

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

RM

SUNDRY NOTICES AND REPORTS ON WELLS

**Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

SUBMIT IN TRIPLICATE - Other instructions on page 2

RECEIVED

MAY 17 2010

NMOCD ARTESIA

1 Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2 Name of Operator  
Yates Petroleum Corporation 025575

3a Address  
105 South Fourth Street, Artesia, NM 88210

3b Phone No (include area code)  
(505) 748-1471

4 Location of Well (Footage, Sec, T, R., M., or Survey Description)  
330' FSL and 660' FWL Surface Hole Location Section 24, T24S-R31E  
330' FNL and 660' FWL Bottom Hole Location Section 24, T24S-R31E

5 Lease Serial No  
NM-57274  
6. If Indian, Allottee or Tribe Name  
7 If Unit or CA/Agreement, Name and/o  
8 Well Name and No.  
Haracz AMO Federal #1H  
9 API Well No.  
30-015-36357  
10 Field and Pool, or Exploratory Area  
Cotton Draw Brushy Canyon  
11. County or Parish, State  
Eddy County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13 Describe Proposed or Completed Operation Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports must be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection )

Yates Petroleum Corporation wishes to change plans and drill a horizontal well and move the location to new footages of 330' FSL & 660' FWL for the surface hole. The bottom hole will be 330' FNL & 660' FWL. We also wish to change the name from the Haracz AMO Federal #1 to the Haracz AMO Federal #1H.

Surface Use Plan and Drilling Plan attached.  
New C-102 attached.

SUBJECT TO LIKE  
APPROVAL BY STATE

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14 I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Cy Cowan

Title

Land Regulatory Agent

Signature

Clifton May for Cy Cowan

Date

August 20, 2009

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

/s/ Don Peterson

FIELD MANAGER

Date

MAY 13 2010

Conditions of approval, if any, are attached. Approval of this notice 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

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001, 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 reverse)

WZ

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

SUNDRY NOTICES AND REPORTS ON WELLS

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SUBMIT IN TRIPLICATE - Other instructions on page 2.

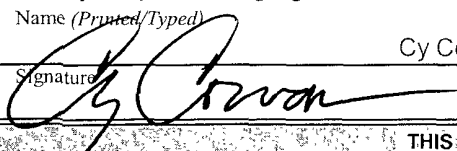
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Serial No NM-57274
2. Name of Operator Yates Petroleum Corporation 025575	6. If Indian, Allottee or Tribe Name N/A
3a. Address 105 South Fourth Street, Artesia, NM 88210	7. If Unit or CA/Agreement, Name and/o N/A
3b. Phone No (include area code) (505) 748-1471	8. Well Name and No Haracz AMO Federal #1 H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 330' FSL & 660' FWL, SWSW, 24-24S-31E Surface Hole 330' FNL & 660' FWL, NENE, 24-24S-31E, Bottom Hole	9. API Well No
	10. Field and Pool, or Exploratory Area Cotton Draw Brushy Canyon
	11. County or Parish, State Eddy County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other Move
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Location
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13 Describe Proposed or Completed Operation Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.

Yates Petroleum Corporation wishes to change plans and drill a horizonatal well and move the location to new footages of 330' FSL & 660' FWL for the surface hole. The bottom hole will be 330' FNL & 660' FWL. See surface use plan and drilling plan that is attached for details. A new C-102 is attached

14 I hereby certify that the foregoing is true and correct	
Name (Printed/Typed) Cy Cowan	Title Land Regulatory Agent
Signature 	Date 8/18/09

THIS SPACE FOR FEDERAL OR STATE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

Title 18 U.S.C. Section 1001, 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 reverse)

DISTRICT I  
1626 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Artec, NM 87410

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 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-34875	Pool Code 13370	Pool Name Cotton Draw Brushy Canyon
Property Code	Property Name HARACZ "AMO" FEDERAL	Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3545'

Surface Location

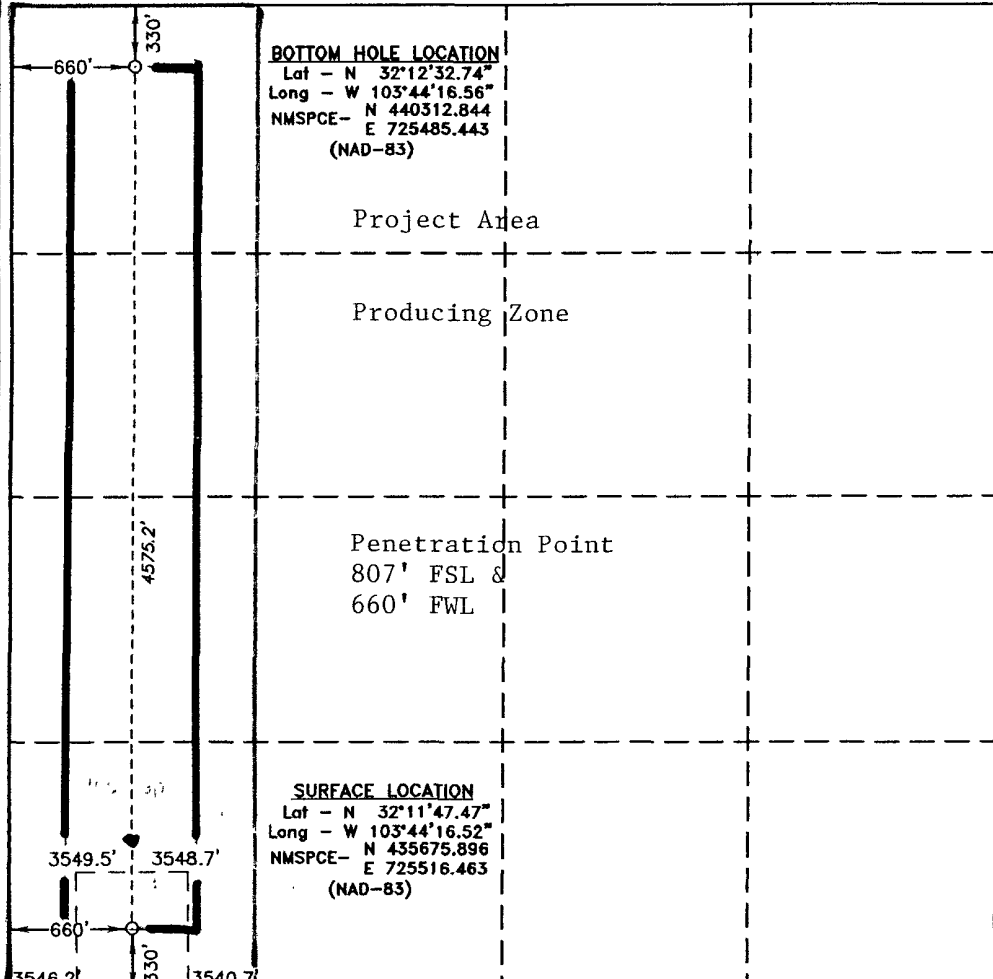
UL or lot No. M	Section 24	Township 24 S	Range 31 E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 660	East/West line WEST	County EDDY
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Bottom Hole Location If Different From Surface

UL or lot No. D	Section 24	Township 24 S	Range 31 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 660	East/West line WEST	County EDDY
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Dedicated Acres 160 W2W2	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>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 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><i>Cy Cowan</i> 8/18/09 Signature Date</p> <p>Cy Cowan 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 JULY 17, 2009 Signature of Surveyor [Signature] Professional Surveyor No. 2155 Certificate No. [Signature] Jones .7977</p> <p>BASIN SURVEYS</p>
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YATES PETROLEUM CORPORATION  
Haracz "AMO" Federal #1H  
330' FSL and 660' FWL, Surface Hole  
330' FNL & 660' FWL, Bottom Hole  
Section 24-T24S-R31E  
Eddy County, New Mexico

1. The estimated tops of geologic markers are as follows:

Rustler	670'	Brushy Canyon	6640'-oil
Top of Salt	1020'	Brushy Canyon MKR	8133'-oil
Base of Salt	4270'	Basal Sand Target	8622'-oil
Bell Canyon	4550'	TVD	8350'
Cherry Canyon	5470'-oil	TMD	12765'

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 160'  
Oil or Gas: Oil Zones: 5470', 6640', 8133' and 8622'.

