

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

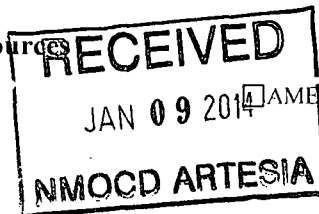
**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**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**  
**Energy Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 South St. Francis Dr.**  
**Santa Fe, NM 87505**

Form C-101  
Revised July 18, 2013



AMENDED REPORT

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

<sup>1</sup> Operator Name and Address <b>YATES PETROLEUM CORPORATION</b> 105 S. 4 <sup>th</sup> STREET ARTESIA, NM 88210		<sup>2</sup> OGRID Number 25575
<sup>4</sup> Property Code 38203		<sup>3</sup> API Number <b>30-015-41957</b>
<sup>5</sup> Property Name HERRADURA UNIT		<sup>6</sup> Well No. 2H

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	2	24S	25E		330	S	330	E	EDDY

**8. Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

**9. Pool Information**

Pool Name SAN LORENZO, BONE SPRING, NORTH	Pool Code 53610
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**Additional Well Information**

<sup>11</sup> Work Type New Well	<sup>12</sup> Well Type OIL	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type State	<sup>15</sup> Ground Level Elevation 4039'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 10478'	<sup>18</sup> Formation 1st Bone Spring Sand	<sup>19</sup> Contractor	<sup>20</sup> Spud Date
Depth to Ground water		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	40	550	575	0
Intl	12.25	9.625	36	2800	975	0
Prod	7.875	5.5	17	10478	2050	2050

**Casing/Cement Program: Additional Comments**

Yates Petroleum Corporation proposes to drill/test the Bone Spring/intermediate formations. Pilot hole will be drilled vertically to 6700'. Well will be plugged back with 400'-500' kick off plug at approx. 5903' and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 6700' MD (6380' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 10,478' MD (6380' TVD) where 4 1/2" casing will be set and cemented. If 7" is not set, then hole size will be reduced to 7 7/8" and drilled to 10,478' MD (6380' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 807' FSL and 367' FEL, 2-24S-25E. Deepest TVD in the well is 6700' in the pilot hole. Deepest TVD in the lateral will be 6380'.  
 MUD PROGRAM: 0-550' FW; 550'-2800' Brine Water; 2800'-6700' Cut Brine (to TD of pilot hole); 5903'-10478' Cut Brine (Lateral).  
 H2S is possible for this well. H2S Contingency Plan is attached. Previously Approved.

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
DoubleRam	3000	3000	

<sup>23</sup> 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: *Lori Flores*

Printed name: Lori Flores

Title: Land Regulatory Tech

E-mail Address: lorif@yatespetroleum.com

Date: 1/8/2014

Phone: 575-748-4448

**OIL CONSERVATION DIVISION**

Approved By:

*T. C. Shepard*

Title:

**"Geologist"**

Approved Date: *1-15-2014*

Expiration Date: *1-15-2016*

Conditions of Approval Attached

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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-41957	<sup>2</sup> Pool Code 53610	<sup>3</sup> Pool Name San Lorenzo; Bone Spring, North
<sup>4</sup> Property Code 38203	<sup>5</sup> Property Name HERRADURA UNIT	<sup>6</sup> Well Number 2H
<sup>7</sup> OGRID No. 25575	<sup>8</sup> Operator Name YATES PETROLEUM CORPORATION	<sup>9</sup> Elevation 4039'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	2	24S	25E		330	SOUTH	330	EAST	EDDY

<sup>11</sup> 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
Lot 1	2	24S	25E		660	NORTH	660	EAST	EDDY

<sup>12</sup> Dedicated Acres 160	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.

<p><sup>16</sup></p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><u>Lori Flores</u> 1/8/2014 Signature Date</p> <p><u>Lori Flores</u> Printed Name</p> <p><u>lorif@yatespetroleum.com</u> E-mail Address</p>
	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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><u>SEE ORIGINAL PLAT</u> Date of Survey</p> <p>_____ Signature and Seal of Professional Surveyor:</p> <p>_____ Certificate Number</p>

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
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1301 W. Grand Avenue, Artesia, NM 88210

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DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 15, 2009

