

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

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

RECEIVED

Submit to appropriate District Office

JUN 22 2006

☐ AMENDED REPORT

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

Operator Name and Address LCX ENERGY, LLC. 110 NORTH MATIENFELD SUITE 200 MIDLAND, TEXAS 79701		2 OGRID Number 218885
Property Code 35812		Property Name 1921 STATE COM.
Proposed Pool 1 WILDCAT - WOLFCAMP		Proposed Pool 2
API Number 30 - 015-34980		Well No. # 21

7 Surface Location									
UL or lot no. X	Section 2	Township 19S	Range 21E	Lot Idn.	Feet from the 760'	North-South line NORTH	Feet from the 660'	East-West line EAST	County EDDY

8 Proposed Bottom Hole Location If Different From Surface									
UL or lot no. D	Section 2	Township 19S	Range 21E	Lot Idn.	Feet from the 760'	North-South line NORTH	Feet from the 660'	East-West line WEST	County EDDY

Additional Well Information				
11 Work Type Code N	12 Well Type Code G	13 Cable/Rotary ROTARY	14 Lease Type Code S	15 Ground Level Elevation 4167'
16 Multiple NO	17 Proposed Depth TVD-4960', MD-8737'	18 Formation WOLFCAMP	19 Contractor BIG DOG DRILLING	20 Spud Date WHEN APPROVED
Depth to Groundwater 100'+		Distance from nearest fresh water well 1.4 Miles SOUTHEAST		Distance from nearest surface water NONE KNOWN
Pit Liner Synthetic ☒ 12 mils thick Clay ☐ Pit Volume: 18M bbls Drilling Method: Closed-Loop System ☐ Fresh Water ☒ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐				

21 Proposed Casing and Cement Program					
Hole Size 26"	Casing Size 20"	Casing weight/foot Conductor	Setting Depth 40'	Sacks of Cement Redi-mix	Estimated TOC Surface
17 1/2"	13 3/8"	48#	350'	400 Sx.	Surface
12 1/2"	9 5/8"	36#	1200'	475 Sx.	"
8 3/4-7 7/8"	5 1/2"	15.5#	TVD-4960' MD-8737'	600 Sx.	Est TOC 1000'

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

SEE ATTACHED SHEET FOR DETAIL

NOTIFY OCD OF SPUD & TIME TO
WITNESS CEMENTING OF
SURFACE & INTERMEDIATE
CASING

22 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐ .		OIL CONSERVATION DIVISION	
Printed name: Joe T. Janica		Approved by: BRYAN G. ARRANT	
Title: Agent		DISTRICT II GEOLOGIST	
E-mail Address: joejanica@valornet.com		Approval Date: JUN 28 2006	
Date:		Expiration Date: JUN 28 2007	
Phone: 505-391-8503		Conditions of Approval Attached ☐	

LCX ENERGY, LLC
110 N. Marienfeld St., Suite 200
Midland, TX 79701

**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'. Run and set 1200' of 9-5/8" 36# J-55 ST&C casing. Cement with 375 sx of 35/65 Poz/C + 5% NaCl + 6% Bentonite, tail in with 100 sx. of Class "C" cement + 2% CaCl, circulate cement to surface.
4. Drill 7-7/8" or 8-3/4" hole to approx. 5000'. Set cement kick-off plug from TD to approx. 4400 ft with 150 sx H + 0.5% dispersant.
5. Dress cement top to desired kick-off point. Drill 7-7/8" curve and land lateral in pay zone (approx. 4900 ft TVD). Pickup lateral drilling assembly with an 8-3/4" or 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 or stronger production casing. Cement 5-1/2" with acid soluble cement through the lateral and 400 sx 50/50 Poz/C + 10% gel and tail in with 200 sx C + 200% CaCO₃ (acid soluble cement) + fluid loss additive + retarder (as required), attempting to bring top of cement to 1,000'.

Contingency Strings:

If lost circulation occurs in the surface hole:

- 2a. Run and set 350' of 13-3/8" 48# H-40 ST&C casing. Cement with 200 sx 35/65 Poz/C + 6% gel and tail in with 200 sx of Class "C" cement + 2% CaCl, circulate cement to surface.