3. Pressure Control Equipment: BOPE will be installed on the 13 3/8" casing and on the 9 5/8" casing and rated for 3000# BOP System. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.
4. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when Kelly is not in use.
5. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: All new casing to be used

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-900'	900'
12 1/4"	9 5/8"	40#	J-55	ST&C	0-100'	100'
12 1/4"	9 5/8"	36#	J-55	ST&C	100-3300'	3200'
12 1/4"	9 5/8"	40#	J-55	ST&C	3300-4300'	1000'
12 1/4"	9 5/8"	40#	HCK-55	ST&C	4300-4400'	100'
**8 3/4"	5 1/2"	17#	HCP-110	LT&C	0'-12765'	12765'

\*\*This well will be drilled vertically to 7872'. At 7872' well will be kicked off and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 8622' MD (8350' TVD). If hole conditions dictate, 7" casing will be set and cemented. A 6 1/8" hole will then be drilled to 12765' MD where 4 1/2" casing will be set and cemented.

If 7" casing is not set then the hole will be reduced to 7 7/8" and drilled to 12765' TMD where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 807' FSL and 660' FWL of Section 24, T24S-R31E. Deepest TVD in the well is 8350' in the lateral.

# HARACZ AMO FEDERAL #1H

## Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 8,622' MD (8,350' TVD). A 6 1/8" hole will then be drilled to 12,765' MD (8,350' TVD) where 4 1/2" casing will be set and cemented with one stage

### 2nd Intermediate

0 ft to 300 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	

300 ft to 5,800 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 #		366,000 #		6.25	

5,800 ft to 8,100 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	

8,100 ft to 8,622 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
5,410 psi	7,240 psi	511,000 #		604,000 #		6.151	

DV tools placed at 7800' & 5700'

Stage I: Cemented w/175sx PVL (YLD 1.41 Wt 13) TOC= 7800'

Stage II: Cemented w/450sx PVL (YLD 1.41 Wt 13) TOC= 5700'

Stage III: Cemented w/150sx Lite Crete (YLD 2.78 Wt 9.9), tail w/100sx PVL (YLD 1.41 Wt 13) TOC= 3900'

### Production

0 ft to 12,765 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
4.5 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	273,000 #		367,000 #		3.875	

DV tool placed at approx. 7800' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7800'.

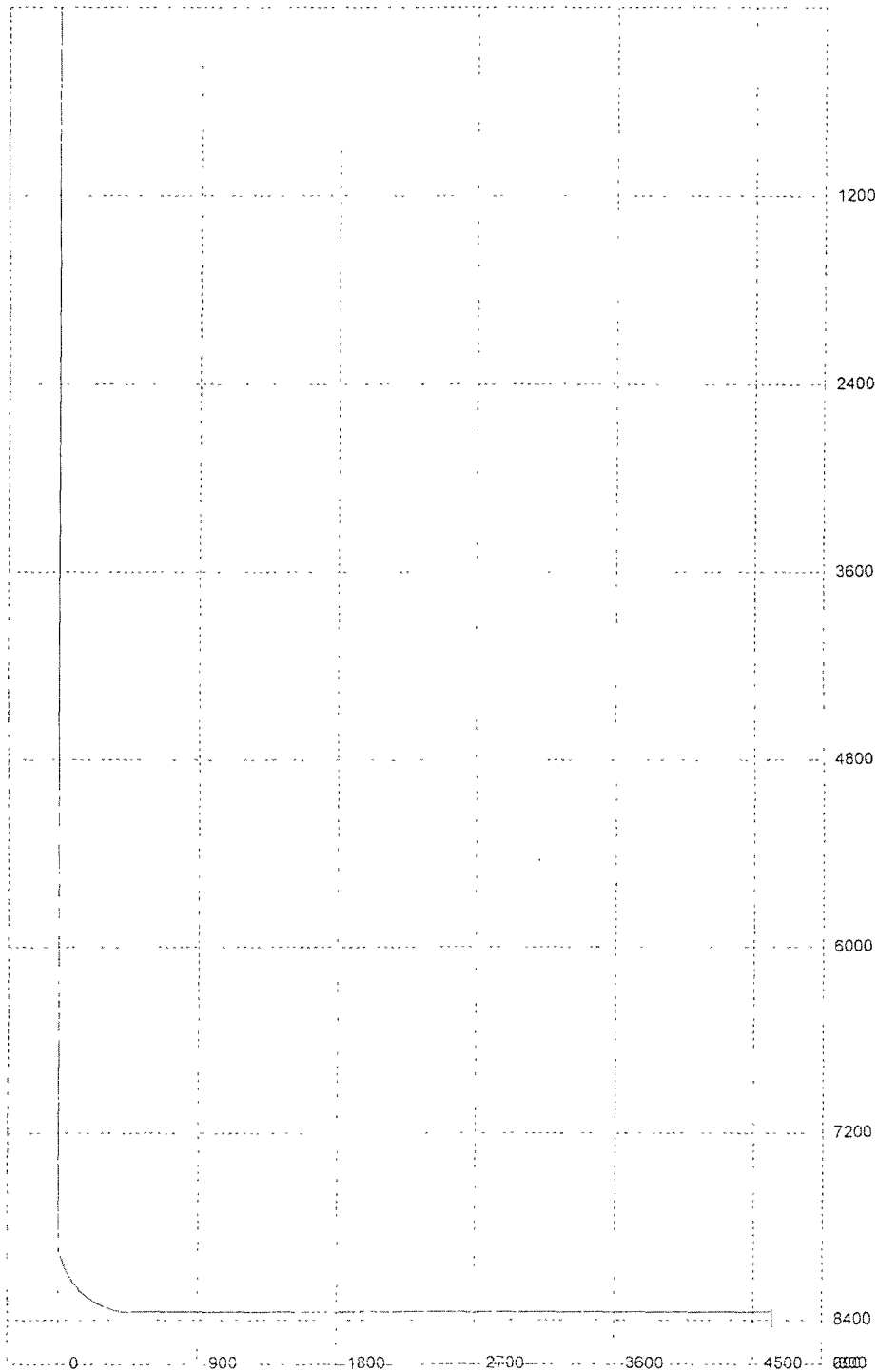
Cemented w/675sx PVL (YLD 1.41 Wt 13) TOC= 7800'

