HOBBS OCD

13-896

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Form 3160-3
(April 2004)

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMNM-57285 (H)

6. If Indian, Allotee or Tribe Name: N/A

7. If Unit or CA Agreement, Name and No.: N/A

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. (315272) HARLEQUIN 27-22 FEDERAL 1H

2. Name of Operator: NADEL AND GUSSMAN HEYCO, L.L.C (258462)

9. API Well No. 30-025-42804

3a. Address: P.O. BOX 1936, ROSWELL NM 88202

3b. Phone No. (include area code): 575-623-6601

10. Field and Pool, or Exploratory: LEA., BONE SPRINGS (37570)

4. Location of Well (Report location clearly and in accordance with any State requirements.*)

At surface: 2590' FNL, 510' FEL, UL H; SEC 27, T19-S, R34-E

At proposed prod. zone: 2310' FSL, 510' FEL UL I; SEC 22,T19-S, R34-E

11. Sec., T. R. M. or Blk. and Survey or Area: SECTION 27, T-19-S, R-34-E

14. Distance in miles and direction from nearest town or post office*: 20 MILES SOUTH OF HOBBS NEW MEXICO

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
510' FSL / 510'	1280	160 ACRES TOTAL
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
1500ft	15,190' TVD- 10,800' Pilot hole 11,190'	NM# 000520
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3741' GL	07/01/2012	45 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed)	Date
Keith Cannon	KEITH CANNON	07/01/2013

Title: DRILLING SUPERINTENDENT

Approved by (Signature)	Name (Printed/Typed)	Date
Steve Caffey		SEP 17 2015
Title	**Office**	
FIELD MANAGER	CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

Capitan Controlled Water Basin

KZ 09/21/15

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

SEP 23 2015

DRILLING AND OPERATIONS PLAN
NADEL AND GUSSMAN HEYCO, L.L.C.
HARLEQUIN 27-22 FEDERAL #1H

Surface: 2590' FNL & 510' FEL
UL H Sec 27, T-19-S, R-34-E
BHL: 2310' FSL & 510' FEL
UL I Sec 22, T-19-S, R-34-E
Lea County, New Mexico.

ELEVATION: GL 3,741'

GEOLOGICAL NAME OF SURFACE FORMATION: QAL / VESITATED

Type of Well: Horizontal

PROPOSED DRILLING DEPTH: 15,190' MD, 10,800 TVD, Kick off point at ~10,300', drill lateral to 15,190' see directional plan: Exhibit #2, Vertical TD of possible pilot hole 11,190ft.

TOPS OF IMPORTANT GEOLOGICAL MARKERS: TVD

				TVD
Rustler	1805'	San Andres	5,435'	
Top Salt	1,930'	Delaware	5,640'	
BX (base salt)	3,340'	Bone spring Ls	8,195'	
Yates	3,590'	1st sand	9,525'	
Seven Rivers	4,080'	B-zone Carbonate	9,835'	
Bowers	4,460'	2nd Bone Spring Sand	10,015'	
Queen	4,655'	Kick Of Point	10,300'	
Penrose	4,900'	Bone spring C Carbonate	10,440'	10,435'
Grayburg	5,075'	3rd Bone spring sand	10,650'	10,625'
		BSPG 3 (pay zone)	11,010'	10,840'
		End Of Curve (EOC)	11,200'	10,870'
		Hz TD	15,190'	10,800'
		TD (pilot hole) Wolfcamp	**11,190'**	

Estimated Depth of Anticipated Water, Oil or Gas:

Rustler	1805'	Water
Yates	3,590'	Oil
Delaware	5,640'	Oil
Bone Springs	8,195'	Oil
1st Sand	9,525'	Oil
2nd Sand	10,015'	Oil
3rd Sand	10,650'	Oil

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water will be protected by setting 13 3/8" casing at ~~1855'~~ 1900' and circulating cement back to surface, all other intervals will be isolated by the 9 5/8 intermediate and 7" production casing.

- **Option 1:** No pilot hole. Drill to kick off point of 10,300' vertically and drill horizontally at 10,870' TVD to BHL TVD 10,800' at 2310' FSL and 510' FEL in Section 22, T19S, R34E, in Bone Springs "3rd Sand".

- **Option 2:** Drill vertically to 11,190', open hole log, spot bottom plug & kick off plug and kick off to TVD revised by open hole proposed at this time in Bone Springs "3rd sand".

