

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

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

AUG 19 2008

Form C-101
May 27, 2004

OCD-ARTESIA

Submit to appropriate District Office

☐ AMENDED REPORT

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

| | | |
|--|--|---------------------------------|
| Operator Name and Address Nadel and Gussman HEYCO, LLC. PO Box 1936, Roswell NM 88202-1936 | | OGRID Number 258462 |
| Property Code 12060 305042 | | API Number 30-015-34594 |
| Property Name LOVING 2 STATE | | Well No # 2 |
| Proposed Pool BONE SPRING 15011 | | Proposed Pool 2 Bone Springs |

Surface Location

| | | | | | | | | | |
|-------------------|--------------|-----------------|--------------|---------|----------------------|---------------------------|----------------------|------------------------|----------------|
| UL or lot no D | Section 2 | Township 23S | Range 28E | Lot Idn | Feet from the 660 | North/South line NORTH | Feet from the 510 | East/West line WEST | County Eddy |
|-------------------|--------------|-----------------|--------------|---------|----------------------|---------------------------|----------------------|------------------------|----------------|

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

| | | | | |
|--|--|--|------------------------|--|
| Work Type Code N | Well Type Code O | Cable/Rotary Rotary | Lease Type Code S | Ground Level Elevation 3039' |
| Multiple | Proposed Depth 6400' | Formation BONE SPRING | Contractor AMERIMEX | Spud Date DEC 22, 08 |
| Depth to Groundwater 20' | | Distance from nearest fresh water well 1 MILE | | Distance from nearest surface water 1/2 MILE |
| Pit | Liner: Synthetic <input type="checkbox"/> _____ mils thick Clay <input type="checkbox"/> | Pit Volume: _____ bbls | Drilling Method | |
| Closed-Loop System <input checked="" type="checkbox"/> | | Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> | | |

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# J-55 ST&C | 400' | 300 sx | SURFACE |
| 7 7/8" | 4 1/2" | 11.6# J-55 ST&C | 6,400' | 1020 sx | SURFACE |
| | | | | | |
| | | | | | |
| | | | | | |

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

Mud program:

0' to 400': 8.4 to 9.0 ppg FW Spud Mud
400' to 6,400': 9.7 to 10.2 ppg Brine w/ SWEEPS

NOTE: NEW PIT RULE

19-15-17 NMAC PART 17

A form C-144 must be approved
before starting drilling operations.

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 ☐.

Printed name: Keith Cannon

Title: Drilling superintendent

E-mail Address: kcannon@heycoenergy.com

Date: 8/19/08

Phone: (505) 623-6601

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date

Conditions of Approval Attached ☐

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23S Range: 28E Sections:

NAD27 X: Y: Zone: ☐ Search Radius:

County: ☐ Basin: C(Carlsbad) ☐ Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 08/12/2008

(Depth Water in Feet)

| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | Min | Max | Avg |
|-----|-----|-----|-----|------|---|---|-------|-----|-----|-----|
| C | 23S | 28E | 05 | | | | 1 | 33 | 33 | 33 |
| C | 23S | 28E | 06 | | | | 11 | 20 | 85 | 45 |
| C | 23S | 28E | 07 | | | | 2 | 40 | 50 | 45 |
| C | 23S | 28E | 08 | | | | 3 | 16 | 50 | 35 |
| C | 23S | 28E | 09 | | | | 1 | 30 | 30 | 30 |
| C | 23S | 28E | 10 | | | | 2 | 19 | 25 | 22 |
| C | 23S | 28E | 11 | | | | 2 | 15 | 16 | 16 |
| C | 23S | 28E | 12 | | | | 1 | 20 | 20 | 20 |
| C | 23S | 28E | 13 | | | | 4 | 15 | 50 | 33 |
| C | 23S | 28E | 14 | | | | 2 | 29 | 30 | 30 |
| C | 23S | 28E | 15 | | | | 5 | 12 | 54 | 37 |
| C | 23S | 28E | 16 | | | | 3 | 33 | 55 | 40 |
| C | 23S | 28E | 17 | | | | 2 | 50 | 75 | 63 |
| C | 23S | 28E | 18 | | | | 3 | 42 | 217 | 113 |
| C | 23S | 28E | 19 | | | | 2 | 10 | 45 | 28 |
| C | 23S | 28E | 20 | | | | 3 | 34 | 70 | 55 |
| C | 23S | 28E | 21 | | | | 7 | 6 | 69 | 23 |
| C | 23S | 28E | 22 | | | | 10 | 30 | 160 | 54 |
| C | 23S | 28E | 23 | | | | 7 | 12 | 75 | 46 |
| C | 23S | 28E | 24 | | | | 1 | 36 | 36 | 36 |
| C | 23S | 28E | 25 | | | | 7 | 27 | 60 | 44 |
| C | 23S | 28E | 27 | | | | 2 | 18 | 40 | 29 |
| C | 23S | 28E | 28 | | | | 2 | 3 | 10 | 7 |
| C | 23S | 28E | 29 | | | | 1 | 15 | 15 | 15 |
| C | 23S | 28E | 30 | | | | 1 | 8 | 8 | 8 |
| C | 23S | 28E | 33 | | | | 1 | 190 | 190 | 190 |
| C | 23S | 28E | 34 | | | | 1 | 25 | 25 | 25 |
| C | 23S | 28E | 35 | | | | 1 | 30 | 30 | 30 |

Record Count: 88

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 | Pool Code <i>15011</i> | Pool Name <i>Culebra Bluff</i> |
| Property Code 12960 | Property Name LOVING 2 STATE | Well Number 2 |
| OCRID No. 258462 | Operator Name NADEL AND GUSSMAN HEYCO, LLC | Elevation 3039' |

Surface Location

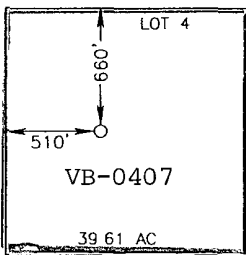
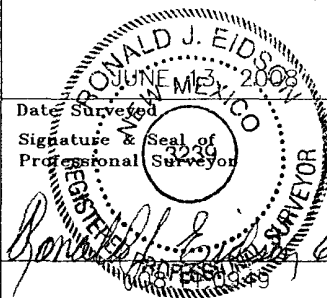
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 4 | 2 | 23-S | 28-E | | 660 | NORTH | 510 | WEST | 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

| | | | |
|---|-----------------|--------------------|-----------|
| Dedicated Acres <i>40</i> 278.68 | Joint or Infill | Consolidation Code | Order No. |
|---|-----------------|--------------------|-----------|

