

Form 3160-3
(February 2005)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTERFORM APPROVED
OMB NO 1004-0137
Expires March 31, 2007

1a Type of Work: ☒ DRILL ☐ REENTER		5 Lease Serial No LC-062376
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Yates Petroleum Corporation 025575		7. If Unit or CA Agreement, Name and No. N/A
3a Address 105 South Fourth Street, Artesia, NM 88210	3b. Phone No. (include area code) 575-748-4120	8. Lease Name and Well No Antweil ANU Federal #2H <151367
4. Location of well (Report location clearly and in accordance with any State requirements *) At surface 330' FSL & 2310' FEL, 30-19S-30E, SESW At proposed prod. zone 330' FNL & 1980' FEL, 30-19S-30E, NWNE		9. API Well No 30-015-40425 TES 6/26
14. Distance in miles and direction from the nearest town or post office* Approximately 40 miles southeast of Artesia, New Mexico		10. Field and Pool, or Exploratory PARKWAY WINDY Bone Spring
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any) 330'		11 Sec, T., R, M, or Blk. And Survey or Area Sec. 30-19S-30E
16. No. of acres in lease 1920.00	17. Spacing Unit dedicated to this well W2E2, Section 30, T19S-R30E	12. County or Parish Eddy
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1980' (Plugged well)	19 Proposed Depth 8414' TVD & 12829' MD No Pilot Hole	13 State NM
20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434	21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3335' GL	22. Aproximate date work will start* ASAP
23. Estimated duration 60 days	24. Attachments	

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

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

25 Signature 	Name (Printed/ Typed) Travis Hahn	Date 2/10/2012
Title Land Regulatory Agent		
Approved By (Signature) /s/ Jesse J. Juen	Name (Printed/ Typed)	Date JUN 14 2012
Title STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to cc operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

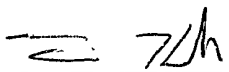
* (Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN
SEE ATTACHED FOR
CONDITIONS OF APPROVALRECEIVED
JUN 25 2012
NMOCD ARTESIAAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

CERTIFICATION
YATES PETROLEUM CORPORATION
Antweil ANU Federal #2H

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 the 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 31 day of _____ 2011

Signature 

Name Travis Hahn

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (575) 748-4120

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

Address (if different from above) Same as above

Telephone (if different from above) (575) 748-4221

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

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

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 30-015-40425	Pool Code 49622	Pool Name Parkway Bone Spring
Property Code 15136	Property Name ANTWEIL "ANU" FEDERAL	Well Number 2H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3335'

Surface Location

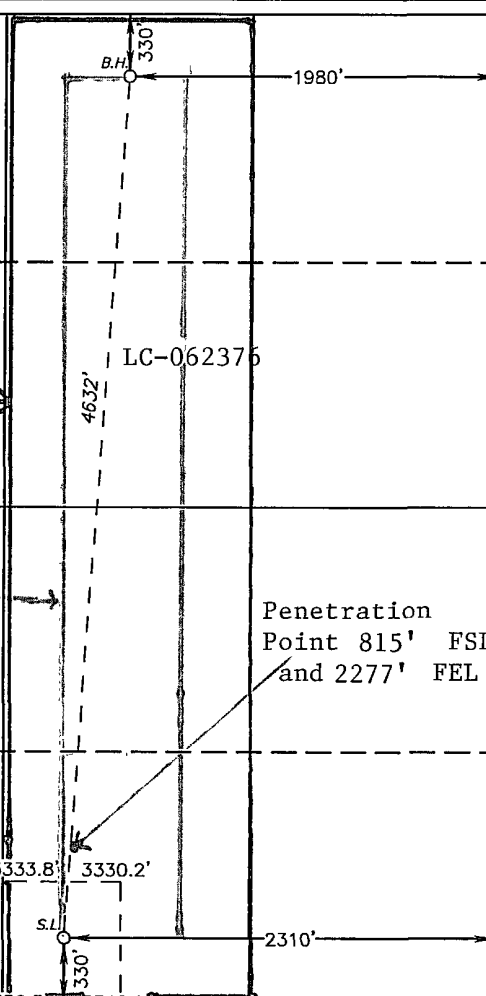
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	30	19 S	30 E		330	SOUTH	2310	EAST	EDDY

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
B	30	19 S	30 E		330	NORTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			6-14 12829

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

PROPOSED BOTTOM HOLE LOCATION Lat - N 32°38'15.99" Long - W 104°00'33.00" NMSPCE- N 595905.903 E 641123.479 (NAD-83)		OPERATOR CERTIFICATION 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. <u>Travis Hahn</u> 1/30/12 Signature Date Travis Hahn Printed Name thahn@yatespetroleum.com Email Address
SURFACE LOCATION Lat - N 32°37'30.29" Long - W 104°00'30.89" NMSPCE- N 591285.958 E 640805.354 (NAD-83)		SURVEYOR CERTIFICATION 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. <u>GARY L. JONES</u> 10/20/11 Date Surveyed <u>GARY L. JONES</u> Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS 25630

YATES PETROLEUM CORPORATION

Antweil ANU Federal #2H
330' FSL & 2310' FEL, Surface Hole
330' FNL & 1980' FEL, Bottom Hole
Section 30 -T19S-R30-E
Eddy County, New Mexico

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

Rustler	378'	Cherry Canyon	3723'
Top of Salt	403'	Bone Spring Lime	4310'
Base of Salt	1383' Oil	Avalon Sand	5860' Oil
Yates	1483' Oil	Middle Avalon	7430' Oil
Capitan Reef	1750' Water	Lower Avalon	8030' Oil
Delaware	3583'	Bone Springs 1/SD	8370' Oil
Brushy Canyon	3650' Oil	Bone Springs 2/SD	8219' Oil
		Target Zone SBSG	8695'
		TD (Lateral Hole)	12829' MD

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

Water: Approx. 0' - 400' & 1750' - 3580'

Oil or Gas: See above--All Potential Zones

3. Pressure Control Equipment: Yates Petroleum Corporation hereby request a variance to allow us to place a 2000 PSI annular system with a 17.5" opening will be installed on the 20" casing. A 3000 PSI BOP with a 13 5/8" opening will be installed on the 13 3/8" casing and also on the 9 5/8" casing. Pressure tests to 3000 PSI and held for 30 minutes 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:

A. 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.

1. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: (All New) 13 3/8" will be J-55/H-40 Hybrid

<i>See COA</i>	Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
	26"	20"	94#	J-55	Buttress Thread	0-400' <i>350'</i>	400'
	17 1/2"	13 3/8"	54.50#	J-55	ST&C	0'-100'	100'
	17 1/2"	13 3/8"	48#	H-40	ST&C	100'-1200'	1100'
	17 1/2"	13 3/8"	54.50#	J-55	ST&C	1200'-1700'	500'
	12 1/4"	9 5/8"	36#	J-55/K-55	ST&C	0'-3800'	3800'
	8 3/4"	5 1/2"	17#	P-110	LT&C	0'-7937'	7937'
	8 1/2"	5 1/2"	17#	L-80	Buttress Thread	7937'-12829'	4892'

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

B. CEMENTING PROGRAM:

Surface casing: 900 sacks of Class C + 2% CaCl₂ (YLD 1.34 WT 14.80) Designed with 100% excess, TOC-Surface.

Intermediate Casing 1: Lead with 905 sacks of Class PozC 35:65:6 (YLD 2.00 WT 12.50); tail in with 200 sacks of Class C + 2% CaCl₂ (YLD 1.34 WT. 14.80). Designed with 100% excess, TOC-Surface.

Intermediate Casing 2: Lead with 1,650 sacks of Class PozC 35:65:6 (YLD 2.00 WT 12.50); tail in with 200 sacks of Class C + 2% CaCl₂ (YLD 1.34 WT 14.80). Designed with 100% excess, TOC-Surface.

Production Casing: Cement to be done with DV Tool in two stages at approximately 7900' & 4000'.

Stage 2 from 0'-7900'; Lead cement with 545 sacks of Class PozC 35:65:6 (YLD 1.83 WT. 13.00); tail in with 200 sacks of Class C + 2% CaCl₂ (YLD 1.34 WT 14.80). Designed with 35% excess, TOC-0'.

Stage 1 from 4000'-7900'; Lead with 515 sacks Class PozC 35:65:6 (YLD 2.00 WT 12.50); tail in with 200 sacks of Pecos Valley Lite (YLD 1.41 WT. 13.00). 30% CaCO₃, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. TOC- 4000' Designed with 35% excess.

Well will be drilled vertically depth to 7937' and drilled directionally at 12 degrees per 100' with a 8 3/4" hole to 8695' MD (8414' TVD). If hole conditions dictate, 7" casing will be set at landing point 8695' MD (8414' TVD) and cemented to surface in two stages (DV tool will be set at 4600') and a 4 1/2" liner hanger with PBR set from kick off point to lateral TD and packers and ports will be utilized. If 7" is not set, hole will then be reduced to an 8 1/2" and drilled to 12829' MD (8343' TVD) where 5 1/2" casing will be set and cemented from Kick off point to surface. A DV tool will be set at 7900' and at 4000'. Packer's Plus packer port system will be utilized in the lateral. Penetration point of producing zone will be encountered at 816' FSL & 1992' FEL, Section 30-19S-30E. Deepest TVD is 8414' in the lateral.

*Summary
For DIR DRILL*

5. Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0-400' <i>350</i>	Fresh Water	8.6-9.2	32-34	N/C
400'-1480' <i>1700</i>	Brine Water	10.0-10.2	28-29	N/C
1480'-3800'	Fresh Water	8.6-8.8	28-29	N/C
3800'-12829'	Cut Brine (lateral)	8.8-9.2	28-32	<10-15

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. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM:

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

Logging: Platform HRLA CMR to 30 degree deviation.

