



Independent Data Services

a Schlumberger partner company

**Automated Reporting and One Version
of the Truth in an Open World**

IDS – who are we?

- **1995 : Founded** - providing a ‘Drilling Data Package’ for daily reporting
- **2001** :Switched to **web-delivered online reporting services** - ‘DataNet’
- **2015** : Rewritten as **DataNet2.5 – HTML5, full mobile capabilities**
- **2016** : Introduce ‘**Lean Automated Reporting**’ initiative
- **2019** : **ACRE** - **Automated Common Reporting Environment** for Operators + Drilling Contractors

Today

- Approximately **70 employees** worldwide, majority in app and core development
- **Offices** in Aberdeen, Calgary, Kuching, Singapore.
- **Over 200 clients** in 24 years of operation



IDS – who are our clients?

60+ operating clients across Operators and Drilling Contractors

- Shell (PoC)
- BP (PoC)
- PDO (in collaboration with Schlumberger)
- OMV (19 years)
- Suncor (12 years)
- Repsol-Sinopec (ex Talisman, 21 years)
- Woodside (20 years)
- Premier Oil (20 years)
- Aker-BP
- Wintershall-DEA
- Centrica

- Noble Drilling (7 years)
- Borr Drilling
- Stena Drilling

Daily Reporting

a manual process....



DRILLING MORNING REPORT # 8
04 May 2009

Well - Drilling

Drilling	
Report Number: 8	UTM (NS)
Day Wellsite Representative: Mike Evansyshyn	UTM (EAW)
Night Wellsite Representative: Gerry McCrindle	Cart Datum/UTM (Zone)
Rig Translator:	/
Rig Manager: Don MacLean	
Rig Name:	
Wellsite Geologist: Keith Frankiewicz	

Well Data					
Country: Australia	Current Hole Size: 12.3 mm	Casing OD: 13.4 mm	AFE Number: demo AFE		
Field: Burringa	Measured Depth: 678.9 m	Casing MD: 234.9 m	Original AFE: \$ 3,881,019.00		
Rig:	True Vertical Depth: 678.9 m	Casing TVD: 234.9 m	Supp AFE No: Test 2		
Ground Level: 124.90 m	24 Hr Progress: 217.0 m	TOL MD:	Org. & Sup: \$ 3,001,619.00		
RT to GL: 15.60 m	Days On Well: 86.00	TOL TVD:	AFE:		
Plan TD (MD): 2,445.30 m	Days Since Spud: 7.89	Lnr Shoe MD:	Daily Cost: \$ 79,129.00		
Plan TD (TVD): 2,429.30 m	Last BOP Date:	Lnr Shoe TVD:	Cum. Cost: \$ 8,267,919.50		
	FIT/LOT:		Last LTI Date: 28 Apr 2009		
			Days Since LTI: 6.00		

Current Op @ 0600:	Logging w/Schlumberger
Planned Op:	Complete Logging Program @ 09.00 Hrs H- / Rig To & Run 9 5/8" Intermediate Casing / Condition Mud / Cement Casing

Summary for Period 0000 Hrs to 2400 Hrs on 04 May 2009

Circulate & Survey @ 295 m - 0.50 Deg. // 350 deg. Azimuth // Drill 12 1/4" Intermediate Section // 337m To 340m // Repair #2 Mud Pump
 Cleaned Suction Screen - Plugged
 With Bugs // Drill 12 1/4" Intermediate Section // 340m To 431m // Circulate & survey @ 400m. 5 degree azimuth 290 Deg. // Drill 12 1/4" hole from 431m to 474 m // Fluid recover bank outlet plugged on MI Swaco equipment // Correct problem // Replace rubber seal in 4" standpipe union under rig floor // Drill 12 1/4" hole from 474 to 483m // Replace seal in #2 mud pump // Drill 12 1/4" hole from 483 to 524 // Circulate & run directional survey @ 492m. 5 degree azimuth 210 deg. // Drill 12 1/4" hole from 524 to Section TD @ 554m MD // Circulate Hole Clean @ TD // Survey @ 517m. 0.50 Deg - Azimuth = 200 deg. // Circulate Bottoms Up Prior To POOH For Logging
 Pump Weighted Slug // POOH To Run Wireline Logs w/Schlumberger.
 Conduct Flow Checks // Use Pipe Spinner // BH @ 102 At Midrite