Submit one copy to appropriate  
District Office

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name Avalon; Bone Spring
Property Code	Property Name HERRADURA UNIT	Well Number 2H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 4039'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	2	24 S	25 E		330	SOUTH	330	EAST	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
LOT 1	2	24 S	25 E		660	NORTH	660	EAST	EDDY

Dedicated Acres 160	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

	<p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°15'04.99" Long - W 104°21'35.95" NMSPCE- N 455188.501 E 533098.357 (NAD-83)</p> <p>Project Area</p> <p>Producing Zone</p> <p>Penetration Point 807' FSL &amp; 367' FEL</p> <p><b>SURFACE LOCATION</b> Lat - N 32°14'22.39" Long - W 104°21'32.10" NMSPCE- N 450884.125 E 533427.511 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Clifton May 6/8/10 Signature Date</p> <p>Clifton May Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></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>Date Surveyed Signature &amp; Seal of Professional Surveyor Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
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## Herradura Unit #2H Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 6,700' MD (6,380' TVD). A 6 1/8" hole will then be drilled to 10,478' MD (6,380' TVD) where 4 1/2" casing will be set and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at approx. 5800'.

### 2nd Intermediate

0 ft to 100 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J 55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

100 ft to 6,000 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	23 #/ft	J 55	LT&C	3130	2350	3910	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,270 psi	4,360 psi	313,000 #		356,000 #		6.251	

6,000 ft to 6,700 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J 55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

Lead w/700sx Lite crete (YLD 2.66 Wt. 9.9) tail w/125sx PVL (YLD 1.41 Wt 13) TOC = Surface

### Production

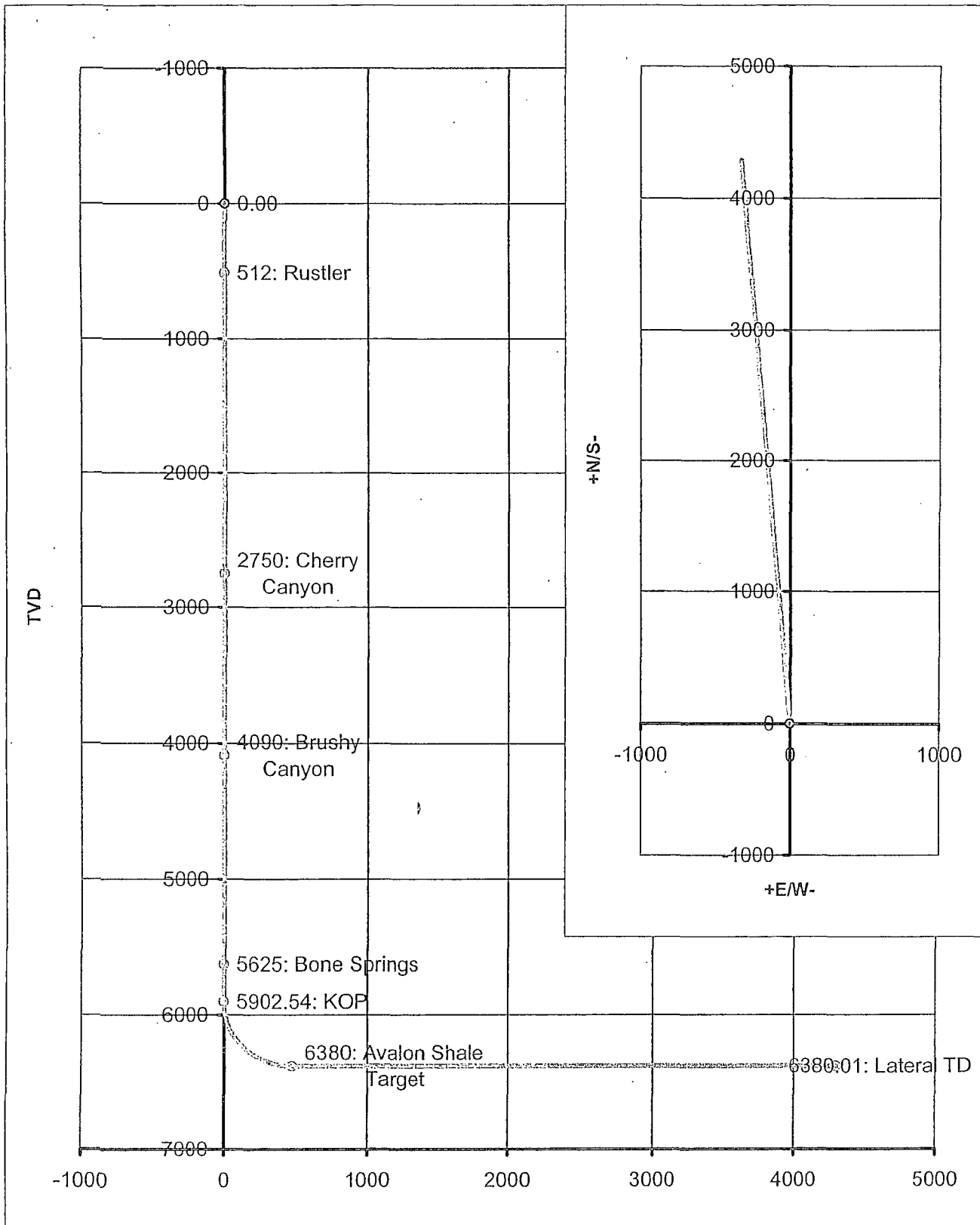
0 ft to 10,478 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
4 1/2 inches	11.6 #/ft	HCP-110	LT&C	3020	2270	3780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,650 psi	10,690 psi	279,000 #		367,000 #		3.875	