CASING PROGRAM:

See COA

1. **Proposed Casing Program**

HOLE SIZE	CASING SIZE	WT./GRADE	THREAD/COLLAR	SETTING DEPTH (MD)	TOP CEMENT
Conductor	20" (new)	94# H-40	8rd STC	60'	Surface
17.5"	13 3/8" (new)	54.5# J-55	8rd STC	~~1,855~~ 1903'	Surface
12.25"	9 5/8" (new)	36# J-55	8rd LTC	4,000'	Surface
8.75"	7" (new)	26# P-110HC	8rd BTC	11,100'	3,500'
6.125"	4 1/2" (new)	13.5# P-110HC	8rd LTC	10,200'-15,190'	10,200'

** 4.5" casing will be set at 10,200 MD with Baker Liner Hanger/packer w/ cement up to liner hanger.

MINIMUM SAFETY FACTORS: **BURST 1.125** **COLLAPSE 1.125** **TENSION 1.8**

ALL CASING WILL BE NEW API APPROVED

CEMENT PROGRAM-ALL CEMENT BLENDS WILL BE TESTED TO BLM MINIMUM REQUIREMENTS.

A. **13 3/8"** **SURFACE** CEMENT TO SURFACE **100% EXCESS OVER CALCULATED**

LEAD 1250 SACKS CLASS "C" +4% BENTONITE +2% CACL +.25# CELLO-FLAKE+.25% DEFOAMER, 13.5 PPG, 1.75 YIELD

TAIL: 250 SACKS CLASS "C"+2%CACL+.25# CELLO-FLAKE+.25% DEFOAMER, 14.8 PPG, 1.35 YIELD

B. **9 5/8"** **INTERMEDIATE** CEMENT TO SURFACE **50% EXCESS OVER CALCULATED**

LEAD 850 SACKS CLASS "C" 35/65 +6% BENTONITE+5% SALT+.25% DEFOAMER 12.8 PPG, 1.9 YIELD

TAIL 250 SACKS CLASS "C" + .25% DEFOAMER, 14.8 PPG, 1.33 YIELD

C. **7"** **PRODUCTION** CEMENT TO 3,500' (WILL RUN FLUID CALIPER) **25% EXCESS OVER FLUID CALIPER, OR 50% OVER CALCULATED.**

LEAD:950SACKS50/50, P/H+5%PF44(BWOW)(SALT)+10%PF20(BENTONITE)+0.1% PF13(RETARDER)+0.5%PF79(EXTENDER)+0.125#/SK PF29(CELLOFLAKE)+0.4#/SK,PF46)DEFOAMER)+3#/SK,PF 42(KOLSEAL) 11.9 PPG, 2.48 YIELD, H2O 13.878

TAIL:250,SACKSCLASS"H"+0.1% PF65(DISPERSANT)+0.3%PF13(RETARDER), 15.6 PPG, 1.18 YIELD, H2O 5.228

D. 4.5" LINER: 600 SACKS 50/50 P/ H, 2% PF20(BENTONITE)+0.4#/SKPF46 (DEFOAMER)+0.7%PF606(GAS MIGTRATION/FLUID LOSS) +0.2%PF65(DISPERSANT)+0.2%PF153(ANTISETTLING AGENT)+0.1%PF13(RETARDER) 14.4 PPG, YIELD 1.26, H2O 5.538

EXCESS AND ADDITIVES AS RECOMMENDED BY CEMENT COMPANY DETERMINED BY WELLBORE CONDITIONS

See COA
Sundry required

PILOT HOLE PLUGS (OPTION 2)

D. BOTTOM HOLE PLUG: YIELD, ADDITIVES AS **50% EXCESS** 100 SACKS CLASS H, 2%CACL+1.5%CD-32, 16.5 PPG, 1.05 RECOMMENDED BY CEMENT COMPANY

E. KICK OFF PLUG YIELD. ADDITIVES AS COMPANY **100% EXCESS, THICKENING TIME (113 DEG F) 2, COMPRESSIVE STRENGTH PSI 3700** 225 SACKS CLASS H, 2%CACL+1.5%CD-32, 16.5 PPG, 1.05 RECOMMENDED BY CEMENT

SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT: (EXHIBIT #5)

See COA

A 2000# WP Annular will be installed after running the 13-3/8" casing. A 3,000# WP Double Ram BOP and 3,000 annular will be installed after running the 9-5/8" and 7" casing. Pressure test will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use. 7" and 9-5/8" casing will be tested to 3000# and the annular to 1500# with a third party testing company before drilling below each shoe. If operations last more than 30 days from 1st test, will test again as per BLM Onshore Oil and Gas order #2, this pressure control system will be used for both well options without pilot hole (option 1) or with pilot hole (option 2).

MUD PROGRAM:

1900'

See COA

Spud and drill 17 ½" surface hole with **fresh water (8.4 to 8.7 ppg)** to a depth of approx ~~1,855~~'. Control lost circulation with paper and LCM pills. Viscosity 28-55, no fluid loss control. Fresh water gel sweeps.

Drill 12 ¼" hole from ~~1,855~~ 1900' to 4,000' with **Brine (9.5 to 10.0 ppg)** . Control lost circulation with paper and LCM pills. Viscosity 28-30, no fluid loss control. Salt water gel sweeps.

Drill 8 ¾" production hole from 4,000' to **11,100'** with **fresh water (8.4 to 8.7 ppg) or cut brine (8.4 to 9.0 ppg)**. Control lost circulation with paper and LCM pills. From 8100' to TD (8.7 to 9.0 ppg), control filtrate with starch and water loss additives. Clean hole with pre-hydrated freshwater gel sweeps, as necessary. System properties: viscosity 32-24, fluid loss <20 ml/30min.

