

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101  
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

☐ AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

HOBBS OCD

FEB 05 2014

RECEIVED

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

Operator Name and Address HARVEY E. YATES Co P.O BOX 1933 ROSWELL N.M 88202		OGRID Number 10179
Property Code 39629 40385		API Number 30-025-41678
Property Name AIRSTRIP 31 STATE COM		Well No. 2H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	31	18 S	35 E	4	150'	SOUTH	330'	WEST	LEA

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
D	31	18 S	35 E	1	330'	NORTH	710'	WEST	LEA

9. Pool Information

Pool Name	Pool Code
AIRSTRIP; BONE SPRING	960

Additional Well Information

11. Work Type NEW DRUG	12. Well Type OIL	13. Cable/Rotary ROTARY	14. Lease Type STATE	15. Ground Level Elevation 3948'
16. Multiple N	17. Proposed Depth TVD 10,980' / MD 15,185'	18. Formation 3rd BONE SPRING	19. Contractor	20. Spud Date 5/15/14
Depth to Ground water 60'		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SURF	17.5	13.375	48#	1945	1600	SURF
INT	12.25	9.625	36#	3840	1100	SURF
PROD	8.75	5.5	17#	15,185	2700	2950

Casing/Cement Program: Additional Comments

Plan to drill 17 1/2" to 1945' uses fresh water, run 13 3/8" 54.5# J-55 csg and cmt back to surf. Drill 12 1/4" hole to 3840' with brine, run 9 5/8" 36# J-55 csg and cmt back to surf. Drill 7 7/8" curve and lateral with cut brine to MD depth of approx. 15,185. Run 5 1/2" 17# P110 csg and cmt and cmt back to 3600' in two stage. Set DVtool @ 9950' +/-

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DOUBLE RAM	5000PSI	3000PSI	

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 I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐ if applicable.  
Signature: *Keith Cannon*

Printed name: Keith Cannon

Title: Drilling Superintendent

E-mail Address: kcannon@heycoenergy.com

Date: 1-31-14/

Phone: 575-623-6601

OIL CONSERVATION DIVISION

Approved By:

Title:

