JOINT INVESTIGATION REPORT FOR INCIDENT NO: $1312944$ JIV report S/N: $00815$
(Note: As practicable as possible the JIT report is to be signed in the field by all the participating parties)
A. GENERAL INFORMATION:
1. Spill incident Number: 13129444 2. Type of incident* G1L SPILL
3. Name of Location SANTA BARBARA WELL 145 FLOWLINE.  4. Name of nearest community BASSAMBARI 5. State: BAYELSA 6. LGA NEMBE
4. Name of nearest community BASSAMBIRI 5. State: BAYELSA 6. LGA NEMBE
7. Type of Production facility/Installation FLOHLINE 8. Asset owner/District SWAMP 2 NEMBE
B. INCIDENT INFORMATION:
9. Details of incident a. Date of incident: 3157 December, 2014
b. Start date/time of investigation: 26TH JANUACI, 2015
c. Investigation End date: 26th JANUARY Return investigation duration, days: ONE DAT
d. Description of spill point environment
Firmed soil Schoose soil Recently excavated area
Under water Swampy Exposed pipe surface
□Well Platform (on Water) □Drill Rig
Additional observations around the spill point: PIECES OF H" FLOWLINE
APPARENTLY CUT BY UNKNOWN PERSON(S) SEEN AROUND
SPILL POINT.
e. Description of leak point (tick as applicable);
Drilled hole
Complete Rupture Inward dent, Well head tampering
Failed Weld-on illegal hot tap valve,  Failed Clamp  Missing Pipeline/Flowline
Crude oil theft (illegal bunkering) point,
Third party tampering with valve setting,
Corrosión Saver-pit over flow, Surge vessel overflow,
Bulging Outward
impact
Relief valve failure Others (specify)
f. Incident caused by:
Third party interference (Sabotage□; crude theft □; Line theft □; Accidental 3 <sup>rd</sup> party damage□)
Operational Others (including Mystery spills)

<sup>\*</sup>This can be: a) Oil Spill b) Drilling fluid/Chemical c) Siltation d) construction e) Encroachment f) Fire,

INT INVESTIGATION	REPORT FOR IN	CIDENT NO:	1313	944_JIV rep	port S/N:	00815
g. Spill point of Meast	oordinates	Min	na W	lid belf		
Northin				Easting:		
	60517:	<del>7</del> 0		44855	6.93	
	<del></del>		<del></del>	-		~~
<u> </u>						2061
C. RISK ASSESS	MENT			<u></u>		
	ype of environment:					
	Swamp	□Water	□se	easonal swamp	Shoreline/Water	front
i. Tv	pe of environment to	which oil has		· · · · · · · · · · · · · · · · · · ·		
□Land	_/	_/	_			
	Swamp	<b>L</b> ₩ater	LIR	iver (identify)	<del></del>	
ii. We	eather condition	,				
□Rain	Sunny m the nearest sensitive	Dry ra babitat	□Wet	□Windy	□Hot	□cool
			_	. ~	,	
	ment reserved and de g water source	signated prote	cted area	[ ,m] [ ,m]	HONE	N <del>30</del> 2
□ Built up □ Farmla				[m, m]	> WITH	N
☐ Fish Fa				[ ,m] [ ,m]	VICIA	117
☐ Fishing ☐ Others				[ ,m]	) ((	
	t measures put in plac	ce;		V		
Booms	Trench	Dyke	Пм	atural depression	□Pit	None
Others:	_	-				• • • • • • • • • • • • • • • • • • • •
13. Any picture	s or video coverage?			[Y] [N]		. )
14. Further res	ponse/repair initiated	as at the time	of JIV?	[Y] [N]		
If yes to item 14, give b	-				•	
Tr yes to nem 14, give c	vier description.					
						<del></del>
15. Was there a	ny disruption to the ir	vestigation?		[Y] [N}	/	
If yes to item 15 give	brief description:					
	N 1	0 -	<u> 7</u>	<u> </u>	c 10	1 /
	1 7	$\vee$ $+$	$\mathcal{T}$	CYY L	CITE	) LC

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1312944 JIV report S/N: 00815

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

16. Structures / Properties

S/N Type of Structures	Description	Size	Number	Comme	nts
MONE	WITH	11	AREA	<del>or</del>	MPACI
17.0 (5.12)					

17. Crops/Economic Trees

S/N Type of crops	Young	Medium	Matured	Quantity	Comments
NONE	WITHIN	AR	CA C	FM	PACT

