Form 3160	÷.
(March 201	2)

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UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG MAR 29 2013

5. Lease Serial No. NMNM 109387

RECEIVED.

la. Type of b. Type of			Vell	Gas Well Vork Over	Dry Deepen		ther			of Lan	Mana	genie	f Indian, III.	Allottee or T	ribe N	nme
	Sombrenom		:						,			7. T	Jnit or C	A Agreemen	t Name	and No.
2. Name of Logos Ope	erating, LL												.ease Na Jos #3	me and Well	No.	
3. Address	4001 North B Farmington,	Butler Ave, Bi NM 87401	uilding 7101					Phone 1 03-550-	No <i>. (includ</i> 1877	e area co	de)		API Well 043-21	l No. 135 <b>- 00 4</b>	- 2_	
4. Location			on clearly an	d in accor	dance with Fede	eral r						10.	Field an	d Pool or Ex	plorato	
At surfac		L & 1263'	FEL									11.	Sec., T.,	N5; DAKO , R., M., on B or Area Sec. 5	lock ar	d
				s above.												
At top pro	od. interval r	-										1		or Parish		State
At total de	opui	as above		D.D. 1			14 0		1 . 1 . 0.0	0010010			ndoval		N	
14. Date Sp 01/24/201			15. Date T 02/06/20		ed			ate Comj D & A	pleted 02/	23/2013 ady to Pro	d.		Elevatio 31' GL	ns (DF, RKI	3, R I , I	JL)*
18. Total D	epth: MD TVI			19. P	lug Back T.D.:	ME TV	D 6641	616	20	). Depth I	Bridge Plu	g Set:	MD TVD			
	lectric & Oth CBL/Neutro		cal Logs Run //Electric	(Submit co	ppy of each)				22	Was D	ell cored? ST run? onal Surve		No 🗖	Yes (Submit Yes (Submit Yes (Submit	report)	
23. Casing	and Liner R	lecord (Ref	oort all string	s set in we	211)		Ster - 0-			Sks. &				~~		
Hole Size	Size/Gra	ide Wt.	(#/ft.) T	op (MD)	Bottom (M	D)	Stage Ce Dep		1	Cement	(BI	7 Vol. 3L)	Cem	ient Top*	4	mount Pulled
12-1/4"	9-5/8" J-		0		319'		N/A		162 cu f	t	29 bbls		surfac		0	
7-7/8"	5-1/2" L-	-80 17	0		6686'		4915'		946 sks		309 bb	s	surfac	RCVD	0	0,40
														<u> </u>	ÓNS.	biv.
														D	ST.	3
24. Tubing Size	<u> </u>	Set (MD)	Packer Dep	th (MD)	Size		Depth Set	t (MD)	Packer De	pth (MD)	Si	ze	Dept	ih Set (MD)	P	icker Depth (MD)
2-7/8"	6.5#J5	5 4887'					<u> </u>									_ ` ` ´ ´
25. Produci	ng Intervals Formation		- т- т	op	Bottom			foration		r	Size	No	Holes		Perf	Status
A) Upper			6266'	<u> </u>	6272'		2 SPF			0.3		12		open		
B)																
C) D)												┣				
	racture. Trea	itment Cen	nent Squeeze	etc												
	Depth Interv								Amount an							
**6140'-62	272'		**Frac'e	d w/ 2000	) gal 10% HCI	, 3,9	914 bbls S	Slickwat	ter, 10,64	0# 100 r	nesh sar	d, & 40	,120# 4	0/70 sand		
					· · · · · · · · · · · · · · · · · · ·											
28. Product	ion - Interva	l A	1				1.12									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Wa BBI		Oil Grav Corr. Al		Gas Gravity		luction N abbing	Aethod			
3/19/13	3/19/13	3	>	3	TSTM	30		0011112		0		abbillg				
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas	Wa		Gas/Oil		Well Sta	itus					
Size	Flwg. SI	Press.	Rate	BBL	MCF	BB		Ratio		Shut-ir	ו					
28a. Produc	no tbg	0		24	TSTM	24	0									
Date First		Hours	Test	Oil	Gas	Wa		Oil Grav	vity	Gas	Pro	luction N	Aethod			<del></del>
Produced		Tested	Production	BBL	MCF	BB	L	Corr. Al	PI	Gravity						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Wa BBI		Gas/Oil Ratio		Well Sta	itus	ACC	EPIE	<b>HUNK</b>		
	SI												APR	n 7 201	3	· .
*(Sec instr	ructions and	spaces for		a on page				· · ·			•	EAR3			1	~ ¦ລ
			CON	IDE	NTAL		N	IMO(	3D M			RANIX BY_V	Lille	NFIELU ( am_[gi	mbe	kou

28b. Prod	luction - Int	erval C							
Date First	Test Date	Hours	Test	Oit	Gas	Water	Oil Gravity	Gas	Production Method
Produced		Tested	Production	BBL	MCF	BBL	Сонт. АРІ	Gravity	
•									
Choke	Tbg. Press	.Csg.		Oil	Gas	Water	Gas/Oil	Well Status	- <b>I</b> , , , , , , , , , , ,
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio		
	SI								
		<u> </u>			_ <u>l</u>	<u> </u>			
28c. Prod	uction - Inte	erval D							
	Test Date	Hours	Test	Oil	Gas	Water	Oil Gravity	Gas	Production Method
Produced		Tested	Production	BBL	MCF	BBL	Corr. API	Gravity	
Choke	Tbg. Press	.Csg.	24 Hr.	Oil	Gas	Water	Gas/Oil	Well Status	
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio		
	SI				1				
	SI								

