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Form 3160-4  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAY 16 2013

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Farmington Field Office  
Bureau of Land Management

Lease Serial No.

SF-078049-A

1a. Type of Well		<input type="checkbox"/> Oil Well	<input checked="" type="checkbox"/> Gas Well	<input type="checkbox"/> Dry	<input type="checkbox"/> Other	6. If Indian, Allottee or Tribe Name				
b. Type of Completion:		<input checked="" type="checkbox"/> New Well	<input type="checkbox"/> Work Over	<input type="checkbox"/> Deepen	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Diff. Resvr.,	7. Unit or CA Agreement Name and No.			
Other:						8. Lease Name and Well No.				
2. Name of Operator						HARDIE 2N				
3. Address						9. API Well No.				
PO Box 4289, Farmington, NM 87499						30-045-35070 -0001				
3a. Phone No. (include area code)						10. Field and Pool or Exploratory				
(505) 326-9700						Basin Dakota				
4. Location of Well (Report location clearly and in accordance with Federal requirements)*						11. Sec., T., R., M., on Block and Survey or				
At surface						SURFACE: SEC. 28, T29N, R8W				
At top prod. Interval reported below						12. County or Parish				
Unit K (NESW), 2363' FSL, 1694' FWL,						San Juan				
Unit K (NESW), 2159' FSL & 1688' FWL						New Mexico				
At total depth						13. State				
Unit I (NESW), 2159' FSL & 1688' FWL						6399' GL ; 6414' KB				
14. Date Spudded		15. Date T.D. Reached		16. Date Completed		GRS		17. Elevations (DF, RKB, RT, GL)*		
1/17/2013		2/22/2013		<input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.		5/3/2013		6399' GL ; 6414' KB		
18. Total Depth:		MD		19. Plug Back T.D.:		MD		20. Depth Bridge Plug Set:		
TVD		7470'		MD		7463'		MD		
		7453		TVD		7446'		TVD		
21. Type Electric & Other Mechanical Logs Run (Submit copy of each)						22. Was well cored?				
GR/CCL/CBL						<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)				
						Was DST run?				
						<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report)				
						Directional Survey?				
						<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)				
23. Casing and Liner Record (Report all strings set in well)										
Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement top*	Amount Pulled	
12 1/4"	9 5/8" / H-40	32.3#	0	229'	n/a	106 sx premium Lite	30 bbls	Surface	1/4 bbl	
8 3/4"	7" / J-55	23#	0	3241	2654	444 sx Premium Lite	168 bbls	Surface	74 bbls	
6 1/4"	4 1/2" / L-80	11.6#	0	7464	n/a	300 sx Premium Lite	107 bbls	2300'	n/a	
24. Tubing Record										
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)		
2 3/8", 4.7#, J-55	7345'	n/a								
25. Producing Intervals										
Formation	Top	Bottom	26. Perforation Record		Perforated Interval	Size	No. Holes	Perf. Status		
A) Dakota	7276	7380			1 spf	.34"	28	open		
B) Dakota	7400	7444			2 spf	.34"	26	open		
C)										
D) Total MV Perfs							54			
27. Acid, Fracture, Treatment, Cement Squeeze, etc.										
Depth Interval		Amount and Type of Material								
7266' - 7444'		Acid - 10 bbls 15% HCL; Frac - 39,522 gal 70% slickwater N2 foam w/2,369,500 scf N2 and 40,068# 20/40 Brady Sand								
28. Production - Interval A										
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method	
5/3/13 GRS	5/6/2013	1hr.	→	0	51 mcfh	1 bwph				
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		
1/2"	449 psi SI	422 psi SI	→	0	1228 mcfh	24 bwph		SI waiting on ND C104		
28a. Production - Interval B										
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method	
			→							
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		
	SI		→							

\*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD

MAY 20 2013

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FARMINGTON FIELD OFFICE  
BY William Tambekou

## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fuel, vented, etc.)

## TO BE SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem test, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Ojo Alamo	1928'	2094'	White, cr-gr ss	Ojo Alamo	1928'
Kirtland	2094'	2687'	Gry sh interbedded w/tight, gry, fine-gr ss. Lk gry-gry caro sn, coal, grn silts, ligni-mieu gry,	Kirtland	2094'
Fruitland	2687'	2973'	tight, fine gr ss.	Fruitland	2687'
Pictured Cliffs	2973'	3146'	Bn-Gry, fine gm, tight ss.	Pictured Cliffs	2973'
Lewis	3146'	3396'	Shale w/ siltstone stingers	Lewis	3146'
Huerfano Bentonite	3568'	n/a	White, waxy chalky bentonite	Huerfano Bentonite	3568'
Chacra	3940'	4310'	Gry fn gm silty, glauconitic sd stone w/ drk gry shale	Chacra	3940'
Mesa Verde	4310'	4727'	Light gry, med-fine gr ss, carb sh & coal	Mesa Verde	4310'
Menefee	4727'	5208'	Med-dark gry, fine gr ss, carb sh & coal	Menefee	4727'
Point Lookout	5208'	5683'	Med-light gry, very fine gr ss w/ frequent sh breaks in lower part of formation	Point Lookout	5208'
Mancos	5683'	6415'	Dark gry carb sh.	Mancos	5683'
Gallup	6415'	7163'	Lt. gry to brn calc carb micac glauc silts & very fine gry gry ss w/ irreg. interbed sh.	Gallup	6415'
Greenhorn	7163'	7222'	Highly calc gry sh w/ thin lmst.	Greenhorn	7163'
Graneros	7222'	7263'	Dk gry shale, fossil & carb w/ pyrite incl.	Graneros	7222'
Dakota	7263'		Lt to dark gry foss carb sl calc sl silty ss w/ pyrite incl thin sh bands cly Y shale breaks	Dakota	7263'
Morrison			interbed gm, brn & red waxy sh & fine to coard gm s	Morrison	

32. Additional remarks (include plugging procedure):

**This is a Blanco Mesaverde & Basin Dakota commingle well under DHC3343AZ**

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
- ☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*.

