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OIL CONS. DIV.

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOV 02 2010

Farmington Field Office
Bureau of Land Management

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *– Other instructions on page 2.*

5. Lease Serial No.
NMSF 078768

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.
Rosa Unit

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other SWD ✓

8. Well Name and No.
Rosa Unit SWD #2

2. Name of Operator
Williams Production Company, LLC

9. API Well No.
30-039-30812

3a. Address
PO Box 640 Aztec, NM 87410

3b. Phone No. *(include area code)*
505-634-4208

10. Field and Pool or Exploratory Area
Entrada

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
Sur: 2460' FNL & 2095' FWL – BHL: 2414' FNL & 1951' FWL, sec 25, T31N, R5W

11. Country or Parish, State
Rio Arriba

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☒ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other COMPLETION
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

10-3-10 – MIRU AWS #471 to complete SWD well per SWD-1236

10-5-10 – Run CBL from 9320' to 5500'. TOC @ 8050, TOC good cement @ 8240' ✓

10-6-10 – Run gyro. Test 7" production casing to 2500 psi for 30 minutes, good test ✓

10-9-10 – Perf Entrada formation, 9056'-9292' with 708, 0.38" holes

10-11-10 – Frac Entrada with 223,000# 20/40 mesh badger. Set Comp BP @ 9010'. Perf Bluff formation, 8746'-8908', with 486, 0.38" holes

ACCEPTED FOR RECORD
NOV 09 2010
FARMINGTON FIELD OFFICE
BY T. Salyers

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)*
Larry Higgins

Title Permit Supervisor

Signature Larry Higgins

Date 11-2-10

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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.

NMOCD

Rosa Unit SWD #2

10-13-10 – Frac Bluff formation with 186,400# 20/40 mesh badger. Set Comp BP @ 8120'. Shoot 4, 0.72" squeeze holes @ 8020'. Established circulation @ 1300# ✓

10-14-10 – Set cement Retainer @ 7908'. Pressured up to 3000# and attempt to establish circulation, attempt failed. Decision made to DO CR and set another

10-15-10 – DO CR @ 7908'. Perf 4 more 0.72" squeeze holes @ 8010'. Set cement retairer @ 7916'. Begin squeeze, pump 5 bbls 2% KCL to break circulation followed by - ; 40 bbls mud flush, 605 sks 1.44 yld, 6.77 gal H20/sk, 155.2 bbls @ 13# ; 97.5 bbls H20 req. 100 sks, 1.18 yld, 5.24 gal H20/sk, 21 bbls @ 15.6# ; 12.5 bbls H20 req. displacement to rtnr 45 bbls ; ISIP 1195 psi, good circulation throughout job & no pipe Movement

10-17-10 – Run CBL, TOC appears to be @ 3600'. DO CR @7916'.

10-18-10 – DO cement. Run CBL from 8120' to 3000', TOC @ 3400' ✓

10-20-10 – Test Squeeze holes to 500# for 30 minutes, good test. ✓ Chart results. DO BP @ 8120'

10-21-10 – Set Comp BP @ 8726'

10-22-10 – Perf Morrison formation, 8334'-8716', with 432, 0.38" holes. RIH and set frac liner @ 7983' top & 8038' bottom

10-24-10 – Frac Morrison formation with 183,336# 20/40 mesh white sand

10-25-10 – TOH with frac liner

10-26-10 – DO BP @ 8726'. DO BP @ 9010'. CO to PBTD @ 9334' ✓

10-27-10 – RIH w/ 7" Weatherford production pkr to 8284'; pkr set 50' above top perf of 8334'

10-29-10 – Land well as follows top down - 1 jnt 3-1/2" 9.3# N-80 EUE ; plastic lined tbg, 8' & 10' plastic lined pup jnts, 260 jnts 3-1/2" 9.3# N-80 ; EUE tbg plastic lined, 3-1/2" X 2.313 I.D. X profile nipple, ; & latch in seal assembly w/ Aflas seals ; sting into 7" X 4" Sealbore Arrowdrill permanent packer @ 8282'. ; Set under compression @ 40K, X-nipple set @ 8282' ✓

Scientific Drilling

Gyroscopic Survey Report
for
Williams

Well Location	SEC 25-T31N-R5W
Well Name	Rosa Unit SWD #2
Rig Name	AWS 471
Survey Date	10/5/2010
Latitude	36.87 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	RKB
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 287.86Azim (deg)
Definitive Survey	Computed from ROSAUNIT.BIN's HighSpeed: OutRun
Operator	S. Heth

Comments

7" casing. Run1 on 10/2/10 tool would not go past 6230. Came back to survey on 10/5/10 to finish after rig cleaned out hole.