29. Disposition of Gas (Solid. used for fuel, vented, etc.) Flowing well back, Gas TSTM.

30. Summary of Porous Zones (Include Aquifers):

31. Formation (Log) Markers Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

ai.	D-44	Descriptions Contants at	N.	Тор
Гор	Bottom	Descriptions, Contents, etc.	Name	Meas. Depth
1350 1480				
1910 1920				
3390 3420				
4220 4350				
5190 6240				
6266				
	1480 1910 1920 3390 3420 4220 4350 5190 6240	1350         1480         1910         1920         3390         3420         4220         4350         5190         6240	1350       1480       1910       1920       3390       3420       4220       4350       5190       6240	1350       1480       1910       1920       3390       3420       4220       4350       5190       6240

32. Additional remarks (include plugging procedure):

\*\*The lower Gallup perforations were frac'd with the Dakota based on the rock properties.

This is an amended report to correct #15 date TD reached and update frac data.

3. Indicate which items have been attached by placing a cl Electrical/Mechanical Logs (1 full set req'd.)	heck in the appropriate boxes:	DST Report	Directional Survey		
Sundry Notice for plugging and cement verification	Core Analysis	Other:			
4. I hereby certify that the foregoing and attached informa	tion is complete and correct as d	etermined from all avail	able records (see attached instructions)*		
Name (please print) Kristy Graham	Title	e Director of Administration and Engineering Support			
Signature Kny G	Date	03/29/2013			

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.

(Continued on page 3)



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MAR 22 2013

FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOGION Field Off	C. 15 Loano Serial N
WEEL COMPLETION OR RECOMPLETION REPORT ADDIENAND LIGHT	ing. Duise senar r

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Form 3160-4-

(March 2012)

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<u> </u>	N	VELL	COM	PLET		RECOMPLI	ETI	ON REPORT	A≱Ω urea	HARG u of L	ton F .and	ield O Manag	ffice   jeine	.ease S <u>NM 1</u>	Cerial No. 09387		
<ul><li>1a. Type of</li><li>b. Type of</li></ul>	Well Completio		Oil Well New Wo		Gas Well Work Ove	Dry Deepen		Other Plug Back 🔲 Dil					6.1	f India	n, Allottee or		
			Other:			••••							7. l.	Init or	CA Agreeme	ent N	ame and No.
2. Name of Logos Op	Operator erating, L	LC												ease Nos #3	iame and We	ll No	
3. Address	4001 North Farmington	Butter A	ve, Buildir 401	ig 7101				3a, Phone 303-550-		clude ai	ea cod	'c)	9. 1	PI We			<b>A</b>
4. Location				learly a	und in accor	dance with Fede	eral						10.	Field a	ind Pool or E	xplo	ratory
At surfa		SL & 1	263' FE	L									. 11.	Sec., T	5W5; DAKC ., R., M., on or Arca Sec	Bloc	k and
• •	od, interval			Same	as above								12.	Count	y or Parish		13. State
At total d	<sub>cpth</sub> Sam	e as a	ibove.											ndova			NM
14. Date Sp 01/24/201				5. Date 2/08/2				16. Date Com □D & A		02/23/   Ready		I		Elevat 1' GL	ions (DF, Rk	(B, F	8T. GL)*
18. Total D	epth: MI TW		95'		19. P	lug Back T.D.:	M TV	D 664T 661	6	20. D	opth B	ridge Plug		MD TVD			
21. Type E GR/CCL/	ilectric & Ot CBL/Neuti	her Me ron/De	ensity/El	ectric						1	Vas DS	ll cored? 'T run? nal Survey	א <b>[2]</b> א ע <b>[2]</b> א	lo 🗋 lo 📘	Ycs (Subm Yes (Subm Yes (Subm	it rep	port)
23. Casing	T							Stage Cementer	Ne	of Ski	i. &	Sturry	Vol.			1	
Hole Size	Size/G		₩i. (∰i	0	Тор (MD)	Bottom (M	1.2)	Depth N/A	Тур	e of Ce		(Bİ			ment Top*	0	Amount Pulled
<u>12-1/4"</u> 7-7/8"	9-5/8" J 5-1/2" L		36 17	0		6686'		4915'	162 946			29 bbls 309 bbl	s	surfa surfa		0	<u></u>
																11.71.7	
	+															<b>í</b>	25'13
	+														<u> </u>	5	<u> </u>
	Record	l		1	1 11 1125	_L			I					·		L	. `
		<u>Sei (M</u> 55 48		cker De	pth (MD)	Size		Depth Set (MD)	Packe	r Depth	(MD)	Siz	ic I	Dej	pth Set (MD)	+	Packer Depth (MD)
25. Product	ing Interval				Тор	Bottom		26. Perforation Perforated In			1	Size	No. I	1			erf. Status
A) Upper				6266	100	6272'		2 SPF			0.38		12	10105	open		
B)																	
C) D)																	
27. Acid. F			. Cement	Squeez	c, ctc.							<u></u>	L				
**6140'-62	Depth Inter	val		**Eroc	d with 47		1.30	14 bbls slickwate		( and Ty			40.120	)# 40	/70 sand		
0140-02	<u> </u>			1140	u with 47	0015 10 % 1101	, 33		51, 10,	000#1		511 54110	, 40,120	J# 40/	or o sand		
	·																
28. Product	ion - Interv															<b>-</b>	
Date First	Test Date	Hours		t duction	Oil BBL	Gas MCF	Wa BB	1		Ga	s avity		uction M abbing				
Produced	3/19/13	3	,	-	3	TSTM	30				u u uj	300	abbillig				
Choke	Tbg. Press.	.Csg.	241		fil	Gas	Wa	ter Gas/Oil		1	ell Stati	.is					
Size	SI	Press.	Rat		BIBL	MCF	BB	-		Sł	nut-in						
28a, Produc	no tbg	0 val B			24	TSTM	24			L							
Date First Produced	Fest Date	Hours Fester		luction	Oil BBL	Gas MCF	Wa BB			Ga Gra	s avity	Prod	uction M	cthod			
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 I Rate	۹r.	Oil BBL	Gas MCF	Wa BB			We	ell Stati	15		Ω	<u> </u>		
	\$1													A	y and the	いい	or off a regime of the
*(See instr	uctions and							പലരംപ							MAR	25	2013