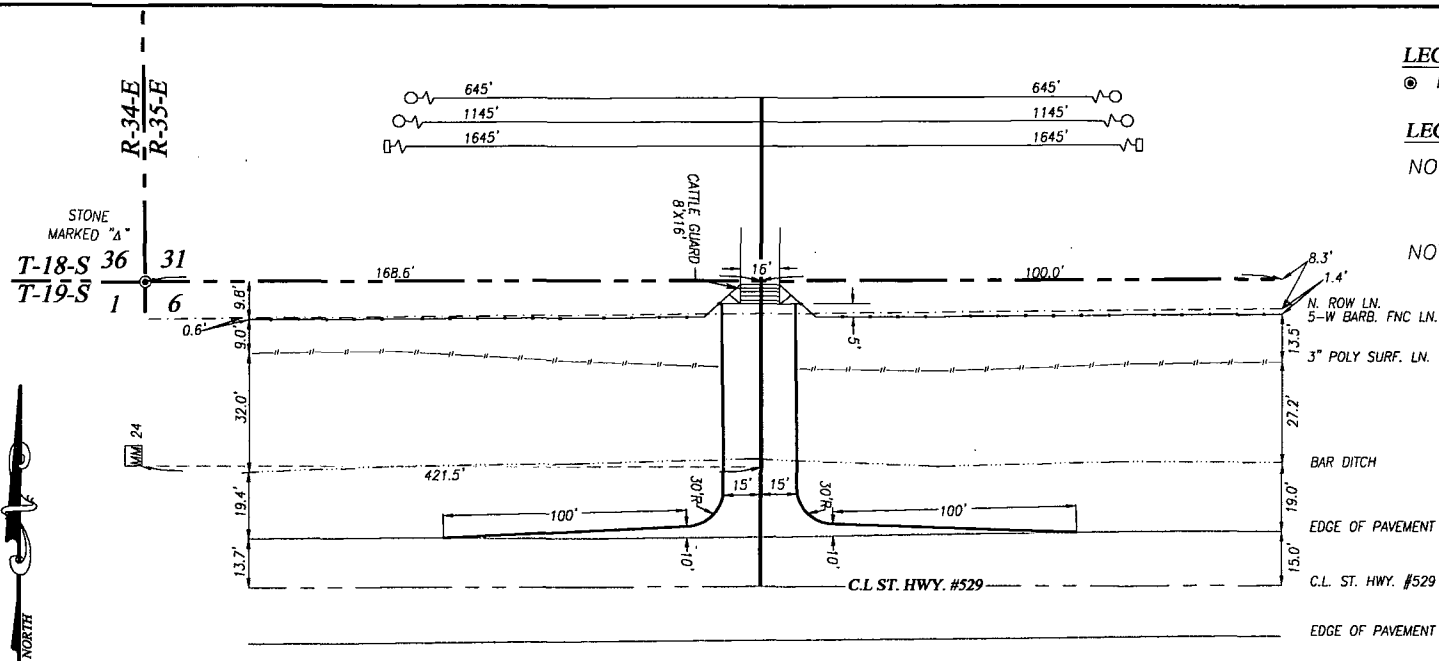
Approved Date: 02/26/14

Conditions of Approval Attached

Petroleum Engineer

Expiration Date: 02/26/16

FEB 27 2014



### LEGEND

⊙ DENOTES FOUND CORNER AS NOTED

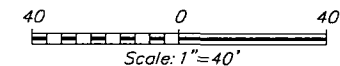
### LEGEND

NOTE: Warning Signs Will Be Placed 1500 Feet In Both Directions During Construction.

NOTE: □ = Shoulder Work Ahead  
○ = Be Prepared To Stop  
○ = Flagman Ahead

"SHOULDER WORK AHEAD and BE PREPARED TO STOP" signs shall remain in place from the time construction starts until it is completed.

"FLAGMAN AHEAD" signs will be in place during the hours construction men and/or equipment are working. A flagman will be on duty all the time that construction men and/or equipment are working. Signs will be 48"x48" in size. Color will be black on orange and will meet the reflective quality specified in the New Mexico State Highway & Transportation Standard Specifications.



## HARVEY E. YATES

A PROPOSED ROAD TURN OUT  
