ATS-08-637

Form 3160-3
(April 2004)

JUN 05 2008
OCD-ARTESIA

OCD-ARTESIA

786

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

Split Estate

1a. Type of work: [XX] DRILL [ ] REENTER	5. Lease Serial No. NM-90947
1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name ----------
2. Name of Operator LCX ENERGY, LLC. (KELVIN FISHER 432-262-4046) 218885	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
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 560' FNL & 1880' FEL SECTION 30 T16S-R25E EDDY CO. NM At proposed prod. zone 660' FSL & 1880' FEL SECTION 30 T16S-R25E	8. Lease Name and Well No. 34279 1625 FEDERAL COM. # 303
	9. API Well No. 30-015-36357
	10. Field and Pool, or Exploratory COTTON WOOD CREEK-WOLFCAMP
	11. Sec., T. R. M. or Blk. and Survey or Area SECTION 30 T16S-R25E
14. Distance in miles and direction from nearest town or post office* Approximately 10 miles Northeast of Artesia, New Mexico	Roswell Controlled Water Basin
	12. County or Parish EDDY CO.
	13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 560'	16. No. of acres in lease 560	17. Spacing Unit dedicated to this well 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1220' Per Diagram	19. Proposed Depth MD- 8451±' 8720 TVD- 4587±' 4850	20. BLM/BIA Bond No. on file Per Proposal NMB-000094
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3581' GL.	22. Approximate date work will start* WHEN APPROVED	23. Estimated duration 28 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature Joe T Janica	Name (Printed/Typed) Joe T. Janica	Date 04/16/08
Title Agent		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date JUN 3 2008
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

NOTE: New Pit Rule NMAC 19-15-17

*(Instructions on page 2)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 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

API Number	Pool Code	Pool Name
	75250	COTTONWOOD CREEK-WOLFCAMP

Property Code	Property Name	Well Number
	1625 FEDERAL COM	303

OGRID No.	Operator Name	Elevation
218885	LCX ENERGY	3581'

Surface Location

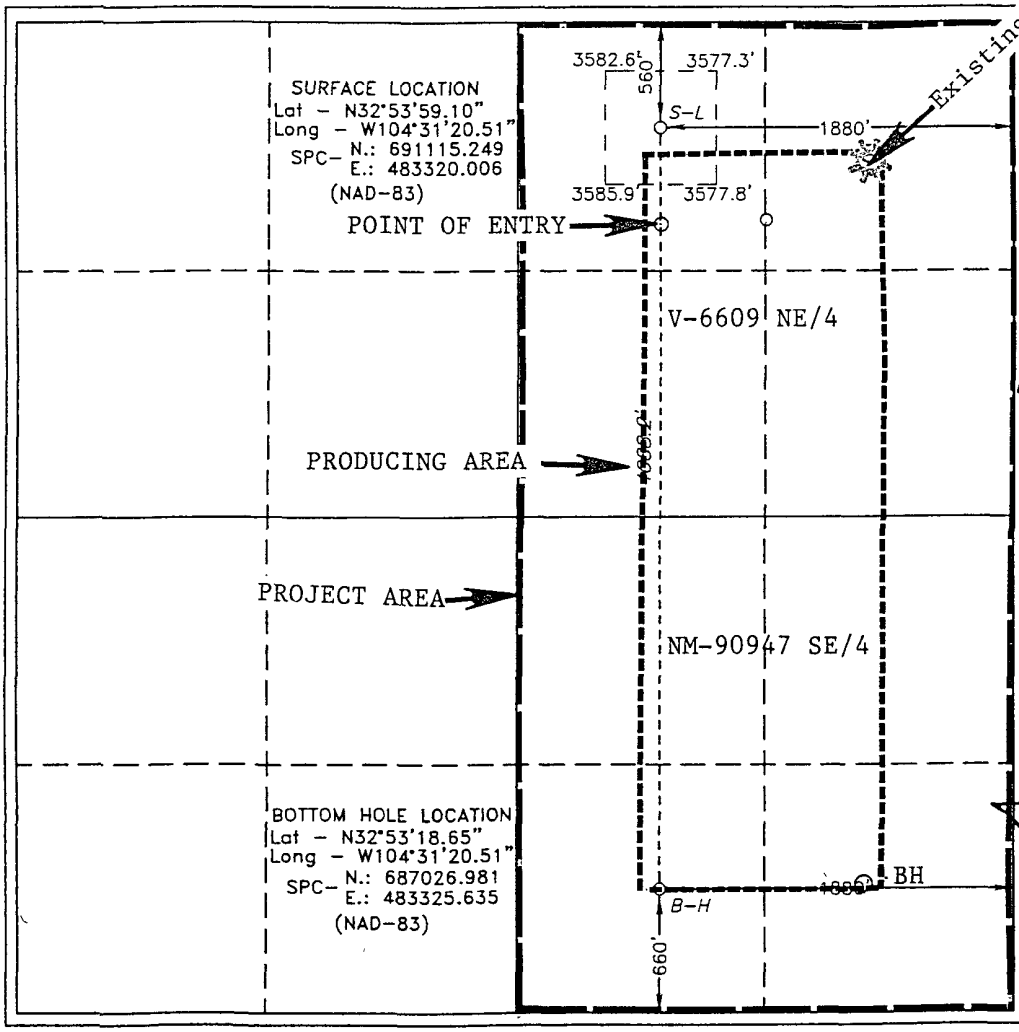
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	30	16 S	25 E		560	NORTH	1880	EAST	EDDY

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
O	30	16 S	25 E		660	SOUTH	1880	EAST	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



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: 04/16/08

Joe T. Janica
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 supervison, and that the same is true and correct to the best of my belief.

DECEMBER 21, 2007
Date Surveyed

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

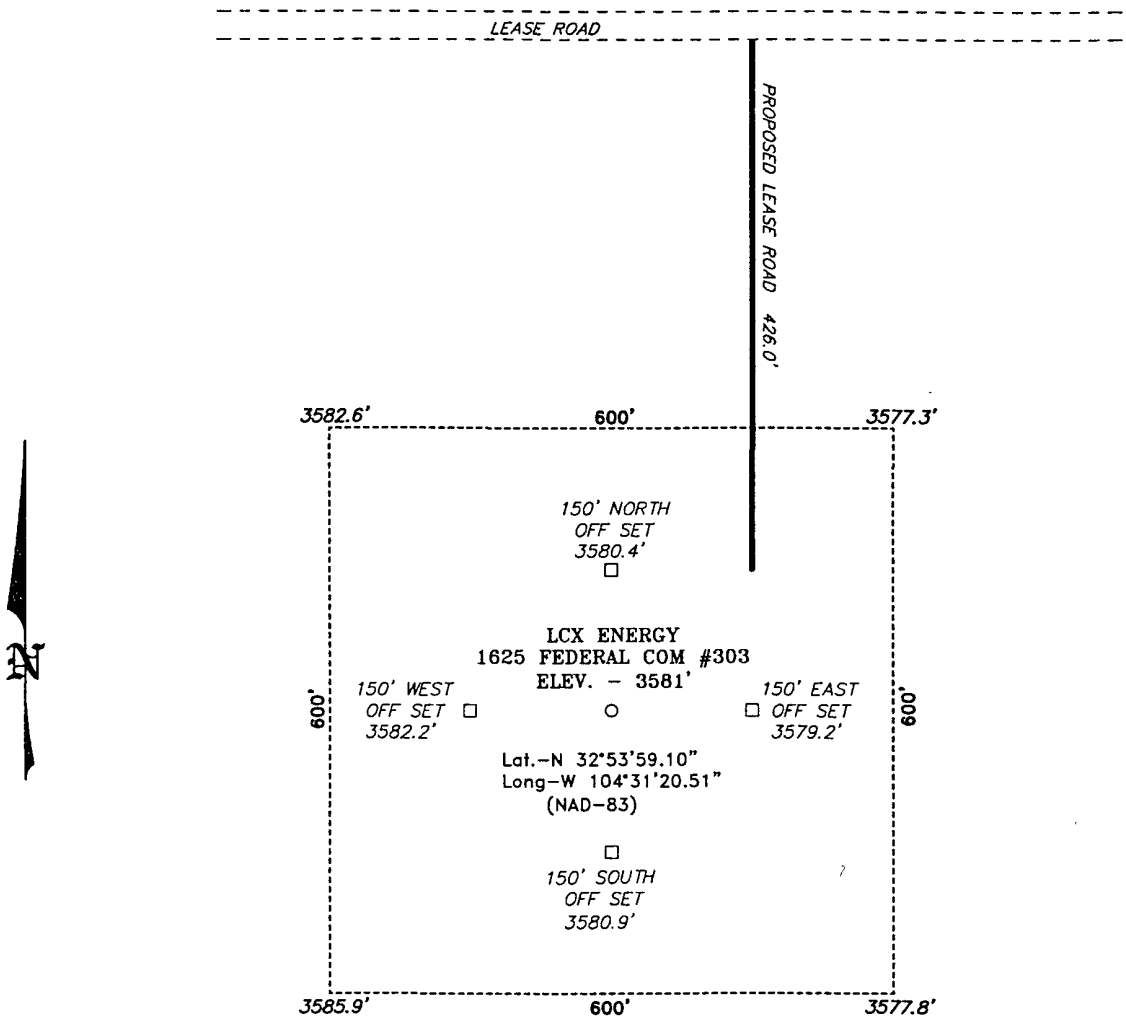
Signature & Seal of Professional Surveyor

W.O. No. 18855

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 30, TOWNSHIP 16 SOUTH, RANGE 25 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF U.S. HWY 285 AND US HWY 82 IN ARTESIA, PROCEED WEST ON ON US HWY 82 TO MILE MARKER #107; FROM MILE MARKER #107 CONTINUE WEST 0.7 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 3.0 MILES TO "T", GO WEST 0.3 MILES TO PROPOSED LEASE ROAD.

