



An IRISNDT Company

VESSEL INSPECTION
SUMMARYReport #: 141136-PM-14
Inspect Date: 01/26/2010
Page: 1 of 4
IRISNDT #: 141136

| Client: Cnrl | District: St. Albert | Field: Byemoor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|------------|-------|--------------------------|--------------------------|-----------|----------|-------------|----------|-------|-----------|------------|--------|-----------|----------|------------|----|--------------------------|--------------------------|---------|----------|----------|------------|----|--------------------------|--------------------------|---|--|--|--|--|--------------------------|--------------------------|---|--|--|--|--|--------------------------|--------------------------|---|--|--|--|--|--------------------------|--------------------------|
| Facility: 08-32-034-17W4 | Unit / Skid #: N/A | LSD: 08-32-034-17W4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jurisdiction #: A0225183 | Equip Tag #: N/A | Serial #: 85C339007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CRN #: F1578.2 | Nat'l Bd #: N/A | Year Built: 1985 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer: Alco Gas & Oil LTD. Equipment Description: Glycol Accumulator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Status: In - Date Removed From Service: | | Service: Sweet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAWP Shell: 150 Psi @ 150 °F | Height/Length: 1955 mm | Code Stamp: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAWP Tube: @ | Size/Diameter.: 324 mm O.D. | Insulated: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MDMT: °F RT: RT-3 | Volume: | PWHT: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Support Type: Skirt | | Manway: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C.A.: 1.58 mm | Coated <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | Clad: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N J.E.: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Component</th> <th>Material</th> <th>Nominal Thk</th> <th>Diameter</th> <th>OD/ID</th> <th>Tube Side</th> <th>Shell Side</th> </tr> </thead> <tbody> <tr> <td>- Head</td> <td>SA-234WPB</td> <td>9.500 mm</td> <td>324.000 mm</td> <td>OD</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>- Shell</td> <td>SA-106-B</td> <td>9.500 mm</td> <td>324.000 mm</td> <td>OD</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> | | | | | | | Component | Material | Nominal Thk | Diameter | OD/ID | Tube Side | Shell Side | - Head | SA-234WPB | 9.500 mm | 324.000 mm | OD | <input type="checkbox"/> | <input type="checkbox"/> | - Shell | SA-106-B | 9.500 mm | 324.000 mm | OD | <input type="checkbox"/> | <input type="checkbox"/> | - | | | | | <input type="checkbox"/> | <input type="checkbox"/> | - | | | | | <input type="checkbox"/> | <input type="checkbox"/> | - | | | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Component | Material | Nominal Thk | Diameter | OD/ID | Tube Side | Shell Side | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - Head | SA-234WPB | 9.500 mm | 324.000 mm | OD | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - Shell | SA-106-B | 9.500 mm | 324.000 mm | OD | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

PSV Static Data

| | | |
|--------------------------------------|--------------------|---------------------------------|
| PSV -1 Tag #: | Serial #: 85C1663 | CRN: 01832.568312 |
| Model #: 1990C1 | Capacity: 297 SCFM | Set Pressure: 150 psi |
| Manufacturer: Consolidated | | Service Company: Unified Valve |
| Inlet Size & Type: 1 in. - Threaded | | Last Service Date: July 06/2004 |
| Outlet Size & Type: 1 in. - Threaded | | Block Valve: - - - |
| Shell Side / Tube Side: Shell Side | | Location of PSV: Shell |
| PSV -2 Tag #: | Serial #: | CRN: |
| Model #: | Capacity: | Set Pressure: |
| Manufacturer: | | Service Company: |
| Inlet Size & Type: - | | Last Service Date: |
| Outlet Size & Type: - | | Block Valve: - - - |
| Shell Side / Tube Side: | | Location of PSV: |

PSV Comments

PSV is in good condition with carseal intact.

| | | | | | | |
|----------|----------------|----------------|----------------|-------------|----------------|-------------------|
| Edmonton | (780) 437-4747 | Fort McMurray | (780) 743-1536 | Cold Lake | (780) 594-1114 | Mailing Address |
| Calgary | (403) 279-6121 | Grande Prairie | (780) 532-2283 | Red Deer | (403) 347-1742 | 5311 - 86 Street |
| Nisku | (780) 955-7616 | High Level | (780) 841-0470 | Tulsa, OK | (918) 446-8773 | Edmonton, Alberta |
| Barrhead | (780) 674-3018 | Lloydminster | (780) 875-6455 | Houston, TX | (281) 476-4444 | T6E 5T8 |



