



# Daily Completion Operations

Date: 7/3/2017

Report #: 5.0

Well Name: Sauer 43-31

Well Name Sauer 43-31	Operator PDC Energy Inc.	API 05123201660000	Well Number 105.001026	Last Mod By BHolman
District Evans	Field Name Wattenberg	County Weld	State CO	
Well Type Development	Surface Legal Location NESE 31 5N 67W	Spud Date 7/30/2001	Original KB Elevation (ft) 4,830.00	Ground Elevation (ft) 4,820.00 KB-Ground Distance (ft) 10.00

## Daily Operation: 7/3/2017 06:00 - 7/3/2017 18:00

AFE Number WBIEXTRACTI ON	Job Category Completion/Workover	Objective TEST TBNG, INSTALL 5K WELLHEAD, SET RBP AHEAD OF HORIZONTAL FRACS/ANNULAR FILL	Start Date 6/21/2017	End Date 7/3/2017	Primary Job Type Wellbore Integrity	Secondary Job Type Remedial Cementing
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## Rigs

Contractor Ensign	Rig Number 356
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## Daily Operations

Report Start Date 7/3/2017	Report End Date 7/3/2017	Daily Field Est Total (Cost) 13,472.00	Cum Field Est To Date (Cost) 68,000.18
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Status at Reporting Time

## Operations Summary

CREW TO LOCATION. HELD SAFETY MEETING. 0 PRESSURES ON WELL. MIRU CASED HOLE WIRELINE. RAN CBL, GR, VDL AND CCL FROM 6300' TO SURFACE. RDMO WIRELINE. RIH WITH RETRIEVING HEAD, SEAT NIPPLE AND 210 JNTS OF 2-3/8" 4.7# J-55 8RD EUE TBNG. RU LUBRICATOR AND BROACHED TBNG TO SN WITH 1.901" BROACH. POOH. RD LUBRICATOR. LAND TBNG IN WELLHEAD AT 6632.07' KB. ND BOPS. NU 5K TOP FLANGE. SECURED WELL. RDMO

10.00' KB  
6617.97' W/210 JNTS  
1.10' SEAT NIPPLE  
3.00' RETRIEVING HEAD  
6632.07' KB

Operations Next Report Period  
FINAL REPORT

Weather	Temperature (*F)	Hole Condition	Road Condition
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## Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code	Code Des	Com
06:00	07:00	1.00	1.00	TRAV	Travel - To Location	
07:00	07:30	0.50	1.50	SMTG	Safety Meeting	
07:30	10:00	2.50	4.00	EWLL	Logging	RAN CBL
10:00	11:30	1.50	5.50	RUTB	Run Tubing	RAN RETRIEVING HEAD
11:30	13:00	1.50	7.00	ROTH	Other Rig Work	BROACHED TBNG TO SN
13:00	13:30	0.50	7.50	BOPR	Remove BOP's	ND BOPS, NU 5K TOP FLANGE
13:30	14:00	0.50	8.00	LOCL	Lock Wellhead & Secure	
14:00	17:00	3.00	11.00	SRIG	Rig Up/Down	RIGGED DOWN. CLEANED LOCATION
17:00	18:00	1.00	12.00	TRAV	Travel - From Location	



# Daily Completion Operations

Date: 7/1/2017  
Report #: 4.0

Well Name: Sauer 43-31

Well Name Sauer 43-31	Operator PDC Energy Inc.	API 05123201660000	Well Number 105.001026	Last Mod By BHolman
District Evans	Field Name Wattenberg	County Weld	State CO	
Well Type Development	Surface Legal Location NESE 31 5N 67W	Spud Date 7/30/2001	Original KB Elevation (ft) 4,830.00	Ground Elevation (ft) 4,820.00 KB-Ground Distance (ft) 10.00

## Daily Operation: 6/30/2017 06:00 - 7/1/2017 18:00

A/E Number WBIEXTRACTI ON	Job Category Completion/Workover	Objective TEST TBNG, INSTALL 5K WELLHEAD, SET RBP AHEAD OF HORIZONTAL FRACS/ANNULAR FILL	Start Date 6/21/2017	End Date 7/3/2017	Primary Job Type Wellbore Integrity	Secondary Job Type Remedial Cementing
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## Rigs

Contractor Ensign	Rig Number 356
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## Daily Operations

Report Start Date 6/30/2017	Report End Date 7/1/2017	Daily Field Est Total (Cost) 24,877.11	Cum Field Est To Date (Cost) 50,362.29
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Status at Reporting Time