18. Fish/Nets/Ponds

S/N Fish/Nets/Ponds	Description	Quantity/Size	Comments
NONE	MITHEN	ACA (	F IMPACT

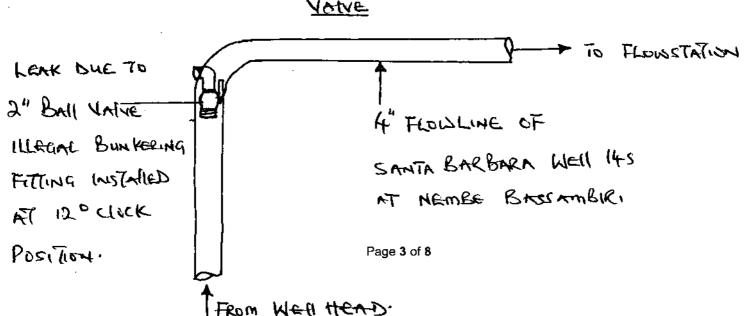
19. Others (Specify) i.e. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
	ONC	MITTIN A	CA D	F IMPACT.

E. GRAPHIC DESCRIPTION OF LEAK POINT (while detail report of the leak point should be contained in the leak report, overview sketch of the site should be added as an appendix 1)

ECTIONAL VIEW OF SANTA BARBARA WELL 145 FLOWLINE AT NEW

# -BASSAMBIRI SHOWING, FAILED WELD-ON ILLEGAL HOT TAP YATVE



JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1312944 JIV report S/N: 00815

# F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION 20. Impacted area boundary Coordinate of more, Print and attach as an appendix)

S/N	Northing (M)	Easting (M)
	60591.30	448430.82
	60587.60	448499.09
	60581.25	448536.13
	60566.43	448 560. 99
	60518.27	448577.93
	60480.70	448566.24
	60471.71	448 522.88
	60 508 · 57	448526.07
	60 523 . 92	448532.28
	60539.31	448 523.07
	60 556 .01	448470.52
	60558.35	448 429.25
	60 566 · 43	448 429 . 24
	60563 · 25	448469.98
	60557.75	448523.12
	60551.55	448541.60
	60560.77	448541.63
	6056b·95	448526.23
	60573.18	448498.49
	60573.25	448470.24
	60576.44	448 430. 66
		CR: 26/01/15
		26/01/15

#### **ESTIMATION OF OIL SPILL VOLUME**

FID =1312944 AT SANTA BARBARA WELL 14 S FLOWLINE AT NEMBA BASSAMBIRI JIV VOLUME CALCULATION REPORT OIL SPILLED ONSHORE/OFFSHORE (Leak stopped at source)