Scientific Drilling

Survey Report

Well Name:	Rosa Unit SWD #2
Survey:	Computed from ROSAUNIT.BIN's HighSpeed: OutRun
Survey Date:	10/5/2010

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	Closure Distance ft	Closure Angle deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.71	147.63	100.00	-0.47	-0.52	0.33	0.62	147.63
200.00	0.47	166.52	199.99	-1.16	-1.44	0.75	1.62	152.31
300.00	0.40	140.68	299.99	-1.66	-2.11	1.07	2.36	153.05
400.00	0.38	163.96	399.99	-2.14	-2.69	1.38	3.03	152.82
500.00	0.47	214.69	499.98	-2.21	-3.35	1.24	3.57	159.63
600.00	0.53	209.11	599.98	-2.00	-4.08	0.79	4.16	169.09
700.00	0.71	252.45	699.98	-1.41	-4.67	-0.03	4.67	180.32
800.00	0.96	261.29	799.97	-0.15	-4.98	-1.45	5.19	196.17
900.00	1.28	271.87	899.95	1.67	-5.07	-3.39	6.11	213.78
1000.00	1.55	281.42	999.92	4.10	-4.77	-5.84	7.54	230.77
1100.00	1.63	283.92	1099.88	6.86	-4.16	-8.55	9.51	244.07
1200.00	1.65	284.93	1199.84	9.72	-3.45	-11.33	11.84	253.08
1300.00	1.78	288.30	1299.79	12.72	-2.59	-14.19	14.43	259.68
1400.00	2.22	292.42	1399.73	16.20	-1.36	-17.46	17.51	265.55
1500.00	2.90	294.43	1499.63	20.64	0.42	-21.55	21.55	271.13
1600.00	3.07	292.70	1599.49	25.82	2.50	-26.32	26.44	275.43
1700.00	3.84	292.68	1699.31	31.83	4.83	-31.88	32.25	278.61
1800.00	3.98	291.04	1799.08	38.63	7.37	-38.21	38.91	280.91
1900.00	4.19	291.70	1898.82	45.73	9.96	-44.84	45.93	282.52
2000.00	4.03	292.57	1998.57	52.88	12.66	-51.48	53.02	283.82
2100.00	4.37	295.62	2098.30	60.16	15.66	-58.16	60.24	285.07
2200.00	4.30	297.38	2198.01	67.63	19.03	-64.93	67.66	286.33
2300.00	4.60	299.71	2297.71	75.25	22.74	-71.74	75.25	287.59
2400.00	4.79	299.60	2397.38	83.27	26.79	-78.85	83.28	288.76
2500.00	4.88	300.78	2497.02	91.51	31.03	-86.14	91.56	289.81
2600.00	3.95	299.97	2596.72	99.03	34.93	-92.78	99.14	290.63
2700.00	3.34	302.36	2696.52	105.22	38.21	-98.23	105.41	291.26
2800.00	2.75	303.94	2796.38	110.35	41.11	-102.69	110.61	291.82
2900.00	2.87	307.67	2896.26	115.01	43.98	-106.66	115.37	292.41
3000.00	2.83	308.22	2996.13	119.68	47.04	-110.58	120.17	293.05
3100.00	2.59	307.34	3096.02	124.13	49.95	-114.32	124.76	293.60
3200.00	2.40	306.91	3195.93	128.24	52.57	-117.79	128.99	294.05
3300.00	1.84	305.78	3295.86	131.74	54.77	-120.77	132.60	294.39
3400.00	1.82	311.46	3395.81	134.72	56.75	-123.26	135.70	294.72
3500.00	1.72	316.00	3495.76	137.50	58.88	-125.49	138.62	295.14
3600.00	1.58	312.21	3595.72	140.08	60.89	-127.55	141.33	295.52
3700.00	1.43	309.50	3695.68	142.49	62.60	-129.53	143.86	295.80
3800.00	1.33	306.74	3795.65	144.75	64.09	-131.42	146.22	296.00

Scientific Drilling

Survey Report

Well Name:	Rosa Unit SWD #2
Survey:	Computed from ROSAUNIT.BIN's HighSpeed: OutRun
Survey Date:	10/5/2010