NMOCD  $\sim$ 



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	í									
28b. Prod	uction - Inte	aval C								
Date First	Post Date	Flours	l'est	Oil	Gas	Water	Oil Gravity	Gas	Production Method	· · · · · · · · · · · · · · · · · · ·
Produced		Tested	Production	BBL	MCF	BBL	Corr. API	Gravity		
۲.										
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas	Water	Gas/Oil	Well Status		
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio			
	SI									
28e. Prod	Luction - Into	t aval D					]	l		
Date First	Test Date	Hours	Fest	Oil	Gas	Water	Oil Gravity	Gas	Production Method	•
Produced		Tested	Production	BBL	MCF	BBL	Corr. API	Gravity		
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas	Water	Gas/Qil	Well Status	. 1	
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio			
	SI									
29. Dispos	sition of Gas	s (Solid, n	sed for fuel, ve	ented. etc.	)		······			

Flowing well back, Gas TSTM.

30. Summary of Por	ous Zones (	Include Aquife	is):	31. Formation (Log) Markers	
Show all importa including depth in recoveries.	nt zones of p aterval tested	orosity and con l, cushion used.	tents thereof: Cored intervals and all drill-stem tests, time tool open. flowing and shut-in pressures and		
Formation	T	Bottom	Demointieur Contente etc	News	Тор
romanon	Тор	15011010	Descriptions, Contents, etc.	Name	Meas, Depth
Ojo Alamo Kirtland	1350 1480				
Fruitland Pictured Cliffs	1910 1920				
Cliffhouse Menelee	3390 3420				
Point Lockout Mancos	4220 4350				
Gallup Greenhorn	5190 6240				- · · ·
Dakota	6266				

32. Additional remarks (include plugging procedure):

\*\*The lower Gallup perforations were frac'd with the Dakota based on the rock properties.

Electrical/Mechanical Logs (1 full set req'd.) Sundry Notice for plugging and coment verification	Geologic Report	DST Report	Directional Survey	
34. Thereby certify that the foregoing and attached informat Name (please print) Kristy Graham Signature			able records (see attached instructions)* stration and Engineering Support	. `
Signature 4745	Date	, 03/21/2013		••••••••••••••••••••••••••••••••••••••

