UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

MIELL COMPLETION OR RECOMPLETION REPORT AND LOG

(waren 201	.,					ITED STAT							DB2 C	CD		FORM	APPROVE)	
	•	١				NT OF THE				Ope	rator	Cop	y			OMB N	0. 1004-013	17	
				BURE	AU OF	LAND MA	NA	GEMI	ENT		A	AUG	272	012		Expires, O	etober 31, 20	014	
WELL COMPLETION OR RECOMPLETION REPORT AND LOG													5 I.	5 Lease Serial No NMNM 033312A					
													D 6 1	6 If Indian, Allottee of Tribe Name					
b Type of	Completion			_		Deepen [□ Pt	ng Back	Diff	. Resvr.							nt Name and		
2. Nama of	Other Natural Gas Storage Name of Operator														14-08-0001-14277 (NMNM 70953X) 8 Lease Name and Well No.				
Enstor Grama Ridge Storage and Transportation, LLC														Gra	Grama Ridge Morrow Unit No. 8				
3. Address 20329 State Highway 249, Suite 400, Houston, TX 77070 3a. Phone No. (include area code) 281-374-3050														30-	30-025-39922				
4 Location of Well (Report location clearly and in accordance with Federal requirements)*															10 Field and Pool or Exploratory Morrow Formation, Grama Ridge				
126' FSL AND 1,048' FEL OF SEC 4, TOWNSHIP 22S, RANGE 34E At surface															11 Sec., T. R. M. on Block and Survey of Area				
	208' FSL and 1,103' FEL														Sec 4, T-22S, R-34E				
At top prod interval reported below 12. County or Parish 13 State														ate					
At total depth 213' FSL and 1,107' FEL Lea County NM															-				
14 Date Spudded 15. Date T D Reached 16 Date Completed 05/05/2012 11/02/2010 01/21/2011 D & A Ready to Prod.											17 Elevations (DF, RKB, RT GL)* 3,623' RKB								
18, Total De		13.4			19 PI	ug Back T D.		13,36			20. De	pth B	idge Plug		MD TVD				
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) 22. Was well cored? Vo Yes (Submit analysis)																			
Platform Express, Caliper, Temperture, CBL, Casing Inspection Was DST run? Z No Yes (Submit report)																			
23. Casing	T							Stage (Cementer	No	of Sks.	æ	Shury	Vol			l		-
Hole Size	Size/Gia		Wi. (#/1		op (MD)	Bottom (MI		D	epth	Туре	of Cen		(BB			ent Top*		int Pulled	_
26" 17-1/2"	20"/X52		0.375"\	vt	0'	60'		NA		125						e (CIR)			_
12-1/4"	13-3/8"/ 9-5/8"/N	-	54.5 40.0	_	0'	1,779' 5,610'		3 004'		1,475						e (CIR)			-
8-3/4"	7-0"/P11		29.0		0,	11,450'		ļ 			,110 sks ,480 sks		459			surface (CIR) 3,723' (TS)		NA .	
6-1/8"	4-1/2"/P		13.5	11,2		13,456		NA					63			(CBL)	<u></u>		-
0 170	4-1/2/1	110	10.0	11,2	24	10,400	-				51.5				11,22				-
24. Tubing																			_
Size 4-1/2"	Depth 5	Set (MI)) Pa	ckei Dept	h (MD)	Size 2-7/8"		Depth S	iet (MD)	Packer	Depih (N	MD)	Size		Dept	Set (MD)	Packer	Depth (MD)	~
25. Producii						2-110			ciforation l	Record				l			· L		-
	Formation				op	Bottom			forated Int							Perf Status		ıs	-
A) Morrow				12,810'		12,856'			2,811'-12,856'		0 23"			270	· 	open			-
B) Morrow C) Morrow				12,903		12,937'			'-12,937' '-66',12,976'-87', a			0.23" and 0.39"		102 102		open open			
D)	<u> </u>			12,960		13,030'				13,030'		0.39"		180		open			••
	acture, Trea	alment,	Cement	t Squeeze, etc				10,000 10,000						Too					
	epth Inter	val							٨	mount	and Typ	e of M	1aterral						_
12,960'-66' 13,000'-30'		87', ar	nd			nol/Acedic Ac frac, 40,000 II		rea pr						-	NT C	7 4 3 5	1000		-
13,000-30				000,000	gai LPG	11ac, 40,000 ii)5 VE	rsa pic	<u>ър</u>				·				ATIO		-
	-													—- <u>E</u>	UE	_//	<u>5-/-></u>		-
28. Producti		,									12.		I						-
Date First Produced	Fest Date	l lours Tested	Tes Pro	t duction	Oil BBL	Gas MCF	Wate		Oil Grav Corr, AP		Gas Gra		Produ	iction M	ethod				
			- 1	-								•							
Thoke	Tbg. Piess.	Csg	24		Oil	Gas	Wate	er	Gas/Oil		Wel	1 State	IS						-
Size		Press.	Rat	e	BBL	MCF	BBL		Ratio				100	\nr	ntr	ח רחי	ם מדת	חחח	
	- -		1722										M	JUE.	TIC	n Lni	R REC	עמען	
28a. Product Date First		,	Гes		Oil	Gas	Wate	·r	Oil Grav	HV.	Gas		IDrod.	iction M	atho.1				-
roduced	i est Date	Hours Fested	- 1		BBL	MCF	BBL		Con. AP	-	Gra		III TOUL	iciioii įv					
			Car.		1										JUI	1 1 6	2012		
	l'bg. Piess		24		Oil	Gas	Wate		Gas/Oil		Wel	1 Statu	IS I			0	_		٠
	Flwg, SI	Press.	Rat		BBI.	MCF	BBL		Ratio							m			
	_				<u> </u>	<u> </u>						_/					ANAGEMI	LNT	
*(See instru	ctions and	spaces	for addi	tional dat	a on page	2)					- /,	1			HITL ST	AU FIEL	J (II FICE		