M.D.	Inclination	Azimuth	T.V.D.	N+/S-	E+/W-	D.L.S.	ToolFace	T.F. Ref [HS/GN]	
0	0	0	0	0	0	0			
670	0	0	670	0	0	0			RUSTLER
1,020	0	0	1,020	0	0	0			TOP OF SALT
4,270	0	0	4,270	0	0	0			BASE OF SALT
4,550	0	0	4,550	0	0	0			BELL CANYON
5,470	0	0	5,470	0	0	0			CHERRY CANYON
6,640	0	0	6,640	0	0	0			BRUSHY CANYON
7872	0	0	7872	0	0	12	0	GN	KOP
7875	0.36	0	7875	0.01	0	12	0	HS	
7900	3.36	0	7899.98	0.82	0	12	0	HS	
7925	6.36	0	7924.89	2.94	0	12	0	HS	
7950	9.36	0	7949.65	6.36	0	12	0	HS	
7975	12.36	0	7974.2	11.07	0	12	0	HS	
8000	15.36	0	7998.47	17.05	0	12	0	HS	
8025	18.36	0	8022.4	24.3	0	12	0	HS	
8050	21.36	0	8046.91	32.8	0	12	0	HS	
8075	24.36	0	8068.94	42.51	0	12	0	HS	
8100	27.36	0	8091.43	53.41	0	12	0	HS	
8125	30.36	0	8113.33	65.48	0	12	0	HS	
8133	31.32	0	8120.2	69.58	0	12	0	HS	BRUSHY CANYON MARKER
8150	33.36	0	8134.56	78.67	0	12	0	HS	
8175	36.36	0	8155.07	92.96	0	12	0	HS	
8200	39.36	0	8174.8	108.3	0	12	0	HS	
8225	42.36	0	8193.71	124.65	0	12	0	HS	
8250	45.36	0	8211.73	141.97	0	12	0	HS	
8275	48.36	0	8228.83	160.21	0	12	0	HS	
8300	51.36	0	8244.94	179.32	0	12	0	HS	
8325	54.36	0	8260.03	199.25	0	12	0	HS	
8350	57.36	0	8274.06	219.94	0	12	0	HS	
8375	60.36	0	8286.99	241.33	0	12	0	HS	
8400	63.36	0	8298.78	263.38	0	12	0	HS	
8425	66.36	0	8309.4	286.01	0	12	0	HS	
8450	69.36	0	8318.82	309.16	0	12	0	HS	
8475	72.36	0	8327.02	332.78	0	12	0	HS	
8500	75.36	0	8333.96	356.79	0	12	0	HS	
8525	78.36	0	8339.65	381.13	0	12	0	HS	
8550	81.36	0	8344.05	405.74	0	12	0	HS	
8575	84.36	0	8347.15	430.54	0	12	0	HS	
8600	87.36	0	8348.96	455.47	0	12	0	HS	
8621.94	89.99	0	8349.47	477.41	0	12	0	HS	TARGET BASAL SAND
12764.54	89.99	0	8350	4620	0	0			LATERAL TD

Well will be drilled vertically to 7872'. At 7872' well will be kicked off at 12 degrees per 100' with a 8 3/4" hole to 8622' MD (8,350' TVD) If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 12,765' MD (8,350' 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 12,765' MD (8,350' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 807' FSL and 660' FWL, 24-24S-31E. Deepest TVD in the well is 8350' in the lateral

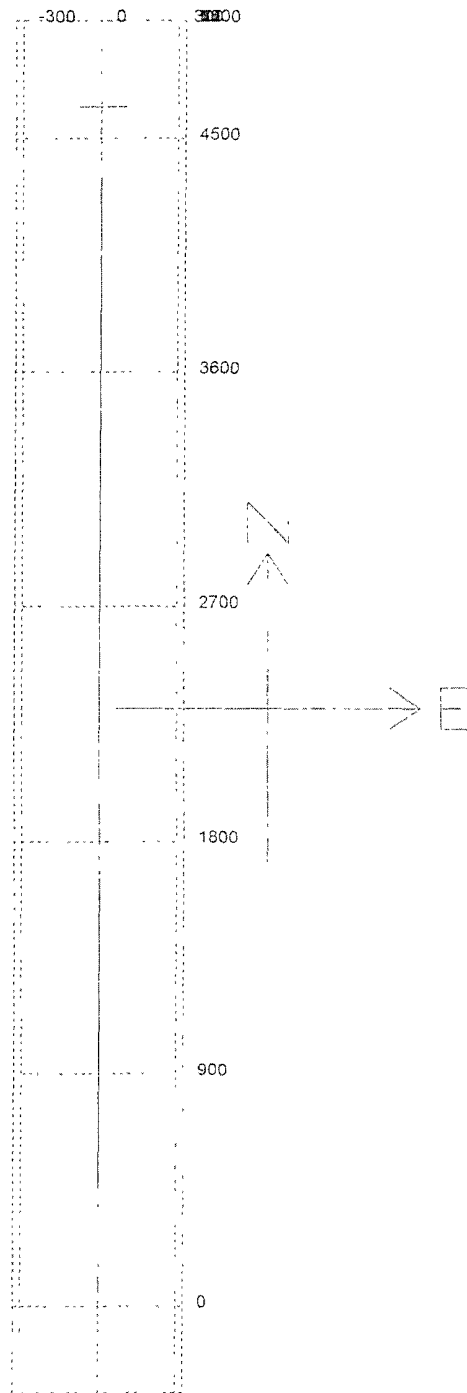
# 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation  
Well: Haracz AMO Federal #1H



# 3D<sup>3</sup> Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation  
Well: Haracz AMO Federal #1H





1. Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.125

B. CEMENTING PROGRAM:

Surface Casing: Lead with 500 sacks 'C' Lite (WT. 12.5 YLD 1.96). Tail in 200 sacks 'C' with 2% CaCL<sub>2</sub> (WT 14.8 YLD 1.34). TOC surface.

Intermediate Casing: 1250 sacks of 'C' Lite (WT 12.6 YLD 2.0) Tail in with 200 sacks 'C' (WT 14.8 YLD 1.34). TOC surface

Production Casing

Stage One: 1400 sacks PecosViLt (WT 13.0 YLD 1.41). TOC. 7800'. DV Tool set at 7800'.

Stage Two Lead with 750 sacks PecosViLt (WT 13.0 YLD 1.41). TOC 5700'. DV Tool set at 5700'.

Stage Three Lead in with 300 sacks Lite Crete (WT 9.9 YLD 2.66). Tail in with 100 sacks PecosViLt (WT 13.0 YLD 1.41). TOC 3900'.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-900'	Fresh Water	8.6-9.2	32-35	N/C
900'-4400'	Brine Water	10.0-10.2	28	N/C
4400'-7872'	Cut Brine	8.5-8.8	28-29	N/C
7872'-12765'	Cut Brine(Lateral Section)	8.5-8.8	28-29	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM:

Samples: 30' samples to 3000'. Every 10' from 3000' to TD

Logging: Platform Hals; CMR.

Coring: None anticipated

DST's: None Anticipated

Mudlogging: From out of surface casing.

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-900' 430 PSI

900'-4400' 2235 PSI

4400'-8350' 3820 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: Water flow or lost circulation possible 6900'-7500'.

H<sub>2</sub>S Zones Anticipated: H<sub>2</sub>S waterflow possible below 2800'.

Maximum Bottom Hole Temperature: 150 F

9. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 20 days.

