

District I
1625 N French Dr , Hobbs, NM 88210
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

RECEIVED

Form C-101
May 27, 2004

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

Submit to appropriate District Office

APR 29 2008

☒ AMENDED REPORT

HOBBS OCD

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

¹ Operator Name and Address Enervest Operating LLC 1001 Fannin St. Suite 800, Houston, TX. 77002		² OGRID Number 143199
		³ API Number 30-025-38883
⁴ Property Code 303909	⁵ Property Name Martin B	⁶ Well No 4
⁹ Proposed Pool 1 Jalmat (Tansil-Yates-7 Rivers) Gas		¹⁰ Proposed Pool 2 Langley Mattix (Lower 7 Rivers-Queen-Grayburg)

⁷ Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	31	24S	37E		660	North	660	West	LEA

⁸ Proposed 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

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3256'
¹⁶ Multiple No	¹⁷ Proposed Depth 3800'	¹⁸ Formation T-Y-7R	¹⁹ Contractor NA	²⁰ Spud Date NA
Depth to Groundwater 100'		Distance from nearest fresh water well >1000'		Distance from nearest surface water >1000'
<input type="checkbox"/> Pit Liner Synthetic <input type="checkbox"/> 12 mils thick Clay <input type="checkbox"/> Pit Volume.		Drilling Method:		
Closed-Loop System <input checked="" type="checkbox"/>		Fresh Water <input type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>		

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	8-5/8"	24#	1,250'	610	Surface
7-7/8"	4-1/2"	11.6#	3,800'	650	Surface

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.

1. Prepare surface location. Move in and rig up drilling rig, spud well and drill and set conductor. Install and test BOP's.
2. Drill 12-1/4" surface hole to a minimum depth of 1250'. Set 8 5/8" casing and cement.
3. Drill 7-7/8" production hole 3,800' TD and evaluate running mud logs as well as DLL/LDT/CAL/GR to TD.
4. Set 4 1/2" to TD and cement to surface. Perforate porosity and stimulate as necessary (specific procedure to be determined).
5. Place well on test.
6. H2S can be present in this area and an H2S contingency plan attached.

**Permit Expires 2 Years From Approval
Date Unless Drilling Underway**

²³ 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 <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		OIL CONSERVATION DIVISION	
Printed name: Ronnie Young		Approved by: <i>Chris Williams</i>	
Title: Regulatory Supervisor		Title: OCD DISTRICT SUPERVISOR/GENERAL MANAGER	
E-mail Address: ryoung@enervest.net		Approval Date: MAY 01 2008 Expiration Date:	
Date: 4-25-08	Phone: 713-495-6530	CONDITIONS OF APPROVAL BY THE OCD -- Approval for drilling only, CANNOT produce until OCD Santa Fe approve Simultaneous Dedication of Acreage and Pool/Formation.	

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38883	Pool Code 79240	Pool Name Jal mat (T-Y-7R) Gas
Property Code 303909	Property Name MARTIN B	Well Number 4
OGRID No. 143199	Operator Name ENERVEST OPERATING	Elevation 3256'