SEP 0 6 2012

28b Prod	uction - Into	rval C						- 						
Date First	Test Date	Hours	Test	Oil	Gas	Water	Oil Gravity	Gas	Production Method					
Produced		Tested	Production	BBL	MCF	BBL	Corr. API	Gravity	Flowing					
03/08/11	03/10/11		72.000					0.59						
Choke Size	l bg. Press. Flwg	Csg. Piess	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status						
	SI	11055		OUL		13151	Katto	Shut-in						
8/64"	261				87									
	lest Date	Ival D Hours	Fest	Oil	Gas	Water	Oil Gravity	Gas	Production Method					
Produced	Test Date	Fested	Production	BBL	MCF	BBL	Con. API	Gravity	Troduction Memor					
Choke Tbg. Press. Csg 24 Hr. Oil Gas Water Gas/Oil Well Status														
Size Flwg. Press Rate B				BBI.	MCT	BBL	Ratio							
	SI													
29 Disposition of Gas (Solid, used for fuel, vented, etc.)														
flared and vi	ented													
30 Sumn	nary of Poro	us Zones (Include Aquit	eis).	31 Format	ion (Log) Markers								
	•				1	Please see the attached list								
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														
										T				
Four	nation	Тор	Bottom		Desci	riptions, Conte	ints, etc.		Name	Тор				
	Tomatun 109 150tt			1			,			Meas Depth				
Rustler		1,702	2,185'	Anhydrit	e, halite, shale									
Salado		2,185'	3,756'		nhydrite, shale									
Yates		4,045'	4,372'	Anhydul	e, limestone, st	nale								
Capitan		4,372'	5,520'	limeston										
Bell Canyon		5,520'	5,864'	limeston	e shale									
Cherry Can		5.864	7,131		e, sandslone, s	hale								
Brushy Can	von	7,131	8,442'	limeston	e, sandslone, s	halo								
Bone Spring		8,442'	11,238		e, limestane, s									
Wolfcamp		11,238'	11.618'	limeston	e, shale									
Strawn		11,618'	11,916'	limestoni	e, shale									
Aloka 11,916' 12,497' limestone, shale														
Morrow Limestone 12,497' 12,726'				imestone	e, shale									
Morrow Clastics 12,726' 13,365'			sandston	o, shale										
School of the second of the se														
32. Additional remarks (include plugging procedure).														
Please se	ee atlache	d wellbor	e schematic											
33 Indicat	e which iter	ns have bee	en attached by	placing a	check in the a	ppropriate box	ces							
Files	tucal/Mecha	meal Logs (l full set req'd)	П	Geologic Report	□ DST R	eport	☑ Directional Survey					
Sundry Notice for plugging and cement verification Core Analysis Other:														
34 Thereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*														
Name (please print) Daryl-W. Gee Title Director, Regulatory Affairs and Land Management														
Signature Date June 7, 2012														
		1												
Title 1811	S.C. Section	1001 and	Fille 43 U.S.C	Section 1	212. make it	a crime for any	v person knowmoly	and willfully to	make to any department or agenc	y of the Linuard Status and				
false, fictiti	ous or frauc	lulent states	nents or repre	sentations	as to any mat	ter within its ji	urisdiction		to any department of agene	y or the Office States any				

(Continued on page 3)

(Form 3160-4, page 2)