YATES PETROLEUM CORPORATION  
Haracz AMO Federal #1H  
330' FSL & 660' FWL, Surface Hole  
330' FNL & 660' FWL, Bottom Hole  
Section 24-T24S-R31E  
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed wellsite is located approximately 29 miles southeast of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Carlsbad on Highway 62-180 to State Road 31. Turn south on 31 and go to Highway 128 (Jal Highway). Turn left on HWY 128 and go east for approximately 18.7 miles to the intersection of Highway 128 and Buck Jackson Road. Turn right on Buck Jackson Road and go approx. 2.9 miles. Turn left here at a cattle guard and lease road and go approximately .5 of a mile to the Cotton Draw AJT Federal #2 well location. From the northeast corner of the Cotton Draw AJT well location follow the existing lease road east for approximately 300 feet turn right here and follow the lease road south for approximately .9 of a mile. Turn left here and go east to the Haracz AMO Federal #9H well location. The new access road will start here going east for approximately .2 of a mile to the southwest corner of the Haracz AMO Federal #1H well location.

2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately .2 of a mile in length from the point of origin to the southwest corner of the well location.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Traffic turnouts may be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

- A. There is drilling activity within a one-mile radius of the well site.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed well site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. There are production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric line can be built, if needed.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a brine water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

The dirt contractor will be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. A closed loop system will be used to drill this well.
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the “Pit Rule” 19.15.17 NMAC.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None

9. WELLSITE LAYOUT:

- A. Exhibit B shows the relative location and dimensions of the well pad, the closed loop mud system, location of the drilling equipment, rig orientation and access road approach. The proposed well location will be approximately 350' x 300'. All of the location will be constructed within the 600' x. 600' staked area.
- B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the “Pit Rule” 19.15.17 NMAC.

10. PLANS FOR RESTORATION:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- C. If the proposed well is plugged and abandoned, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible.

11. SURFACE OWNERSHIP:

Federal Surface and Federal Minerals managed by the supervision of the Carlsbad BLM.

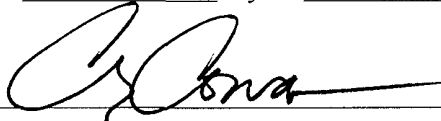
12 OTHER INFORMATION:

- A. The primary use of the surface is for grazing.
- B. Refer to the archaeological report for a description of the topography, flora, fauna, soil, characteristics, dwellings, and historical and cultural sites.

CERTIFICATION  
YATES PETROLEUM CORPORATION  
Haracz AMO Federal #8H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has full knowledge of state and federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 18th day of August 2009

Signature 

Name Cy Cowan

Position Title Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (505) 748-4372

Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor

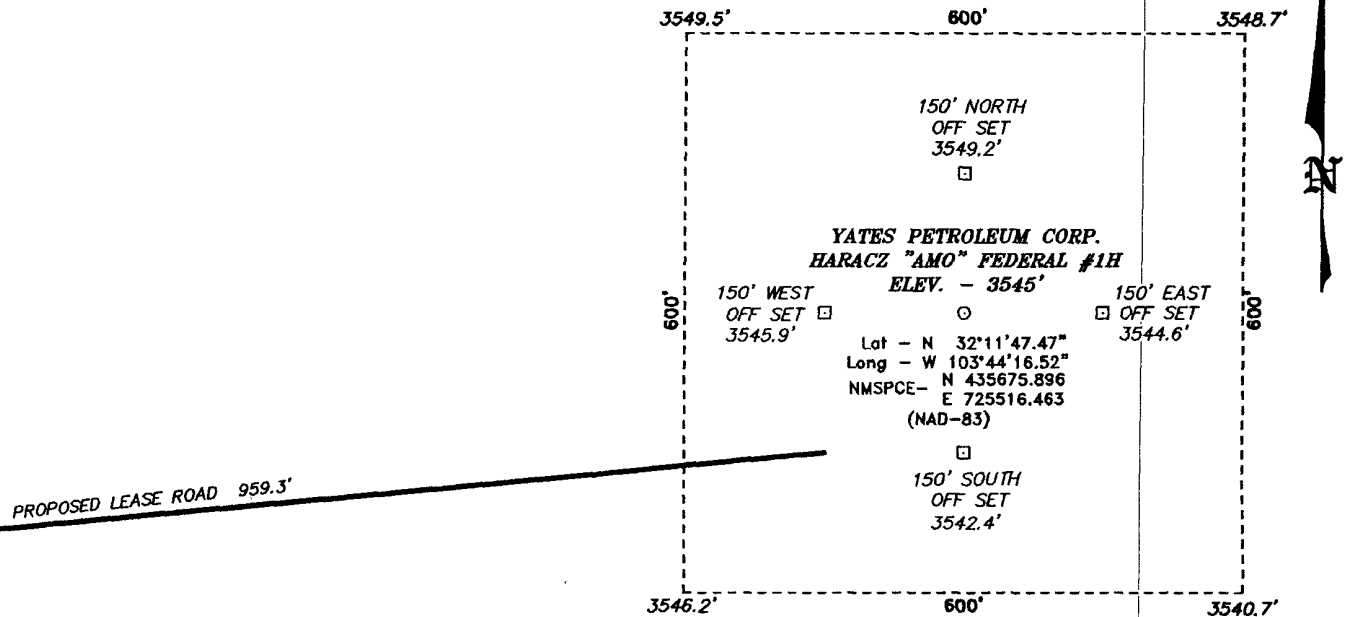
Address (if different from above) Same as above.

Telephone (if different from above) (505) 748-4221

E-mail (optional) \_\_\_\_\_



SECTION 24, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET  
SCALE: 1" = 200'

**YATES PETROLEUM CORP.**

REF: HARACZ "AMO" FEDERAL #1H / WELL PAD TOPO

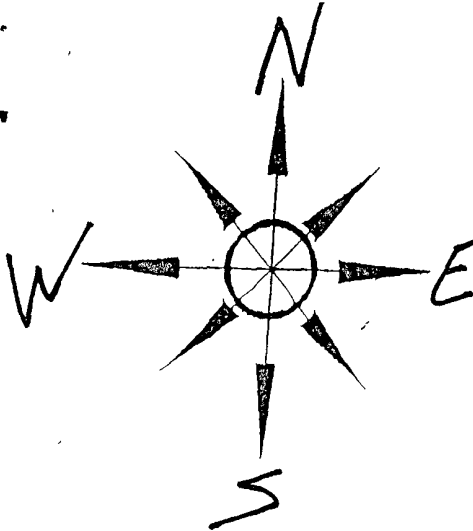
THE HARACZ "AMO" FEDERAL #1H LOCATED 330'  
FROM THE SOUTH LINE AND 660' FROM THE WEST LINE OF  
SECTION 24, TOWNSHIP 24 SOUTH, RANGE 31 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 21557 Drawn By: J. SMALL

