

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
June 16, 2008

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

RECEIVED

Submit to appropriate District Office

MAR 10 2011

☐ AMENDED REPORT

HOBBSOCD

APPLICATION FOR PERMIT TO DRILL

¹ Operator Name and Address Marshall & Winston P.O.Box 50880 Midland, TX 79710-0880		² OGRID Number 014187
³ Property Code 38580	⁵ Property Name Crossroads 22 State Corn	³ API Number 30 - D25-40109
⁹ Proposed Pool 1 Flying M Abo Wolfcamp		⁶ Well No. 2 H
⁹ Proposed Pool 1 Flying M Abo Wolfcamp		¹⁰ Proposed Pool 2 Wildcat Wolfcamp

Surface Location

UL or lot no. B	Section 22	Township 9 South	Range 33 East	Lot Idn N/A	Feet from the 400	North/South line North	Feet from the 1980	East/West line East	County Lea

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no. O	Section 22	Township 9 South	Range 33 East	Lot Idn N/A	Feet from the 467	North/South line South	Feet from the 1700	East/West line East	County Lea

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4370'
¹⁶ Multiple N	¹⁷ Proposed Depth 8700 Ft	¹⁸ Formation Lower Abo	¹⁹ Contractor Patterson	²⁰ Spud Date April 15, 2011

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8	48	400	450	To surface
12 1/4	9 5/8	36 & 40	4,050	1100	To surface
8 3/4	7.0	23.0 & 26.0	9,000	665	3,050'
6 1/4	4 1/2	11.0	12,969	700	8,170'

²² 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.

We propose to drill a horizontal well to the Abo/Wolfcamp horizon. Set a 20" conductor at 40 ft., then spud hole with a 17 1/2 inch bit, drill to 400 ft with fresh water, set 13 3/8 inch casing and circulate to surface. NU 3,000 BOPE, well head and test to 2,000 psi. Continue drilling out from shoe with a 12 1/4 inch hole using 10.0 ppg brine to 4050', set 9 5/8 inch casing, circulate cement to surface, continue drilling with a 8 3/4" hole & land curve at 8730' using cut brine fluid. Set 7.0 inch casing, circulate TOC to 3050 ft. Evaluate Abo / Wolfcamp zones, if decision is to continue, then we will choose the best KO point which should be approximately 8321 ft and drill a 6 1/8 inch horizontal hole from KO point to a MVD of 12,969 ft, to the desired BHL. The horizontal shall be cased off with 4 1/2" P-110 liner from KO pt. to BHL and cemented to top casing. A 4 1/2" P-110 casing shall be run from surface to the top of the liner for the frac job. An evaluation will be made before production facilities are confirmed. A C-103 notice for the facility plans will be submitted.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Vernon D. Dyer

Printed name:

Vernon D. Dyer

Title:

Agent

E-mail Address:

Vdyeroil@cablone.com

Date:

3-10-2011

Phone:

(575) 420-0355

OIL CONSERVATION DIVISION

Approved by:

[Signature]

Title:

Geologist

Approval Date:

04/12/11

Expiration Date:

04/12/13

Conditions of Approval 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

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MAR 10 2011

HOBBS

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-40109	Pool Code 96794	Pool Name Wildcat Wolfcamp (0.1)
Property Code 38580	Property Name CROSSROADS STATE 22	Well Number 2H
OGRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 4370'

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	22	9-S	33-E		400	NORTH	1980	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	22	9-S	33-E		467	SOUTH	1700	EAST	LEA

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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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

Penetration Point, 808.65' FNL & 1957.25' FEL GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=919459.9 N X=738018.3 E LAT.=33.525111° N LONG.=103.552326° W BOTTOM HOLE LOCATION Y=915052.2 N X=738263.2 E	400' S.L. O 1980' GRID AZ. = 176°49'13" HORZ. DIST. = 4415.5' 467' B.H. O 1700'	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Vernon D. Dyer</i> 3-10-2011 Signature Date VERNON D. DYER Printed Name SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was placed 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. FEBRUARY 18, 2011 Date Surveyed LA Signature & Seal of Professional Surveyor <i>Ronald J. Edson</i> 02/25/2011 11.11.0389 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239
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DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

MAR 10 2011
HOBBSOCD

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

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

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-4010R	Pool Code 24580	Pool Name Flying M Abo
Property Code 38580	Property Name CROSSROADS STATE 22	Well Number 2H
OGRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 4370'

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	22	9-S	33-E		400	NORTH	1980	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	22	9-S	33-E		467	SOUTH	1700	EAST	LEA
Dedicated Acres 1.00	Joint or Infill	Consolidation Code	Order No.						

