| District: S | lave Lake | | | | Skid No.: | BP16 | | | | | | |
|------------------------|---------------|-------------|--------------------------|---------------|--|------------------|---|-------|---------------------------|--|--|--|
| | rintnell Pads | | | | Location (LSD): 13-22-081-22W4 | | | | | | | |
| Name & Equip N | | E KNOCK OL | JT - N/S | | Orientation: | Horizontal | | | | | | |
| | NRL | | | | Cost Code: | | | | | | | |
| | hut-In | | | | Operating Pro | vince: Alberta | | | | | | |
| Unit: | | | | | | | | | | | | |
| | | | | A | BSA | | | | | | | |
| Plant: | | | | | Vessel: | | | | | | | |
| Process: | | | | | Special: | | | | | | | |
| Amount(\$): | | | | | | | | | | | | |
| | | | PRES | SSURE VESSE | L NAMEPLATE | DATA | | | | | | |
| Registration Num | ber: 042 | 9774 | | | Registration Number (Other): | | | | | | | |
| Serial Number: | L960K1V10 | 0 | | | CRN Number: N6415.2 | | | | | | | |
| MAWP: | | 50.00 (| psi) 344.74 | (Kpa) | AT temperature: 100.00 (F) 37.78 (C) | | | | | | | |
| Size (diam. x len | gth): | 60.00 x | 120.00(In) 1524.00 | x :048.00(mm) | Manufacturer: PLAINS OIL LTD. | | | | | | | |
| X-Ray: R | Г3 | | | | Lining Or Coated | d: | | | | | | |
| Year Built: 1 | 997 | | | | Heat Treatment: Yes | | | | | | | |
| Code parameters | : UW12B | | | | Corrosion allowance: (In) 0.00 (mm) | | | | | | | |
| | | | | | Manway: Y | 'es | | | | | | |
| | | | | PIPING NAM | MEPLATE DAT | Α | | | | | | |
| Primary Flange R | | 150 | | | ASME B16.5 - Table 2-1.1 @ 150F: 285 (psi) | | | | | | | |
| Pressure Use For | | Vess Design | Press | | Piping Operating Press: 50 (psi) | | | | | | | |
| Stress Value: | 20000 | (psi) | | | E Value: | | | 1 | | | | |
| Comments: | | | | | | | | | | | | |
| | | | | | INDICATE ALL | | | | | | | |
| Sweet | | Sour | ✓ | Oil | | Gas | | Water | | | | |
| Amine Other (Describe) | | LPG | | Condensate | Air Glycol | | | | | | | |
| Other (Describe) | • | | | COMP | ONENTS | | | | | | | |
| Name | Joint Effic | ciency | Outside Diameter(in.) | | ad Type | Material Type | | | Nominal Thickness(Inch | | | |
| SHELL | 0 | .85 | 60.00 | | | SA-516 70 | 1 | 7500 | 0.37 | | | |
| HEAD | | .00 | 60.00 | Elli | psoidal | SA-516 70 | | | 0.34 | | | |









| OWNER | CNRL | EQUIPMENT # | N/S |
|-----------------------|----------------|-----------------|----------------|
| EQUIPMENT NAME | FLARE KNOCKOUT | SERIAL# | 1960K1V1001 |
| REGISTRATION # | 0429774 | INSPECTION DATE | APRIL 14, 2011 |
| NOTES | | | |

ULTRASONIC CORROSION SURVEY REPORT

EQUIP NAME: FLARE KNOCK OUT SERIAL #: L960K1V100 DISTRICT: Slave Lake
PROV REG: 0429774 CRN: N6415.2 FACILITY: Brintnell Pads
EQUIP #: N/S LSD: 13-22-081-22W4