Drill 6 1/8" production hole from 11,100'-TD' with **fresh water (8.4-8.7 ppg)**, control filtrate and increase viscosity with Xanthan gum and Poly Anionic Cellulose. Clean hole with high viscosity sweeps and lubricants as necessary. System Properties viscosity 32-34, fluid loss <20 ml/30min.

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program subject to change due to hole conditions. A PVT will be used to monitor the mud system

Mud monitoring system:

Mud will be maintained and checked daily for mud weight, viscosity, API water loss, pH, etc. Additional electronic monitoring will include a pit volume totalizer to monitor mud volume in active system, pump rate, and mud return flow percentage. H2S monitors will be located on rig floor, shale shakers, and mud tanks. Gas chromatograph with monitor hydrocarbon gas content of mud from 4,000' to TD.

Auxiliary Equipment

A. A Kelly cock will be in the drill string at all times. BOP and fittings must be in good condition with minimum of 2000 psi working pressure on 13-3/8" casing and 3000 psi working pressure on 9-5/8" and 7" casing. Accumulator will be at least 40 gallon capacity with 2 independent sources of pressure on closing unit and meet all other API specifications.

B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times with 3000 psi working pressure.

C. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 4 ½" liner is run and set and rigging down operations have begun.

See COA

TESTING, LOGGING & CORING PROGRAM: See COA

a. Testing: No DST's are expected.
b. Open hole logs are planned at KOP (10,300) TD of vertical hole in option #1.
   Open hole logs are also planned for option #2 to 11,190ft TD of vertical pilot hole.
   1. Halliburton Triple Combo, for option #1 and #2.
c. Mud logging will take place from 4,000ft to TD 10ft samples
d. Gyro survey will be run at KOP of 10,300'
e. MWD (directional) and LWD (gamma) surveys will be taken from KOP (10,300') to TD

POTENTIAL HAZARDS:

No significant hazards are expected to MD of 15,190ft, no abnormal pressures or temperatures are expected, **Expected pressure gradient will be that of .433 psi/ft (8.33 PPG FW) or lessgine expected temp & pressure 130 deg, 4845psi..** Lost circulation may occur, H_2S is expected in the Queen, NGH will utilize a 3rd party H_2S monitoring package from ~~1855'~~ 1900' to TD. If H2S is encountered the operator will comply with the provisions of onshore oil and gas order no 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

See COA

ANTICIPATED STARTING DATE & DURATION:

Nadel & Gussman HEYCO, LLC anticipates drilling operations to begin ASAP after receiving approved APD. Expected time to complete is approximately 45 days. An additional 15 days will be needed for completion activities. Road and location construction will begin after the BLM has approved the APD.

6/7/2013

Keith Cannon, Drilling Superintendent Date
Nadel & Gussman HEYCO, LLC

Nadel and Gussman HEYCO
HORIZONTAL WORKSHEET

DATE
11/13/12

WELL NAME: Harlequin 27-22 Federal #1
SURFACE LOCATION: 2310' FNL & 510' FEL
SEC TOWNSHIP RANGE 27 19S 34E

TARGET DEPTH: 10800 FT TVD @TD
TARGET ANGLE: 0.00 DEGREES
PLANNED HZ LENGTH: 4620 FT
PLANNED KOP: 10300 FT TVD

COUNTY: Lea
STATE: NM
FORMATION: Bone Spring 3rd Sd
MAXIMUM ROB: 10 DEG/100 FT
FORMATION DIP: 1:1 DEGREES
DIRECTION: 140 AZIMUTH
DECLINATION: N9E DEGREES
STARTING PT: 0.001 DEGREES
AT 30 FEET

BEGINNING SURVEY

COMPANY: 0

SURVEY TYPE: 0

DEPTH FROM 0 FT
TO 0 FT

	MD (Ft)	INCL (deg)	AZIMUTH (deg)	TVD (Ft)	COORDINATES (N+/S-)	(E+/W-)	VERT.SEC (Ft)
TIE IN POINT	1800.00	0.25	145.00	1799.99	-0.01	0.01	-0.01

