

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address BOLD ENERGY, LP 415 W. Wall Street, Suite 500 Midland, TX 79701		² OGRID Number 233545
³ Property Code 35983	⁴ Property Name Bell Lake	⁵ API Number 30-025-38118
⁹ Proposed Pool 1 Bell Lake; Delaware, South		⁶ Well No. 023
⁷ Surface Location		¹⁰ Proposed Pool 2

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	31	23S	34E	K	1650	S	1650	W	Lea

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

¹¹ Work Type Code P	¹² Well Type Code G	¹³ Cable/Rotary N/A	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3,640
¹⁶ Multiple NO	¹⁷ Proposed Depth 8,500'	¹⁸ Formation Delaware	¹⁹ Contractor TWS	²⁰ Spud Date 5/28/07
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input type="checkbox"/> _____mils thick Clay <input type="checkbox"/> Pit Volume: _____bbls Drilling Method:				
Closed-Loop System <input type="checkbox"/> None Required For Workover Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17.5"	13.375"	48#	735'	1,040	Surface (1")
12.25"	9.625"	40#	5,108'	1,425	Surface (circ)
8.75"	7"	26#	12,000'	1,606	4,800' (TS)
6.125"	4-1/2"	13.5#	13,800'	255	12,625 (CBL)

Permit Expires 1 Year From Approval

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on Date of last drilling under way. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Current completion: 13,800 TD 13,185 PBTD Morrow Lime Perfs: 12,693' - 12,695'; 12,894' - 12,896'; 12,938' - 12,940'; 13,076' - 13,080'; 13,143' - 13,145'

Proposed procedure: Plug back and re-complete to the Delaware. Detailed procedure, current and proposed wellbore diagrams attached. Summary as follows:

1) Pull existing tubing and packer. 2) WL set CIBP at 12,630'. 3) Circulate well to 12.6 ppg mud. 4) Shoot circulating holes in 4-1/2" casing at 12,050' and circulate well until balanced. 5) Chemically cut 4-1/2" casing at 12,050'. 6) POOH laying down 4-1/2" casing. 7) Spot cement plug from 11,950' - 12,100'. WOC and tag. 8) WL set CIBP at 8,500'. Pressure test to 7K psi. 9) TIH w/ bit & scraper to PBTD. Circulate hole to 2% KCL water. 10) Run GR/CCL/CBL from PBTD to 7,000'. Locate TOC with CBL. 11) Perforate 8,398' - 8,404' & perform breakdown. Perforate 7,510' - 7,514'; 8,208' - 8,212'; 8,222' - 8,232'. 12) Fracture stimulate with 77,500 lbs CarboLite + 7,500 lbs FlexSand using 30# Viking Fluid at 48 bpm. 13) Flowback and test. 14) Check TD on SL and prep to install production equipment.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Signature:

Printed name: Shannon Klier

Title: Operations Engineering Manager

E-mail Address: shannon.klier@boldenergy.com

Date: 5/4/07

Phone: 432-686-1100

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval Attached ☐

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-38118	² Pool Code 97051	³ Pool Name Bell Lake; Delaware, South
⁴ Property Code 35983	⁵ Property Name Bell Lake	⁶ Well Number 023
⁷ OGRID No. 233545	⁸ Operator Name BOLD ENERGY, LP	⁹ Elevation 3,620'

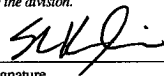
¹⁰ Surface Location

UL or lot no. K	Section 31	Township 23S	Range 34E	Lot Idn	Feet from the 1,650	North/South line S	Feet from the 1,650	East/West line W	County Lea
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶				¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i>  Signature 5/4/07 Date Shannon L. Klier Printed Name
				¹⁸ SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

BOLD ENERGY, LP

Bell Lake #23

Delaware Completion Procedure

Sec 31-T23S-R34E, 660' FSL & 1650' FEL

Bell Lake Field

Lea County, New Mexico

See Attached Wellbore Schematic

Contact Information:

Field Foreman: Joe Thomas 432-208-7868 (M)
830-734-8955 (alt.)