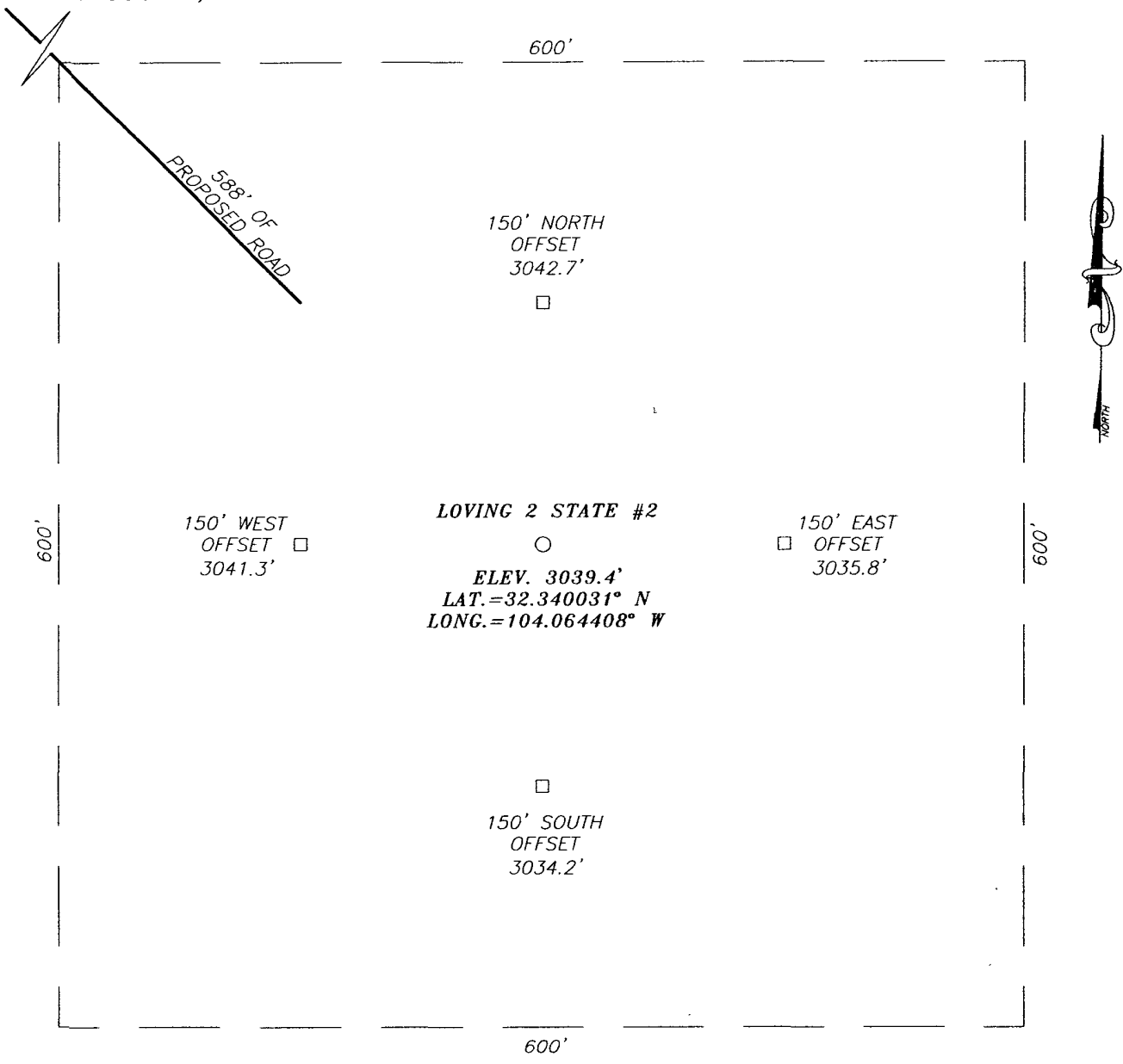
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | | | |
|--|-------------------|-------------------|-------------------|
|  | LOT 3 39.56 AC | LOT 2 39.51 AC | LOT 1 39.45 AC |
| GEODETIC COORDINATES NAD 27 NME Y=487523.3 N X=583056.4 E LAT.=32.340031° N LONG.=104.064408° W | | | |
| 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>Keith Cannon</i> 8-19-08 Signature Date <i>Keith Cannon</i> 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.  Date Surveyed Signature & Seal of Professional Surveyor Certificate No. RONALD EIDSON 3239 | | | |

SECTION 2, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.,

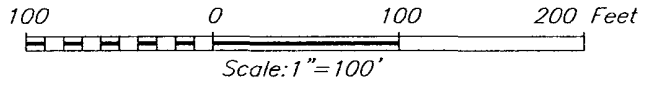
EDDY COUNTY,


NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF POTASH MINE RD. AND CO. RD. #605 (U.S. REFINERY), GO NORTH-NORTHWEST ON CO. RD. #605 APPROX. 2.5 MILES. TURN LEFT AND GO WEST-SOUTHWEST AND GO APPROX. 0.3 MILES. THIS LOCATION IS APPROX. 500 FEET SOUTH.





