Form 3167-5 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

HOBBANCH PERSONNELL

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

5. Lease Serial No.					
NMNM 82799					
				 	
6. If Indian, Allottee	or Tr	ibe N	ame		

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Do not use this t	IOTICES AND REPO Form for proposals Use Form 3160-3 (A	6. If Indian, Allottee o	r Tribe Name		
	T IN TRIPLICATE - Other	r Instructions on page 2.	7. If Unit of CA/Agree 14-08-0001-14277 (ement, Name and/or No. NMNM 70953X\	
1. Type of Well				·	
Oil Well Gas W	/ell Other		8. Well Name and No. Grama Ridge Feder		
2. Name of Operator Enstor Grama Ridge Storage and T	ransportation, LLC		9. API Well No. 30-025-30686	/	
Ba. Address 20329 State Highway 249, Suite 400, Houston, TX 77070		3b. Phone No. (include area code)	10. Field and Pool or I	10. Field and Pool or Exploratory Area	
		281-374-3050	Grama Ridge, Morro	Grama Ridge, Morrow (Gas)	
4. Location of Well (Footage, Sec., T., E1/4 of Sec. 9, T22S, R34E	R.,M., or Survey Description		11. Country or Parish,	State	
60' FNL & 1980' FEL			Lea County, NM		
12. CHEC	K THE APPROPRIATE BO	DX(ES) TO INDICATE NATURE OF	NOTICE, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION		TYPE O	F ACTION		
✓ Notice of Intent	Acidize	Deepen	Production (Start/Resume)	☐ Water Shut-Off	
4 Notice of Their	Alter Casing	Fracture Treat	Reclamation	Well Integrity	
Subsequent Report	Casing Repair	New Construction	Recomplete	Other	
Subsequent Report	Change Plans	Plug and Abandon	Temporarily Abandon		
Final Abandonment Notice	Convert to Injection	Plug Back	Water Disposal		
Attach the Bond under which the w following completion of the involve	ally or recomplete horizontal fork will be performed or project ed operations. If the operation Abandonment Notices must	rtinent details, including estimated star ly, give subsurface locations and meas ovide the Bond No. on file with BLM// on results in a multiple completion or a be filed only after all requirements, inc	ured and true vertical depths o BIA. Required subsequent reprecompletion in a new interval,	f all pertinent markers and zones. orts must be filed within 30 days a Form 3160-4 must be filed once	

Starting Date March 1, 2010.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify Daryl W. Gee	that the foregoing is true and correct. Name (Printed/Typed)	le Director, Regulatory Affairs and	Land Management
Signature	Da	te 02/12/2010	
	THIS SPACE FOR FEDERA	L OR STATE OFFICE USE	APPROVED
Approved by	A COUL	Fitle	DELEB 2 5 2010
that the applicant ho	val, if any, are attached. Approval of this notice does not warrant or certify olds legal or equitable title to those rights in the subject lease which would to conduct operations thereon.	Office .	/s/ Chris Walls BUREAU OF LAND MANAGEMENT
	tion 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person ent statements or representations as to any matter within its jurisdiction.	knowingly and willfully to make to any	departmental and hay of lite United States any in se,

