### State of New Mexico Energy Minerals and Natural Resources

Form C-101 June 16, 2008

1301 W. Grand Avenue, Artesia, No. 80 2 8 2008

District III UUI ZO ZOOC 1000 Rio Brazos Road, Azzec, NM 87410

District IV 1220 S. St. Francis or Assim F. M. 87505 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit to appropriate District Office

☐ AMENDED REPORT

A	PLIC	TION	OR PERMI	T TO DRI	LL, RE-EN	TER, DE	EPEN, F	LUGBAC	CK. OR A	DD A ZONE	
		CAZ 200	+	249099							
			TE 1550 LAND, TEXA	.s 79701			.   30	· 02	5- 34	P241	
Property Name  Property Name  Well No.  MOORE COWBELL "23" STATE  1									il No.		
Caprock Upper Proposed Pool 2  MOORE - PERMO PENNE (27310) (9120)  "Proposed Pool 2											
	<del>,</del>		· ·		<sup>7</sup> Surface Loc	cation					
UL or lot no.	Section 23	Township 12S	Range 32E	LotIda	Feet from the 330 '	North/South lin	Feet 33		East/West line WEST	LEA County	
· · · · · · · · · · · · · · · · · · ·		·	8 Pro	oosed Bottom	Hole Location	If Different I	From Surf	ace	<del> </del>	<u> </u>	
··· · · · · · · · · · · · · · · · · ·				Lorlda	Feet from the	North/South lin			East/West line	County	
					tional Well Ir	nformation				<u> </u>	
11 Work Type Code 12 Well Type Code N O				ROT	ROTARY "I		"Lease T	case Type Code S		Ground Level Elevanon	
	"Mulippie "Proposed Depth "Formation PENN PER					"Contractor "Spud Date PERMIAN DRILLING WHEN APPROVED					
									<u>'</u>		

<sup>21</sup> Proposed Casing and Cement Program

		<del></del>	1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC		
26"	20 <b>''</b>	Conductor	401	Redi-mix	Surface		
175"	13 3/8"	48#	400'	500 Sx	SURFACE		
12½"	9 5/8"	40 & 36#	5000 <b>'</b>	1575 Sx.	SURFACE		
8½"	5½"	17#	10,000'	1450 Sx	5000' From Sur		

Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

### SEE ATTACHED SHEET FOR DETAI

# Permit Expires 2 Years From Approval Date Unless Drilling Underway

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.	OIL CONSERVATION DIVISION  Approved by:			
Signature: Jach. Janka				
Printed Jame: Joe T. Janica	Title: FEIHÖLEUM ENGINEER			
Tide: Permit Eng.	Approval Date: Expiration Date:			
E-mail Address: joejanica@valornet.com	NOV 0 7 2008			
Date: 10/28/08 Phone: 575-391-8503	Conditions of Approval Attached			

### 1. Moore Cowbell 23 State # 1

330' FSL & 330' FWL Section 23, T12S, R32, Lea County, NEW MEXICO. TD 10.000 ft. "Penn". 40 acre proration unit oil well.

### SURFACE CASING:

17 ½" hole drilled w/ fresh water & viscous sweeps. Set 13 3/8" 48# H-40 casing @ 400 ft. Cement Casing w/ 300 sks Caza Slurry # 1 followed by 200 sks Caza Slurry # 2. Cement should be circulated to surface. Hydraulic diameter of annulus is .695 cu ft/ ft. Volume figured @ 200% excess or 3 times the hydraulic volume. Top job may be needed if cement fails to circulate.

### INTERMEDIATE CASING:

Nipple up 5K BOP equipment. Test same with rig pump to 2000 PSI. R/U H2S safety equipment with remote monitoring stations for safety only. Drill 12 ¼ inch hole with Brine & viscous sweeps to 5000 ft. Run Fluid caliper. Set 9 5/8" 36# J-55 & 40# N-80 casing @ 5000 ft. No stage tool planned unless we encounter chronic lost returns. Cement 9 5/8" casing w/ 1375 sks Caza slurry 3 followed by 200 sks Caza Slurry # 4. Cement should circulate. True hole hydraulic volume is .313 cu ft/ft. Cement volume was figured on 100% wash out or 2 times the hydraulic volume. Slurry lead will be adjusted after running fluid caliper.