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VESSEL INSPECTION
SUMMARY

Report #: **141136-PM-14**
 Report Date: 01/26/2010
 Page: 2 of 4
 IRISNDT #: 141136

Client: Cnrl LSD: 08-32-034-17W4 Jurisdiction #: A0225183

External Inspection Results - VE

| Item | Y | N | N/A | Condition | Comment | NCR | Action Item | Priority |
|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------|---------|--------------------------|--------------------------|----------|
| Nameplate | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Foundation and Supports | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Anchor Bolts | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Grounding | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Insulation Condition | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| PSV | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Shell & Heads | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Metal Surfaces (Paint) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Aux Equipment | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Cathodic Protection | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Alignment | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Flange Connections | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Pressure Gauge | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Piping from Vessel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Temperature Gauge | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Sight Glass | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Accept | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Leaks | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Current UT Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | UT Company: | | |
| Previous UT Survey | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | UT Company: | | |

LEGEND:

Priority 0 - General Recommendations

Priority 3 - Goal date is 1 Year from the activity date.

Priority 1 - Goal date is 30 days from the activity date

Priority 4 - Goal date is 5 Years from the activity date.

Priority 2 - Goal date is 90 days from the activity date.

External Visual Observations

Manual Review Required By Customer Representative -

An external visual inspection was performed on the vessel and the findings are as follows:

- The vessel was operating at time of inspection. No process leaks or vibrations were noted..
- The paint is on shell and piping in good condition and it is noted that shell has had previous external corrosion that has been painted over. An external pit on upper north shell has been painted over. Pit is approximately 0.250" in diameter and 0.100" deep. UT reading were taken around area and no internal corrosion was detected.
- Where exposed all piping, flanges and bolting were in good condition.
- The vessel is supported by skirt bolted to skid floor. Vessel is secure and level.
- External UT was performed with no significant wall losses noted.
- PSV appears to be in good condition with Carseal intact.
- Refer to the attached photos, UT data and drawing for inspection findings.
- The vessel appears to be in good operating condition for continued service based on the external visual observations and UT thicknesses recorded.

| | | | | | | |
|----------|----------------|----------------|----------------|-------------|----------------|-------------------|
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Page: 3 of 4
IRISNDT #: 141136

Client: Cnrl LSD: 08-32-034-17W4 Jurisdiction #: A0225183

Internal Inspection Results – VI N/A (Not Applicable)

| Item | Y | N | N/A | Condition | Comment | NCR | Action Item | Priority |
|------------------|--------------------------|--------------------------|--------------------------|-----------|---------|--------------------------|--------------------------|----------|
| Shell | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Heads | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Manway | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Gasket Surfaces | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Welds | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Refractory | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Heating Coils | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Demister Pad | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Vane Pack | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Baffles | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Trays | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Filter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Internal Coating | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Tubesheet | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Tube Bundle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | |

LEGEND:

Priority " 0 " - General Recommendations.

Priority " 3 " - Goal date is 1 Year from the activity date.

Priority " 1 " - Goal date is 30 days from the activity date.

Priority " 4 " - Goal date is 5 Years from the activity date.

Priority " 2 " - Goal date is 90 days from the activity date.

Internal Visual Observations

Manual Review Required By Customer Representative -

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Mailing Address
5311 – 86 Street
Edmonton, Alberta
T6E 5T8



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Page: 4 of 4
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Client: Cnrl LSD: 08-32-034-17W4 Jurisdiction #: A0225183

Attached to Vessel Inspection Report # _____

Additional Attachments # of pages _____ Specify _____
NDE UT MT PT ET RT OTHER

NDE Report #: _____

Items Raised: NCR _____ Operational Action Item _____ Repair Action Item _____ Deferred Action Item _____

Action Items / Recommendations:

- Continue to inspect vessel at regular scheduled intervals.

