

OCD-ARTESIA

SEP 20 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Split Estate

APPLICATION FOR PERMIT TO DRILL OR REENTER

TS-07-523  
LA-07-1107  
FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>28</b> <del>NY-108959</del> <b>NM111401</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name -----
2. Name of Operator LCX ENERGY, LLC. (LARRY GILLETTE 432-262-4011)		7. If Unit or CA Agreement, Name and No. -----
3a. Address 101 NORTH MARIENFELD SUITE 200 MIDALND, TEXAS 79701	3b. Phone No. (include area code) 432-262-4011	8. Lease Name and Well No. 1724 FEDERAL COM. # 212
4. Location of Well (Report location clearly and show well on map of State requirements) At surface 660' FNL & 1880' FWL SECTION 21 T17S-R24E At proposed prod. zone 660' FSL & 1880' FWL SECTION 21 T17S-R24E		9. API Well No. <b>30-015-35822</b>
14. Distance in miles and direction from nearest town or post office* Approximately 12 miles West of Artesia, New Mexico		10. Field and Pool, or Exploratory COLLINS RANCH-WOLFCAMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		11. Sec., T. R. M. or Blk. and Survey or Area SECTION 21 T17S-R24E
16. No. of acres in lease 240	17. Spacing Unit dedicated to this well 320	12. County or Parish EDDY CO.
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA	19. Proposed Depth MD-8715' TVD-4960'	13. State NM
20. BLM/BIA Bond No. on file <b>NMB000094</b> RLB-0008129	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3787' GL	22. Approximate date work will start* WHEN APPROVED
23. Estimated duration 45 Days		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Joe T. Janica</i>	Name (Printed/Typed) Joe T. Janica	Date 06/20/07
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Title Agent	
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Approved by (Signature) <i>/s/ James Stovall</i>	Name (Printed/Typed) <i>/s/ James Stovall</i>	Date SEP 18 2007
--	--	---------------------

Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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Application approval does not warrant or conduct operations thereon.  
Conditions of approval, if any, are attached

Title 18 U.S.C. Section 1001 and Title 43 U.S. States any false, fictitious or fraudulent statement or information.

**If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.**

rights in the subject lease which would entitle the applicant to  
**APPROVAL FOR TWO YEARS**

**SEE ATTACHED FOR**

**CONDITIONS OF APPROVAL**

and willfully to make any department or agency of the United States.

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL stipulations  
ATTACHED**

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	75010	COLLINS RANCH-WOLFCOMP
Property Code	Property Name	Well Number
36414	1724 FEDERAL COM	212
OGRID No.	Operator Name	Elevation
218885	LCX ENERGY	3787'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	17 S	24 E		660	NORTH	1880	WEST	EDDY

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
N	21	17 S	24 E		660	SOUTH	1880	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
320									

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

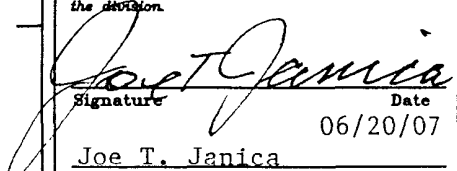
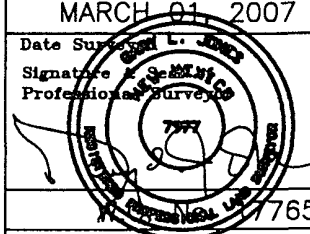
NM-108959	NM-111401		
3790.3'	3786.8'		
1880'	S.L.		
3788.5'	3785.1'		
	3960.0'		
	VA-2564	PROJECT AREA	
		PRODUCING AREA	
1880'	B.H.		
	Fee ?		
	660'		
SURFACE LOCATION LAT-N32°49'35.2" LONG-W104°35'47.2" N.: 664477.722 W.: 460529.741 (NAD-83)		OPERATOR CERTIFICATION  I hereby certify that the information 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 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.   Signature Date Joe T. Janica 06/20/07 Printed Name Agent	
BOTTOM HOLE LOCATION LAT-N32°15'15.8" LONG-W104°41'54.7" N.: 660517.72 W.: 460529.74 (NAD-83)		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.  MARCH 01, 2007 Date Surveyed Signature Professional Surveyor  7765 Certificate No. Gary L. Jones 7977  BASIN SURVEYS	

EXHIBIT "A"



3106 N. Big Spring St., Ste. 100  
Midland, TX 79705  
Tel: (432) 685-9158  
Fax: (432) 218-7396  
ellis@graysurfacespecialties.com

September 10, 2007

Bureau of Land Management  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, New Mexico 88220  
Attn: Don Peterson

Re: 1724 Federal #212      - LCX  
Section 21, T17S, R24E,  
Eddy County, New Mexico

Dear Mr. Peterson,

Please note that the surface for the above referenced well location is owned by a Private Landowner and an agreement has been reached. The minerals are owned and administered by the U.S. Federal Government. The surface is of limited use except for the grazing of livestock and the production of oil and gas.

Landowner information is as follows.  
Albert P. & Wilma R. Bach  
1603 Washington Ave.  
Artesia, New Mexico 88210  
505-487-7197

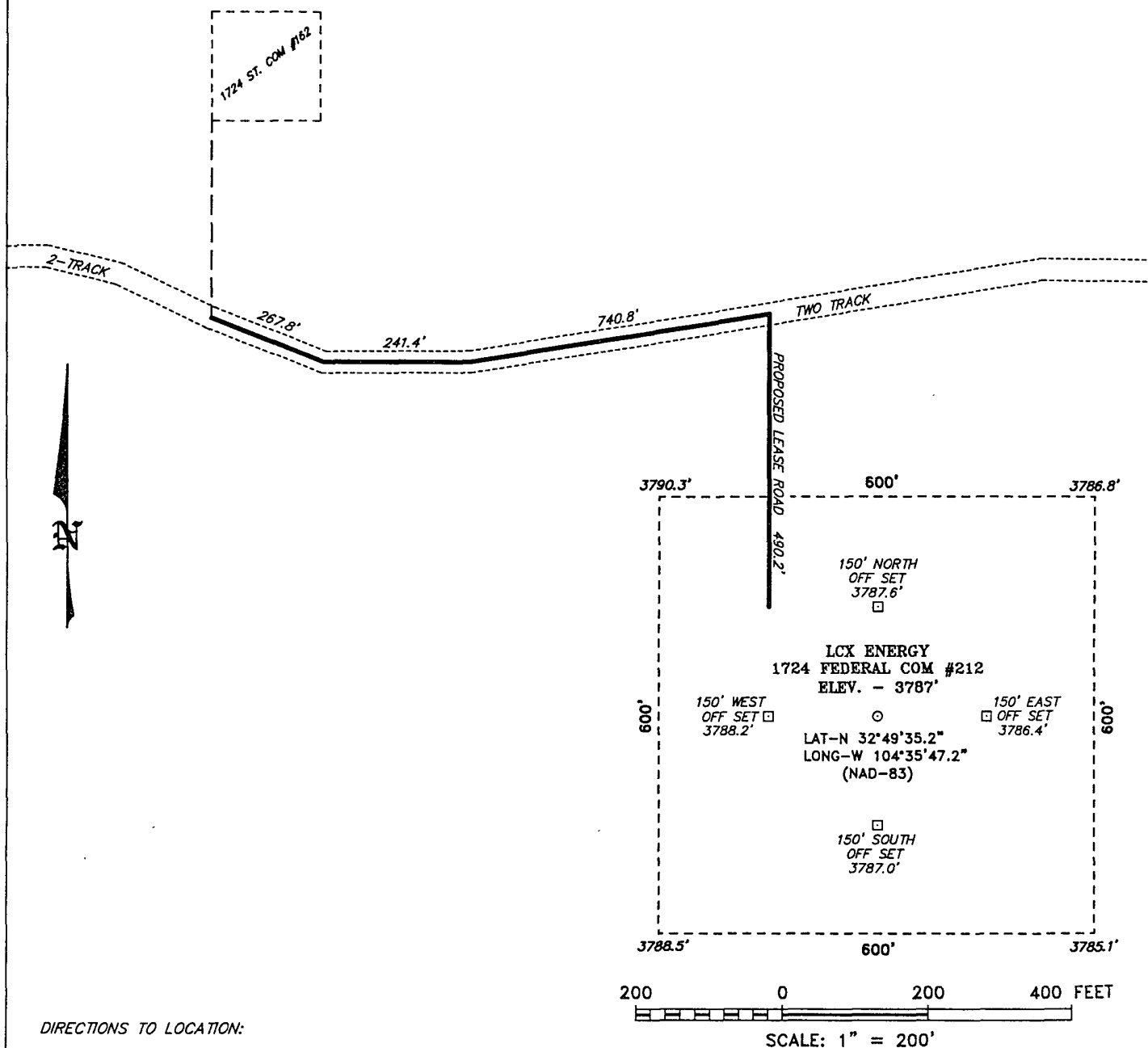
Please feel free to contact me at (432) 685-9158 if you need any additional information to assist you in regards to having received agreement from the private surface owner.