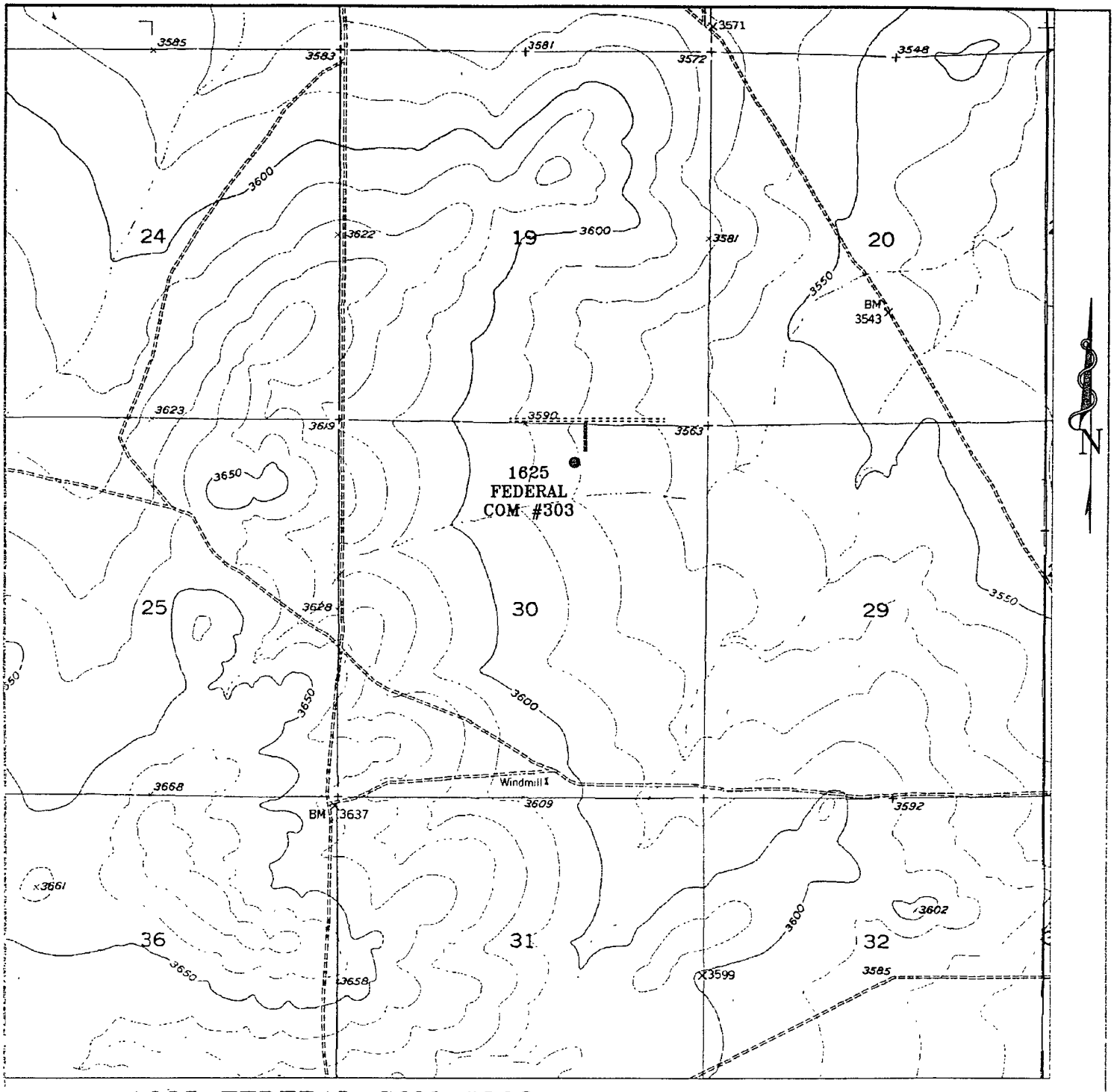
LCX ENERGY

REF: 1625 FEDERAL COM #303 / WELL PAD TOPO

THE 1625 FEDERAL COM #303 LOCATED 560' FROM THE NORTH LINE AND 1880' FROM THE EAST LINE OF SECTION 30, TOWNSHIP 16 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 18855	Drawn By: J. M. SMALL		
Date: 12-21-2007	Disk: JMS 18855W	Survey Date: 12-21-2007	Sheet 1 of 1 Sheets



1625 FEDERAL COM #303

Located 560' FNL and 1880' FEL
Section 30, Township 16 South, Range 25 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

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

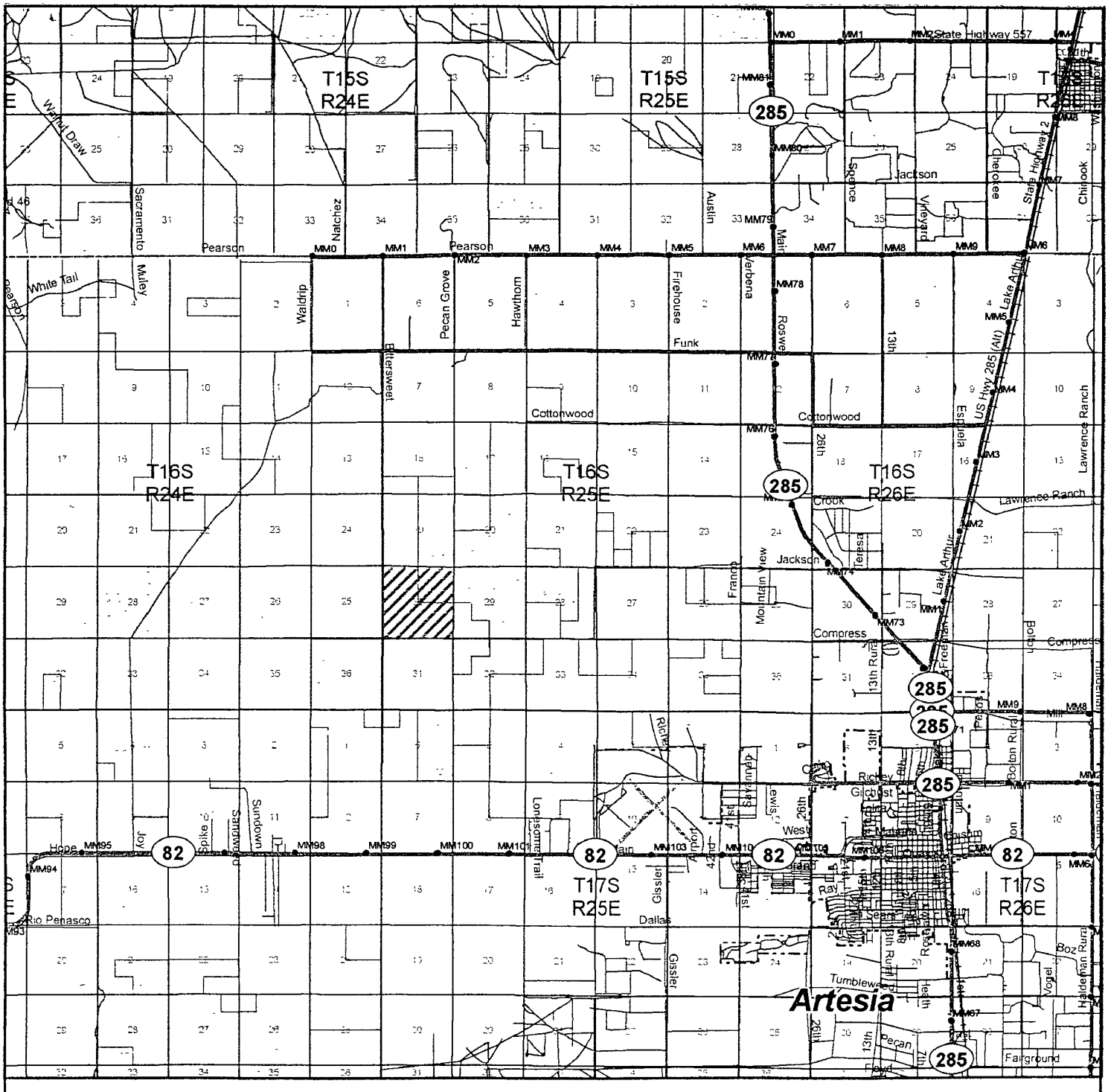
W.O. Number: JMS 18855T

Survey Date: 12-21-2007

Scale: 1" = 2000'

Date: 12-21-2007

LCX ENERGY



1625 FEDERAL COM #303
Located at 560' FNL and 1880 FEL
Section 30, Township 16 South, Range 25 East,
N.M.P.M., Eddy County, New Mexico.

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1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 18855T
Survey Date:	12-21-2007
Scale:	1" = 2 MILES
Date:	12-21-2007

LCX ENERGY

APPLICATION TO DRILL

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

In response to questions asked under Section II of Bulliten NTL-6, the following information on the above will be provided.

1. LOCATION: 560' FNL & 1880' FEL SECTION 30 T16S-R25E EDDY CO. NM

2. ELEVATION ABOVE SEA LEVEL: 3581' GL

3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.

4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.