Date: 07-20-2009 Disk: JMS 21557

Survey Date: 07-17-2009 Sheet 1 of 1 Sheets

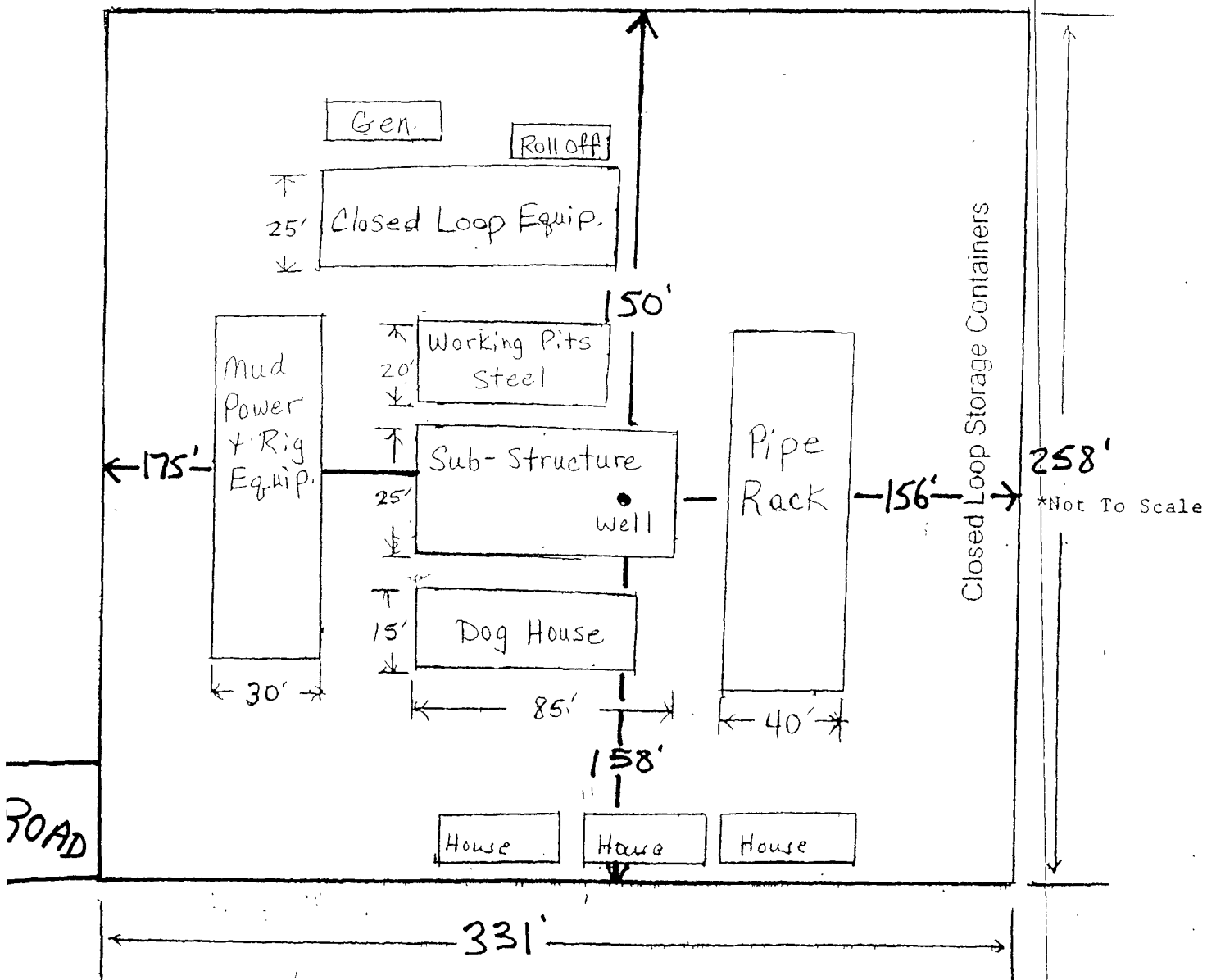


# Yates Petroleum Corporation

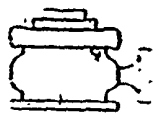
Location Layout for Permian Basin

YATES PETROLEUM CORPORATION  
Haracz AMO Federal. #1H  
330' FSL and 660' FWL SHL  
330' FNL and 660' FWL BHL  
Section 24, T24S-R31E  
Eddy County, New Mexico Exhibit B