Thank you,

A handwritten signature in cursive script, appearing to read 'Lee Ann Rollins', is written over a horizontal line.

Lee Ann Rollins  
Gray Surface Specialties  
Agent for LCX Energy, LLC

SECTION 21, TOWNSHIP 17 SOUTH, RANGE 24 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE HWY MARKER 94 OF US HWY 82, PROCEED SOUTH 0.5 MILES TO LEASE ROAD, FOLLOW LEASE ROAD SOUTH 0.2 MILES TO LEASE ROAD GOING EAST, PROCEED EAST 1.1 MILES TO PROPOSED LEASE ROAD.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 17765

Drawn By: J. M. SMALL

Date: 03-05-2007

Disk: 17765W

**LCX ENERGY**

REF: 1724 FEDERAL COM # 212 / Well Pad Topo

THE 1724 FEDERAL COM No. 212 LOCATED 660' FROM

THE NORTH LINE AND 1880' FROM THE WEST LINE OF

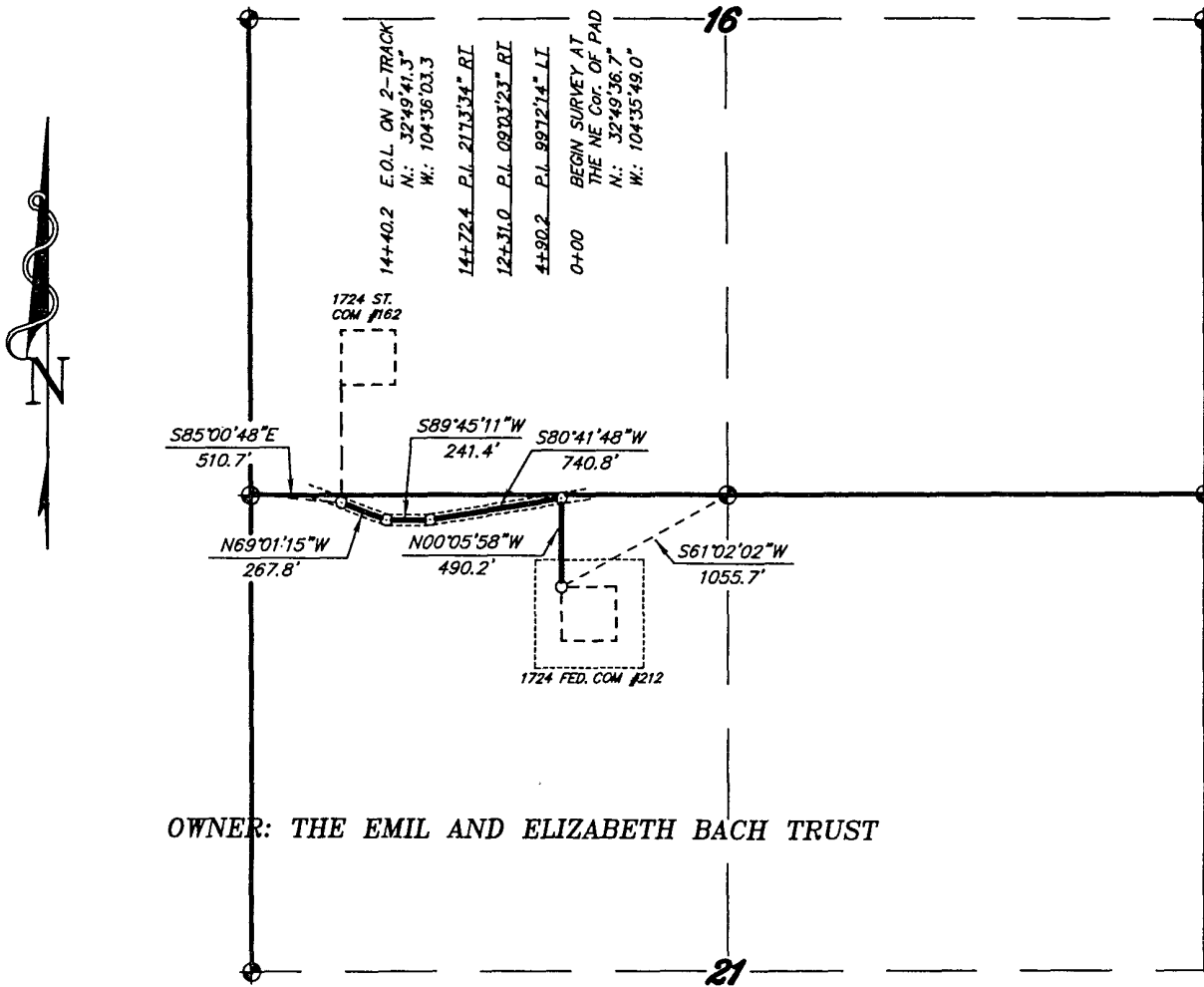
SECTION 21, TOWNSHIP 18 SOUTH, RANGE 24 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 03-01-2007

Sheet 1 of 1 Sheets

SECTION 21, TOWNSHIP 17 SOUTH, RANGE 24 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

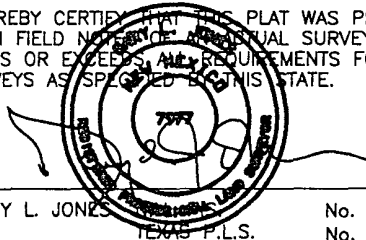


OWNER: THE EMIL AND ELIZABETH BACH TRUST

LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTION 21, TOWNSHIP 17 SOUTH, RANGE 24 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.  
BEGINNING AT A POINT WHICH LIES S.61°02'02\"W., 1055.7 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 21; THENCE N.00°05'15\"W., 490.2 FEET; THENCE S.80°41'48\"W., 740.8 FEET; THENCE S.89°45'11\"W., 241.4 FEET; THENCE N.69°01'15\"W., 267.8 FEET TO THE END OF THIS LINE WHICH LIES S.85°00'48\"E., 510.7 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 21. SAID STRIP OF LAND BEING 1740.2 FEET OR 105.47 RODS IN LENGTH.

