

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

S

Form C-101
May 27, 2004

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

Submit to appropriate District Office

AUG 19 2008

☐ AMENDED REPORT

OCD-ARTESIA

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

¹ Operator Name and Address Nadel and Gussman HEYCO, LLC. PO Box 1933, Roswell NM 88202-1933		² OGRID Number 258462
³ Property Code 12955-305037	⁴ Property Name HEYCO STATE	⁵ API Number 30-015-36595
⁹ Proposed Pool 1 Morrow		⁶ Well No #002
⁹ Proposed Pool 1 Morrow		¹⁰ Proposed Pool 2

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
F	32	20S	30E		1650	NORTH	1980	WEST	EDDY

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
F	32	20S	30E		1650	NORTH	1980	WEST	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 3338'
¹⁶ Multiple	¹⁷ Proposed Depth 12675	¹⁸ Formation MORROW	¹⁹ Contractor	²⁰ Spud Date Asap
Depth to Groundwater 170' approx		Distance from nearest fresh water well 1/2 mile		Distance from nearest surface water 1/2 mile
Pit Liner Synthetic <input checked="" type="checkbox"/> 20 mils thick Clay <input type="checkbox"/>		Pit Volume 10000 bbls		
Closed-Loop System <input type="checkbox"/>		Drilling Method Rotary		
		Fresh Water <input checked="" 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
20"	16"	65#	450'	450	circ to surface
14 3/4"	13 3/8"	48# / 54 4#	1700'	430	circ to surface
12 1/4"	9 5/8"	36#	3630'	700	circ to surface
8 3/4"	5 1/2"	17#	12675'	1800	cmt to 3400' 3000'

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.

DEPTH	TYPE OF MUD
0 - 450'	8.4 to 8.8 ppg FW spud mud
450 - 1700'	10.0 to 10.3 ppg brine
1700 - 3630'	8.4 to 8.5 ppg FW
600 - 12675'	9.5 to 10.2 ppg polymer w/6-8 cc fluid loss

PRESSURE CONTROL EQUIPMENT
5000psi BOP w/ANNULAR, UPPER AND LOWER KELLY COCK
ROTATING HEAD PRIOR TO DRILLING 9 5/8" SHOE

OTHER

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 NMOC 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	3/18/08
Phone	(505) 623-6601

OIL CONSERVATION DIVISION

Approved by

Keith Cannon
District II Supervisor

Title

Approval Date

9/2/08

Expiration Date

9/2/10

Conditions of Approval Attached ☒

NOTE: NEW PIT RULE
19-15-17 NMAC PART 17
A form C-144 must be approved
before starting drilling operations.

V240

DISTRICT I

1628 N. FERNCH DR., ROBB, NM 87240

DISTRICT II

1301 W. GRAND AVENUE, ARTISTIA, NM 86810

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 EDDYs - 4 Copies

Fee EDDYs - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 97560	Pool Name GOLDEN LANE, MORROW
Property Code 12955	Property Name HEYCO STATE	Well Number 2
OGRI No. 258462	Operator Name NADEL AND GUSSMAN HEYCO, LLC	Elevation 3338'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	32	20-S	30-E		1650	NORTH	1980	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 320	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

