

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. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
Revised March 17, 1999

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

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

AMENDED REPORT

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

¹ Operator Name and Address Ensign Operating Co., 1225 17th Street, Suite 1900, Denver, CO 80202-5519		² OGRID Number 26782
		³ API Number 30-025-36140
⁴ Property Code 31907	⁵ Property Name Key 20	⁶ Well No. #1

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
H	20	T-13S	R-35E		2480'	FNL	870'	FEL	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
⁹ Proposed Pool 1 Wildcat Miss					¹⁰ Proposed Pool 2				

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4080'
¹⁶ Multiple N	¹⁷ Proposed Depth 13,900'	¹⁸ Formation Lower Mississippi	¹⁹ Contractor Grey Wolf	²⁰ Spud Date Feb 15, 2003

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	N/A - conductor	60'	ready mix	surface
17 1/2"	13 3/8"	48#	450'	545	surface
12 1/4"	9 5/8"	40#	4,800'	1156	surface
8 3/4"	4 1/2"	11.6#	13,900'	355	9,000'

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.
See attached

Permit Expires 1 Year 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. Signature: <i>John M. Stinson</i>		OIL CONSERVATION DIVISION	
Printed name: John M. Stinson		Approved by: <i>[Signature]</i>	
Title: Operations Specialist		Title: PETROLEUM ENGINEER	
Date: 01/22/03	Phone: (303) 675-4432	Approval Date: FEB 04 2003	Expiration Date:
Conditions of Approval: Attached <input type="checkbox"/>			

Blowout Preventer Program

Ensign Operating Co.
Key #1-20,
2480' FNL, 870' FEL,
Section 20, T-13S, Range 35E,
Lea County, New Mexico

From Depth	To Depth	Size	Min. Stack W.P.	Tested	Comments
0'	500'	N/A	N/A	N	None installed on conductor pipe while drilling surface hole
500'	4,800'	13 3/8"	5,000#	Y	BOP stack and manifold tested after installation on 13 3/8" starting casing head
4,800'	13,900'	13 3/8"	5,000#	Y	BOP stack and manifold tested every 30 days after initial installation

0' – 500' No BOP stack will be installed on the conductor pipe while drilling the 17 1/2" surface hole.

500' – 4800' Subsequent to cementing of the 13 3/8" surface casing, a 13 5/8" x 13 3/8" SOW 3M casing head will be installed and tested to 1,500#. The BOP stack and choke manifold will be installed and tested by with the rig pump prior to drilling out from under the surface casing shoe. Test pressure for the BOP stack will be to industry recognized standards.

4800' – 13900' Subsequent to cementing of the 9 5/8" intermediate casing, a 13 5/8" 3M x 11" 5M casing spool will be installed and tested to 2,500#. The BOP stack and choke manifold will be re-installed and again tested by an independent contractor prior to drilling out from under the intermediate casing shoe. Test pressure for the BOP stack will be to industry recognized standards. In addition, an Equivalent Mud Weight test will be run to test the integrity of the intermediate casing shoe. The EMW test will be run to test the shoe to a maximum expected mud weight of 10.5 ppg by pressuring testing the shoe and 25' of new formation to 550# and holding it for 15 minutes.

The following page depicts a typical BOP stack arrangement and choke manifold arrangement as might be expected on the subject well.

Unless otherwise specified by the New Mexico Oil Conservation Division, Ensign Operating Co. will install the BOP stack with the blind rams installed as the upper set of rams, the pipe rams will be installed as the lower set of rams, and their will be no shear rams installed. An annular preventer will be installed above the ram type preventer.

10/12/2003
 ED
 Hobbs
 OCO

BLOWOUT PREVENTION
EQUIPMENT
IADC Recommended BOP Stacks

TABLE K1-2
IADC RECOMMENDED BOP STACKS

IADC Service Class	Service Condition	Stack W.P. (psi)	Stack Components
2	Lt. Duty	2,000	Two ram preventers* or one annular preventer capable of closing on open hole. Two outlets.
3	Low Pres.	3,000	Two ram preventers* and one annular preventer. Two outlets.**
5	Med. Pres.	5,000	Two ram preventers* and one annular preventer. Two outlets.**
10	High Pres.	10,000	Three ram preventers* and one annular preventer.*** Two outlets.** Annular preventers of any size may be 5,000 psi.
15	Extreme Pressure	15,000	Three ram preventers* and one annular preventer, (minimum 10,000 psi)