## Closed Loop Design Plan







# Yates Petroleum Corporation

BOP-3

## Typical 3,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack

YATES PETROLEUM CORPORATION

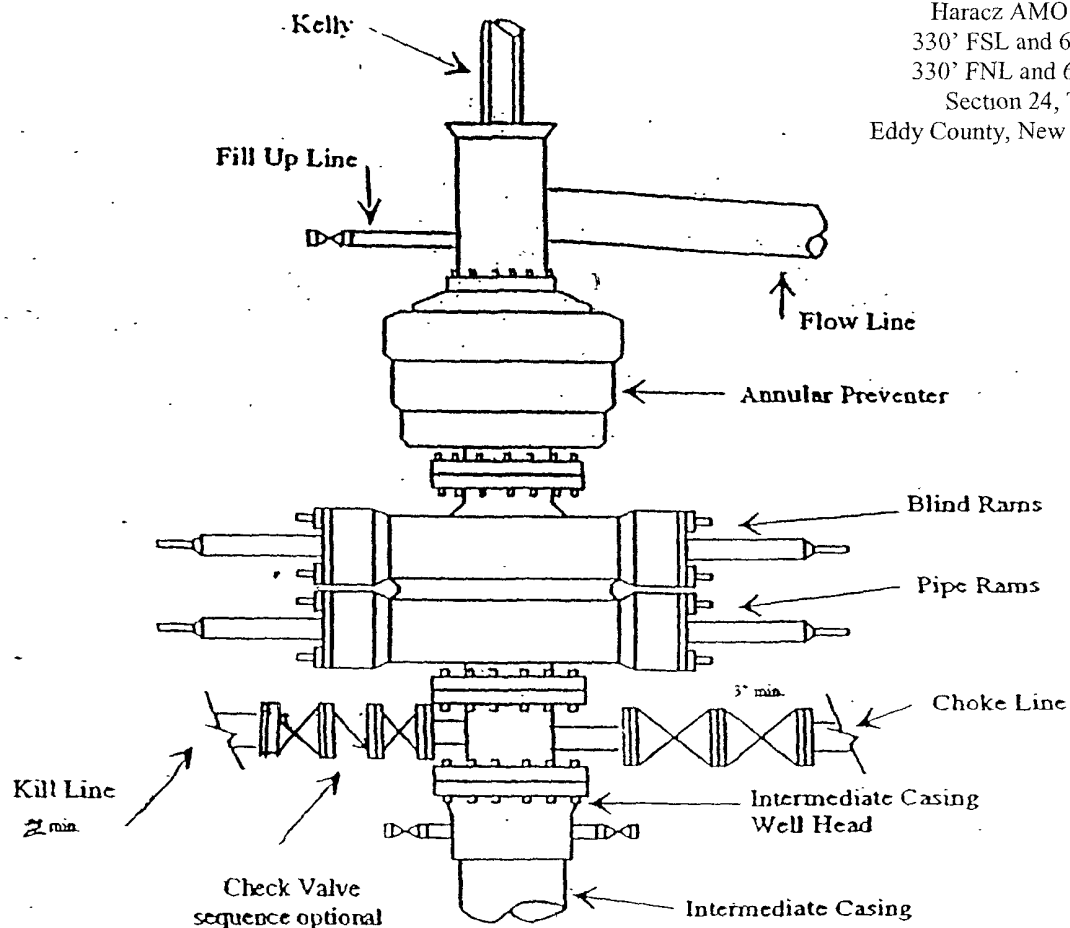
Haracz AMO Federal. #1H

330' FSL and 660' FWL SHL

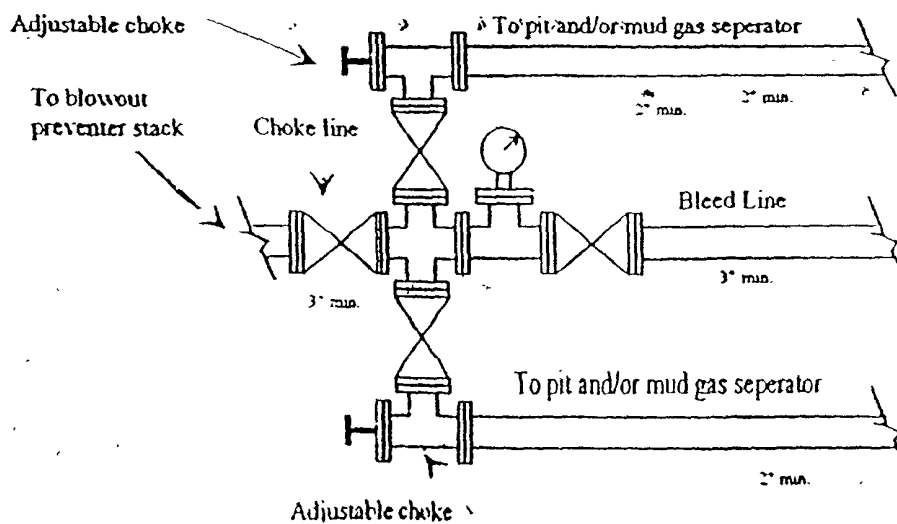
330' FNL and 660' FWL BHL

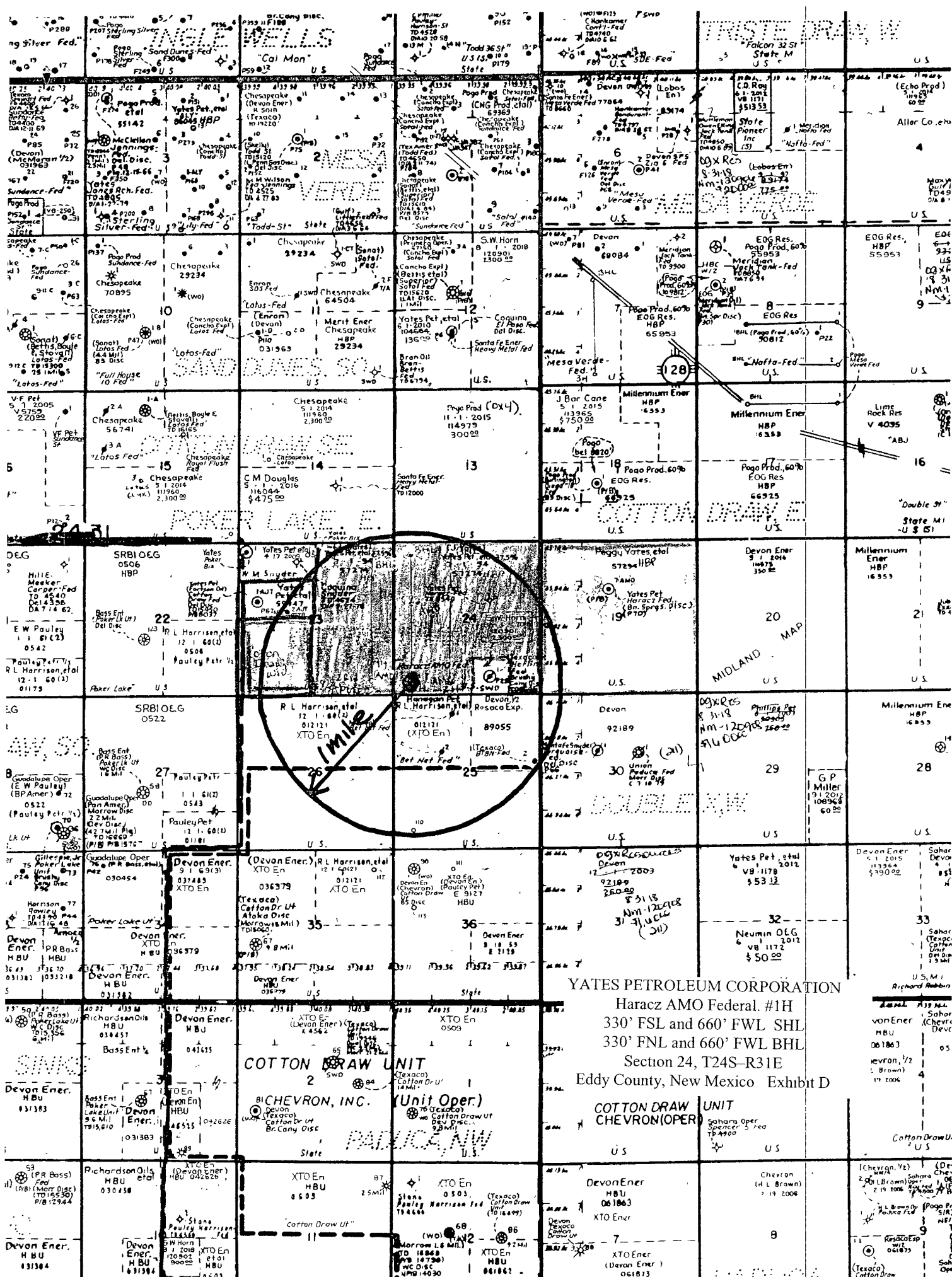
Section 24, T24S-R31E

Eddy County, New Mexico Exhibit C



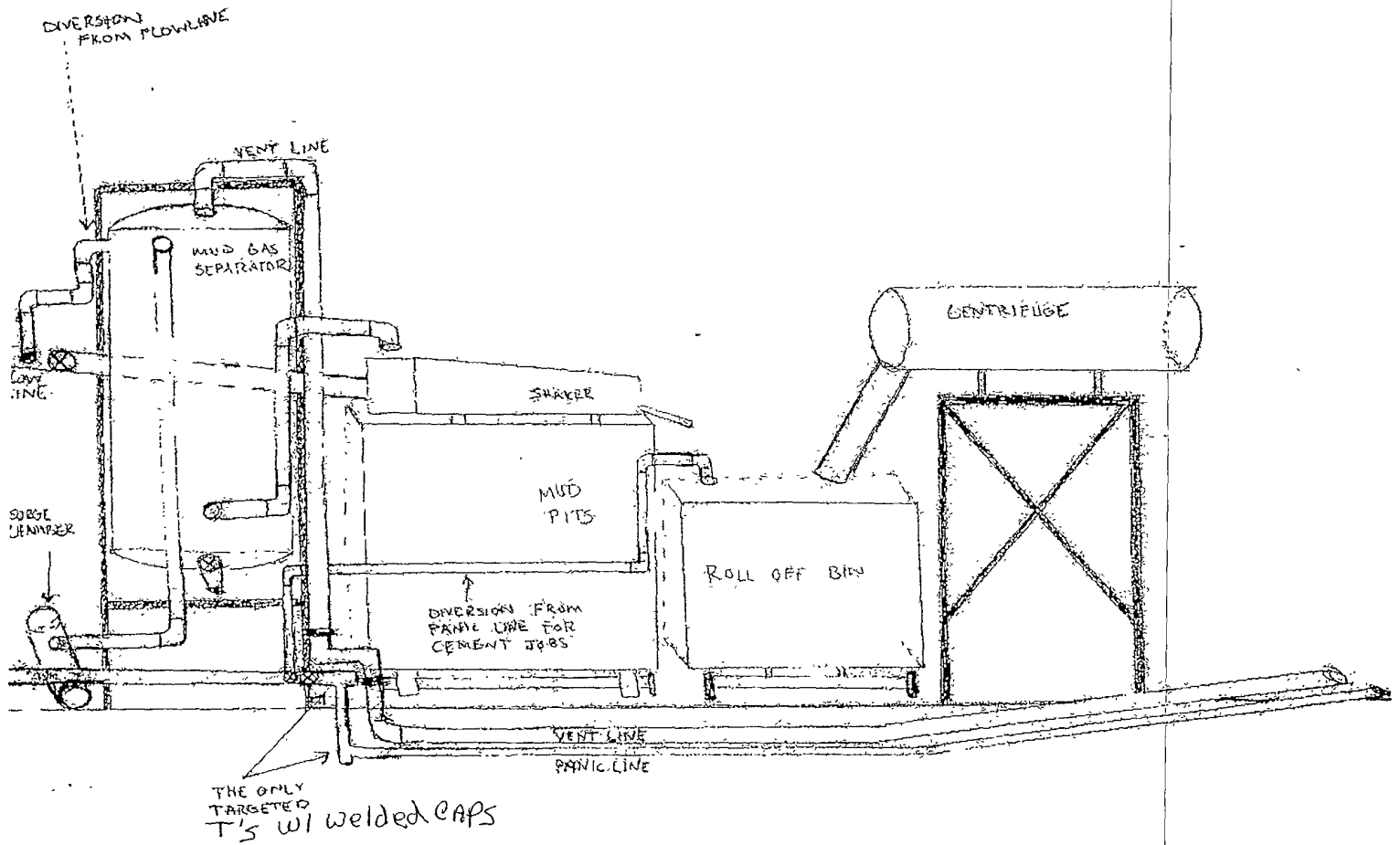
Typical 3,000 psi choke manifold assembly with at least these minimum features