Coring: As warranted.

DST's: As warranted.

7. Abnormal Conditions, Bottom hole pressure and potential hazards:

Anticipated BHP:

From: 0	TO: 400'	Anticipated Max. BHP:	191	PSI
From: 450'	TO: 1480'	Anticipated Max. BHP:	1739	PSI
From: 3800	TO: 8414'	Anticipated Max. BHP	4025	PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: Possible in Capitan Reef

H₂S may be encountered.

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 65 days to drill the well with completion taking another 30 days.

Antweil ANU Federal #2H

Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 8,695' MD (8,414' TVD). A 6 1/8" hole will then be drilled to 12,829' MD (8,343' TVD) where a 4 1/2" liner will be set with a packer/port system

2nd Intermediate

0 ft to 8,695 ft		Make up Torque ft-lbs			Total ft =	8,695
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 tool placed at 4500'.

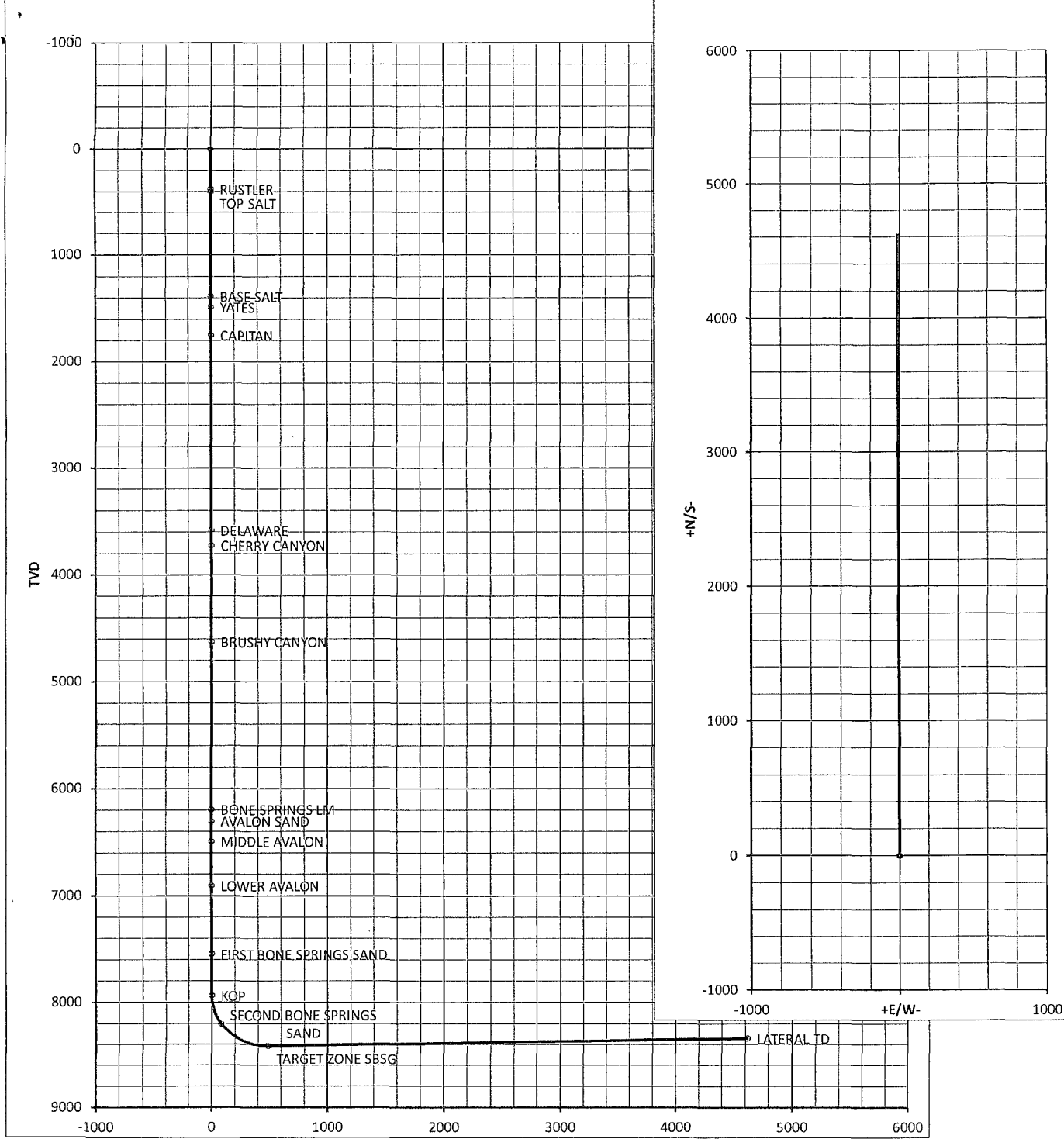
Stage I Lead w/480sx 35.65 6 PzC (YLD 2.0 Wt 12.5), w/200sx PVL (YLD 1.41 Wt 13) 8695' - 4500'

Stage II Lead w/540sx 35.65.6 PzC (YLD 2.0 Wt 12.5), tail w/200sx Class C (YLD 1.34 Wt 14.8) 4500' - 0'

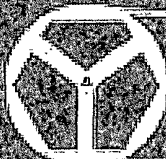
Production

7,700 ft to 12,829 ft		Make up Torque ft-lbs			Total ft =	5,129
O D.	Weight	Grade	Threads	opt	min	mx
4.5 inches	11.6 #/ft	L-80	BT&C			
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
6,350	7,780 psi	212,000 #		267,000 #		3.875

4 1/2" liner will have a packer/port system in the lateral. No cement.



Co:	Yates Petroleum Corporation					Units:	Feet, °, 7100ft		VS Az:	359.85		Method:	Minimum Curvature	
Drillers:	0					Elevation:			Map System:	NAD83, St. Plane, Wyoming West				
Well Name:	Antweil ANU Federal #2H					Northing:			Latitude:					
Location:	Sec. 19, 19S-30E					Easting:			Longitude:					
30 Yates Petroleum Corporation: Antweil ANU Fed. #2H														
No.	MD	CL	Inc.	Azi	TVD	VS	N/S	E/W	BR	WR	DLS	Comments		
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
1	378.00	378.00	0.00	360.00	378.00	0.00	0.00	0.00	0.00	0.00	0.00	RUSTLER		
2	403.00	25.00	0.00	360.00	403.00	0.00	0.00	0.00	0.00	0.00	0.00	TOP SALT		
3	1383.00	980.00	0.00	360.00	1383.00	0.00	0.00	0.00	0.00	0.00	0.00	BASE SALT		
4	1483.00	100.00	0.00	360.00	1483.00	0.00	0.00	0.00	0.00	0.00	0.00	YATES		
5	1750.00	267.00	0.00	360.00	1750.00	0.00	0.00	0.00	0.00	0.00	0.00	CAPITAN		
6	3583.00	1833.00	0.00	360.00	3583.00	0.00	0.00	0.00	0.00	0.00	0.00	DELAWARE		
7	3723.00	140.00	0.00	360.00	3723.00	0.00	0.00	0.00	0.00	0.00	0.00	CHERRY CANYON		
8	4623.00	900.00	0.00	360.00	4623.00	0.00	0.00	0.00	0.00	0.00	0.00	BRUSHY CANYON		
9	6193.00	1570.00	0.00	360.00	6193.00	0.01	0.01	0.00	0.00	0.00	0.00	BONE SPRINGS LM		
10	6303.00	110.00	0.00	360.00	6303.00	0.01	0.01	0.00	0.00	0.00	0.00	AVALON SAND		
11	6493.00	190.00	0.00	360.00	6493.00	0.01	0.01	0.00	0.00	0.00	0.00	MIDDLE AVALON		
12	6903.00	410.00	0.00	360.00	6903.00	0.01	0.01	0.00	0.00	0.00	0.00	LOWER AVALON		
13	7548.00	645.00	0.00	360.00	7548.00	0.01	0.01	0.00	0.00	0.00	0.00	FIRST BONE SPRINGS		
14	7937.03	389.03	0.00	359.85	7937.03	0.01	0.01	0.00	0.00	0.00	0.00	KOP		
15	8000.00	62.97	7.56	359.85	7999.82	4.15	4.15	-0.01	12.00	0.00	12.00			
16	8100.00	100.00	19.56	359.85	8096.85	27.55	27.55	-0.07	12.00	0.00	12.00			
17	8200.00	100.00	31.56	359.85	8186.90	70.61	70.61	-0.18	12.00	0.00	12.00			
18	8219.12	19.12	33.85	359.85	8202.99	80.94	80.94	-0.21	12.00	0.00	12.00	SECOND BONE SPRING		
19	8300.00	80.88	43.56	359.85	8266.03	131.46	131.46	-0.34	12.00	0.00	12.00			
20	8400.00	100.00	55.56	359.85	8330.79	207.42	207.42	-0.53	12.00	0.00	12.00			
21	8500.00	100.00	67.56	359.85	8378.33	295.19	295.19	-0.76	12.00	0.00	12.00			
22	8600.00	100.00	79.56	359.85	8406.58	390.93	390.92	-1.00	12.00	0.00	12.00			
23	8695.28	95.28	90.99	359.85	8414.43	485.72	485.72	-1.24	12.00	0.00	12.00	TARGET ZONE SBSG		
24	12829.30	4134.02	90.99	359.85	8343.00	4619.12	4619.11	-11.83	0.00	0.00	0.00	LATERAL TD		



**YATES
PETROLEUM
CORPORATION**

Yates Petroleum Corp.