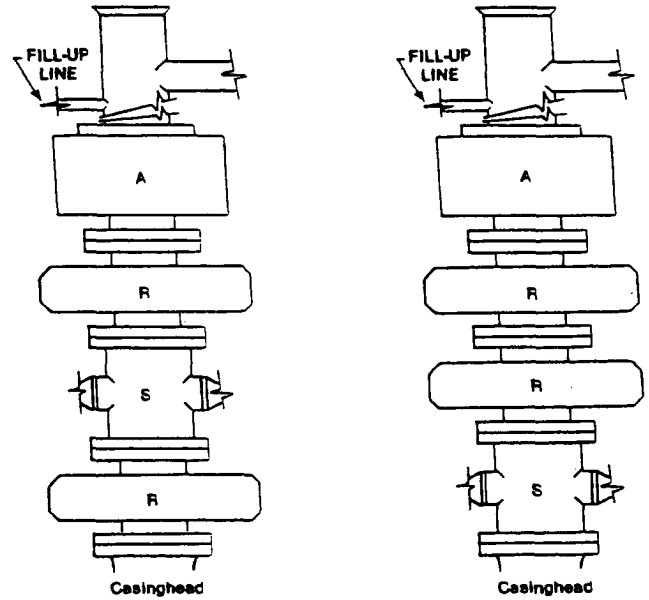


FIGURE K1-2. Recommended IADC Class 3(3000 psi WP) and 5(5000 psi WP) stacks. Either RSRA (left) or SRRR (right) is acceptable and drilling spool is optional if side outlets on rams are utilized.

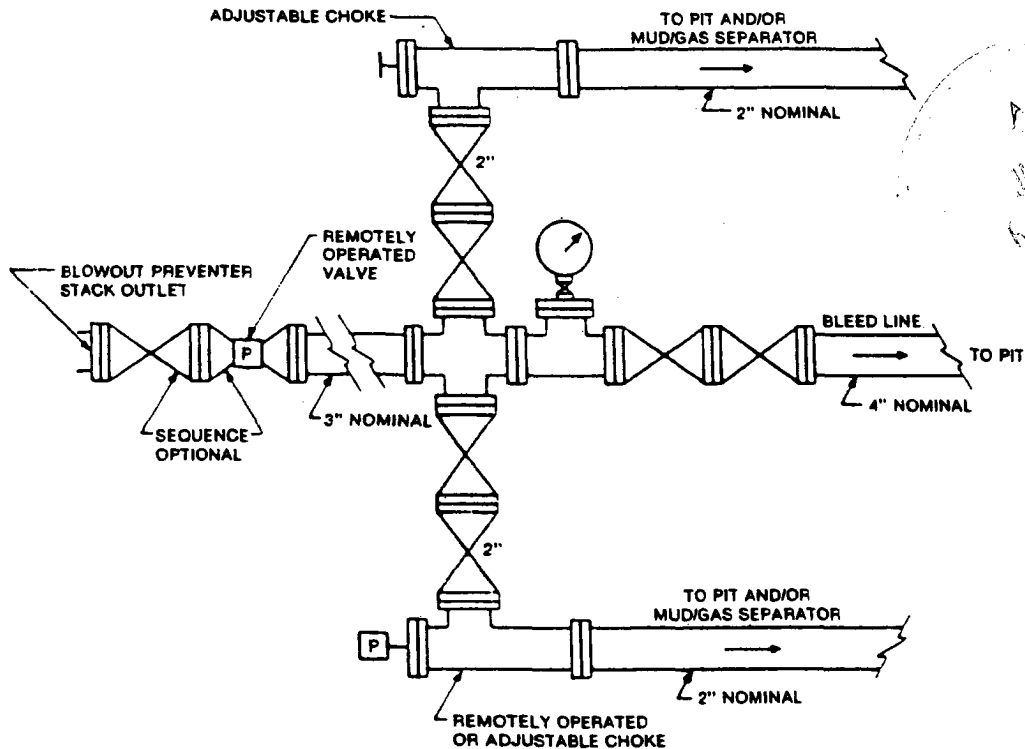


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

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JAN 2008
ED
MOBIL
OCE

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-36140	Pool Code ✓	Pool Name Wildcat Miss
Property Code 31907	Property Name KEY "20"	Well Number 1
OGRID No. 26782	Operator Name ENSIGN OPERATING COMPANY	Elevation 4080'