Operations for Period 0000 Hrs to 2400 Hrs On 04 May 2009							
PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
IHT	P	SVY	00:00	00:30	0.50	461.9	Circulate & Survey Survey Depth = 295 m 0.50 Deg // 350 Azimuth
IHT	P	DA	00:30	01:00	0.50	464.9	Drill 12 1/4" Intermediate Section // 337m To 340m
IHT	U	DA	01:00	01:30	0.50	464.9	Repair #2 Mud Pump Cleaned Suction Screen - Plugged With Bugs
IHT	P	DA	01:30	07:00	5.50	537.9	Drill 12 1/4" Intermediate Section // 340m To 431m
IHT	P	SVY	07:00	08:00	1.00	565.9	Circulate & survey @ 400m. 5 degree azimuth 290
IHT	P	DA	08:00	10:30	2.50	568.9	Drill 12 1/4" hole from 431m to 474 m
IHT	U	RO	10:30	11:00	0.50	568.9	Fluid recover bank outlet plugged on MI Swaco equipment // Correct problem
IHT	U	RO	11:00	11:30	0.50	568.9	Replace rubber seal in 4" standpipe union under rig floor
IHT	P	DA	11:30	12:00	0.50	607.9	Drill 12 1/4" hole from 474 to 483m
IHT	U	DA	12:00	12:30	0.50	607.9	Replace seal in #2 mud pump
IHT	P	DA	12:30	15:30	3.00	648.9	Drill 12 1/4" hole from 483 to 524
IHT	P	SVY	15:30	18:30	1.00	648.9	Circulate & run directional survey @ 492m. 5 degree azimuth 210
IHT	P	DA	18:30	20:00	3.50	678.9	Drill 12 1/4" hole from 524 to Section TD @ 554m MD
IHT	P	CMD	20:00	20:30	0.50	678.9	Circulate Hole Clean @ TD
IHT	P	SVY	20:30	21:00	0.50	678.9	Survey @ 517 m 0.50 Deg Azimuth = 200
IHT	P	CMD	21:00	21:30	0.50	678.9	Circulate Bottoms Up Prior To POOH For Logging Pump Weighted Slug
IHT	P	TO	21:30	24:00	2.50	678.9	POOH To Run Wireline Logs w/Schlumberger. Conduct Flow Checks // Use Pipe Spinner // BH @ 102 At Midrite



DRILLING MORNING REPORT # 8
04 May 2009

Well - Drilling

Drilling		UTM (NS)		Rig Manager:			
Report Number:	8	UTM (EAW)		Don MacLean			
Day Wellsite Representative:	Mike Evanshyn	UTM (Zone)		Rig Name:			
Night Wellsite Representative:	Gerry McCrindle			Wellsite Geologist: Keith Frankiewicz			
Rig Translator:							
Well Data							
Country:	Australia	Current Hole Size:	12.3 mm	Casing OD:	13.4 mm		
Field:	Burrigga	Measured Depth:	678.9 m	Casing MD:	234.9 m		
Rig:		True Vertical Depth:	678.9 m	Casing TVD:	234.9 m		
Ground Level:	124.90 m	24 Hr Progress:	217.0 m	TOL MD:			
RT to GL:	15.60 m	Days On Well:	86.00	TOL TVD:			
Plan TD (MD):	2,445.30 m	Days Since Spud:	7.69	Lvs Show MD:	Daily Cost: \$ 79,129.00		
Plan TD (TVD):	2,429.30 m	Last BOP Date:		Lvs Show TVD:	Cum. Cost: \$ 8,267,919.50		
		FITL/OT:	/		Last LTI Date: 28 Apr 2009		
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Current Op @ 0600:	Logging w/Schlumberger						
Planned Op:	Complete Logging Program @ 09.00 Hrs +/- / Rig To & Run 9 5/8" Intermediate Casing / Condition Mud / Cement Casing						
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Pump Weighted Slug // POOH To Run Wireline Logs w/Schlumberger.							
Conduct Flow Checks // Use Pipe Spinner // Bit @ 102 At Midrise							
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IH1	P	SVY	20:30	21:00	0.50	678.9	Survey @ 517 m
							0.50 Deg
							Azimuth = 200
IH1	P	CMD	21:00	21:30	0.50	678.9	Circulate Bottoms Up Prior To POOH For Logging
							Pump Weighted Slug
IH1	P	TO	21:30	24:00	2.50	678.9	POOH To Run Wireline Logs w/Schlumberger.
							Conduct Flow Checks // Use Pipe Spinner // Bit @ 102 At Midrise