MEASURED DEPTH (ft)	INCL ANGLE (degrees)	HOLE AZIMUTH (degrees)	COURSE LENGTH (ft)	T.V.D. (ft)	TOTAL VERT.SEC (ft)	COORDINATES (N+/S-) (ft)	(E+/W-) (ft)	CLOSURE DISTANCE (ft)	DOGLEG SEVERITY (deg/100)	BUILD RATE (deg/100)
2000.0	0.3	135.0	200.0	2000.0	-0.7	-0.7	0.6	1.0	0.0	0.0
2500.0	0.4	125.0	500.0	2500.0	-2.6	-2.6	2.8	3.8	0.0	0.0
3000.0	0.4	115.0	500.0	3000.0	-4.2	-4.2	5.6	7.0	0.0	0.0
3500.0	0.5	105.0	500.0	3500.0	-5.5	-5.5	9.1	10.6	0.0	0.0
4000.0	0.5	95.0	500.0	3999.9	-6.2	-6.2	13.2	14.6	0.0	0.0
4500.0	0.6	85.0	500.0	4499.9	-6.2	-6.2	17.8	18.8	0.0	0.0
5000.0	0.6	75.0	500.0	4999.9	-5.3	-5.3	22.7	23.3	0.0	0.0
5500.0	0.7	65.0	500.0	5499.9	-3.5	-3.5	27.8	28.0	0.0	0.0
6000.0	0.7	55.0	500.0	5999.8	-0.5	-0.5	32.9	32.9	0.0	0.0
6500.0	0.8	45.0	500.0	6499.8	3.6	3.6	37.7	37.9	0.0	0.0
7000.0	0.8	40.0	500.0	6999.7	8.5	8.5	42.3	43.2	0.0	0.0
7500.0	0.9	35.0	500.0	7499.7	14.2	14.2	46.7	48.8	0.0	0.0
8000.0	0.9	30.0	500.0	7999.6	20.7	20.7	50.8	54.8	0.0	0.0
8500.0	1.0	25.0	500.0	8499.6	27.8	27.8	54.5	61.2	0.0	0.0
9000.0	1.0	20.0	500.0	8999.5	35.7	35.7	57.8	67.9	0.0	0.0
9500.0	1.1	15.0	500.0	9499.4	44.2	44.2	60.5	74.9	0.0	0.0
10000.0	1.1	10.0	500.0	9999.3	53.4	53.4	62.5	82.2	0.0	0.0

Nadel and Gussman HEYCO
Harlequin 27-22 Federal #1

DATE
11/13/12

MEASURED DEPTH (ft)	INCL ANGLE (degrees)	HOLE AZIMUTH (degrees)	COURSE LENGTH (ft)	T.V.D. (ft)	TOTAL VERT.SEC (ft)	COORDINATES (N+/S-) (ft)	(E+/W-) (ft)	CLOSURE DISTANCE (ft)	DOGLEG SEVERITY (deg/100)	BUILD RATE (deg/100)
10300.0	1.2	5.0	300.0	10299.3	59.2	59.2	63.3	86.7	0.0	0.0
10400.0	10.0	0.0	100.0	10398.7	68.9	68.9	63.7	93.8	8.9	8.9
10500.0	20.0	0.1	100.0	10495.2	94.8	94.8	63.7	114.2	10.0	10.0
10600.0	30.0	0.0	100.0	10585.7	137.0	137.0	63.7	151.1	10.0	10.0
10700.0	40.0	0.1	100.0	10667.5	194.3	194.3	63.8	204.5	10.0	10.0
10800.0	50.0	0.0	100.0	10738.1	264.9	264.9	63.9	272.5	10.0	10.0
10900.0	60.0	0.1	100.0	10795.4	346.7	346.7	63.9	352.5	10.0	10.0
11000.0	70.0	0.0	100.0	10837.6	437.2	437.2	64.0	441.9	10.0	10.0
11100.0	80.0	0.1	100.0	10863.5	533.7	533.7	64.1	537.5	10.0	10.0
11200.0	90.0	0.0	100.0	10872.2	633.2	633.2	64.2	636.4	10.0	10.0
11500.0	91.0	0.1	300.0	10869.5	933.1	933.1	64.4	935.4	0.3	0.3
11750.0	91.1	0.0	250.0	10865.0	1183.1	1183.1	64.7	1184.9	0.1	0.0
12000.0	91.0	0.1	250.0	10860.4	1433.1	1433.1	64.9	1434.5	0.1	0.0
12500.0	91.1	0.0	500.0	10851.2	1933.0	1933.0	65.3	1934.1	0.0	0.0
13000.0	91.0	0.1	500.0	10842.1	2432.9	2432.9	65.8	2433.8	0.0	0.0
13500.0	91.1	0.0	500.0	10832.9	2932.8	2932.8	66.2	2933.6	0.0	0.0
14000.0	91.0	0.1	500.0	10823.7	3432.7	3432.7	66.6	3433.4	0.0	0.0
14500.0	91.1	0.0	500.0	10814.6	3932.6	3932.6	67.1	3933.2	0.0	0.0
15000.0	91.0	0.1	500.0	10805.4	4432.6	4432.6	67.5	4433.1	0.0	0.0
15190.0	91.1	0.0	190.0	10801.9	4622.5	4622.5	67.7	4623.0	0.1	0.1