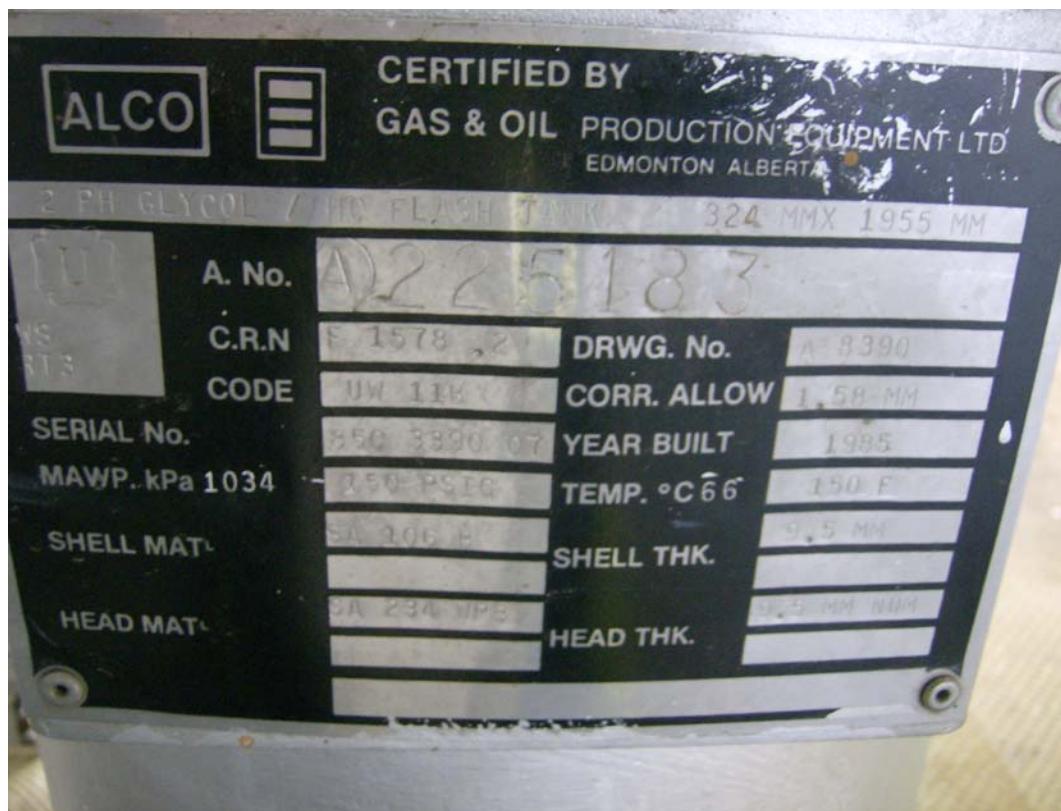
Actions Corrected at Time of Inspection: (If actions were corrected at the time of Inspection – note the corrected actions here.)

Recommended Inspection Intervals:

| Meets Code Criteria: - | | | Re-Inspection Required - | | |
|------------------------|------------------|---|--------------------------|--|-------------------------|
| VT External | Last Inspection: | - | Interval (yrs) | | Next Inspection: - 0000 |
| VT Internal | Last Inspection: | - | Interval (yrs) | | Next Inspection: - 0000 |
| UT Inspect. | Last Inspection: | - | Interval (yrs) | | Next Inspection: - 0000 |
| PSV Service | Last Inspection: | - | Interval (yrs) | | Next Inspection: - 0000 |

| | | | |
|---|--------------------|---|----------------------------|
| Unit # 374 Kilometers: _____ | Consumables: _____ | Inspector: Pamela Maze (Print) _____ | PESL: 351 |
| In 00:00 Out 00:00 Hrs _____ | | | |
| In 00:00 Out 00:00 Hrs _____ | | | API: 28750/34396/2786 7 |
| Personnel: KK/MB _____ _____ _____ | | (Signature) | |
| P.O.# / W.O.#/AFE #: _____ | | I am in full agreement with report contents: Client Representative _____ | |

| | | | |
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A0225183_Nameplate_26Jan2010

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Medicine Hat (403) 878-0789
 Lloydminster (780) 875-6455
 Barrhead (780) 674-3018

Cold Lake (780) 594-1114
 Grande Prairie (780) 532-2283
 Fort McMurray (780) 743-1536

5311 – 86 Street, Edmonton, Alberta T6E 5T8
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 Oklahoma City, OK (405) 495-6677
 Tulsa, OK (918) 446-8773



A0225183_Overview_26Jan2010

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A0225183_Prevous external pit painted over_26Jan2010

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Lloydminster (780) 875-6455
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