



No. 01503

A. GENERAL INFORMATION:

1. Spill incident Number: 632853
2. Name of Location BATAN FLOW STATION
3. Name of nearest community BATAN
4. State DELTA LGA WARRI SOUTH WEST
5. Type of Production facility/Installation FLOW STATION Asset owner /District NWSA

B. INCIDENT INFORMATION:

6. Details of incident

- a. Date of incident 09/03/2011 at 0900 AM
- b. Date/Period of investigation, 11-03-2011 at 1200 PM
- c. Description of spill point environment

- | | | |
|--|------------------|------------------|
| <input type="checkbox"/> Firmed soil | [Y] | [X] |
| <input type="checkbox"/> Loose soil | [Y] | [X] |
| <input type="checkbox"/> Previously excavated area | [Y] | [X] |
| <input type="checkbox"/> Under water | [Y] | [X] |
| <input type="checkbox"/> Swampy | [Y] | [X] |
| <input checked="" type="checkbox"/> Exposed pipe surface | [X] | [N] |

d. Description of leak point (tick as applicable);

- | | | |
|--|-----|------------------|
| <input type="checkbox"/> Drilled hole, | [Y] | [X] |
| <input type="checkbox"/> Hack saw cut, | [Y] | [X] |
| <input type="checkbox"/> Explosive tear, | [Y] | [X] |
| <input type="checkbox"/> Complete Rupture | [Y] | [X] |
| <input type="checkbox"/> Inward dent, | [Y] | [X] |
| <input type="checkbox"/> Well head tampering | [Y] | [X] |
| <input type="checkbox"/> Failed Weld-on illegal hot tap valve, | [Y] | [X] |
| <input type="checkbox"/> Missing pipeline (flowline) | [Y] | [X] |
| <input type="checkbox"/> Crude oil theft (illegal bunkering) point, | [Y] | [X] |
| <input type="checkbox"/> Third party tampering with Clamp Bolt/Nut, | [Y] | [X] |
| <input type="checkbox"/> Third party tampering with valve setting, | [Y] | [X] |
| <input type="checkbox"/> Third party tampering with flange Nuts/bolts, | [Y] | [X] |
| <input type="checkbox"/> Corrosion, | [Y] | [X] |

Type: _____

- | | | |
|--|-----|------------------|
| <input type="checkbox"/> Saver-pit over flow, | [Y] | [X] |
| <input type="checkbox"/> Surge vessel overflow, | [Y] | [X] |
| <input type="checkbox"/> Outward dent | [Y] | [X] |
| <input type="checkbox"/> Others (specify). <u>PASSING VALVE FAILURE 1/2"</u>
<u>(EQUIPMENT FAILURE)</u> | | |

e. Spill point coordinates

Northing: 164581mN,

Easting: 345828mE



No. 1500

C. RISK/DAMAGE ASSESSMENT

7. Type of environment of spill site:

- Land
- Swamp
- water

Type of environment of which oil has spread:

- Land
- Swamp
- water (NO IMPACT NOTICED IN THE ENVIRONMENT DURING OIL)

8. Distance from the nearest sensitive habitat

- Government reserved and designated protected area [,m]
- Drinking water source [,m]
- Built up area [100 ,m]
- Farmlands [,m]
- Fish Farm/Pond [,m]
- Fishing net [,m]
- Others (specify) [,m]

9. Containment measures put in place;

- Booms [Y] [N]
- Trench [Y] [N]
- Dyke [Y] [N]

Others: _____

10. Any pictures or video coverage? [N]

11. Was there any disruption to the investigation? [Y]

If yes give brief description:

NOT APPLICABLE

D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL

A. Structures / Properties

S/N	Type of Structures	Description	Size	Number	Comments
	<u>NONE WITHIN AREA OF IMPACT.</u>				



No. 1500

B. Crops/Economic Trees

S/N	Types of crops	Young	Medium	Matured	Quantity	Comments
	NONE	WITHIN	AREA	OF	IMPACT.	