DDR Data Type

- Basic Well Data

- Activities
- BHA
- Bits
- Casing and Cementing
- Drilling Parameters
- Formation Tops
- Fluid properties
- Fluid Volumes
- Rig Pumps
- Surveys
- Weather and Environment
- HSE
- Bulk Stocks
- Personnel on Board (PoB)
- Rig information

Data Source

Well plan

Manual (collaborative) entry

Money and time wasted gathering data...

■ At the Rig...



- Manual data gathering
- Manual data entry
- Import from 3rd party Excel



Each DDR represents in US\$250+ and 1.5 hrs direct acquisition/input cost and lost key man time each day

And reprocessing it...

“...On average, a BHA report or a mud report are generated and re-typed three or four times each day at the rig..

FTR – Fixed Text Remarks

- Engineer required to enter Specific data

Drilling ahead from ft to ft with rpm
 & gpm , psi SPP On Bottom, psi Off Bottom, klbs
 WOB, in OD hole, klbs Up Weight, klbs Down Weight, klbs
 Free Rot Weight, ft-lbs On Bottom TQ, ft-lbs Off Bottom TQ .

Activity		Activity Time and Codes	Description
<input type="checkbox"/>	<input type="checkbox"/>	From: 00:00 To: 03:00 Dur.: 3.00 h	Fixed Text Remark: Pressure tested 1 m from 2 m with 3.00 sg mud system to 4 psi / 5 min, 6 psi / 7 min. Good test. Volume pumped = 8.00 bbl, volume returned = 10.00 bbl.
		Lib: Drilling	
		Class: Planned Time (P)	
		Phase:	Test Activity 3 hours
		Ops: Pressure Test (PT)	
<input type="checkbox"/>	<input type="checkbox"/>	From: 00:00 To: 03:00 Dur.: 3.00 h	Fixed Text Remark: Pressure tested 1 m from 2 m with 3.00 sg mud system to 4 psi / 5 min, 6 psi / 7 min. Good test. Volume pumped = 8.00 bbl, volume returned = 10.00 bbl.
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		Class: Planned Time (P)	
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		Ops: Pressure Test (PT)	
		Total Duration: 6.00 h	

- Formatted output

Fixed Text Remark >

Drilling ahead from 555 ft to 666 ft with 3 rpm & 4 gpm , 5 psi SPP On Bottom, 6.00 psi Off Bottom, 7.00 klbs WOB, 8.000 in OD hole, 7.00 klbs Up Weight, 6.00 klbs Down Weight, 111.00 klbs Free Rot Weight, 222.00 ft-lbs On Bottom TQ, 333.00 ft-lbs Off Bottom TQ .

- Aligned to Performance codes
 - Data input requirements change

How do we get to LAR (Lean Automated Reporting)?