5. PROPOSED DRILLING DEPTH: TVD 4587' MD 8451'

6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

San Andres	580'	Abo	3880'
Glorietta	1720'	Wolfcamp	4580'
Tubb	3205'		

7. POSSIBLE MINERAL BEARING FORMATIONS:

Abo	Gas
Wolfcamp	Gas

8. CASING PROGRAM:

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40	20"	NA	NA	NA	Conductor	New
17½"	0-350±'	13 3/8"	48#	8-R	ST&C	H-40	New
12¼"	0-1200±'	8 5/8"	24#	8-R	ST&C	J-55	New
7 7/8"	8451±" MD	5½"	17#	8-R	LT&C	N-80	New

Design Factors: Collapse 1.125 Burst 1.0 Body yield 1.5 Joint Strength
8-R 1.8
Butress 1.6

APPLICATION TO DRILL

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

9. CASING SETTING DEPTHS AND CEMENTING:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix. Seeca
13 3/8"	Surface	Run and set 350' of 13 3/8" 48# H-40 ST&C casing. Cement with 200 Sx. of Class "C" 35/65 POZ + 6% Gel. + 2% CaCl, yield 1.94, tail in with 200 Sx. of Class "C" cement + 2% CaCl yield 1.34, circulate cement to surface.
8 5/8"	Intermediate	Run and set 1200±' of 8 5/8" 24# J-55 ST&C casing. Cement with 250 Sx. of Class "C" 35/65 POZ + 6% Gel, + 2% CaCl, yiels 1.94, tail in with 200 Sx. of Class "C" cement + 2% CaCl, yield 1.34. Circulate cement to surface.
5½"	Production	Run and set 8451±' of 5½" 17# N-80 LT&C casing. Cement with 750 Sx. of Class "C" 50/50 POZ + additives yield 2.46, tail in with 350 Sx. of PVL + 100% $CaCo_3$, + fluid loss additive, + 1% CaCl, yield 2.79 estimate top of cement 1000' from surface.

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. This B.O.P. will be nippled up on the 8 5/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraucally operated closing unit and a 3" 5000 PSI choke manifoldwith dual adjustiable chokes. No abnormal pressures or abnormal temperatures are expected while drilling this well.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE SYSTEM
40-350±'	8.4-9.0	28-32	NC	Fresh water Spud mud add paper to control seepage, use high viscosity sweeps to clean hole.
350-3700±'	8.4-8.8	28-32	NC	Same as above
3700-TD	9.4-9.7	28-45	10 cc or Less	Add brine water to system and use starch to control water loss. add XC polymer as required, use high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all tines in order to combat lost circulation, or unexpected kicks. In order to run logs, DST's and casing water loss/viscosity may have to be altered or adjusted in order to meet these needs.

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Log vertical hole withDual Induction, SNP, MSFL, LDT, Gamma Ray, Caliper from TVD back to the 8 5/8" casing shoe.

B. Cased hole log Gamma Ray, Neutron fro 8 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^2S in this area. If H^2S 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.

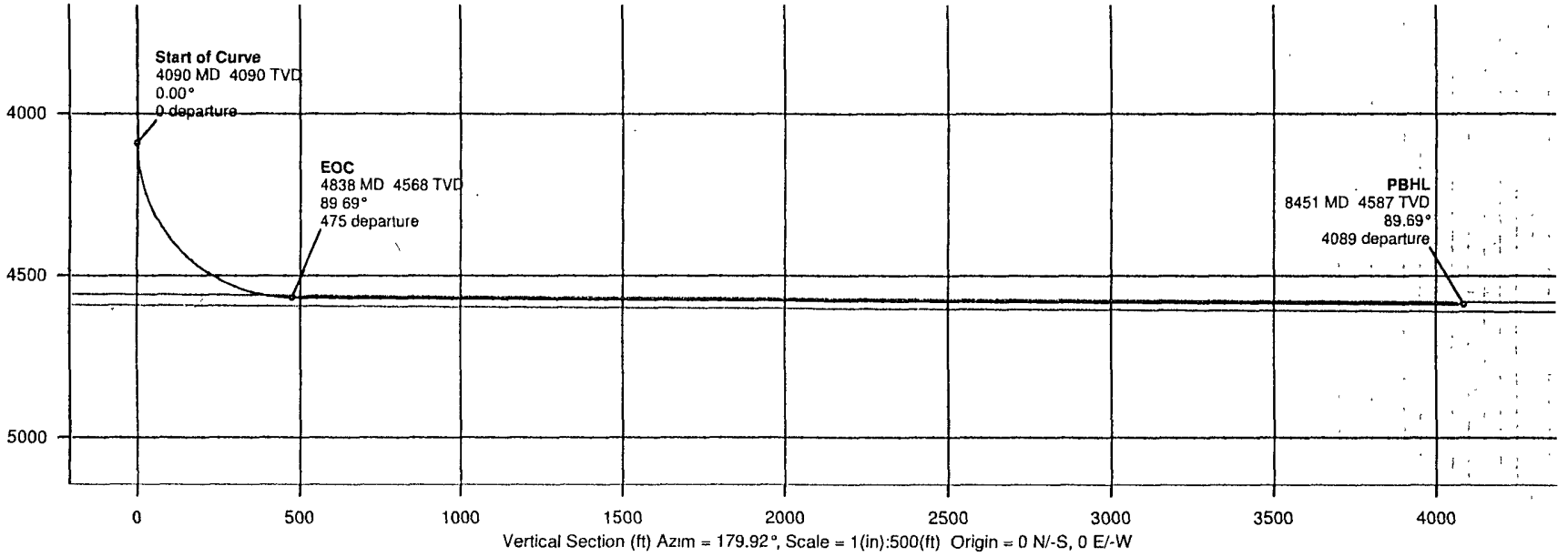
15. OTHER FACETS OF OPERATIONS:

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 potentialed as a gas well.

LCX Energy

WELL	FIELD	STRUCTURE
1625 Federal Com #303	Eddy County, NM NAD83	1625 Federal Com #303

Magnetic Parameters						Surface Location						Miscellaneous			
Model	IGRF 2005	Dip	60.735°	Date:	February 29, 2008	Lat	N32 53 59.101	Northing	691115.25 flUS	Grid Conv	-0.10257555°	Slot	1625 Federal Com #303	TVD Ref	RKB (0.00 ft above)
		Mag Dec	+8.454°	FS	49292.6 nT	Lon	W104 31 20.506	Easting	483320.01 flUS	Scale Fact	0.9999129454	Plan	1625 Federal Com #303 r1	Srvy Date:	February 29, 2008



600 d

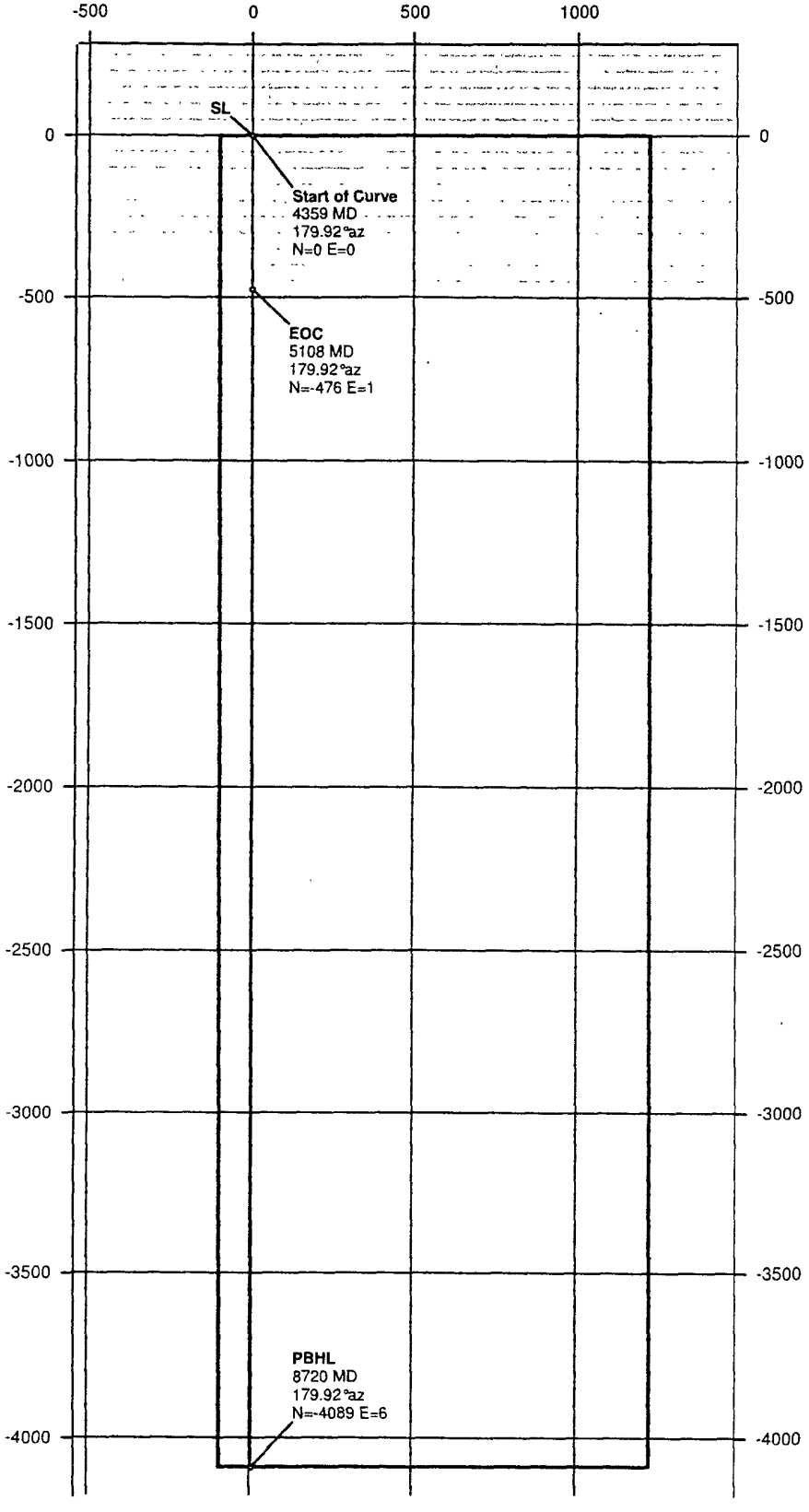
INTREPID
Directional Drilling Specialists