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF A PERSONAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.



GARY L. JONES No. 7977  
TEXAS P.L.S. No. 5074

1000 0 1000 2000 FEET

**LCX ENERGY**

REF: PROPOSED ROAD TO THE LCX - 1724 FEDERAL COM #212

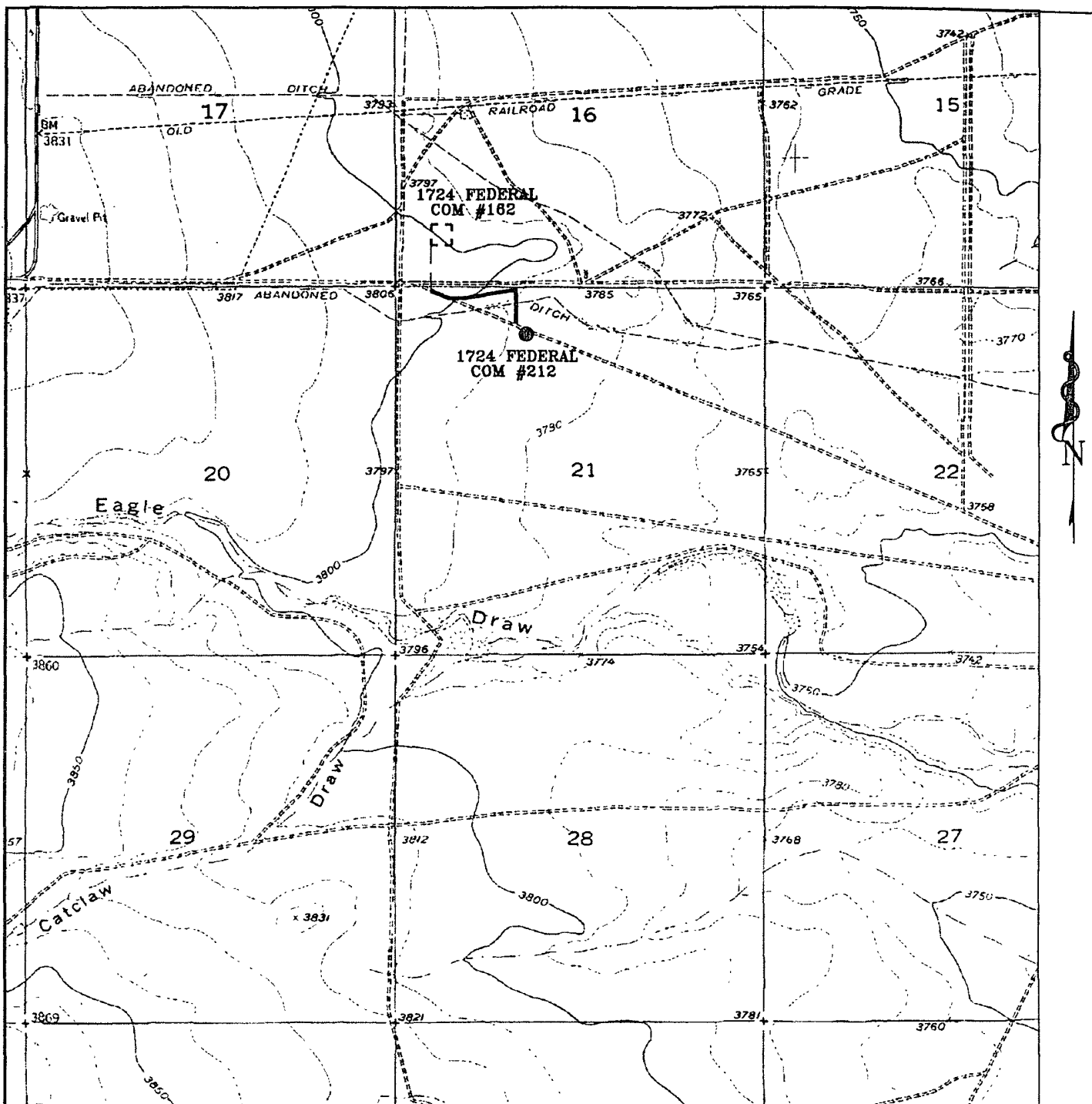
A ROAD CROSSING FEE LAND IN  
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 24 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

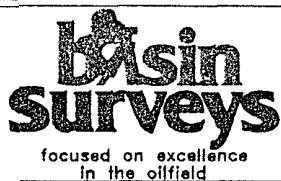
W.O. Number: 17765 Drawn By: J. M. SMALL

Date: 03-06-2007 Disk: JMS 17765R

Survey Date: 03-01-2007 Sheet 1 of 1 Sheets



THE 1724 FEDERAL COM #212  
 Located at 660' FNL and 1880 FWL  
 Section 21, Township 17 South, Range 24 East,  
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number: JMS 17765T

Survey Date: 03-01-2007

Scale: 1" = 2000'

Date: 03-05-2007

LCX ENERGY

**LCX ENERGY, LLC**  
**110 N. Marlenfeld St., Suite 200**  
**Midland, TX 79701**  
 Aug. 7, 2007

**Horizontal Drilling Procedure**  
**Abo Wildcat Horizontals**  
**(Eddy Co., NM)**

1. Drill 26" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17-1/2" hole to 350'.
3. Drill 12-1/4 hole to 1200'. *BTC per operator 8/14/07*
4. Run and set 1200' of 8-5/8" 24# J55 casing. Cement to surface with Lead: 250 sx 35/65 Poz/C + 6% gel + 2% CaCl<sub>2</sub> (12.7 ppg, 1.94 cu ft/sk) and Tail: 200 sx. of Class "C" cement + 2% CaCl<sub>2</sub> (14.8 ppg, 1.34 cu ft/sk). Circulate cement to surface.  
Note: if losses occur, additional light weight and thixotropic slurries may be added to increase the overall volume. These slurries are:  
 PVL + 12% gel + 3% BWOW salt + bridging agents (1.0 ppg, 2.75 cu ft/sk)  
 10-2 RFC (10% D53, 2% CaCl<sub>2</sub>) + bridging agents (14.2 ppg, 1.62 cu ft/sk)
5. Drill 7-7/8" hole. Drill 7-7/8" curve and land lateral in pay zone (approx. 4700-4900 ft TVD). Pickup lateral drilling assembly with a 7-7/8" bit and drill a +/-4000' lateral to 660' from lease line (approx. 4000 ft vertical section).
6. Run and set 5-1/2" 17# N80 production casing. Cement 5-1/2" with Lead: 750 sx 50/50 Poz/C (11.9 ppg, 2.46 cu ft/sk) and Tail: 350 sx PVL + 100% CaCO<sub>3</sub> (acid soluble cement) + fluid loss additive + 1% CaCl<sub>2</sub> attempting to bring top of cement to 1,000'. *Yield 2,800 per operator 8/14/07*

**Contingency String:**

If lost circulation occurs while drilling the 17-1/2" hole:

- 2a. Run and set 350' of 13-3/8" 48# H-40 ST&C casing. Cement with Lead: 195 sx 35/65 Poz/C + 6% gel + 2% CaCl<sub>2</sub> (12.7 ppg, 1.94 cu ft/sk) and Tail: 200 sx of Class "C" cement + 2% CaCl<sub>2</sub> (14.8 ppg, 1.34 cu ft/sk). Circulate cement to surface.