If hole conditions dictate running a 7" contingency string in the 8-3/4" hole :

- 4a. Run approx. 5100 ft 7" 26# J55 or stronger casing to TD. Cement with 700 sx class 'C' cement + add's attempting bringing TOC to approx. 1,000 ft. This may be done in the vertical pilot hole or at the end of the 8-3/4" curve section.
- 4b. Run whipstock and cut a window in the 7" casing (or drill out with 6-1/8" BHA if 7" set at end of curve). Drill to TD.
- 5a. Step 5 will be omitted.
- 6a. Run and set approximately 4400 ft 4-1/2" 11.6# N/L80 liner from TD to approximately 200' above the window/7" casing shoe. Cement with approx. 110 sx C + 200% CaCO₃ (acid soluble cement) + add's attempting to bring TOC above liner top.

FRESH WATER WILL BE USED TO DRILL THE 350' HOLE AND THE 1200' HOLE.

THERE IS NO KNOWN PRESENCE OF ANY H₂S IN THIS AREA. OTHER WELLS DRILLED HAVE NOT ENCOUNTERED ANY HYDROGEN SULFIDE WHILE DRILLING.

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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Frances Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96086	Pool Name WILDCAT - WOLFCAMP
Property Code	Property Name 1921 STATE COM.	Well Number 21
OGRID No. 218885	Operator Name LCX ENERGY, LLC	Elevation 4167'

Surface Location

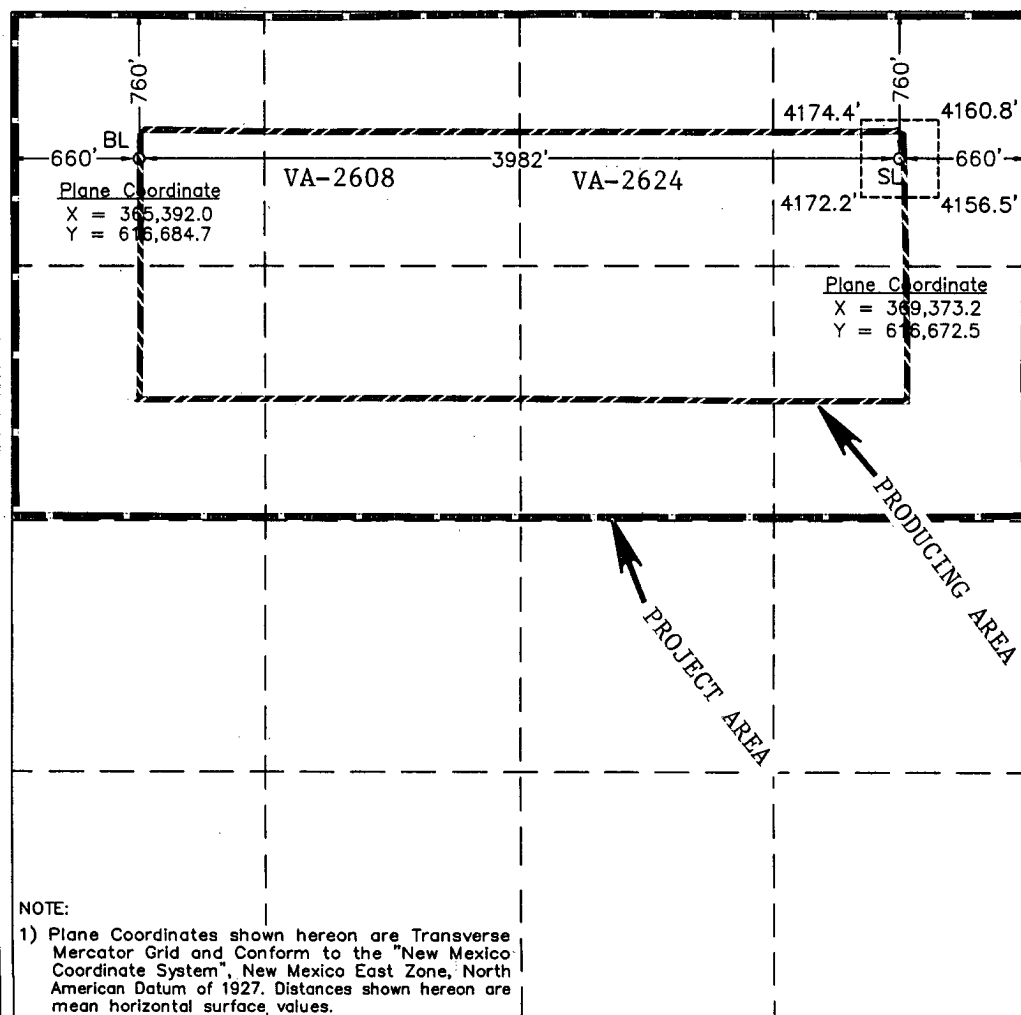
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	19 S	21 E		660	EAST	760	NORTH	EDDY

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
D	2	19 S	21 E		660	WEST	760	NORTH	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



NOTE:

- 1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.