Engineering: Shannon Klier 432-686-1100 (O)
432-296-8602 (M)

WELLBORE PREPARATION (AFE # 700015)

1. Bleed pressure off tubing.
2. Use fresh water for well control and ND WH & 7-1/16" X 7-1/16" 10K psi spool. NU 10K psi hydraulic BOP with blind rams on bottom and 10K psi valve on the body outlet below blind rams. Ensure that choke manifold is tied into 4-1/2" x 7" casing valve and tested with BOP.
3. POOH w/ packer standing back 2-3/8" tubing.
4. MIRU WL unit. Set CIBP at 12,630'.
5. Move in 200+ bbls 12.6 ppg mud.
6. TIH w/ 2-3/8" tubing to PBTD. Spot 35' of cement on CIBP at 12,630'.
7. Circulate well to 12.6 ppg mud.
8. POOH standing back 2-3/8" tubing. Keep casing full of 12.6 ppg mud while POOH.
9. MIRU WL unit and perforate squeeze holes at 12,050' (50' below 7" casing shoe).
10. With blind rams shut, establish circulation through squeeze holes pumping down the 4-1/2" casing and taking returns up 4-1/2" x 7" annulus.

Note: Care should be taken to completely circulate well to condition and balance mud before moving forward. Circulate conventional through choke manifold. Make note if mud is gas cut anywhere in annulus while circulating. Full circulation thru these perfs may indicate pipe is free above it.
11. If full returns is established and wellbore stabilized, install 4-1/2" casing rams in BOP. Chemical cut 4-1/2" casing at 12,050'.
12. POOH laying down 4-1/2" casing on trucks installing thread protectors on each joint.
13. Keep hole full of 12.6 ppg mud while POOH. Monitor fill up.

Note: Casing should weigh 131,000 lbs buoyed.

14. After 4-1/2" casing is laid down, change rams and run open-ended 2-3/8" tubing inside 4-1/2" casing stump to 12,100'. Spot cement plug from 11,950' to 12,100'. WOC as required and tag plug.
15. POOH laying down 2-3/8" tubing. Move tubing to Bold Energy pipe yard.
16. RU WL unit. Set 7" CIBP at 9,000'. Pressure test to 7,000 psi.

IF CASING WILL NOT PULL AFTER CASING CUT IN STEP 11 PROCEED AS FOLLOWS:

17. *If casing won't pull after casing cut in step 11 (full returns or not), change rams and RIH w/ cement retainer and set at 11,950'. Pump sufficient cement to blanket 11,950' – 12,050' inside and out. Dump 35' of cement on retainer.*
18. *Do not freepoint casing. Change rams and chemical cut 4-1/2" at 11,400'.*

Note: If circulation was not established through perfs at 12,050', use "Casing Punch" type gun to perforate circulation holes at 11,410'. Re-establish circulation and condition mud, then perform chemical cut of 4-1/2" casing at 11,400'.