Eddy County (NAD 83)

Antweil "ANU" Federal

#2H

OH

Plan #1

Anticollision Report

08 March, 2012

RECEIVED

BUREAU OF LAND MGMT
OIL & GAS FIELD OFFICE

PATHFINDER®

A Schlumberger Company



Pathfinder Anticollision Report



A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antwell "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 5,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date 3/8/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,840.5	Plan #1 (OH)	MWD	MWD - Standard

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antwell ANU #1						
#1 - OH - OH	12,511.7	8,378.1	23.5	-638.6	0.035	Level 1, CC, ES, SF
Yates Federal						
#1 - OH - OH	9,878.6	8,381.2	211.6	-341.0	0.383	Level 1, CC, ES, SF

Offset Design										Antwell ANU #1 - #1 - OH - OH		Offset Site Error: 0.0 usft	
Survey Program: 400-INC												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	65.1	65.1	0.0	2.8	4.25	4,289.2	319.0	4,301.2	4,300.4	0.87	4,962.570	
100.0	100.0	143.2	143.2	0.1	6.2	4.25	4,288.7	319.0	4,300.6	4,298.6	2.02	2,130.387	
172.8	172.8	200.0	200.0	0.3	8.6	4.25	4,288.6	319.0	4,300.5	4,297.5	2.94	1,463.267	
200.0	200.0	221.3	221.2	0.3	9.6	4.25	4,288.7	319.0	4,300.5	4,297.2	3.28	1,309.987	
300.0	300.0	299.3	299.3	0.6	12.9	4.25	4,289.0	319.0	4,300.9	4,296.3	4.55	945.924	
400.0	400.0	400.0	400.0	0.8	17.3	4.25	4,289.9	319.0	4,301.9	4,295.8	6.11	703.837	
500.0	500.0	528.3	528.3	1.0	27.2	4.25	4,290.1	319.0	4,301.9	4,293.3	8.57	502.056	
600.0	600.0	637.2	637.2	1.2	35.6	4.25	4,289.9	319.0	4,301.8	4,291.1	10.69	402.531	
663.7	663.7	689.9	689.8	1.4	40.1	4.25	4,289.8	319.0	4,301.7	4,289.8	11.84	363.401	
700.0	700.0	717.2	717.0	1.5	42.4	4.25	4,289.9	319.0	4,301.7	4,289.3	12.44	345.928	
800.0	800.0	831.3	831.2	1.7	52.6	4.25	4,290.0	319.0	4,301.8	4,287.0	14.86	289.569	
835.9	835.9	873.6	873.5	1.8	56.5	4.25	4,289.9	319.0	4,301.8	4,286.0	15.75	273.059	
900.0	900.0	867.0	866.8	1.9	55.9	4.25	4,289.9	319.0	4,302.2	4,286.4	15.77	272.815	
1,000.0	1,000.0	1,033.0	1,032.8	2.1	67.8	4.25	4,290.2	319.0	4,302.0	4,282.5	19.59	219.591	
1,095.5	1,095.5	1,144.9	1,144.6	2.3	75.8	4.25	4,289.8	319.0	4,301.7	4,279.5	22.23	193.506	
1,100.0	1,100.0	1,123.0	1,122.7	2.4	74.3	4.25	4,289.9	319.0	4,301.8	4,280.0	21.77	197.630	
1,159.8	1,159.8	1,177.6	1,177.4	2.5	78.9	4.25	4,289.8	319.0	4,301.6	4,278.7	22.96	187.386	
1,200.0	1,200.0	1,210.0	1,209.7	2.6	81.6	4.25	4,289.9	319.0	4,301.8	4,278.2	23.67	181.735	
1,300.0	1,300.0	1,344.2	1,343.9	2.8	94.7	4.25	4,290.0	319.0	4,301.9	4,275.3	26.51	162.295	
1,324.4	1,324.4	1,377.3	1,377.0	2.9	98.0	4.25	4,289.8	319.0	4,301.7	4,274.5	27.21	158.117	
1,400.0	1,400.0	1,352.0	1,351.6	3.0	95.5	4.25	4,289.9	319.0	4,302.5	4,275.6	26.88	160.044	
1,492.5	1,492.5	1,504.9	1,504.5	3.2	110.4	4.25	4,289.9	319.0	4,301.8	4,271.7	30.09	142.973	
1,500.0	1,500.0	1,521.0	1,520.6	3.3	112.0	4.25	4,289.9	319.0	4,301.8	4,271.4	30.42	141.412	
1,561.6	1,561.6	1,585.0	1,584.6	3.4	119.6	4.25	4,289.9	319.0	4,301.8	4,269.9	31.85	135.067	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report



A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antweil "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Antweil ANU #1 - #1 - OH - OH												Offset Site Error:	0.0 usft
Survey Program: 400-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
1,600.0	1,600.0	1,609.0	1,608.5	3.5	122.4	4.25	4,289.9	319.0	4,301.8	4,269.4	32.42	132.696	
1,700.0	1,700.0	1,609.0	1,608.5	3.7	122.4	4.25	4,289.9	319.0	4,303.4	4,270.8	32.64	131.831	
1,793.6	1,793.6	1,816.2	1,815.6	3.9	149.6	4.25	4,289.8	319.0	4,301.7	4,264.5	37.19	115.668	
1,800.0	1,800.0	1,822.1	1,821.6	3.9	150.4	4.25	4,289.9	319.0	4,301.7	4,264.4	37.33	115.238	
1,900.0	1,900.0	1,875.0	1,874.3	4.2	157.4	4.25	4,289.9	319.0	4,302.1	4,263.5	38.66	111.279	
1,982.9	1,982.9	2,000.0	1,999.2	4.3	174.6	4.25	4,289.9	319.0	4,301.8	4,260.4	41.37	103.987	
2,000.0	2,000.0	2,000.0	1,999.2	4.4	174.6	4.25	4,289.9	319.0	4,301.9	4,260.5	41.41	103.893	
2,100.0	2,100.0	2,000.0	1,999.2	4.6	174.6	4.25	4,289.9	319.0	4,303.7	4,262.1	41.63	103.375	
2,200.0	2,200.0	2,231.0	2,230.1	4.8	203.5	4.25	4,290.4	319.0	4,302.2	4,255.8	46.42	92.689	
2,300.0	2,300.0	2,341.4	2,340.5	5.1	217.2	4.25	4,290.2	319.0	4,302.0	4,253.2	48.82	88.121	
2,371.4	2,371.4	2,420.2	2,419.3	5.2	227.1	4.25	4,289.9	319.0	4,301.7	4,251.2	50.54	85.124	
2,400.0	2,400.0	2,400.0	2,398.8	5.3	224.5	4.25	4,289.9	319.0	4,301.9	4,251.7	50.20	85.695	
2,500.0	2,500.0	2,543.7	2,542.6	5.5	238.6	4.25	4,290.0	319.0	4,301.9	4,248.5	53.35	80.641	
2,529.6	2,529.6	2,582.5	2,581.3	5.6	242.4	4.25	4,289.8	319.0	4,301.7	4,247.5	54.20	79.367	
2,600.0	2,600.0	2,558.0	2,556.8	5.7	240.0	4.25	4,289.9	319.0	4,302.4	4,248.5	53.86	79.880	
2,688.9	2,688.9	2,710.0	2,708.7	5.9	250.9	4.25	4,289.9	319.0	4,301.8	4,244.7	57.14	75.282	
2,700.0	2,700.0	2,710.0	2,708.7	6.0	250.9	4.25	4,289.9	319.0	4,301.8	4,244.7	57.17	75.249	
2,800.0	2,800.0	2,828.5	2,827.2	6.2	257.7	4.25	4,289.9	319.0	4,301.8	4,242.0	59.75	72.002	
2,900.0	2,900.0	2,928.5	2,927.2	6.4	263.5	4.25	4,289.9	319.0	4,301.8	4,239.8	61.96	69.432	
3,000.0	3,000.0	3,028.5	3,027.2	6.6	269.3	4.25	4,289.9	319.0	4,301.8	4,237.6	64.17	67.039	
3,100.0	3,100.0	3,128.5	3,127.2	6.9	275.1	4.25	4,289.9	319.0	4,301.8	4,235.4	66.38	64.806	
3,159.1	3,159.1	3,187.6	3,186.3	7.0	278.5	4.25	4,289.9	319.0	4,301.8	4,234.1	67.69	63.555	
3,200.0	3,200.0	3,210.0	3,208.7	7.1	279.8	4.25	4,289.9	319.0	4,301.8	4,233.6	68.22	63.055	
3,300.0	3,300.0	3,337.5	3,336.2	7.3	288.9	4.25	4,289.5	319.0	4,301.4	4,230.3	71.12	60.477	
3,400.0	3,400.0	3,430.4	3,429.1	7.5	295.5	4.25	4,289.4	319.0	4,301.3	4,228.0	73.30	58.682	
3,426.4	3,426.4	3,455.0	3,453.6	7.6	297.3	4.25	4,289.4	319.0	4,301.3	4,227.4	73.87	58.226	
3,500.0	3,500.0	3,523.3	3,522.0	7.8	302.2	4.25	4,289.5	319.0	4,301.3	4,225.8	75.47	56.992	
3,600.0	3,600.0	3,616.2	3,614.9	8.0	308.8	4.25	4,289.6	319.0	4,301.5	4,223.9	77.65	55.399	
3,700.0	3,700.0	3,700.0	3,698.5	8.2	314.8	4.25	4,289.9	319.0	4,301.9	4,222.3	79.63	54.025	
3,800.0	3,800.0	3,826.5	3,825.0	8.4	323.8	4.25	4,290.3	319.0	4,302.1	4,219.7	82.36	52.234	
3,900.0	3,900.0	3,941.6	3,940.1	8.7	332.0	4.25	4,290.1	319.0	4,302.0	4,217.1	84.87	50.689	
3,957.2	3,957.2	4,007.5	4,006.0	8.8	336.7	4.25	4,289.8	319.0	4,301.7	4,215.4	86.30	49.844	
4,000.0	4,000.0	3,986.0	3,984.5	8.9	335.2	4.25	4,289.9	319.0	4,302.0	4,216.0	85.97	50.038	
4,100.0	4,100.0	4,122.9	4,121.4	9.1	341.3	4.25	4,290.3	319.0	4,302.2	4,213.2	89.02	48.329	
4,200.0	4,200.0	4,233.3	4,231.7	9.3	346.2	4.25	4,290.4	319.0	4,302.2	4,210.7	91.52	47.010	
4,300.0	4,300.0	4,343.7	4,342.1	9.6	351.2	4.25	4,290.1	319.0	4,302.0	4,208.0	94.01	45.759	
4,400.0	4,400.0	4,428.8	4,427.2	9.8	354.4	4.25	4,289.9	319.0	4,301.8	4,205.8	95.96	44.830	
4,500.0	4,500.0	4,528.8	4,527.2	10.0	357.6	4.25	4,289.9	319.0	4,301.8	4,203.6	98.17	43.820	
4,600.0	4,600.0	4,628.8	4,627.2	10.2	360.7	4.25	4,289.9	319.0	4,301.8	4,201.4	100.38	42.855	
4,700.0	4,700.0	4,728.8	4,727.2	10.5	363.9	4.25	4,289.9	319.0	4,301.8	4,199.2	102.59	41.932	
4,765.4	4,765.4	4,794.1	4,792.6	10.6	365.9	4.25	4,289.9	319.0	4,301.8	4,197.8	104.03	41.350	
4,800.0	4,800.0	4,825.0	4,823.4	10.7	366.9	4.25	4,289.9	319.0	4,301.8	4,197.1	104.73	41.077	
4,900.0	4,900.0	4,943.7	4,942.1	10.9	373.0	4.25	4,289.4	319.0	4,301.2	4,193.8	107.40	40.048	
5,000.0	5,000.0	5,033.7	5,032.1	11.1	377.7	4.25	4,289.1	319.0	4,301.0	4,191.5	109.48	39.284	
5,049.2	5,049.2	5,078.0	5,076.4	11.2	380.0	4.25	4,289.1	319.0	4,301.0	4,190.5	110.51	38.920	
5,100.0	5,100.0	5,123.7	5,122.1	11.4	382.3	4.25	4,289.1	319.0	4,301.0	4,189.4	111.57	38.551	
5,200.0	5,200.0	5,213.7	5,212.1	11.6	387.0	4.25	4,289.4	319.0	4,301.2	4,187.6	113.65	37.847	
5,300.0	5,300.0	5,303.7	5,302.1	11.8	391.6	4.25	4,289.8	319.0	4,301.7	4,186.0	115.73	37.170	
5,400.0	5,400.0	5,424.5	5,422.8	12.0	399.1	4.25	4,290.1	319.0	4,301.9	4,183.6	118.38	36.341	
5,500.0	5,500.0	5,530.2	5,528.5	12.2	406.0	4.25	4,290.1	319.0	4,302.0	4,181.3	120.70	35.641	
5,600.0	5,600.0	5,635.8	5,634.2	12.5	412.8	4.25	4,290.0	319.0	4,301.9	4,178.9	123.03	34.967	
5,652.0	5,652.0	5,690.8	5,689.1	12.6	416.4	4.25	4,289.9	319.0	4,301.8	4,177.5	124.24	34.626	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report