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	Closure Distance ft	Closure Angle deg
3900.00	1.39	300.64	3895.63	147.03	65.40	-133.39	148.56	296.12
4000.00	0.62	229.38	3995.61	148.49	65.67	-134.84	149.98	295.97
4100.00	0.70	180.72	4095.61	148.59	64.71	-135.26	149.94	295.57
4200.00	0.86	155.17	4195.60	147.90	63.41	-134.95	149.11	295.17
4300.00	0.88	154.25	4295.59	146.86	62.04	-134.30	147.94	294.79
4400.00	0.76	143.95	4395.58	145.79	60.81	-133.58	146.77	294.48
4500.00	0.68	142.35	4495.57	144.76	59.80	-132.82	145.66	294.24
4600.00	0.59	156.77	4595.56	143.93	58.85	-132.25	144.76	293.99
4700.00	0.52	172.43	4695.56	143.40	57.93	-131.99	144.15	293.70
4800.00	0.40	192.38	4795.55	143.17	57.14	-132.01	143.84	293.41
4900.00	0.42	192.25	4895.55	143.10	56.44	-132.16	143.71	293.13
5000.00	0.33	189.97	4995.55	143.03	55.80	-132.29	143.57	292.87
5100.00	0.47	189.85	5095.55	142.93	55.12	-132.41	143.42	292.60
5200.00	0.41	196.90	5195.54	142.87	54.37	-132.58	143.30	292.30
5300.00	0.52	213.34	5295.54	142.98	53.65	-132.94	143.35	291.98
5400.00	0.49	251.91	5395.54	143.45	53.13	-133.59	143.77	291.69
5500.00	0.55	296.16	5495.53	144.26	53.21	-134.42	144.57	291.60
5600.00	0.52	303.36	5595.53	145.17	53.67	-135.23	145.49	291.65
5700.00	0.39	306.49	5695.53	145.93	54.12	-135.88	146.26	291.72
5800.00	0.40	285.86	5795.52	146.60	54.42	-136.49	146.93	291.74
5900.00	0.36	301.81	5895.52	147.26	54.68	-137.09	147.60	291.74
6000.00	0.34	308.75	5995.52	147.84	55.03	-137.60	148.19	291.80
6100.00	0.25	303.47	6095.52	148.33	55.34	-138.01	148.69	291.85
6200.00	0.44	218.47	6195.52	148.68	55.16	-138.43	149.02	291.73
6300.00	0.38	238.34	6295.51	149.03	54.69	-138.95	149.33	291.48
6400.00	0.41	236.54	6395.51	149.47	54.32	-139.54	149.74	291.27
6500.00	0.38	240.90	6495.51	149.92	53.96	-140.12	150.15	291.06
6600.00	0.30	247.27	6595.51	150.34	53.70	-140.65	150.56	290.90
6700.00	0.34	234.90	6695.51	150.72	53.43	-141.14	150.91	290.73
6800.00	0.37	254.98	6795.50	151.17	53.18	-141.68	151.33	290.57
6900.00	0.32	258.59	6895.50	151.68	53.04	-142.26	151.83	290.45
7000.00	0.36	238.28	6995.50	152.12	52.82	-142.80	152.26	290.30
7100.00	0.42	235.35	7095.50	152.55	52.45	-143.37	152.66	290.09
7200.00	0.32	240.96	7195.50	152.96	52.10	-143.91	153.06	289.90
7300.00	0.21	254.92	7295.49	153.30	51.92	-144.33	153.39	289.79
7400.00	0.32	225.73	7395.49	153.58	51.68	-144.70	153.65	289.66
7500.00	0.20	254.20	7495.49	153.85	51.44	-145.07	153.92	289.53
7600.00	0.31	208.62	7595.49	154.05	51.16	-145.36	154.10	289.39

Scientific Drilling

Survey Report

Well Name:	Rosa Unit SWD #2
Survey:	Computed from ROSAUNIT.BIN's HighSpeed: OutRun
Survey Date:	10/5/2010

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	Closure Distance ft	Closure Angle deg
7700.00	0.49	194.13	7695.49	154.07	50.51	-145.60	154.11	289.13
7800.00	0.36	171.67	7795.49	153.90	49.78	-145.66	153.93	288.87
7900.00	0.36	152.86	7895.48	153.54	49.18	-145.47	153.55	288.68
8000.00	0.25	131.67	7995.48	153.11	48.75	-145.16	153.12	288.56
8100.00	0.24	142.77	8095.48	152.74	48.44	-144.87	152.75	288.49
8200.00	0.28	118.32	8195.48	152.33	48.16	-144.53	152.34	288.43
8300.00	0.24	138.73	8295.48	151.91	47.89	-144.17	151.92	288.37
8400.00	0.25	131.43	8395.48	151.53	47.59	-143.87	151.54	288.30
8500.00	0.39	134.57	8495.48	151.03	47.20	-143.47	151.03	288.21
8600.00	0.44	142.97	8595.48	150.41	46.66	-142.99	150.41	288.07
8700.00	0.46	191.15	8695.47	150.05	45.96	-142.84	150.05	287.84
8800.00	0.26	190.34	8795.47	149.97	45.34	-142.96	149.98	287.60
8900.00	0.08	349.66	8895.47	149.98	45.19	-143.01	149.98	287.54
9000.00	0.32	294.04	8995.47	150.29	45.37	-143.28	150.29	287.57
9100.00	0.35	319.31	9095.47	150.82	45.72	-143.73	150.82	287.64
9200.00	0.20	24.98	9195.47	151.06	46.11	-143.85	151.06	287.77
9300.00	0.13	321.85	9295.47	151.14	46.36	-143.85	151.14	287.86
9301.00	0.14	317.28	9296.47	151.14	46.36	-143.85	151.14	287.86