OPERATOR CERTIFICATION

I hereby certify the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Joe T. Janica
Signature Date

Joe T. Janica
Printed Name

Agent

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.

June 17, 2006

Date of Survey
Signature & Seal of Professional Surveyor

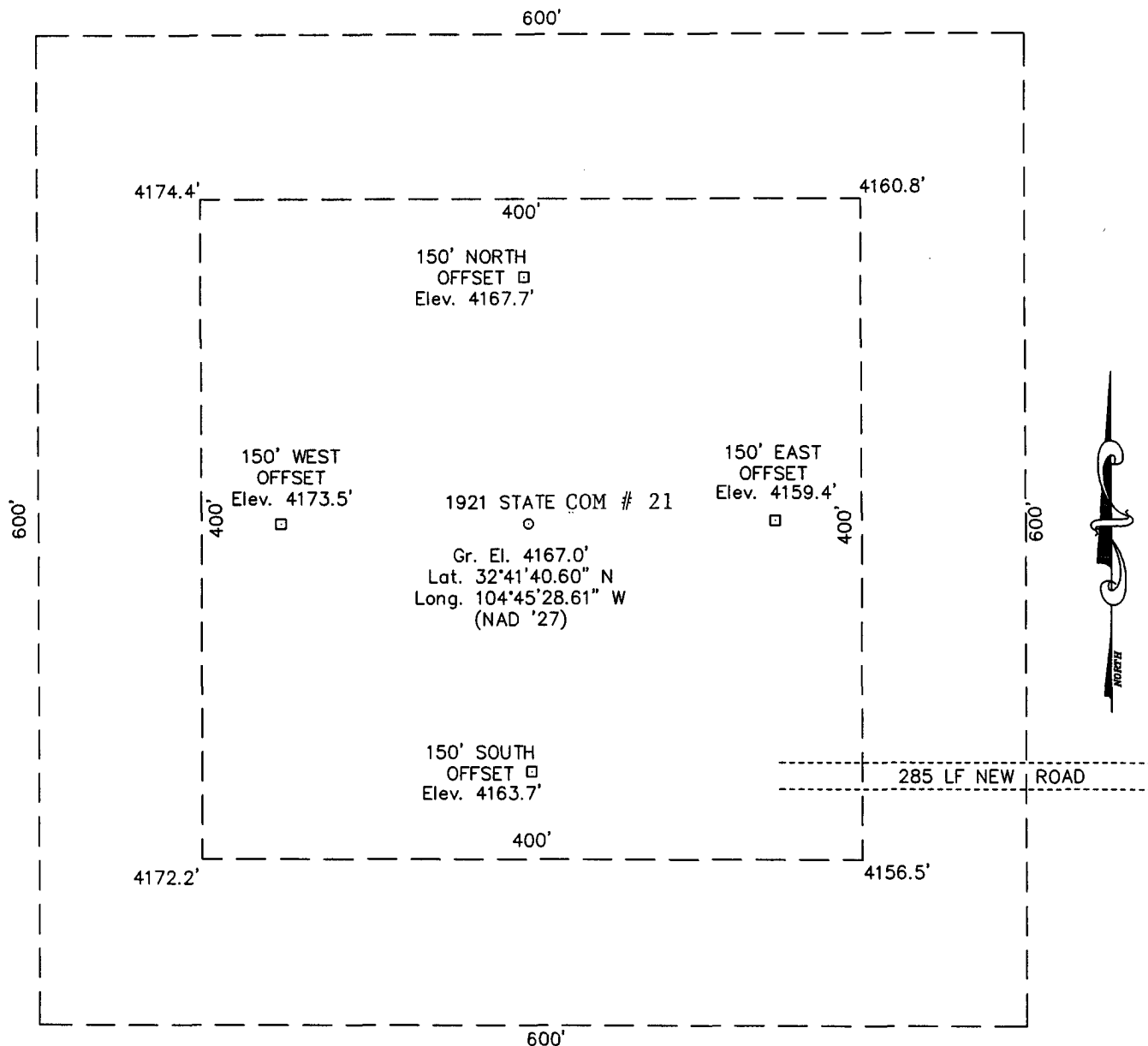
W.O. Num 2006-0725
Certificate No. **12185**