DV tool placed at approx. 5800' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 5800'.

Cemented w/625sx PVL (YLD 1.41 Wt 13) TOC= 5800'

Co: Yates Petroleum	Units: Feet, ° 9100ft	VS Az: 355.60	Tgt TVD: 6380.00
Drillers: 0	Elevation:	Tgt Radius: 0.00	Tgt MD: 0.00
II Name: Herradura Unit #2H	Northing:	Tgt N/S: 4290.00	Tgt Displ.: 0.00
Location: Sect. 2, 24S-25E	Easting:	Tgt E/W: -330.00	Method: Minimum Curvature

MD	CL	Inc	AZI	TVD	VS	N/S	E/W	BR	WR	DLS	Comments
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
512.00	512.00	0.00	360.00	512.00	0.00	0.00	0.00	0.00	0.00	0.00	Rustler
2750.00	2238.00	0.00	360.00	2750.00	0.00	0.00	0.00	0.00	0.00	0.00	Cherry Canyon
4090.00	1340.00	0.00	360.00	4090.00	0.00	0.00	0.00	0.00	0.00	0.00	Brushy Canyon
5625.00	1535.00	0.00	360.00	5625.00	0.00	0.00	0.00	0.00	0.00	0.00	Bone Springs
5902.54	5902.54	0.00	355.60	5902.54	0.01	0.01	0.00	0.00	-0.07	0.00	KOP
6000.00	97.46	11.68	355.60	5999.33	9.91	9.88	-0.76	11.99	0.00	11.99	
6100.00	100.00	23.67	355.60	6094.43	40.22	40.10	-3.08	11.99	0.00	11.99	
6200.00	100.00	35.66	355.60	6181.16	89.63	89.36	-6.87	11.99	0.00	11.99	
6300.00	100.00	47.65	355.60	6255.74	155.97	155.51	-11.96	11.99	0.00	11.99	
6400.00	100.00	59.64	355.60	6314.92	236.36	235.66	-18.13	11.99	0.00	11.99	
6500.00	100.00	71.63	355.60	6356.10	327.28	326.32	-25.10	11.99	0.00	11.99	
6600.00	100.00	83.61	355.60	6377.50	424.78	423.53	-32.58	11.99	0.00	11.99	
6651.80	749.27	89.82	355.60	6380.47	476.47	475.07	-36.54	11.99	0.00	11.99	
6652.53	750.00	90.00	355.60	6380.00	477.47	476.06	-36.62	12.00	0.00	12.00	Avalon Shale Target
10477.74	3825.21	90.00	355.60	6380.01	4302.68	4290.01	-330.00	0.00	0.00	0.00	Lateral TD