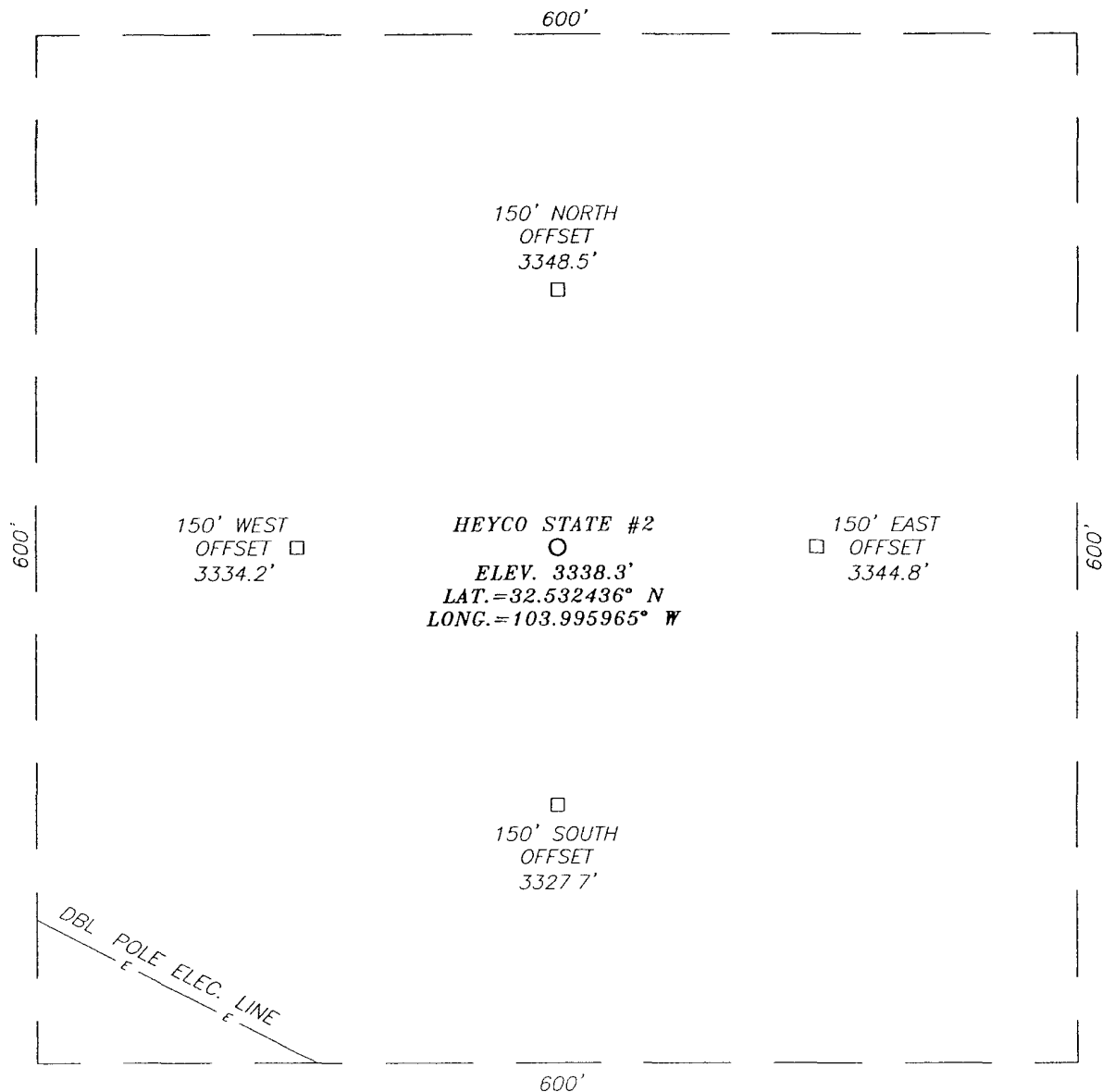
	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill 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.</p> <p><i>Keith Cannon</i> 3-18-08 Signature Date Keith Cannon Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>FEBRUARY 13 2008 Date Surveyed Signature & Seal of Professional Surveyor RONALD J. EDSON 3239 08-11-0130 Certificate No. GARY C. EDSON 12841 RONALD J. EDSON 3239</p>
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GEODETIC COORDINATES
NAD 27 NME.

Y=557577.3 N
X=603973.7 E

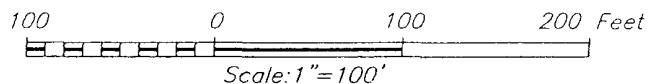
LAT.=32.532436° N
LONG.=103.995965° W

SECTION 32, TOWNSHIP 20 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO



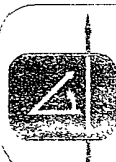
DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. 62-180 AND STATE HIGHWAY 360, GO NORTH ON STATE HIGHWAY 360 APPROX. 0.4 MILES. TURN RIGHT AND GO EAST ON CALICHE ROAD 0.3 MILES. BEND RIGHT AND GO SOUTHEAST APPROX. 0.15 MILES TO THE EXISTING HEYCO STATE #1 WELL. THIS LOCATION IS APPROX. 1230 FEET EAST.