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Night Wellsite Representative: Gerry McCrindle		Cart Datum/UTM (Zone)		Wellsite Geologist:			
Rig Translator:							
Well Data							
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Field:	Burrigga	Measured Depth:	678.9 m	Casing MD:	234.9 m	Original AFE:	\$ 3,861,019.00
Rig:		True Vertical Depth:	678.9 m	Casing TVD:	234.9 m	Supp AFE No:	Test 2
Ground Level:	124.90 m	24 Hr Progress:	217.0 m	TOL MD:		Org. & Sup:	\$ 3,001,619.00
RT to GL:	15.60 m	Days On Well:	86.00	TOL TVD:		AFE:	
Plan TD (MD):	2,445.30 m	Days Since Spud:	7.89	Lvs Show MD:		Daily Cost:	\$ 79,129.00
Plan TD (TVD):	2,428.30 m	Last BOP Date:		Lvs Show TVD:		Cum. Cost:	\$ 8,267,919.50
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DDR Data Type

- Basic Well Data
- Activities
- BHA
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- Casing and Cementing
- Drilling Parameters
- Formation Tops
- Fluid properties
- Fluid Volumes
- Rig Pumps
- Surveys
- Bulk Stocks
- Personnel on Board (PoB)
- Rig information
- Weather and Environment
- HSE

Data Source

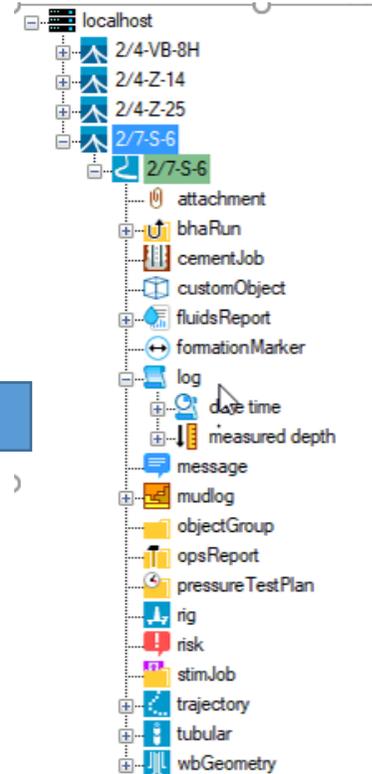
Well plan

← WITSML data

Rig systems

Collaborative entry

WITSML Store



The Filebridge-powered Lean Report



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Activities
Fluid Volumes
Rig information

- BHA
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- Rig Pumps
- Survey
- Bulk Stocks
- PoB

- Weather and Environment
- HSE

Data Source

Well plan

FileBridge

Collaborative entry

Service Co Report

- BHA/ bit report
- Casing Tally
- Cmt Report
- Formation Data
- Mud Report
- Rig Pumps
- Surveys
- Bulk Stocks Report
- PoB



