EXHIBIT B-1
PTEP Alignment Sheets and Details

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POINT THOMSON PROJECT

12" EXPORT PIPELINE
12"-LN-644-0049-ME8EV-3"H

ISSUED FOR CONSTRUCTION
DECEMBER 28, 2011
**SCOPE OF WORK**

The scope of work for this project includes:

1. Approximately 22 miles of 48" to 12" HDPE cross-country pipeline between the Point Thomson Control Pad and the North Slope Chukchi Field Harboring.
2. Pipeline support system.
3. Pipeline saddles, elbows, and valves.
4. Valved-ended vibration isolation design for the pipeline.
5. Pipeline inspection with ultrasonic testing.
6. The sites of work, referenced details, standards, specifications, project drawings, technical manuals, and other supplemental instructions given in the project requirements.

**PROJECT SURVEY CONTROL NOTES**

1. Topographic survey information provided by Pol, Inc., April 2011.
3. Vertical datum is Point Thomson Unit Lower Low Water (TLW) datum. TLW U.S. Foot is synonymous with Point Thomson Mean Oke Water.

**PROJECT SURVEY CONTROL POINTS**

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**GENERAL NOTES**

1. Known underground utilities and structures are shown in their approximate locations. Prior to the construction, utility, utility size, depth, and location of all underground utilities and structures. The contractor shall protect underground utilities and structures from damage and shall not disturb underground utilities and structures that are known.
2. Longitudinal wild areas shall be offset a minimum of 50 ft at all bluff edges.

**STRUCTURAL NOTES**

1. All steel pipeline shall conform to non-destructive testing as noted below, unless noted otherwise.
2. All welding shall be in accordance with AWS D1.1.
3. All bolts shall be ASTM A320 or LT unless noted otherwise.

**CODES, STANDARDS AND SPECIFICATIONS**

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<tr>
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<td>1001</td>
<td>AWWA C206</td>
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**REFERENCES**

- Alaska Pipeline Code (ASME)
- ASME Boiler and Pressure Vessel Code
- AWWA C206: Water Transmission Pipelines
- AWWA C800: Water Distribution Pipelines
- DNV-OS-F101: Offshore Structures

**ABBRIVATIONS**

- ASME | American Society of Mechanical Engineers
- AWWA | American Water Works Association
- DNV | Det Norske Veritas
- ASME | American Society of Mechanical Engineers
- AWWA | American Water Works Association
- DNV | Det Norske Veritas

**LEGEND**

- **Location Code:**
  - **PLAN:** Plan view
  - **ELEV:** Elevation
  - **LONG:** Longitudinal section
  - **TRANS:** Transverse section
  - **SECTION:** Section view
  - **ELEVATION:** Elevation view
  - **PIPELINE:** Pipeline view
  - **PIPELINE SUPPORT:** Pipeline support view
NOTES
1. CENTERLINE OF ALIGNMENT = CENTERLINE OF 12"-DIA.-444-0014-040331-37%
2. HORIZONTAL, RISE ANGLE IS 40 DEGREES TYPICAL, BUT VARYS VARY. SEE COORDINATE TABLE ON
   PLAN AND PROFILE DRAMAS FOR HORIZONTAL, RISE ANGLES AT PI'S (LEFT-REV-1009-000010)
   THROUGH LEFT-REV-1009-000036.
3. SEE LEADING MARK. SEE PIPELINE SUPPORT DETAILS ON LEFT-REV-1009-000010 AND
   LEFT-REV-1009-000036.
4. ALL PIPELINE BENDS ARE 90 DEGREES UNLESS NOTED OTHERWISE.
5. SUPPORT الدفاعS SHOWN ARE TYPICAL, BUT VARY. REFER TO PLAN AND PROFILE DRAMAS.

TYPICAL PI DETAIL
GUIDED OR ANCHORED SUPPORTS
SCALE: 1" = 10'

TYPICAL PI DETAIL
SLIDING SUPPORTS
SCALE: 1" = 10'

TYPICAL EXPANSION LOOP DETAILS
SCALE: 1" = 10'

REFERENCE SHEETS:
- LEFT-REV-1009-000010
- LEFT-REV-1009-000036
- LEFT-REV-1009-000029

Référence SHEETS:
- LEFT-REV-1009-000010
- LEFT-REV-1009-000036
- LEFT-REV-1009-000029

EXPORT PIPELINE - PIPELINE
DETAIL: EXPANSION
TYPICAL PI AND EXPANSION LOOP DETAILS
WEST WELL PAD JUNCTION TO EXA:

AEC: Weatherford

M: Kiser

FLUOR

M: ExxonMobil Development

ALASKA

DATE: 12/07/07

SCALE: 1/10" = 1"
NOTES
1. ALL SADDLE PLATES AND SHAPES SHALL BE RED WITH ARROW UNTIL OTHERWISE NOTED.
2. ALL BOLTS SHALL BE 1/2" X 4" ASME A193 GRADE 17 WITH ASME A194 GRADE 7.34 NUTS AND PAK WASHERS. TORSION BOLTS TO 100 FT-LB WITH SINGLE NUT AND TRACTION LOCK NUT.
3. STAINLESS STEEL STRIPS SHALL HAVE A CLASS 20 FENDER.
NOTES
1. BOLTS SHALL BE 1/4"X5/8" Grade 17, with 1/4" X 5/8" Grade 17 ANCHOR BOLTS and 4-40 Nuts and Lock Washers. TYPICAL BOLTS TO USE 4-40 NUTS AND WASHERS FOR DETAIL SHOWN.
2. ALL ANCHOR PLATES AND SHAFTS SHALL BE 1/4" X 5/8" Grade 17 STEEL OR BETTER, UNLESS OTHERWISE NOTED.

TYPICAL ANCHOR SADDLE DETAIL

TYPICAL SLIDING SADDLE ELEVATION

STRAP CONNECTION DETAIL