	THE STATE OF THE PROPERTY OF THE TRANSPORTATION LLC
	ENSTOR GRAMA RIDGE STORAGE & TRANSPORTATION LLC GRMU #7 (GRAMA RIDGE FEDERAL 8817 JV-P #1/BTA #1)
	METHANOL/ACETIC ACID STIMULATION
	WIE HAROLAGE TO AGE STIMULATION
	TEST TUBING WITH N2, ESTABLISH PUMP-IN RATES AND PRESSURES WITH N2, SPOT METHANOL/ACID ACROSS PERFS
	AND PUMP INTO FORMATION, REPEAT, UNLOAD AND FLOW WELL
	LOCATION IS IN THE NE1/4 OF SEC 9, T22S R34E, LEA CTY., NM
	EOCATION IS IN THE NET/4 OF SEC 9, 1225 KO4E, EEX OTT., KNIII
C4	Foliating 6, 1976
Step No.	Activity (Depths rof. RKB)
	Survey site, decide how to spot equipment.
	MIRU slick line unit. PU wireline tools, install lubricator and wireline BOP on tree.
3	MIRU N2 unit Test N2 lines to 10,000 psi. Test slickline BOP to 1000 psi with N2.
4	RIH and set blanking plug in 2-7/8" BX nipple (2.313" ID) at 12,788'. POOH. RD slickline unit.
	MI and spot 300 bbl blow down tank with gas buster with confainment. RU flow back piping and choke manifold and route to blow down
5	tank.
6	Install Tubing/Tree Saver on top of tree (Saver ID 2 416") and frac head to permit pumping N2 between coil tubing and Saver. Test
°	flanged connections to 10,000 psi with N2.
	MIRU kill truck with 6% KCI water.
8	Install a gauge and 5000 psi relief valve on 4-1/2"X7" annulus outlet and pressure annulus to 2500 psi with KCI water and close in and
	monitor. Open relief valve on Saver for pressure relief on tree should Saver packoffs leak .
9	Pressure tubing to 10,000 psi with N2 and monitor tubing and annulus pressures for 30 min. (Do not exceed 7500 psi differential
	pressure between tubing and annulus pressures). Bleed pressure off tubing then off annulus.
10	RU slick line unit. PU wireline tools, install lubricator and wireline BOP on tree and test to 1000 psi with N2 and RIH and pull blanking
	plug. RD slickline unit. MIRU Coiled tubing unit. Test lines and equipment to 10,000 psi with N2. MU flowback line from outlot on Coiled tubing BOPs to choke
11	manifold.
l	
12	RIH with coiled tubing without a back pressure valve to 13,099' PBTD and blow well dry with N2. Route returns through choke manifold
	and do not exceed 4000 psig back pressure on manifold. Pull coiled tubing up into 4-1/2" tubing.
13	Pressure tubing/casing annulus to 2500 psi with KCl water and close in and monitor. Establish N2 injection into the Morrow formations
	by injecting N2 down backside between CT and tree saver and record rates and pressures. Moniter SI pressure on CT to a maximum
	of 10,000 psig.
14	MIRU methanol/acid equipment.
	RIH with coiled tubing to below perfs and spot 10 bbl of 50/50 Methanol/HCl Acid treatment across perfs PU coiled tubing above acid.
15	RIFI with coiled tubing to below peris and spot to obt of 50/50 Methanol/HC/ Acid deathlett across peris.
16	With 2500 psi on tubing/casing annulus, displace acid into perforations pumping down coiled tubing backside with N2. Monitor
۱ '`	pressure on CT and do not exceed a maximum pressure of 10,000 psig. Record N2 rates and all pressures.
17	Stop N2 injection and allow CT/Saver pressure to fall to <3000 psi—Resume N2 injection noting rates and pressures with particular attention to rates at and below the maximum intended natural gas injection pressure of 3,850 psig as monitored on CT.
1	attention to rates at and below the maximum intended natural gas injection pressure of 9,000 pog at monitor of 0.7.
18	Lower CT to below perfs and spot another 10 bbl of 50/50 Methanol/Acid in well. PU coiled tubing above acid.
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19	Maintain 2,500 psi annulus pressure and displace acid into perforations with N2 down CT backside to a maximum CTsurface pressure
	of 10,000 psig recording rates and pressures.
20	Repeat Step 16.
21	Repeat Steps 17-19 if the additional treatment improved injection performance.
22	Repeat Step 16.
23	Repeat Steps 17-19 if the additional treatment improved injection performance.
24	Lower coiled tubing to PBTD and blow well dry and POOH.
25	Bleed off annulus pressure and RD N2 and coiled tubing and remove Tubing/Tree saver with tubing pressure on well.
~~	Prince of the control
	PUI electric virolina unit and zun temperature lag te PRTN PANH
26	RU electric wireline unit and run temperature log to PBTD. POOH.
27	MIRU separator/flare test unit.
28	Open well and flow well through choke/separator/flare test unit recording rates, volumes and pressures.
29	RDMO.
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Grama Ridge Federal 8817 JV P #1 30-025-30686 Enstor Grama Ridge Storage and Transportation February 25, 2010 Conditions of Approval

- 1. Surface disturbance beyond the existing pad must have prior approval.
- 2. Closed loop system required.
- 3. A minimum of a 5M BOP is required and must be tested prior to beginning operations.
- 4. Subsequent sundry required.

CRW 022510