## Operations Summary

DAY CREW TO LOCATION. HELD SAFETY MEETING. WELL CIRCULATING LITE MUD WITH NO GAS. MIRU O-TEX PUMPING. HELD SAFETY MEETING. EOT AT 5030.76' KB. TEST PUMP AND LINES TO 2000 PSI. ESTABLISHED CIRCULATION WITH 5 BBLs OF FRESH WATER. MIXED AND PUMPED 420 SKS OF PREMIUM LITE 13.5# CEMENT IN A 112 BBL SLURRY 1.3 BPM AT 1750 PSI WHILE RECIPRICATING TBNG. DISPLACED 5 BBLs OF FRESH WATER. LD 142 JNTS OF 1-1/4" TBNG. EOT AT 617'. MIXED AND PUMPED 180 SKS OF CLASS G 15.8# CEMENT IN A 36.8 BBL SLURRY TO SURFACE. 2 BBLs OF CEMENT TO TANK. LD TBNG. TOPPED OFF SURFACE PLUG WITH 5 SKS. WASHED UP PUMP AND LINES. RDMO O-TEX. ND DUAL STRING FLANGES. LAND CASING IN SLIPS WITH 45K PULLED. PACKED OFF SURFACE HEAD. NU 5K WELLHEAD AND BOPS. CHANGED TOOLS OVER TO 2-3/8". SECURED WELL. SDFD. CREW TO YARD.

## Operations Next Report Period

RUN CBL, RUN RETRIEVING HEAD

Weather	Temperature (*F)	Hole Condition	Road Condition
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## Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code	Code Des	Com
06:00	07:00	1.00	1.00	TRAV	Travel - To Location	
07:00	07:30	0.50	1.50	SMTG	Safety Meeting	
07:30	08:30	1.00	2.50	CIRC	Circulating	CONDITIONED HOLE
08:30	12:30	4.00	6.50	CEMT	Cement Squeeze	PUMPED 420 SKS ANNULAR FILL
12:30	13:30	1.00	7.50	PULT	Pull Tubing	LD TBNG
13:30	14:30	1.00	8.50	CEMT	Cement Squeeze	PUMPED 185 SK ANNULAR FILL
14:30	15:00	0.50	9.00	PULT	Pull Tubing	LD TBNG
15:00	16:00	1.00	10.00	WHRP	Well Head Work	ND DUAL STRING FLANGES, LAND CASING IN SLIPS, NU 5K WELLHEAD
16:00	16:30	0.50	10.50	BOPI	Install BOP's	NU BOPS
16:30	17:00	0.50	11.00	LOCL	Lock Wellhead & Secure	
17:00	18:00	1.00	12.00	TRAV	Travel - From Location	





# Daily Completion Operations

Date: 6/30/2017

Report #: 3.0

Well Name: Sauer 43-31

Well Name Sauer 43-31	Operator PDC Energy Inc.	API 05123201660000	Well Number 105.001026	Last Mod By bholman	
District Evans	Field Name Wattenberg	County Weld	State CO		
Well Type Development	Surface Legal Location NESE 31 5N 67W	Spud Date 7/30/2001	Original KB Elevation (ft) 4,830.00	Ground Elevation (ft) 4,820.00	KB-Ground Distance (ft) 10.00

## Daily Operation: 6/29/2017 11:00 - 6/30/2017 06:00

AFE Number WBIEXTRACTI ON	Job Category Completion/Workover	Objective TEST TBNG, INSTALL 5K WELLHEAD, SET RBP AHEAD OF HORIZONTAL FRACS	Start Date 6/21/2017	End Date	Primary Job Type Wellbore Integrity	Secondary Job Type
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## Rigs

Contractor Ensign	Rig Number 356
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## Daily Operations

Report Start Date 6/29/2017	Report End Date 6/30/2017	Daily Field Est Total (Cost) 7,448.50	Cum Field Est To Date (Cost) 25,485.18
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Status at Reporting Time