ATTACHED

# APPLICATION TO DRILL

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

1. Location of well: 660' FNL & 1880' FWL SECTION 21 T17S-R24E
2. Ground Elevation above Sea Level: 3787' GL.
3. Geological age of surface formation: Quaternary Deposits:
4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.
5. Proposed drilling depth: MD=8715' TVD-4960'±

6. Estimated tops of geological markers:

San Andres	575'	Abo	3875'
Glorietta	1715'	Wolfcamp	4700'
Tubb	3200'		

7. Possible mineral bearing formations:

Abo	Gas
Wolfcamp	Gas

8. Casing Program:

(New)

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
26"	0-40'	20"	NA	NA	NA	Conductor
17½"	0-350'	13 3/8"	48#	8-R	ST&C	H-40
12½"	0-1200'	8 5/8"	36#	8-R	ST&C	J-55
8 3/4' & 7 7/8"	0-8715'	5½"	17#	8-R Butt.	LT&C	N-80
SAFETY FACTORS: COLLAPSE 1.125 BURST 1.0 TENSION 1.8 BODY YIELD 1.5						

Per Operator  
8-14-07

BTC below 4200'



LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

# 9. CASING SETTING DEPTHS & CEMENTING:

20" Conductor Set 40' of 20" conductor pipe and cement to surface with Redi-mix.

13 3/8" Surface Set 350' of 13 3/8" 48# H-40 ST&C casing. Cement as follows:  
13 3/8" casing, 17 1/2" hole: 1<sup>st</sup> lead 150 sx RFC(10-2-A) + 5pps D24 Gilsonite + 1/8 pps D130 Poly Flakes, Mixed at 14.2#/gal, 1.99 cu ft/sk; 2<sup>nd</sup> lead w/ 35:65:6 Poz: C: gel + 3% S1 CaCl + 5 pps D24 Gilsonite + 1/8 pps D130 Poly Flakes, Mixed at 12.6 #/gal, 1.99 cu ft/sk; Tail in w/ 200 sx Cl C + 2pps D24 Gilsonite, Mixed at 14.8 ppg, 1.34 cu ft/sk.

9 5/8" Intermediate Set 1200' of 9 5/8" 36# J-55 ST&C casing. Cement as follows:  
9 5/8" casing, 12 1/4" hole: 280 sx Scavenger PVL + 12% D20 Gel + 3% BWOW salt + 0.2% D46 TIC + 6 pps D24 Gilsonite + 1/8 pps D130 Poly Flakes, Mixed at 11 ppg, 2.75 cu ft/sk; 2<sup>nd</sup> lead RFC(10-2-A) + 5 pps D24 Gilsonite + 1/8 pps D130 Flakes, Mixed at 14.2 ppg, 1.52 cu ft/sk; Tail in w/ 150 sx Cl C neat, Mixed at 14.8 ppg, 1.33 cu ft/sk.

5 1/2" Production Set 8715' of 5 1/2" 17# N-80 LT&C casing. Cement as follows:  
5 1/2" casing, Lead, 620 sx 50:50:10, Poz:C: Gel + 10% D44 salt + 0.2% D46 AF + 0.3% D112 Flac + 0.125 pps D130 Polyflakes, Mixed at 12.9 ppg, 2.01 cu ft/sk, 150 sx 50:50:10, Poz C:Gel + 10% D44 salt + 0.2% D46 AF + 0.3% D112 Flac + 0.125 pps D130 Polyflakes, Mixed at 12.9 ppg, 2.01 cu ft/sk; Tail w/ 300 sx PVL(Pacos Valley Lite) acid soluble cement + 100% D151 CaCO3 + 0.6% D46 AF + 2% S1 SaCl, mixed at 13 ppg, 2.8 cu ft/sk

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 Hr. period and the blind rams will be operated when the drill pipe is out of on trips. Full opening stabbing valve and upper kelly cock will be available in case if needed. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 3000 PSI choke manifold with adjustable chokes. No abnormal pressures or temperatures are expected while drilling this well. No problems in offset wells.

# 11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-350'	8.4-8.7	29-34	NC	Fresh water use paper to control seepage.
350-1200'	8.4-8.7	30-38	NC	Fresh water use paper to control seepage.
1200-5000'	9.0-9.2	29-34	NC	Cut brine circulate outer reserve
5000-8715'	9.0-9.3	29-38	* 15 cc or less	Cut brine use high viscosity sweeps to clean hole
Water loss may have to be controlled in order to run casing.				

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run casing, water loss may have to be controlled.

APPLICATION TO DRILL

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Log vertical hole with Dual Induction, SNP, MSFL, LDT, Gamma Ray, Caliper from TVD back to the 9 5/8" casing shoe.
- B. Cased hole log Gamma Ray, Neutron from 9 5/8" casing shoe back to surface.
- C. Rig up mud logger on hole at 3700'±.
- D. No cores or DST's are planned at this time.

13. POTENTIAL HAZARDS:

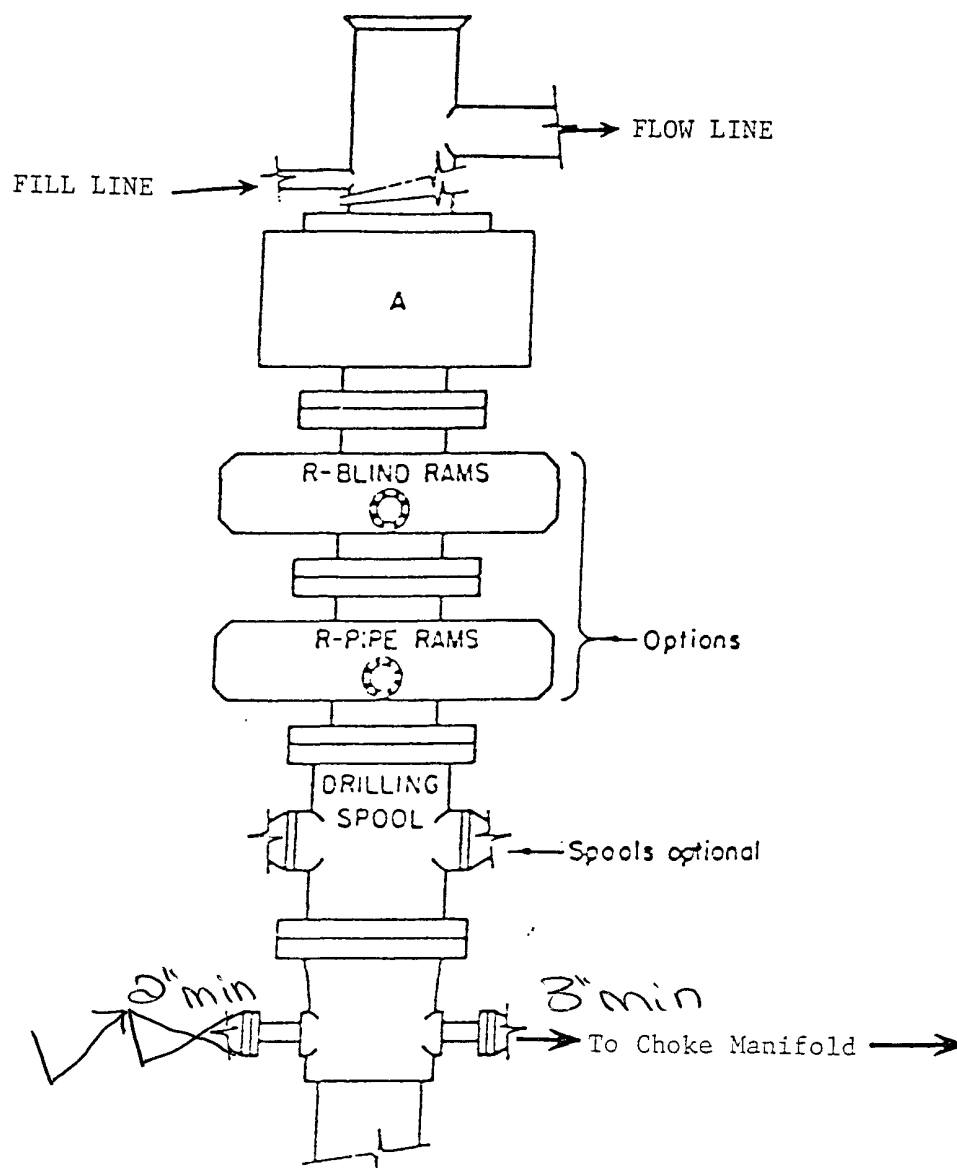
No abnormal pressures or temperatures are expected. There is no known presence of H<sup>2</sup>S in this area. If H<sup>2</sup>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3500 PSI, and Estimated BHT 165°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 40 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Wolfcamp formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as a gas well.