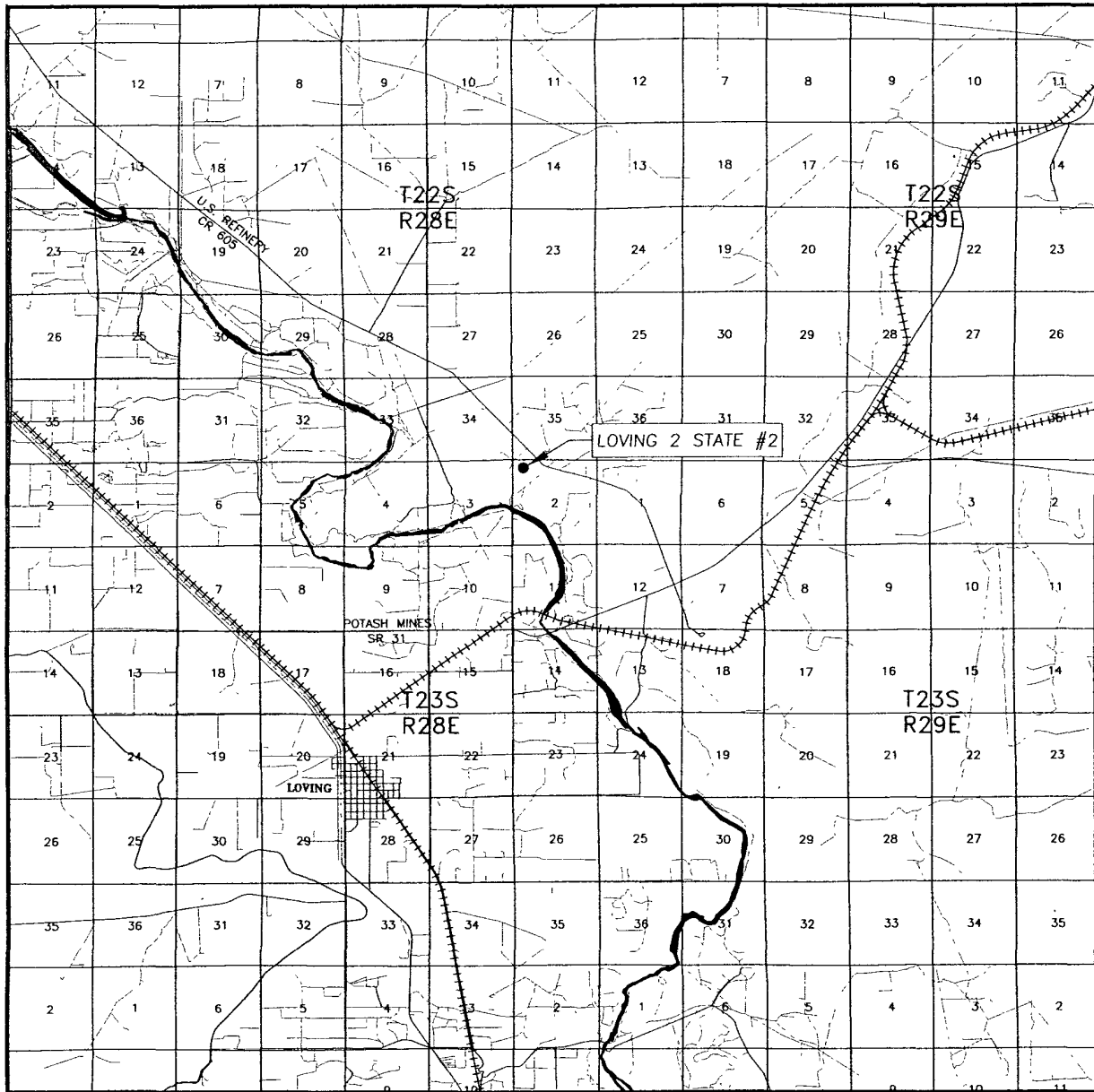
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

NADEL AND GUSSMAN HEYCO, LLC

LOVING 2 STATE #2 WELL
LOCATED 660 FEET FROM THE NORTH LINE
AND 510 FEET FROM THE WEST LINE OF SECTION 2,
TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

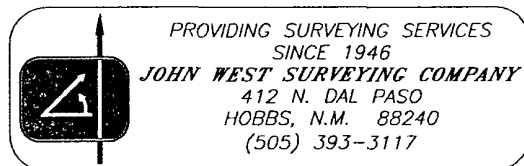
| | |
|-------------------------|-------------------------|
| Survey Date: 6/13/08 | Sheet 1 of 1 Sheets |
| W.O. Number: 08.11.0949 | Dr By: LA Rev 1:N/A |
| Date: 6/18/08 | 08110949 Scale: 1"=100' |