YATES PETROLEUM CORPORATION  
Piping from Choke Manifold  
to the Closed-Loop Drilling Mud System

YATES PETROLEUM CORPORATION  
Haracz AMO Federal #1H  
330' FSL and 660' FWL SHL  
330' FNL and 660' FWL BHL  
Section 24, T24S-R31E  
Eddy County, New Mexico Exhibit E



# **Yates Petroleum Corporation**

**105 S. Fourth Street  
Artesia, NM 88210**

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

**For**

### **Haracz AMO Federal #1H**

**330' FSL and 660' FWL Surface Hole Location**

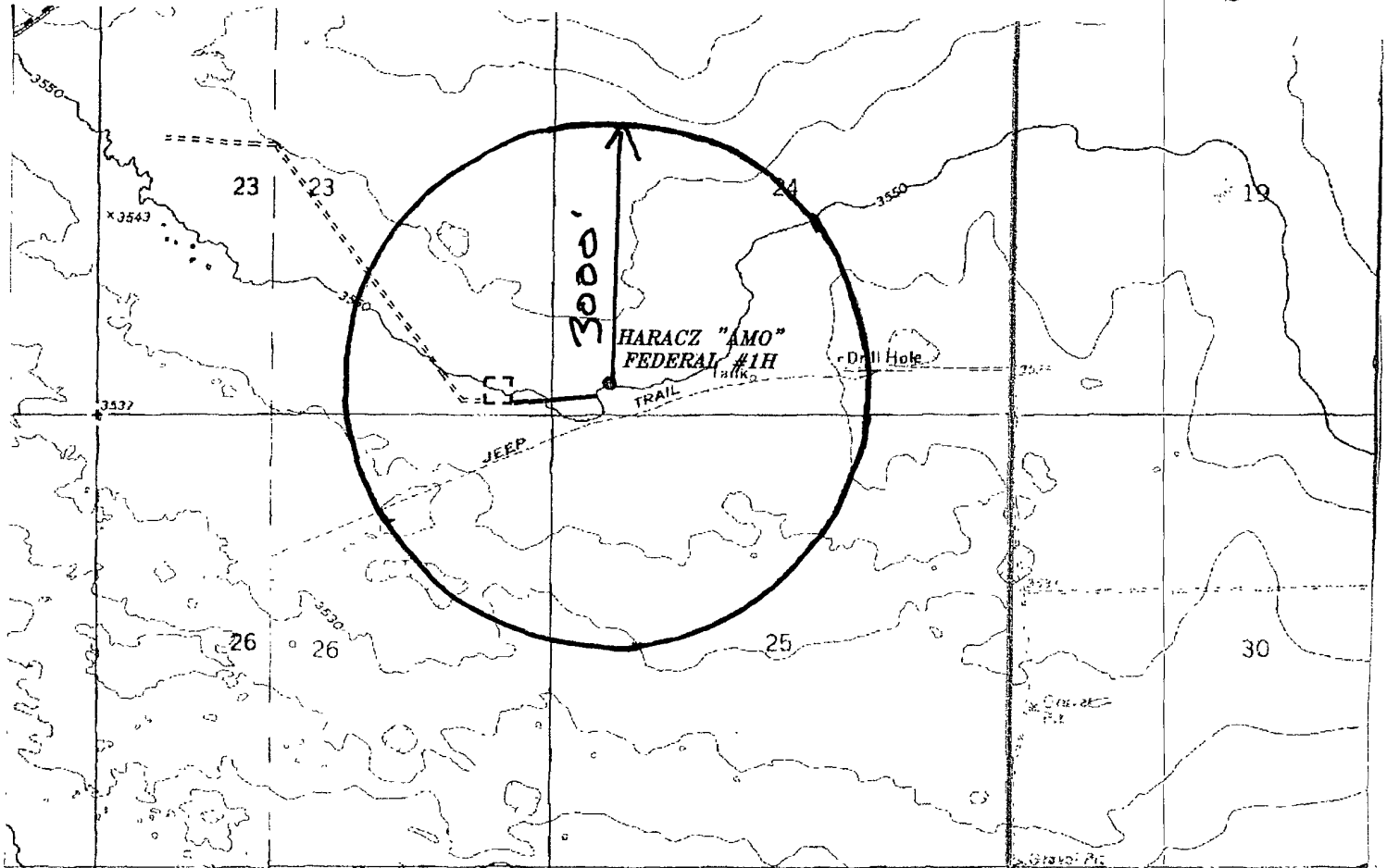
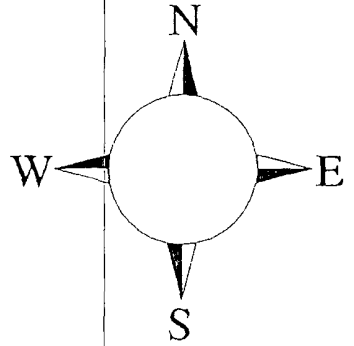
**330' FNL and 660' FWL Bottom Hole Location**

**Section 24, T-24S, R-31E**

**Eddy County NM**

## Haracz AMO Federal #1H

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***

---

YPC Office .....	(505) 748-1471
Paul Ragsdale/Operations Manager.....	(505) 748-4520
Ron Beasley/Production Manager .....	(505) 748-4210
Wade Bennett/Prod Superintendent .....	(505) 748-4236
Mike Lankin/Drilling .....	(505) 748-4222
Paul Hanes/Prod. Foreman/Roswell .....	(505) 624-2805
Tim Bussell/Drilling Superintendent .....	(505) 748-4221
Artesia Answering Service .....	(505) 748-4302
(During non-office hours)	

### **Agency Call List**

#### **Eddy County (505)**

##### **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 .....	(505) 746-2757
B. J. Services.....	(505) 746-3569
Flight For Life -4000 24th St, Lubbock, TX .....	(806) 743-9911
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