LCX Energy

WELL	FIELD	STRUCTURE
1625 Federal Com #303	Eddy County, NM NAD83	1625 Federal Com #303

Magnetic Parameters	Surface Location	Miscellaneous
Model IGRF 2005 Dip: 60.735° Mag Dec: -8.454° Date: February 29, 2008 FS: 49282.6 nT	Lat N32 53 56.101 Long W104 31 20.505 Northing: 691115.25 RUS Easting: 463120.01 RUS NAD83 New Mexico State Planes, Eastern Zone, US Feet Grid Conv: -0.1026755° Scale Fact: 0.9998129454	Slot 1625 Federal Com #303 Plan: 1625 Federal Com #303 r1 TVD Ref: RKB (0.00 ft above) Spud Date: February 29, 2008

<<< W Scale = 1(in):500(ft) E >>>



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Directional Drilling Specialists

INTREPID
Directional Drilling Specialists

Proposal

Report Date:	February 29, 2008	**Survey / DLS Computation Method:**	Minimum Curvature / Lubinski
Client:	LCX Energy	**Vertical Section Azimuth:**	179 920°
Field:	Eddy County, NM NAD83	**Vertical Section Origin:**	N 0 000 ft, E 0.000 ft
Structure / Slot:	1625 Federal Com #303 / 1625 Federal Com #303	**TVD Reference Datum:**	RKB
Well:	1625 Federal Com #303	**TVD Reference Elevation:**	0.0 ft relative to
Borehole:	1625 Federal Com #303	**Sea Bed / Ground Level Elevation:**	0.000 ft relative to
UWI/API#:		**Magnetic Declination:**	8 454°
Survey Name / Date:	1625 Federal Com #303_r1 / February 29, 2008	**Total Field Strength:**	49292.624 nT
Tort / AHD / DDI / ERD ratio:	89 790° / 4088 64 ft / 5.820 / 0 843	**Magnetic Dip:**	60.735°
Grid Coordinate System:	NAD83 New Mexico State Planes, Eastern Zone, US Feet	**Declination Date:**	February 29, 2008
Location Lat/Long:	N 32 53 59.101, W 104 31 20 506	**Magnetic Declination Model:**	IGRF 2005
Location Grid N/E Y/X:	N 691115.249 ftUS, E 483320 006 ftUS	**North Reference:**	Grid North
Grid Convergence Angle:	-0.10267555°	**Total Corr Mag North -> Grid North:**	+8 557°
Grid Scale Factor:	0 99991295	**Local Coordinates Referenced To:**	Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Mag / Grav Tool Face (deg)	Build Rate (deg/100 ft)	Walk Rate (deg/100 ft)
Tie-In	0.00	0.00	179.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	100.00	0.00	179.92	100.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	200.00	0.00	179.92	200.00	0.00	0.00	0.00	0.00	0 00	0.00	---	0.00	0.00
	300.00	0.00	179.92	300.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0 00
	400.00	0.00	179.92	400.00	0 00	0 00	0.00	0.00	0.00	0.00	---	0.00	0.00
	500.00	0.00	179.92	500.00	0.00	0.00	0.00	0 00	0.00	0.00	---	0.00	0.00
	600.00	0.00	179.92	600.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	700.00	0.00	179.92	700.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0 00
	800.00	0.00	179.92	800.00	0 00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	900.00	0.00	179.92	900.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	1000 00	0.00	179.92	1000 00	0.00	0.00	0 00	0.00	0.00	0.00	---	0.00	0.00
	1100.00	0.00	179.92	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	1200.00	0.00	179 92	1200.00	0.00	0.00	0 00	0.00	0.00	0.00	---	0.00	0.00
	1300.00	0.00	179.92	1300.00	0.00	0.00	0.00	0 00	0 00	0.00	---	0.00	0 00
	1400.00	0.00	179.92	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	1500 00	0.00	179.92	1500.00	0 00	0.00	0.00	0.00	0.00	0.00	---	0.00	0 00
	1600.00	0.00	179.92	1600.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	1700.00	0.00	179.92	1700.00	0.00	0.00	0.00	0.00	0.00	0 00	---	0.00	0.00
	1800.00	0.00	179.92	1800.00	0.00	0.00	0 00	0.00	0.00	0.00	---	0.00	0.00
	1900.00	0.00	179.92	1900.00	0.00	0.00	0.00	0.00	0.00	0 00	---	0.00	0.00
	2000.00	0.00	179 92	2000 00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	2100 00	0.00	179.92	2100.00	0.00	0.00	0 00	0 00	0 00	0.00	---	0.00	0.00
	2200 00	0.00	179.92	2200.00	0.00	0.00	0 00	0.00	0 00	0.00	---	0.00	0.00
	2300.00	0.00	179.92	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	2400.00	0.00	179.92	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	2500.00	0 00	179 92	2500.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	2600.00	0.00	179 92	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0 00
	2700.00	0.00	179 92	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	2800 00	0.00	179.92	2800.00	0.00	0.00	0.00	0 00	0.00	0.00	---	0.00	0.00
	2900.00	0.00	179.92	2900 00	0.00	0 00	0.00	0.00	0 00	0.00	---	0.00	0.00
	3000.00	0.00	179.92	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0 00
	3100.00	0.00	179.92	3100.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3200.00	0.00	179.92	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3300.00	0.00	179.92	3300.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3400.00	0.00	179.92	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3500.00	0.00	179.92	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3600.00	0.00	179.92	3600.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3700.00	0.00	179.92	3700.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	3800 00	0.00	179.92	3800.00	0.00	0 00	0.00	0.00	0 00	0.00	---	0.00	0.00
	3900.00	0.00	179.92	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	4000.00	0.00	179 92	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Mag / Grav Tool Face (deg)	Build Rate (deg/100 ft)	Walk Rate (deg/100 ft)
	4100.00	0.00	179.92	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	4200.00	0.00	179.92	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
	4300.00	0.00	179.92	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00
Start of Curve	4359.28	0.00	179.92	4359.28	0.00	0.00	0.00	0.00	0.00	0.00	179.92M	0.00	0.00
	4400.00	4.89	179.92	4399.95	1.73	-1.73	0.00	1.73	179.92	12.00	179.92M	12.00	0.00
	4500.00	16.89	179.92	4497.97	20.59	-20.59	0.03	20.59	179.92	12.00	HS	12.00	0.00
	4600.00	28.89	179.92	4589.93	59.40	-59.40	0.08	59.40	179.92	12.00	HS	12.00	0.00
	4700.00	40.89	179.92	4671.81	116.49	-116.49	0.16	116.49	179.92	12.00	HS	12.00	0.00
	4800.00	52.89	179.92	4740.03	189.36	-189.36	0.26	189.36	179.92	12.00	HS	12.00	0.00
	4900.00	64.89	179.92	4791.61	274 82	-274.82	0.38	274.82	179.92	12.00	HS	12.00	0.00
	5000.00	76.89	179.92	4824.30	369.13	-369.13	0.51	369.13	179.92	12.00	HS	12.00	0.00
	5100.00	88.89	179.92	4836.66	468.18	-468.18	0.64	468.18	179.92	12.00	HS	12.00	0.00
EOC	5107.53	89.79	179.92	4836.75	475.71	-475.71	0.65	475.71	179.92	12.00	---	12.00	0.00
	5200.00	89.79	179.92	4837.08	568.18	-568.18	0.78	568.18	179.92	0.00	---	0.00	0.00
	5300.00	89.79	179.92	4837.45	668.18	-668.18	0.92	668.18	179.92	0.00	---	0.00	0.00
	5400.00	89.79	179.92	4837.82	768.18	-768.18	1.06	768.18	179.92	0.00	---	0.00	0.00
	5500.00	89.79	179.92	4838.19	868.18	-868.18	1.20	868.18	179.92	0.00	---	0.00	0.00
	5600.00	89.79	179.92	4838 55	968.18	-968.18	1.33	968.18	179.92	0.00	---	0.00	0.00
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	6000.00	89.79	179.92	4840.02	1368.18	-1368.17	1.88	1368.18	179.92	0.00	---	0.00	0.00
	6100.00	89.79	179.92	4840.39	1468.17	-1468.17	2.02	1468.17	179.92	0.00	---	0.00	0.00
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	6300.00	89.79	179.92	4841.12	1668.17	-1668.17	2.30	1668.17	179.92	0.00	---	0.00	0.00
	6400.00	89.79	179.92	4841.49	1768.17	-1768.17	2.43	1768.17	179.92	0.00	---	0.00	0.00
	6500.00	89.79	179.92	4841.85	1868 17	-1868.17	2.57	1868.17	179.92	0.00	---	0.00	0.00
	6600.00	89.79	179.92	4842.22	1968.17	-1968.17	2.71	1968.17	179.92	0.00	---	0 00	0.00
	6700.00	89 79	179.92	4842.59	2068.17	-2068.17	2.85	2068.17	179.92	0.00	---	0.00	0.00
	6800.00	89.79	179.92	4842.95	2168.17	-2168.17	2.99	2168.17	179.92	0.00	---	0.00	0.00
	6900.00	89.79	179.92	4843.32	2268.17	-2268.17	3.12	2268.17	179.92	0.00	---	0.00	0.00
	7000.00	89.79	179.92	4843.69	2368.17	-2368.17	3.26	2368.17	179.92	0.00	---	0.00	0.00
	7100 00	89.79	179.92	4844.06	2468.17	-2468.17	3.40	2468.17	179 92	0.00	---	0 00	0.00
	7200.00	89.79	179.92	4844.42	2568.17	-2568.16	3 54	2568.17	179.92	0.00	---	0.00	0.00
	7300 00	89.79	179.92	4844.79	2668.17	-2668.16	3.67	2668 17	179.92	0.00	---	0.00	0.00
	7400 00	89.79	179.92	4845 16	2768.17	-2768.16	3.81	2768.17	179.92	0.00	---	0.00	0.00
	7500 00	89.79	179.92	4845.52	2868.16	-2868.16	3.95	2868.16	179.92	0.00	---	0.00	0.00
	7600.00	89 79	179.92	4845.89	2968.16	-2968.16	4.09	2968.16	179.92	0.00	---	0.00	0.00
	7700.00	89.79	179.92	4846.26	3068.16	-3068.16	4.22	3068.16	179.92	0.00	---	0.00	0.00
	7800.00	89.79	179.92	4846.62	3168.16	-3168.16	4.36	3168.16	179.92	0.00	---	0.00	0.00
	7900.00	89.79	179.92	4846.99	3268.16	-3268.16	4.50	3268.16	179.92	0.00	---	0 00	0.00
	8000.00	89 79	179.92	4847.36	3368.16	-3368.16	4.64	3368.16	179.92	0 00	---	0.00	0 00
	8100.00	89 79	179.92	4847.72	3468.16	-3468.16	4.78	3468.16	179.92	0.00	---	0.00	0.00
	8200.00	89.79	179.92	4848.09	3568.16	-3568.16	4.91	3568.16	179.92	0.00	---	0.00	0.00
	8300.00	89.79	179.92	4848.46	3668.16	-3668.16	5.05	3668.16	179.92	0 00	---	0.00	0.00
	8400.00	89.79	179.92	4848.82	3768.16	-3768.16	5.19	3768.16	179.92	0.00	---	0.00	0.00
	8500.00	89.79	179.92	4849.19	3868.16	-3868.15	5.33	3868.16	179.92	0.00	---	0.00	0 00
	8600.00	89.79	179.92	4849.56	3968.16	-3968.15	5.46	3968.16	179.92	0.00	---	0.00	0.00
	8700.00	89.79	179.92	4849.92	4068.16	-4068.15	5.60	4068.16	179.92	0.00	---	0.00	0.00
PBHL	8720.48	89.79	179.92	4850.00	4088.64	-4088.63	5.63	4088.64	179.92	0.00	---	0.00	0.00