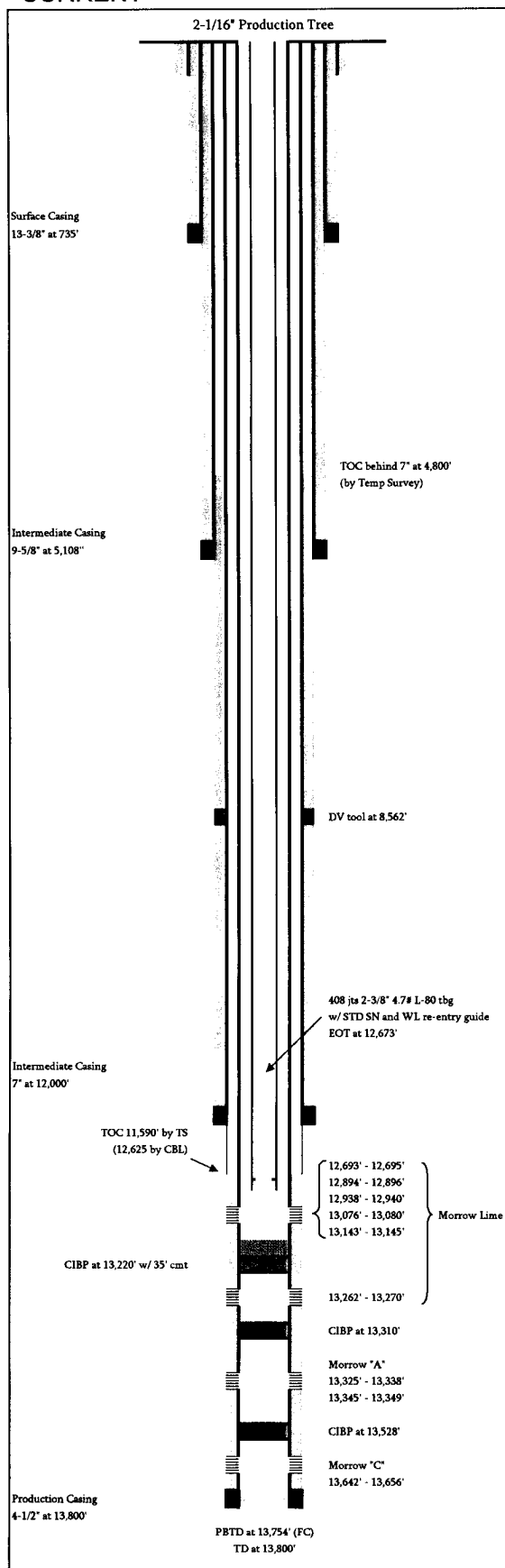
19. POOH laying down 4-1/2" casing on trucks installing thread protectors on each joint.
20. Keep hole full of 12.6 ppg mud while POOH. Monitor fill up.
21. After 4-1/2" casing is laid down, change rams and run open-ended 2-3/8" tubing inside 4-1/2" casing stump to 11,450'. Spot cement plug from 11,350' to 11,450'. WOC as required and tag plug.
22. POOH laying down 2-3/8" tubing. Move tubing to Bold Energy pipe yard.
23. RU WL unit. Set 7" CIBP at 9,000'. Pressure test to 7,000 psi.

DELAWARE COMPLETION PROCEDURE (AFE # 700016):

24. Truck in 9,000' of 2-7/8" tubing from Bold Energy stock.
25. TIH w/ bit and scraper to PBTD.
26. Pickle casing w/ 500 gallons 7-1/2% HCL acid.
27. Displace pickle acid leaving hole full of 2% KCL water + 2 gpt surfactant.
28. POOH laying down 2-7/8" tubing.
29. ND BOPE. NU frac stack consisting of a 7-1/16" 10K frac valve, flow cross with valves, and 7-1/16" frac valve on top of the cross.
30. Ensure that flowback tank, choke manifold & flowback iron is rigged up to casing valve and secured using existing anchors.
31. MIRU WL unit with 5K psi pressure control equipment.
32. With 2,000 psi applied at surface, run GR, CCL, CBL from PBTD to 7,000'. Locate TOC with bond log. TOC located at 4,800' by temperature survey. Correlate depth to Halliburton Spectral Density Dual-Spaced Neutron log dated 19-NOV-06. Call with CBL results once available.
33. RIH with 4" expendable casing gun loaded with 38.5 gm charges w/ 0.44" EHD and perforate as follows:

- 8,398' – 8,404' 18 shots at 3 spf 120° phasing
34. POOH with gun. Perform breakdown at 10 bpm using 20 bbls of 2% KCL water + 2 gpt surfactant. Record ISIP, 5, 10 & 15 min SIP's.
35. RIH with 4" expendable casing guns loaded with 38.5 gm charges w/ 0.44" EHD and perforate as follows:
- 7,510' – 7,514' 12 shots at 3 spf 120° phasing
 - 8,208' – 8,212' 12 shots at 3 spf 120° phasing
 - 8,222' – 8,232' 30 shots at 3 spf 120° phasing
36. POOH w/ guns. Inspect to insure all shots fired.
37. Have 5 frac tanks loaded with 2% real KCL water.
38. MIRU BJ Services frac equipment for a single-stage frac treatment as follows:
- 77,500 lbs 20/40 CarboLite
 - 7,500 lbs FlexSand
 - Slurry Blending Equipment
 - Continuous-Mix Gel unit (tanks will not be gelled)
 - Acid transports containing 8,000 gallons 15% NEFE acid inhibited for 151°F.
 - Liquid HHP for 48 bpm at 7,500 psi.
 - Back up HHP equivalent to 24 bpm at 7,500 psi.
 - Computer Monitoring Vehicle with all critical data displayed and recorded.
 - Field Lab properly equipped with QA equipment for performing proppant, base fluid, xlink & breaker tests on location.
 - Chemicals used for Fann 50 testing to be quarantined for treatment.
39. Have 2" CT unit, nitrogen pump and (2) two nitrogen transports standing by on lease road to cleanout well in the event of a screenout.
40. Sierra Engineering to perform pre-job testing and supervise execution of treatment.
41. Hold safety meeting and discuss location hazards, job procedure and contingency plans.
42. Prime up pumps and pressure test against lower WH master valve to 9,000 psi. An acceptable test will have a final bleed off rate no greater than 95 psi/minute. Bleed pressure to 1,000 psi above SICP.
43. Open wellhead valves. Begin pumping acid at 12 bpm. With all of the acid pumped, swap to WF30 and increase rate to 48 bpm. Ensure that full rate is achieved when acid hits formation. Pump treatment per attached schedule. Do not exceed a maximum allowable pressure of 7,900 psi. Obtain 5, 10 & 15 min SIP's.
44. Shutdown and release all frac equipment.
45. Once treatment is complete, immediately open to flowback tank on an 18/64" choke. Adjust flowrate as necessary to obtain a liquid recovery rate of 50 bwph.
46. Flow well until dead or until a stabilized rate is achieved.
47. RU SL unit and tag TD.
48. Prepare to install production equipment.

CURRENT



BOLD ENERGY, LP

Bell Lake #23

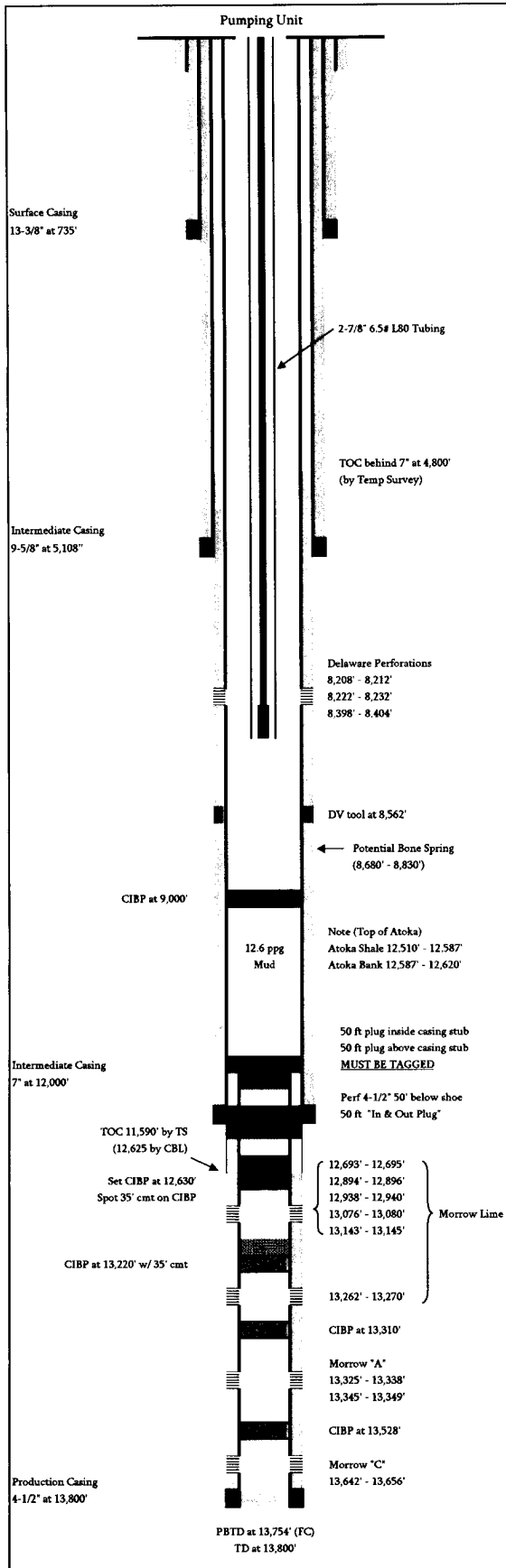
WL: 98.1%
Elevation: 3,620'
KR: 18'
Mess. TD: 13,800'
TVD: 13,800'
PBD: 13,754' (FC)
Zone: Morrow Lime