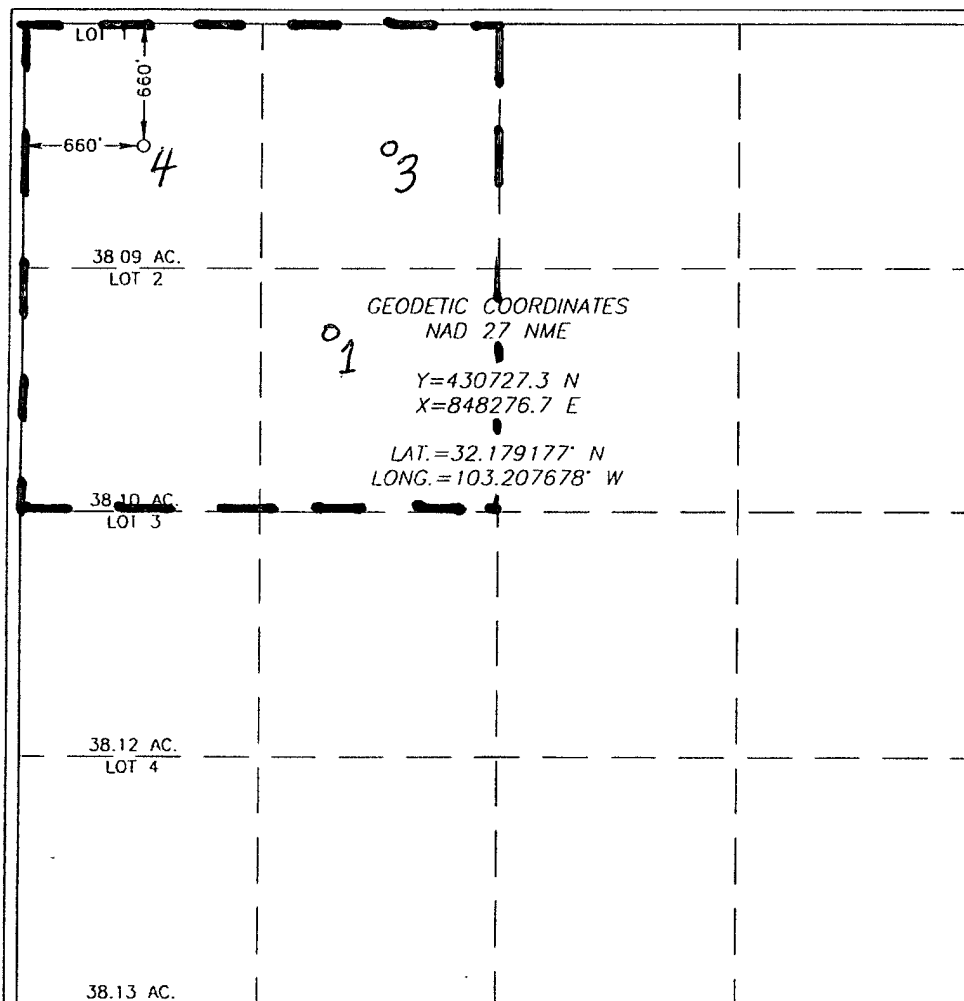
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	31	24-S	37-E		660	NORTH	660	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 156.19	Joint or Infill Y	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



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.