SECTION 2, TOWNSHIP 19 SOUTH, RANGE 21 EAST, N.M.P.M.

EDDY COUNTY

NEW MEXICO

L-2006-0725



DRIVING DIRECTIONS

Beginning at the intersection of US Highway 82 with County Road 12 (Armstrong Road) located in the West side of the town of Hope, New Mexico, proceed South on County Road 12 (Armstrong Road) for approximately 7.0 miles to a fork intersection with County Road 20 (Broncho Road). Turn Right and proceed Southwesterly along County Road 20 (Broncho Road) approximately 1.8 miles to a point from which a 2-track road extends North along an existing fence line. Turn right and proceed North approximately 0.4 miles to a point from which the well location bears West 475 feet.

LCX ENERGY, LLC

1921 STATE COM # 21

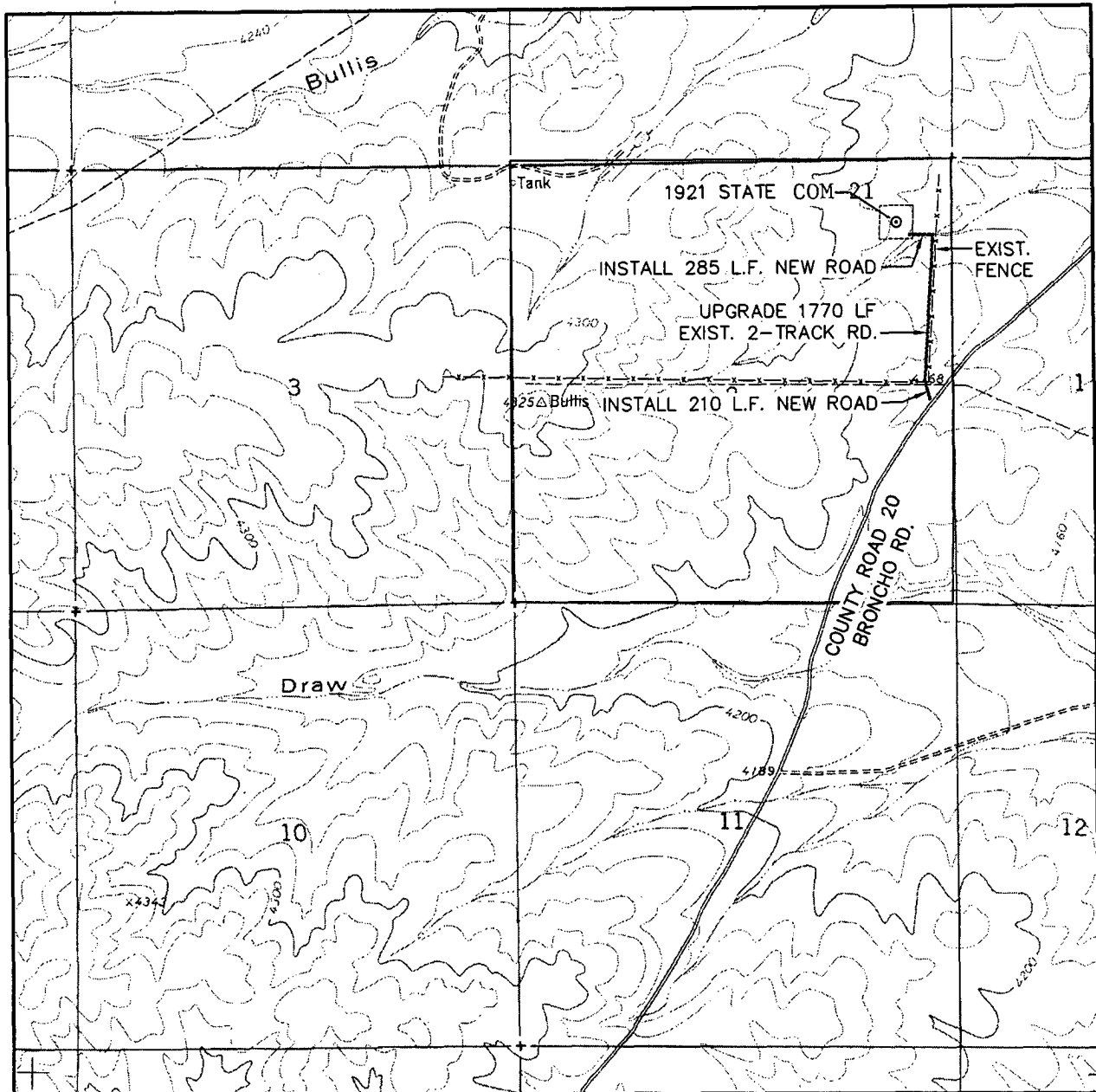
Located 760' FNL & 660' FEL, Section 2
Township 19 S, Range 21 E, N.M.P.M.
Eddy County, New Mexico