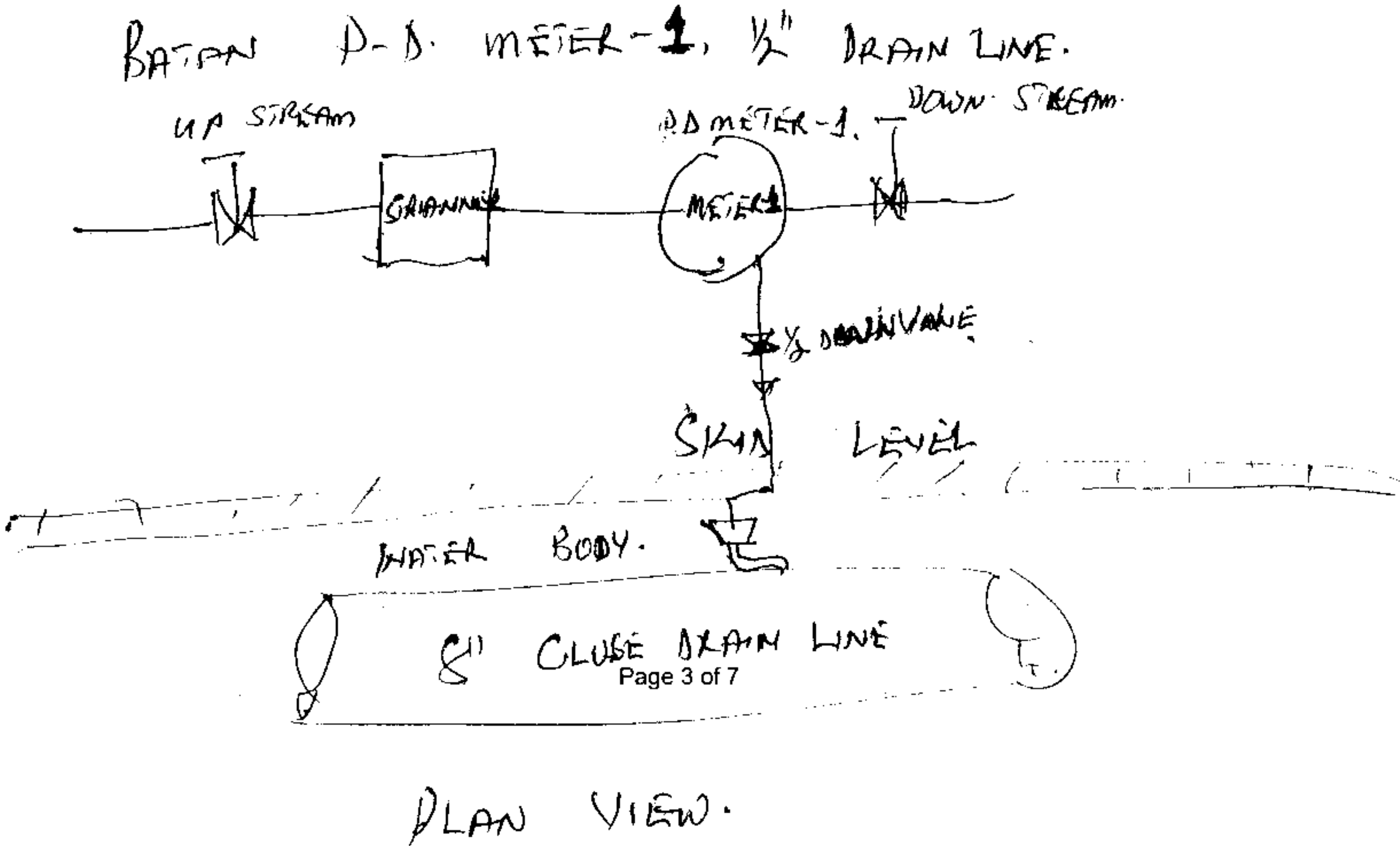
C. Fish/Nets/Ponds

S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments	
	NONE	WITHIN	AREA	OF	IMPACT.