ON ST. HIGHWAY #529  
LOCATED IN SECTION 31,  
TOWNSHIP 18 SOUTH, RANGE 35 EAST, N.M.P.M.  
LEA COUNTY, NEW MEXICO

Survey Date: 12/16/13	CAD Date: 1/6/14	Drawn By: ACK
W.O. No.: 13111419	Rev: .	Rel. W.O.: .
		Sheet 1 of 1

PROVIDING SURVEYING SERVICES  
SINCE 1946

**JOHN WEST SURVEYING COMPANY**

412 N. DAL PASO  
HOBBBS, N.M. 88240  
(575) 393-3117 www.jwsc.biz

DATE  
1/10/14

WELL NAME: Airstrip 31 State Com #2H  
SURFACE LOCATION: 150 FSL 330 FWL  
SEC TOWNSHIP RANGE 31 18S 35E  
TARGET DEPTH: 10510 FT TVD @TD  
TARGET ANGLE: 3.7 DEGREES  
PLANNED HZ LENGTH: 4800 FT  
PLANNED KOP: 10080 FT TVD

COUNTY: Lea  
STATE: NM  
FORMATION: Bone Spring 3rd Sd  
MAXIMUM ROB: 10 DEG/100 FT  
FORMATION DIP: 1 DEGREES  
DIRECTION: 150 AZIMUTH  
DECLINATION: N9E DEGREES  
STARTING PT: 0.001 DEGREES  
AT 1900 FEET

## BEGINNING SURVEY

COMPANY: 0

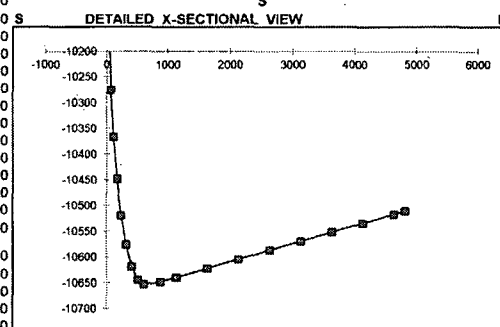
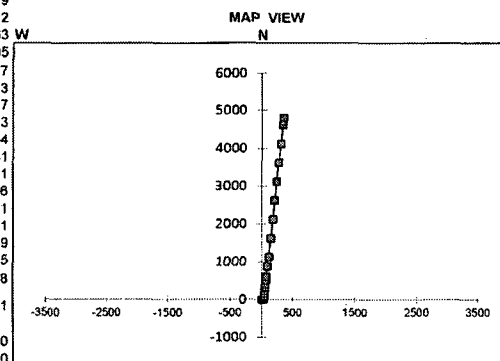
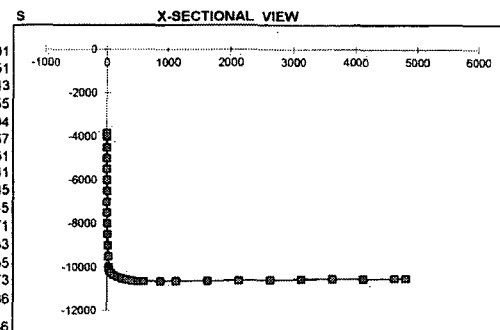
**SURVEY TYPE:** 0