110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

Drawn By: JSR	Date: June 20, 2006
Scale: 1"=100'	Field Book:
Revision Date:	Quadrangle: Holt Tank, N.M.
W.O. No: 2006-0725	Dwg. No.: L-2006-0725

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
HOLT TANK, NM - 20'

SEC. 2 TWP. 19-S RGE. 21-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FEL & 760' FNL

ELEVATION 4167'

OPERATOR LCX ENERGY, LLC

LEASE 1921 STATE COM # 21

U.S.G.S. TOPOGRAPHIC MAP
HOLT TANK N.M.



WEST
COMPANY
of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

[illegible]

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

Proposal

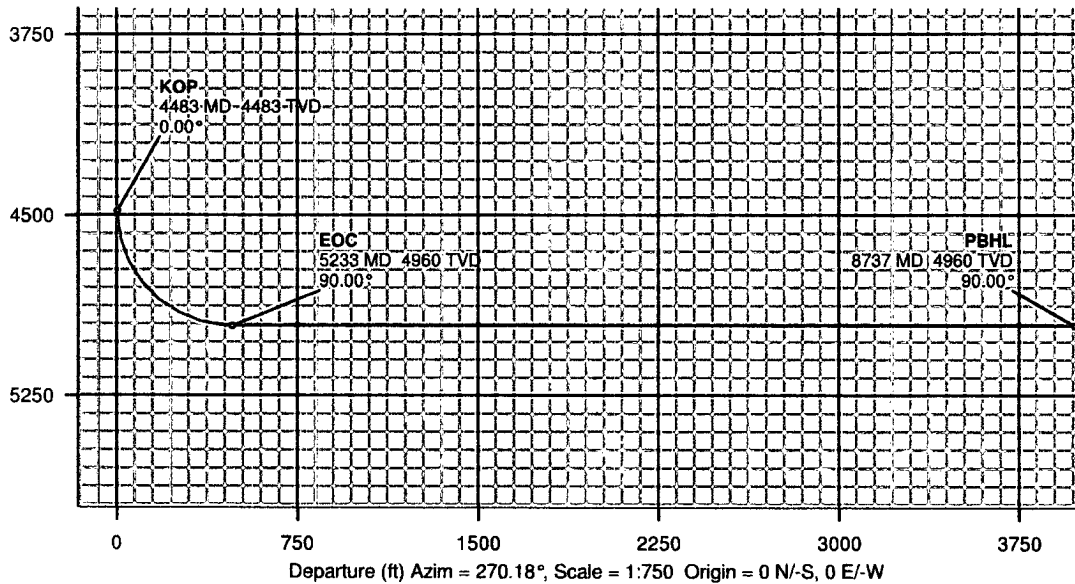
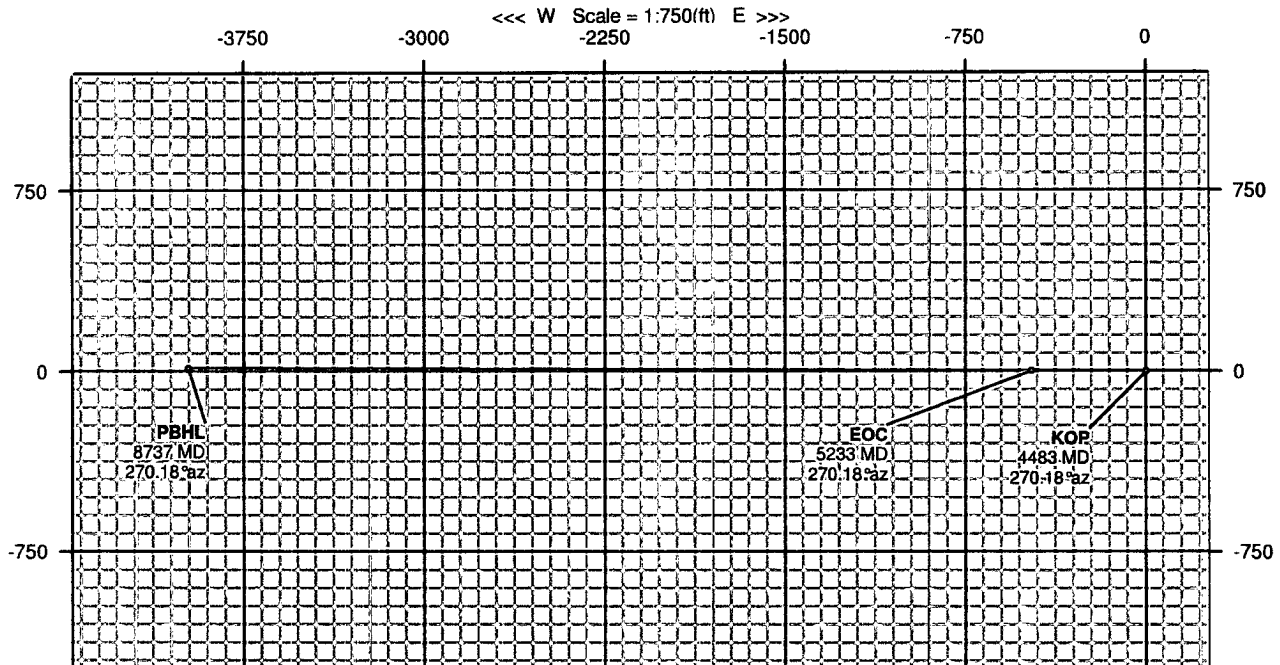
Report Date: June 21, 2006 Client: LCX Energy Field: Eddy County, NM Structure / Slot: 1921 State #21 / 1921 State #21 Well: 1921 State #21 Borehole: 1921 State #21 UWI/API#: Survey Name / Date: 1921 State #21_r1 / June 21, 2006 Tort / AHD / DDI / ERD ratio: 90.000° / 3981.51 ft / 5.800 / 0.803 Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Feet Location Lat/Long: N 32 41 40.605, W 104 45 28.612 Location Grid N/E Y/X: N 616672.500 ftUS, E 369373.200 ftUS Grid Convergence Angle: -0.22936329° Grid Scale Factor: 0.99992863	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 270.180° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 0.0 ft relative to Sea Bed / Ground Level Elevation: 0.000 ft relative to Magnetic Declination: 8.744° Total Field Strength: 49306.012 nT Magnetic Dip: 60.534° Declination Date: June 01, 2006 Magnetic Declination Model: IGRF 2005 North Reference: Grid North Total Corr Mag North -> Grid North: +8.973° Local Coordinates Referenced To: Well Head