## Operations Summary

MOVED ENSIGN RIG 356 BACK ON WELL. HELD SAFETY MEETING. TP: 0 PSI CP: 0 PSI SCP: 20 PSI. OPENED SURFACE CASING TO RIG TANK. ND 5K TOP FLANGE. FUNCTION TEST AND NU BOPS. POOH TO DERRICK WITH 210 JNTS OF 2-3/8" 4.7# J-55 8RD EUE TBNG, SN AND RETRIEVING HEAD. ND CASING HEAD. UNLAND CASING WITH SPEAR. WORKED STRETCH IN CASING. FREE TO TOC. NU DUAL STRING FLANGES AND TIW VALVE WITH WASHINGTON HEAD. PU 20' MULE SHOE AND 161 JNTS OF 1-1/4" 3.02# CS-HYDRIL AND RIH TO 5030.76' KB STOPPING AT 3100' TO CONDITION HOLE AND PUMP SAPP SWEEP. CONDITIONED HOLE AND PUMPED SAPP SWEEP AGAIN. NIGHT CREW CHANGED AT 2200 HRS. CONDITIONED HOLE THROUGHOUT THE NIGHT. THIN MUD RETURNS. DAY CREW CHANGED AT 0600. NO GAS NOTED.

## Operations Next Report Period

PUMP ANNULAR FILL

Weather	Temperature (°F)	Hole Condition	Road Condition
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## Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code	Code Des	Com
11:00	11:30	0.50	0.50	RMOV	Rig Move	
11:30	12:00	0.50	1.00	SRIG	Rig Up/Down	
12:00	12:30	0.50	1.50	SMTG	Safety Meeting	
12:30	13:00	0.50	2.00	BOPI	Install BOP's	ND 5K TOP FLANGE, NU BOPS
13:00	14:30	1.50	3.50	PULT	Pull Tubing	POOH WITH RETRIEVING HEAD
14:30	15:30	1.00	4.50	WHRP	Well Head Work	ND CASING HEAD, UNLAND CASING, NU DUAL STRING FLANGES
15:30	18:00	2.50	7.00	RUTB	Run Tubing	RUN 1-1/4" TBNG
18:00	06:00	12.00	19.00	CIRC	Circulating	CONDITION HOLE
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## Daily Completion Operations

Date: 6/22/2017

Report #: 2.0

Well Name: Sauer 43-31

Well Name Sauer 43-31	Operator PDC Energy Inc.	API 05123201660000	Well Number 105.001026	Last Mod By BHolman
District Evans	Field Name Wattenberg	County Weld	State CO	
Well Type Development	Surface Legal Location NESE 31 5N 67W	Spud Date 7/30/2001	Original KB Elevation (ft) 4,830.00	Ground Elevation (ft) 4,820.00 KB-Ground Distance (ft) 10.00

## Daily Operation: 6/22/2017 06:00 - 6/22/2017 14:00

A/E Number WBIEXTRACTI ON	Job Category Completion/Workover	Objective TEST TBNG, INSTALL 5K WELLHEAD, SET RBP AHEAD OF HORIZONTAL FRACS	Start Date 6/21/2017	End Date	Primary Job Type Wellbore Integrity	Secondary Job Type
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## Rigs

Contractor Ensign	Rig Number 356
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## Daily Operations

Report Start Date 6/22/2017	Report End Date 6/22/2017	Daily Field Est Total (Cost) 8,756.61	Cum Field Est To Date (Cost) 18,036.68
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Status at Reporting Time

## Operations Summary

CREW TO LOCATION. HELD SAFETY MEETING. TP: 0 CP: 0 SCP: 200 PSI. BLEW WELL DOWN TO RIG TANK, CONTINUED TO POOH TO DERRICK WITH 2-3/8" TBNG. LD BIT AND SCRAPER. PU RMOR 4.5" 10K WLTC RBP AND RIH TO 6940'. SET RBP WITH 220 JNTS 7' OUT. LD 1 JNT. ROLLED HOLE CLEAN. TEST RBP AND CASING TO 2000 PSI. HELD GOOD WITH NO COMMUNICATION WITH SURFACE CASING. BLED OFF PRESSURE. LD 4 JNTS. BROACHED TBNG TO SN WITH 1.901" BROACH. POOH. SPOT 2 SKS OF SAND ON TOP OFF PLUG. LD 5 JNTS. LAND TBNG IN WELLHEAD AT 6632.07' KB WITH 210 JNTS. ND BOPS. NU 5K TOP FLANGE. INSTALLED 2 NEW 5K VALVES ON CASING AND PLUMBED UP SURFACE CASING VALVE. SECURED WELL. WAIT ON ORDERS. RDMO TO SAUER 33-31D.