Signature **[Signature]** Date **4-8-08**
Printed Name **Gary Miller**
AGENT

SURVEYOR CERTIFICATION

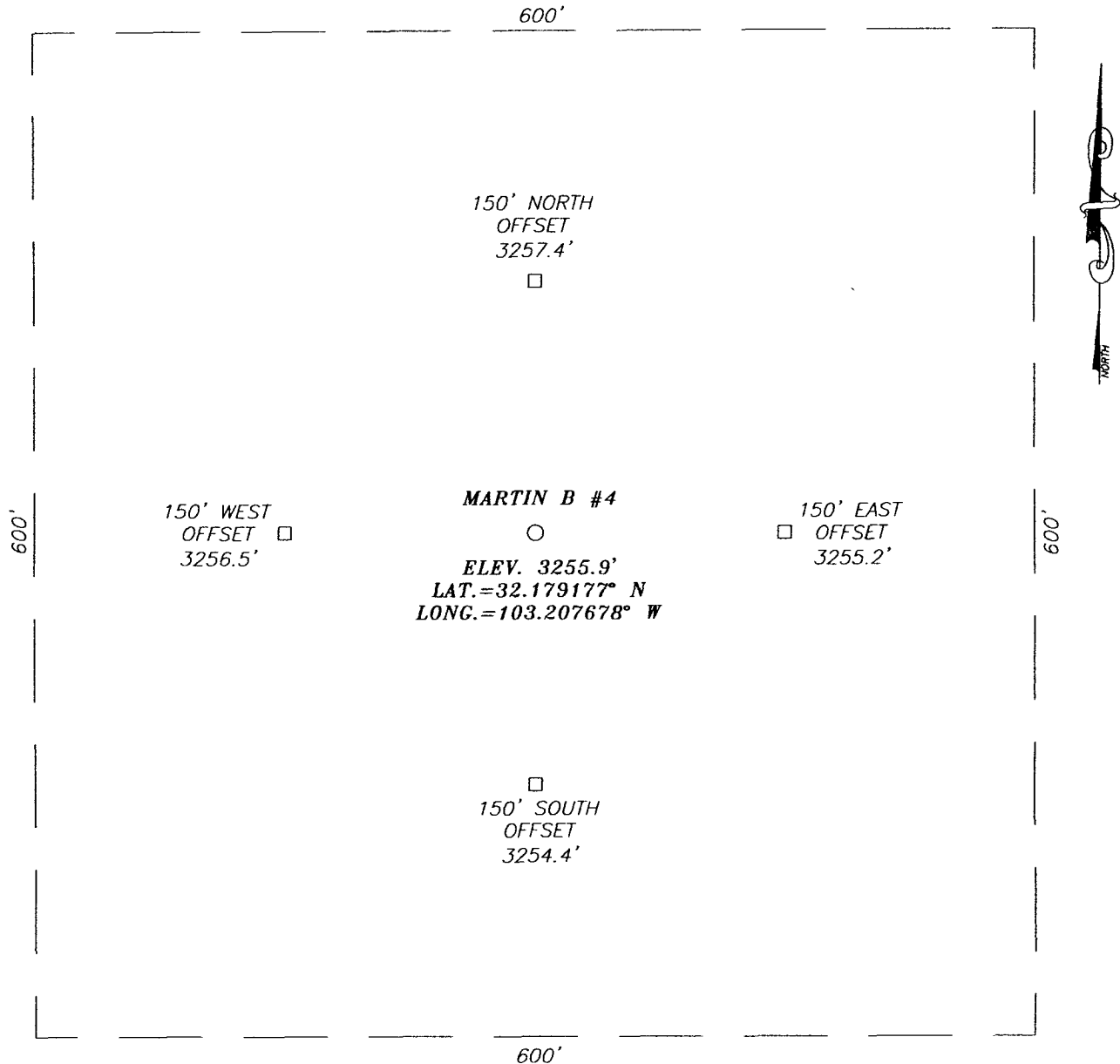
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature and Seal of Professional Surveyor
[Signature]
Certificate No. **GARY EIDSON 12641**
RONALD J. EIDSON 3239

<p>LOT 1 660' 660'</p> <p>38.09 AC. LOT 2</p> <p>38.10 AC. LOT 3</p> <p>38.12 AC. LOT 4</p> <p>38.13 AC.</p>	<p style="text-align: center;">GEODETIC COORDINATES NAD 27 NME</p> <p style="text-align: center;">Y=430727.3 N X=848276.7 E</p> <p style="text-align: center;">LAT.=32.179177° N LONG.=103.207678° W</p>
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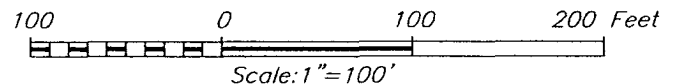
<h3>OPERATOR CERTIFICATION</h3>	
<p><i>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unlessed mineral interest in the land including the proposed bottom hole location or has a right 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></p>	
<p> Signature</p>	<p><u>4-8-03</u> Date</p>
<p><u>GARY M. EIDSON</u> Printed Name</p>	
<h3>SURVEYOR CERTIFICATION</h3>	
<p><i>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.</i></p>	
<div style="text-align: center;"> </div>	
<p>Date Surveyed _____</p> <p>Signature & Seal of Professional Surveyor </p>	<p><u>4/8/03</u> Date</p>
<p>Certificate No. <u>GARY EIDSON</u> 12641 <u>RONALD J. EIDSON</u> 3239</p>	