VICINITY MAP

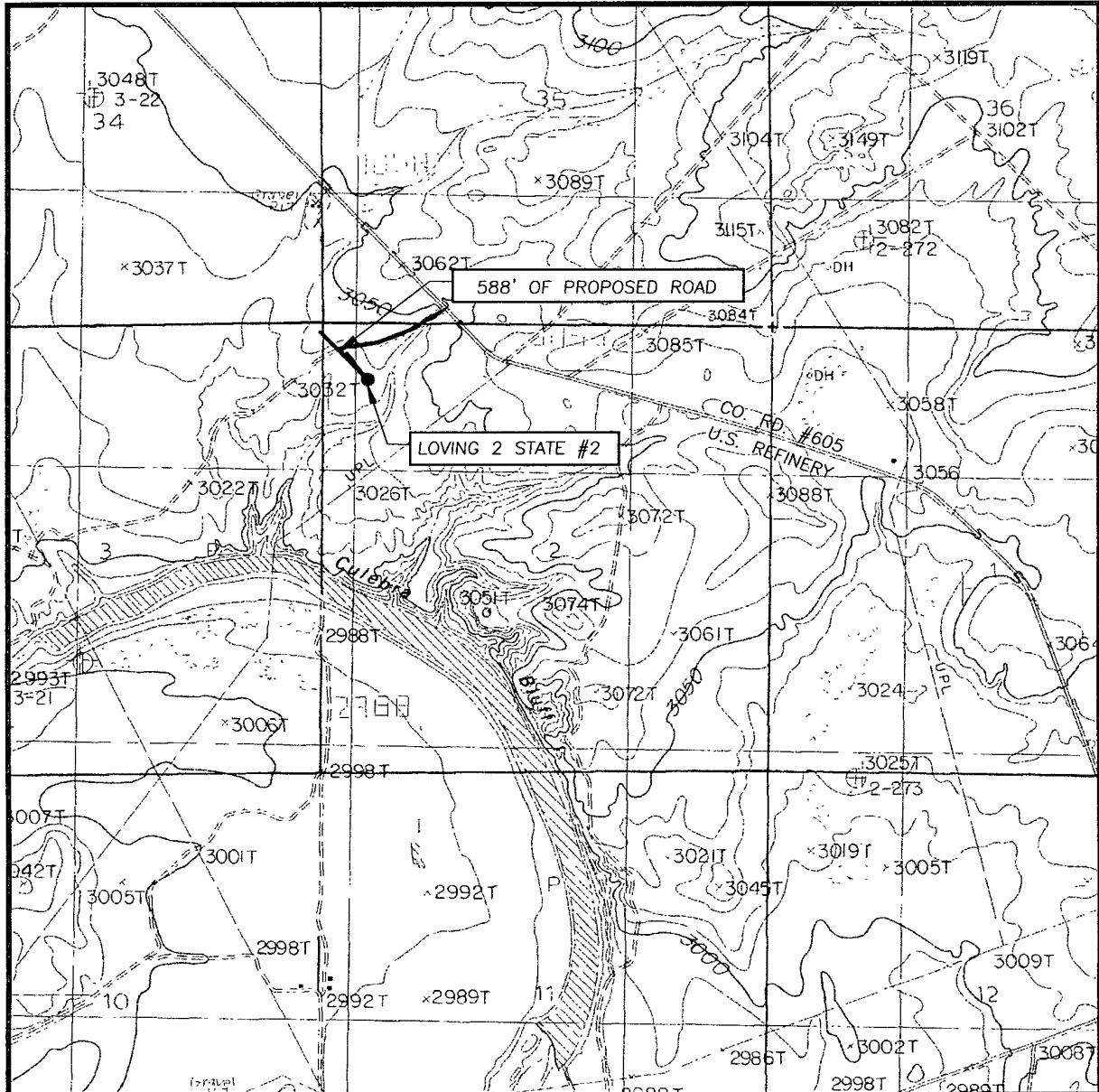


SCALE: 1" = 2 MILES

SEC. 2 TWP. 23-S RGE. 28-E
 SURVEY N.M.P.M.
 COUNTY EDDY STATE NEW MEXICO
 DESCRIPTION 660' FNL & 510' FWL
 ELEVATION 3039'
 OPERATOR NADEL AND GUSSMAN
HEYCO, LLC
 LEASE LOVING 2 STATE