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Ground Level:	124.90 m	24 Hr Progress:	217.0 m	TOL MD:			
RT to GL:	15.60 m	Days On Well:	86.00	TOL TVD:			
Plan TD (MD):	2,445.30 m	Days Since Spud:	7.89	Lvs Show MD:	Daily Cost: \$ 79,129.00		
Plan TD (TVD):	2,429.30 m	Last BOP Date:	/	Lvs Show TVD:	Cum. Cost: \$ 6,267,919.50		
		FITL/OT:	/		Last LTI Date: 28 Apr 2009		
					Days Since LTI: 6.00		
Current Op @ 0600:	Logging w/Schlumberger						
Planned Op:	Complete Logging Program @ 09.00 Hrs +/- / Rig To & Run 9 5/8" Intermediate Casing / Condition Mud / Cement Casing						
Summary for Period 0000 Hrs to 2400 Hrs on 04 May 2009							
Circulate & Survey @ 295 m - 0.50 Deg. // 350 deg. Azimuth // Drill 12 1/4" Intermediate Section // 337m To 340m // Repair #2 Mud Pump Cleaned Suction Screen - Plugged With Bugs // Drill 12 1/4" Intermediate Section // 340m To 431m // Circulate & survey @ 400m. .5 degree azimuth 290 Deg. // Drill 12 1/4" hole from 431m to 474 m // Fluid recover bank outlet plugged on MI Swaco equipment // Correct problem // Replace rubber seal in 4" standpipe union under rig floor // Drill 12 1/4" hole from 474 to 483m // Replace web in #2 mud pump // Drill 12 1/4" hole from 483 to 524 // Circulate & run directional survey @ 492m .5 degree azimuth 210 deg. // Drill 12 1/4" hole from 524 to Section TD @ 554m MD // Circulate Hole Clean @ TD // Survey @ 517m. 0.50 Deg - Azimuth = 200 deg. // Circulate Bottoms Up Prior To POOH For Logging Pump Weighted Slug // POOH To Run Wireline Logs w/Schlumberger. Conduct Flow Checks // Use Pipe Spinner // Bit @ 102 At Midrise							
Operations for Period 0000 Hrs to 2400 Hrs On 04 May 2009							
PHSE	CLS (RC)	OP	From	To	Hrs	Depth (m)	Activity Description
IH1	P	SVY	00:00	00:30	0.50	461.9	Circulate & Survey Survey Depth = 295 m 0.50 Deg. // 350 Azimuth
IH1	P	DA	00:30	01:00	0.50	464.9	Drill 12 1/4" Intermediate Section // 337m To 340m
IH1	U	DA	01:00	01:30	0.50	464.9	Repair #2 Mud Pump Cleaned Suction Screen - Plugged With Bugs
IH1	P	DA	01:30	07:00	5.50	537.9	Drill 12 1/4" Intermediate Section // 340m To 431m
IH1	P	SVY	07:00	08:00	1.00	555.9	Circulate & survey @ 400m. .5 degree azimuth 290
IH1	P	DA	08:00	10:30	2.50	589.9	Drill 12 1/4" hole from 431m to 474 m
IH1	U	RO	10:30	11:00	0.50	589.9	Fluid recover bank outlet plugged on MI Swaco equipment // Correct problem
IH1	U	RO	11:00	11:30	0.50	589.9	Replace rubber seal in 4" standpipe union under rig floor
IH1	P	DA	11:30	12:00	0.50	607.9	Drill 12 1/4" hole from 474 to 483m
IH1	U	DA	12:00	12:30	0.50	607.9	Replace web in #2 mud pump
IH1	P	DA	12:30	15:30	3.00	648.9	Drill 12 1/4" hole from 483 to 524
IH1	P	SVY	15:30	16:30	1.00	648.9	Circulate & run directional survey @ 492m .5 degree azimuth 210
IH1	P	DA	16:30	20:00	3.50	678.9	Drill 12 1/4" hole from 524 to Section TD @ 554m MD
IH1	P	CMD	20:00	20:30	0.50	678.9	Circulate Hole Clean @ TD
IH1	P	SVY	20:30	21:00	0.50	678.9	Survey @ 517 m 0.50 Deg Azimuth = 200
IH1	P	CMD	21:00	21:30	0.50	678.9	Circulate Bottoms Up Prior To POOH For Logging
IH1	P	TO	21:30	24:00	2.50	678.9	Pump Weighted Slug POOH To Run Wireline Logs w/Schlumberger. Conduct Flow Checks // Use Pipe Spinner // Bit @ 102 At Midrise

ACTIVITIES – The most important part of the report...

~30% of the real estate
~65% of the effort
~90% of the value
~100% re-used

WITSML 1.4.1.1

1. well
2. wellbore
3. bhaRun
4. tubular
5. fluidsReport
6. opsReport
7. formationMarker

8. log

9. mudLog
10. wbGeometry
11. trajectory
12. Attachment
13. CementJob
14. Risk Object



Rig State source data from WITSML 'Log' object

- | | |
|-----------------------------------|------------------------------|
| 1. Date and time (hh:mm:ss) | 8. Standpipe Pressure (avg) |
| 2. Depth Bit (meas) | 9. Hookload (avg) |
| 3. Depth Hole (meas) | 10. Weight-on-bit (surf,avg) |
| 4. Rotary Torque (surface) | 11. Mud Flow rate in |
| 5. Rotary/top drive RPM (surface) | 12. Pump Stroke Rate # 1 |
| 6. Motor/turbine RPM (downhole) | 13. Pump Stroke Rate # 2 |
| 7. Hook position | 14. Pump Stroke Rate # 3 |