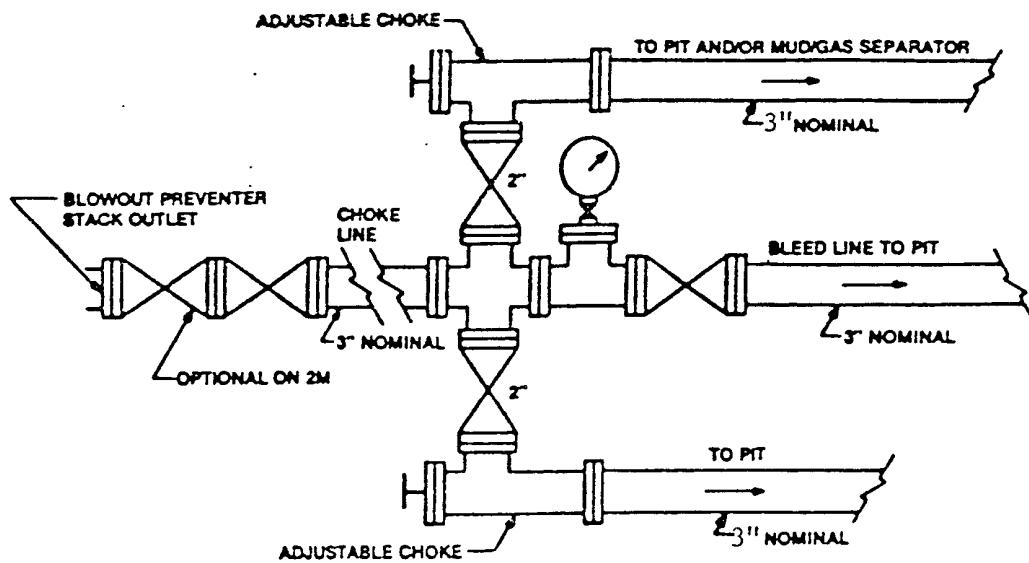


# ARRANGEMENT SRRA

900 Series  
3000 PSI WP

EXHIBIT "E"  
SKETCH OF B.O.P. TO BE USED ON

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM



Typical choke manifold assembly for 3M WP system

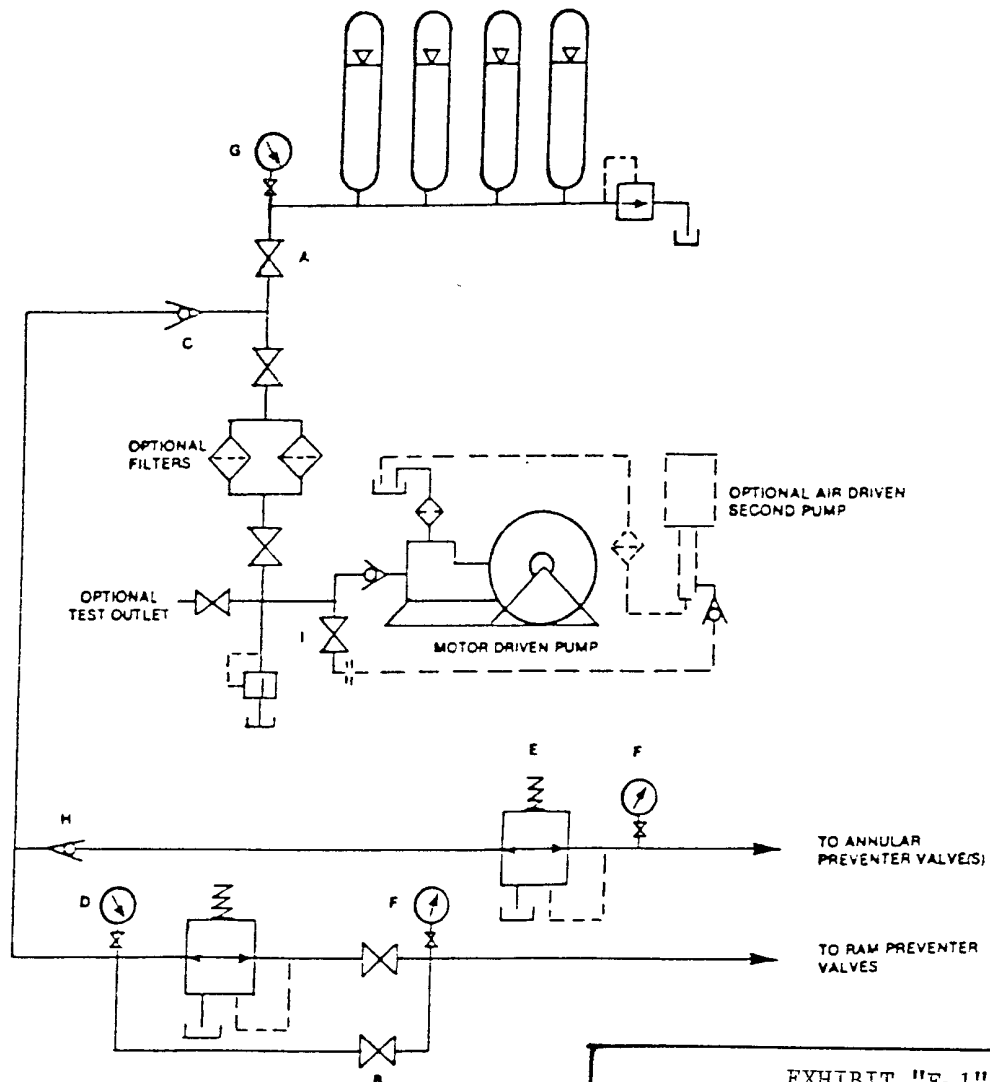


EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

LCX ENERGY , LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

**INTERDID**  
**IN LINE**  
Directional Drilling Specialists

Report Date:	May 21, 2007	Survey / DLS Computation Method:	Minimum Curvature / Lubinski
Client:	LCX Energy	Vertical Section Azimuth:	180 000°
Field:	Eddy County, NM Nad 83	Vertical Section Origin:	N 0.000 ft, E 0.000 ft
Structure / Slot:	1724 Federal Com #212 / 1724 Federal Com #212	TVD Reference Datum:	RKB
Well:	1724 Federal Com #212	TVD Reference Elevation:	0.0 ft relative to
Borehole:	1724 Federal Com #212	Sea Bed / Ground Level Elevation:	0.000 ft relative to
UWI/API#:		Magnetic Declination:	8 572°
Survey Name / Date:	1724 Federal Com #212_r1 / May 21, 2007	Total Field Strength:	49313.577 nT
Tort / AHD / DDI / ERD ratio:	90 000° / 3960.34 ft / 5 797 / 0.798	Magnetic Dip:	60 668°
Grid Coordinate System:	NAD83 New Mexico State Planes, Eastern Zone, US Feet	Declination Date:	May 21, 2007
Location Lat/Long:	N 32 49 35.040, W 104 35 47.040	Magnetic Declination Model:	IGRF 2005
Location Grid N/E Y/X:	N 664477.722 ftUS, E 460529.741 ftUS	North Reference:	Grid North