NADEL AND GUSSMAN HEYCO, LLC

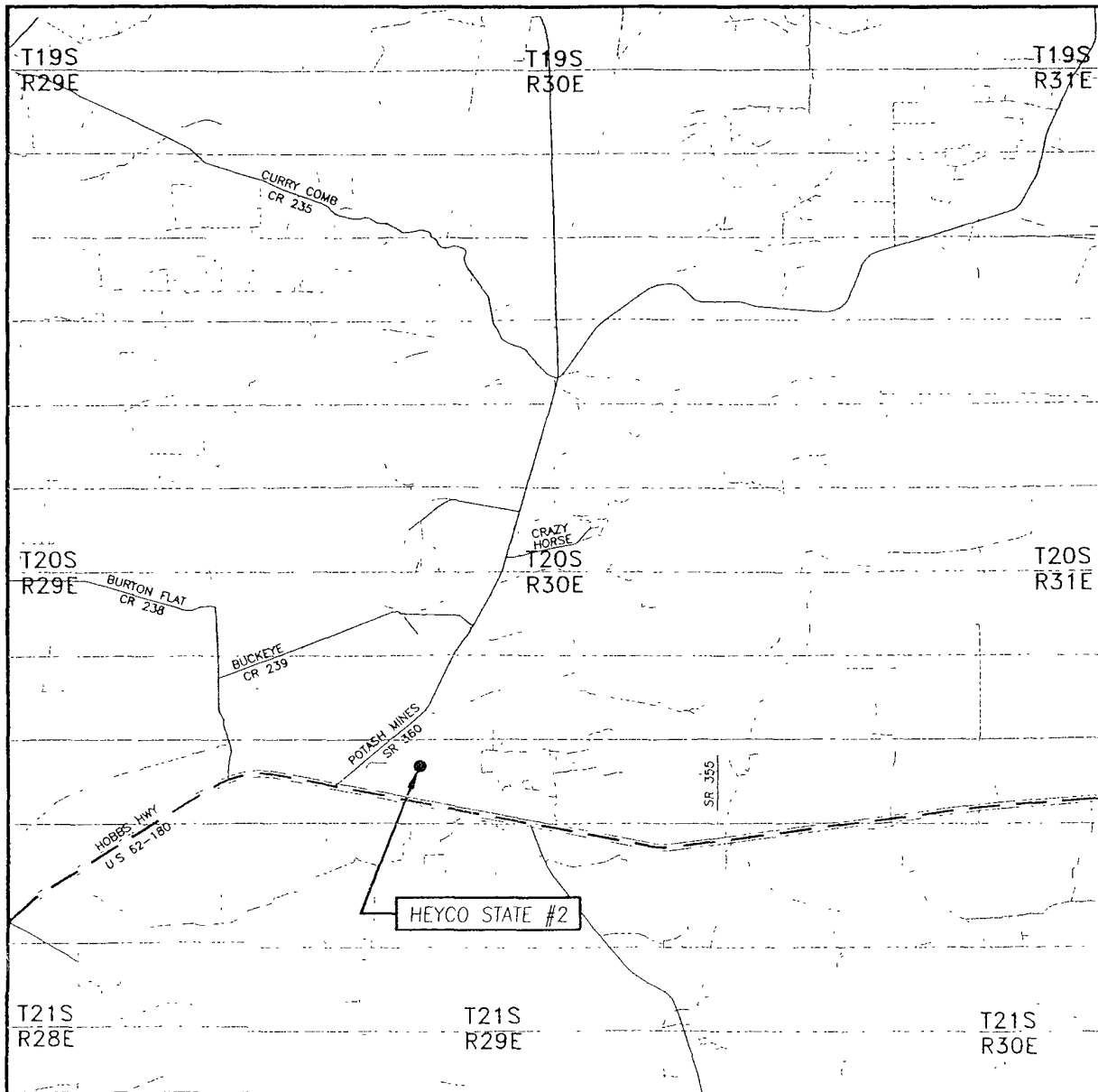
HEYCO STATE #2 WELL
LOCATED 1650 FEET FROM THE NORTH LINE
AND 1980 FEET FROM THE WEST LINE OF SECTION 32,
TOWNSHIP 20 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



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

Survey Date: 02/13/08	Sheet 1 of 1 Sheets
W.O. Number: 08.11.0130	Dr By: DSS
Date: 02/14/08	08110130
	Scale: 1"=100'

VICINITY MAP



SCALE 1" = 2 MILES

SEC. 32 TWP. 20-S RGE. 30-E

SURVEY N.M.P.M

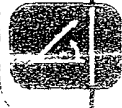
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1650' FNL & 1980' FWL