	Impa	cted Area Details	,			
		Total Calculated Area of	Impact			7,000.00 m²
	i	Impact within SPDC R.O.I	N			m²
	ji	Impact outside SPDC R.O.	.W			
4						
1		Estimated Recovered oil (	re completion of JIV (V)			bbis
		LOBINISTED INCOMPCION OF (				DDIS
		Estimated Recovered oil	(Net) V <sub>rec.)</sub>			0.00 bbls
			<u> </u>			
2	Com	putation of estimated res				
	8	-	of free phase oil (on land or confined	water body)		2
		Total area occupied by po	•			54.00 m²
		Average depth of pool of fi Emulsification factor	ree priase ou (If applicable, else 0%)			0.010 m 30 %
	"	Lindomedian idolor	ar applicable, else 070)			
		Estimated Volume of poo	ol of free phase oil, V <sub>pool</sub>			0.38 m²
		Estimated Volume of po-	ol of free phase oil, V <sub>pool</sub>			2.38 bbls
			<del></del>	·		
	b	Computation of estimate	ed volume of inflitrated oil in the soil	(V <sub>int</sub> )		
		Volume of inflitrated oil a				
		Total area covered by the	•			1.00 m <sup>2</sup>
		Average depth of infiltratio Soil type	n above leaking facility i.e. pipeline/flow	dine .		0.200 m
		P <sub>e</sub> (effective porosity of the	e soifi			Clay ▼
	.*	. a (amount portion) or an				
	٧	Cause of spill				Third party interference ▼
					_	-
	Vİ		infiltration below the leaking point on p			
		Incident Date	JIV Date	Days on Site		
		12/31/2014 13:40	1/27/2015 14:45 rational, use 1 week as worst case	27		
			there 'days on site' exceeds 7.	7		
		Soil time I	Infiltration of oil types in various soil t		ad leval	-
		Soil type Oil type	Approximate time to reach Sand	Loam	Clay	┨
		Bonny Medium	3 weeks	3 years	> 10 years	1
		Bonny Light	2 days	2 months	> 10 years	1
		Oil type				Bonny Light. ▼
	VIII	Average depth of inhitratio	n below leaking facility i.e. pipeline/flow	line		0.007 m
	i¥	Total depth below ground	surface of infiltration of oil			0.207 m
		Total coppi poloti gi tario				0.207
		Estimated Volume of Infi	Itrated oil, V <sub>tot a</sub>			0.02 m <sup>3</sup>
		Estimated Volume of infi	ltrated oil, V <sub>ints</sub>			0.10 bbis
	_			_		
			at second spill point [if applicable] (V	infb)		m² m²
		Total area covered by the Average depth of infiltration	on (moreauon) n above leaking facility i.e. pipeline/flow	dina		m m
		Soil type	ri doore leaking talinty i.e. pipeline/nest			
		P <sub>e</sub> (effective porosity of the	a soil)			8 %
	V	Average depth of infiltratio	n below leaking facility i.e. pipeline/flow	line		0.007 m
	vi Total depth below ground surface of infiltration of oil				0.007 m	
		Estimated Volume of infl	itrated oil, V bd b			D.00 m³
		Estimated Volume of infi	litrated oil, V <sub>inf b</sub>			0.00 bbls
		Volume of infiltrated all	vrtelda immadinta anlli asiatist assis	m ()/ )		
		Total Area covered by the	outside immediate spill point(s) regio oil (infifration)	" (V infe)		<b>6,300.00</b> m <sup>2</sup>
		-	ee phase oil in touch with soil			#,300.00 m <sup>2</sup>
		F <b>2.</b> "				<u> </u>