A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antwell "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design											Antwell ANU #1 - #1 - OH - OH		Offset Site Error:		0.0 usft	
Survey Program: 400-INC													Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis		Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)	(usft)	(usft)			
5,700.0	5,700.0	5,681.0	5,679.3	12.7	415.7	4.25	4,289.9	319.0	4,302.1	4,177.9	124.15	34.652				
5,800.0	5,800.0	5,835.3	5,833.6	12.9	426.7	4.25	4,289.5	319.0	4,301.3	4,173.9	127.44	33.751				
5,886.5	5,886.5	5,915.5	5,913.8	13.1	432.5	4.25	4,289.4	319.0	4,301.3	4,172.0	129.23	33.283				
5,900.0	5,900.0	5,927.9	5,926.2	13.1	433.3	4.25	4,289.4	319.0	4,301.3	4,171.8	129.51	33.211				
6,000.0	6,000.0	6,020.5	6,018.8	13.4	439.9	4.25	4,289.5	319.0	4,301.4	4,169.8	131.58	32.690				
6,100.0	6,100.0	6,113.1	6,111.4	13.6	446.6	4.25	4,289.8	319.0	4,301.7	4,168.0	133.65	32.187				
6,200.0	6,200.0	6,150.0	6,148.2	13.8	449.2	4.25	4,289.9	319.0	4,302.5	4,167.9	134.61	31.964				
6,300.0	6,300.0	6,329.0	6,327.2	14.0	464.4	4.25	4,289.9	319.0	4,301.8	4,163.3	138.50	31.060				
6,400.0	6,400.0	6,429.1	6,427.2	14.3	472.8	4.25	4,289.9	319.0	4,301.8	4,161.0	140.77	30.558				
6,500.0	6,500.0	6,529.1	6,527.2	14.5	481.3	4.25	4,289.9	319.0	4,301.8	4,158.7	143.05	30.072				
6,566.3	6,566.3	6,595.3	6,593.5	14.6	486.9	4.25	4,289.9	319.0	4,301.8	4,157.2	144.55	29.759				
6,600.0	6,600.0	6,628.0	6,626.0	14.7	489.7	4.25	4,289.9	319.0	4,301.8	4,156.5	145.30	29.606				
6,700.0	6,700.0	6,628.0	6,626.0	14.9	489.7	4.25	4,289.9	319.0	4,303.0	4,157.5	145.52	29.569				
6,794.0	6,794.0	6,821.1	6,819.1	15.2	504.7	4.25	4,290.2	319.0	4,302.0	4,152.5	149.58	28.760				
6,800.0	6,800.0	6,827.3	6,825.3	15.2	505.2	4.25	4,290.2	319.0	4,302.0	4,152.3	149.72	28.734				
6,900.0	6,900.0	6,931.2	6,929.2	15.4	513.3	4.25	4,290.2	319.0	4,302.0	4,150.0	152.01	28.300				
7,000.0	7,000.0	7,035.2	7,033.1	15.6	521.4	4.25	4,290.1	319.0	4,302.0	4,147.6	154.31	27.879				
7,097.3	7,097.3	7,136.3	7,134.3	15.8	529.3	4.25	4,289.9	319.0	4,301.8	4,145.2	156.54	27.480				
7,100.0	7,100.0	7,127.0	7,124.9	15.8	528.6	4.25	4,289.9	319.0	4,301.8	4,145.4	156.36	27.512				
7,200.0	7,200.0	7,217.4	7,215.3	16.1	533.9	4.25	4,290.3	319.0	4,302.1	4,143.7	158.44	27.154				
7,300.0	7,300.0	7,325.5	7,323.4	16.3	540.2	4.25	4,290.5	319.0	4,302.3	4,141.4	160.87	26.744				
7,400.0	7,400.0	7,433.7	7,431.5	16.5	546.5	4.25	4,290.5	319.0	4,302.3	4,139.0	163.31	26.345				
7,500.0	7,500.0	7,541.9	7,539.7	16.7	552.8	4.25	4,290.2	319.0	4,302.1	4,136.4	165.74	25.956				
7,595.2	7,595.2	7,644.8	7,642.6	17.0	558.8	4.25	4,289.9	319.0	4,301.7	4,133.7	168.06	25.596				
7,600.0	7,600.0	7,625.0	7,622.8	17.0	557.6	4.25	4,289.9	319.0	4,301.8	4,134.1	167.67	25.656				
7,700.0	7,700.0	7,723.6	7,721.4	17.2	561.4	4.25	4,290.1	319.0	4,302.0	4,132.1	169.91	25.319				
7,800.0	7,800.0	7,827.4	7,825.2	17.4	565.4	4.25	4,290.2	319.0	4,302.1	4,129.8	172.25	24.975				
7,900.0	7,900.0	7,931.2	7,929.0	17.6	569.4	4.25	4,290.2	319.0	4,302.1	4,127.5	174.60	24.640				
7,936.6	7,936.6	7,969.2	7,967.0	17.7	570.9	4.25	4,290.2	319.0	4,302.0	4,126.6	175.45	24.519				
7,950.0	7,950.0	7,983.1	7,980.9	17.8	571.4	0.31	4,290.2	319.0	4,301.8	4,120.9	180.93	23.776				
7,975.0	7,975.0	8,009.0	8,006.8	17.8	572.4	0.31	4,290.2	319.0	4,300.5	4,119.3	181.20	23.733				
8,000.0	7,999.8	8,034.8	8,032.5	17.9	573.4	0.32	4,290.1	319.0	4,297.8	4,116.8	180.98	23.747				
8,025.0	8,024.5	8,060.4	8,058.2	17.9	574.4	0.32	4,290.1	319.0	4,293.8	4,113.5	180.28	23.817				
8,050.0	8,048.9	8,085.7	8,083.5	18.0	575.4	0.32	4,290.1	319.0	4,288.5	4,109.4	179.09	23.946				
8,075.0	8,073.1	8,110.8	8,108.5	18.0	576.4	0.33	4,290.0	319.0	4,281.9	4,104.5	177.41	24.135				
8,100.0	8,096.8	8,135.4	8,133.2	18.1	577.3	0.33	4,290.0	319.0	4,274.1	4,098.9	175.25	24.389				
8,125.0	8,120.1	8,140.0	8,137.8	18.2	577.5	0.34	4,289.9	319.0	4,265.1	4,092.9	172.23	24.765				
8,150.0	8,143.0	8,140.0	8,137.8	18.2	577.5	0.35	4,289.9	319.0	4,255.0	4,086.3	168.67	25.228				
8,175.0	8,165.2	8,167.1	8,164.9	18.3	578.7	0.36	4,290.0	319.0	4,243.6	4,078.1	165.51	25.640				
8,200.0	8,186.8	8,209.6	8,207.3	18.3	579.3	0.37	4,290.1	319.0	4,231.1	4,069.6	161.45	26.207				
8,225.0	8,207.8	8,231.3	8,229.1	18.4	579.8	0.39	4,290.1	319.0	4,217.5	4,060.5	156.95	26.872				
8,250.0	8,228.0	8,252.3	8,250.0	18.4	580.3	0.40	4,290.1	319.0	4,202.8	4,050.8	152.00	27.649				
8,275.0	8,247.4	8,272.4	8,270.1	18.5	580.9	0.42	4,290.2	319.0	4,187.0	4,040.4	146.64	28.553				
8,300.0	8,265.9	8,291.6	8,289.4	18.6	581.4	0.45	4,290.2	319.0	4,170.3	4,029.4	140.87	29.603				
8,325.0	8,283.6	8,309.9	8,307.7	18.6	581.8	0.47	4,290.2	319.0	4,152.6	4,017.9	134.72	30.823				
8,350.0	8,300.3	8,327.2	8,325.0	18.7	582.3	0.50	4,290.2	319.0	4,134.0	4,005.8	128.22	32.242				
8,375.0	8,315.9	8,343.5	8,341.3	18.8	582.7	0.54	4,290.2	319.0	4,114.5	3,993.2	121.38	33.899				
8,400.0	8,330.6	8,358.7	8,356.5	18.9	583.1	0.58	4,290.2	319.0	4,094.3	3,980.1	114.23	35.842				
8,425.0	8,344.2	8,372.8	8,370.5	19.0	583.4	0.63	4,290.2	319.0	4,073.3	3,966.5	106.82	38.133				
8,450.0	8,356.6	8,385.7	8,383.4	19.1	583.8	0.70	4,290.2	319.0	4,051.6	3,952.5	99.18	40.852				
8,475.0	8,367.9	8,397.4	8,395.1	19.2	584.1	0.78	4,290.2	319.0	4,029.3	3,938.0	91.37	44.101				
8,500.0	8,378.1	8,407.9	8,405.6	19.3	584.3	0.88	4,290.2	319.0	4,006.5	3,923.0	83.45	48.011				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report