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Form 3160- (March 2012				DEF	UN PARTME	UND ( ITED STA NT OF TH LAND MA	TES E Iì	S NTERIC				CE Ar 2		/ED			O. 10	ROVED 04-0137 r 31, 2014
	w	ELL	сомғ			RECOMPL						aton l	Field	0ff	case Se			
la. Type of V			Dil Well		Gas Well			Other	0	urea	100		Ma	I HIS IN I I I I MADE		, Allottce or	Tuibo	Nome
b. Type of (				11 <b>H</b>	Work Over	Diy Deepen		Plug Back	🗖 Diff	. Resvi	r.,							
		(	Other:													CA Agreeme		ne and No.
<ol> <li>Name of Logos Ope</li> </ol>	Operator erating, LL	с													ease Na os #3	ame and Wel	ll No.	
3. Address	4001 North E Farmington, I	Butler Av	re, Buildir	ig 7101					a. Phone 1 303-550-		clude a	irea cod	e)	9. A	PI Wel	II No. 135 <b>- 00</b>		
				learly a	ind in accora	lance with Fed	eral			1071				10. 1	Field ar	nd Pool or E	xplora	
At surface	741' FSI e	L & 12	263' FE	L												W5; GALL	•	,
				Same	as above.											or Area Sec.		
At top pro	od. interval r	eporte	d below	Gamo										12. (	County	or Parish		13. State
At total de	<sub>epth</sub> Same	e as al	oove.											San	doval			NM
14. Date Spi 01/24/2013				5. Date )2/06/2	T.D. Reache	d			Date Comp D & A			/2013 to Prod			Elevatio 1' GL	ons (DF, RK	(B, R]	ſ, GL)*
18. Total De		669				ug Back T.D.:	MI TV	D -6641		1/	~ ~ ~	Depth B		lug Set:	MD			
21. Type El			hanical I	.ogs Rut	n (Submit co	py of each)	1 V	<u>'D</u>	601	0	22.	Was we		? 🔽 N		Yes (Subm		
GR/CCL/C												Was DS Directio		vey? 🔽 N		Yes (Subm Yes (Subm		
23. Casing	1	T			0	<u>́</u>		Stage C	ementer	No.	o, of Sl	ks. &	Slu	rry Vol.			r	
Hole Size	Size/Gra		Wt. (#/f	<u> </u>	Top (MD)	Bottom (N	4D)	De	pth	Туре	e of C		. (	BBL)		nent Top*		Amount Pulled
<u>12-1/4"</u> 7-7/8"	9-5/8" J- 5-1/2" L-		36 17	0		319' 6686'		N/A 4915'		162 c 946 s			29 bt 309 t		surfac surfac		0	
	•			Ť						0400	0110			/010	Juna			
																		2'13
																	DN9 IST	<u>. DIV.</u>
24. Tubing						•							L				101	
Size 2-7/8"	Depth 8			icker De	pth (MD)	Size		Depth Se	et (MD)	Packer	r Deptł	1 (MD)		Size	Dep	th Set (MD)		Packer Depth (MD)
25. Produci	ng Intervals Formation			··· ···	T	Detter			rforation l			t	C'		T . 1 .			6.64.4
A) Gallup*		1		5024'	Тор	Bottom 6236'		Per	forated In	tervat		0.38	Size "	No. F 120	ioles	open	Per	f. Status
B)																		
C) D)																		
27. Acid, Fr	racture, Trea	itment,	Cement	Squeez	e, etc.													
]	Depth Interv	val		Place	e refer to s	ection #32 fo	or fra	e dotaile		Amount	t and T	ype of M	Materia	1				
				11003		ection #32 ic	1 114		·									
28. Producti	ion - Interva	ıl A							•									
Date First Produced	Test Date	Hours Tested	Tes	t	Oil BBL	Gas MCF	Wa BB	ater 1	Oil Grav Corr. Al			ias iravity		roduction M lowing	ethod			
3/2/13	3/4/13	24			120	тот	74					navny		lowing				
Choke	Tbg. Press.	Csg.	24		Oil	Gas	Wa	nter	Gas/Oil			Vell Stat	us					
	SI	Press.	Rat	e	BBL	MCF	BB		Ratio			Shut-in						
16/64 28a. Produc	no tbg	15 p: al B	si		120	TSTM	74	41										
		Hours Tested		t duction	Oil BBL	Gas MCF	Wa BB	ater SL	Oil Grav Corr. Al	•		ias iravity	Pı	roduction M	ethod			
	Tbg. Press. Flwg. SI	Csg. Press.	24 Rat	Hr.	Oil BBL	Gas MCF	Wa BB	ater BL	Gas/Oil Ratio		v	Vell Stat	us	Ą	CCEI	PTED FO	R R	ECORD
*(See instr	uctions and	spaces	for addi	tional d	ata on page 2									· · · · · · · · · · · · · · · · · · ·	A	PR 0 2	200	<u>.</u>
		1	C	OM				ſ	NMO	CD				FAF	<b>Ben</b> ti	atton fie	100	FFICE
			\$7 Y	w 1910	فالتبيين القرابي				P					BY_	Wi	lliam	lam	bekou

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Date First	Test Date	Hours	Test	Oil	Gas	Water	Oil Gravity	Gas	Production Method	
Produced	}	Tested	Production	BBL	MCF	BBL	Corr. API	Gravity		
•										
Choke	Tbg. Press	.Csg.	24 Hr.	Oil	Gas	Water	Gas/Oil	Well Status		
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio			
	51							}		
28c. Prod	uction - Inte	rval D			I			I		
	Test Date	Hours	Гest	þil	Gas	Water	Oil Gravity	Gas	Production Method	
Produced	1	Tested	Production	BBL	MCF	BBL	Сонт. АРІ	Gravity		
	Į				ł			1		
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas	Water	Gas/Oil	Well Status	1	
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio			
	SI									

31. Formation (Log) Markers

29. Disposition of Gas (Solid. used for fuel, vented, etc.) Flowing well back, Gas TSTM.

30. Summary of Porous Zones (Include Aquifers):

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

				Тор
Тор	Bottom	Descriptions, Contents, etc.	Name	Meas. Depth
1350 1480				
1910 1920				
3390 3420				
4220 4350				
5190 6240				
6266				
	1480 1910 1920 3390 3420 4220 4350 5190 6240	1350       1480       1910       1920       3390       3420       4220       4350       5190       6240	1350       1480       1910       1920       3390       3420       4220       4350       5190       6240	1350 1480         1350           1390 1910

32. Additional remarks (include plugging procedure):

\*\*The lower Gallup perforations were frac'd with the Dakota based on the rock properties.

5024'-5150' Frac'd w/ 2000 gal 10% HCl, 6,633 bbls Slickwater, 10,000# 100 mesh, & 90,500# 40/70 sand 5268'-5392' Frac'd w/ 2000 gal 10% HCl, 2,401 bbls Slickwater, 10,000# 100 mesh, 94,000# 40/70 sand, & 2,300,000 scf N2 5440'-5504' Frac'd w/ 2000 gal 10% HCl, 2,245 bbls Slickwater, 10,840# 100 mesh, 93,805# 40/70 sand, & 2,642,562 scf N2 5838'-6050' Frac'd w/ 2000 gal 10% HCl, 6,072 bbls Slickwater, 10,000# 100 mesh sand, & 71,065# 40/70 sand \*\*6140'-6236' Frac'd w/ 2000 gal 10% HCl, 3,914 bbls Slickwater, 10,640# 100 mesh sand, & 40,120# 40/70 sand

This is an amended report to correct #15 date TD reached, the frac detail, and to include tubing data.