Grid Convergence Angle:	-0.14260796°	Total Corr Mag North -> Grid North:	+8.715°
Grid Scale Factor:	0.99991657	Local Coordinates Referenced To:	Well Head

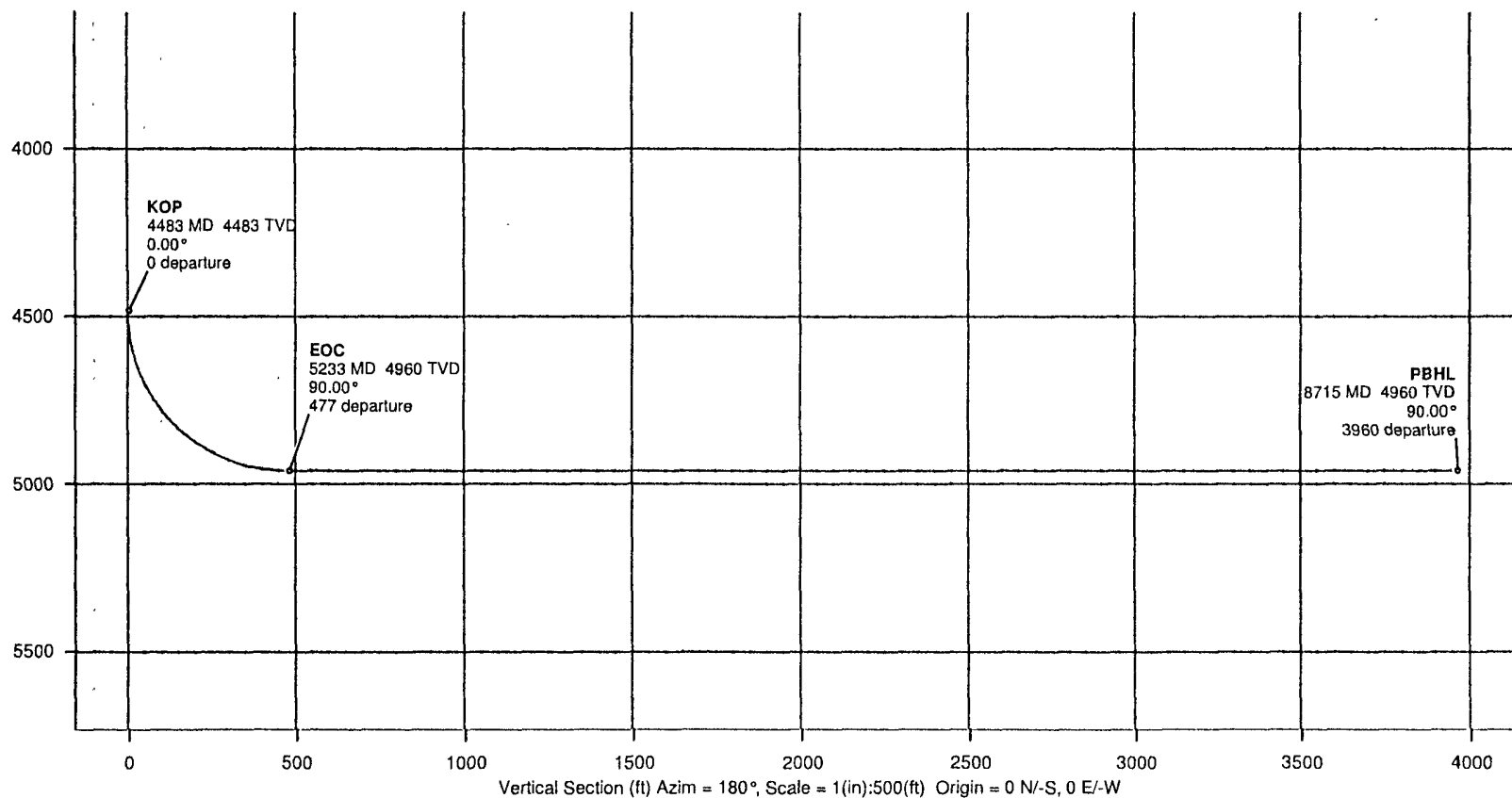
[illegible]

Comments	Measured Depth	Inclination	Azimuth	TVD	Vertical Section	NS	EW	Closure	Closure Azimuth	DLS	Mag / Grav Tool Face
	(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(deg/100 ft)	(deg)
KOP	3800.00	0.00	180.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	3900.00	0.00	180.00	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4000.00	0.00	180.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4100.00	0.00	180.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4200.00	0.00	180.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4300.00	0.00	180.00	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4400.00	0.00	180.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	---
	4482.54	0.00	180.00	4482.54	0.00	0.00	0.00	0.00	0.00	0.00	180.00M
	4500.00	2.10	180.00	4500.00	0.32	-0.32	0.00	0.32	180.00	12.00	180.00M
	4600.00	14.10	180.00	4598.82	14.38	-14.38	0.00	14.38	180.00	12.00	HS
	4700.00	26.10	180.00	4692.56	48.67	-48.67	0.00	48.67	180.00	12.00	HS
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EOC	5200.00	86.10	180.00	4958.89	444.95	-444.95	0.00	444.95	180.00	12.00	HS
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	7400.00	90.00	180.00	4960.00	2644.93	-2644.93	0.00	2644.93	180.00	0.00	---
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# LCX Energy

