

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OOD
Operator Copy
AUG 27 2012

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☐ Oil Well ☐ Gas Well ☐ Dry ☒ Other
b. Type of Completion, ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resrv.,

Other Natural Gas Storage

2. Name of Operator
Enstor Grama Ridge Storage and Transportation, LLC

3. Address 20329 State Highway 249, Suite 400, Houston, TX 77070

3a. Phone No. (include area code)
281-374-3050

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
126' FSL AND 1,048' FEL OF SEC 4, TOWNSHIP 22S, RANGE 34E
At surface

208' FSL and 1,103' FEL

At top prod. interval reported below

At total depth 213' FSL and 1,107' FEL

14. Date Spudded
11/02/2010

15. Date T.D. Reached
01/21/2011

16. Date Completed 05/05/2012
☐ D & A ☐ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*
3,623' RKB

18. Total Depth MD 13,460'
TVD 13,458'

19. Plug Back T.D. MD 13,367'
TVD 13,365'

20. Depth Bridge Plug Set MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
Platform Express, Caliper, Temperature, CBL, Casing Inspection

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☒ 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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
26"	20"/X52	0.375"wt	0'	60'	NA	125 sks	30	surface (CIR)	NA
17-1/2"	13-3/8"/J5	54.5	0'	1,779'	NA	1,475 sks	432	surface (CIR)	NA
12-1/4"	9-5/8"/N80	40.0	0'	5,610'	3,994'	2,110 sks	641	surface (CIR)	NA
8-3/4"	7-0"/P110	29.0	0'	11,450'	NA	1,480 sks	459	3,723' (TS)	NA
6-1/8"	4-1/2"/P110	13.5	11,224'	13,456'	NA	211 sks	63	11,224' (CBL)	NA

24. Tubing Record

Size	Depth Set (MD)	Packet Depth (MD)	Size	Depth Set (MD)	Packet Depth (MD)	Size	Depth Set (MD)	Packet Depth (MD)
4-1/2"	10,992'		2-7/8"	12,717'				

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Morrow A	12,810'	12,856'	12,811'-12,856'	0.23"	270	open
B) Morrow B	12,903'	12,937'	12,920'-12,937'	0.23"	102	open
C) Morrow C	12,960'	13,030'	12,960'-66', 12,976'-87', and	0.39"	102	open
D)			13,000'-13,030'	0.39"	180	open

27. Acid, Fracture, Treatment, Cement Squeeze, etc

Depth Interval	Amount and Type of Material
12,960'-66', 12,976'-87', and	2,000 gal Methanol/Acetic Acid
13,000'-30'	55,000 gal LPG frac, 40,000 lbs versa prop

RECLAMATION
DUE 11-5-12

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
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

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. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

ACCEPTED FOR RECORD

JUN 16 2012

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

SEP 06 2012

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
03/08/11	03/10/11	3	→					0.59	Flowing
Choke Size	Ibg. Press. Flwg. SI	Csg. Press	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
8/64"	261		→		87			Shut-in	

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	Ibg. 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.)
 flared and vented

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.	Please see the attached list

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Rustler	1,702'	2,185'	Anhydrite, halite, shale		
Salado	2,185'	3,756'	Halite, anhydrite, shale		
Yates	4,045'	4,372'	Anhydrite, limestone, shale		
Capitan	4,372'	5,520'	limestone, shale		
Bell Canyon	5,520'	5,864'	limestone, shale		
Cherry Canyon	5,864'	7,131'	limestone, sandstone, shale		
Brushy Canyon	7,131'	8,442'	limestone, sandstone, shale		
Bono Spring	8,442'	11,238'	sandstone, limestone, shale		
Wolfcamp	11,238'	11,618'	limestone, shale		
Strawn	11,618'	11,916'	limestone, shale		
Aloka	11,916'	12,497'	limestone, shale		
Morrow Limestone	12,497'	12,726'	limestone, shale		
Morrow Clastics	12,726'	13,365'	sandstone, shale		

32. Additional remarks (include plugging procedure).

Please see attached wellbore schematic.

