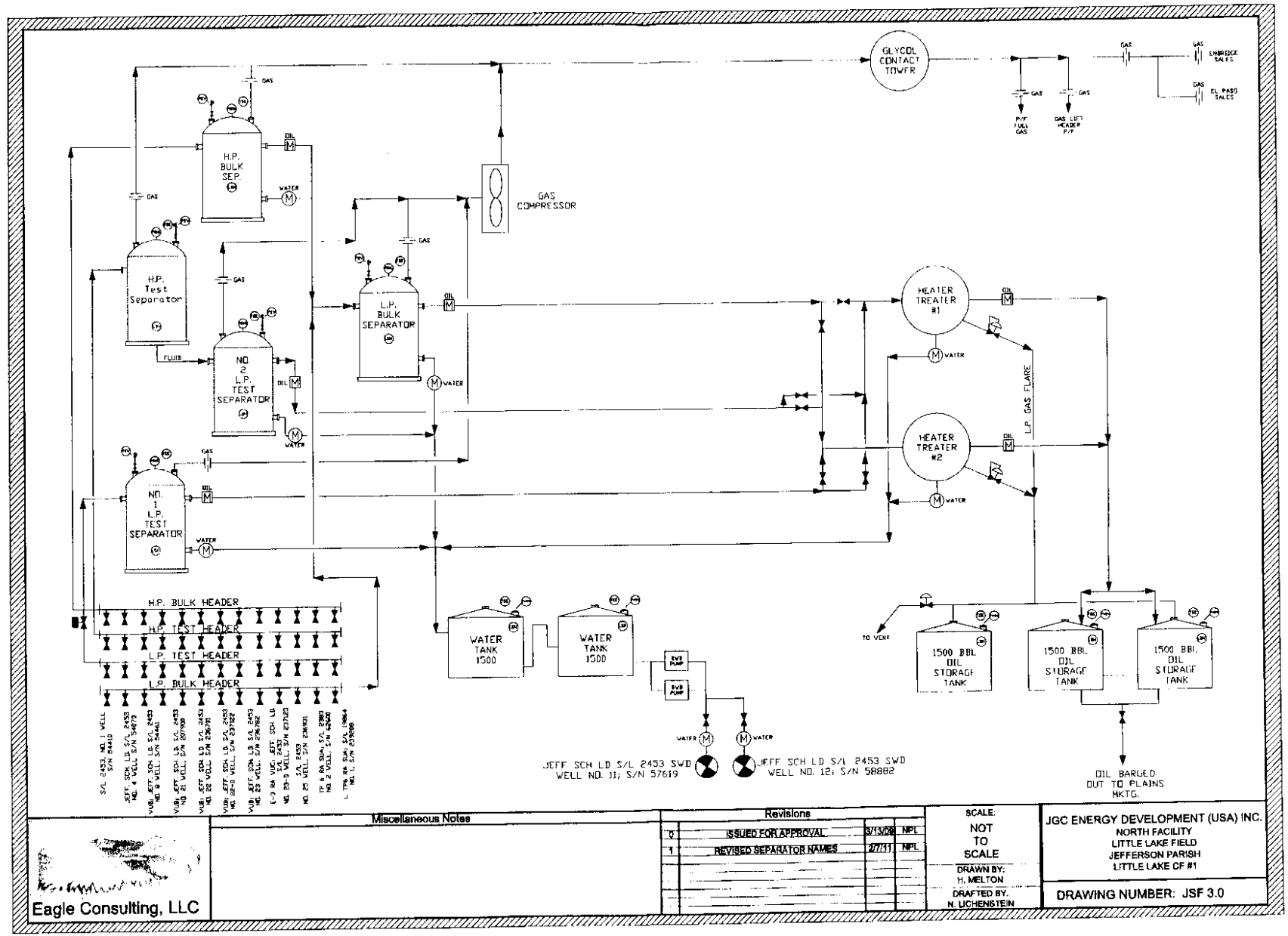
In the opinion of the applicant, the commingling of liquid and gaseous hydrocarbons in the manner described above, using methods other than gauging tanks for allocation of production; will provide reasonably accurate measurement, will not create inequities, and the owner of any interest will have the opportunity to recover his just and equitable share of all hydrocarbons produced.



Henry H. Melton, Jr.

HHM/hm

cc : Chris Goodnight
File



Eagle Consulting, LLC

Miscellaneous Notes

Revisions

0	ISSUED FOR APPROVAL	3/13/08	NPL
1	REVISED SEPARATOR NAMES	2/7/11	NPL

SCALE: NOT TO SCALE

DRAWN BY: H. MELTON

DRAFTED BY: N. LICHENSTEIN

JGC ENERGY DEVELOPMENT (USA) INC.
NORTH FACILITY
LITTLE LAKE FIELD
JEFFERSON PARISH
LITTLE LAKE CF #1

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