PATHFINDER
A Schlumberger Company

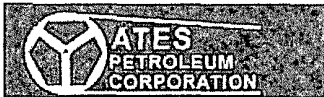
Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Antweil "ANU" Federal
Site Error: 0.0 usft
Reference Well: #2H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:

Well #2H
WELL @ 3335.0usft (Original Well Elev)
WELL @ 3335.0usft (Original Well Elev)
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Offset Datum

Offset Design Antweil ANU #1 - #1 - OH - OH														Offset Site Error	0.0 usft
Survey Program: 400-INC														Offset Well Error	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
8,525.0	8,387.0	8,417.1	8,414.8	19.4	584.6	1.02	4,290.2	319.0	3,983.1	3,907.6	75.53	52.733			
8,550.0	8,394.7	8,425.0	8,422.8	19.6	584.8	1.21	4,290.2	319.0	3,959.4	3,891.5	67.80	58.396			
8,575.0	8,401.1	8,431.7	8,429.4	19.7	584.9	1.48	4,290.2	319.0	3,935.2	3,874.6	60.61	64.925			
8,600.0	8,406.2	8,437.0	8,434.7	19.9	585.1	1.91	4,290.2	319.0	3,910.7	3,855.9	54.83	71.328			
8,625.0	8,410.1	8,441.0	8,438.7	20.0	585.2	2.70	4,290.2	319.0	3,886.0	3,833.1	52.93	73.423			
8,650.0	8,412.7	8,443.6	8,441.4	20.2	585.2	4.57	4,290.2	319.0	3,861.2	3,797.5	63.70	60.617			
8,675.0	8,413.9	8,444.9	8,442.7	20.4	585.3	14.38	4,290.2	319.0	3,836.2	3,678.4	157.83	24.306			
8,694.8	8,414.0	8,445.0	8,442.7	20.5	585.3	160.64	4,290.2	319.0	3,816.4	3,609.8	206.60	18.472			
8,700.0	8,413.9	8,444.9	8,442.6	20.6	585.3	160.62	4,290.2	319.0	3,811.2	3,604.3	206.87	18.424			
8,800.0	8,412.2	8,443.1	8,440.8	21.4	585.2	160.12	4,290.2	319.0	3,711.2	3,499.2	212.01	17.505			
8,900.0	8,410.5	8,441.3	8,439.0	22.3	585.2	159.60	4,290.2	319.0	3,611.2	3,393.8	217.45	16.607			
9,000.0	8,408.8	8,439.5	8,437.2	23.3	585.1	159.05	4,290.2	319.0	3,511.3	3,288.1	223.19	15.732			
9,100.0	8,407.1	8,437.7	8,435.4	24.4	585.1	158.47	4,290.2	319.0	3,411.3	3,182.0	229.24	14.881			
9,200.0	8,405.3	8,435.9	8,433.6	25.6	585.0	157.87	4,290.2	319.0	3,311.3	3,075.7	235.61	14.054			
9,300.0	8,403.6	8,434.1	8,431.8	26.9	585.0	157.23	4,290.2	319.0	3,211.3	2,969.0	242.33	13.252			
9,400.0	8,401.9	8,432.3	8,430.0	28.2	584.9	156.56	4,290.2	319.0	3,111.3	2,861.9	249.40	12.475			
9,500.0	8,400.2	8,430.5	8,428.2	29.6	584.9	155.85	4,290.2	319.0	3,011.3	2,754.5	256.85	11.724			
9,600.0	8,398.5	8,428.7	8,426.5	31.0	584.8	155.10	4,290.2	319.0	2,911.4	2,646.7	264.70	10.999			
9,700.0	8,396.8	8,426.9	8,424.7	32.5	584.8	154.31	4,290.2	319.0	2,811.4	2,538.4	272.97	10.299			
9,800.0	8,395.1	8,425.1	8,422.9	34.0	584.8	153.47	4,290.2	319.0	2,711.4	2,429.7	281.68	9.626			
9,900.0	8,393.4	8,423.4	8,421.1	35.5	584.7	152.58	4,290.2	319.0	2,611.4	2,320.6	290.86	8.978			
10,000.0	8,391.6	8,421.6	8,419.4	37.1	584.7	151.63	4,290.2	319.0	2,511.4	2,210.9	300.54	8.356			
10,100.0	8,389.9	8,419.8	8,417.6	38.6	584.6	150.63	4,290.2	319.0	2,411.5	2,100.7	310.74	7.760			
10,200.0	8,388.2	8,418.1	8,415.8	40.2	584.6	149.56	4,290.2	319.0	2,311.5	1,990.0	321.51	7.190			
10,300.0	8,386.5	8,416.3	8,414.1	41.9	584.5	148.42	4,290.2	319.0	2,211.5	1,878.6	332.86	6.644			
10,400.0	8,384.8	8,414.5	8,412.3	43.5	584.5	147.20	4,290.2	319.0	2,111.5	1,766.7	344.83	6.123			
10,500.0	8,383.1	8,412.8	8,410.5	45.1	584.4	145.90	4,290.2	319.0	2,011.5	1,654.1	357.46	5.627			
10,600.0	8,381.4	8,411.0	8,408.8	46.8	584.4	144.51	4,290.2	319.0	1,911.6	1,540.8	370.77	5.156			
10,700.0	8,379.7	8,409.3	8,407.0	48.4	584.4	143.01	4,290.2	319.0	1,811.6	1,426.8	384.78	4.708			
10,800.0	8,377.9	8,407.5	8,405.3	50.1	584.3	141.42	4,290.2	319.0	1,711.6	1,312.1	399.53	4.284			
10,900.0	8,376.2	8,405.8	8,403.5	51.8	584.3	139.70	4,290.2	319.0	1,611.6	1,196.6	415.01	3.883			
11,000.0	8,374.5	8,404.0	8,401.8	53.5	584.2	137.86	4,290.2	319.0	1,511.7	1,080.4	431.24	3.505			
11,100.0	8,372.8	8,402.3	8,400.1	55.2	584.2	135.88	4,290.2	319.0	1,411.7	963.5	448.18	3.150			
11,200.0	8,371.1	8,400.6	8,398.3	56.9	584.1	133.75	4,290.2	319.0	1,311.7	845.9	465.81	2.816			
11,300.0	8,369.4	8,398.8	8,396.6	58.6	584.1	131.46	4,290.2	319.0	1,211.7	727.7	484.06	2.503			
11,400.0	8,367.7	8,397.1	8,394.9	60.4	584.0	129.00	4,290.2	319.0	1,111.8	609.0	502.81	2.211			
11,500.0	8,366.0	8,395.4	8,393.1	62.1	584.0	126.37	4,290.2	319.0	1,011.8	489.9	521.91	1.939			
11,600.0	8,364.2	8,393.7	8,391.4	63.8	584.0	123.54	4,290.2	319.0	911.9	370.7	541.17	1.685			
11,700.0	8,362.5	8,391.9	8,389.7	65.5	583.9	120.53	4,290.2	319.0	811.9	251.6	560.32	1.449 Level 3			
11,800.0	8,360.8	8,390.2	8,388.0	67.3	583.9	117.32	4,290.2	319.0	712.0	132.9	579.03	1.230 Level 2			
11,900.0	8,359.1	8,388.5	8,386.3	69.0	583.8	113.93	4,290.2	319.0	612.1	15.1	596.92	1.025 Level 2			
12,000.0	8,357.4	8,386.8	8,384.5	70.8	583.8	110.35	4,290.2	319.0	512.2	-101.4	613.54	0.835 Level 1			
12,100.0	8,355.7	8,385.1	8,382.8	72.5	583.7	106.60	4,290.2	319.0	412.3	-216.1	628.42	0.656 Level 1			
12,200.0	8,354.0	8,383.4	8,381.1	74.3	583.7	102.71	4,290.2	319.0	312.5	-328.5	641.08	0.488 Level 1			
12,300.0	8,352.3	8,381.7	8,379.4	76.0	583.6	98.70	4,290.2	319.0	213.0	-438.1	651.10	0.327 Level 1			
12,400.0	8,350.5	8,380.0	8,377.7	77.8	583.6	94.61	4,290.2	319.0	114.1	-544.0	658.10	0.173 Level 1			
12,500.0	8,348.8	8,378.3	8,376.0	79.6	583.6	90.48	4,290.2	319.0	26.2	-635.6	661.84	0.040 Level 1			
12,511.7	8,348.6	8,378.1	8,375.8	79.8	583.6	90.00	4,290.2	319.0	23.5	-638.6	662.05	0.035 Level 1, CC, ES, SF			
12,600.0	8,347.1	8,376.6	8,374.3	81.3	583.5	86.35	4,290.2	319.0	91.4	-570.8	662.21	0.138 Level 1			
12,700.0	8,345.4	8,374.9	8,372.6	83.1	583.5	82.27	4,290.2	319.0	189.7	-469.5	659.28	0.288 Level 1			
12,800.0	8,343.7	8,373.2	8,371.0	84.9	583.4	78.27	4,290.2	319.0	289.2	-364.0	653.25	0.443 Level 1			
12,840.6	8,343.0	8,372.5	8,370.3	85.6	583.4	76.68	4,290.2	319.0	329.7	-320.3	649.98	0.507 Level 1			