SUMMARY

| TYPE | LAST INSPECTION | INSPECTION INTERVAL (YEARS) | CORROSION R SHORT TERM | ATE (IN/YR) LONG TERM | REMAINING HALF LIFE (YEARS) | GOVERNING INSPECTION INTERVAL | NEXT INSPECTION DATE |
|---------------|-----------------|-----------------------------|---------------------------|--------------------------|--------------------------------|----------------------------------|----------------------|
| VESSEL PIPING | Apr 14, 2011 | 4.0 | 0.0000 | 0.0000 | 99.0 | REGULATORY | Apr 14, 2015 |

VESSEL SURVEY READINGS

| | | POINT DATA (INCH) | | SURVEY READINGS | | | | CALCULATIONS | | | |
|--------|-------|-------------------|--------|-----------------|-----------|-------|-------|--------------|------------|-----------|-----------|
| POINT | TYPE | NOM. | C.A. | NOM-CA | DATE | LOW | AVG | T Req | short term | long term | remaining |
| NUMBER | | | | | | | | (inch) | corr rate | corr rate | half life |
| 05 | Head | 0.3440 | 0.0000 | 0.3440 | Apr 14/11 | 0.389 | 0.405 | 0.085 | 0.0000 | 0.0000 | 99.0 |
| 10 | Shell | 0.3740 | 0.0000 | 0.3740 | Apr 14/11 | 0.412 | 0.415 | 0.101 | 0.0000 | 0.0000 | 99.0 |
| 15 | Shell | 0.3740 | 0.0000 | 0.3740 | Apr 14/11 | 0.411 | 0.420 | 0.101 | 0.0000 | 0.0000 | 99.0 |

Registration #: 0429774 **Equipment Name:** FLARE KNOCK OUT Province: Alberta District: Slave Lake LSD: 13-22-081-22W4 Location: **Brintnell Pads**

N6415.2 CRN: Skid Number: BP16 Service:

Manway: Coating: **Equipment Number:** N/S

Serial Number: MAWP (psi): L960K1V100 50.00 (psi) Temp: 100.00 (F)

Outstanding NCR's: No No.: 0

General:

Safety Valves

Side: MAWP MAWP PSV No. Set Press **Set Press** Capacity **Imperial** Capacity Metric (psi) (kPa) (psi) (kPa) **Imperial** Units Metric Units

> 50.00 344.74 0.00 SCFM

Access: EXTERNAL **Examination Methods:** Status: Shut-In Cleaning:

External Inspection

Inspection Date: Apr 14, 2011 **Inspection Interval:** 48 Next Insp. Date: Apr 14, 2015 Condition <u>Item</u> **Inspection Comments** IN GOOD CONDITION. Insulation Accept **External Condition** INSULATED. Accept NO LEAKS OBSERVED. Leakage Accept IN GOOD CONDITION. Skirt/Saddle Accept Anchor Bolts Accept SECURE. Concrete Foundation N/A Ladder/Platform N/A Accept IN GOOD CONDITION. Nozzle IN GOOD CONDITION. Gauges Accept **External Piping** Accept INSULATED. Valving Accept NO VISIBLE LEAKS. VENTS TO FLARE. PSV N/A NDE Methods Accept UT/VT. Other N/A FIT FOR SERVICE. Recommendations: Inspected By: Jamey Tanasichuk ABSA PESL #: 000411

INSPECTOR: I have witnessed/done the above inspections and certify that they have been done in accordance with our approved

manual and that the information is accurate. I certify that the status of the Pressure equipment detailed here is:

Suitable to be returned to service: Repairs complete(AB-40 attached): Yes

Repairs are still required: Suggested Inspection interval:

Inspector: Signature: Jamey Tanasichuk ABSA PESL #: 000411 Date: Apr 14, 2011



TOTAL INTEGRITY MANAGEMENT SOLUTIONS





NAMEPLATE OVERALL

OVERALL

OVERALL

| OWNER | CNRL | NOTES |
|----------------|---------------------|-------|
| EQUIPMENT NAME | FLARE KNOCKOUT DRUM | |
| REGISTRATION # | 0429774 | |
| EQUIP NUMBER | N/S | |
| SERIAL NUMBER | L960K1V100 | |