Rig #9 Rig Plan

Big Dog Drilling

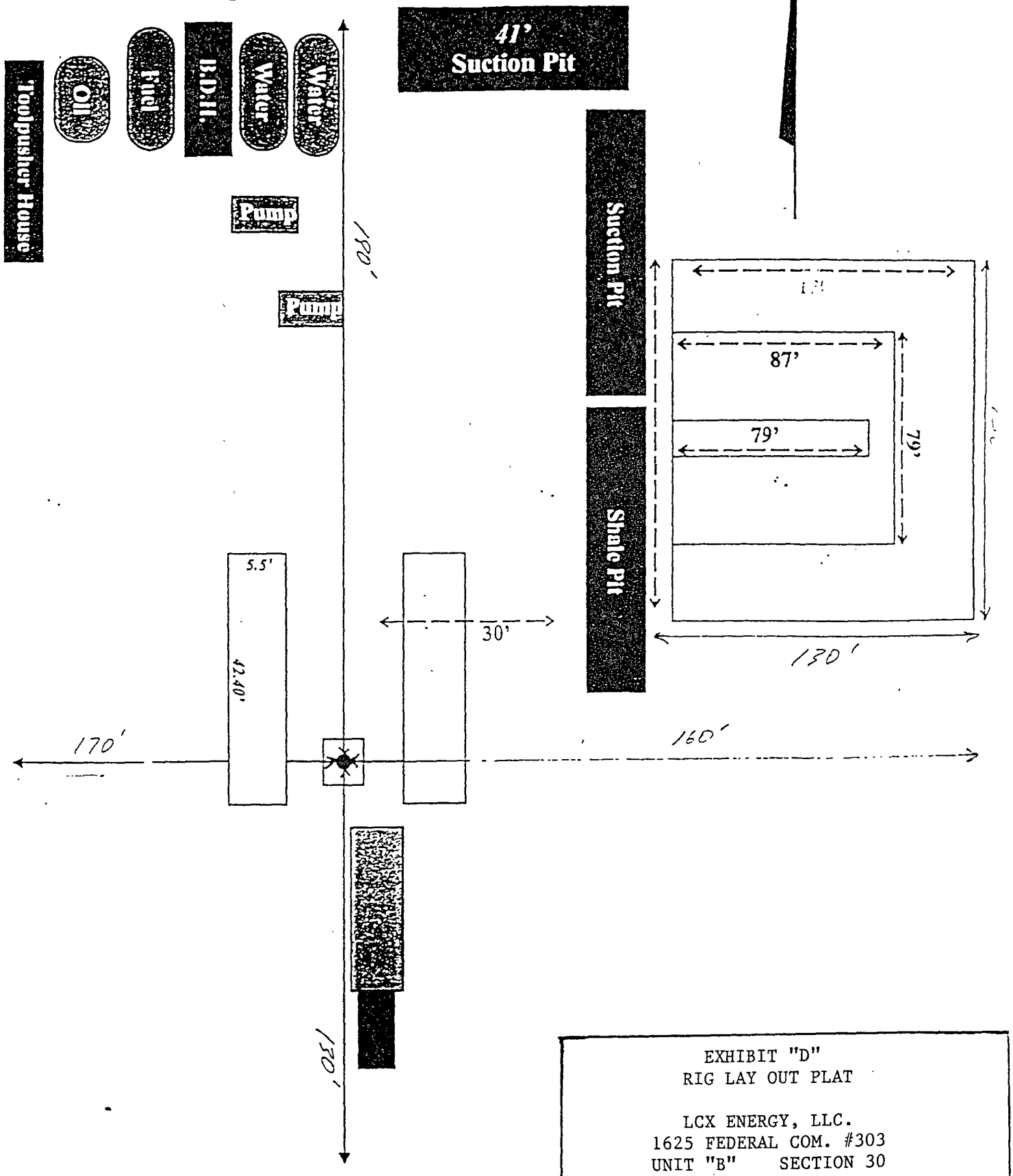
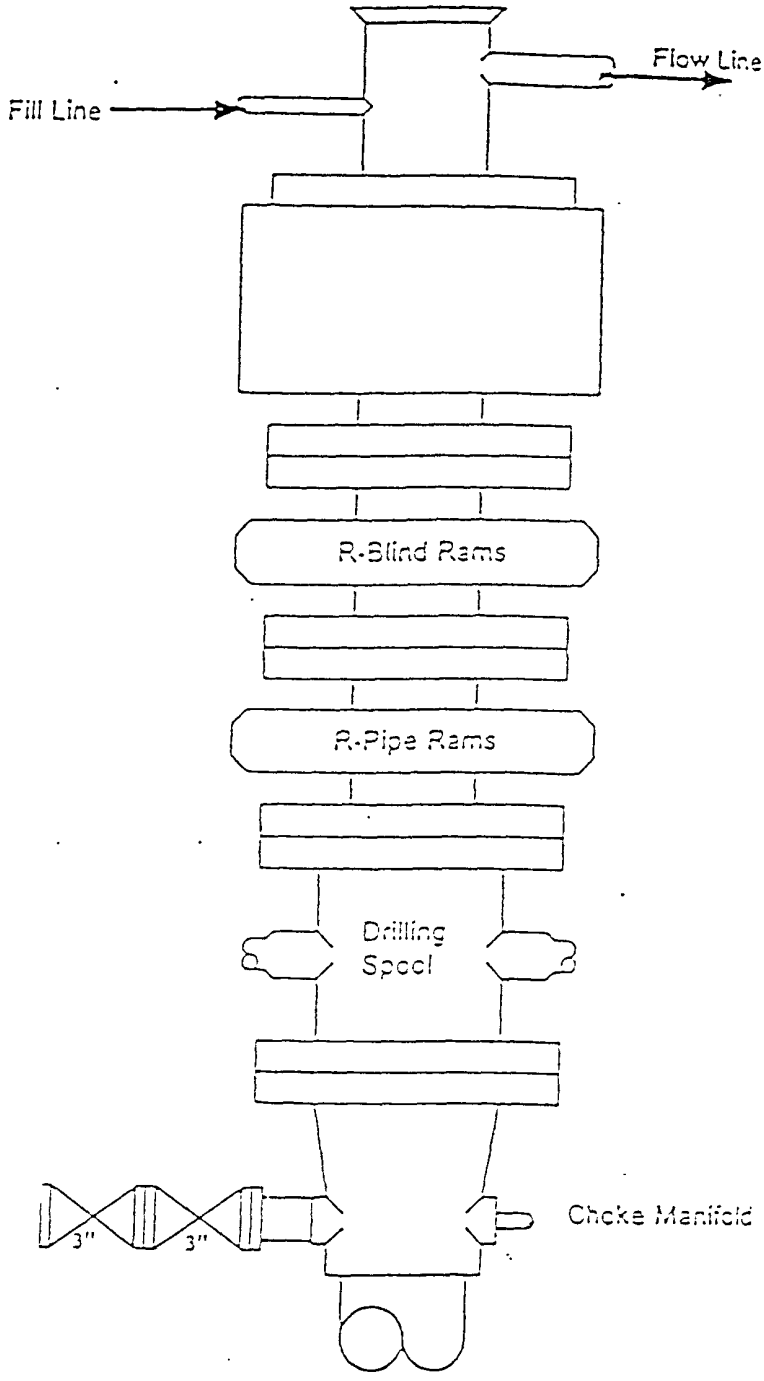