FOR GRAPHING

MD	VERT	TVD	ROB	+E/-W	+N/-S
1800	0	-1800		0.01	-0.01
2000	-1	-2000	0.0	0.626247	-0.74441
2500	-3	-2500	0.0	2.786103	-2.56514
3000	-4	-3000	0.0	5.626548	-4.1993
3500	-5	-3500	0.0	9.10725	-5.46617
4000	-6	-4000	0.0	13.18421	-6.18505
4500	-6	-4500	0.0	17.75982	-6.18505
5000	-5	-5000	0.0	22.60506	-5.31483
5500	-3	-5500	0.0	27.81368	-3.45181
6000	-1	-6000	0.0	32.9084	-0.51037
6500	4	-6500	0.0	37.74875	3.551165
7000	9	-7000	0.0	42.31627	8.535749
7500	14	-7500	0.0	46.6975	14.24547
8000	21	-8000	0.0	50.79876	20.68316
8500	28	-8500	0.0	54.52472	27.84066
9000	36	-8999	0.0	57.77958	35.6986
9500	44	-9499	0.0	60.46834	44.22626
10000	53	-9999	0.0	62.49803	53.38150
10300	59	-10299	0.0	63.2666	59.21945
10400	69	-10399	8.9	63.6898	68.91235
10500	95	-10495	10.0	63.71236	94.7614
10600	137	-10586	10.0	63.74919	136.9696
10700	194	-10667	10.0	63.79918	194.2544
10800	265	-10738	10.0	63.86081	264.8754
10900	347	-10795	10.0	63.9322	346.6866
11000	437	-10838	10.0	64.01119	437.2029
11100	534	-10863	10.0	64.09538	533.6723
11200	633	-10872	10.0	64.1822	633.1653
11500	933	-10870	0.3	64.44399	933.15
11750	1183	-10865	0.0	64.66212	1183.108
12000	1433	-10860	0.0	64.88025	1433.066
12500	1933	-10851	0.0	65.31651	1932.981
13000	2433	-10842	0.0	65.75277	2432.897
13500	2933	-10833	0.0	66.18903	2932.813
14000	3433	-10824	0.0	66.62528	3432.729
14500	3933	-10815	0.0	67.06154	3932.644
15000	4433	-10805	0.1	67.4978	4432.56
15190	4623	-10802	0.0	67.66358	4622.528
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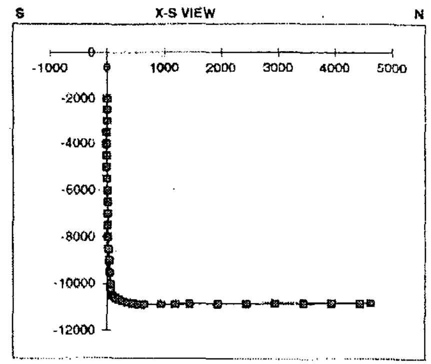
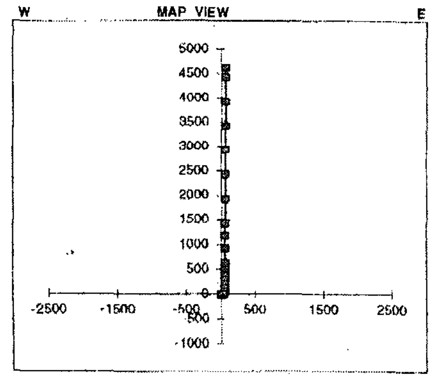
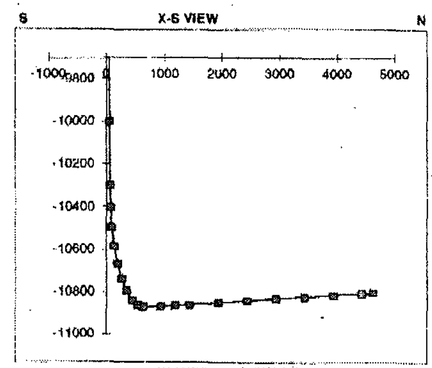
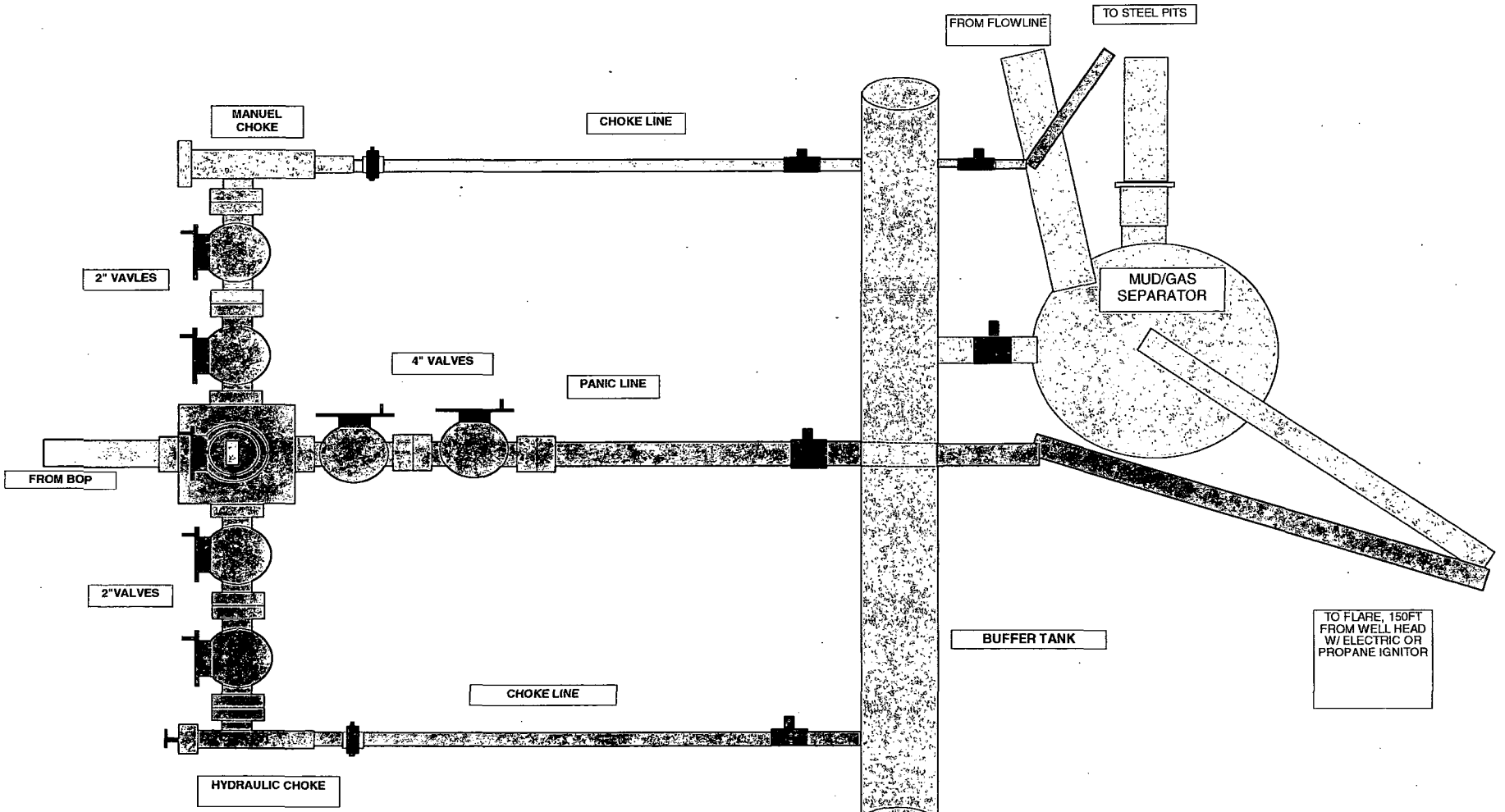