Surface Location

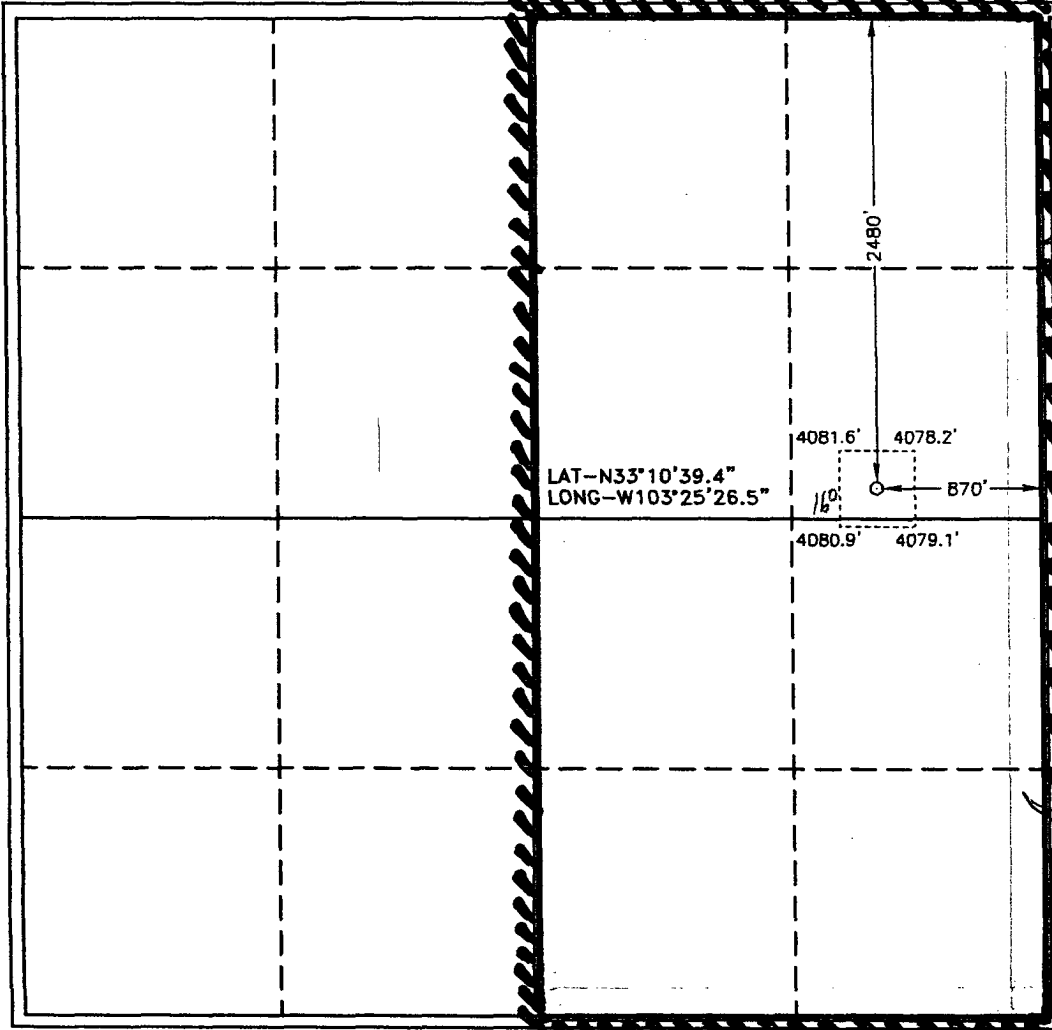
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	20	13 S	35 E		2480	NORTH	870	EAST	LEA

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

Dedicated Acres 320	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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

John M. Stinson
Signature

John M. Stinson
Printed Name

Operations Specialist
Title

1/30/03
Date

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.