Yates Petroleum Corporation  
105 S. Fourth Street  
Artesia, NM 88210

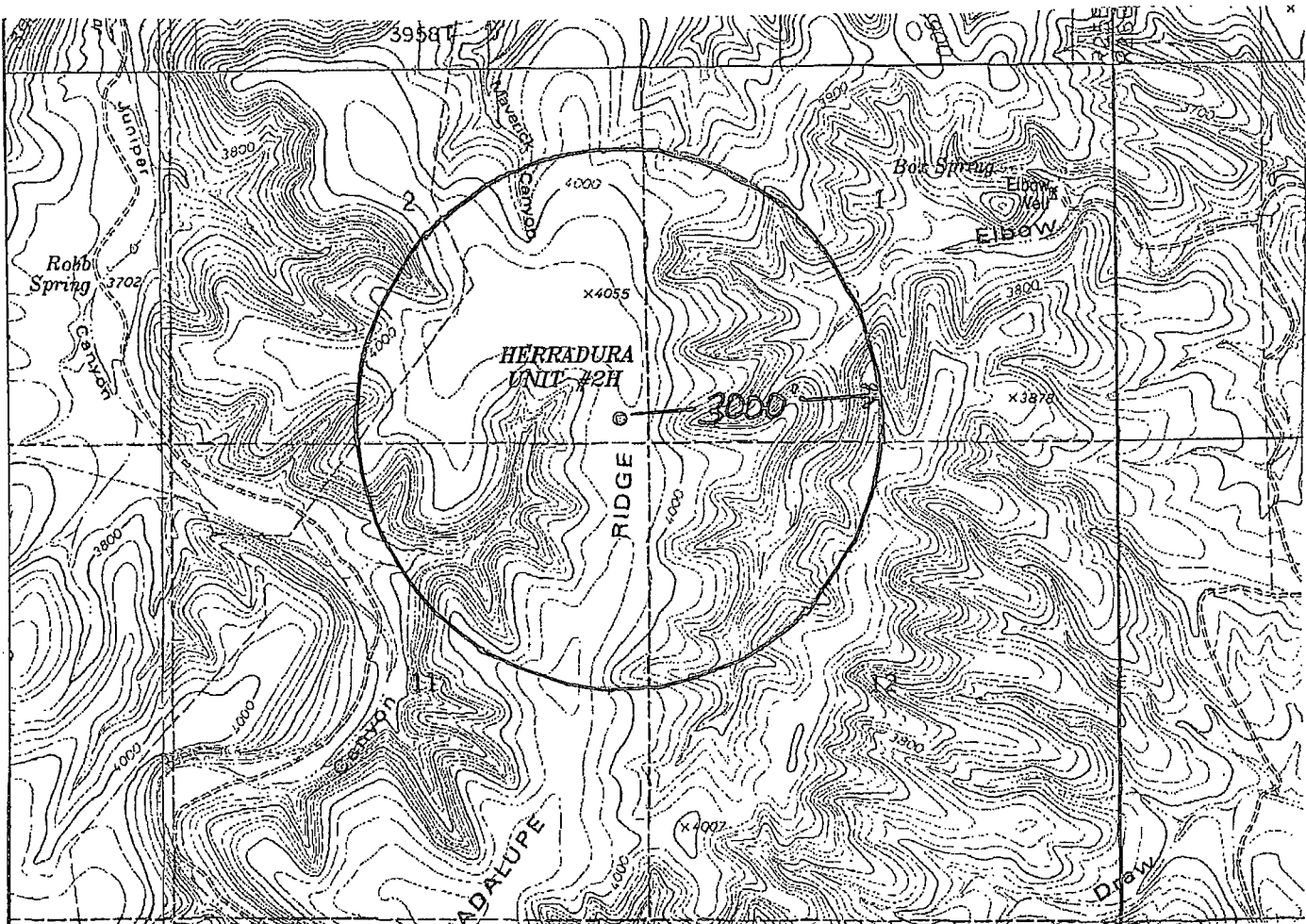
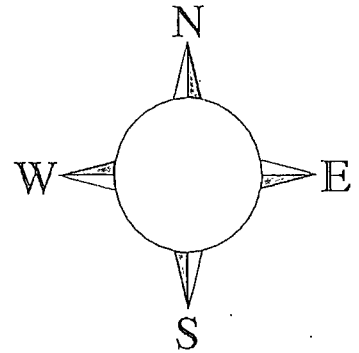
## Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

Herradura Unit #2H  
330' FSL and 330' FEL Surface Hole Location  
660' FNL and 660' FEL Bottom Hole Location  
Section 2, T-24S, R-25E  
Eddy County NM

## Herradura Unit #2H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



Assumed 100 ppm ROE = 3000'  
100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.