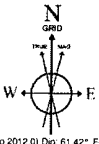
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=919459.9 N X=738018.3 E LAT.=33.525111° N LONG.=103.552326° W BOTTOM HOLE LOCATION Y=915052.2 N X=738263.2 E	400' S.L. 1980' GRID AZ. = 176°49'13" HORZ. DIST. = 4415.5' B.H. 467' 1700'	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Vernon D. Dyer</i> 3-80-2011 Signature Date VERNON D. DYER Printed Name SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. FEBRUARY 18, 2011 Date Surveyed LA Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 02/25/2011 11.11.0389 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239
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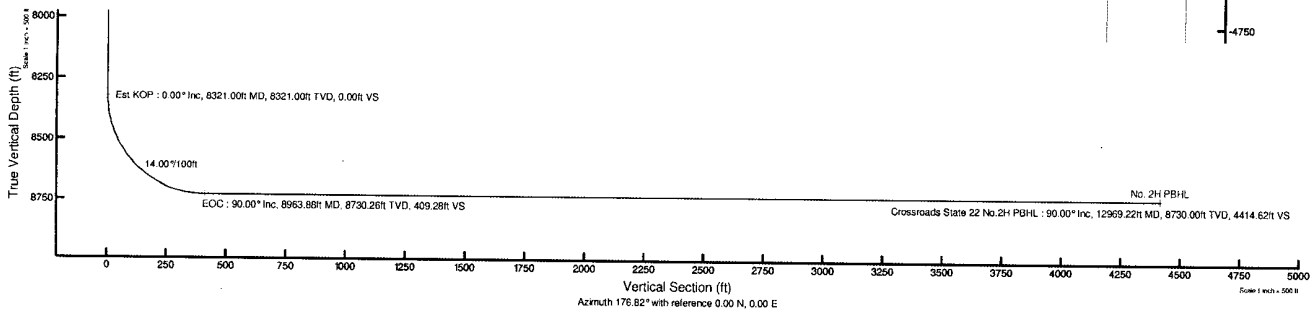
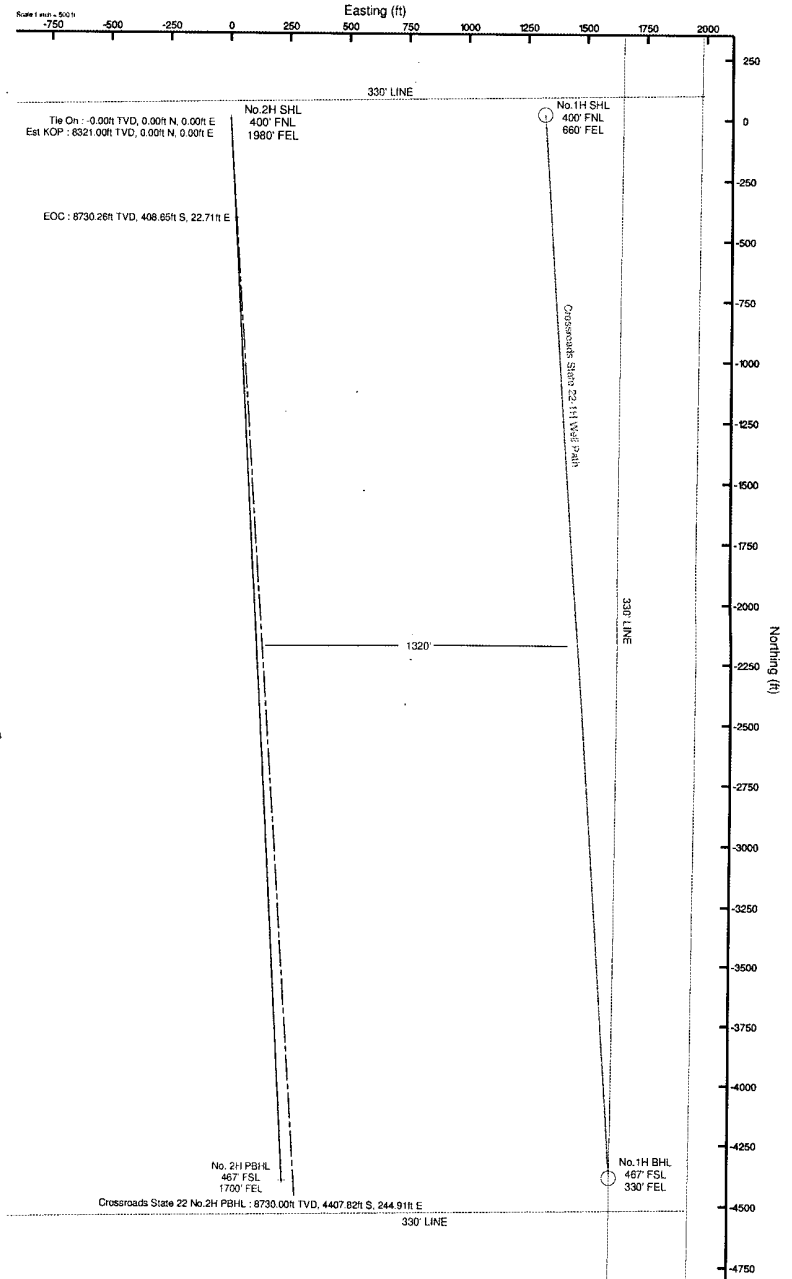
(Cont.)