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 inform	nation is complete and correct a	s determined from all avail	able records (see attached instructions)*
Name (please print) Kristy Graham	Т	itle Director of Admini	stration and Engineering Support
Signature France	D	ate 03/29/2013	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1 false, fictitious or fraudulent statements or representations			Ily to make to any department or agency of the United States any
(Continued on page 3)	CONFIDENT	AL	(Form 3160-4, page 2)

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Form 3160-4	
(March 2012)	
'	

Choke

Size

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- (March 20)	7			DEPART	UNITED ST MENT OF T OF LAND M	HE I	NTERIC	-	Ę	8EC		EIV		Ç		I APPROV IO: 1004-0 Detober 31	0137	`.
	W	ELL C	OMPL	ETION O	R RECOMP	LETI	ON RE	PORT	AND L	OGMAR	\$ (	08 <b>20</b>	<b>1</b> 5. L	ease Se VM 10	- rial No. 9387			<u> </u>
la. Type of b. Type of		n: 🔽 N	il Well ow Well hor:	Gas We Work O	II Dry ver Deeper	п <b>П</b> с	)ther Plug Baek	Dif	Fa Buile	arming au of L	tor .ar	n Field nd Man				Tribe Nai ent Name i	me and No.	<u></u>
2. Name of Logos Op	Operator												8. La	ase Na	me and We			
3. Address	4001 North I	Butler Ave	. Building 7	101						nde areu co	ode)	)	Logo 9. Al	Y Wel	No.			<u></u>
4. Location	Farmington, of Well (R			nly and in acc	cordance with F	ederal)		03-550- nts)*	1877				10. F	field an	135-86 d Pool or E	sploratory		001
At surfac	741' FS	L & 12€	3' FEL										11. S	ce., T.,	N5; GALL R., M., on or Area Sec	Block and		980
At top pro	ad. interval	reported		ame as abo <sup>,</sup>	ve.										or Parish		State	
	upth Same													loval	04 1 01 01	NM		
At total do 14. Date Sp 01/24/201	udded		15.1	9 <del>110 (19)</del> Real 08/2013	ehod			Date Com		2/23/2010 cady to Pro				levatio	ons (DF, RI			
18. Total D	epth: MD TV		· · · · ·	19.	Plug Back T.D.	.: ME TV	) <u>664</u> 44 1)	661	6	20. Depth	Bri	dge Plug 8		MD 'VD				`
GR/CCL/C	CBL/Neutr	on/Den:	sity/Elec	lric	copy of each)					22. Was v Was I Direct	)ST		V No V No V No	, 🗖	Yes (Subr Yes (Subr Yes (Subr	ut report)	) .	
Hole Size	and Liner F		<i>Keport all</i> Vt. (#/ft.)	strings set in Top (ME		(MID)	Stage C		1	of Sks. &	T	Slurry V		Cem	ent Top*	An	nount Pull	ed
12-1/4"	9-5/8" J			0	319'		De N/A	pth	162 cu	of Cement ft		( <u>13131.</u> 29 bbls	÷	surfac		0	····	
7-7/8"	5-1/2" L	-80 1	7.	0	6686'		4915'		946 sk	s		309 bbls		surfac	e	0	 	
<b></b>				·····			· · · · · · · · · · · · · · · · · · ·				╉			<u>.</u>	ONINL	00 10	);4D	
·····												·····				0.885		
24. Tubing	Record					]			l			<u>-</u>				IND. U ICT 3		
Size -	Depth 3	Set (MID)		er Depth (MD)	Size		Depth Se	a (MD)	Packer I	Depth (MD)	)	Size		Dept	h Sel (MD)		ker Depth	(MD)
To b 25. Produci		rted on	1st del	livery date.			26. Pa	rforation	Record									· · · · · ·
	Formatio	n		Тор	Botton	3	Par	forated In	terval			ize	No. H	oles		Perf. St	tatus	
A) Gallup*				024'	6236'				··	0.3			120		open			
C)																		·····
D)													OPT Theory in the					
27, Acid, F	racture, Trea Depth Inter		Cement Sq	neeze, ele.				?	Amount a	nd Type of	ſ Ma	aterial			<u> </u>		···	
	'		PI	ease refer to	o section #32	for frac	c details.											
<u> </u>						••• <u>•••</u> •••									A 144			
28, Product	r							1										
Date First Produced	Fest Date	Hours Tested	Fest Produc		Gas MCF	Wat BBI	[.,	Oil Grav Corr. Al		Gas Gravity		flowii	ation Me ng	thod				
3/2/13 Choke	3/4/13 Fbg. Press.	24	24 Fir.	▶ 120 Oil	Cias	74 Wat		Gas/Oil		Well St	a1110						·	
Size	Hog, Tress, Flwg, Sl	Osg. Press.	Rate	BBL,	MCI <sup>2</sup>	BBI		Ratio		Shut-i								
16/64	no tbg	15 psi		▶ 120	TSTM	74	1	<u> </u>										·
28a. Produc Date First	tion - Interv Fest Date	al B Hours	Fest	bil	Gas	Wat	er	Oil Grav		Gas		Produc	tion Mc	thod	ACCEN		<u>Ath Fir</u>	<u>8828</u> 00.10
Produced	i ost Dino	Tested	Produc	1	MCF	BBI		Corr. Al	•	Gravity								

Well Status

98013

MAR 1 2 2013 -

FARMINGTON FIELD OFFICE BY\_TL\_Salvers\_

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

Press.