ELEVATION 3338'

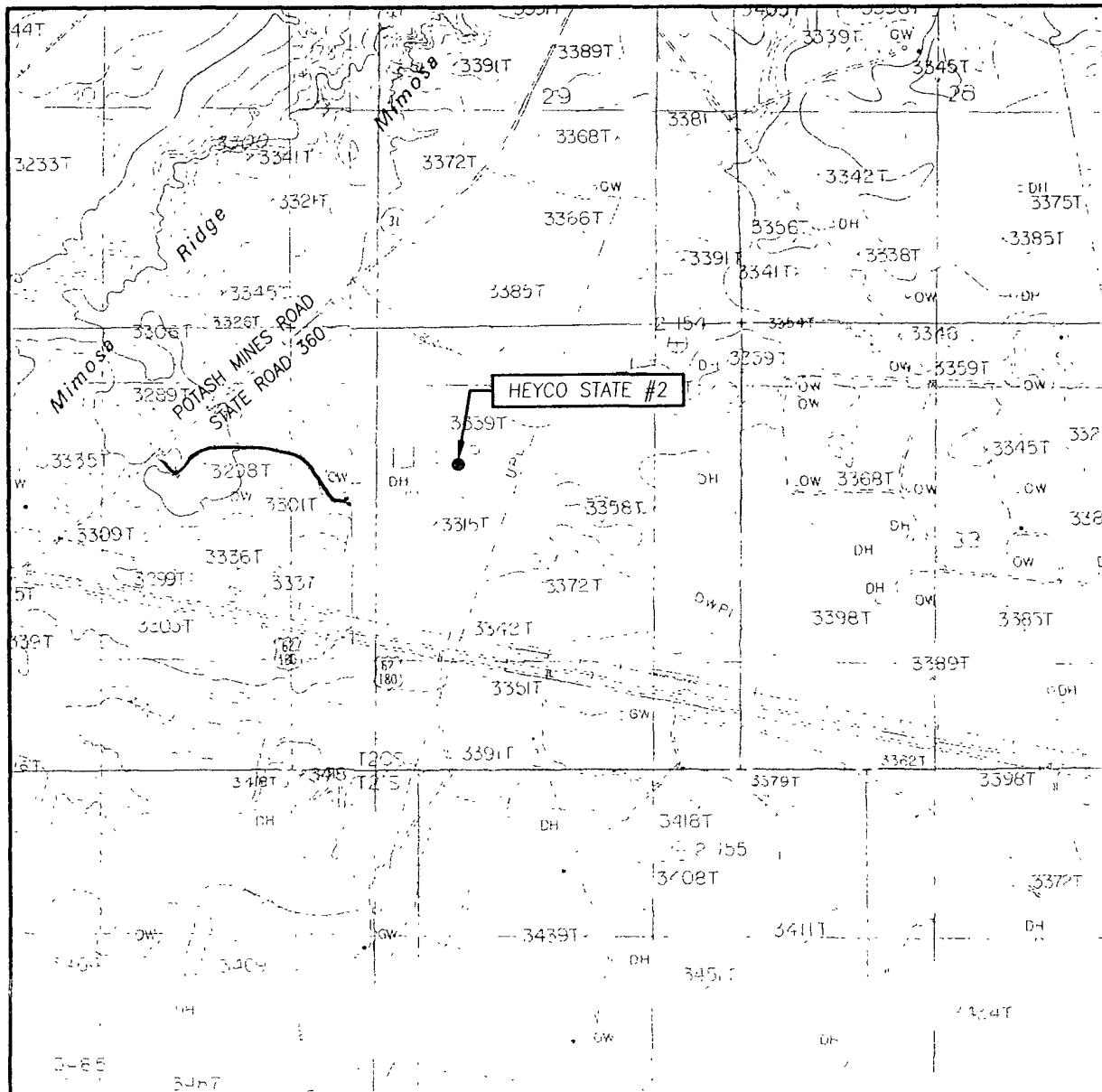
OPERATOR NADEL AND GLUSSMAN HEYCO, LLC

LEASE HEYCO STATE



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
TOWER HILL NORTH, N.M. - 10'
ILLINOIS CAMP SE, N.M. - 5'

SEC. 32 TWP. 20-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1650' FNL & 1980' FWL