SECTION 31, TOWNSHIP 24 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #18 AND
CO. RD. J12 (FLYING E. RD.) GO SOUTH ON ST.
HWY. #18 APPROX. 1.0 MILES. TURN RIGHT AND
GO WEST APPROX. 0.5 MILES. VEER LEFT AND
GO SOUTHWEST APPROX. 0.1 MILE. TURN RIGHT
AND GO WEST APPROX. 0.4 MILES. THIS
LOCATION IS SOUTH APPROX. 500 FEET.



ENERVEST OPERATING

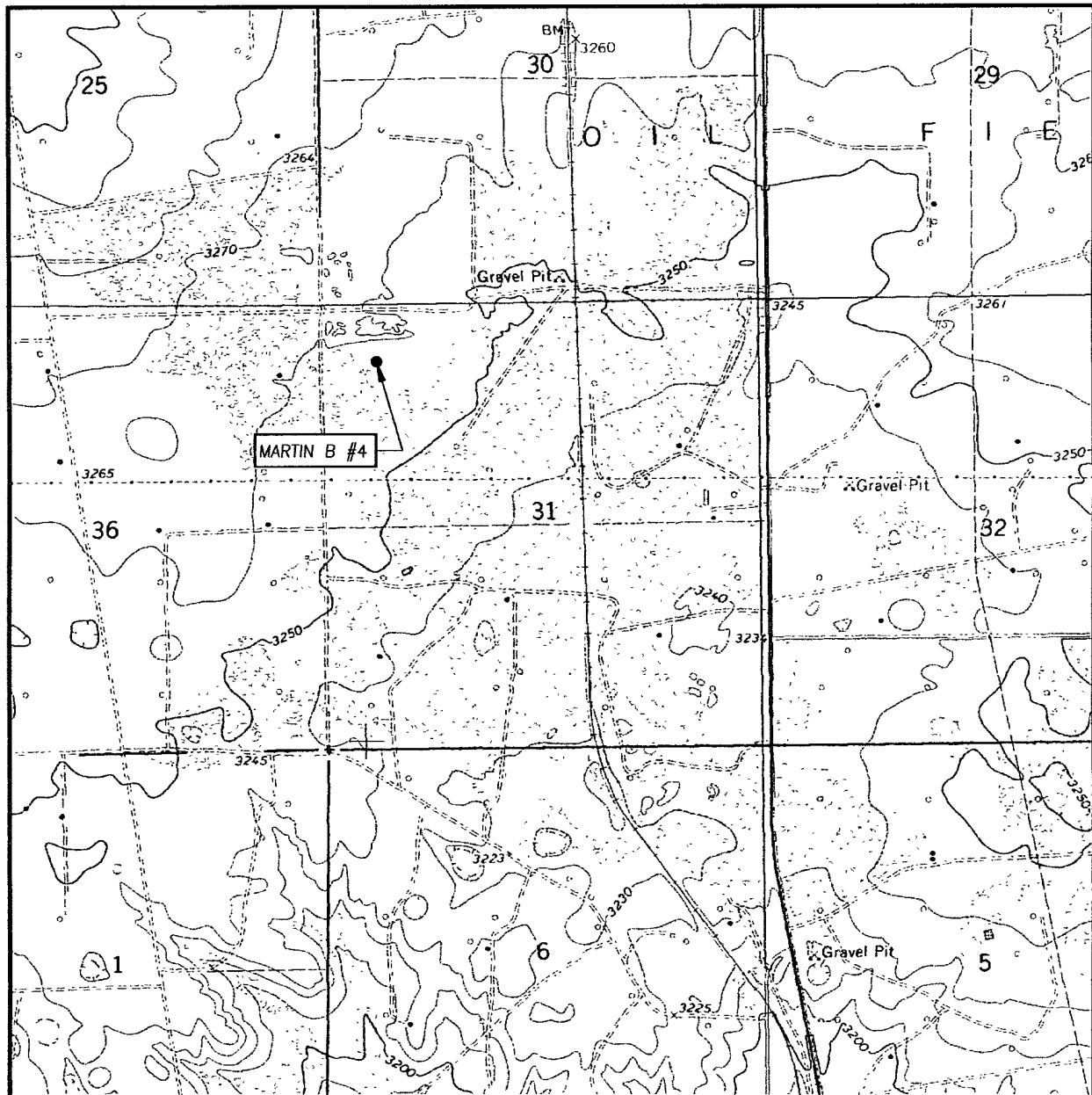
MARTIN B #4 WELL
660 FEET FROM THE NORTH LINE AND
660 FEET FROM THE WEST LINE OF SECTION 31,
TOWNSHIP 24 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 3/27/08		Sheet 1 of 1 Sheets	
W.O. Number: 07.11.1712		Dr By: LA	Rev 1:N/A
Date: 4/2/08		07111712	Scale: 1"=100'