EXHIBIT "D"
RIG LAY OUT PLAT

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM



Type 900 Series
3000 psi WP

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

APACHE CORPORATION
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

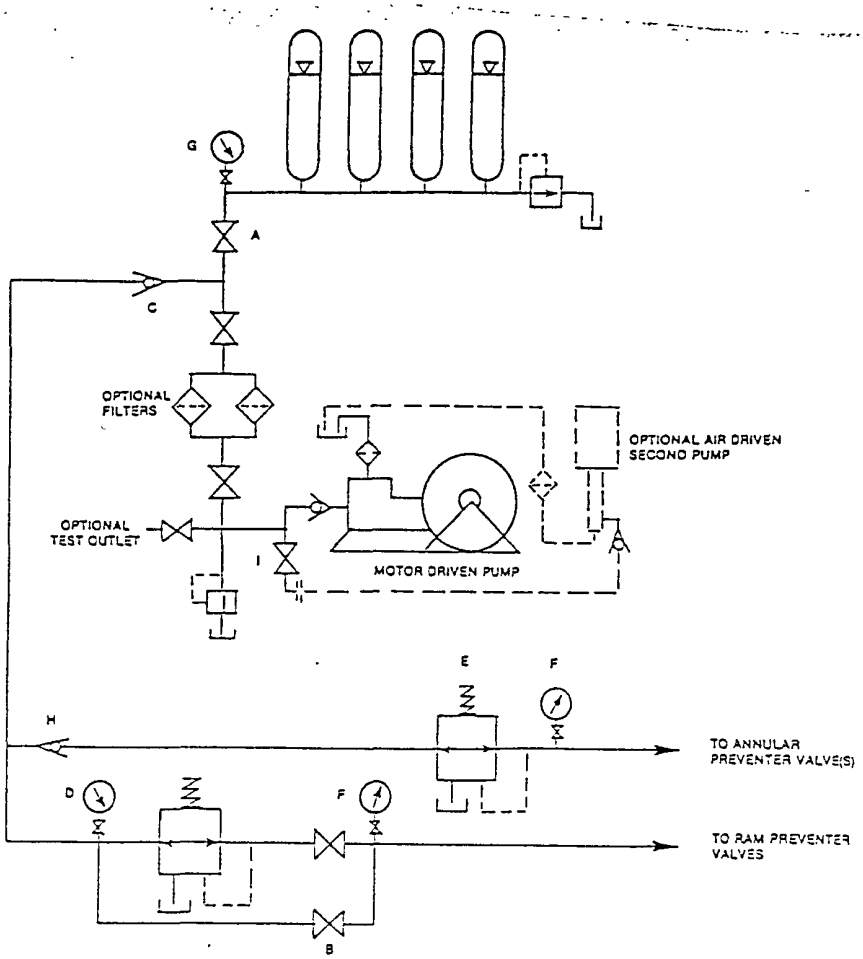


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

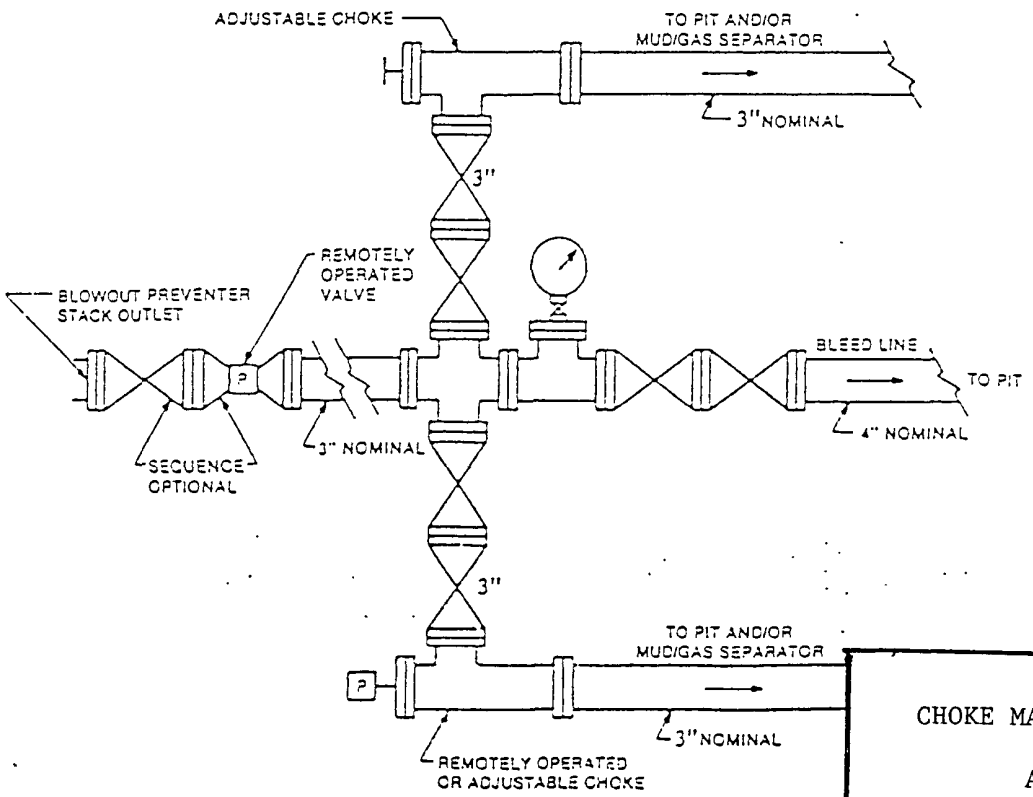


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

APACHE CORPORATION
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S 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_2S Detection and Alarm Systems

   A. H_2S 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_2S present in dangerous concentration. Only emergency personnel admitted to location.

5. Well control equipment

   A. See exhibit "E"

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 location is near any dwelling a closed D.S.T. will be performed.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H_2S scavengers if necessary.

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harms way he will take the necessary steps to protect the workers and the public.
EMERGENCY CALL LIST: (Start and continue until ONE of these people have been contacted)

	OFFICE	MOBILE	HOME
LCX ENERGY, LLC.	432-262-4011		
KELVIN FISHER		432-634-5621	432-694-1306
LARRY GILLETTE	432-262-4011	432-634-5530	432-262-7120
ROLAN LISLE	432-634-2632	DRILLING CONSULTANT WILL BE ON LOCATION AT ALL TIMES.	

EMERGENCY RESPONSE NUMBERS:

State Police:	Eddy County		505 748 9718
State Police:	Lea County		505 392 5588
Sheriff	Eddy County		505 746 2701
Sheriff	Lea County		
Emergency Medical Ser	Eddy County		911 or 505 746 2701
(Ambulance)	Lea County	Eunice	911 or 505 394 3258
Emergency Response	Eddy County SERC		505 476 9620
	Lea County		
Artesia Police Dept			505 746 5001
Artesia Fire Dept			505 746 5001

Carlsbad Police Dept		505 885 2111
Carlsbad Fire Dept		505 885 3125
Loco Hills Police Dept		505 677 2349
Jal Police Dept		505 395 2501
Jal Fire Dept		505 395 2221
Jal ambulance		505 395 2221
Eunice Police Dept		505 394 0112
Eunice Fire Dept		505 394 3258
Eunice Ambulance		505 394 3258
Hobbs Police Dept		
NMOCD	District 1 (Lea, Roosevelt, Curry)	505 393 6161
	District 2 (Eddy Chavez)	505 748 1283
Lea County Information		505 393 8203
Indian Fire & Safety		505-393-3093
BJ Services	Artesia	505 746 3140
	Hobbs	505 392 5556
Halliburton	Artesia	1 800 416-6081
	Hobbs	1 800 416-6081
Wild Well Control	Midland	432 550 6202
	Mobile	432 553 1166

SURFACE USE PLAN

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction 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. Hi-way 82 and U. S. Hi-way 285 in Artesia New Mexico go West on U. S. 82 for 6- miles to Lonesome Trail Road, turn North follow caliche road 4 miles, turn Left (West) go 1.4 miles to the location on the South side of road.

D. Exhibit "C" shows the directions to location from Hi-way 82.

2. PLANNED ACCESS ROADS: Approximately 425' of new road will be constructed.

A. The access roads will be crowned and ditched 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 approximately .9 miles South 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"

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 quaters will be drained into holes with a minium 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 furthed 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 pips 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.

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 encontered 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 than12 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 completionphases. 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 furture 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.

CERTIFICATION

I HEREBY CERTIFY THAT I OR PERSONS UNDER MY SUPERVISION HAVE INSPECTED THE PROPOSED DRILL SITE AND THE ACCESS ROAD ROUTES, THAT I AM FAMILIAR WITH THE CONDITIONS THAT CURRENTLY EXIST, AND 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 LCX ENERGY, LLC. ITS CONTRACTORS OR ITS SUB-CONTRACTORS IS IN CONFORMANCE WITH THIS PLAN AND THE TERMS AND THE CONDITIONS UNDER WHICH IT IS APPROVED. THIS STATEMENT IS SUBJECT TO THE PROVISIONS OF U.S.C. 1001 FOR THE FILING OF A FALSE STATEMENT.