		DEPTH		FROM TO		0 FT 0 FT					
		MD (FY)	INCL (deg)	AZIMUTH (deg)	TVD (FT)	COORDINATES (N+NS-) (E+NW-)		VERT.SEC (FT)			
TIE IN POINT		3840.00	0.23	150.00	3839.99	-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+NS-) (ft)	COORDINATES (E+NW-) (ft)	CLOSURE DISTANCE (ft)	DOGLEG SEVERITY (deg/100)	BUILD RATE (deg/100)	
4000.0	0.25	120.0	160.0	4000.0	-0.4	-0.5	0.5	0.7	0.1	0.0	
4500.0	0.30	110.0	500.0	4500.0	-1.3	-1.5	2.7	3.0	0.0	0.0	
5000.0	0.35	100.0	500.0	5000.0	-1.9	-2.2	5.4	5.8	0.0	0.0	
5500.0	0.40	90.0	500.0	5500.0	-1.9	-2.5	8.6	9.0	0.0	0.0	
6000.0	0.45	80.0	500.0	6000.0	-1.4	-2.2	12.3	12.5	0.0	0.0	
6500.0	0.50	70.0	500.0	6499.9	-0.1	-1.1	16.3	16.4	0.0	0.0	
7000.0	0.55	60.0	500.0	6999.9	2.1	0.8	20.5	20.5	0.0	0.0	
7500.0	0.60	50.0	500.0	7499.9	5.3	3.7	24.6	24.9	0.0	0.0	
8000.0	0.65	40.0	500.0	7999.9	9.4	7.5	28.4	29.4	0.0	0.0	
8500.0	0.70	30.0	500.0	8499.8	14.4	12.4	31.8	34.1	0.0	0.0	
9000.0	0.75	20.0	500.0	8999.8	20.3	18.1	34.5	38.9	0.0	0.0	
9500.0	0.80	10.0	500.0	9499.7	26.9	24.6	36.2	43.8	0.0	0.0	
10000.0	0.85	3.7	500.0	9999.7	34.1	31.8	37.1	48.8	0.0	0.0	
10080.0	0.9	3.7	80.0	10079.7	35.3	33.0	37.2	49.7	0.1	9.1	
10180.0	10.0	3.7	100.0	10179.1	44.8	42.4	37.8	56.8	9.1	9.1	
10280.0	20.0	3.7	100.0	10275.6	70.6	68.2	39.4	78.8	10.0	10.0	
10380.0	30.0	3.7	100.0	10366.1	112.9	110.4	42.2	118.1	10.0	10.0	

HEYCO  
Alstrip 31 State Com #2H

MEASURED	INCL	HOLE	COURSE	TOTAL		COORDINATES		CLOSURE	DOGLEG	BUILD
DEPTH	ANGLE	AZIMUTH	LENGTH	T.V.D.	VERT.SEC	(N+/-S)	(E+/-W)	DISTANCE	SEVERITY	RATE
(ft)	(degrees)	(degrees)	(ft)	(ft)	(in)	(in)	(ft)	(ft)	(deg/100)	(deg/100)
10480.0	40.0	3.7	100.0	10447.9	170.1	167.5	45.9	173.7	10.0	10.0
10580.0	50.0	3.7	100.0	10518.5	240.8	238.0	50.4	243.3	10.0	10.0
10680.0	60.0	3.7	100.0	10575.8	322.6	318.6	55.7	324.5	10.0	10.0
10780.0	70.0	3.7	100.0	10618.0	413.1	410.0	61.5	414.6	10.0	10.0
10880.0	80.0	3.7	100.0	10643.9	509.6	506.2	67.8	510.8	10.0	10.0
10980.0	90.0	3.7	100.0	10652.6	609.0	605.5	74.2	610.1	10.0	10.0
11250.0	92.0	3.7	270.0	10847.9	879.0	874.9	91.6	879.7	0.7	0.7
11500.0	92.0	3.7	250.0	10939.1	1128.8	1124.2	107.7	1129.4	0.0	0.0
12000.0	92.0	3.7	500.0	10621.6	1628.5	1622.9	140.0	1628.9	0.0	0.0
12500.0	92.0	3.7	500.0	10604.1	2128.2	2121.5	172.2	2128.5	0.0	0.0
13000.0	92.0	3.7	500.0	10586.6	2627.9	2620.2	204.4	2626.2	0.0	0.0
13500.0	92.0	3.7	500.0	10569.1	3127.6	3118.8	236.7	3127.8	0.0	0.0
14000.0	92.0	3.7	500.0	10551.6	3627.3	3617.5	269.0	3627.5	0.0	0.0
14500.0	92.0	3.7	500.0	10534.1	4127.0	4116.1	301.2	4127.2	0.0	0.0
15000.0	92.0	3.7	500.0	10518.7	4626.7	4614.8	333.4	4626.8	0.0	0.0
15185.0	92.0	3.7	185.0	10510.2	4811.6	4799.3	345.4	4811.7	0.0	0.0