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10 FEET
JAL NW, N.M.

SEC. 31 TWP. 24-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO


DESCRIPTION 660' FNL & 660' FWL

ELEVATION 3256'

OPERATOR ENERVEST OPERATING

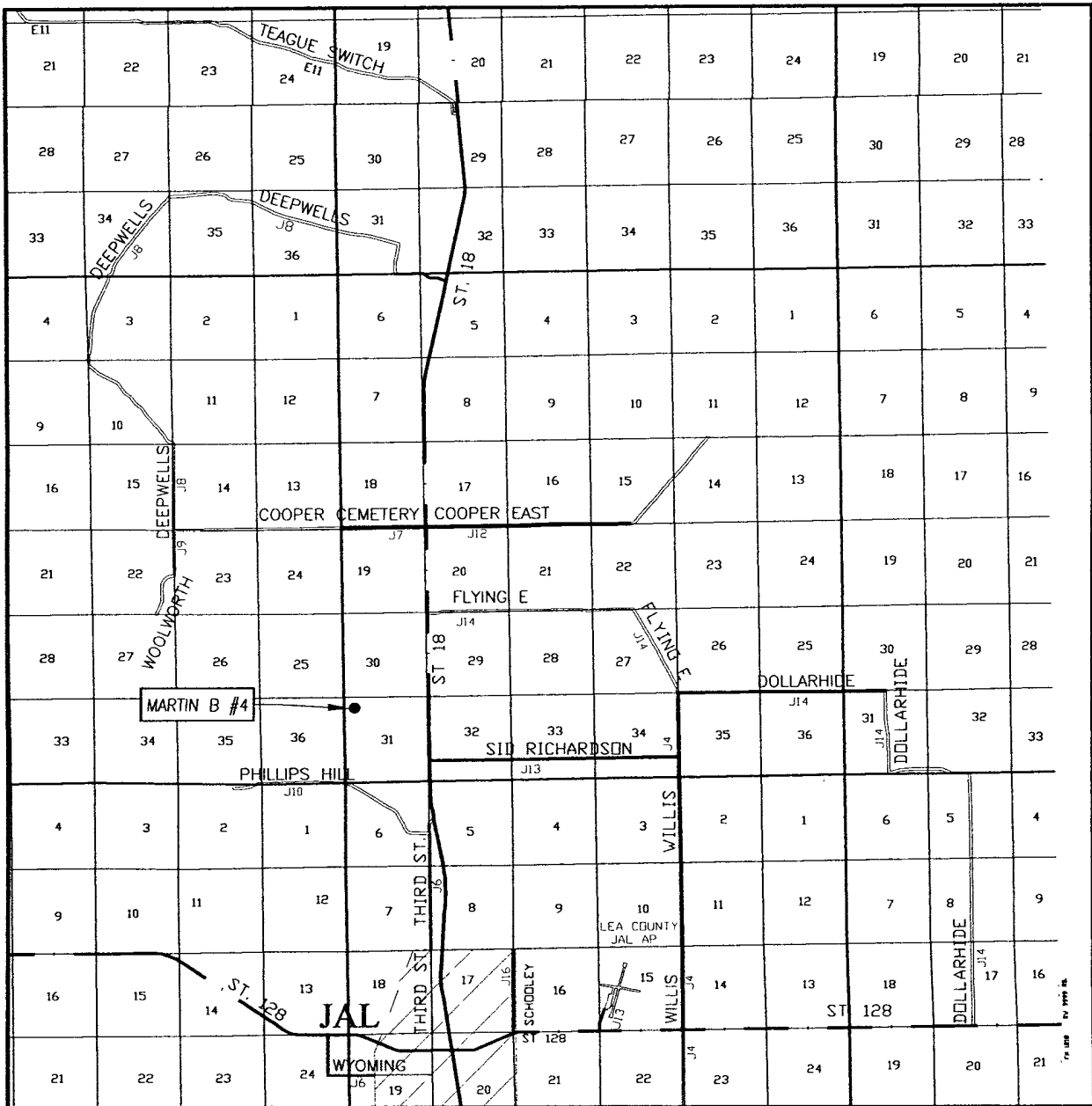
LEASE MARTIN B

U.S.G.S. TOPOGRAPHIC MAP
JAL NW, N.M.



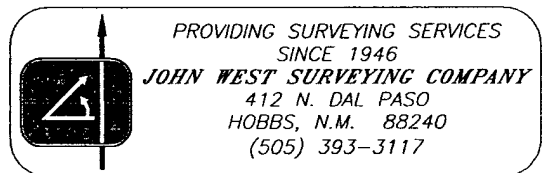
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 31 TWP. 24-S RGE. 37-E
 SURVEY N.M.P.M.
 COUNTY LEA STATE NEW MEXICO
 DESCRIPTION 660' FNL & 660' FWL
 ELEVATION 3256'
 OPERATOR ENERVEST OPERATING
 LEASE MARTIN B