Soil Jude   P. (effective porosity of the soil)   29   24   25   25   25   25   25   25   25	NVESTIGATION REPORT SP	ILL VOLUME ESTIMATE FOR INCIDI	ENT NO:		
y P <sub>e</sub> (effective porosity of the soil)  V Average depth below ground surface of infiltration of oil  Estimated Volume of Infiltrated oil, V <sub>Mr</sub> 2.3.73 m²  Estimated Volume of Infiltrated oil, V <sub>Mr</sub> 2.3.45 bble  4 Volume of Infiltrated oil, outside immediate spill point(e) region (superficial impact, V <sub>mrd</sub> )  1 Total Area covered by the oil (infiltration)  ii Total Area covered by the oil (infiltration)  ii Total Area covered by the oil (infiltration of oil  Estimated Volume of Infiltrated oil, V <sub>Mrd</sub> 0.000 m²  Estimated Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>Mrd</sub> 0.00 bble  Estimated Total Volume of Oil on open water based on standard coloration  i Total area of oil on open water  is Total of evarage depth of oil on water based on coloration  Link to Coverses Visual  Barek Visible 7 Total Area (Mrd) 1.00000  Silven 0.0000 0.0000 0.00000  Silven 0.0000 0.00000 0.00000  Silven 0.00000 0.00000 0.00000  Entitle Color 0.00000 0.00000  Entitle Color 0.00000 0.00000  Entitle Color 0.00000 0.000000  Entitle Color 0.00000 0.000000000000000000000000000	iii Soil type				Claw ▼
Estimated Volume of Infiltrated oil, V <sub>arc</sub> .  23.45 bble  4 Volume of Infiltrated oil outside immediate spill point(e) region (superficial impact, V <sub>intral</sub> )  1 Total Area of the pool of free phase oil in touch with soil  ii Average depth pool of three phase oil in touch with soil  ii Average depth below ground surface of Infiltrated oil, V <sub>ard</sub> .  Estimated Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  23.55 bble  Computation of volume of Infiltrated oil, V <sub>ard</sub> .  23.55 bble  Computation of volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  23.55 bble  Computation of volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume of Infiltrated oil, V <sub>ard</sub> .  23.55 bble  Computation of volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Total Volume (and Infiltrated oil, V <sub>ard</sub> .  Estimated Volume (and Infiltrated oil, V <sub>ard</sub> .  Estimated Volume (and Infiltrated oil, V <sub>ard</sub> .  Estimated Volume of Infiltrated oil, V <sub>ard</sub> .  Estimated Volume (and Infiltrated oil, V <sub>ard</sub> .  Estimated Volume of Infiltrated oil (aloy and Infiltrated oil Infiltrated Infilt	•	soil)			<u> </u>
Estimated Volume of Infiltrated oil, V <sub>art</sub> 23.45 bbls  4 Volume of Infiltrated oil outside immediate spill point(s) region (superficial impact, V <sub>intd</sub> )  1 Total Area covered by the oil (infilitation)  1 Total Area covered by the pool of free phase oil in touch with soil  2 Total Area of the pool of free phase oil in touch with soil  2 Average depth below ground surface of infiltrated oil, V <sub>art</sub> 2 D.00 m²  2 Estimated Volume of Infiltrated oil, V <sub>art</sub> 2 D.00 m²  2 Estimated Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 4 Total area of oil on open water  5 Total area of oil on open water  6 Total area of oil on open water  8 Total area of oil on open water  1 Total area of oil on open water  2 Total area of oil on open water  3 Total area of oil on open water  4 Total volume (ma)  5 Silvery  1 0,00000  1 0,00000  1 0,000000  1 0,0000000000	v Average depth below groun	Average depth below ground surface of infiltration of oil			
Estimated Volume of Infiltrated oil, V <sub>art</sub> 23.45 bbls  4 Volume of Infiltrated oil outside immediate spill point(s) region (superficial impact, V <sub>intd</sub> )  1 Total Area covered by the oil (infilitation)  1 Total Area covered by the pool of free phase oil in touch with soil  2 Total Area of the pool of free phase oil in touch with soil  2 Average depth below ground surface of infiltrated oil, V <sub>art</sub> 2 D.00 m²  2 Estimated Volume of Infiltrated oil, V <sub>art</sub> 2 D.00 m²  2 Estimated Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 3 T.4 m³  2 Estimated Total Volume of Infiltrated oil, V <sub>art</sub> 4 Total area of oil on open water  5 Total area of oil on open water  6 Total area of oil on open water  8 Total area of oil on open water  1 Total area of oil on open water  2 Total area of oil on open water  3 Total area of oil on open water  4 Total volume (ma)  5 Silvery  1 0,00000  1 0,00000  1 0,000000  1 0,0000000000	Estimated Volume of infili	trated oil, V <sub>belo</sub>		j	3.73 m³
i Total Area covered by the oil (infiltration) ii Total Area of the pool of free phase oil in touch with soil ii Average depth below ground surface of infiltration of oil  Estimated Volume of Infiltrated oil, V <sub>Pot</sub> 0.000 bble  Estimated Total Volume of Infiltrated oil, V <sub>Pot</sub> 0.000 bble  Estimated Total Volume of Infiltrated oil, V <sub>Pot</sub> 0.000 bble  Estimated Total Volume of Infiltrated oil, V <sub>Pot</sub> 0.000 bble  Computation of volume of infiltrated oil, V <sub>Pot</sub> 0.000 bble  Computation of volume of oil on open water based on standard coloration i Total area of oil on open water sased on coloration i Total area of oil on open water ii Total of average depth of oil on water based on coloration Spill Factors from USCQ FOQ (2009 Edition)  Att 10	Estimated Volume of Infili	rated oll, V <sub>infe</sub>		-	23.45 bbis
i Total Area covered by the oil (infiltration) ii Average depth below ground surface of infiltration of oil    0.007 m	s Mahama of Inditioning all a	-1 (-14-11114-111-4		10	