ELEVATION 3338'

OPERATOR NADEL AND
GUSSMAN HEYCO, LLC

LEASE HEYCO STATE

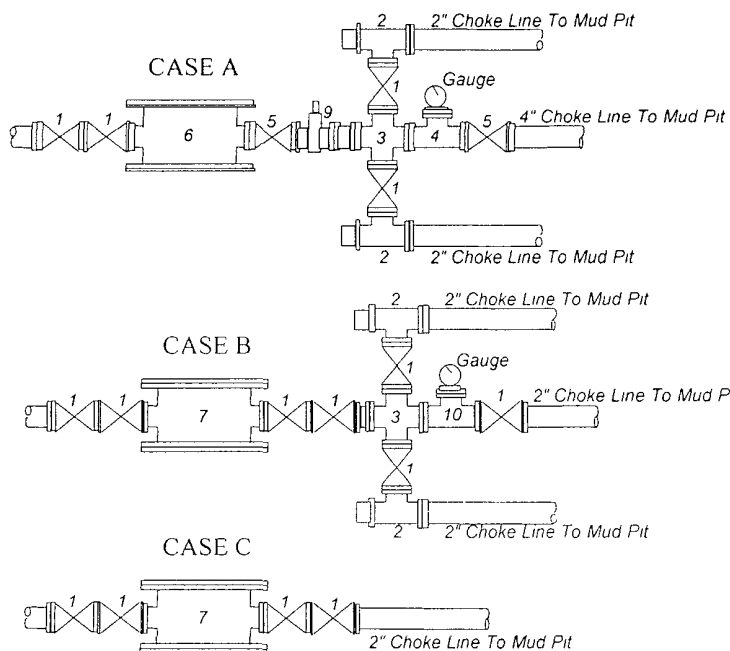
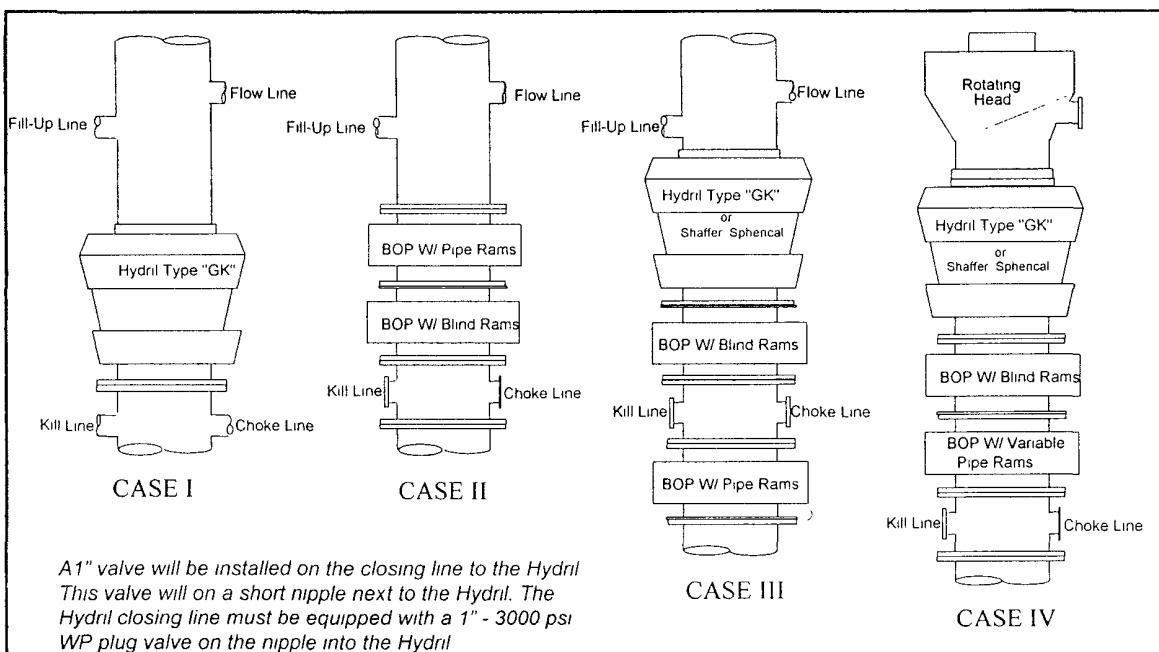
U.S.G.S. TOPOGRAPHIC MAP
TOWER HILL NORTH, N.M.