WELL		Martin B #4			ENERVEST				
TYPE	VERTICAL	RIG	TBD		DATE	4/25/2008			
FIELD	JALMAT	COUNTY	LEA COUNTY, NEW MEXICO		ELEVATION	3,256'			
GAS/OIL	GAS	MUD	NOVA		CEMENT	RISING STAR			
LOCATION	660' FNL & 660' FWL SEC 31 T24S R37E				SBHT	99° F			
COMMENTS OBJECTIVE FORMATION. TANSILL, YATES, SEVEN RIVERS, QUEEN & PENROSE									
NOTE									
MUD- LOGGER	SURVEYS	WOB/GPM BIT	FORMATION DEPTHS	VERTICAL DEPTH	MUD WEIGHT	OPEN HOLE LOGS	CEMENT	WELLHEAD	REMARKS
14" CONDUCTOR				40'					
INCLINATIONS 5K/300 400' & 1,250' 10K/350 12-1/4" HOLE 15K/450 TYPE 2 INSERT NO MUD LOGGER 60' PEND RED BEDS 2 - 8" DCs					8.5 - 8.8 PPG NATIVE LEAD 415 Sks 35.65.6 POZ C GEL (1.90 Yld, 12.8 PPG) TAIL: 195 Sks Class "C" 2% CaCl2 (1.35Yld, 14.8 PPG) (100 % Excess) FLOAT COLLAR & TEXAS PATTERN SHOE TOP OUT: IF NEEDED				
8-5/8" 24# J55 STC				1,250'					
INCLINATIONS 1,800', 2,800', 3,800' 10K/350 7-7/8" HOLE OR AS NEEDED SEC FMH3655ZM 15K/350 PACKED NO MUD LOGGER					9.8 - 10.1 PPG BRINE				
20K/500				2,000'					
22K/500				2,400'	< ADD STARCH FOR 15 - 20 CC WL				
<u>PRIMARY OBJECTIVES</u>									
POS LR - DEPLETION TANSILL (DOLO / ANHYD) >				2,700'	< POS LOST RETURNS 2,700' - 3,600'				
25K/500 YATES (SS / DOLO) >				2,853'	OPEN HOLE LOGS: HALLIBURTON TD TO SC: GR / LITHO DENSITY / DUAL LATEROLOG TD TO SURFACE: GR / NEUTRON				
SEVEN RIVERS (SS / DOLO) >				3,070'	< POSSIBLE LOST RETURNS				
QUEEN (ANHYD / SS / DOLO) >				3,515' EST.	LEAD: 350 SKS 50:50 POZ:C (11.8 PPG 2.56 CF/SK) TAIL: 300 SKS CLASS "C" (14.8 PPG 1.33 CF/SK) (20% EXCESS OVER CALIPER) CEMENT TO SURFACE FLOAT SHOE, 1 JT, FLOAT COLLAR				
PENROSE (LOWER QUEEN) >				3,565' EST.					
4-1/2 11.60# J55 LTC				3,800'					
					OFFICE		HOME		
AFE #	C0-0804-189	REGULATORY	RONNIE YOUNG		(713) 495-6530				
EV #	45142.003	SAFETY, HEALTH & ENVIRONMENTAL	ELROY ARDOIN		(713) 495-6534 (337)654-1992				
API #	30-025-	GEOLOGIST	ROGER TREJO		(713) 495-5317 (281) 265-5973				



EnerVest Operating, Ltd.

Drilling Plan

Jalmat Area

660' FNL & 660' FWL Sec 31 T24S R37E

Lea County, NM

GL =

Rig Telephone #:

Rig FAX #:

3,256'

MARTIN B #4 - DRILLING PROGRAM

1 Geologic Name of Surface Formation & Directions to Well

Quaternary

Directions to well:

2 Estimated Tops of Important Geologic Markers

MD	SS	Formation	Objective	Rock Type
2,700	556	Tansill	Primary	(Dolomite & Anhydrite)
2,853	403	Yates	Primary	(Sandstone & Dolomite)
3,070	186	Seven Rivers	Primary	(Sandstone & Dolomite)
3,515	-259	Queen	Primary	(Anhydrite, SS & Dolomite)
3,565	-309	Penrose	Primary	(Lower Queen)
		Grayburg		(Dolomitic SS)

3 Estimated Depths of Anticipated Fresh Water, Oil and Gas

MD	SS	Formation	Objective	Fluid Type
2,700	556	Tansill	Primary	(Oil/Gas)
2,853	403	Yates	Primary	(Oil/Gas)
3,070	186	Seven Rivers	Primary	(Oil/Gas)
3,515	-259	Queen	Primary	(Oil/Gas)
3,565	-309	Penrose	Primary	(Oil/Gas)
		Grayburg		(Oil/Gas)

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 8-5/8" casing to 1,250' and circulating cement back to the surface will protect the surface fresh water sand. All zones containing commercial quantities of oil or gas will have cement circulated across them by cementing the 4-1/2" production casing back to at least the 8-5/8" casing shoe. Cement volumes will be pumped to provide cement back to surface.



EnerVest Operating, Ltd.