NRI: 74.9%
APE: 30-025-38118
Surface Location: 660' FSL & 1650' FWL
Legal Description: Section 31 - T23S - R34E
Field: Bell Lake
County: Lea
State: New Mexico

Casing	Hole	Weight	Grade	Depth	Burst	80% Burst	Sacks	TOC
20"				60'				Surface
13-3/8"	17-1/2"	48#	H-40	735'	1,730	1,384	1,040	Surface (1')
9-5/8"	12-1/4"	40#	KJ-55	5,108'	3,950	3,160	1,425	Surface
7"	8-3/4"	26#	P-110	12,000'	9,960	7,968	1,606	4,800' (TS)
4-1/2"	6-1/8"	13.5#	P-110	13,800'	12,410	9,928	255	11,590' (TS)

Date	Event
10/9/2006	Spud
11/20/2006	Logged 8-3/4" intermediate hole.
12/9/2006	TD and log production hole. SFT tool stuck across Morrow 'C' sand. POO rope socket. 9 days required to recover fish.
12/18/2006	Ran and cemented production casing.
12/19/2006	Release rig.
12/30/2006	Cleaned out to FC. Circulated wellbore to nitrogen. Ran GR, CCL, CBL from PBTD to TOC. Perforated Morrow 'C' as follows with 8,000 psi nitrogen pressure applied at surface: 13,642' - 13,656' 3-1/8" expendable casing guns - 42 holes 0.42" EHD 120' phasing at 3 spf Performed nitrogen breakdown at 16,000 scfm. Final injection rate = 7,000 scfm at 8,450 psi ISIP = 8,403 psi. 5 min SIP = 7,405 psi. Total nitrogen injected = 1,000,000 scf. Flowtested well for 24 hours. Final flowtest = 100 psi on 12/64" ck. Would not burn. No water. RIH w/ SL gauges to 10' below perfs for 36 hr build up. Final BH pressure = 405 psi.
1/2/2007	RIH w/ CIBP and set at 13,528'. Perforated Morrow 'A' as follows with 8,000 psi nitrogen pressure applied at surface: 13,325' - 13,338' 3-1/8" expendable casing guns - 39 holes 0.42" EHD 120' phasing at 3 spf 13,345' - 13,349' 3-1/8" expendable casing guns - 12 holes 0.42" EHD 120' phasing at 3 spf Performed nitrogen breakdown at 16,000 scfm. Final injection rate = 8,600 scfm at 8,450 psi ISIP = 8,315 psi. 5 min SIP = 7,472 psi. Total nitrogen injected = 770,000 scf. Flowtested well for 12 hours. Final flowtest = 260 psi on 10/64" ck. Would burn. No water.
1/3/2007	Run tubing in open-ended to 13,299' w/ WL re-entry guide, 2-3/8" STD SN & 2 x 4" blast jts at surface. Swabbed as follows: CP = 0 psi TP = 0 psi IFL = 5,000' FFL = 7,900' 50 bbls water recovered
1/4/2007	Swabbed as follows: CP = 50 psi TP = 25 psi IFL = 5,400' FFL = 12,500' 129 bbls water recovered No sign of methane gas
1/6/2007	Frac'd Morrow 'A' as follows via 2-3/8" x 4-1/2" annulus SITP = 40 psi SIAP = 108 psi. Formation breakdown occurred at 4,142 psi. Placed 56,960 lbs 20/40 CarboProp from 1 - 6 ppg at 11.6 bpm at 8,536 psi average Nitrogen pumped down tubing during frac at 5,240 scfm at 7,825 psi average. ISIP = 5,589 psi FG = 0.859 psi/ft. Total load = 1,097 bbls Total N2 pumped = 491,000 scf. Immediately opened tubing and began flowing well back while pumping nitrogen down annulus. Tubing died while still pumping nitrogen down annulus. Ran CT to kick off tubing. Recovered 573 bbls while circulating nitrogen. No apparent gas contribution from formation. Stopped pumping nitrogen down annulus. Tubing died within 30 minutes.
1/8/2007	SITP = 540 psi SIAP = 2,100 psi Bled pressure off tubing in 6 minutes. RU swab unit. Flowed and swab tested zone. High water volume. No sign of gas other than nitrogen.
1/11/2007	Set CIBP at 13,310'.
1/12/2007	Perforated Morrow Lime as follows w/ 3-1/8" expendable casing guns: 12,693' - 12,695' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD. 12,894' - 12,896' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD. 12,938' - 12,940' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD. 13,076' - 13,080' 12 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD. 13,143' - 13,145' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
1/13/2007	WL Set ArrowSet II pkr at 12,660' w/ 1.78" F profile in on-off tool and pump-out plug on btm of pkr.
1/14/2007	Acidized perfs with 4,000 gallons 15% NEFE Acid w/ 100 1.3 SG ball sealers. Ballout achieved. Displaced acid w/ 100 bbls 2% KCL water. APR = 5 bpm ATP (before acid hit) = 8,400 psi ATP (after acid hit) = 5,800 psi. ISIP = 5,548 psi 5 min SIP = 5,528 psi 10 min SIP = 5,465 psi 15 min SIP = 5,438 psi. Opened well to test tank w/ 5,000 psi. Pressure bled to 50 psi within 1 hour on 32/64" CK.
1/15/2007	Pressure increased to 300 psi through the night. With 100% load recovery FTP = 120 psi on 48/64" CK. Hourly water rate = 24 bw.
1/16/2007	Put well to sales. Tagged TD w/ SL. Found CIBP to be in place. Ran production log. Found high percentage of water coming from lower most perf set (13,262' - 13,270')
1/22/2007	Killed well with 60 bbls KCL water. POOH w/ thg & pkr. Set CIBP at 13,220 w/ 35' of cmt bailed.
1/24/2007	Ran 2-3/8" tubing back in well open-ended. EOT at 12,673'. Swab 55 bbls. SFL = 3,700'. FFL = 7,600'.
1/25/2007	SICP = 1,100 psi. SITP = 1,300 psi. Make final flowline connection. Swabbed and put to sales.