FOR GRAPHING

[illegible]

**EXHIBIT "D" LOCATION DIAGRAM**

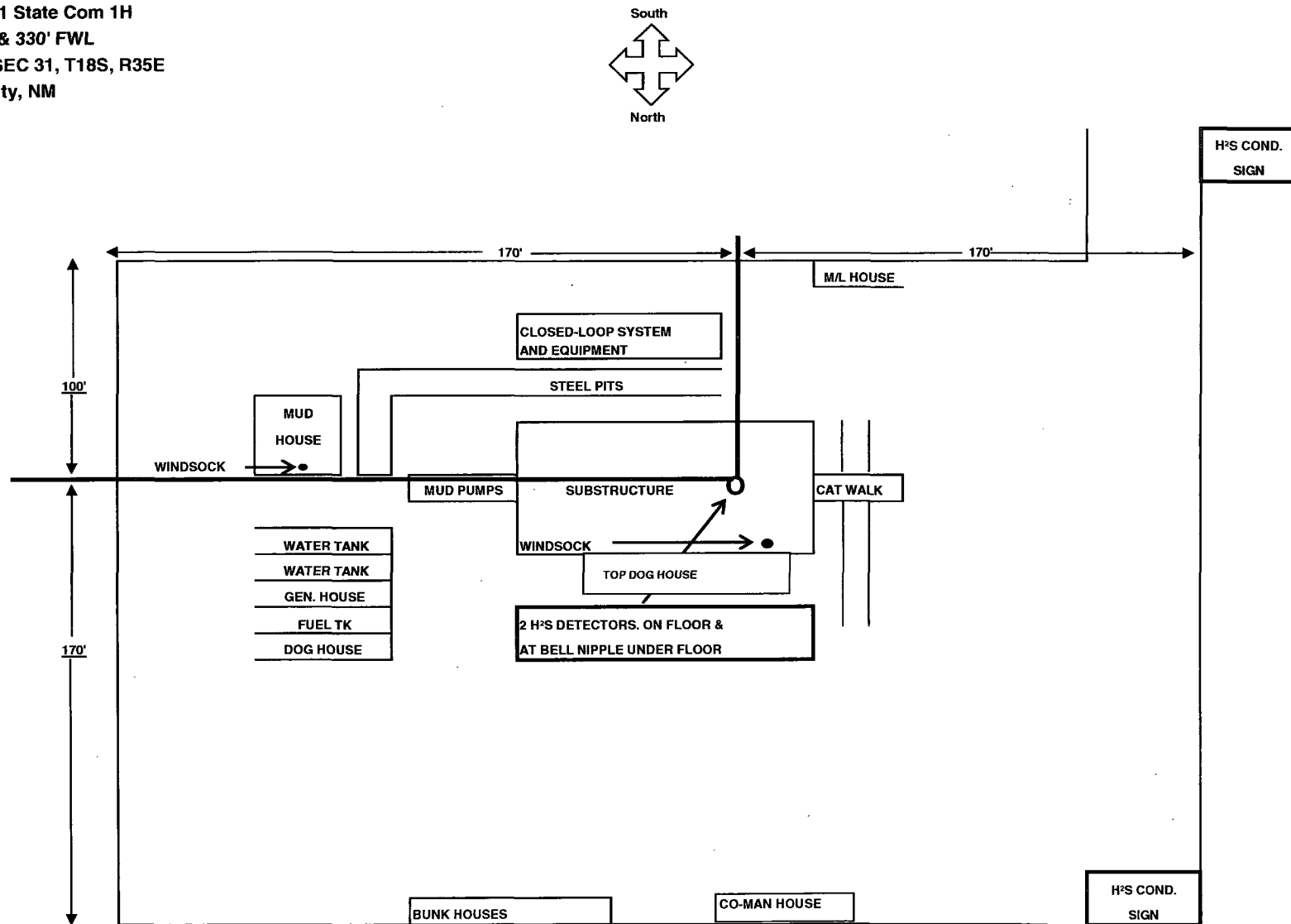
**Harvey E. Yates**

**Airstrip 31 State Com 1H**

**150' FSL & 330' FWL**

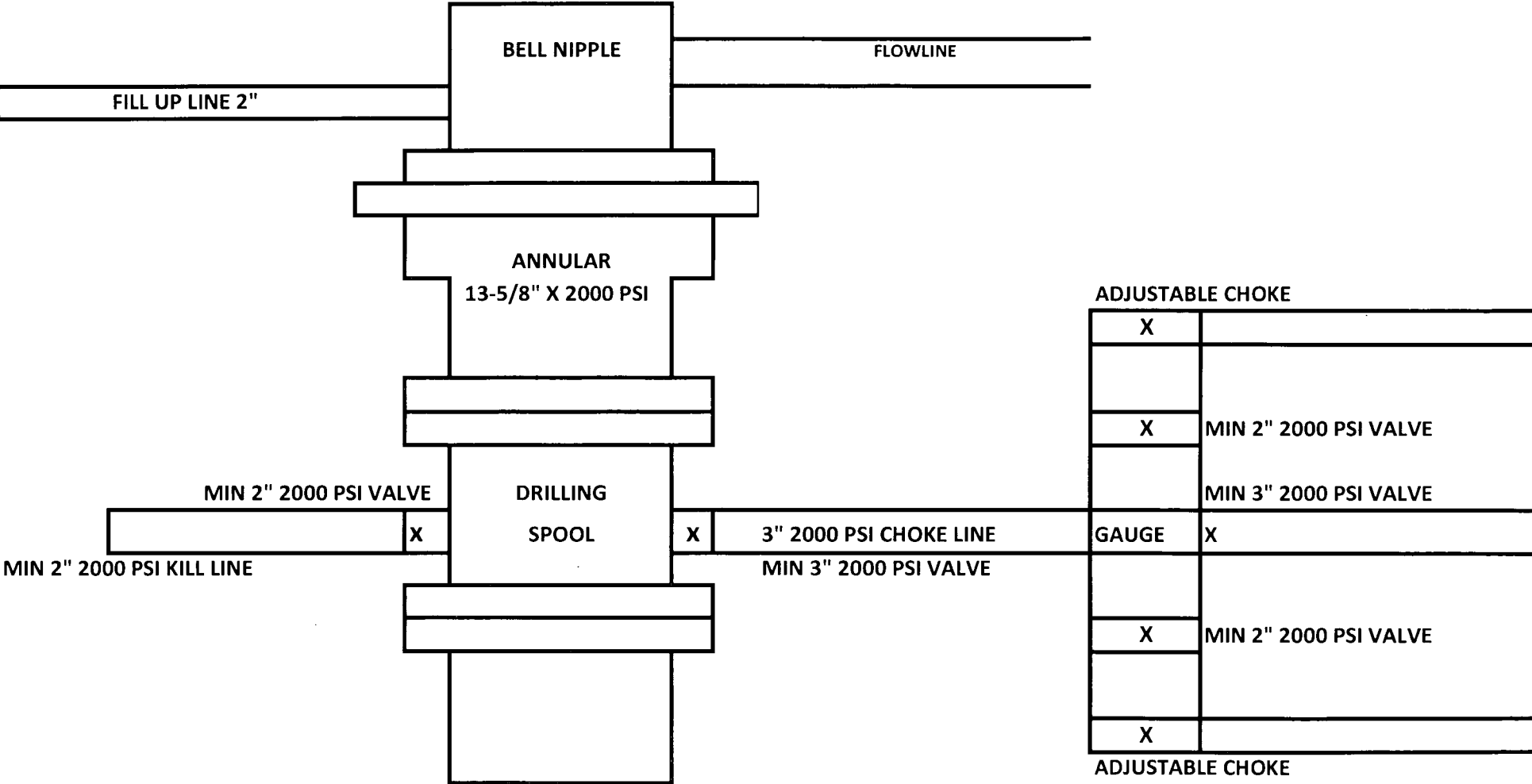