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) Daryl W. Gee Title Director, Regulatory Affairs and Land Management
 Signature [Signature] Date June 7, 2012

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

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

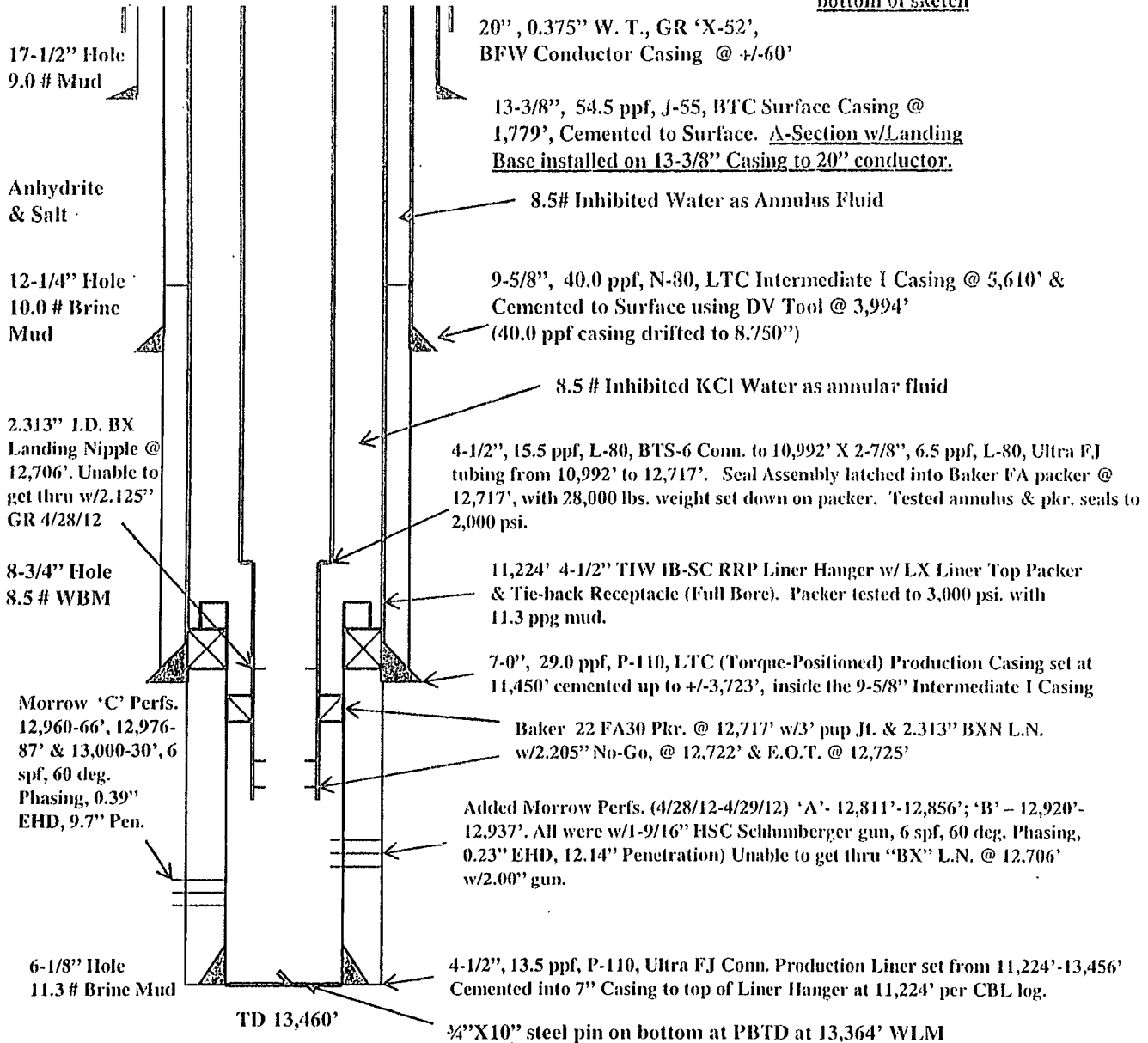
Gr. Elev.: 3,597'

RKB: 26'

FINAL COMPLETION 4/29/12

API Number: 30-025-39922

See Wellhead data at
bottom of sketch



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" 10k

adapter on top of cross w/Free 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.

Revised 5-05-2012

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