D. Others (Specify) i.e. Animal Traps

S/N	Others	Description	Quantity/Size	Comments	
	NONE	WITHIN	AREA	OF	IMPACT.

E. GRAPHIC DESCRIPTION OF LEAK POINT (Details should be contained in leak repair report)





No. 1539

G. INCIDENT INFORMATION:

17 Impacted Area Details

- a. Total calculated area of impact NIL (NO IMPACT)
- Impact within SPDC R.O.W NIL (NO IMPACT)
 - Impact outside R.O.W NIL (NO IMPACT)

18 Volume of oil recovered before completion of JIV (V_{rec}):

Recovered oil V_{rec} :

NIL	barrels
-----	---------

19. Computation of the residual volume on site

a. Computation of the volume of pooled free phase oil (on land or confined water body).

- i. Area (m^2) occupied by pool of free phase oil NIL
- ii. Average Depth (m) of pool of free phase oil _____
- iii. Volume of pooled of free phase oil, V_{pool} :

NIL	barrels
-----	---------
- iv. _____

b. Computation of volume of infiltrated oil in the soil (V-3).

- i. Area (m^2) covered by the oil: NOT APPLICABLE
- ii. Average Depth (m) below ground surface of infiltration of oil: _____
- iii. Soil type: _____
- iv. p_e (effective porosity of the soil): _____
- v.

Volume of infiltrated oil, V_{inf}	barrels
--------------------------------------	---------

20. Computation of volume of oil on open water based on standard coloration.

	Thickness (mm)	Percentage coverage	Volume (m^3)
Barely Visible	0.00004		
Silvery	0.00008		
Slight Colour	0.00015		
Bright Colour	0.0003		
Dull	0.001		
Dark	0.002		
Black oil	0.1		
Emulsion (30% Oil)	1		
	Percent Total	100%	Total Volume

ESTIMATING BY
 METER READING
 AND DAILY PRODUCTION:

24 HRS PRODUCTION READING
 FROM METER (ABOUT 21,181 BBL)
 MINUS METER READING
 AFTER INCIDENT
 (ABOUT 21,178 BBL)
 EQUALS DEFERMENT
 (ABOUT 3 BBL)

barrels

Spill Factors from USCG FOG (2000 Edition)



Volume of oil on open water V_{wat} : barrels

21. Calculation of evaporated volume:

- i. Oil type: _____
- ii. E-Factor: _____
- iii. _____

NOT APPLICABLE

Volume of evaporated oil, V_{vap} : barrels

Oil Type		Bonny Light	Bonny Medium
		E-Factor	E-Factor
Period Since Oil Spill	<1 day	10%	5%
	1-7 days	25%	15%
	>7 days	40%	25%

9. Gross Total Estimated Spilled Volume $V_{Est}(bbls) = V_{vap}(bbls) + V_{wat}(bbls) + V_{inf}(bbls) + V_{pool}(bbls) + V_{recJ}(bbls)$

$V_{Est}(bbls) =$ _____

10. Net Total Estimated Spilled Volume $V_{Est}(bbls) = V_{vap}(bbls) + 0.6 * V_{wat}(bbls) + V_{inf}(bbls) + V_{pool}(bbls) + V_{recJ}(bbls)$

$V_{Est}(bbls) =$ 3 BBLS (NOT SIGHTED AT TIME OF SIV)

- *Calculation of the respective estimated volume is to done using the new spill estimation software on site
- *Conversion of m3 to barrel is Total volume VT (m3) x6.29
- *Emulsification factor for spill on water to consider is 60% of volume of oil.

This report was filled and signed on the 11 / 03 / 2011 at incident site by joint investigation representative from

- Host Community
- Department of Petroleum Resources [DPR]:
- National Oil Spill Detection and Response Agency [NOSDRA]:
- State Ministry of Environment [SME]:
- Nigeria Police Force [NPF]: NOT PRESENT
- Shell Petroleum Development Company [SPDC]:

Tick as applicable