Fbg, Press, Csg.

Flwg.

SI

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Ōil

BBL

24 Hr.

Rate



Gas MCF

Water

BBL

Gas/Oil

Ratio

2812 Dave	luction - Int-	annal C								······
	Fest Date	Hours Tested	Fest 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		
	uction - Inte		····						······································	
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	ffbg, Press Flwg, St	.Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		. `
	sition of Ga I back, Gas T		sed for fuel, ve	nted. etc.)			<b>I</b>			

31. Formation (Log) Markers

30. Summary of Porous Zones (Include Aquifers):

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

					Тор
Formation	Төр	Bottom	Descriptions, Contents, etc.	Name	Meas. Depth
o Alamo Iland	1350 1480				· ·
illand lured Cliffs	1910 1920		· · ·		
llhause nefee	3390 3420				
int Lookout neos	4220 4350				·
llup senhorn	5190 6240				
kota	6266				
					、
llhouse neloo int Lookoat neos Nap 20nhorn	3390 3420 4220 4350 5190 6240				

32. Additional remarks (include plugging procedure):

\*\*The lower Gallup perforations were frac'd with the Dakota based on the rock properties.

5024`-5150` Frac'd w/ 4,348 bbls Slickwater, 10,000# 100 mesh, & 90,500# 40/70 sand
5268'-5392' Frac'd w/ 2,447 bbls Slickwater, 10,000# 100 mesh, & 94,000# 40/70 sand
5440'-5504' Frac'd w/ 2,293 bbls Slickwater, 10,000# 100 mesh, 100,359# 40/70 sand, & 2,642,562 scf N2
5838'-6050' Frac'd w/ 3,763 bbls Slickwater, 10,000# 100 mesh sand, & 71,065# 40/70 sand
*6140'-6236` *Frac'd w/ 2,342 bbls Slickwater, 10,000# 100 mesh sand, & 40,120# 40/70 sand

<ul> <li>Electrical/Mechanical Logs (Full set req'd.)</li> <li>Sundry Notice for plugging and cement verification</li> </ul>	Geologic Report	DST Report	Directional Survey	
34. Thereby certify that the foregoing and attached informat Name (please pring) Kristy Graham	ion is complete and correct as (		able records (see attached instructions)* stration and Engineering Support	· · · ·
Signature that God		o <u>03/07/2013</u>		

(Continued on page 3)



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Form 3	3160-4	
(Marel	n 2012)	
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DEPA	ARTMEN	NT OF T	HE INT	ERIOR

BUREAU OF LAND MANAGEMENT

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FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014

Salvers

5. Lease Serial No.

MAR 22 2013 WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Farmington Field OfficeNMNM 109387 Bureau of Land Managenie If Indian, Allottee or Tribe Name Gas Well Dry Other Bureau C Work Over Deepen Plug Back Diff. Resvr., la. Type of Well Oil Well b. Type of Completion: New Well Other: MV Dry Hole Completion 7. Unit or CA Agreement Name and No. 2. Name of Operator 8. Lease Name and Well No. Logos Operating, LLC Logos #3 3. Address 4001 North Butter Ave, Building 7101 Farmington, NM 87401 9. API Well No. 3a. Phone No. (include area code) 505-436-2627 30-043-21135- OOXI 10. Field and Pool or Exploratory 4. Location of Well (Report location clearly and in accordance with Federal requirements) WC 22N6W5; Mesa Verde (0) 9900 98014 741' FSL & 1263' FEL At surface 11. Sec., T., R., M., on Block and Survey or Area Sec. 5, T22N, R6W Same as above At top prod. interval reported below 12. County or Parish 13. State At total depth Same as above. Sandoval NM 17. Elevations (DF, RKB, RT, GL)\* 14. Date Spudded 15. Date T.D. Reached Date Completed 02/23/2013 01/24/2013 02/08/2013 D & A Ready to Prod. 7181' GL 18. Total Depth: MD 19. Plug Back T.D.: 20. Depth Bridge Plug Set: MD 6 MD 6695 616 TVD TVD TVD Yes (Submit analysis) Yes (Submit report) 21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Was well cored? Z No 🗾 No Was DST run? GR/CCL/CBL/Neutron/Density/Electric Directional Survey? No No Yes (Submit copy) 23. Casing and Liner Record (Report all strings set in well) No. of Sks. & Slurry Vol. Stage Cementer Size/Grade Wt. (#/ft.) Hole Size Top (MD) Bottom (MD) Cement Top\* Amount Pulled Depth Type of Cement (BBL) N/A 12-1/4" 9-5/8" J-55 36 0 319 162 cu ft 29 bbls surface 0 7-7/8" 0 0 5-1/2" L-80 17 6686' 4915' 946 sks 309 bbls surface RCUN HAR 75 1 9 ARKE DRI Tubing Record Size Depth Set (MD) Packer Depth (MD) Size Depth Set (MD) Packer Depth (MD) Size Depth Set (MD) Packer Depth (MD) To be reported on 1st delivery date. Producing Intervals 26 Perforation Record No. Holes Perf. Status Formation Top Bottom Perforated Interval Size A) Mesa Verde cemented\*\* / 3727 3953' 0.38" 36 B)  $\overline{C}$ D) 27. Acid, Fracture, Treatment, Cement Squeeze, etc. Amount and Type of Material Depth Interval 750 gal 15% HCI acid 3727'-3953 3727'\*\* 100 sks type 3 cmt\*\* 3908'-3918', 3953'\*\* 175 sks type 3 cmt\*\* 28. Production - Interval A Date First Test Date Hours Water **Dil Gravity** Production Method Test Oil Gas Gas Produced Production BBL MCF BBL Corr. API Tested Gravity  $\triangleright$ ----24 Hr. Choke Tbg. Press. Csg. Water Gas/Oil Well Status Oil Gas Flwg. BBL Size Press MCF BBL Ratio Rate SI Ð 28a. Production - Interval B Hours Date First Test Date Test Oil Gas Water Oil Gravity Gas Production Method Produced Production BBL MCF BBL Corr. API Tested Gravity -Choke 24 Hr. Well Status I'bg. Press Csg. Oil Water Gas/Oil Gas Size Flwg Press. Rate BBL MCF BBL Ratio ACCEPTED FOR RECORD sт Þ 02 \*(See instructions and spaces for additional data on page 2) MAR 2 5 2013 NMOCL FARMINISTON FIELD OFFICE