PROPOSED



BOLD ENERGY, LP

Bell Lake #23

WI: 98%
Elevation: 3,620'
KB: 18'
Mesa TD: 13,800'
TVD: 13,800'
PBD: 13,754' (FC)
Zone: Delaware

NRI: 78.9%
API: 30-025-38118
Surface Location: 660' FSL & 1650' FWL
Legal Description: Section 31 - T23S - R34E
Field: Bell Lake
County: Lea
State: New Mexico

Casing	Hole	Weight	Grade	Depth	Burst	80% Burst	Sacks	TOC
20"				60'				Surface
13-3/8"	17-1/2"	48#	H-40	735'	1,730	1,384	1,040	Surface (1')
9-5/8"	12-1/4"	40#	K7-55	5,108'	3,950	3,160	1,425	Surface
7"	8-3/4"	26#	P-110	12,000'	9,960	7,968	1,606	4,800' (TS)
4-1/2"	6-1/8"	13.5#	P-110	13,800'	12,410	9,928	255	11,590' (TS)

Date Event

10/9/2006 Spud
11/20/2006 Logged 8-3/4" intermediate hole.
12/9/2006 TD and log production hole.
SFT tool stuck across Morrow "C" sand. POO rope socket. 9 days required to recover fish.
12/18/2006 Ran and cemented production casing.
12/19/2006 Release rig.
12/30/2006 Cleaned out to FC. Circulated wellbore to nitrogen.
Ran GR, CCL, CBL from PBTD to TOC.
Perforated Morrow "C" as follows with 8,000 psi nitrogen pressure applied at surface:
13,642' - 13,656' 3-1/8" expendable casing guns - 42 holes 0.42" EHD 120' phasing at 3 spf
Performed nitrogen breakdown at 16,000 scfm. Final injection rate = 7,000 scfm at 8,450 psi
ISIP = 8,403 psi. 5 min SIP = 7,405 psi.
Total nitrogen injected = 1,000,000 scf.
Flowtested well for 24 hours. Final flowtest = 100 psi on 12/64" ck. Would not burn. No water.
RIH w/ SL gauges to 10' below perfs for 36 hr build up. Final BH pressure = 405 psi.
1/2/2007 RIH w/ CIBP and set at 13,528'.
Perforated Morrow "A" as follows with 8,000 psi nitrogen pressure applied at surface:
13,325' - 13,338' 3-1/8" expendable casing guns - 39 holes 0.42" EHD 120' phasing at 3 spf
13,345' - 13,349' 3-1/8" expendable casing guns - 12 holes 0.42" EHD 120' phasing at 3 spf
Performed nitrogen breakdown at 16,000 scfm. Final injection rate = 8,600 scfm at 8,450 psi
ISIP = 8,315 psi. 5 min SIP = 7,472 psi.
Total nitrogen injected = 770,000 scf.
Flowtested well for 12 hours. Final flowtest = 260 psi on 10/64" ck. Would burn. No water.
1/3/2007 Run tubing in open-ended to 13,299' w/ WL re-entry guide, 2-3/8" STD SN & 2 x 4" blast jts at surface.
Swabbed as follows:
CP = 0 psi TP = 0 psi IFL = 5,000' FFL = 7,900' 50 bbls water recovered
1/4/2007 Swabbed as follows:
CP = 50 psi TP = 25 psi IFL = 5,400' FFL = 12,500' 129 bbls water recovered
No sign of methane gas
1/6/2007 Frac'd Morrow "A" as follows via 2-3/8" x 4-1/2" annulus