Drilling Plan

Jalmat Area

660' FNL & 660' FWL Sec 31 T24S R37E

Lea County, NM

GL =

Rig Telephone #:

Rig FAX #:

3,256'

4 Casing Program

Hole Size	Interval	OD Casing	Weight	Grade	Conn./New?	Bur/Col/Tens
11"	0-1,250'	8-5/8"	24#	J-55	STC/New	2.00 / 2.40 / 9.35
7-7/8"	0-3,800'	5-1/2"	15.50#	J-55	LTC/New	1.12 / 2.38 / 4/24

5 Cement Program

8-5/8" Surface Casing
100% XS

LEAD 200 SX, 35/65/6, C/Poz/Gel, 2.00 cf/sk, 12.6 PPG

TAIL 200 SX, Class "C", 1.32 cf/sk, 14.8 PPG

5-1/2" Production Csg

LEAD 300 SX, 35/65, Poz/H, 1.90 cf/sk, 12.5 PPG

TAIL 420 SX, Class H, 1.32 cf/sk, 14.8 PPG

6 Minimum Specifications for Pressure Control & Wellhead Equipment

The blowout preventer equipment (BOPE) shown in Exhibit #9 will consist of a double ram-type (2,000 psi WP) preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on bottom and 4-1/2" drill pipe rams on top. The BOPE will be nipped up on the 8-5/8" surface casing and tested to 2,000 psi by a third party. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a kelly cock and floor safety valve, choke lines and a choke manifold (Exhibit #11) and will have a 2,000 psi WP rating.

A 2,000 psi WP Larkin Type Wellhead will be used.

7 Types and Characteristics of the Proposed Mud System

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with saturated brine water.

DEPTH	TYPE	WEIGHT	VISCOSITY	WATER LOSS
0-1,250'	FW Mud	8.7	28	N.C.
1,250'-TD	Brine	10	30	12 cc



EnerVest Operating, Ltd.

Drilling Plan

Jalmat Area

660' FNL & 660' FWL Sec 31 T24S R37E

Lea County, NM

GL =

Rig Telephone #:

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3,256'

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times.

8 Auxillary Well Control and Monitoring Equipment

- A. Kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

9 Logging, Testing and Coring Program

- A. The electric logging program will consist of a GR-Dual Laterolog Litho Density log run from TD to the surface casing shoe.
- B. A GR-Neutron will be run to surface.
- C. No mud logger will be used.
- D. No conventional coring is anticipated.
Further testing procedures will be determined after the 5-1/2" production casing has been cemented at TD, based on drill shows and log evaluation.

10 Abnormal conditions, Pressure, Temperatures and Potential Hazards

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 97°F and the estimated maximum bottom hole pressure is 1,700 psi. Lost returns have been experienced in offset wells. Losses have occurred below 2,700'.

11 Anticipated Starting Date and Duration of Operations

Road and location work will not begin until approval has been received from the BLM. Anticipated Start Date is January 1, 2008.

Once commenced, drilling operations should be finished in approximately 12 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.



EnerVest Operating, Ltd.

Drilling Plan

Jalmat Area

660' FNL & 660' FWL Sec 31 T24S R37E

Lea County, NM

GL =

Rig Telephone #:

Rig FAX #:

3,256'

12 Safety

Conduct Tour Safety Meetings with all crews and record topics of these meetings on the IADC and morning reports. Document all personnel in attendance and topics of these Safety Meetings. Keep these documents on file in company representative's office for inspection.

13 Notes

Stamp, Code and Sign all Invoices

H₂S Area? If yes, attach contingency plan.

Inclinations: Survey every 500' or bit trip

Drop Totco every trip out to check the angle. Max inclination = 3°

Call Houston if survey is $\geq 3^\circ$

Mud Disposal: Closed Loop system will be used. Haul off all cuttings and fluids.

BHA #1 **Surface** BIT-2 DC-STAB-DC as needed (60' Pendulum)

BHA #2 **Production** BIT-DC-STAB-DC-STAB-DC as needed (30/60 Pendulum)

BIT PROGRAM

			RPM	WOB
Surface	11"	Smith F29	90	35k
Production	7-7/8"	HC 506ZX	50-75	50-75k