**UNIT M, SEC 31, T18S, R35E**

**Lea County, NM**



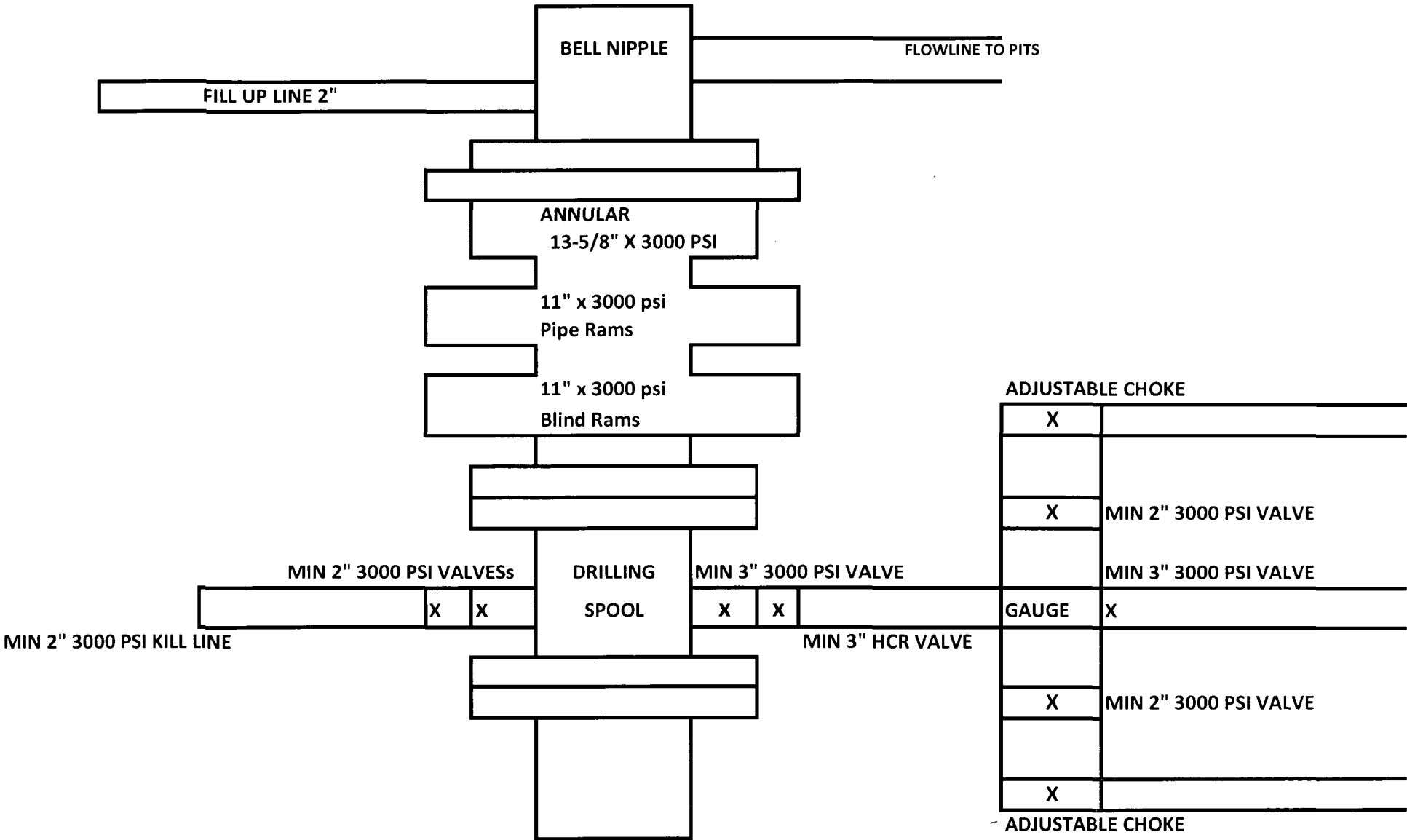
Well:       Airstrp 31 State Com 2H  
150' FSL & 330' FWL, Sec 31, T18S, R35E  
LEA County New Mexico