## Operations Next Report Period

PERFORM ANNULAR FILL

Weather	Temperature (°F)	Hole Condition	Road Condition
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## Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code	Code Des	Com
06:00	07:00	1.00	1.00	TRAV	Travel - To Location	
07:00	07:30	0.50	1.50	SMTG	Safety Meeting	
07:30	10:30	3.00	4.50	RTRIP	Tripping	PULLED SCRAPER, RAN RBP
10:30	11:30	1.00	5.50	PTST	Pressure Test	ROLL HOLE, TEST CASING GOOD TO 2000 PSI
11:30	12:30	1.00	6.50	ROTH	Other Rig Work	BROACHED TBNG TO SN, SPOT 2 SKS SAND
12:30	13:00	0.50	7.00	BOPR	Remove BOP's	ND BOPS, NU 5K TOP FLANGE
13:00	13:30	0.50	7.50	LOCL	Lock Wellhead & Secure	
13:30	14:00	0.50	8.00	SRIG	Rig Up/Down	





## Daily Completion Operations

Date: 6/21/2017  
Report #: 1.0

Well Name: Sauer 43-31

Well Name Sauer 43-31	Operator PDC Energy Inc.	API 05123201660000	Well Number 105.001026	Last Mod By BHolman
District Evans	Field Name Wattenberg	County Weld	State CO	
Well Type Development	Surface Legal Location NESE 31 5N 67W	Spud Date 7/30/2001	Original KB Elevation (ft) 4,830.00	Ground Elevation (ft) 4,820.00 KB-Ground Distance (ft) 10.00

## Daily Operation: 6/21/2017 06:00 - 6/21/2017 18:00

AFE Number WBIEXTRACTI ON	Job Category Completion/Workover	Objective TEST TBNG, INSTALL 5K WELLHEAD, SET RBP AHEAD OF HORIZONTAL FRACS	Start Date 6/21/2017	End Date	Primary Job Type Wellbore Integrity	Secondary Job Type
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## Rigs

Contractor Ensign	Rig Number 356
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## Daily Operations

Report Start Date 6/21/2017	Report End Date 6/21/2017	Daily Field Est Total (Cost) 9,280.07	Cum Field Est To Date (Cost) 9,280.07
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Status at Reporting Time

## Operations Summary

CREW TO LOCATION. HELD SAFETY MEETING. MIRU ENSIGN RIG 356. RIGGED UP PUMP AND LINES. ITP: 150 PSI ICP: 150 PSI ISCP: 150 PSI. BLEW WELL DOWN TO RIG TANK. SURFACE CASING FLOWED OIL AND WATER. KILLED WELL WITH 80 BBLS CLAYTREAT/BIOCIDE WATER. ND 3K WELLHEAD. NU 5K WELLHEAD. FUNCTION TEST AND NU BOPS. PU 4 JNTS, RIH AND TAGGED WITH 120'. LD TAG JNTS AND 12' SUB. TOOH TO DERRICK WITH 223 JNTS OF 2-3/8" 4.7# J-55 8RD EUE TBNG, SN/NC. MIRU PICK TESTERS. PU RMOR 3-7/8" BLADE BIT, CASING SCRAPER AND TEST IN HOLE TO 6000 PSI WITH 224 JNTS. ALL TBNG TESTED GOOD. TBNG WAS LANDED AT 7050.45' (40.45' BELOW CODELL PERFS) RDMO TESTERS. ROLLED HOLE CLEAN. SB 90 JNTS IN DERRICK. SECURED WELL. SDFD. CREW TO YARD.

## Operations Next Report Period

PULL SCRAPER, RUN RBP, TEST CASING

Weather	Temperature (°F)	Hole Condition	Road Condition
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## Time Log

Start Time	End Time	Dur (hr)	Cum Dur (hr)	Code	Code Des	Com
06:00	07:00	1.00	1.00	TRAV	Travel - To Location	
07:00	07:30	0.50	1.50	SMTG	Safety Meeting	
07:30	08:30	1.00	2.50	SRIG	Rig Up/Down	RIG UP RIG, PUMP AND TANK
08:30	09:30	1.00	3.50	WKLL	Kill Well	KILL WELL W/80 BBLS CLAYTREAT/BIOCIDE WATER
09:30	10:00	0.50	4.00	BOPI	Install BOP's	ND 3K WELLHEAD, NU 5K WELLHEAD AND BOPS
10:00	14:30	4.50	8.50	RTRIP	Tripping	TOOH, TEST IN SCRAPER
14:30	15:30	1.00	9.50	CIRC	Circulating	ROLLED HOLE CLEAN
15:30	16:30	1.00	10.50	PULT	Pull Tubing	SB 90 JNTS
16:30	17:00	0.50	11.00	LOCL	Lock Wellhead & Secure	
17:00	18:00	1.00	12.00	TRAV	Travel - From Location	