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
LOVING, N.M. - 10'

SEC. 2 TWP. 23-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

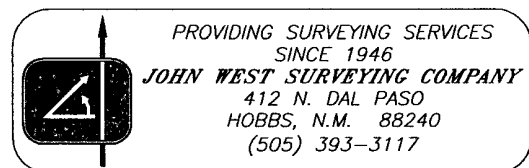
DESCRIPTION 660' FNL & 510' FWL

ELEVATION 3039'

OPERATOR NADEL AND GUSSMAN
HEYCO, LLC

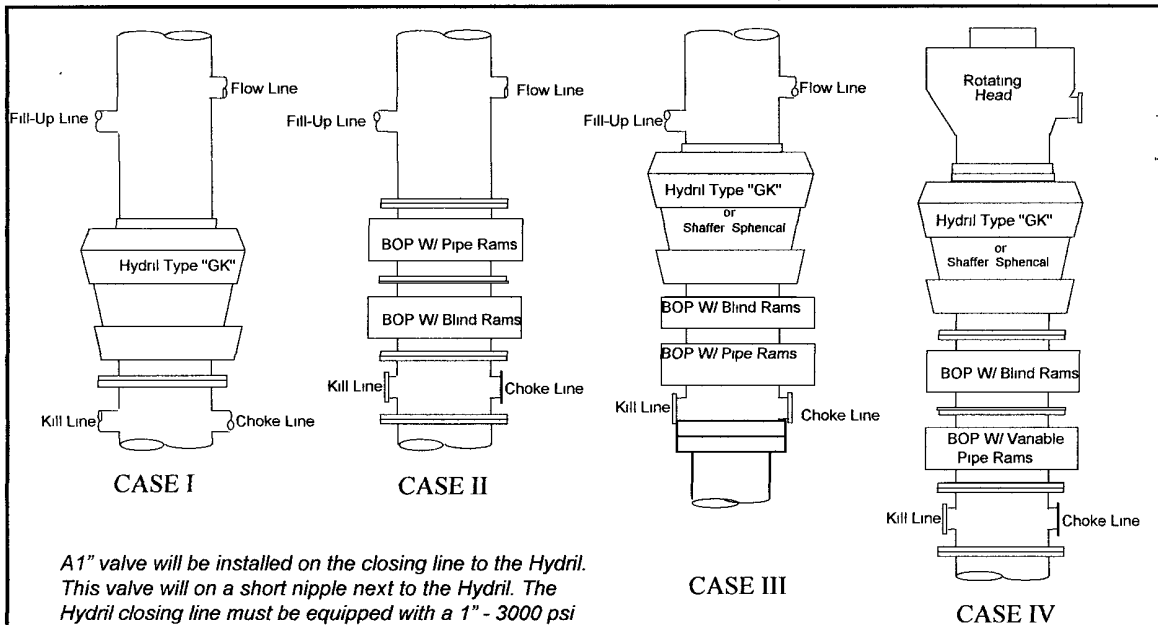
LEASE LOVING 2 STATE

U.S.G.S. TOPOGRAPHIC MAP
LOVING, N.M.