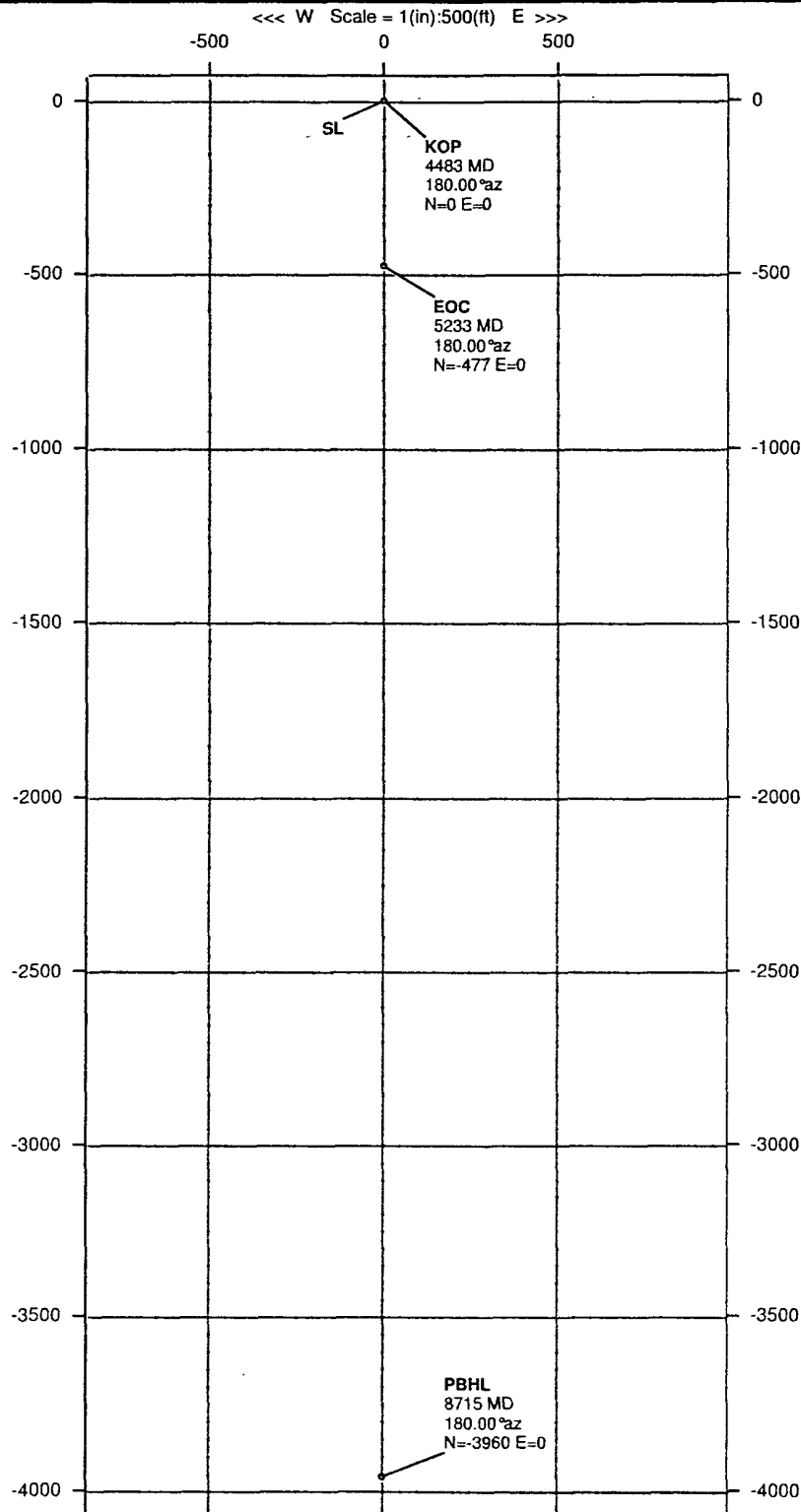
WELL				1724 Federal Com #212				FIELD				Eddy County, NM Nad 83				STRUCTURE				1724 Federal Com #212											
Magnetic Parameters								Surface Location								NA83 New Mexico State Plane Eastern Zone US Feet								Miscellaneous							
Model		IOF 2005		Dip		60.883°		Date		May 21, 2007		Lat		N32 49 35 040		Northing		664477.72 NUS		Grid Conv		0.14250796'		Spot		1724 Federal Com #212		TVD Ref		RKB (0.00 above)	
				Mag Dec		+8.572°		FS		49313.6 nT		Lon		W104 35 47 040		Easting		660529.74 NUS		Scale Fact		0.9999165686		Plan		1724 Federal Com #212 .r1		Srvy Date		May 21, 2007	





# LCX Energy

WELL 1724 Federal Com #212	FIELD Eddy County, NM Nad 83	STRUCTURE 1724 Federal Com #212
Magnetic Parameters Model: IGRF 2005 Dip: 60.658° Mag Dec: +8.572°	Surface Location Lat: N32 49 35.040 Long: W104 35 47.040	NAD83 New Mexico State Plane, Eastern Zone, US Feet Northing: 6647772.8US Easting: 4652374.8US Grid Corner: -0.14260736° Scale Factor: 0.9998165565
Data: May 21, 2007 FS: 49313.6 nT	Miscellaneous Slot: 1724 Federal Com #212 Plan: 1724 Federal Com #212_r1 TVD Ref: RKB (0.00 ft above) Srvy Date: May 21, 2007	



## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E" & "E-1"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.
7. Drillstem Testing
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If the location is near to a dwelling a closed DST will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

SURFACE USE PLAN

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

- A. Exhibit "B" is a reproduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.
- B. Exhibit "A" shows the proposed well site as staked.
- C. Directions to location: From the junction of U.S. 82 and U.S. 285 in Artesia New Mexico take U.S. 82 West for 13 miles follow U.S. 82 South 1 mile then turn on to a lease road going East, follow this road 1.3 miles and the location is 500' on the South side of lease road.
- D. Exhibit "C" shows existing roads and proposed roads to location.

2. PLANNED ACCESS ROADS: Approximately 500' of new road will be constructed.

- A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.
- B. Gradient of all roads will be less than 5%.
- C. Turn-outs will be constructed where necessary.
- D. If require new access roads will be surface, with a minimum of 4-6" of caliche. this material will be obtained from a local source.
- E. Center line for new roads will be flagged, road construction will be done as field conditions require.
- F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS: EXHIBIT "A-1"

- A. Water wells - One well approximately 1200' Northeast of location.
- B. Disposal wells - None known
- C. Drilling wells - None known
- D. Producing wells - As shown on Exhibit "A-1"
- E. Abandoned wells - As shown on Exhibit "A-1"

## SURFACE USE PLAN

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's. Exhibit "C" shows proposed routes of roads, flowlines and powerlines.

### 5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

### 6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

### 7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.
- D. Waste water from living quarters will be drained into holes with a minimum of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pits will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

### 8. ANCILLARY FACILITIES:

- A. No camps or air strips will be constructed on location.

## SURFACE USE PLAN

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

### 9. WELL SITE LAYOUT:

- A. Exhibit "D" shows the proposed well site layout.
- B. This Exhibit shows the location of reserve pit, sump pits, and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pits will be unlined unless subsurface conditions encountered during pit construction indicate that a plastic liner is required to contain lateral migration.
- D. If needed the reserve pits will be lined with polyethelene. The pit liner will be no less than 6 mils thick and the liner will be extended at least 3 feet over the top of the dikes and secured in place to keep edge of liner in place.
- E. The reserve pit will be fenced on three sides and fenced with four strands of barbed wire during drilling and completion phases. The 4th side will be fenced after drilling operations are complete and the drilling rig has moved out. If the well is a producer the mud pits will remain fenced in until the mud has dried up enough to break out the pits and reclaimed according to BLM requirements.

### 10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location and reserve pits will be allowed to dry properly, fluids may be moved and disposed of in accordance with article 7-E as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any will be reshaped to the original configuration with provisions made to alleviate future erosion. In case of the well completed as a producer the drilling pad will be necessary to construct production facilities. After the area has been shaped and contoured top soil from the spoil pile will be placed over the disturbed area to the extent possible so that revegetation procedures can be accomplished to comply with the BLM specifications.

If the well is a dry hole the pad and road area will be contoured to match the existing terrain. Top soil will be spread to the extent possible and revegetation will be carried out according to the BLM specifications.

Should the well be a producer the previously noted procedures will apply to those areas which are not required for production facilities.