PV

a'	- 1 F	

28b. Prod	uction - Into	arval C							•
Date First Produced	Fest Date	Hours Fested	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	Qil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	- <b>I</b>
28c. Produ	action - Inte	rval D			<b>I</b>				······································
Date First Produced	Fest Date	Hours Tested	Fest Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	fbg, Press, Flwg, SI	Csg. Pross.	24 Hr. Rate	Oil BBL	Gas MCF	Water BI3L	Gas/Oil Ratio	Well Status	· · ·

31. Formation (Log) Markers

29. Disposition of Gas (Solid, used for fuel, vented, etc.) Flowing well back, Gas TSTM.

30. Summary of Porous Zones (Include Aquifers):

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

					Тор •
Formation	Тор	Bottom	Descriptions, Contents, etc.	Name	Meas. Depth
Ojo Alamo Kirtland	1350 1480				
Fruitland Pictured Cliffs	1910 1920				
Cliffhouse Menefee	3390 3420				· ·
Point Lookout Mancos	4220 4350				
Gallup Greenhorn	5190 6240				
Dakota	6266				

32. Additional remarks (include plugging procedure):

Logos completed a cement squeeze on the Mesa Verde perforations from 3727'-3953' to shut off excessive water. Logos perforated and swabbed approximately 300 bbls of water in 3 days with no show of oil. Logos swabbed ~265 barrels of water on 3/8/13-3/9/13 from perforations 3908'-3918'. Logos swabbed ~40 barrels of water from perfs @ 3727' on 3/11/2013. Logos performed the squeeze work on 3/12/2013-3/16/2013. Please see attached.

33. Indicate which items have been attached by placing a ch	eck 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. Thereby certify that the foregoing and attached informat	ion is complete and correct as o	letermined from all avail	able records (see attached instructions)*	<u> </u>
Name (please print), Kristy Graham	Titl	<ul> <li>Director of Admini</li> </ul>	stration and Engineering Support	
Signature ty y	Dat	e 03/22/2013		
, 0 =				
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 12	12. make it a crime for any pers	son knowingly and willfu	lly to make to any department or agency of the Unit	ted States

false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)



(Form 3160-4, page 2)

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Form 3160-4	4
(March 2012)	