Harvey E. Yates  
BOP Scematic 12.25" hole

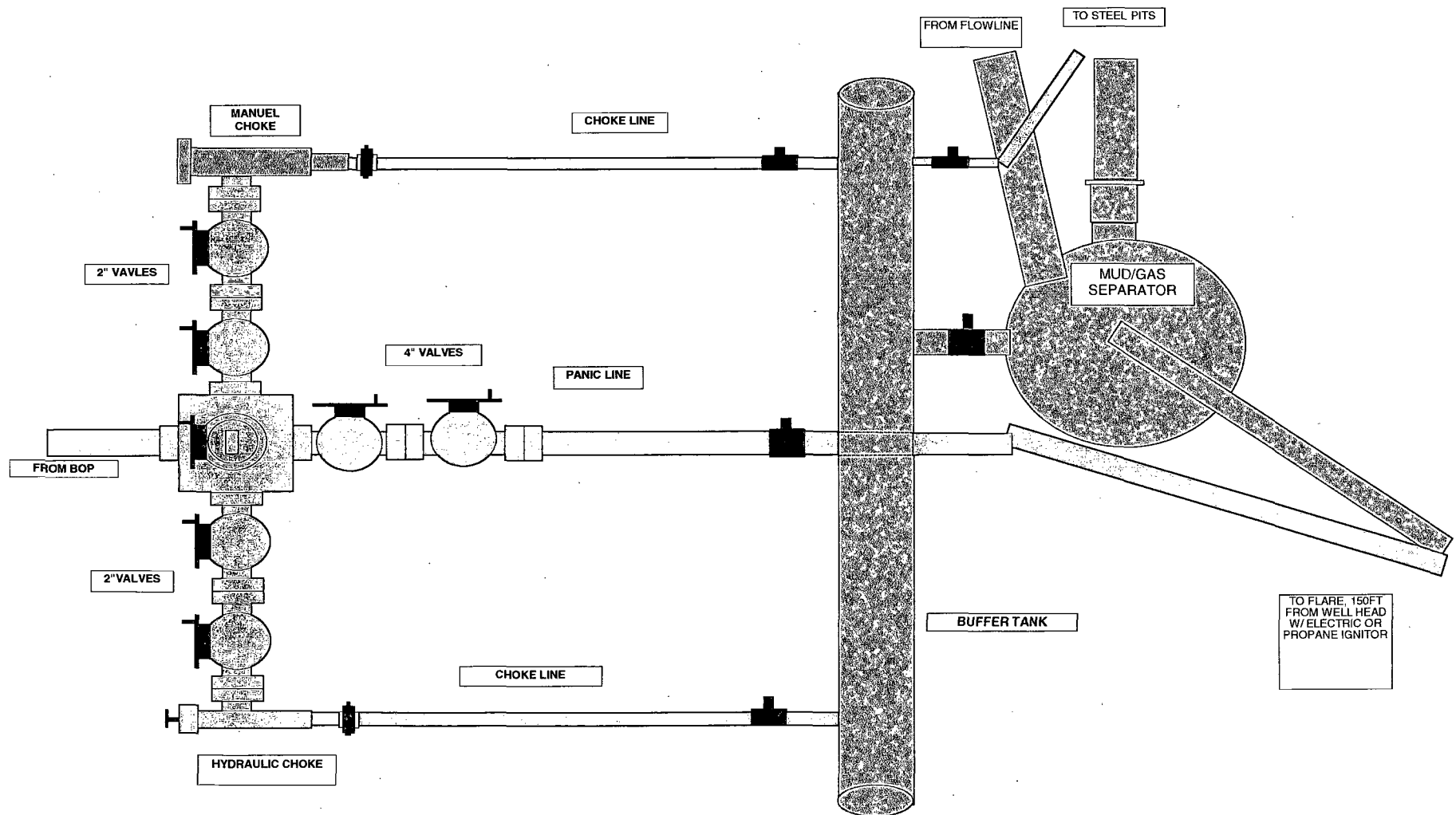


Well        AIRSTRIP 31 STATE COM 2H  
150' FSL, 330 FWL, Sec. 31, T18S, R35E  
LEA County New Mexico

Harvey E. Yates  
BOP Scematic 8.75" hole



**AIRSTrip 31 STATE COM #2H**  
**3000 psi BOP Manifold System**



**HARVEY E. YATES**  
**P.O. BOX 1936**  
**ROSWELL N.M. 88202**  
**(575) 623-6601 (Office)**  
**(575) 624-5321 (Fax)**

1/31/2014

Mr. Paul Kautz  
District 1 Geologist  
New Mexico Oil and Gas Division  
1625 N. French Drive  
Hobbs N.M 88240

**Re: AIRSTRIP 31 STATE COM 2H**  
**150' FSL & 330' FWL**  
**Unit Letter M, Sec. 31, T18S, R35E**  
**LEA, NM**  
**Rule 118 H2S Exposure**

Dear MR Kautz

Harvey E. Yates, 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,

A handwritten signature in black ink, appearing to read "Keith Cannon", with a long horizontal flourish extending to the right.

Keith Cannon  
Drilling Superintendent



**Hydrogen Sulfide Drilling Operations Plan**  
**Harvey E. Yates**  
**Airstrip 31 State Com 2H**  
**UNIT M, Sec 31, T18S, R35E**  
**150' FSL & 330' FWL**  
**Lea Co. N.M.**