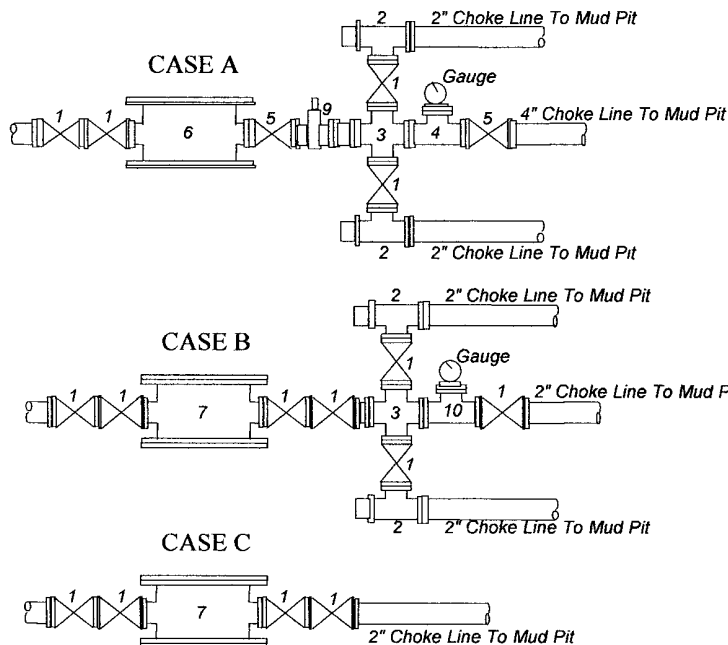


Nadel and Gussman Heyco, LLC

MINIMUM BLOWOUT PREVENTER REQUIREMENTS



A1" valve will be installed on the closing line to the Hydril. This valve will be on a short nipple next to the Hydril. The Hydril closing line must be equipped with a 1" - 3000 psi WP plug valve on the nipple into the Hydril.



| BOP SIZE | BOP CASE | WORKING PRESSURE | CHOKE CASE |
|----------|----------|------------------|------------|
| 13-5/8" | III | 3000 psi | B |
| | | | |

***Rotating head required**

| | |
|-------------|-------------------|
| Bradenhead: | |
| Mfr: | _____ |
| Size: | _____ Type: _____ |

Legend

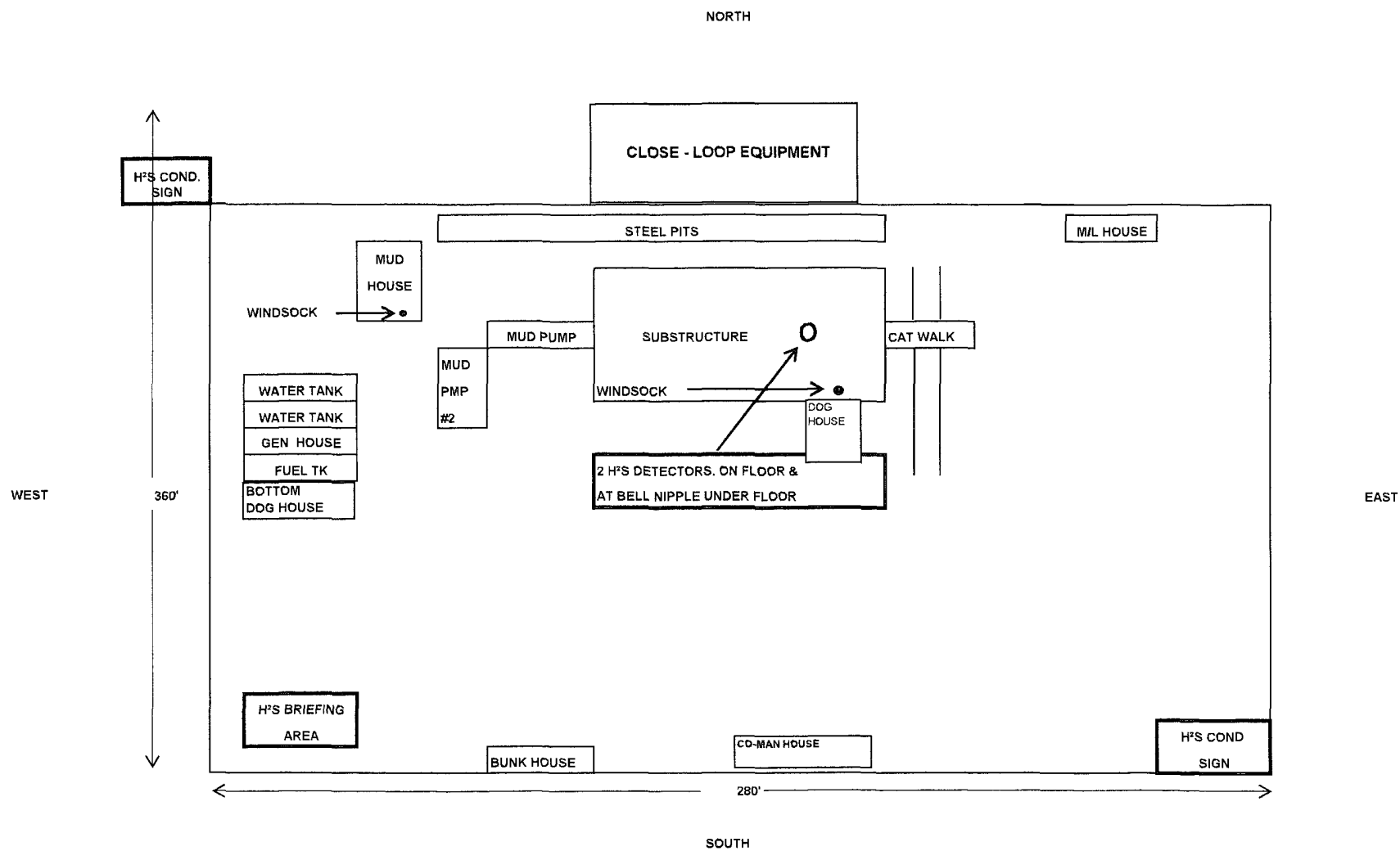
1. 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal
2. 2" flanged adjustable chokes, min. 1" full opening & equipped with hard trim.
3. 4" x 2" flanged steel cross
4. 4" flanged steel tee.
5. 4" flanged all steel valve (Type as in no. 1)
6. Drilling Spool with 2" x 4" flanged outlet
7. Drilling Spool with 2" x 2" flanged outlet.
8. 2" x 2" flanged steel cross.
9. 4" pressure operated gate valve.
10. 2" flanged steel tee.

Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

(10-31-96) WTXBOPS PPT

LOVING 2 STATE #2
660' FNL & 510' FWL
SEC 2, T23S, R28E
EDDY COUNTY, NM



NADEL AND GUSSMAN HEYCO, L.L.C.
P.O. BOX 1936
ROSWELL N.M. 88202
(575) 623-6601 (Office)
(575) 624-5321 (Fax)

8/19/08

Mr. Tim Gum
New Mexico Oil and Gas Division
1301 West Grand Avenue
Artesia, NM 88210

Re: LOVING 2 STATE #2
660' FNL & 510' FSL
Unit Letter D, NW/NW Sec. 2, T23S, R28E
Eddy, NM
Rule 118 H2S Exposure

Dear , Mr. Gum

Nadel and Gussman Heyco, LLC have evaluated this well and we do not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to drilling out the intermediate casing and will continue monitoring the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,



Keith Cannon
Drilling superintendent

Hydrogen Sulfide Drilling Operations Plan

1. Company and Contract personnel admitted on location should be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S.
 - B. Physical Effects and Hazards.
 - C. Proper Use of Safety Equipment and Life Support Systems.
 - D. Principle and Operation of H₂S Detectors, Warning System and Briefing.
 - E. Evacuation Procedure, Routes and First Aid.
 - F. Proper Use of 30 minute Pressure Demand Air Pack.
2. H₂S Detection and Alarm Systems
 - A. H₂S 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 Mud Pit 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.
 1. Green Flag, Normal Safe Condition.
 2. Yellow Flag, Indicates Potential Pressure and Danger.
 3. Red Flag, Danger H₂S Present in Dangerous Concentration Only Emergency Personnel Admitted to Location.
5. Well Control Equipment
 - A. See Attached Diagram.
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 or Cell Phone will be Used to Communicate off Location in Case of 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 Igniter or a propane pilot light in case gas reaches the surface.
 - C. If Location is near any Dwelling a Closed DST will be Performed.
8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H₂S has on tubular goods and other mechanical equipment.
9. If H₂S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H₂S Scavengers if Necessary.