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UNITED STATES

DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014

P			E	BURE	AU OF	LAND MA	AN/	AGEME	NT		M	AR	29 20	1:		Expires: C		or 31, 2014
	W	ELL C	OMPL	ETIC	N OR F	RECOMPL	ETI	ON REI	PORT		OG irmin	igto	n Field	C	case Ser NM 109	ial No. 9387		· · · · · · · · · · · · · · · · · · ·
la. Type of	Well		il Well		Jas Well	Dry		Other		- <u>120116</u>	an Oi	La	n <del>a Man</del>			Allottee or	Trib	v Name
b. Type of	Completion				Vork Over Iole Com	Deepen pletion		Plug Back	L Diff	f. Resvr.,				7. L	Init or C.	A Agreeme	nt Na	ame and No.
2. Name o Logos Or	FOperator perating, LI	LC													.case Nai os #3	nc and We	ll No.	
	4001 North Farmington,	Buller Ave	e, Building	7101					. Phone 1 05-436-2		ide area	a cod	e)	9. A	PI Well	No. 135 - DO	~ \	
4. Location	-			arly and	d in accord	lance with Fed	eral			2021				10.	Field and	Pool or E	plor	
At surfa		SL & 126	53' FEL											11.	Sec., T.,	N5; Mesa R., M., on r Area Sec.	Block	de (O) 98014 and 2N, R6W
• •	od. interval		below	ame a	s above.									12.	County o	or Parish		13. State
At total d	<sub>lepth</sub> Sam	e as ab	ove.												doval			NM
14. Date Sp 01/24/20				Date T. 06/20	.D. Reache 13	od.		16. L	Date Comp D & A	pleted 0;	2/23/2( cady to				Elevation 1' GL	ns (DF, RK	.B, R	T, GL)* ` `
18. Total E	epth: ME TV					ug Back T.D.:	MI TV	D CONT	6616		20. Dej	pth B	ridge Plug	Sct:	MD TVD			
-	CBL/Neutr			·	(Submit co	py of each)					Wa	as DS	ll cored? T run? nal Survey?	И <b>Ц</b> И <b>Ц</b> И <b>Ц</b>	io 🗖	Yes (Subm Yes (Subm Yes (Subm	it rep	ort)
23. Casing	and Liner I	Cecord (	Report al	l string: T	s set in wei	<i>ii)</i>		Stage Co	amantar	No. 4	of Sks.	ų.	Slurry	Val				· · · · · · · · · · · · · · · · · · ·
Hole Size			Nt. (#/ft.)	<u> </u>	op (MD)	Bottom (N	ID)	Der		Туре о	of Cem		(เชิย์เ			ent Top*		Amount Pulled
<u>12-1/4"</u> 7-7/8"	9-5/8" J 5-1/2" L		6 7	0		319' 6686'		N/A 4915'		162 cu 946 sk			29 bbls 309 bbls		surface		0	
				Ĵ						0 10 0.	<u> </u>		000 0010		barrad	<u> </u>		
							_									RCVE	AF	PR 2 '13
																OIL G	ON	<u>S. DIV.</u>
24. Tubing												l					95	T. 3
Size To l		Set (MD) rted on	) Pack 1st de	er Dept livery		Size		Depth Set	it (MID)	Packer [	Depth (N	4D)	Size		Depth	Set (MD)		Packer Depth (MID)
	ing Intervals	;							foration l			L		1				
A) Mesa	Formatio /erde	n	3	То 727'	op	Bottom 3953'		Perl	forated Int	terval		0.38'	Size '	<u>No. F</u> 36	lolcs	cemente		rf. Status
13)		-																
C)		•						~~~~										
D)	racture, Tre	almont (	· ·		ota						[							
27. Acid, F	Depth Inter								/	\mount a	nd Type	c of N	latorial					
3727'-395	3'				15% HC													·
3727'**	8', 3953'**				type 3 cr													
				0 0110	<u>()po o o</u> ,													
28. Product Date First	ion - Interva Test Date	al A Hours	l'est		Oil	Gas	Wa	ter	Oil Grav	ity	Gas		Produ	ction M	cthod			
Produced	i cat ijate	Tested	Produ	ction	BBL	MCF	вв		Corr. AF	•	Grav	/ity	, roux		Juniou			
Choke	Tbg. Press.		24 Hr.		Oil BBL	Gas MCF	Wa BB		Gas/Oil Ratio		Well	Stati	15					
Size	Flwg. SI	Press.	Rate	A	RRP	MCF	1313.	L	Kano									
28a, Produ	tion - Interv	al B									1	<u> </u>						, ```
Date First Produced	Test Date	Hours Fested	Fest Produ		Oil BBL	Gas MCF	Wa BB		Oil Grav Corr. AF		Gas Grav	vity	Produ	ction M	cthod			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate		Oil BBL	Gas MCF	Wa BBI		Gas/Oil Ratio		Well	Statu	lis		ACCE	PTEDF	RO	RECOND
				-					<u> </u>									<u></u>
*(See inst	uctions and	spaces fo	or additio 🔉 🔊	nal data A A A B	i on page 2				UIRA	ሰውጮ						APR U		
			CC		的目	NTAL				ocd Y				f	ARNIA 3Y <u>\\</u>	GTONF Lillian	ТЕЦ Л.—	) OFFICE Tambekou

285. Prod	uction - Inte	orval C								
Date First Produced	Fost Date	Hours Tested	Fest 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	Ĝas/Oil Ratio	Well Status	- J	
28c. Prod	uction - Inte	rval D		·			•			
Date First Produced	l'est 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		
Flowing well	back, Gas T	STM.	(Include Aqui		)	K,	····		tion (Log) Markers	· · ·

30. Summary of Porous Zones (Include Aquifers):

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

		D. II			Тор
Formation	Тор	Bottom	Descriptions, Contents, etc.	Name	Meas. Depth
Ojo Alamo Kirlland	1350 1480				
Fruitland Pictured Cliffs	1910 1920				
Cliffhouse Menefee	3390 3420				. x
Point Lookout Mancos	4220 4350				
Gallup Greenhorn	5190 6240				· · ·
Dakota	6266				
					· · ·
				[	

32. Additional remarks (include plugging procedure):

Logos completed a cement squeeze on the Mesa Verde perforations from 3727'-3953' to shut off excessive water. Logos perforated and swabbed approximately 300 bbls of water in 3 days with no show of oil. Logos swabbed ~265 barrels of water on 3/8/13-3/9/13 from perforations 3908'-3918'. Logos swabbed ~40 barrels of water from perfs @ 3727' on 3/11/2013. Logos performed the squeeze work on 3/12/2013-3/16/2013. Please see attached.

This is an amended report to correct #15 date TD reached.

Electrical/Mechanical Logs (1 full set req`d.)	Geologic Report	DST Report	Directional Survey	
Sundry Notice for plugging and cement verification	Core Analysis	Other:		
. Thereby certify that the foregoing and attached informa Name (please print) Kristy Graham	tion is complete and correct as		able records (see attached instructions)* stration and Engineering Support	
Signature Ant		e 03/28/2013		

(Continued on page 3)



(Form 3160-4, page 2)