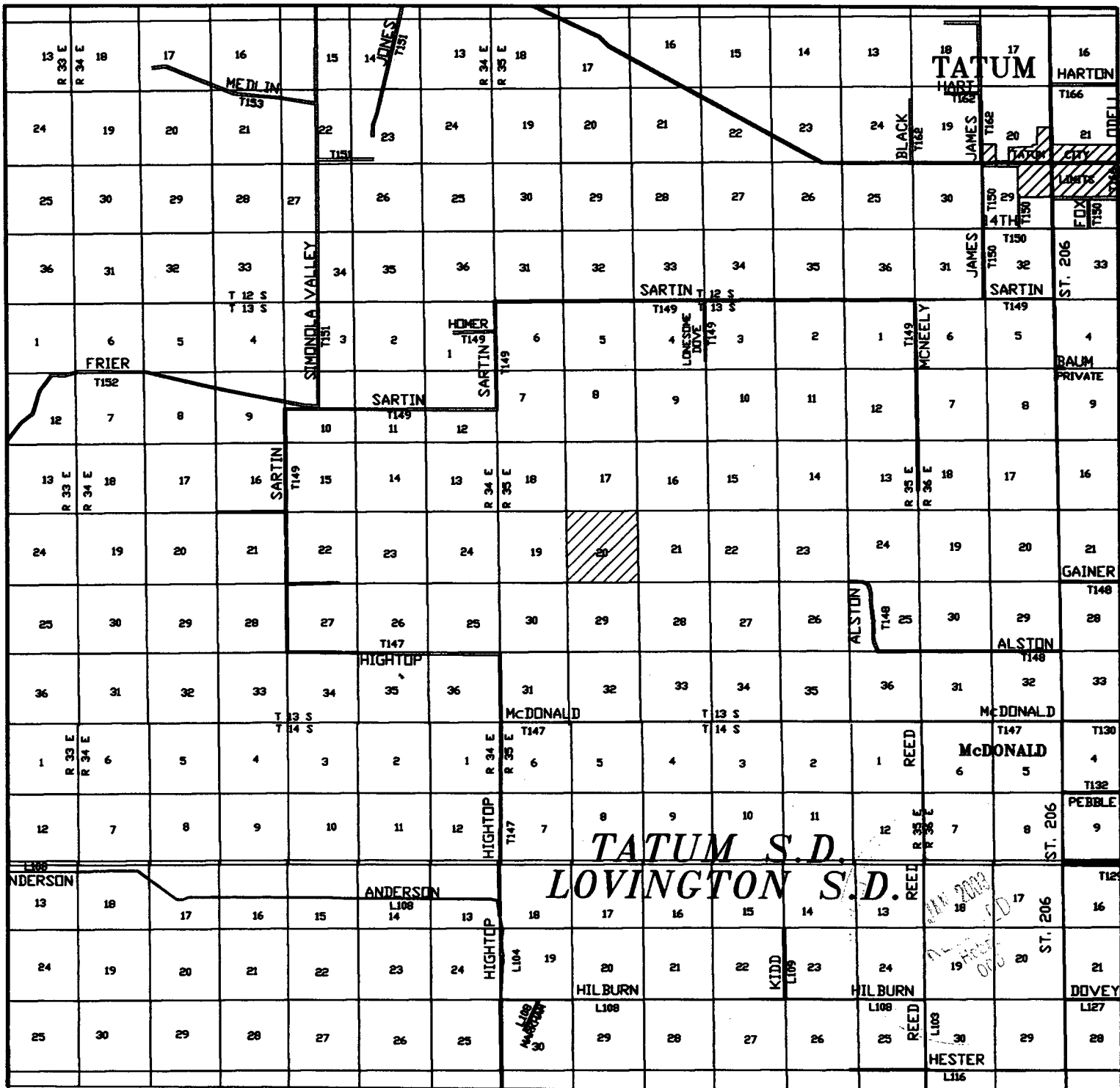
JANUARY 16, 2003
Date Surveyed

Gary L. Jones
Signature & Seal of L. JONES
Professional Surveyor

NEW MEXICO
7977
W.O. No. 2969

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



KEY "20" #1
 Located at 2480' FNL and 870' FEL
 Section 20, Township 13 South, Range 35 East,
 N.M.P.M., Lea 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