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	OLS (*100ft)
Tie On	0.00	0.000	176.820	0.00	0.00	0.00	0.00
Est KOP	8321.00	0.000	176.820	8321.00	0.00	0.00	0.00
EOC	8963.88	90.004	176.820	8730.26	-408.65	22.71	14.00
Crossroads State 22 No.2H PBHL	12969.22	90.004	176.820	8730.00	-4407.82	244.91	0.00
							4414.62

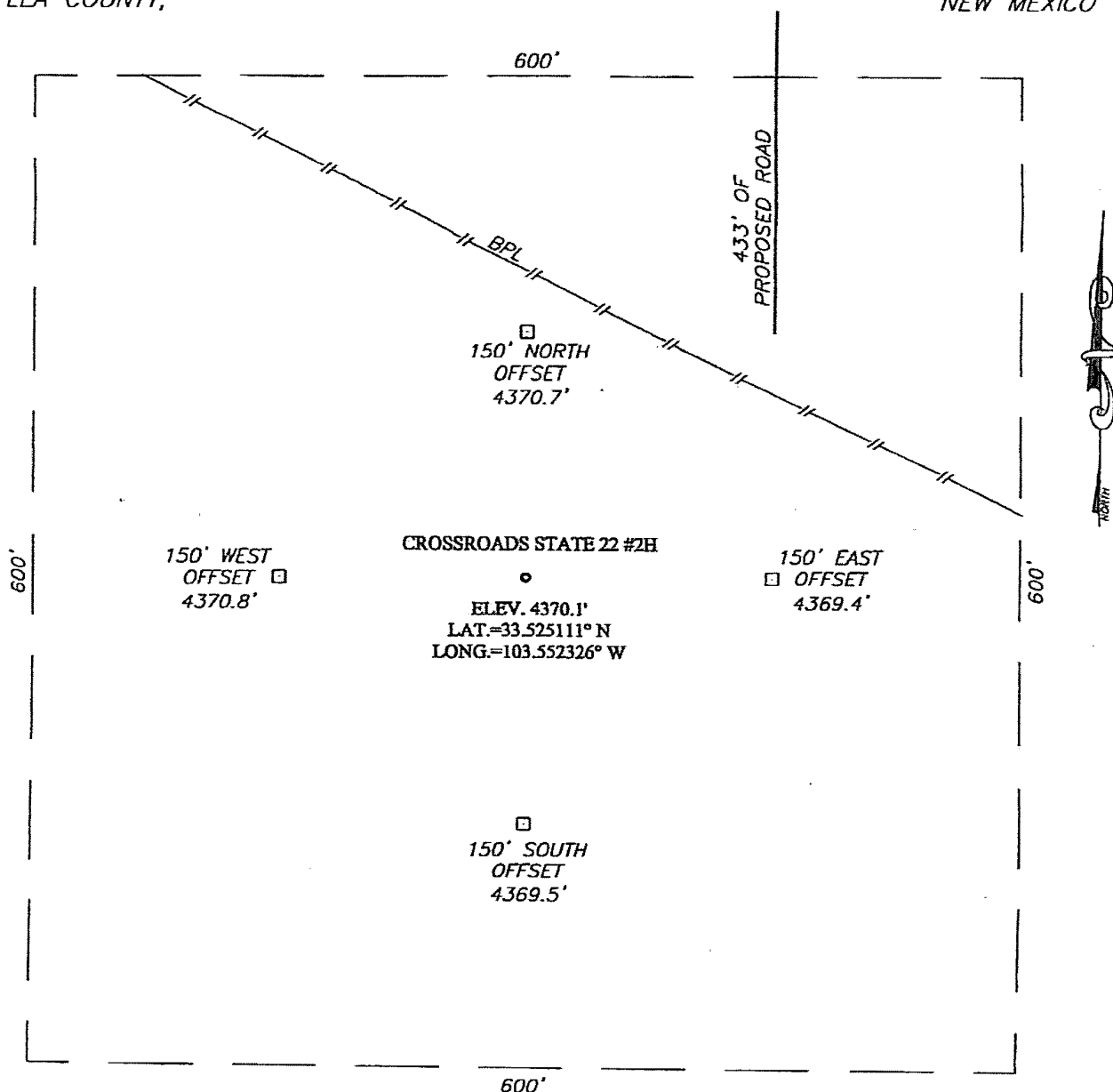
Plot reference wellpath is Prelim_1	
True vertical depths are referenced to Rig on No.2H SHL (RT)	Grid System: NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.2H SHL (RT)	North Reference: Grid north
Rig on No.2H SHL (RT) to Mean Sea Level: 4370 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: Crossroads State 22 No. 2H): -4370 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: gentry on 3/2/2011