APPLICATION TO DRILL

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM

11. OTHER INFORMATION:

- A. The surface of land in this area consists of rolling plains relatively flat with Northeast exposure and drainage. Soils are tan/brown/grey loamy sandy silte with minor ampunts of caliche. The vegetation consists of Heron bill, blatter pod, loco weed, broomweed, snakeweed, prickley pear, cholla and various native grasses.
- B. Portions of this drilling unit are on federal lands and minerals and other parts are on state lands and some on Fee lands. The surface location is on Fee land, the owner is The Emil and Elizabeth Bach Trust.
- C. An archealogical survey will be conducted on the well location and the access roads, and the report will be filed with The Bureau of Land Management Carlsbad Field Office.
- D. There are no dwellings near this location.

12. OPERATORS REPRESENTATIVE:

BEFORE CONSTRUCTION

TIERRA EXPLORATION, INC.  
P.O. BOX 2188  
HOBBS, NEW MEXICO 88241  
OFFICE PHONE 505-391-8503  
CELL 505-390-1598  
JOE T. JANICA

DURING AND AFTER CONSTRUCTION

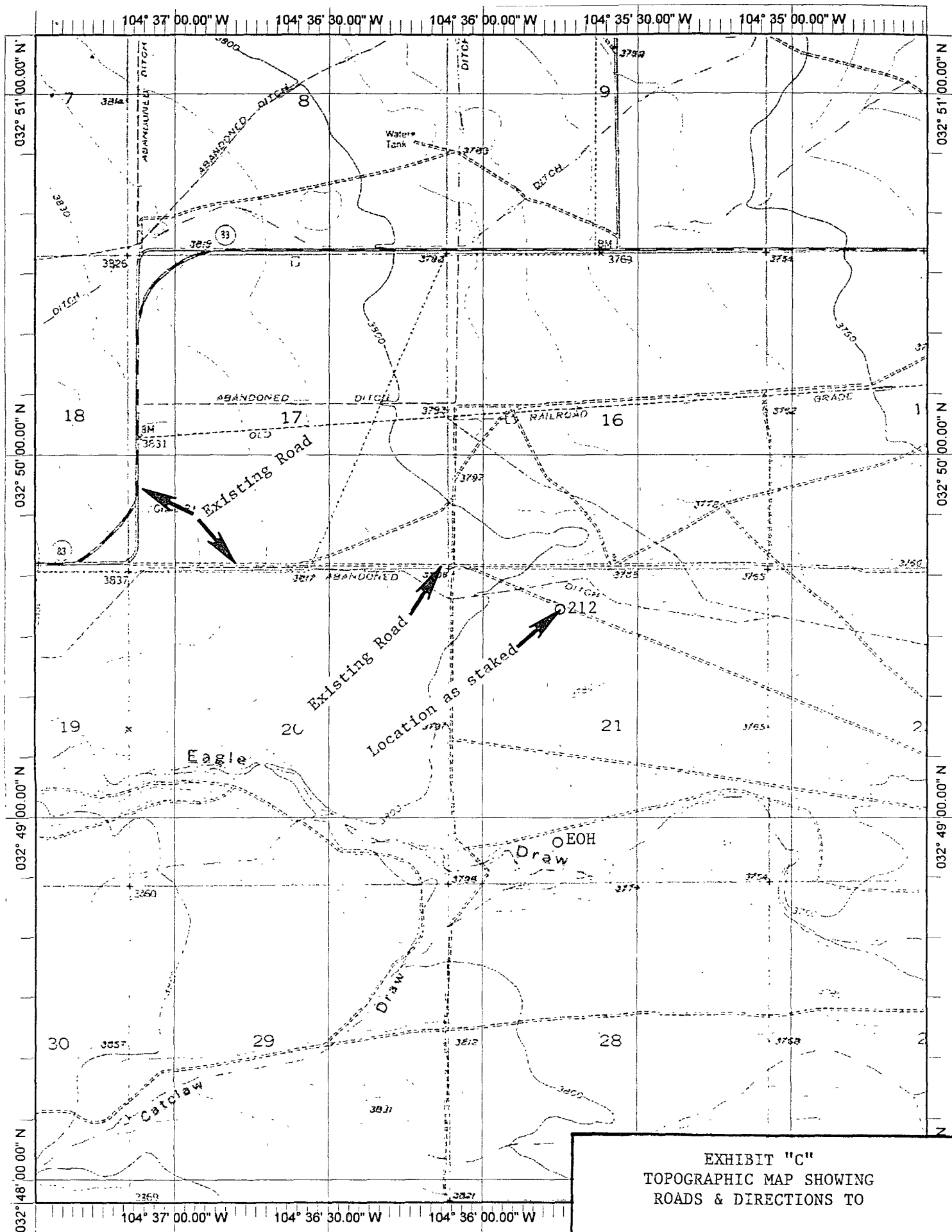
LCX ENERGY, LLC.  
110 NORTH MARIENFELD  
SUITE 200  
MIDLAND, TEXAS 79701  
OFFICE PHONE 432-262-4011  
LARRY GILLETTE.

13. CERTIFICATION: I hereby certify that I or persons under my direct supervision have inspected the proposed drill site and access routes, that I am fimiliar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge are true, and correct, and that the work associated with the operations proposed herein will be performed by LXC ENERGY, LLC. it's contractors/subcontractors is in the confirmity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of the U.S.C. 1001 for the filing of a false statement.

NAME : Joe T. Janica

DATE : 06/20/07

TITLE : Agent



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EXHIBIT "C"  
TOPOGRAPHIC MAP SHOWING  
ROADS & DIRECTIONS TO

LCX ENERGY, LLC.  
1724 FEDERAL COM. #212  
UNIT "C" SECTION 21  
T17S-R24E EDDY CO. NM



## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: LCX Energy, LLC  
Well Name & No. 212-1724 Federal Com  
Location SHL: 0660' FNL, 1880' FWL, Sec. 21, T-17-S, R-24-E, Eddy County, NM  
Location BHL: 0660' FSL, 1880' FWL, Sec. 21, T-17-S, R-24-E, Eddy County, NM  
Lease: NM-111401

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### I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 2 hours in advance for a representative to witness:
1. Spudding well
  2. Setting and/or Cementing of all casing strings
  3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. **Although no Hydrogen Sulfide has been reported, it is always a potential hazard.**
- C. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- D. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### II. CASING:

- A. **The 13-3/8 inch casing will be used as surface casing when lost circulation occurs prior to 350 feet and cemented to the surface.**
1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  2. Wait on cement (WOC) time for a primary cement job will be a minimum of **18 hours for a water basin** or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
  3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
  4. **If cement falls back, remedial action will be done prior to drilling out that string.**

**Possible lost circulation in the Grayburg and San Andres formations.**

**Possible bursts of high pressure gas in the Wolfcamp**

- B. If lost circulation does not occur in the surface hole, 8-5/8" casing shall be set as surface casing at approximately 1200 feet and cemented to the surface. **Otherwise, the casing will be set as intermediate casing and cemented to surface.** If cement does not circulate see A.1 thru 4.
- C. The minimum required fill of cement behind the 5-1/2 inch production casing is **cement to extend a minimum of 200' inside the intermediate casing. If 13-3/8" casing is not set, the cement on the production casing must come to surface.** If cement does not circulate see A.1 thru 4.
- D. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **III. PRESSURE CONTROL:**

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec 17.
- B. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
1. The tests shall be done by an independent service company.
  2. The results of the test shall be reported to the appropriate BLM office.
  3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
  5. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

### **IV. DRILLING MUD:**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well

**Engineer on call phone (after hours): 505-706-2779**

**WWI 080607**