## Emergency Procedures

In the case of a release of gas containing H<sub>2</sub>S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H<sub>2</sub>S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H<sub>2</sub>S monitors and air packs in order to control the release. Use the 'buddy system' to ensure no injuries during the response.

## Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

## Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

## Contacting Authorities

YPC personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. YPC Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

### ***Yates Petroleum Corporation Phone Numbers***

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YPC Office .....	(575) 748-1471
Darrick Stallings/Operations Manager .....	(575) 748-4198
Wade Bennett/Prod Superintendent .....	(575) 748-4236
LeeRoy Richards/Assistant Prod Superintendent .....	(575) 748-4228
Mike Larkin/Drilling .....	(575) 748-4222
Paul Hanes/Prod. Foreman/Roswell .....	(575) 624-2805
Tim Bussell/Drilling Superintendent .....	(575) 748-4221
Artesia Answering Service .....	(575) 748-4302
(During non-office hours)	

### **Agency Call List**

#### **Eddy County (575)**

##### **Artesia**

State Police .....	746-2703
City Police.....	746-2703
Sheriff's Office .....	746-9888
Ambulance.....	911
Fire Department.....	746-2701
LEPC (Local Emergency Planning Committee) .....	746-2122
NMOCD.....	748-1283

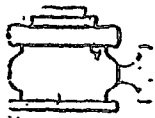
##### **Carlsbad**

State Police .....	885-3137
City Police.....	885-2111
Sheriff's Office.....	887-7551
Ambulance.....	911
Fire Department.....	885-2111
LEPC (Local Emergency Planning Committee).....	887-3798
US Bureau of Land Management.....	887-6544
New Mexico Emergency Response Commission (Santa Fe) .....	(505) 476-9600
24 HR .....	(505) 827-9126
New Mexico State Emergency Operations Center.....	(505) 476-9635
National Emergency Response Center (Washington, DC) .....	...(800) 424-8802

##### **Other**

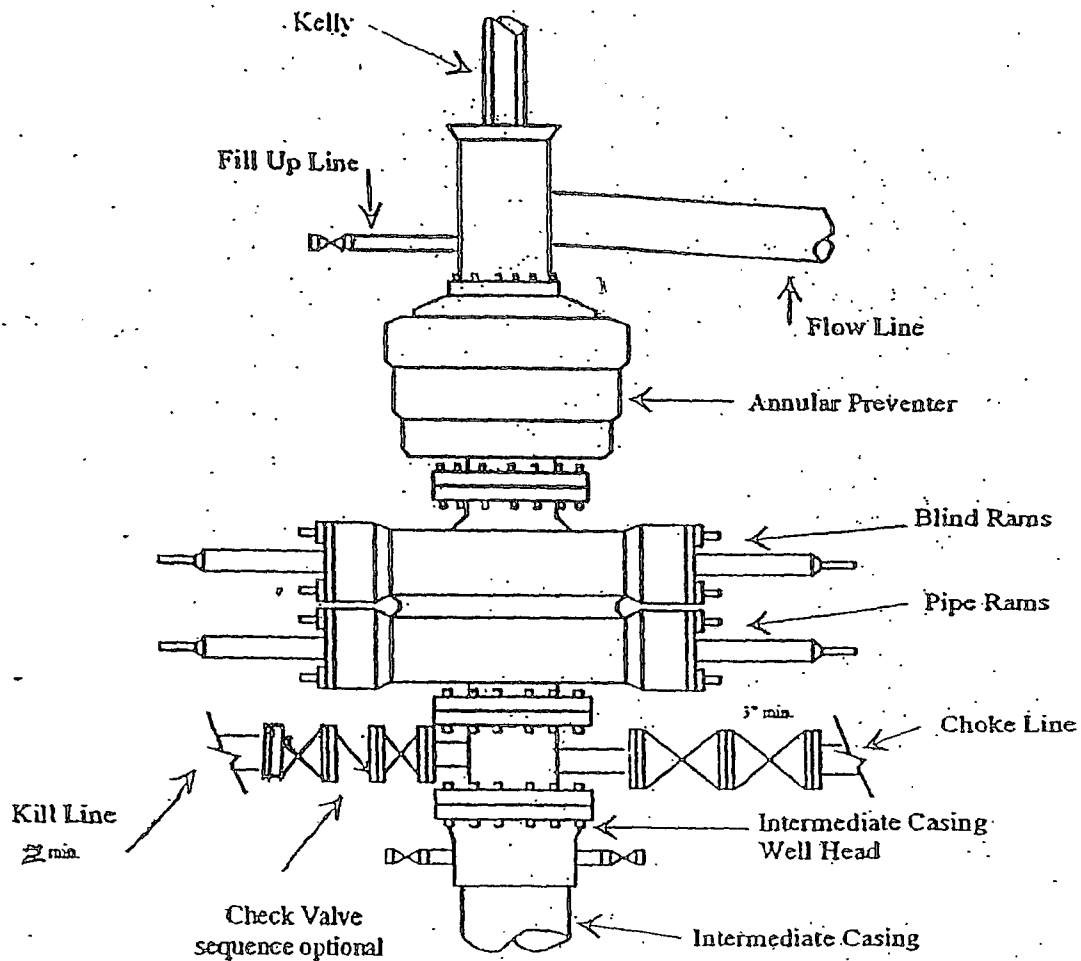
Boots & Coots IWC .....	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control.....	(915) 699-0139 or (915) 563-3356
Halliburton .....	(575) 746-2757
B. J. Services.....	(575) 746-3569