WITSML 2.0

Waiting on uptake

Rig State	IDS Op State Description	Rig State	IDS Op State Description
1	Drilling	23	Rotating
2	Tripping In	24	Circulating while Reciprocating
3	Tripping Out	28	In Slips - Trip Out
4	Circulating	29	Back Reaming
5	Casing Run	30	Reaming Down
10	Surface	31	In Slips - Casing
12	Rotary Drilling (Surface and DH)	35	Pump Off - In slips
13	Turbo Drilling	36	Connection - In Slips
14	Sliding Drilling	38	Weight to Weight
15	Connection	40	Weight to Slip
17	Circulating Static	41	Slip to Weight
18	Wash Down	42	Slips to Slips - Trip In
19	Pump out of hole	43	Slips to Slips - Trip Out
20	Cut/Slip Drill line	44	Slips to Slips - Casing
22	In slips - Trip-In	45	Rotary Drilling (Surface)
		47	Casing Block Down
		100	Pipe Handling Delays

Under development...



- a. Rig move
- b. Anchoring
- c. Rig up/down (Rig)
- d. Handling tools (types)
- e. Rig-up down

*mt = minimum threshold

24 Hrs Operations On Sunday, November 13, 2016				
From	To	Hours	IADC Code	Operations
00:00	06:00	6.00	2	Drilled 12 1/4" hole section from depth 594 m to 645 m with controlled parameters, Wash up & Ream down one single each stand drilled.No DH losses.
06:00	06:15	0.25	21	Hold PJSM, Discussed, Hand & finger injury, Use compressed air, Slip, Trip and Fall, Loading Unloading Chemicals.
06:15	18:00	11.75	2	Drilled 12 1/4" hole section from depth 645 m to 732 m with controlled parameters, Wash up & Ream down one single each stand drilled.No DH losses.
18:00	18:15	0.25	21	Hold PJSM, Discussed, Hand & finger injury, Use compressed air, Slip, Trip and Fall, Loading Unloading Chemicals.
18:15	23:30	5.25	2	Drilled 12 1/4" hole section from depth 732 m to 777 m with controlled parameters, Wash up & Ream down one single each stand drilled.No DH losses.
23:30	00:00	0.50	7	Service TDS

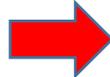
DDR (manual entry):

Drill 12.25" hole : 23.0 hrs
PJSM : 0.5 hrs
Service TDS : 0.5 hrs



LAR (ILT Analysis):

Drill 12.25" hole : 22.48 hrs (DDR: 23.0 hrs)
PJSM +TDS : 0.60 hrs (DDR: 1.0 hrs)
Pipe Handling : 0.92 hrs
Total ILT = : 0.92hrs



LAR (QC):

Service TDS : DDR – 30 mins 23.30-00.00 hrs
Service TDS : LAR – 16 mins, 23:10-23:26



Time Breakdown						
Date	Start	End	Hrs	Rate Code (%)	Comments	
13 Nov 2016	00:00	00:12	0.20		Unplanned Downtime (UT) - PIP. Pipe Handling - PIP.10. Pipe Handling Delays	
13 Nov 2016	00:12	03:20	3.14		Programmed Event (P) - DRL. Drilling - DRL.1. Drill Ahead - DRL.1.7. Sliding	
13 Nov 2016	03:20	03:35	0.25		Unplanned Downtime (UT) - PIP. Pipe Handling - PIP.10. Pipe Handling Delays	
13 Nov 2016	03:35	14:30	10.91		Programmed Event (P) - DRL. Drilling - DRL.1. Drill Ahead - DRL.1.7. Sliding	
13 Nov 2016	14:30	14:58	0.47		Unplanned Downtime (UT) - PIP. Pipe Handling - PIP.10. Pipe Handling Delays	
13 Nov 2016	14:58	18:48	3.83		Programmed Event (P) - DRL. Drilling - DRL.1. Drill Ahead - DRL.1.7. Sliding	
13 Nov 2016	18:48	19:07	0.32		Unplanned Downtime (UT) - PIP. Pipe Handling - PIP.10. Pipe Handling Delays	
13 Nov 2016	19:07	23:09	4.04		Programmed Event (P) - DRL. Drilling - DRL.1. Drill Ahead - DRL.1.7. Sliding	
13 Nov 2016	23:10	23:26	0.28		Unplanned Downtime (UT) - PIP. Pipe Handling - PIP.10. Pipe Handling Delays	
13 Nov 2016	23:26	24:00	0.56		Programmed Event (P) - DRL. Drilling - DRL.1. Drill Ahead - DRL.1.7. Sliding	