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

MINIMUM BLOWOUT PREVENTER REQUIREMENTS



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-5/8"	IV	5000 psi	A

***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

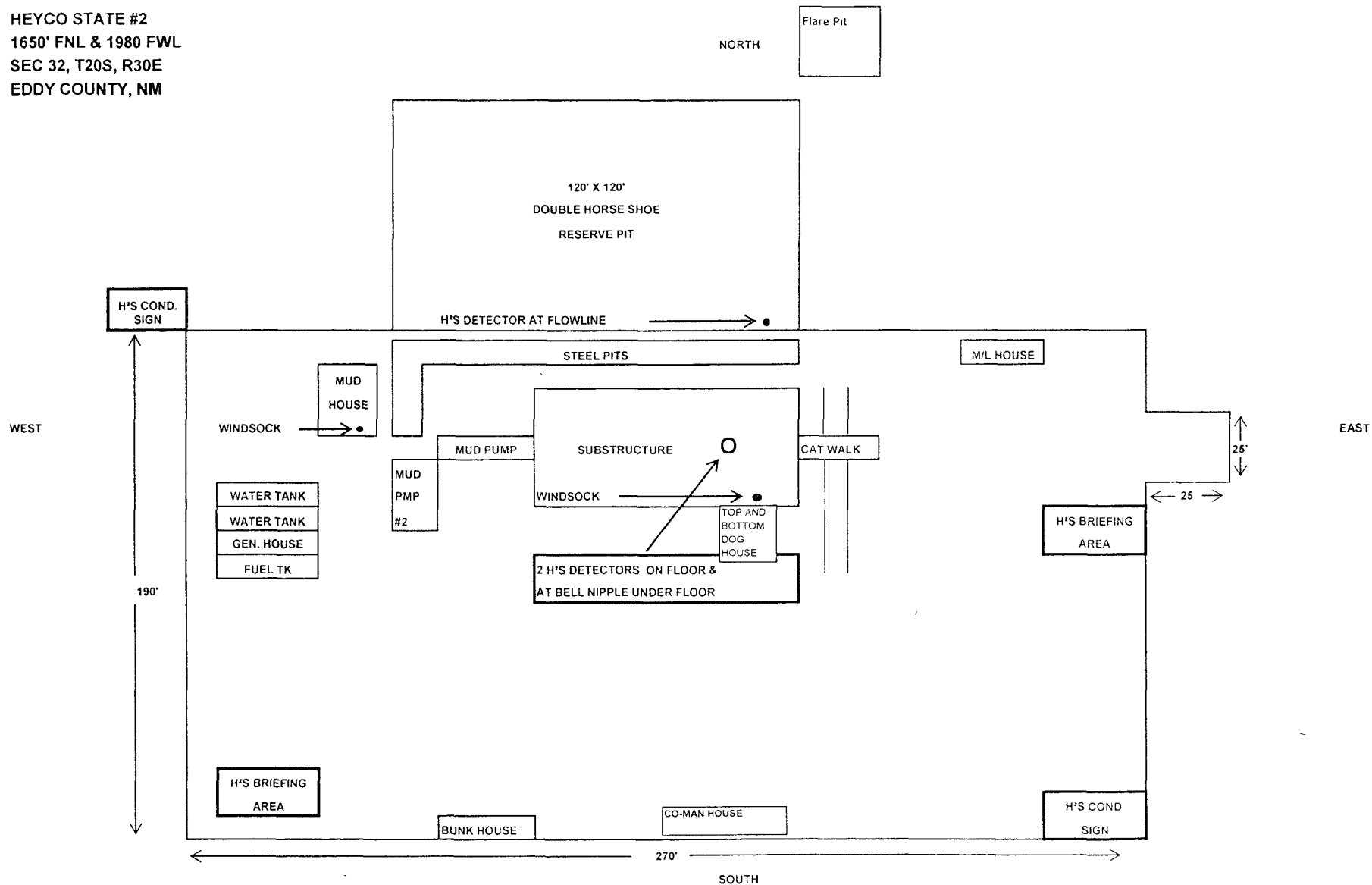
Notes

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

EXHIBIT "D" LOCATION DIAGRAM

HEYCO STATE #2
1650' FNL & 1980 FWL
SEC 32, T20S, R30E
EDDY COUNTY, NM



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

3/7/08

Mr. Bryan Arrant
District 2 Geologist
New Mexico Oil and Gas Division
1301 West Grand Avenue
Artesia, NM 88210

Re: Heyco State #2
1650' FNL & 1980' FWL
Unit Letter F, Sec. 32-T20S-R30E
Eddy, NM
Rule 118 H2S Exposure

Dear Mr. Arrant,

Nadel and Gussman Permian 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.