OPERATORS REPRESENTATIVES

BEFORE CONSTRUCTION

JOE T. JANICA

TIERRA EXPLORATION, INC.
P. O. BOX 2188
HOBBS, NEW MEXICO 88241

PHONE 505-391-8503
CELL 505-390-1598

DURING AND AFTER CONSTRUCTION

KELVIN FISHER

LCX ENERGY, LLC.
110 NORTH MARIENFELD
SUITE 200
MIDLAND, TEXAS 79701
PHONE 432-262-4011
CELL 432-634-5621

NAME; JOE JANICA Joe T Janica

TITLE; Permit Engineer

DATE; 04/16/08

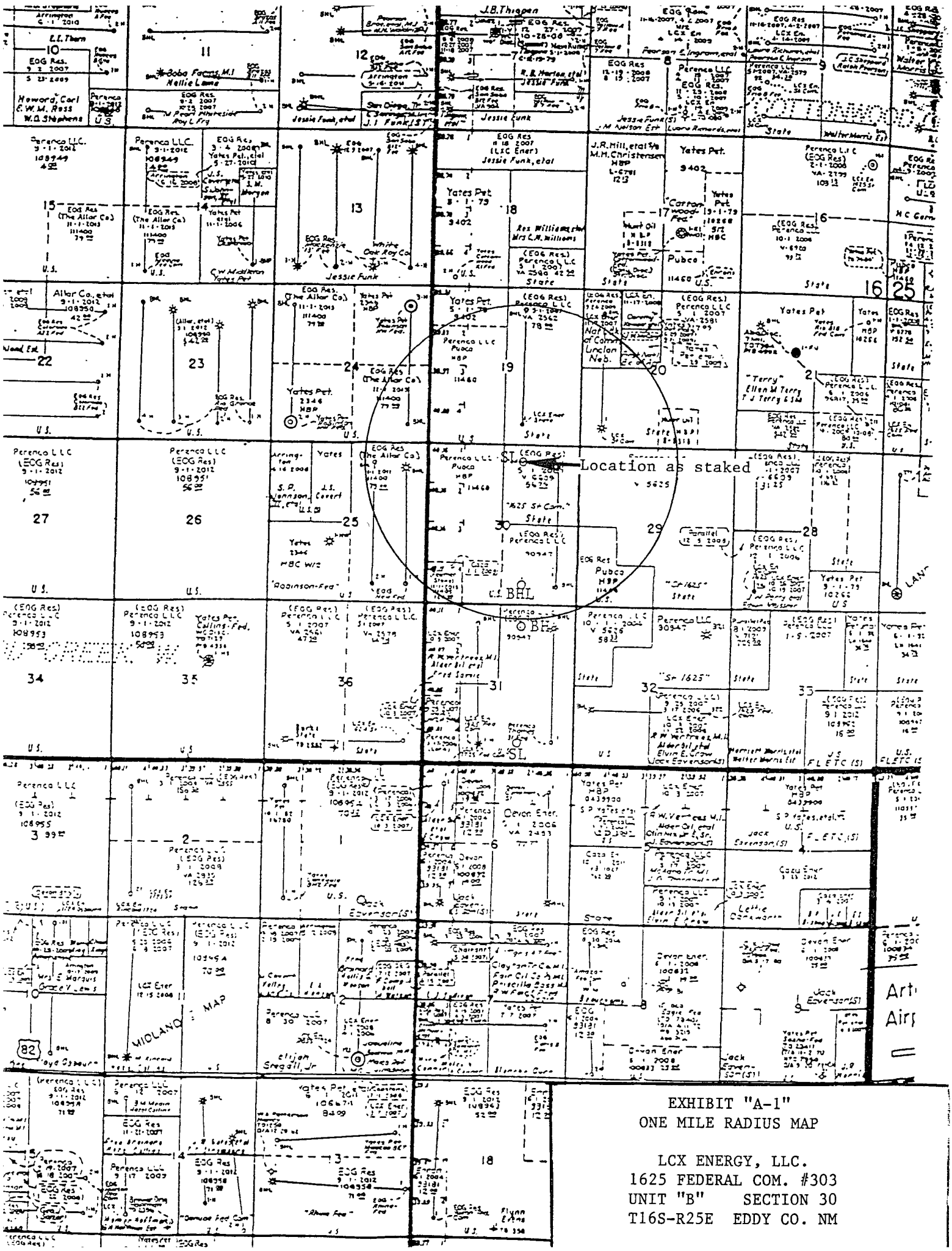


EXHIBIT "A-1"
ONE MILE RADIUS MAP

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

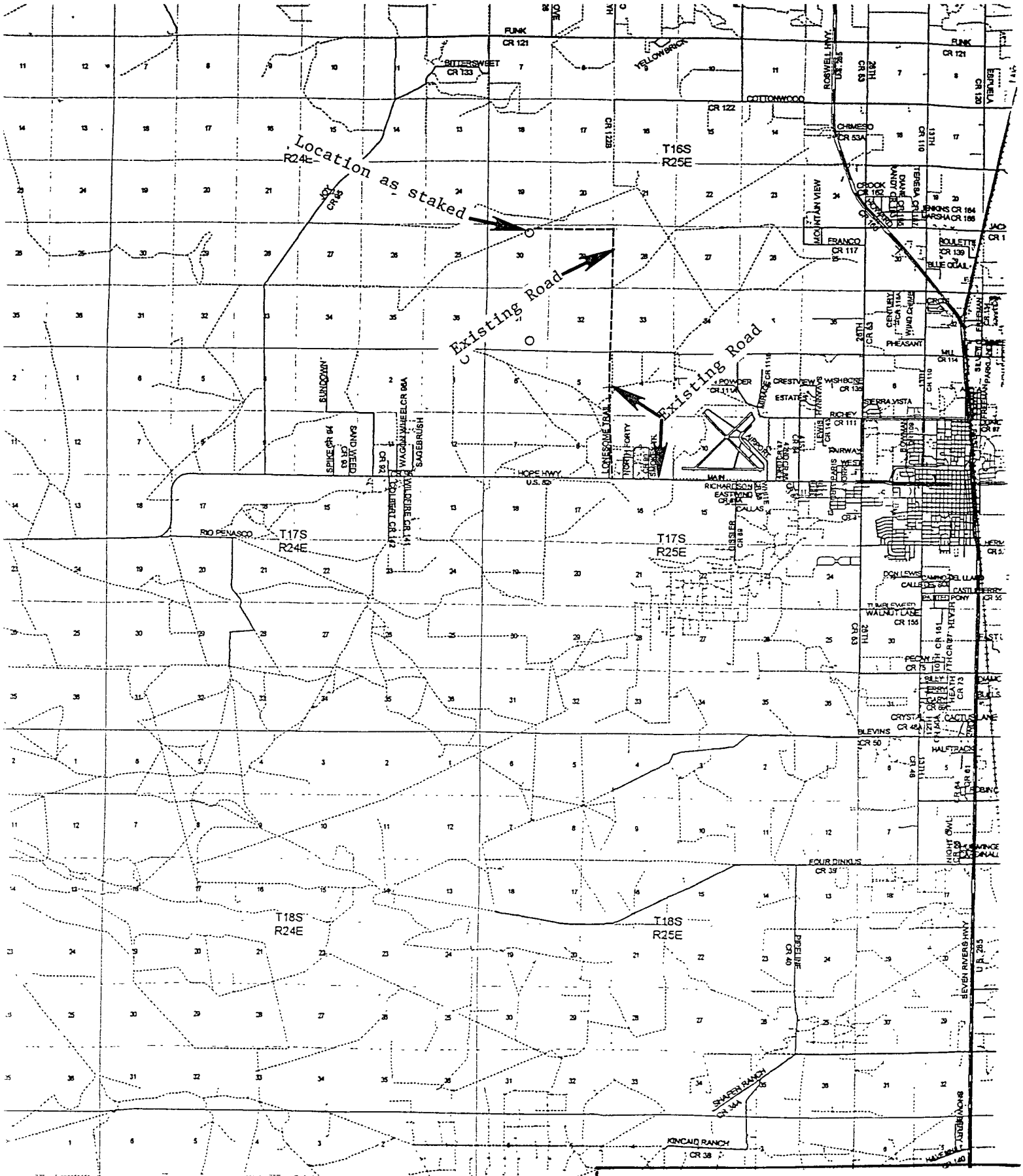


EXHIBIT "B"
LOCATION & ACCESS ROAD MAP

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

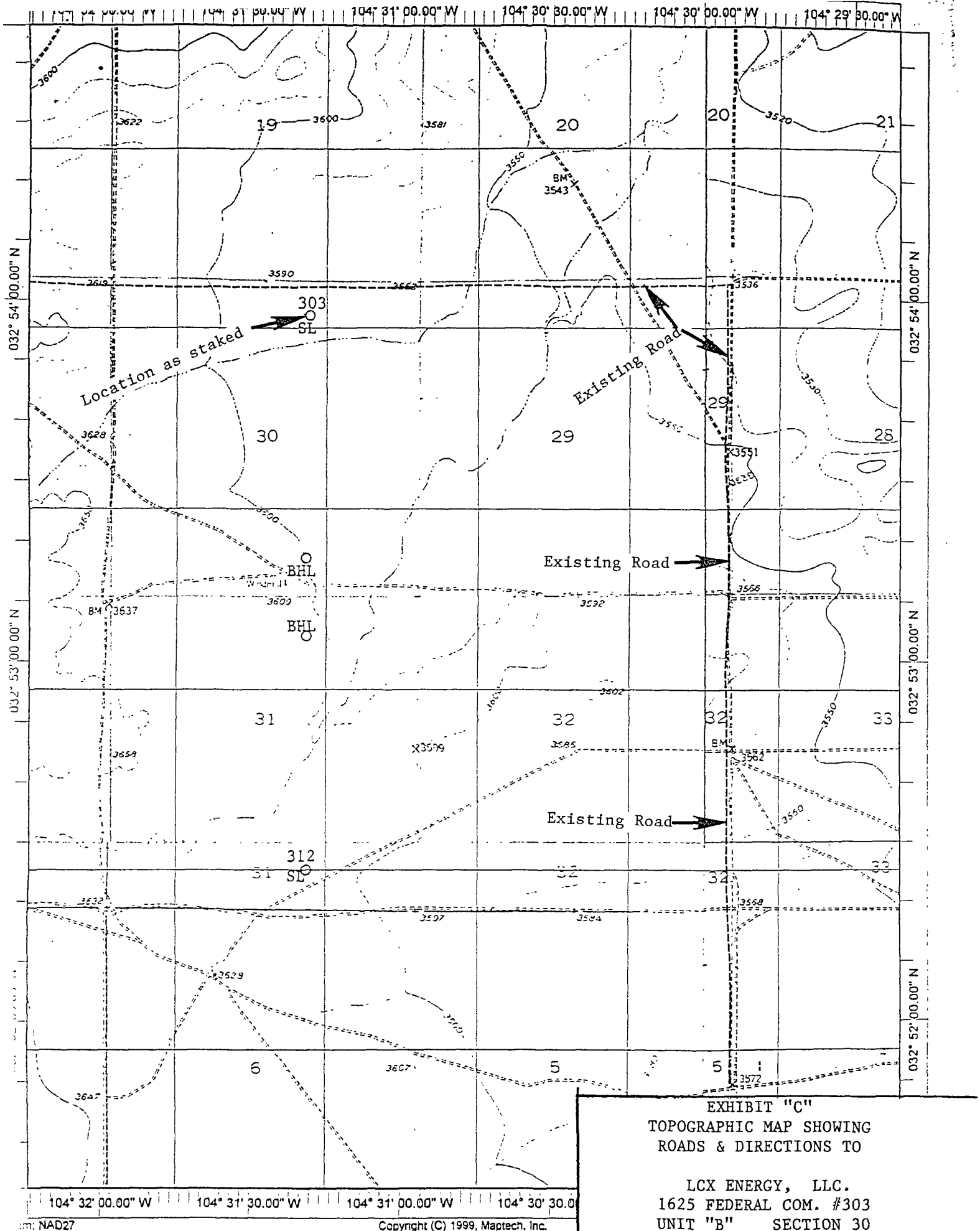


EXHIBIT "C"
TOPOGRAPHIC MAP SHOWING
ROADS & DIRECTIONS TO

LCX ENERGY, LLC.
1625 FEDERAL COM. #303
UNIT "B" SECTION 30
T16S-R25E EDDY CO. NM

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	LCX ENERGY LLC
LEASE NO.:	NM-90947
WELL NAME & NO.:	303-1625 Federal Com
SURFACE HOLE FOOTAGE:	560' FNL & 1880' FEL
BOTTOM HOLE FOOTAGE	660' FSL & 1880' FEL
LOCATION:	Section 30, T.16 S., R 25 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Stipulations for Drilling in Aplomado Falcon Habitat

The following well pad construction and reclamation measures will be implemented to provide for minimal long-term disturbance:

No Yuccas over 5 feet in height will be damaged by vehicular use or any other activity associated with this project.

Remove all caliche from well pads and roads that are plugged and abandoned. Reclamation will consist of disking, mulching, seeding with a drill (See seed mixture below), and application of water to encourage seed germination.

Well pad size will not exceed 300 ft. x 390 ft. (unless multiple wells are drilled from the same well pad). All unused portions of the well pad associated with producing wells will be reclaimed using the seed mixture below:

Buffalograss (Buchloe dactyloides)	4 lbs/acre
Blue grama (Bouteloua gracilis)	1 lbs/acre
Cane bluestem (Bothriochloa barbinodis)	5 lbs/acre
Sideoats grama (Boutelou curtipendula)	5 lbs/acre
Plains bristlegrass (Setaria macrostachya)	6 lbs/acre

Reserve pits for drilling and disposal are not allowed unless the pit can be effectively netted to the satisfaction of the BLM. Steel tank circulation system must be used if the reserve pit is not netted.

All active raptor nests will be avoided by a minimum of 400 meters by all activities or curtail activities until fledging is complete.

All inactive raptor nests will be avoided by a minimum of 200 meters by all activities.