 BQGM (1945.0 to 2012.0) Dip: 61.42° Field: 49460.8 nT
 Magnetic North is 7.77 degrees East of True North (at 3/2/2011)
 Grid North is 0.43 degrees East of True North
 To correct azimuth from True to Grid subtract 0.43 degrees
 To correct azimuth from Magnetic to Grid add 7.34 degrees
 For example: if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.34 = 97.34

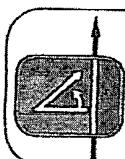
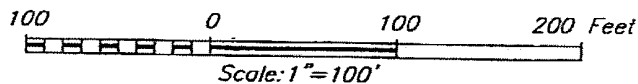


SECTION 22, TOWNSHIP 9 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HWY. #206 AND
CO. RD. T-170 (CARROL RD), GO WEST ON
CARROL RD. APPROX. 12.6 MILES TO A PROPOSED
ROAD SURVEY. FOLLOW ROAD SURVEY SOUTH 433
FEET TO THIS LOCATION.



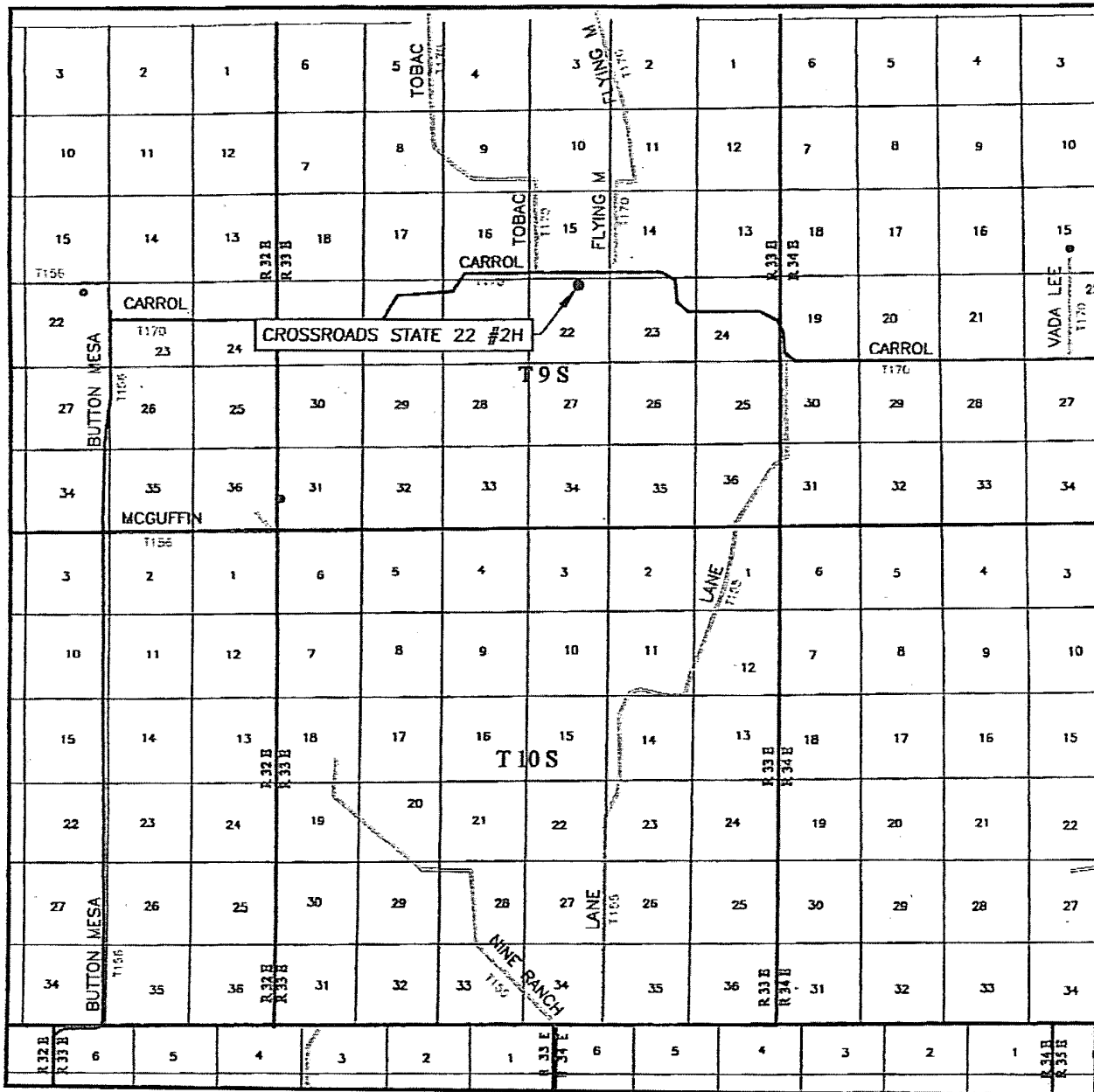
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

MARSHALL & WINSTON, INC.

CROSSROADS STATE 22 #2H WELL
LOCATED 400 FEET FROM THE NORTH LINE
AND 1980 FEET FROM THE EAST LINE OF SECTION 22,
TOWNSHIP 9 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

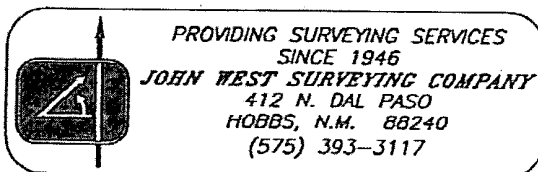
Survey Date: 2/18/11	Sheet 1 of 1 Sheets
W.O. Number: 11.11.0389	Dr By: LA
Date: 2/24/11	Rev 1:
11110389	Scale: 1"=100'