W / VERTICAL EXAGGERATION

Harlequin 27-22 Federal #1H
3000 psi BOP Manifold System



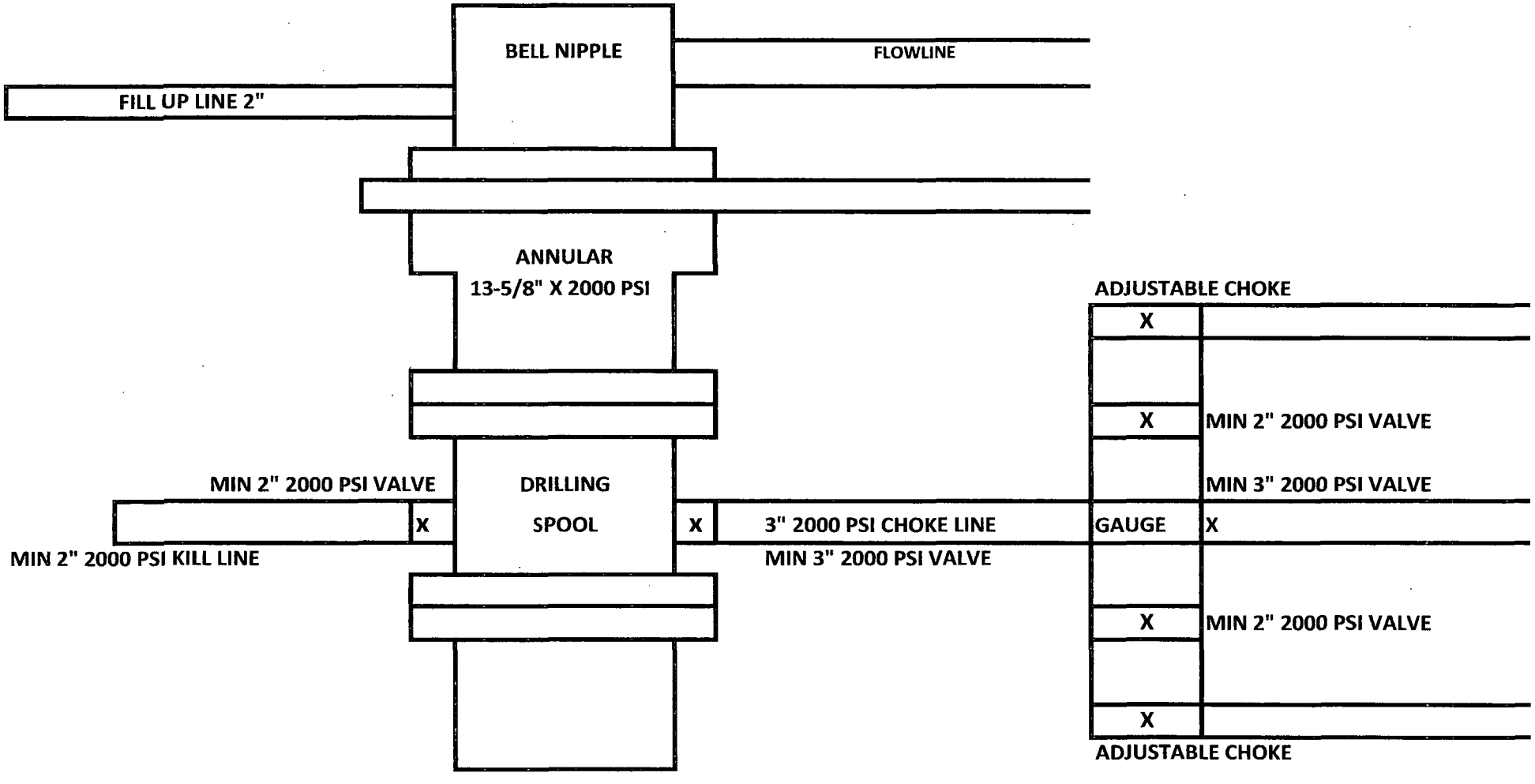
Well: HARLEQUIN 27/22 FEDERAL #1H

2590 FNL, 510 FEL, Sec. 27, 19S, 34E

LEA County New Mexico

Nadel and Gussman HEYCO, L.L.C.