GRAMA RIDGE STORAGE GRAMA RIDGE MORROW UNIT NO. 3

Section 4, T22S, R34E, 126' FSL, 1,048' FEL, Lea County, NM

Spud: 11/2/10 TD: 1/21/11

Gr. Elev.: 3.597' RKB: 26' **FINAL COMPLETION 4/29/12** API Number: 30-025-39922 See Wellhead data at bottom of sketch 20", 0.375" W. T., GR 'X-52', 17-1/2" Hole BFW Conductor Casing @ +/-60' 9.0 # Mud 13-3/8", 54.5 ppf, J-55, BTC Surface Casing @ 1,779', Cemented to Surface. A-Section w/Landing Base installed on 13-3/8" Casing to 20" conductor. Anhydrite 8.5# Inhibited Water as Annulus Fluid & Salt . 12-1/4" Hole 9-5/8", 40.0 ppf, N-80, LTC Intermediate I Casing @ 5,610' & 10.0 # Brine Cemented to Surface using DV Tool @ 3,994' (40.0 ppf casing drifted to 8.750") Mud 8.5 # Inhibited KCl Water as annular fluid 2.313" 1.D. BX L Landing Nipple @ 4-1/2", 15.5 ppf, L-80, BTS-6 Conn. to 10,992' X 2-7/8", 6.5 ppf, L-80, Ultra F.I. 12,706'. Unable to tubing from 10,992' to 12,717'. Seal Assembly latched into Baker FA packer @ get thru w/2.125" 12,717', with 28,000 lbs. weight set down on packer. Tested annulus & pkr. seals to GR 4/28/12 2,000 psi. 8-3/4" Hole 11,224' 4-1/2" TIW IB-SC RRP Liner Hanger w/ LX Liner Top Packer & Tie-back Receptacle (Full Bore). Packer tested to 3,000 psi, with 8.5 # WBM 11.3 ppg mud. 7-0", 29.0 ppf, P-110, LTC (Torque-Positioned) Production Casing set at 11,450' cemented up to +/-3,723', inside the 9-5/8" Intermediate I Casing Morrow 'C' Perfs. 12,960-66', 12,976-Baker 22 FA30 Pkr. @ 12,717' w/3' pup Jt. & 2.313" BXN L.N. 87' & 13,000-30', 6 w/2.205" No-Go, @ 12,722' & E.O.T. @ 12,725' spf, 60 deg. Phasing, 0.39" Added Morrow Perfs. (4/28/12-4/29/12) 'A'- 12,811'-12,856'; 'B' - 12,920'-EHD, 9.7" Pen. 12,937'. All were w/1-9/16" HSC Schlumberger gun, 6 spf, 60 deg. Phasing, 0.23" EHD, 12.14" Penetration) Unable to get thru "BX" L.N. @ 12,706" w/2.00" gun. 6-1/8" Hole 4-1/2", 13.5 ppf, P-110, Ultra FJ Conn. Production Liner set from 11,224'-13,456' Cemented into 7" Casing to top of Liner Hanger at 11,224' per CBL log. 11.3 # Brine Mud TD 13,460' 34"X10" steel pin on bottom at PBTD at 13,364' WLM

Cameron Wellhead:

'A' Sect.: 13-3/8" SOW X 13-5/8", 3k

'B' Sect.: 13-5/8", 3k X 11", 5k Csg Spool w/ 2-1/16", 5k casing valve

Tbg. Spool: 11", 5k X 7-1/16", 10k w/two 1-13/16" valves;

Tbg. Hanger: 7" X 4-1/2", 10k w/15.5 ppf, BTS-6, B X B threads w/4" Type 'H' BPV Threads; Tree: two (2) 7-1/16", 10k Master Valves, 7-1/16", 10k X 7-1/16", 10k cross (7-1/16" X 4-1/16" X 4-1/16" 10k adapter on top of cross w/Tree Cap w/4-1/2", 8rd lift thread) w/two 4-1/16" wings w/4-1/16", 10k gate valves & 4-1/16", 10k actuated gate valves on each wing. See Cameron Dwg. C5633.

GRMU No 8 API # 30-025-39922

Item 31. Formation (Log) Markers

Name*	Top (ft)*	Measured Depth (ft)*
01-Platform Express, Compensated Neutron, Slim Density, Final Comp 1", 2", 5"	200	13.198
		. = ,
02-Platform Express, Hi-Res Latrolog Array, Final Comp 1", 2", 5"	5,608	13,374
03-Platform Express, Three Detector Litho-Density, Compensated Neutron/GR	5,608	11,457
04-Platform Express, Hi-Res Latrolog Array, Micro-CFL/GR	5,608	11,457
05-Borehole Compensated Sonic, GR	1,778	5,612
06-Compensated Neutron PPC/GR	200	5,612
07-Four Arm Caliper	5,608	11,457
08-Platform Express, Slim Density, Compensated Neutron	11,448	13,190
09-Platform Express, Hi-Res Latrolog Array, Micro-CFL/GR	11,448	13,374
10-Temperature Survey (Cement Top)	Surface	6,650

^{*}Descriptions and depths taken from log headings