1. Company and contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the recognize and handle following:
  - A. Characteristics of H<sub>2</sub>S gas
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing knowledge
  - E. Evacuation procedure, routes and first aid support
  - F. Proper use of 30 minutes Pressure-on-Demand Air Pack
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S 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 (high enough to be visible)
  - B. Windsock at briefing area (high enough to be visible)
  - C. Windsock at location entrance
4. Condition Flags and Signs
  - A. H<sub>2</sub>S warning signs on lease access road into location
  - B. Flags displayed on sign at location entrance
    1. Green flag indicates "Normal Safe Conditions"
    2. Yellow Flag indicates "Potential Pressure and Danger"
    3. Red Flag indicates "Danger - H<sub>2</sub>S Present in High Concentrations" *admit only emergency personnel*
5. Well Control Equipment
  - A. See Exhibit #5.
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 radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters
7. Drillstem Testing
  - A. Exhausts watered
  - B. Flare line equipped with electric Igniter/propane pilot light in case gas reaches surface
  - C. If location near dwelling closed DST will be performed
8. Drilling Supervisor required to be familiar with effects of H<sub>2</sub>S on tubular goods/mechanical equipment
9. If H<sub>2</sub>S encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers, if necessary.

## PUBLIC PROTECTION PLAN FOR EMERGENCY CONTACTS

### **HARVEY E. YATES**

(575) 623-6601

### **Company Personnel**

Lanny Overby	Prod. Enrineer	575-623-6601 575-317-5059
Keith Cannon	Drilling Supt.	575-623-6601 575-626-1936

### **ARTESIA N.M.**

Ambulance	911
State Police	575-746-5000
City Police	575-746-5000
Sheriff's Office	575-746-9888
Fire Department	575-746-5050 or 575-746-5051
N.M.O.C.D	575-748-1283

### **CARLSBAD N.M.**

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-885-3125 or 575-885-2111
Carlsbad BLM	575-887-6544

### **HOBBS N.M.**

Ambulance	911
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-396-3611
Fire Department	575-397-9308
N.M.O.C.D	575-393-6161
Hobbs BLM	575-393-3612

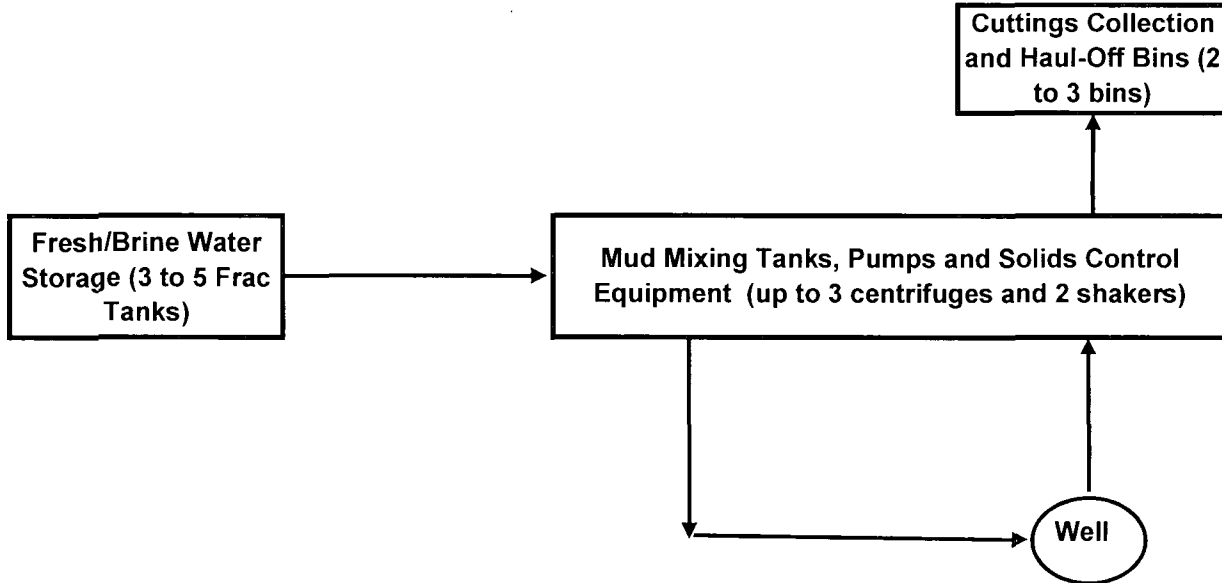
Flight for Life (Lubbock Tx)	806-743-9911
Aerocare (Lubbock Tx)	806-747-8923
Med flight air Ambulance (Albuq NM)	505-842-4433
SB air Med Services (Albuq NM)	505-842-4949

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd Pressure Control	915-699-0139 or 915-563-3356
BJ Services (Artesia NM)	575-746-3569
(Hobbs NM)	575-392-5556

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

# **CLOSED-LOOP SYSTEM**

## **Design Plan:**



## **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. At the end of the well, all closed loop equipment will be removed from the location.