iii Average depth below ground surface of infiltration of oil  Estimated Volume of Infiltrated oil, V <sub>Pero</sub> Estimated Volume of Infiltrated oil, V <sub>Pero</sub> Estimated Yolume of Infiltrated oil, V <sub>Pero</sub> Estimated Yolume of Infiltrated oil, V <sub>Pero</sub> Estimated Total Volume of Infiltrated oil, V <sub>Pero</sub> Estimated Total Volume of Infiltrated oil, V <sub>Pero</sub> Estimated Total Volume of Infiltrated oil, V <sub>Pero</sub> Computation of volume of oil on open water based on standard coloration  i Total area of oil on open water  i Total area of oil on open water  Spill Factors from USC3 FOQ (2000 Edition)  Bately Visible  Coccool  Silvery			on (supernoial impact,	V <sub>infd</sub> )	m²
Estimated Volume of Infiltrated oil, V <sub>ext d</sub> 0.00 bble  Estimated Volume of Infiltrated oil, V <sub>ext d</sub> 0.00 bble  Estimated Total Volume of Infiltrated oil, V <sub>ext d</sub> 23.55 bble  Computation of volume of oil on open water seed on standard coloration  i Total area of oil on open water 645.00 m²  ii Total area of oil on open water seed on coloration  Spill Factors from USCG FOG (2006 Edition) 645.00 m²  Bately Visible 0.00000 0.00000  Silveny 0.00000 0.00000  Silveny 0.00000 0.00000  Bright Color 0.00015 0.00015 0.00000  Dull 0.001 60% 0.00001  Black oil 0.001 0.0000 0.00000  Black oil 0.0001 0.0000 0.00000  Estimated Volume of oil on open water, V <sub>ext</sub> 0.0000  Estimated Volume of oil on open water, V <sub>ext</sub> 0.0000  Estimated Volume of oil on open water, V <sub>ext</sub> 0.01 bbis    Color of evaporation Factors (E-Factor) for SPDC Crude oil 0.0000 0.01 0.0000 0.01 0.0000 0.01 0.0000 0	•	, ,			
Estimated Volume of Inflitrated oil, V <sub>tot</sub>   3.74 m <sup>3</sup>     Estimated Total Volume of Inflitrated oil, V <sub>tot</sub>   23.55 bbis     Computation of volume of oil on open water based on standard coloration     Total area of oil on open water   645.00 m <sup>2</sup>     Total area of oil on open water based on coloration     Total area of oil on open water based on coloration     Spill Factors from USCG FOG (2006 Edition)   645.00 m <sup>2</sup>     Thickness (mm)   Volume (m3)   164   165	iii Average depth below groun	d surface of infiltration of oil		1	0.007 m
Estimated Volume of Infiltrated oil, V <sub>tot</sub>   3.74 m²	Fetimated Volume of Infil	rated oil V		1	o oolm³
Estimated Total Volume of infiltrated oil, V <sub>tot</sub>   23.55 bble					
Estimated Total Volume of Infiltrated oil, V <sub>low</sub>				·	4.44 0014
Computation of volume of oil on open water based on standard coloration   Total area of oil on open water	Estimated Total Volume o	f inflitrated oil, V <sub>inf</sub>			3.74 m³
i Total area of oil on open water  ii Table of average depth of oil on water based on coloration    Spill Factors from USCG FOG (2000 Edition)	Estimated Total Volume o	f infiltrated oil, V <sub>inf</sub>			23.55 bbls
i Total area of oil on open water  ii Table of average depth of oil on water based on coloration    Spill Factors from USCG FOG (2000 Edition)	A				
Table of average depth of oil on water based on coloration   Link to Coverage Visual.	<u>-</u>	-	rd coloration		
Spill Factors from USCQ FOG (2000 Edition)   Silvery   0.00004   0.00000	•				645.00 m°
Spill Factors from USCG FOG (2000 Edition)   Patients and State   Pati	ii Table of average depth of o	il on water based on coloration	Link to Coverson Visual		
Thickness (mm)	Spill Factors from USCG FOG (	2000 Edition)	Aid		
Barely Visible		Thickness (mm)		Volume (m3)	
Siight Color   0.00015   0.0000	Barety Visible				
Bright Color	Silvery	0.00008			
Dull		0.00015		0.0000	
Dark   0.002   40%   0.0005					
Black oil 0.1 0.0000 Emulsion (30% Oil) 1 0.0000 Percent Total: 100% 0.0009  Estimated Volume of oil on open water, V <sub>wet</sub> 0.00 m³  Estimated Volume of oil on open water, V <sub>wet</sub> 0.01 bbis    Couletion of evaporated volume					
Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> Estimated Volume of oil on open water, V <sub>wat</sub> O.01 bbis    Culation of evaporated volume			40%		
Estimated Volume of oil on open water, V <sub>wet</sub> Estimated Volume of oil on open water, V <sub>wet</sub> Couletion of evaporated volume    Evaporation Factors (E-Factor) for SPDC Crude oil   Residence time of spilled oil (days on site)   Bonny Light   Bonny Medium     <1 day		0.1			
Estimated Volume of oil on open water, V <sub>wet</sub> Estimated Volume of oil on open water, V <sub>wet</sub> Culation of evaporated volume    Evaporation Factors (E-Factor) for SPDC Crude oil   Oil type   Bonny Light   Bonny Medium		Percent Total:	100%		
Estimated Volume of oil on open water, Vwex    Culation of evaporated volume					
Evaporation Factors (E-Factor) for SPDC Crude oil   Oil type	Estimated Volume of all o	n open water, V <sub>wat</sub>			0.00 m <sup>3</sup>
Evaporation Factors (E-Factor) for SPDC Crude oil  Residence time of spilled oil (days on site)  Coil type  Bonny Light Bonny Medium  10% 5%  1-7 daya 25% 15%  > 7 daya 40% 25%  i Was oil recovery before JiV completion done before JiV date?  ii Estimated volume available for evaporation  E-factor  E-factor	Estimated Volume of oil o	n open water, V <sub>wat</sub>		_	0.01 bbis
Bonny Light   Bonny Medium					
<1 day	Residence time	of spilled oil (days on site)	Ÿ		
i Was oil recovery before JIV completion done before JIV date? ii Estimated volume available for evaporation  25.94 bbls  iii E-factor					
i Was oil recovery before JIV completion done before JIV date? ii Estimated volume available for evaporation  25.94 bbts  iii E-factor  40 %					
ii Estimated volume available for evaporation 25.94 bbts iii E-factor 40 %		> 7 days	40%	25%	
ii Estimated volume available for evaporation 25.94 bbts iii E-factor 40 %	i Mise oil recovery hefore III.	Completion done before IBI date?		г	<del></del>
(i) E-factor 40 %	•	•		i	<del></del>
	II Estinated Totalie available	TOT EVAPORATION			23.94 008
Estimated Volume of evaporated oil, V <sub>evap</sub> 17.29 bbls	iii E-factor			I	40 %
	Estimated Volume of evar	orated oil, V <sub>evap</sub>			17.29 bbls
	Net Total Estimated 8	hilled Volume V			43.23 bbls