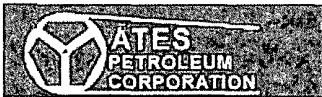
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder
Anticollision Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antwell "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2 00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum



Pathfinder Anticollision Report

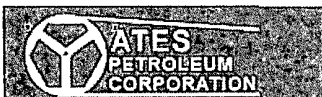


Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Antwell "ANU" Federal
Site Error: 0 0 usft
Reference Well: #2H
Well Error: 0 0 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:
Well #2H
WELL @ 3335.0usft (Original Well Elev)
WELL @ 3335.0usft (Original Well Elev)
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Offset Datum

Offset Design Yates Federal - #1 - OH - OH												Offset Site Error: 0.0 usft	
Survey Program: 251-INC												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	0.0	0.0	11.16	1,650.8	325.8	1,682.7				
100.0	100.0	88.1	88.1	0.1	1.7	11.16	1,650.6	325.8	1,682.4	1,681.1	1.29	1,299.620	
139.6	139.6	125.5	125.5	0.2	2.4	11.16	1,650.6	325.8	1,682.4	1,680.5	1.89	891.913	
200.0	200.0	182.6	182.6	0.3	3.5	11.16	1,650.6	325.8	1,682.5	1,679.7	2.79	603.292	
300.0	300.0	288.1	288.1	0.6	6.3	11.16	1,650.8	325.8	1,682.6	1,677.9	4.75	353.900	
359.6	359.6	345.5	345.5	0.7	8.6	11.16	1,650.7	325.8	1,682.6	1,676.4	6.16	273.027	
400.0	400.0	384.4	384.4	0.8	10.2	11.16	1,650.8	325.8	1,682.6	1,675.5	7.12	236.398	
500.0	500.0	488.6	488.6	1.0	15.0	11.16	1,650.7	325.8	1,682.6	1,672.9	9.71	173.364	
600.0	600.0	586.9	586.9	1.2	20.1	11.16	1,650.6	325.8	1,682.5	1,670.3	12.21	137.767	
654.6	654.6	640.5	640.5	1.4	23.0	11.16	1,650.6	325.8	1,682.5	1,668.9	13.58	123.883	
700.0	700.0	685.1	685.1	1.5	25.3	11.16	1,650.6	325.8	1,682.5	1,667.8	14.72	114.293	
800.0	800.0	783.4	783.3	1.7	30.5	11.16	1,650.7	325.8	1,682.6	1,665.3	17.23	97.655	
900.0	900.0	880.5	880.5	1.9	35.3	11.16	1,651.0	325.8	1,682.8	1,663.3	19.54	86.106	
1,000.0	1,000.0	985.2	985.2	2.1	40.0	11.16	1,651.2	325.8	1,683.0	1,661.3	21.75	77.375	
1,100.0	1,100.0	1,089.9	1,089.9	2.4	44.7	11.16	1,651.1	325.8	1,682.9	1,659.0	23.96	70.239	
1,200.0	1,200.0	1,199.6	1,199.6	2.6	50.3	11.17	1,650.5	325.8	1,682.4	1,656.1	26.32	63.929	
1,300.0	1,300.0	1,289.3	1,289.2	2.8	56.0	11.17	1,650.0	325.8	1,681.9	1,653.5	28.37	59.290	
1,331.5	1,331.5	1,317.5	1,317.4	2.9	57.8	11.17	1,650.0	325.8	1,681.8	1,652.8	29.01	57.969	
1,400.0	1,400.0	1,378.9	1,378.8	3.0	61.7	11.17	1,650.1	325.8	1,682.0	1,651.6	30.42	55.296	
1,500.0	1,500.0	1,473.0	1,472.8	3.3	67.7	11.16	1,650.8	325.8	1,682.7	1,650.2	32.56	51.678	
1,600.0	1,600.0	1,585.3	1,585.1	3.5	77.1	11.16	1,651.1	325.8	1,682.9	1,647.7	35.20	47.813	
1,700.0	1,700.0	1,691.4	1,691.2	3.7	85.9	11.16	1,651.0	325.8	1,682.8	1,645.1	37.71	44.625	
1,800.0	1,800.0	1,788.1	1,787.9	3.9	93.6	11.16	1,650.7	325.8	1,682.6	1,642.6	40.02	42.043	
1,879.8	1,879.8	1,866.0	1,865.7	4.1	99.6	11.16	1,650.7	325.8	1,682.5	1,640.6	41.88	40.177	
1,900.0	1,900.0	1,885.7	1,885.4	4.2	101.1	11.16	1,650.7	325.8	1,682.5	1,640.2	42.35	39.732	
2,000.0	2,000.0	1,983.2	1,982.9	4.4	108.7	11.16	1,650.8	325.8	1,682.6	1,638.0	44.68	37.664	
2,100.0	2,100.0	2,086.2	2,085.9	4.6	117.2	11.16	1,650.8	325.8	1,682.7	1,635.4	47.23	35.627	
2,200.0	2,200.0	2,186.2	2,185.9	4.8	126.6	11.16	1,650.8	325.8	1,682.7	1,632.9	49.75	33.824	
2,300.0	2,300.0	2,286.3	2,285.9	5.1	134.1	11.16	1,650.8	325.8	1,682.7	1,630.4	52.27	32.193	
2,400.0	2,400.0	2,383.7	2,383.3	5.3	141.0	11.16	1,651.1	325.8	1,683.0	1,628.4	54.59	30.830	
2,500.0	2,500.0	2,488.9	2,488.4	5.5	148.5	11.16	1,651.1	325.8	1,683.0	1,625.9	57.07	29.490	
2,598.4	2,598.4	2,592.4	2,591.9	5.7	155.9	11.16	1,650.8	325.8	1,682.7	1,623.1	59.51	28.274	
2,600.0	2,600.0	2,585.0	2,584.5	5.7	155.4	11.16	1,650.8	325.8	1,682.7	1,623.3	59.36	28.348	
2,700.0	2,700.0	2,688.8	2,688.3	6.0	162.1	11.16	1,650.7	325.8	1,682.5	1,620.7	61.79	27.228	
2,800.0	2,800.0	2,787.7	2,787.2	6.2	168.5	11.16	1,650.5	325.8	1,682.4	1,618.3	64.12	26.237	
2,900.0	2,900.0	2,886.5	2,886.0	6.4	174.9	11.16	1,650.5	325.8	1,682.3	1,615.9	66.45	25.317	
2,911.6	2,911.6	2,898.0	2,897.5	6.4	175.7	11.16	1,650.5	325.8	1,682.3	1,615.6	66.72	25.215	
3,000.0	3,000.0	2,985.4	2,984.9	6.6	181.3	11.16	1,650.5	325.8	1,682.4	1,613.6	68.78	24.460	
3,100.0	3,100.0	3,084.3	3,083.7	6.9	187.7	11.16	1,650.6	325.8	1,682.5	1,611.4	71.11	23.661	
3,200.0	3,200.0	3,183.1	3,182.6	7.1	194.1	11.16	1,650.8	325.8	1,682.6	1,609.2	73.44	22.913	
3,300.0	3,300.0	3,288.7	3,288.1	7.3	202.0	11.16	1,650.7	325.8	1,682.5	1,606.5	76.02	22.133	
3,400.0	3,400.0	3,386.9	3,386.2	7.5	209.7	11.16	1,650.6	325.8	1,682.5	1,604.0	78.48	21.438	
3,418.9	3,418.9	3,405.5	3,404.8	7.6	211.1	11.16	1,650.6	325.8	1,682.5	1,603.5	78.95	21.312	
3,500.0	3,500.0	3,485.1	3,484.4	7.8	217.3	11.16	1,650.7	325.8	1,682.5	1,601.6	80.94	20.787	
3,600.0	3,600.0	3,583.2	3,582.6	8.0	225.0	11.16	1,650.8	325.8	1,682.6	1,599.2	83.40	20.177	
3,700.0	3,700.0	3,681.4	3,680.7	8.2	232.1	11.16	1,651.1	325.8	1,683.0	1,597.2	85.76	19.624	
3,800.0	3,800.0	3,784.0	3,783.2	8.4	239.4	11.16	1,651.4	325.8	1,683.2	1,595.0	88.20	19.084	
3,900.0	3,900.0	3,886.5	3,885.7	8.7	246.7	11.16	1,651.5	325.8	1,683.3	1,592.7	90.65	18.570	
4,000.0	4,000.0	3,989.0	3,988.3	8.9	254.0	11.16	1,651.4	325.8	1,683.2	1,590.1	93.09	18.082	
4,100.0	4,100.0	4,091.6	4,090.8	9.1	261.4	11.16	1,651.2	325.8	1,683.0	1,587.5	95.54	17.617	
4,198.2	4,198.2	4,192.3	4,191.5	9.3	268.5	11.16	1,650.8	325.8	1,682.7	1,584.7	97.94	17.181	
4,200.0	4,200.0	4,185.0	4,184.1	9.3	268.0	11.16	1,650.8	325.8	1,682.7	1,584.9	97.79	17.208	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report