VICINITY MAP

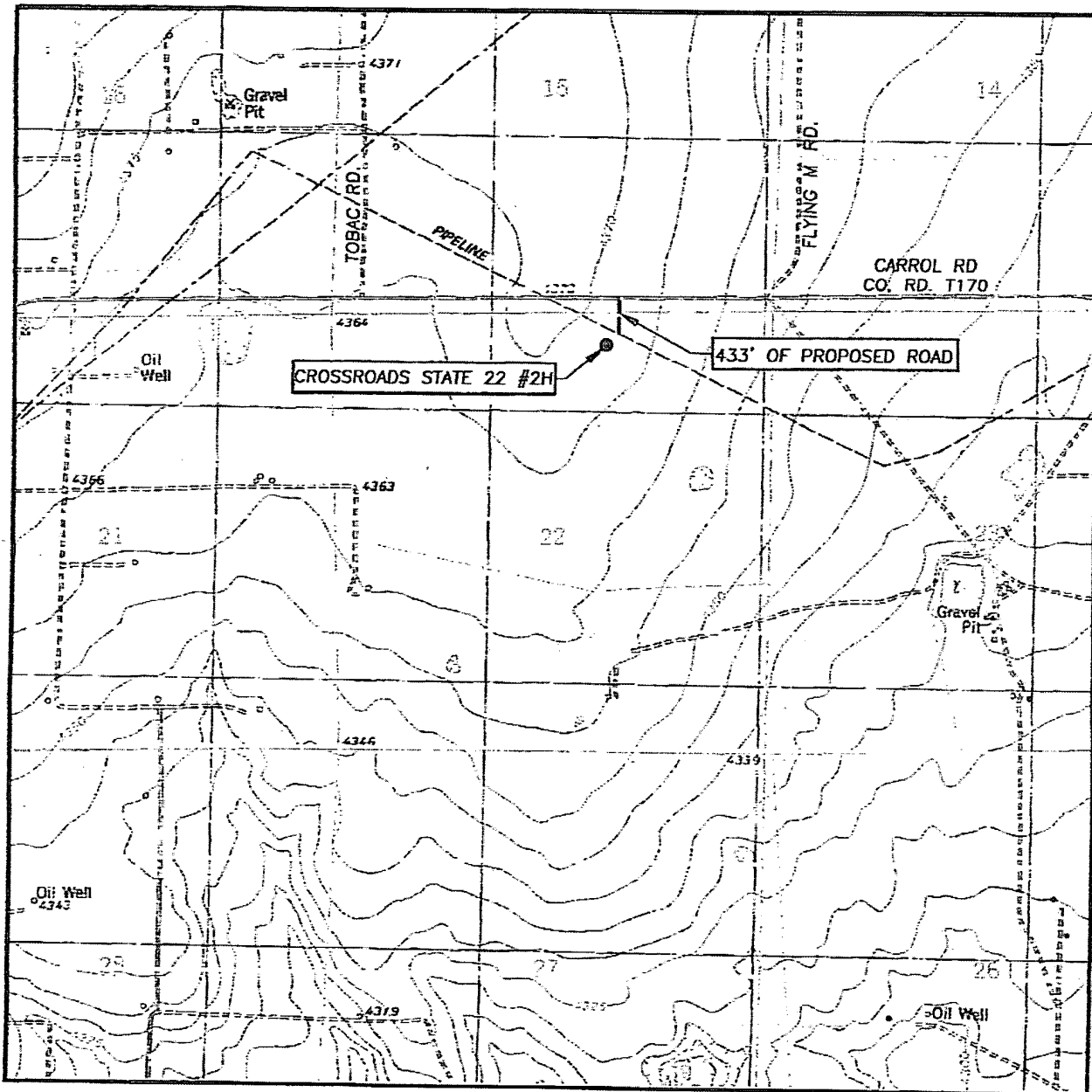


SCALE: 1" = 2 MILES

SEC. 22 TWP. 9-S RGE. 33-E
 SURVEY N.M.P.M.
 COUNTY LEA STATE NEW MEXICO
 DESCRIPTION 400' FNL & 1980' FEL
 ELEVATION 4370'
 OPERATOR MARSHALL & WINSTON, INC.
 LEASE CROSSROADS STATE 22



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
FLYING M RANCH, N.M. - 5'

SEC. 22 TWP. 9-S RGE. 33-E

SURVEY _____ N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 400' FNL & 1980' FEL

ELEVATION 4370'

OPERATOR MARSHALL & WINSTON, INC.