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corporation
LEASE NO.:	NM-57274
WELL NAME & NO.:	Haracz AMO Federal #1H
SURFACE HOLE FOOTAGE:	330' FSL & 660' FWL
BOTTOM HOLE FOOTAGE:	330' FNL & 660' FEL
LOCATION:	Section 24, T. 24 S., R31 E., NMPM
COUNTY:	Eddy County, New Mexico

### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie Chicken
  - Ground-level Abandoned Well Marker
  - Contact Lease Holder
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☒ **Closed Loop System/Interim Reclamation**
- ☐ **Final Abandonment/Reclamation**



## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

1. Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.
2. Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.
3. The lease holder will be contacted prior to the construction of the access road and well pad to ensure the water line located approximately 300 feet south of the well is avoided during construction.  
Jimmie Richardson: 575-706-4063  
Jesus Hernandez: 575-706-2349

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Closed Loop System: v-door north

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

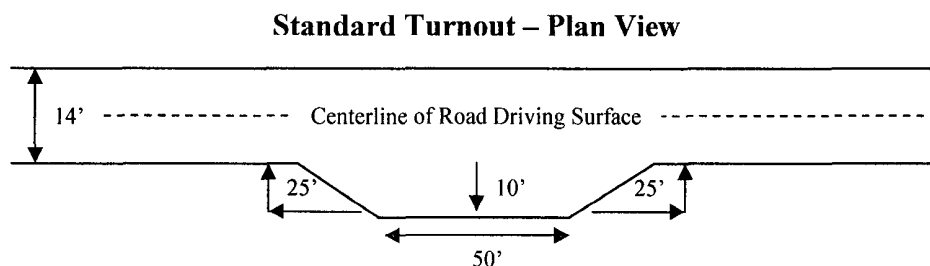
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

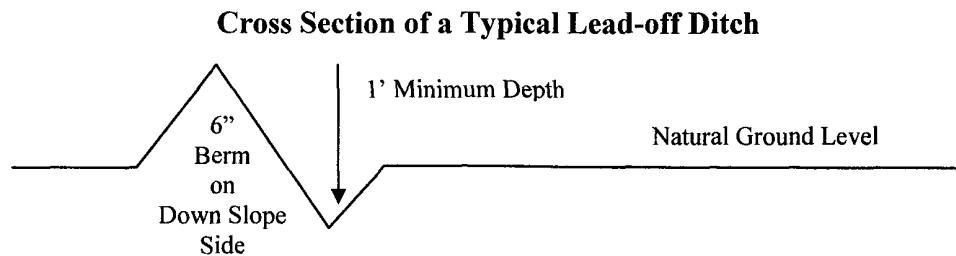
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



## Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

## Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

## Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for

the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

**Fence Requirement**

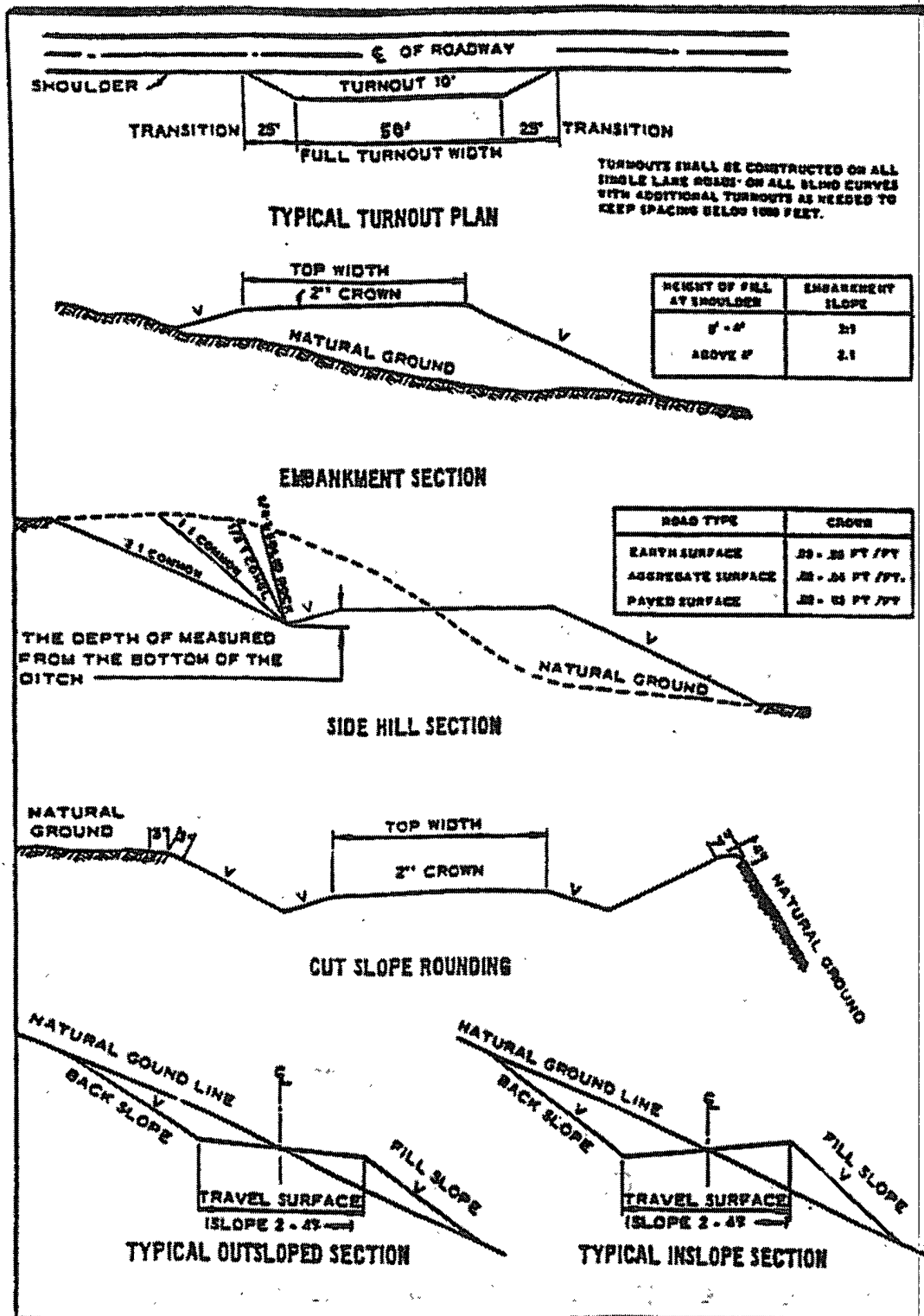
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**



**Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possible lost circulation in Delaware & Bone Spring Formations  
Possible H2O flows in Castile, Salado, Delaware & Bone Spring**

1. The 13-3/8 inch surface casing shall be set at approximately **900 feet** (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:  
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - a. First stage to DV tool, cement shall:  
☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

c. Third stage DV tool shall:

- ☒ Cement should tie-back at least **500** feet into **9-5/8"** casing string. **Operator shall provide method of verification.**

**Contingency casing program:**

4. The minimum required fill of cement behind the **7** inch intermediate casing is:

- ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

5. The minimum required fill of cement behind the **4-1/2** inch production casing is:

- ☒ Cement to come to DV tool depth. Operator shall provide method of verification.

6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

**C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **Piping from choke manifold and to flare to be as straight as possible.**
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period. Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
- b. The tests shall be done by an independent service company utilizing a test plug.
- c. The results of the test shall be reported to the appropriate BLM office.
- d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2:III.D shall be followed.

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## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

### **C. ELECTRIC LINES**

## **IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

### Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

## **X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.