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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)	Tool Face (deg)
Tie-In	0.00	0.00	270.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-89.82M
KOP	4482.54	0.00	270.18	4482.54	0.00	0.00	0.00	0.00	0.00	0.00	-89.82M
	4500.00	2.10	270.18	4500.00	0.32	0.00	-0.32	0.32	270.18	12.00	-89.82M
	4600.00	14.10	270.18	4598.82	14.38	0.04	-14.38	14.38	270.18	12.00	0.00G
	4700.00	26.10	270.18	4692.56	48.67	0.15	-48.67	48.67	270.18	12.00	0.00G
	4800.00	38.10	270.18	4777.12	101.71	0.31	-101.71	101.71	270.18	12.00	0.00G
	4900.00	50.10	270.18	4848.81	171.17	0.52	-171.17	171.17	270.18	12.00	0.00G
	5000.00	62.10	270.18	4904.49	254.01	0.78	-254.01	254.01	270.18	12.00	0.00G
	5100.00	74.10	270.18	4941.72	346.63	1.06	-346.62	346.63	270.18	12.00	0.00G
	5200.00	86.10	270.18	4958.89	444.95	1.36	-444.95	444.95	270.18	12.00	0.00G
EOC	5232.54	90.00	270.18	4960.00	477.46	1.46	-477.46	477.46	270.18	12.00	0.00G
	5300.00	90.00	270.18	4960.00	544.93	1.67	-544.93	544.93	270.18	0.00	0.00G
	5400.00	90.00	270.18	4960.00	644.93	1.98	-644.93	644.93	270.18	0.00	0.00G
	5500.00	90.00	270.18	4960.00	744.93	2.28	-744.93	744.93	270.18	0.00	0.00G
	5600.00	90.00	270.18	4960.00	844.93	2.59	-844.93	844.93	270.18	0.00	0.00G
	5700.00	90.00	270.18	4960.00	944.93	2.90	-944.93	944.93	270.18	0.00	0.00G
	5800.00	90.00	270.18	4960.00	1044.93	3.20	-1044.92	1044.93	270.18	0.00	0.00G
	5900.00	90.00	270.18	4960.00	1144.93	3.51	-1144.92	1144.93	270.18	0.00	0.00G