### **PRODUCTION CASING:**

Nipple up 5K BOPE. Test same with 3<sup>rd</sup> party to 5K specifications. Drill 8 ½ inch hole to 10,000 ft. Mud consist of FW & viscous sweeps to 7200 ft. At top of Abo formation mud up w/ salt gel & caustic using sweeps to clean hole. At the top of the Penn Shale mud up with Starch & Desco w/ fluid loss < 10 cc's per quart. Run Gyro. POH & Log per Keith Williams Geo Prognosis. Run 5 ½" 17# N-80 LTC casing to 10,000 ft. Cmt casing with 1450 sks Caza Slurry # 5. TOC estimated @ 5000 ft from surface. Top of slurry will be adjusted according to drilling problems and log characteristics. Stage tools may be necessary to obtain pipe protection in the open hole. Hyraulic diameter of the 8 ½" hole vs the 5 ½ inch casing is .229 cu ft/ft. Cement volume was calculated using 50% wash out or 1.5 times the gauge hole volume.

### DISTRICT I

DISTRICT II

1625 N FRENCH DR HOBBS, NM 88240

1301 W GRAND AVENUE, ARTESIA, NM 88210

### State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 12, 2005

### Revised October 12, 2005 Submit to Appropriate District Office

## OIL CONSERVATION DIVISION

1330 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV

1990 C CT FRANCIC DR CANTE PE NM 97505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

30.025.39240	Pool Code 47310 9120	Caprock UpperPool Name -MOORE PERMO-PENN East	
Property Code 37458		perty Name BELL "23" STATE	Well Number 1
ogrid No. 249099	•	rator Name ERATING, LLC	Elevation 4335'

#### Surface Location

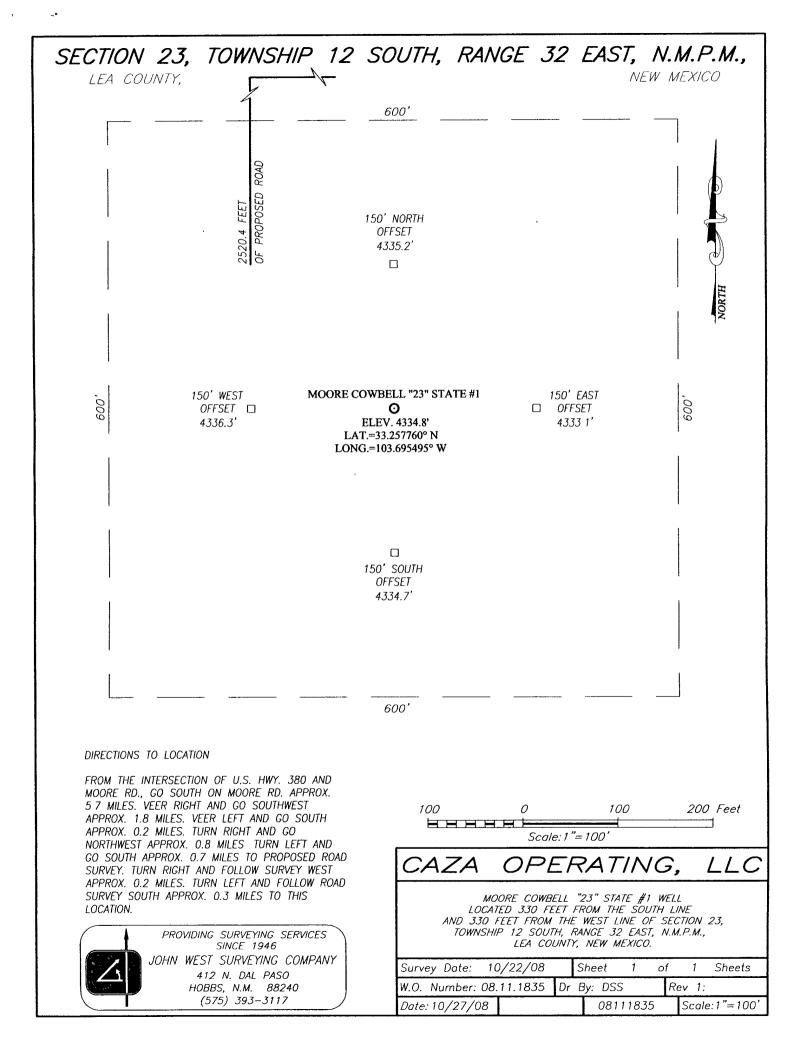
				· · · · · · · · · · · · · · · · · · ·						
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
М	23	12-S	32-E		330	SOUTH	330	WEST	LEA	