JOINT INVESTIGATION REPORT FOR INCIDENT NO: 1312944 JIV report S/N: 00815 G. INCIDENT INFORMATION:

20.	Impacted	Area	Details

• To	ital calculated area of impact 0.7444		
• Im	pact within SPDC R.O.W		
• lm	pact outside SPDC R.O.W	··· · · ·	
21. Volume of o	il recovered before completion of JIV (Vre	<sub>(c1</sub> ):	
	Recovered oil V <sub>ree3</sub> :	NIL	Barrels
	7		

Controlled recovery/evacuation from source with no impact to environment:

NIL	Barrels

22. Net Estimated Spilled Volume V<sub>En</sub>(bbls)\* =

43. 23 BARRES

Estimated Reported Volume\*\* V<sub>rep</sub>(bbls)=

44 BARRES

\*Notes:

Volume estimation was done using an excel based tool.(see attached for details on the calculation)

Reported spilled volume is an estimate

Wester other volument notes taken into consideration for artimating the spilled in the horizontal processor.

Wester other volument notes taken into consideration for artimating the spilled in the horizontal processor.

Write other relevant notes taken into consideration for estimating the spilled in the hax below:

JIY (JOINT INVESTIGATION VISIT) | RESPONSE DELAYED DUE

TO HEIGHTENED SECURITY SITUATION FOLLOWING THE

KILLING OF SOME SECURITY PERSONNEL BY UNKNOWN

PERSON (S) WITHIN THE AXIS:

Calculation of the respective estimated volume is to be done on site as far as practicable using the new spill volume estimation software on site; Conversion of  $m^3$  to barrels is Volume (m3) x 6.29; \*\*Round up estimated volume to next whole number using the following rules:

Any spill volume in excess of 1 bbl is rounded up to the next whole number.

Any spill volume in less than - I bbl - is rounded up to the next 0.1 bbl.

Wherever this estimation tool is not applicable please refer to paragraph 6c (Deviations) of the JIV procedure to use appropriate steps for column estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

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#### 23. GENERAL STATUS OF THE SITE

A.	Joint investigation of the incident site found that there is no residual impact after the initial response and JIT therefore recommend that the site be closed out
B.	Investigation of the incident site showed that there is residual impact on site requiring further works

#### 24. REPRESENTATIVES

This report was filled, agreed and signed by the following joint investigation representatives:			
	Host Community:		
	Department of Petroleum Resources [DPR]: 5		
	National Oil Spill Detection and Response Agency [NOSDRA]: 1		
•	State Ministry of Environment [SME]:		
	Nigeria Police Force [NPF]: 🗖	'	
•	Shell Petroleum Development Company [SPDC]:		
	Signatories agree with reported findings:		
	Separate DPR form has been filled out with same findings		
		Tick as applicable	

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25. Appendix 1: Overview sketch of the site