Name (please print)

Patsy Clugston

Title

Staff Regulatory Tech.

Signature

Date

5/15/2013

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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MAY 16 2013

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010Farmington Field Office  
Bureau of Land Management  
SF-078049-A

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name							
b. Type of Completion: <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr.,		7. Unit or CA Agreement Name and No. <b>Report To Lease</b>							
2. Name of Operator <b>ConocoPhillips Company</b>		8. Lease Name and Well No. <b>HARDIE 2N</b>							
3. Address <b>PO Box 4289, Farmington, NM 87499</b>		9. API Well No. <b>30-045-35070 -0002</b>							
3a. Phone No. (include area code) <b>(505) 326-9700</b>		10. Field and Pool or Exploratory <b>Blanco Mesaverde</b>							
4. Location of Well (Report location clearly and in accordance with Federal requirements)*  At surface <b>Unit K (NESW), 2363' FSL, 1694' FWL,</b>  At top prod. Interval reported below <b>Unit K (NESW), 2159' FSL &amp; 1688' FWL</b>  At total depth <b>Unit I (NESW), 2159' FSL &amp; 1688' FWL</b>		11. Sec., T., R., M., on Block and Survey o <b>SURFACE: SEC. 28, T29N, R8W</b>							
14. Date Spudded <b>1/17/2013</b>		15. Date T.D. Reached <b>2/22/2013</b>							
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.		GRS <b>5/3/2013</b>							
17. Total Depth: MD <b>7470'</b> TVD <b>7453</b>		19. Plug Back T.D.: MD <b>7463'</b> TVD <b>7446'</b>							
20. Depth Bridge Plug Set: MD TVD		21. Elevations (DF, RKB, RT, GL)* <b>6399' GL ; 6414' KB</b>							
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) <b>GR/CCL/CBL</b>		22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)							
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement top*	Amount Pulled
12 1/4"	9 5/8" / H-40	32.3#	0	229'	n/a	106 sx premium Lite	30 bbls	Surface	1/4 bbl
8 3/4"	7" / J-55	23#	0	3241	2654	444 sx Premium Lite	168 bbls	Surface	74 bbls
6 1/4"	4 1/2" / L-80	11.6#	0	7464	n/a	300 sx Premium Lite	107 bbls	2300'	n/a
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2 3/8", 4.7#, J-55	7345'	n/a							
25. Producing Intervals									
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status			
A) Pt Lookout	5198	5386	1 spf	.34"	25	open			
B) Menefee	4764	5130	1 spf	.34"	25	open			
C) Cliffhouse	4620	4724	1 spf	.34"	25	open			
D) total holes					75				
26. Perforation Record									
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval	Amount and Type of Material								
5198 - 5386	Acid - 10 bbls 15% HCL; Frac - 40,950 gal 70% Slickwater N2 foam w/1,481,600 scf N2 & 100,123# 20/40 Brady Sand								
4764 - 5130	Acid - 10 bbls 15% HCL; Frac - 26,544 gal 70% Slickwater N2 foam w/1,212,300 scf N2 & 49,996# 20/40 Brady Sand								
4620 - 4724	Acid - 10 bbls 15% HCL; Frac - 34,146 gal 70% Slickwater N2 foam w/1,222,100 scf N2 & 100,273# 20/40 Brady Sand								
28. Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
5/3/13 GRS	5/6/2013	1hr.		0	31 mcfh	1 bwph			
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
1/2"	449 psi SI	SI 422 psi		0	752 mcfh	24 bwph		SI waiting on ND C104	
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI								

\*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD

MAY 20 2013

NMOCDA

FARMINGTON FIELD OFFICE  
BY William Tambekou

## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fuel, vented, etc.)

## TO BE SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem test, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Ojo Alamo	1928'	2094'	White, cr-gr ss	Ojo Alamo	1928'
Kirtland	2094'	2687'	Gry sh interbedded w/tight, gry, fine-gr ss. Lk gry-gry carb sh, coal, gm silts, ngnt-mieu gry,	Kirtland	2094'
Fruitland	2687'	2973'	tight, fine gr ss.	Fruitland	2687'
Pictured Cliffs	2973'	3146'	Bn-Gry, fine gm, tight ss.	Pictured Cliffs	2973'
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Mancos	5683'	6415'	Dark gry carb sh.	Mancos	5683'
Gallup	6415'	7163'	Lt. gry to brn calc carb micac glauc silts & very fine gry ss w/ irreg. interbed sh.	Gallup	6415'
Greenhorn	7163'	7222'	Highly calc gry sh w/ thin lmst.	Greenhorn	7163'
Graneros	7222'	7263'	Dk gry shale, fossil & carb w/ pyrite incl.	Graneros	7222'
Dakota	7263'		Lt to dark gry foss carb sl calc sl silty ss w/ pyrite incl thin sh bands clay shale breaks	Dakota	7263'
Morrison			interbed gm, brn & red waxy sh & fine to coard gm s	Morrison	

## 32. Additional remarks (include plugging procedure):

**This is a Blanco Mesaverde & Basin Dakota commingle well under DHC3343AZ**

## 33. Indicate which items have been attached by placing a check in the appropriate boxes:

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 ☐ DST Report
 ☐ Directional Survey
- ☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other:

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print)

Patsy Clugston

Title

Staff Regulatory Tech.

Signature

Date

5/15/2013

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