All roads associated with well development will not exceed 30 ft in width

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 130' X 150' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

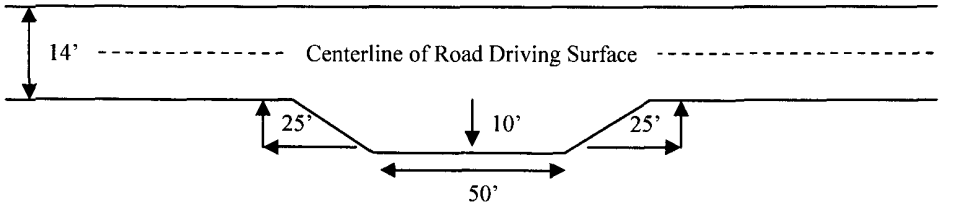
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

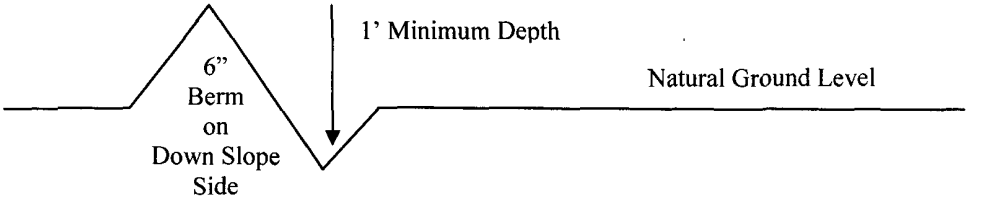
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

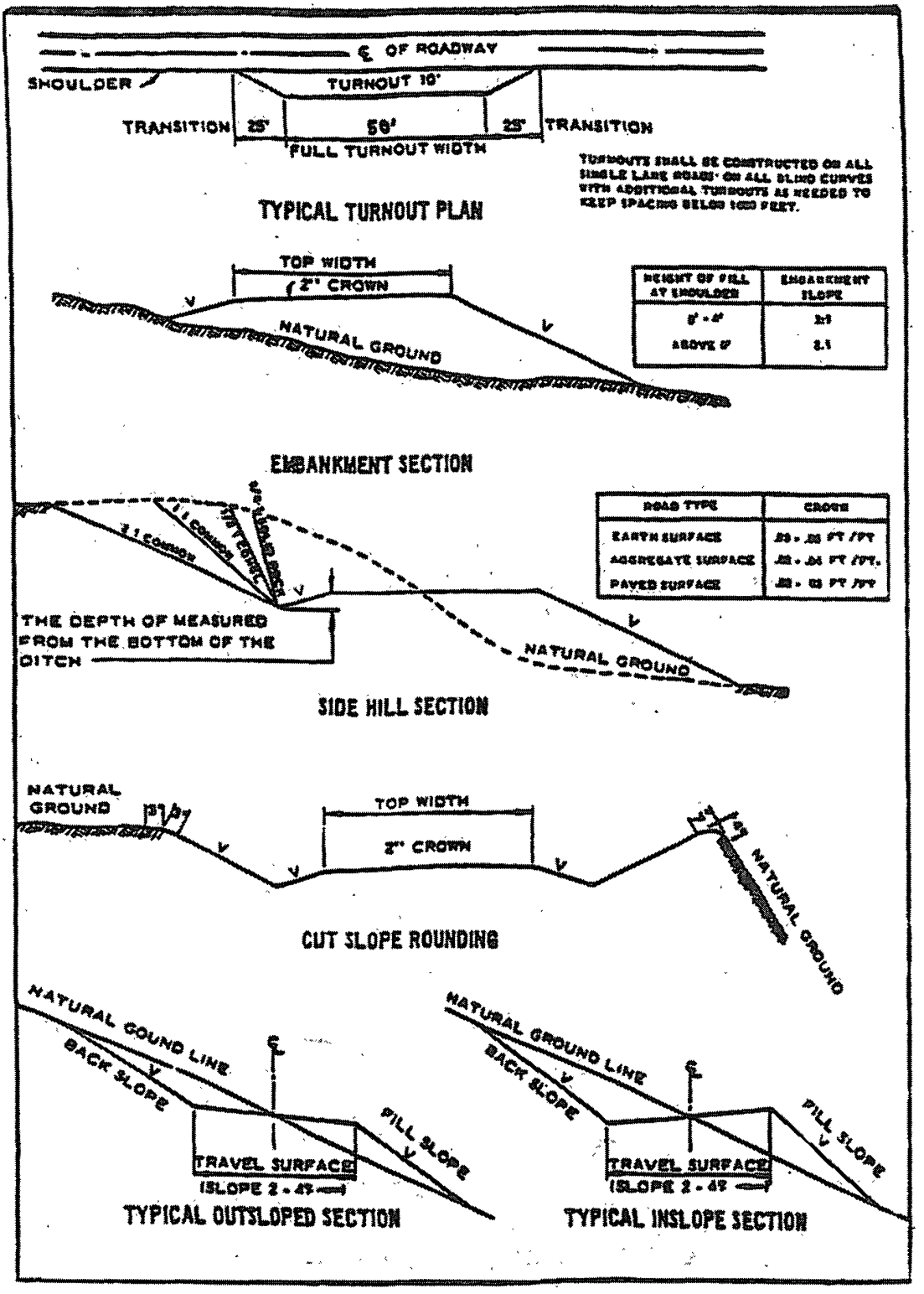
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Chaves and Roosevelt Counties, T16S Eddy County**
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
(575) 627-0205 and (575) 361-2822.

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. 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.

3. Floor controls are required for 3M or Greater systems. These 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.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Grayburg and San Andres formations.
Possible high pressure gas bursts in the Wolfcamp formation.

1. The **13-3/8** inch surface casing shall be set **at approximately 570 feet in the top of the consolidated San Andres** and cemented to the surface. **This setting depth will put the casing in a competent formation as required by Onshore Order 2.**

    a. 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.

    b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a-d above.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. 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.

C. PRESSURE CONTROL

1. 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.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. The tests shall be done by an independent service company.

    b. The results of the test shall be reported to the appropriate BLM office.

    c. 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.

    d. 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.

    e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation 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.

D. 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.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

VRM Facility Requirement

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

- Buffalograss (Buchloe dactyloides) 4 lbs/acre
- Blue grama (Bouteloua gracilis) 1 lbs/acre
- Cane bluestem (Bothriochloa barbinodis) 5 lbs/acre
- Sideoats grama (Boutelou curtipendula) 5 lbs/acre
- Plains bristlegrass (Setaria macrostachya) 6 lbs/acre

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.