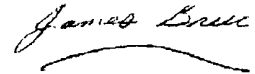
Please contact me if you have any additional questions.

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. Windsack and/or Wind Streamers
 - A. Windsack at Mud Pit Area Should be High Enough to be Visible.
 - B. Windsack at Briefing Area Should be High Enough to be Visible.
 - C. There Should be a Windsack 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.

AUG 19 2008
OCD-ARTESIA

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 14131
ORDER NO. R-12983

APPLICATION OF NADEL AND GUSSMAN HEYCO, LLC FOR AN ORDER
AUTHORIZING THE DRILLING OF A WELL IN THE POTASH AREA, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 29, 2008, at Santa Fe, New Mexico, before Examiners David K. Brooks and Terry G. Warnell.

NOW, on this 13th day of August, 2008, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

FINDS THAT:

- (1) Due notice has been given, and the Division has jurisdiction of the subject matter of this case.
- (2) In this application, Nadel and Gussman HEYCO, LLC ("Nadel and Gussman" or "Applicant") seeks approval of an Application for Permit to Drill (APD) for a gas well at a location that is within the "Potash Area," as defined by Commission Order No. R-111-P, issued in Case No. 9316 on April 21, 1988 (Order No. R-111-P), and located within a potash operator's designated Life-of-Mine Reserves (LMR) area, as defined in Order No. R-111-P.
- (3) Applicant filed the Application for Permit to Drill (APD) its proposed Heyco State Well No. 2 (the subject well), to be located at a standard Morrow gas well location, 1650 feet from the North line and 1980 feet from the West line (Unit F) of Section 32, Township 20 South, Range 30 East, NMPM, in Eddy County, New Mexico

Case No. 14131
Order No. R-12983
Page 2 of 4

(the proposed location), with the Artesia District Office of the Division. Because this location is within the Potash Area, Applicant notified Intrepid Potash Company (Intrepid), the owner of a potash lease including the proposed location.

(4) The Division's Hobbs District Office determined that the proposed well location is within an LMR. Ordering Paragraph G(3) of Order No. R-111-P provides that:

Any application to drill in the LMR area, including buffer zones, may be approved only by mutual agreement of lessor and lessees of both potash and oil and gas interests.

Intrepid did not agree to the drilling of the subject well at the proposed location. Accordingly, the District Office denied the APD.

(5) At the hearing, Applicant appeared through its attorney and presented land and geologic testimony as follows:

(a) Applicant proposes to drill the subject well on a State of New Mexico oil and gas lease comprising the W/2 of Section 32, Township 20 South, Range 30 East, to a depth sufficient to test the Morrow formation.

(b) Intrepid holds a potash lease from the State of New Mexico that includes the W/2 of Section 32, Township 20 South, Range 30 East.

(c) There is a producing Strawn well, Applicant's Yates State Well No. 1, in Unit E of Section 32. There is a producing Morrow well, Lynx Petroleum's BD State Well No. 2, in Unit B of Section 32.

(d) There is a producing Strawn well to the north of Section 32, in the SE/4 of Section 29, Township 20 South, Range 30 East. In addition, there are plugged and abandoned wells that either produced from, or were drilled to, the Strawn or Morrow formations to the west, in the NE/4 of Section 31, to the east, in the NW/4 of Section 33, Township 20 South, Range 30 East, and to the south in the SE/4 and SW/4 of Section 32.

(e) Intrepid and HB Potash, LLC, an affiliate of Intrepid with the same address as Intrepid, are the only potash operators that own any potash leases within one mile of the proposed location.

(f) Potash miners believe that potash mining operations cannot safely be conducted within 1/2 mile of any active or abandoned deep-gas well bore.

(g) Virtually all of the area within 1/2 mile of the proposed location, and virtually all of Section 32, is located within 1/2 mile of one or more of the above-identified, existing deep gas wells.

