



## **OBSIDIAN ENERGY**

### **WELL CONTROL EQUIPMENT REQUIREMENTS**

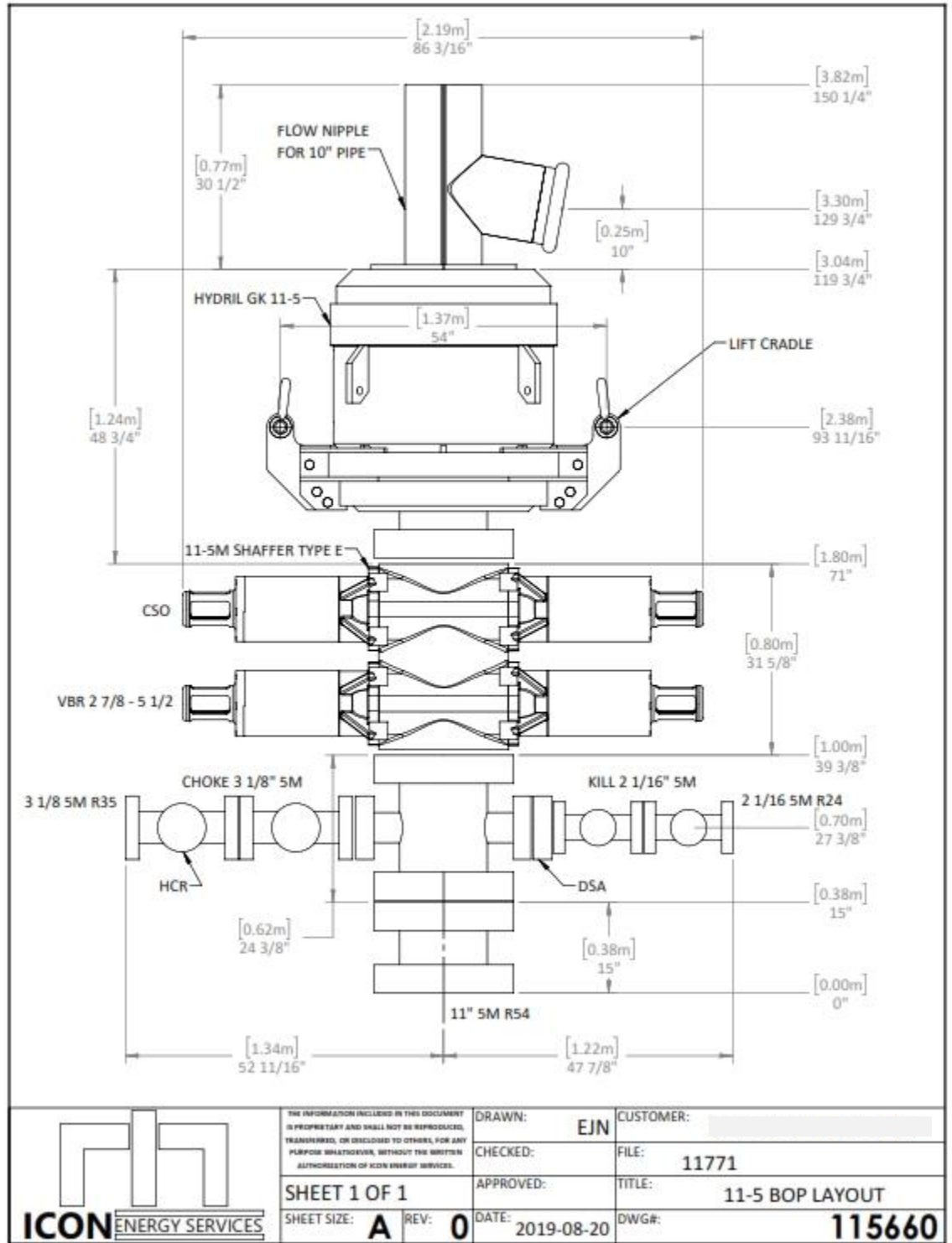
#### **OBSIDIAN ET AL NORTH LIARD C-31A**

#### **VERTICAL WELL**

October 28, 2019

## Well Control Equipment Requirements

- A well servicing 21 MPa blowout preventer (BOP) stack will be used for well control (see schematic below)
  - o The BOP stack will consist of
    - Work spool
    - Pipe rams (sized tubing installed in the C-31A wellbore – 60.3 mm tubing)
    - Blind rams
    - Annular Preventer
    - Remote Controls
- The BOP stack was chosen for two reasons:
  - o The working pressure of the stack is well above the expected bottomhole pressure (Fort Simpson bottomhole pressure = 2896 KPa) and/or expected surface pressures seen on the C-31A well
  - o The addition of the Annular Preventer allows for an additional level of backup for the pipe rams when tripping tubing, pumping kill fluid, etc.
- An appropriately size 35 MPa pump will be mobilized to the location with the service rig for well kill operations
- Enough kill fluid for 2 times the hole volume will be mobilized to location for well kill operations.



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