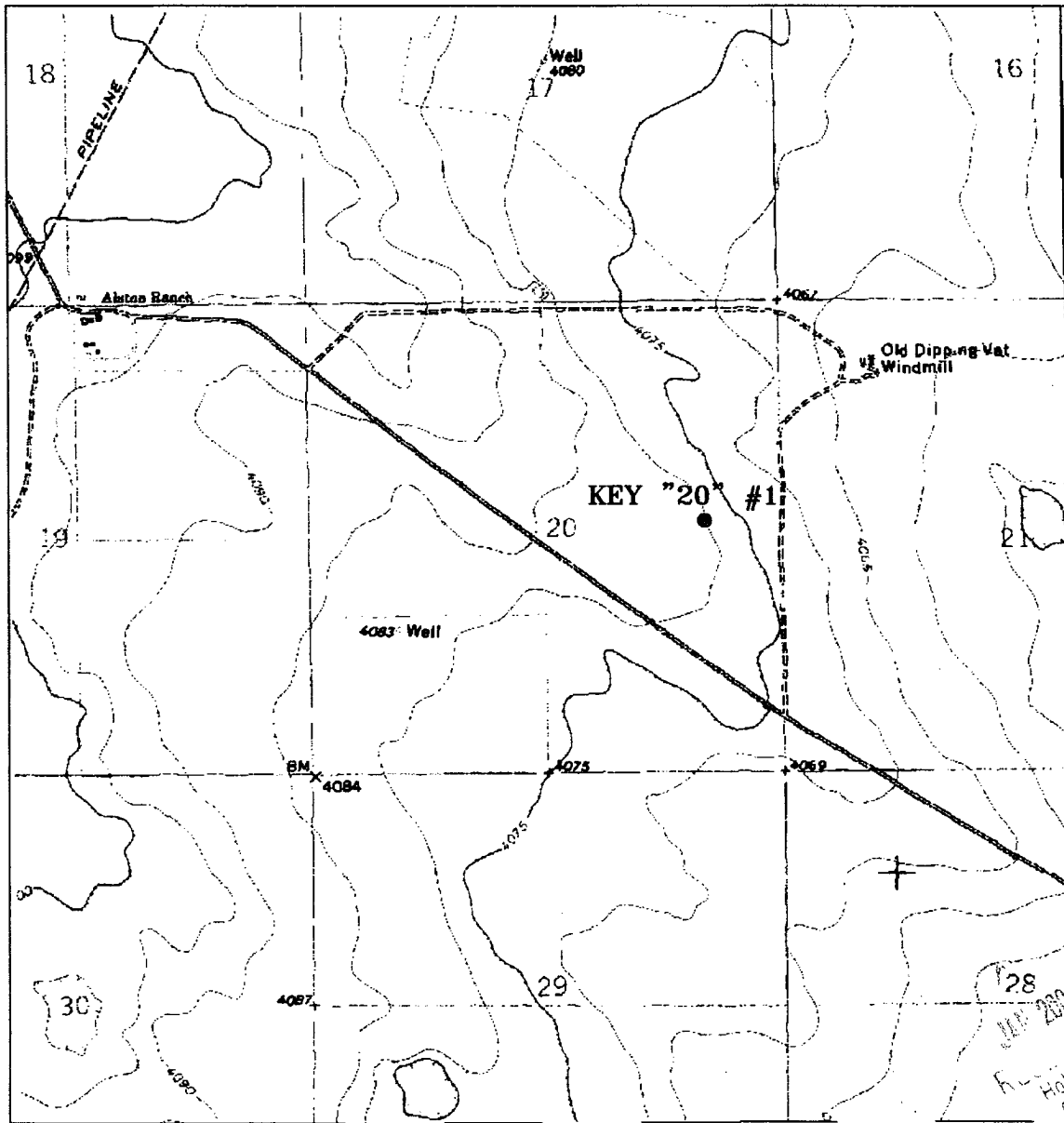
W.O. Number: 2969AA - KJG CD#5

Survey Date: 01-16-2003

Scale: 1" = 2 MILES

Date: 01-17-2003

**ENSIGN
 OPERATING
 COMPANY**



KEY "20" #1

Located at 2480' FNL and 870' FEL
 Section 20, Township 13 South, Range 35 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786
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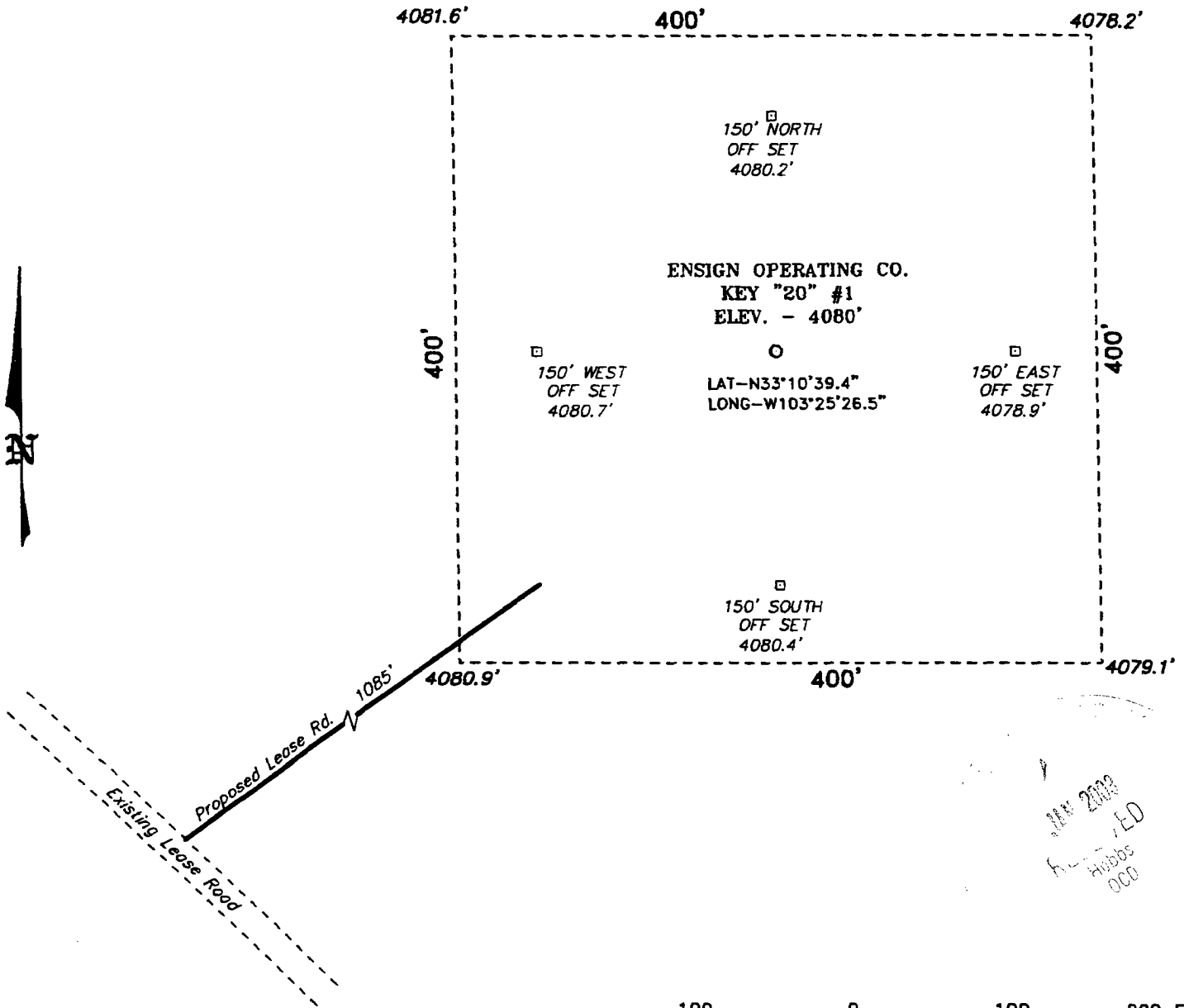
Survey Date: 01-16-2003

Scale: 1" = 2000'

Date: 01-17-2003

**ENSIGN
 OPERATING
 COMPANY**

SECTION 20, TOWNSHIP 13 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



ENSIGN OPERATING CO.
KEY "20" #1
ELEV. - 4080'

LAT-N33°10'39.4"
LONG-W103°25'26.5"

JAN 2003
Hubbs
OCD

DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 18 AND CO. RD. T-147,
GO WEST ON T-147 FOR APPROX. 4.0 MILES TO A LEASE
ROAD; THENCE NORTHWESTERLY FOR APPROX. 2.2 MILES TO
THE PROPOSED LEASE ROAD.

ENSIGN OPERATING CO.

REF: KEY "20" No. 1 / Well Pad Topo

THE KEY "20" No. 1 LOCATED 2480' FROM THE
NORTH LINE AND 870' FROM THE EAST LINE OF
SECTION 20, TOWNSHIP 13 SOUTH, RANGE 35 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 2969

Drawn By: K. GOAD

Date: 01-17-2003

Disk: KJG CD#4 - 2969A.DWG

Survey Date: 01-16-2003

Sheet 1 of 1 Sheets