SITP = 40 psi SIAP = 108 psi. Formation breakdown occurred at 4,142 psi.
Placed 56,960 lbs 20/40 CarboProp from 1 - 6 ppg at 11.6 bpm at 8,536 psi average
Nitrogen pumped down tubing during frac at 5,240 scfm at 7,825 psi average.
ISIP = 5,589 psi FG = 0.859 psi/ft. Total load = 1,097 bbls Total N2 pumped = 491,000 scf.
Immediately opened tubing and began flowing well back while pumping nitrogen down annulus.
Tubing died while still pumping nitrogen down annulus. Ran CT to kick off tubing.
Recovered 573 bbls while circulating nitrogen. No apparent gas contribution from formation.
Stopped pumping nitrogen down annulus. Tubing died within 30 minutes.
1/8/2007 SITP = 540 psi SIAP = 2,100 psi Bled pressure off tubing in 6 minutes. RU swab unit.
Flowed and swab tested zone. High water volume. No sign of gas other than nitrogen.
1/11/2007 Set CIBP at 13,310'.
1/12/2007 Perforated Morrow Lime as follows w/ 3-1/8" expendable casing guns:
12,693' - 12,695' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
12,894' - 12,896' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
12,938' - 12,940' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
13,076' - 13,080' 12 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
13,143' - 13,145' 6 shots at 3 spf 120' phasing 22.7 gm charge 0.46" EHD.
1/13/2007 WL Set ArrowSet II pkr at 12,660' w/ 1.78" F profile in on-off tool and pump-out plug on btm of pkr.
1/14/2007 Acidized perfs with 4,000 gallons 15% NEFE Acid w/ 100 1.3 SG ball sealers. Ballout achieved.
Displaced acid w/ 100 bbls 2% KCL water.
APR = 5 bpm ATP (before acid hit) = 8,400 psi ATP (after acid hit) = 5,800 psi.
ISIP = 5,548 psi 5 min SIP = 5,528 psi 10 min SIP = 5,465 psi 15 min SIP = 5,438 psi.
Opened well to test tank w/ 5,000 psi. Pressure bled to 50 psi within 1 hour on 32/64" CK.
1/15/2007 Pressure increased to 300 psi through the night.
With 100% load recovery FTP = 120 psi on 48/64" CK. Hourly water rate = 24 bw.
1/16/2007 Put well to sales.
Tagged TD w/ SL. Found CIBP to be in place.
Ran production log. Found high percentage of water coming from lower most perf set (13,262' - 13,270')
1/22/2007 Killed well with 60 bbls KCL water. POOH w/ thg & pkr.
Set CIBP at 13,220' w/ 35' of cmt bailed.
1/24/2007 Ran 2-3/8" tubing back in well open-ended. EOT at 12,673'. Swab 55 bbls. SFL = 3,700'. FFL = 7,600'.
1/25/2007 SICP = 1,100 psi. SITP = 1,300 psi. Make final flowline connection. Swabbed and put to sales.