Activity	Activity Code	Description	Depth	Hole Size
From 00:00 to 00:05	Class: Programmed Event (P)	Fixed Text Remark: Drilling ahead rotating from 2,580.6 m to 2,580.6 m with 159 rpm, 201 galUS/min Flow Rate (Min), 202 galUS/min Flow Rate (Max), 340 psi SPP On Bottom, # WOB, # Up Weight, # Down Weight, 15,843.21 J On Bottom TQ, # Off Bottom TQ	2,580.6 m	
From 00:28 to 00:45	Class: Programmed Event (P)	Fixed Text Remark: Circulating hole between 2,581.5 m to 2,581.5 m, 202 galUS/min, 314 psi spp, 154 rpm, 14,937.44 J TQ	2,581.5 m	
From 00:28 to 05:33	Class: Programmed Event (P)	Fixed Text Remark: POOH Reaming from 2,581.5 m to 2,581.5 m with 73 rpm Surf RPM & 450 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,581.5 m	
From 05:33 to 05:40	Class: Programmed Event (P)	Fixed Text Remark: Drilling ahead rotating from 2,581.5 m to 2,581.5 m with 6 rpm, 0 galUS/min Flow Rate (Min), 272 galUS/min Flow Rate (Max), 100 psi SPP On Bottom, # WOB, # Up Weight, # Down Weight, 886.08 J On Bottom TQ, # Off Bottom TQ	2,581.5 m	
From 05:42 to 06:09	Class: Programmed Event (P)	Fixed Text Remark: POOH Reaming from 2,581.5 m to 2,581.5 m with 132 rpm Surf RPM & 904 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,581.5 m	
From 06:09 to 06:38	Class: Programmed Event (P)	Fixed Text Remark: Rih Reaming from 2,581.5 m to 2,581.8 m with 140 rpm Surf RPM & 502 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,581.8 m	
From 06:38 to 06:47	Class: Programmed Event (P)	Fixed Text Remark: POOH Reaming from 2,581.8 m to 2,582.7 m with 140 rpm Surf RPM & 381 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,582.7 m	
From 06:47 to 09:40	Class: Programmed Event (P)	Fixed Text Remark: POOH OH Back Reaming (PBR)		
From 09:40 to 10:42	Class: Programmed Event (P)	Fixed Text Remark: Drilling ahead rotating from 2,582.7 m to 2,582.9 m with 147 rpm, 0 galUS/min Flow Rate (Min), 217 galUS/min Flow Rate (Max), 304 psi SPP On Bottom, # WOB, # Up Weight, # Down Weight, 15,094.50 J On Bottom TQ, # Off Bottom TQ	2,582.9 m	
From 10:42 to 16:23	Class: Programmed Event (P)	Fixed Text Remark: POOH Reaming from 2,582.9 m to 2,583.4 m with 128 rpm Surf RPM & 591 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,583.4 m	
From 16:23 to 16:28	Class: Programmed Event (P)	Fixed Text Remark: Rih Reaming from 2,583.4 m to 2,583.4 m with 110 rpm Surf RPM & 810 galUS/min Avg Flow, # Avg SPP, # Avg WOB, # Up Weight, # Down Weight, # Free Rot Weight, # Off Bottom TQ	2,583.4 m	
From 23:34 to 24:00	Class: Programmed Event (P)	Fixed Text Remark: POOH in casing pumping from # to depth #	2,583.4 m	
Total Duration: 26.67 h				



Thank You