	6000.00	90.00	270.18	4960.00	1244.93	3.81	-1244.92	1244.93	270.18	0.00	0.00G
	6100.00	90.00	270.18	4960.00	1344.93	4.12	-1344.92	1344.93	270.18	0.00	0.00G
	6200.00	90.00	270.18	4960.00	1444.93	4.43	-1444.92	1444.93	270.18	0.00	0.00G
	6300.00	90.00	270.18	4960.00	1544.93	4.73	-1544.92	1544.93	270.18	0.00	0.00G
	6400.00	90.00	270.18	4960.00	1644.93	5.04	-1644.92	1644.93	270.18	0.00	0.00G
	6500.00	90.00	270.18	4960.00	1744.93	5.35	-1744.92	1744.93	270.18	0.00	0.00G
	6600.00	90.00	270.18	4960.00	1844.93	5.65	-1844.92	1844.93	270.18	0.00	0.00G
	6700.00	90.00	270.18	4960.00	1944.93	5.96	-1944.92	1944.93	270.18	0.00	0.00G
	6800.00	90.00	270.18	4960.00	2044.93	6.27	-2044.92	2044.93	270.18	0.00	0.00G
	6900.00	90.00	270.18	4960.00	2144.93	6.57	-2144.92	2144.93	270.18	0.00	0.00G
	7000.00	90.00	270.18	4960.00	2244.93	6.88	-2244.92	2244.93	270.18	0.00	0.00G
	7100.00	90.00	270.18	4960.00	2344.93	7.19	-2344.92	2344.93	270.18	0.00	0.00G
	7200.00	90.00	270.18	4960.00	2444.93	7.49	-2444.92	2444.93	270.18	0.00	0.00G
	7300.00	90.00	270.18	4960.00	2544.93	7.80	-2544.92	2544.93	270.18	0.00	0.00G
	7400.00	90.00	270.18	4960.00	2644.93	8.11	-2644.92	2644.93	270.18	0.00	0.00G
	7500.00	90.00	270.18	4960.00	2744.93	8.41	-2744.92	2744.93	270.18	0.00	0.00G
	7600.00	90.00	270.18	4960.00	2844.93	8.72	-2844.92	2844.93	270.18	0.00	0.00G
	7700.00	90.00	270.18	4960.00	2944.93	9.02	-2944.92	2944.93	270.18	0.00	0.00G
	7800.00	90.00	270.18	4960.00	3044.93	9.33	-3044.92	3044.93	270.18	0.00	0.00G
	7900.00	90.00	270.18	4960.00	3144.93	9.64	-3144.91	3144.93	270.18	0.00	0.00G