LEASE CROSSROADS STATE 22

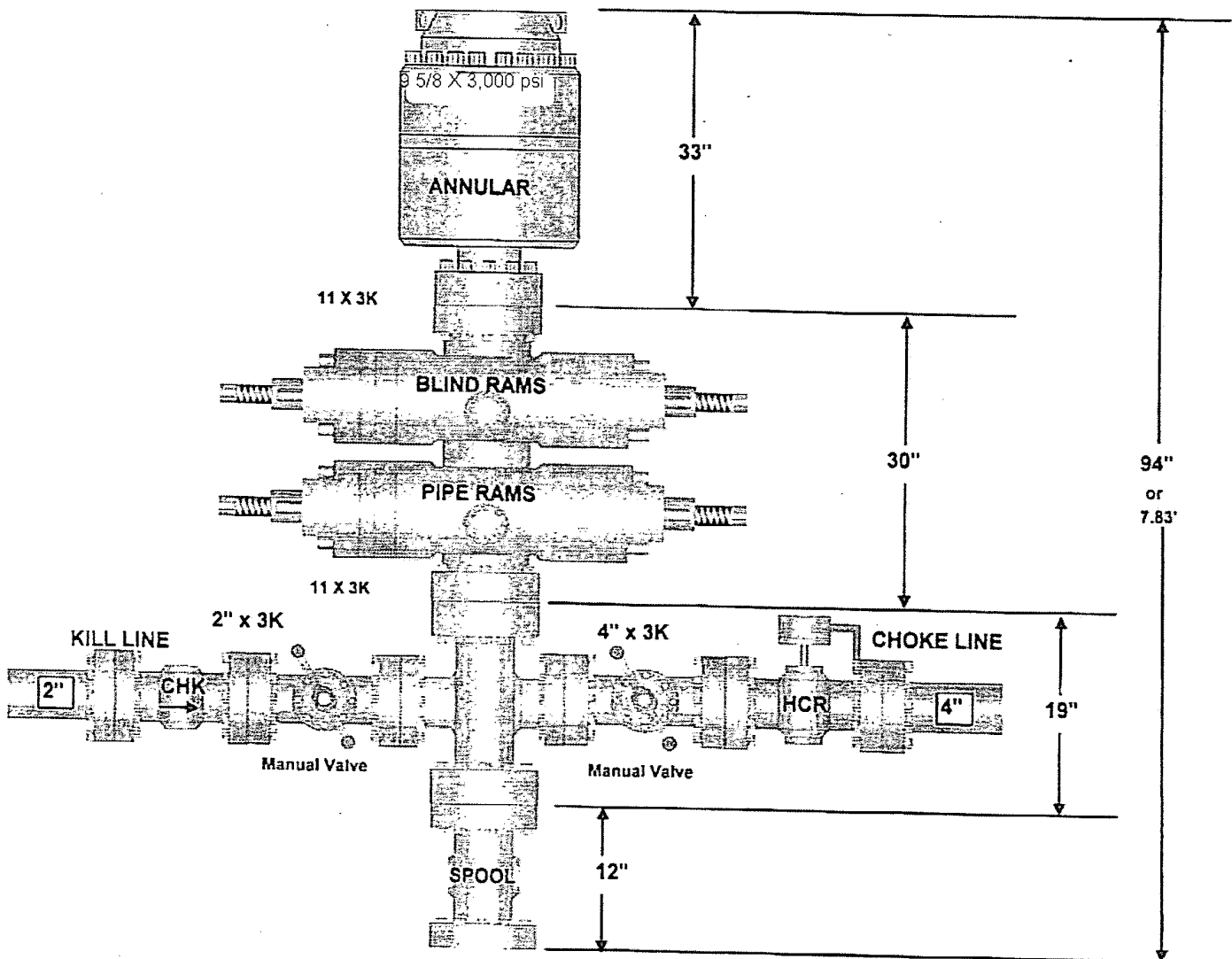
U.S.G.S. TOPOGRAPHIC MAP
FLYING M RANCH, N.M.



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

BOP STACK SPACING

9 5/8" X 3,000 psi



NMOCD Exhibit 3.0 BOPE

AFE No.	 Crossroads State 22-3H Lea County, NM Proposed Wellbore Sketch	AFE Information	
API #		Dry Hole:	Days:
Permit No.		Proposed TD: 10,878' TMD 8730' TVD	
Project No.		v	
Drill 17-1/2" Hole with 8.4-8.6 Spud Mud 13-3/8" 48# H-60 STC Surface at 340" Drill out with 12-1/4" Bit with 10# Salt Saturated Water Cement to 3050' 9-5/8" 36# & 40# J-55 STC Casing at 4050'. Drill with 8-3/4" to TD of Pilot Hole with 8.4# - 9.5# Cut Brine Vis 28-29 and Water Loss no greater than 12 Ran 7" 23# P-110 and 7" 26# N-80 from bottom of Pilot to surface and cmt to 3050' Liner Hanger at 8170' with tie back sleeve. Kick off with 6-1/8" bit at about 8321' After well is TD and cased we will run 4-1/2" P-110 11.6 # casing and tie back from liner to the surface for frac. Land Curve at 8730' TVD 8963 TMD Drill out with 6-1/8" bit to TD 4-1/2" P-110 11.6# LTC Casing TMD 12.969' Pilot Hole TD = 9000'			
<u>Well Information</u> Surface Location: Lea County, T9S R33E Section 22			