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Order No. R-12983
Page 3 of 4

(j) The proposed location is geologically favorable for a Morrow well, as indicated by its structural position in the Morrow and by its proximity to other wells exhibiting favorable Morrow reservoir characteristics.

(6) In addition to its request for approval of its APD for the proposed Heyco State Well No. 2, Applicant seeks an order that would allow the district office to approve APDs for additional wells in Section 32, Township 20 South, Range 30 East, NMPM, without approval of potash lessees.

(7) Intrepid sent a letter to the Division objecting to the granting of Applicant's request for consent to drill the subject well and also specifically objecting to Applicant's request for an order authorizing the district office to approve additional wells in Section 32 without Intrepid's consent. However, neither Intrepid, nor any other party, appeared at the hearing, or otherwise brought to the Division's attention any evidence showing that this Application should not be granted.

The Division concludes that:

(8) Although Ordering Paragraph G(3) of Order No. R-111-P provides that an APD for a well within the LMR or buffer zone can be approved only with the agreement of the affected potash lessees, Finding Paragraph (20) of the same order states:

The Commission cannot abdicate its discretion to consider applications to drill as exceptions to its rules and orders but in the interest of preventing waste of potash should deny any application to drill in commercial potash areas . . . unless a clear demonstration is made that commercial potash will not be wasted unduly as a result of the drilling of the well.

(9) In this case, Applicant has made a clear demonstration that the drilling of the subject well will not cause any undue waste of potash, since virtually all of the area that will be rendered unsafe for potash mining by the drilling of the subject well at the proposed location is already condemned for potash mining due to its proximity to other active or abandoned deep gas wells.

(10) The drilling of the subject well is necessary to prevent waste of natural gas that likely cannot be produced if the well is not drilled, and to protect the correlative rights of the owners of minerals in the W/2 of Section 32. Accordingly, Applicant's APD for the proposed well, if otherwise approvable, should be approved notwithstanding the absence of express consent from Intrepid.

(12) Because virtually all of Section 32, and the immediately surrounding area, is already condemned for potash mining by existing, active or abandoned gas wells, the drilling of additional wells for oil or gas in Section 32 will not cause undue waste of potash. Accordingly, Applicant's request for an order directing the Artesia District Office of the Division to approve otherwise approvable APDs for additional wells in Section 32 without requiring express approval from any potash lessee should also be granted.

Case No. 14131
Order No. R-12983
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IT IS THEREFORE ORDERED THAT:

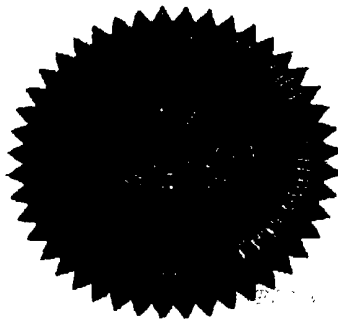
(1) The Artesia District office of the Division shall review Nadel and Gussman HEYCO LLC's Application for Permit to Drill its Heyco State Well No. 2, to be located at a standard gas well location, 1650 feet from the North line and 1980 feet from the West line (Unit F) of Section 32, Township 20 South, Range 30 East, NMPM, in Eddy County, New Mexico. If the District Office finds the APD to be otherwise approvable, including compliance with all provisions of Order No. R-111-P except for the provision of Ordering Paragraph G(3) requiring the agreement of potash lessees, the district office shall approve the same.

(2) If Applicant, or any other oil and gas operator, files an APD to drill a new well within Section 32, Township 20 South, Range 30 East, NMPM, in Eddy County, New Mexico, other than the well described in Ordering Paragraph (1) hereof, the Artesia District Office of the Division shall, if it finds such application to be approvable, including compliance with all provisions of Order No. R-111-P other than the requirement for agreement of potash lessees thereto, shall approve the same, but not before the expiration of twenty days after the oil and gas operator has delivered written notice of the filing of such APD to potentially affected potash lessees in compliance with Ordering Paragraph G(2) of Order No. R-111-P.

(3) All provisions of Order No. R-111-P save and except the provision of Ordering Paragraph G(3) thereof requiring the agreement of potash lessees to the approval of an APD shall continue in full force and affect, and shall apply to the well described in Ordering Paragraph (1) of this order, and likewise to any well approved pursuant to Ordering Paragraph (2) of this Order.

(4) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.
Director