BOP Scematic 12.25" hole



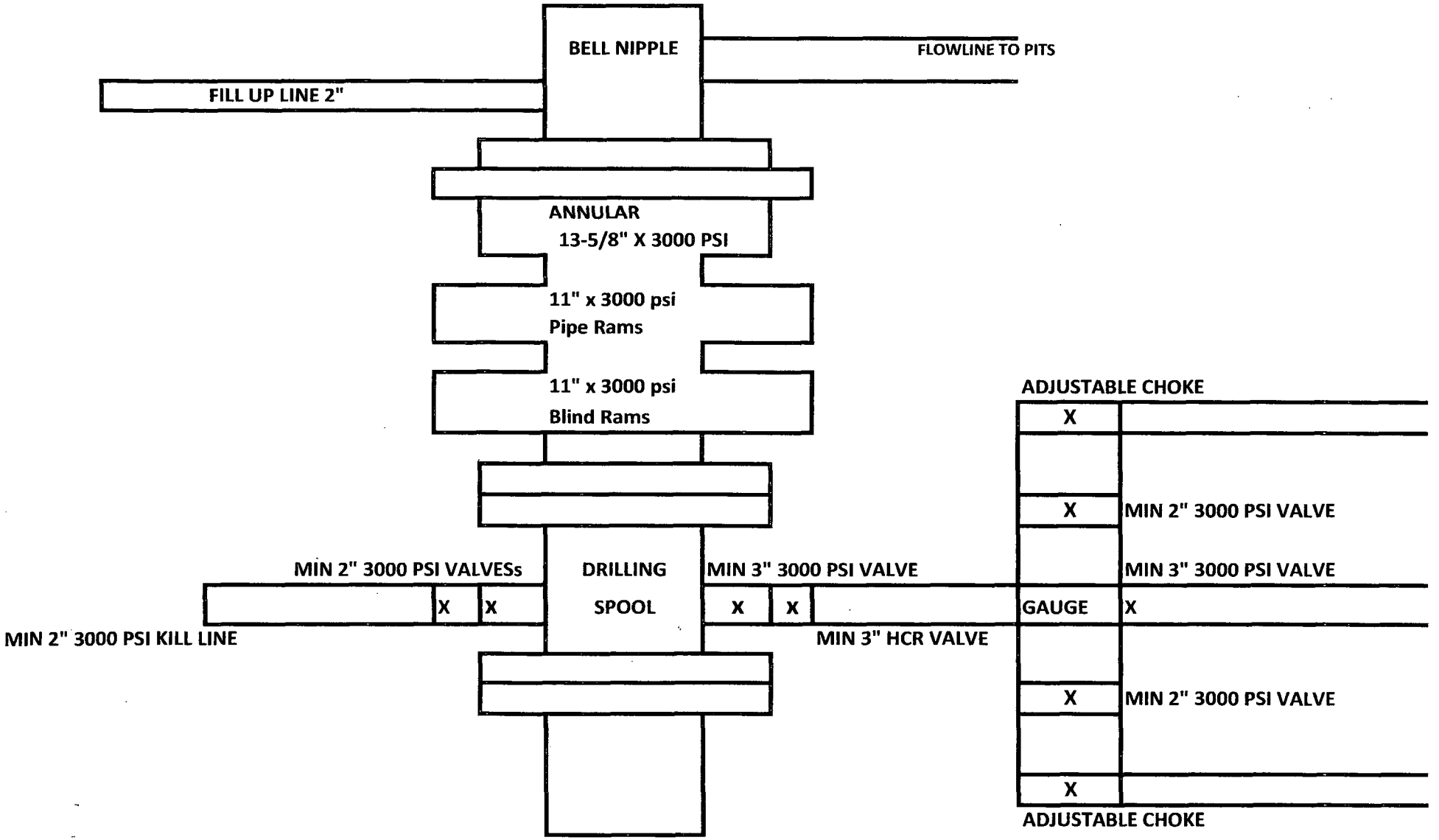
Well HARLEQUIN 27/22 FEDERAL 1H

2590' FNL, 510 FEL, Sec. 27, 19S, 34E

LEA County New Mexico

Nadel and Gussman HEYCO, L.L.C.

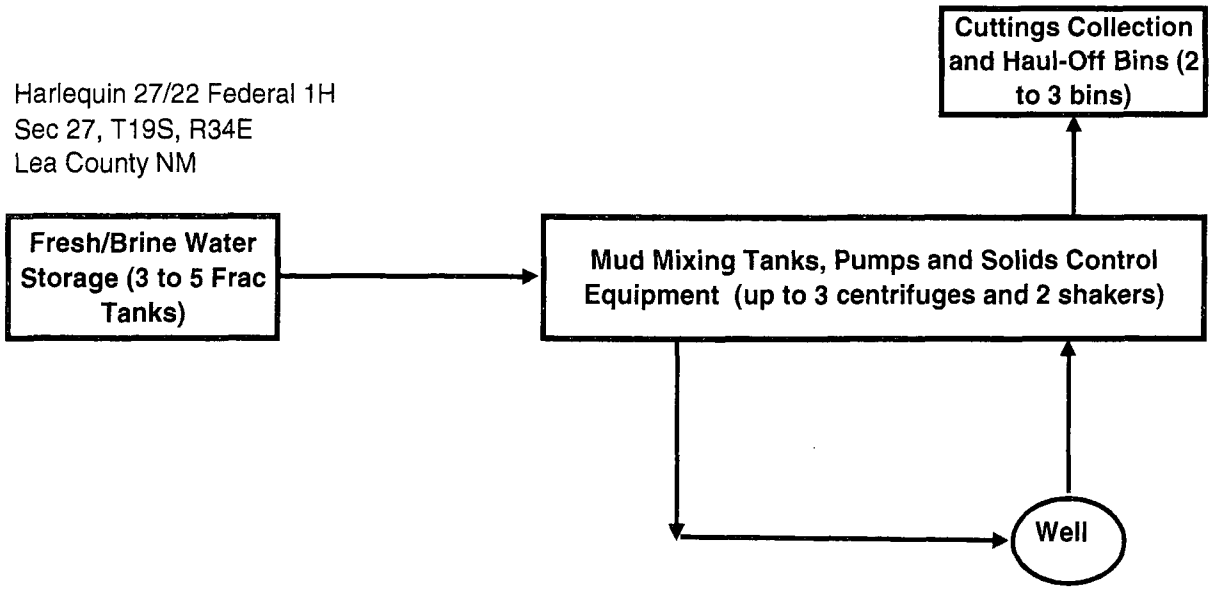
BOP Scematic 8.75" & 6.125" hole



CLOSED-LOOP SYSTEM

Design Plan:

Harlequin 27/22 Federal 1H
Sec 27, T19S, R34E
Lea County NM



Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility as noted on the C-144 form. At the end of the well, all closed loop equipment will be removed from the location.

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

Form C-144 CLEZ
July 21, 2008

For closed-loop systems *that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure*, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.

Operator: Nadel and Gussman HEYCO, LLC OGRID # 258462

Address: P.O Box 1936, Roswell NM 88202

Facility or well name: Harlequin 27/22 Federal #1H

API Number: _____ OCD Permit Number: _____

U/L or Qtr/Qtr UL-H Section 27 Township 19 S Range 34E County: Eddy

Center of Proposed Design: Latitude 32 631324° N Longitude 103.540651° W NAD: ☒1927 ☐ 1983

Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.

☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC

Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A

☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3.

Signs: Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

4.

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____

5.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: CRI Disposal Facility Permit Number: NM-01-0006
Disposal Facility Name: GMI Disposal Facility Permit Number: NM-01-0019

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations:

☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Keith Cannon Title: Drilling Superintendent

Signature: _____ Date: 6/7/2013

e-mail address kcannon@heycoenergy.com Telephone: (575) 623-6601

7.
OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **OCD Permit Number:** _____

8.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

9.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

10.
Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____