### Bottom Hole Location If Different From Surface

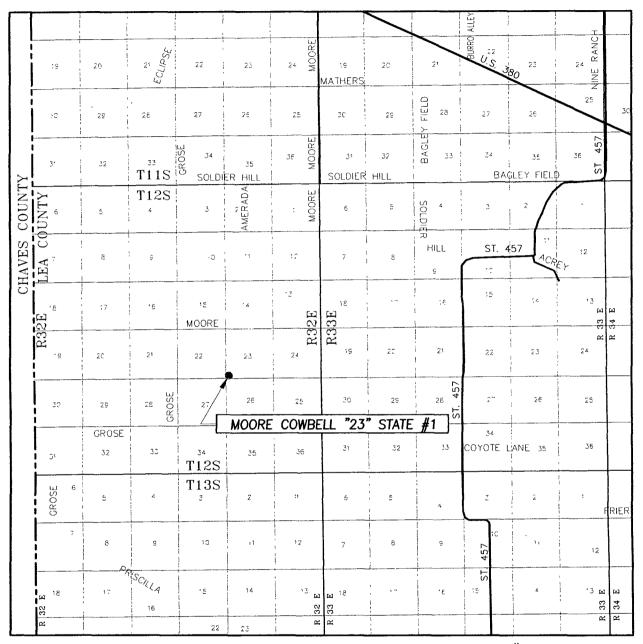
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill C	onsolidation (	Code Or	der No.				
40									

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

		EN ATTROVED BY TH	
			OPERATOR CERTIFICATION  I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a companisory pooling order heretofore entered by the division.
	GEODETIC COORDINATES  NAD 27 NME  SURFACE LOCATION  Y=821887.0 N  X=694981.7 E  LAT.=33.257760 N  LONG =103.695495 W	 	Signature Date  Joe T. Danica 10/28/08  Printed Name  SURVEYOR CERTIFICATION  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.
E~3499			OCTORER 2008  Date Surveyed D. E. DSS  Signature & Scal of Professional Rumbon  Back Scal of Professional Rumbon  Back Scal of Profession 12641  Certificate Ass. CART C. EIDSON 12641



## **VICINITY MAP**



SCALE: 1" = 2 MILES

SEC. 23 TWP. 12-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 330' FSL & 330' FWL

ELEVATION 4335'

OPERATOR CAZA OPERATING, LLC

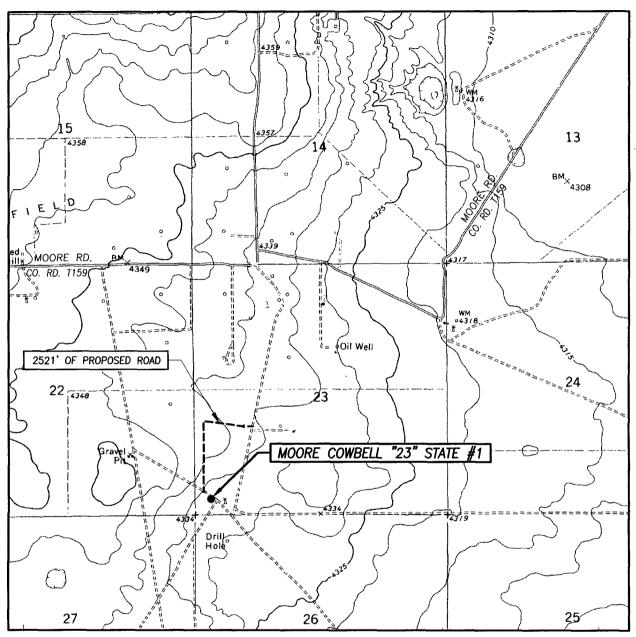
LEASE MOORE COWBELL "23" STATE



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117



# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: SOLDIER HILL, N.M. - 5'

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 330' FSL & 330' FWL

ELEVATION 4335'

OPERATOR CAZA OPERATING, LLC

LEASE MOORE COWBELL "23" STATE

U.S.G.S. TOPOGRAPHIC MAP

SOLDIER HILL, N.M.

SEC. 23 TWP. 12-S RGE. 32-E



PROVIDING SURVEYING SERVICES
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# BLOWOUT PREVENTER SYSTEM

5000 PSI