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)	Tool Face (deg)
	8000.00	90.00	270.18	4960.00	3244.93	9.94	-3244.91	3244.93	270.18	0.00	0.00G
	8100.00	90.00	270.18	4960.00	3344.93	10.25	-3344.91	3344.93	270.18	0.00	0.00G
	8200.00	90.00	270.18	4960.00	3444.93	10.56	-3444.91	3444.93	270.18	0.00	0.00G
	8300.00	90.00	270.18	4960.00	3544.93	10.86	-3544.91	3544.93	270.18	0.00	0.00G
	8400.00	90.00	270.18	4960.00	3644.93	11.17	-3644.91	3644.93	270.18	0.00	0.00G
	8500.00	90.00	270.18	4960.00	3744.93	11.48	-3744.91	3744.93	270.18	0.00	0.00G
	8600.00	90.00	270.18	4960.00	3844.93	11.78	-3844.91	3844.93	270.18	0.00	0.00G
	8700.00	90.00	270.18	4960.00	3944.93	12.09	-3944.91	3944.93	270.18	0.00	0.00G
PBHL	8736.58	90.00	270.18	4960.00	3981.51	12.20	-3981.49	3981.51	270.18	0.00	0.00G

LCX Energy

WELL	1921 State COM #21	FIELD	Eddy County, NM	STRUCTURE	1921 State #21
Magnetic Parameters		Surface Location		Miscellaneous	
Model:	IGRF 2005	Dip:	60.534°	Date:	June 01, 2006
		Mag Dec:	+8.744°	FS:	48306.0 nT
		Lat:	N32 41 40.625	North:	619672.50 BUS
		Long:	W104 45 28.612	East:	369373.20 BUS
				Grid Conr:	-0.22836329°
				Scale Fact:	0.999298317
				Slot:	1921 State #21
				Plan:	1921 State #21 .fl
				TVD Ref:	RKB (0.00 ft above)
				Srvy Date:	Wed 12:53 PM June 21, 2006



Critical Points								
Critical Point	MD	INCL	AZIM	TVD	YSEC	N(±)/S(±)	E(±)/W(±)	DLS
Tie-In	0.00	0.00	270.18	0.00	0.00	0.00	0.00	0.00
KOP	4482.54	0.00	270.18	4482.54	0.00	0.00	0.00	0.00
EOC	5232.54	90.00	270.18	4960.00	477.46	1.46	-477.46	12.00
PBHL	8736.58	90.00	270.18	4960.00	3981.51	12.20	-3981.49	0.00

INTREPID
Directional Drilling Specialists

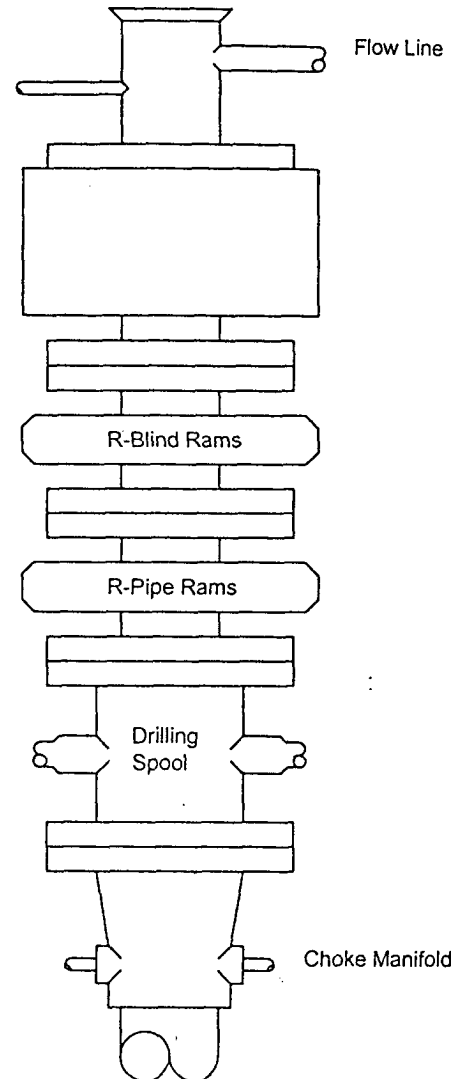


BLOWOUT PREVENTER SYSTEM

3000 PSI

Fill Line

Flow Line



Choke Manifold Assembly for 5M WP System

To Pit and/or
Mud/Gas Separator

Adjustable
Choke

Blowout Preveter
Stack Outlet

Choke Line

Bleed Line to Pit

To Pit

Adjustable Choke