Flight For Life -4000 24th St, Lubbock, TX .....(806) 43-9911  
Aerocare -Rr 3 Box 49f, Lubbock, TX .....(806) 747-8923  
Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM .....(505) 842-4433  
S B Air Med Svc 2505 Clark Carr Loop SE, Albuq, NM .....(505) 842-4949

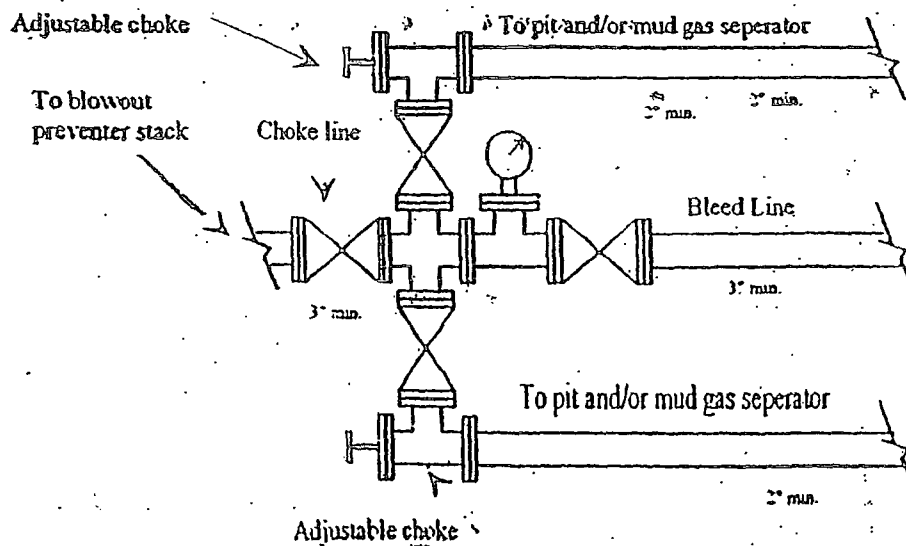


Yates Petroleum Corporation  
Typical 3,000 psi Pressure System  
Schematic  
Annular with Double Ram Preventer Stack

BOP-3



Typical 3,000 psi choke manifold assembly with at least these minimum features



# Yates Petroleum Corporation

## Closed Loop System

### Equipment Design Plan

Closed Loop System will consist of:

1 – double panel shale shaker

1 – (minimum ) Centrifuge, certain wells and flow rates may require 2 centrifuges

On certain wells, the Centrifuge will be replaced by a Clackco Settling Tank System

1 – minimum centrifugal pump to transfer fluids

2- 500 bbl. FW Tanks

1 – 500 bbl. BW Tank

1 – half round frac tank – 250 bbl. capacity as necessary to catch cement / excess mud returns generated during a cement job.

1 Set of rail cars / catch bins

Certain wells will use an ASC Auger Tank

### Operation Plan

All equipment will be inspected at least hourly by rig personnel and daily by contractors' personnel.

Any spills / leaks will be reported to YPC, NMOCD, and cleaned up without delay.

### Closure Plan

Drilling with Closed Loop System, haul off bins will be taken to Gandy Marley, Lea Land Farm, CRI or Sundance Services Inc.