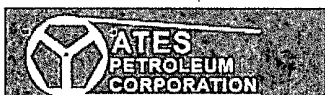


A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antwell "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Yates Federal - #1 - OH - OH														Offset Site Error:	0.0 usft
Survey Program: 251-INC														Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,300.0	4,300.0	4,288.9	4,288.0	9.6	274.8	11.16	1,650.7	325.8	1,682.5	1,582.3	100.23	16.786			
4,400.0	4,400.0	4,387.5	4,386.6	9.8	281.1	11.16	1,650.6	325.8	1,682.4	1,579.8	102.57	16.403			
4,449.7	4,449.7	4,436.5	4,435.6	9.9	284.3	11.16	1,650.6	325.8	1,682.4	1,578.7	103.73	16.219			
4,500.0	4,500.0	4,486.1	4,485.2	10.0	287.5	11.16	1,650.6	325.8	1,682.4	1,577.5	104.90	16.038			
4,600.0	4,600.0	4,584.7	4,583.8	10.2	293.9	11.16	1,650.7	325.8	1,682.5	1,575.3	107.23	15.690			
4,700.0	4,700.0	4,683.2	4,682.3	10.5	300.3	11.16	1,650.8	325.8	1,682.7	1,573.1	109.56	15.358			
4,800.0	4,800.0	4,786.9	4,785.9	10.7	307.7	11.16	1,650.8	325.8	1,682.7	1,570.6	112.10	15.010			
4,900.0	4,900.0	4,886.9	4,885.9	10.9	314.9	11.16	1,650.8	325.8	1,682.7	1,568.1	114.57	14.688			
5,000.0	5,000.0	4,986.9	4,985.9	11.1	322.0	11.16	1,650.8	325.8	1,682.7	1,565.6	117.03	14.378			
5,100.0	5,100.0	5,086.9	5,085.9	11.4	329.2	11.16	1,650.8	325.8	1,682.7	1,563.2	119.49	14.082			
5,150.3	5,150.3	5,137.2	5,136.2	11.5	332.8	11.16	1,650.8	325.8	1,682.7	1,561.9	120.73	13.938			
5,200.0	5,200.0	5,154.0	5,152.9	11.6	334.0	11.16	1,650.8	325.8	1,683.0	1,561.8	121.22	13.884			
5,292.5	5,292.5	5,277.8	5,276.7	11.8	342.0	11.16	1,651.0	325.8	1,682.9	1,558.8	124.07	13.564			
5,300.0	5,300.0	5,285.4	5,284.3	11.8	342.5	11.16	1,651.0	325.8	1,682.9	1,558.6	124.25	13.545			
5,400.0	5,400.0	5,386.9	5,385.9	12.0	349.1	11.16	1,651.1	325.8	1,682.9	1,556.3	126.64	13.289			
5,500.0	5,500.0	5,488.5	5,487.4	12.2	355.7	11.16	1,651.1	325.8	1,682.9	1,553.8	129.04	13.041			
5,600.0	5,600.0	5,590.1	5,589.0	12.5	362.2	11.16	1,650.9	325.8	1,682.7	1,551.3	131.44	12.802			
5,637.9	5,637.9	5,628.6	5,627.5	12.6	364.7	11.16	1,650.8	325.8	1,682.7	1,550.3	132.35	12.714			
5,700.0	5,700.0	5,684.3	5,683.1	12.7	367.6	11.16	1,651.0	325.8	1,682.8	1,549.1	133.68	12.588			
5,800.0	5,800.0	5,785.7	5,784.5	12.9	372.9	11.16	1,651.1	325.8	1,682.9	1,546.8	136.07	12.368			
5,900.0	5,900.0	5,887.1	5,886.0	13.1	378.1	11.16	1,651.1	325.8	1,683.0	1,544.5	138.46	12.154			
6,000.0	6,000.0	5,988.6	5,987.4	13.4	383.4	11.16	1,651.1	325.8	1,682.9	1,542.0	140.86	11.947			
6,100.0	6,100.0	6,090.0	6,088.8	13.6	388.7	11.16	1,650.9	325.8	1,682.8	1,539.5	143.26	11.747			
6,200.0	6,200.0	6,187.1	6,185.9	13.8	393.4	11.16	1,650.8	325.8	1,682.7	1,537.2	145.52	11.563			
6,300.0	6,300.0	6,287.1	6,285.9	14.0	398.0	11.16	1,650.8	325.8	1,682.7	1,534.9	147.79	11.386			
6,400.0	6,400.0	6,387.1	6,385.9	14.3	402.5	11.16	1,650.8	325.8	1,682.7	1,532.6	150.06	11.213			
6,500.0	6,500.0	6,487.1	6,485.9	14.5	407.0	11.16	1,650.8	325.8	1,682.7	1,530.3	152.33	11.046			
6,600.0	6,600.0	6,587.1	6,585.9	14.7	411.6	11.16	1,650.8	325.8	1,682.7	1,528.1	154.61	10.884			
6,700.0	6,700.0	6,690.1	6,688.8	14.9	416.5	11.16	1,650.7	325.8	1,682.6	1,525.6	156.98	10.719			
6,800.0	6,800.0	6,788.7	6,787.4	15.2	421.7	11.16	1,650.6	325.8	1,682.5	1,523.1	159.31	10.561			
6,900.0	6,900.0	6,887.2	6,885.9	15.4	426.8	11.16	1,650.6	325.8	1,682.4	1,520.8	161.63	10.409			
6,902.8	6,902.8	6,889.9	6,888.7	15.4	426.9	11.16	1,650.6	325.8	1,682.4	1,520.7	161.70	10.405			
7,000.0	7,000.0	6,985.8	6,984.5	15.6	431.9	11.16	1,650.6	325.8	1,682.5	1,518.5	163.96	10.262			
7,100.0	7,100.0	7,084.4	7,083.1	15.8	437.0	11.16	1,650.7	325.8	1,682.6	1,516.3	166.28	10.119			
7,200.0	7,200.0	7,187.2	7,185.9	16.1	442.7	11.16	1,650.8	325.8	1,682.7	1,514.0	168.71	9.974			
7,300.0	7,300.0	7,287.2	7,285.9	16.3	448.6	11.16	1,650.8	325.8	1,682.7	1,511.6	171.09	9.835			
7,400.0	7,400.0	7,387.2	7,385.9	16.5	454.4	11.16	1,650.8	325.8	1,682.7	1,509.2	173.47	9.700			
7,500.0	7,500.0	7,487.2	7,485.9	16.7	460.3	11.16	1,650.8	325.8	1,682.7	1,506.8	175.85	9.569			
7,600.0	7,600.0	7,587.3	7,585.9	17.0	466.1	11.16	1,650.8	325.8	1,682.7	1,504.4	178.23	9.441			
7,700.0	7,700.0	7,690.3	7,688.9	17.2	472.5	11.16	1,650.7	325.8	1,682.6	1,501.9	180.70	9.312			
7,800.0	7,800.0	7,789.0	7,787.6	17.4	478.9	11.16	1,650.6	325.8	1,682.4	1,499.4	183.09	9.189			
7,900.0	7,900.0	7,887.8	7,886.4	17.6	485.3	11.16	1,650.5	325.8	1,682.4	1,496.9	185.47	9.071			
7,936.6	7,936.6	7,923.9	7,922.5	17.7	487.7	11.16	1,650.5	325.8	1,682.4	1,496.0	186.35	9.028			
7,950.0	7,950.0	7,937.2	7,935.7	17.8	488.5	7.23	1,650.5	325.8	1,682.2	1,482.3	199.87	8.416			
7,975.0	7,975.0	7,961.8	7,960.4	17.8	490.1	7.26	1,650.5	325.8	1,680.8	1,480.6	200.28	8.393			
8,000.0	7,999.8	7,966.4	7,964.9	17.9	491.7	7.31	1,650.5	325.8	1,678.2	1,477.9	200.33	8.377			
8,025.0	8,024.5	8,010.7	8,009.3	17.9	493.3	7.38	1,650.6	325.8	1,674.3	1,474.3	200.04	8.370			
8,050.0	8,048.9	8,034.9	8,033.5	18.0	494.9	7.49	1,650.6	325.8	1,669.1	1,469.7	199.41	8.370			
8,075.0	8,073.1	8,058.7	8,057.3	18.0	496.4	7.62	1,650.6	325.8	1,662.7	1,464.2	198.46	8.378			
8,100.0	8,096.8	8,082.2	8,080.8	18.1	497.9	7.79	1,650.6	325.8	1,655.0	1,457.8	197.20	8.392			
8,125.0	8,120.1	8,105.2	8,103.8	18.2	499.4	7.99	1,650.7	325.8	1,646.1	1,450.4	195.68	8.412			
8,150.0	8,143.0	8,127.8	8,126.4	18.2	500.9	8.22	1,650.7	325.8	1,638.0	1,442.1	193.92	8.437			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Antwell "ANU" Federal
Site Error: 0.0 usft
Reference Well: #2H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:

Well #2H
WELL @ 3335.0usft (Original Well Elev)
WELL @ 3335.0usft (Original Well Elev)
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Offset Datum

Yates Federal - #1 - OH - OH														Offset Site Error:	0.0 usft
Survey Program: 251-INC														Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,175.0	8,165.2	8,149.8	8,148.4	18.3	502.3	8.50		1,650.7	325.8	1,624.8	1,432.8	191.98	8.463		
8,200.0	8,186.8	8,171.2	8,169.7	18.3	503.7	8.82		1,650.8	325.8	1,612.4	1,422.4	189.93	8.489		
8,225.0	8,207.8	8,191.9	8,190.5	18.4	505.1	9.20		1,650.8	325.8	1,598.9	1,411.0	187.85	8.511		
8,250.0	8,228.0	8,210.0	8,208.5	18.4	506.2	9.63		1,650.8	325.8	1,584.3	1,398.6	185.75	8.529		
8,275.0	8,247.4	8,210.0	8,208.5	18.5	506.2	10.03		1,650.8	325.8	1,568.9	1,385.9	182.97	8.575		
8,300.0	8,265.9	8,253.3	8,251.8	18.6	509.3	10.76		1,650.8	325.8	1,552.1	1,369.2	182.88	8.487		
8,325.0	8,283.6	8,271.0	8,269.5	18.6	510.6	11.46		1,650.8	325.8	1,534.5	1,352.4	182.10	8.427		
8,350.0	8,300.3	8,287.7	8,286.2	18.7	511.8	12.27		1,650.8	325.8	1,518.1	1,333.9	182.19	8.321		
8,375.0	8,315.9	8,303.4	8,301.8	18.8	512.9	13.23		1,650.8	325.8	1,498.8	1,313.3	183.49	8.158		
8,400.0	8,330.6	8,318.0	8,316.5	18.9	514.0	14.37		1,650.8	325.8	1,476.8	1,290.4	186.41	7.922		
8,425.0	8,344.2	8,331.6	8,330.1	19.0	514.9	15.75		1,650.8	325.8	1,456.0	1,264.5	191.49	7.604		
8,450.0	8,356.6	8,344.1	8,342.5	19.1	515.8	17.41		1,650.8	325.8	1,434.6	1,235.2	199.41	7.194		
8,475.0	8,367.9	8,355.4	8,353.8	19.2	516.6	19.46		1,650.8	325.8	1,412.5	1,201.5	210.99	6.695		
8,500.0	8,378.1	8,365.5	8,364.0	19.3	517.4	22.01		1,650.8	325.8	1,389.9	1,162.6	227.32	6.115		
8,525.0	8,387.0	8,374.4	8,372.9	19.4	518.0	25.26		1,650.8	325.8	1,368.9	1,117.1	249.74	5.473		
8,550.0	8,394.7	8,382.1	8,380.6	19.6	518.5	29.47		1,650.8	325.8	1,343.4	1,063.4	279.98	4.798		
8,575.0	8,401.1	8,388.5	8,387.0	19.7	519.0	35.05		1,650.8	325.8	1,319.5	999.5	319.98	4.124		
8,600.0	8,406.2	8,393.7	8,392.1	19.9	519.4	42.55		1,650.8	325.8	1,295.4	924.1	371.24	3.489		
8,625.0	8,410.1	8,397.5	8,396.0	20.0	519.6	52.69		1,650.8	325.8	1,271.0	838.6	432.42	2.939		
8,650.0	8,412.7	8,400.1	8,398.6	20.2	519.8	66.03		1,650.8	325.8	1,246.5	752.5	493.98	2.523		
8,675.0	8,413.9	8,401.4	8,399.8	20.4	519.9	82.13		1,650.8	325.8	1,221.9	687.6	534.27	2.287		
8,694.8	8,414.0	8,401.4	8,399.9	20.5	519.9	95.47		1,650.8	325.8	1,202.4	665.5	536.97	2.239		
8,700.0	8,413.9	8,401.3	8,399.8	20.6	519.9	95.45		1,650.8	325.8	1,197.3	660.3	537.03	2.230		
8,800.0	8,412.2	8,399.6	8,398.1	21.4	519.8	94.99		1,650.8	325.8	1,099.0	560.9	538.09	2.042		
8,900.0	8,410.5	8,397.9	8,396.4	22.3	519.7	94.53		1,650.8	325.8	1,001.1	461.9	539.24	1.857		
9,000.0	8,408.8	8,396.2	8,394.7	23.3	519.5	94.07		1,650.8	325.8	903.6	363.2	540.46	1.672		
9,100.0	8,407.1	8,394.5	8,393.0	24.4	519.4	93.61		1,650.8	325.8	806.8	265.0	541.74	1.489 Level 3		
9,200.0	8,405.3	8,392.8	8,391.2	25.6	519.3	93.14		1,650.8	325.8	710.8	167.7	543.06	1.309 Level 3		
9,300.0	8,403.6	8,391.1	8,389.5	26.9	519.2	92.68		1,650.8	325.8	616.0	71.6	544.42	1.132 Level 2		
9,400.0	8,401.9	8,389.3	8,387.8	28.2	519.1	92.22		1,650.8	325.8	523.2	-22.6	545.81	0.959 Level 1		
9,500.0	8,400.2	8,387.6	8,386.1	29.6	518.9	91.75		1,650.8	325.8	433.7	-113.5	547.21	0.793 Level 1		
9,600.0	8,398.5	8,385.9	8,384.4	31.0	518.8	91.29		1,650.8	325.8	349.8	-198.8	548.62	0.638 Level 1		
9,700.0	8,396.8	8,384.2	8,382.7	32.5	518.7	90.83		1,650.8	325.8	276.9	-273.2	550.04	0.503 Level 1		
9,800.0	8,395.1	8,382.5	8,381.0	34.0	518.6	90.36		1,650.8	325.8	225.7	-325.7	551.46	0.409 Level 1		
9,878.6	8,393.7	8,381.2	8,379.6	35.2	518.5	90.00		1,650.8	325.8	211.6	-341.0	552.57	0.383 Level 1, CC, ES, SF		
9,900.0	8,393.4	8,380.8	8,379.3	35.5	518.4	89.90		1,650.8	325.8	212.7	-340.2	552.87	0.385 Level 1		
10,000.0	8,391.6	8,379.1	8,377.5	37.1	518.3	89.44		1,650.8	325.8	243.9	-310.4	554.26	0.440 Level 1		
10,100.0	8,389.9	8,377.4	8,375.8	38.6	518.2	88.97		1,650.8	325.8	306.2	-249.5	555.65	0.551 Level 1		
10,200.0	8,388.2	8,375.6	8,374.1	40.2	518.1	88.51		1,650.8	325.8	384.7	-172.3	557.02	0.691 Level 1		
10,300.0	8,386.5	8,373.9	8,372.4	41.9	518.0	88.05		1,650.8	325.8	471.5	-86.9	558.37	0.844 Level 1		
10,400.0	8,384.8	8,372.2	8,370.7	43.5	517.8	87.58		1,650.8	325.8	562.6	2.9	559.70	1.005 Level 2		
10,500.0	8,383.1	8,370.5	8,369.0	45.1	517.7	87.12		1,650.8	325.8	656.3	95.3	561.01	1.170 Level 2		
10,600.0	8,381.4	8,368.8	8,367.3	46.8	517.6	86.66		1,650.8	325.8	751.7	189.4	562.30	1.337 Level 3		
10,700.0	8,379.7	8,367.1	8,365.6	48.4	517.5	86.20		1,650.8	325.8	848.1	284.5	563.55	1.505		
10,800.0	8,377.9	8,365.4	8,363.8	50.1	517.3	85.74		1,650.8	325.8	945.2	380.4	564.79	1.674		
10,900.0	8,376.2	8,363.7	8,362.1	51.8	517.2	85.28		1,650.8	325.8	1,042.9	476.9	565.99	1.843		
11,000.0	8,374.5	8,361.9	8,360.4	53.5	517.1	84.81		1,650.8	325.8	1,141.0	573.8	567.16	2.012		
11,100.0	8,372.8	8,360.2	8,358.7	55.2	517.0	84.36		1,650.8	325.8	1,239.4	671.1	568.31	2.181		
11,200.0	8,371.1	8,358.5	8,357.0	56.9	516.9	83.90		1,650.8	325.8	1,338.0	768.6	569.42	2.350		
11,300.0	8,369.4	8,356.8	8,355.3	58.6	516.7	83.44		1,650.8	325.8	1,436.8	866.3	570.51	2.519		
11,400.0	8,367.7	8,355.1	8,353.6	60.4	516.6	82.98		1,650.8	325.8	1,535.8	964.2	571.56	2.687		
11,500.0	8,366.0	8,353.4	8,351.9	62.1	516.5	82.53		1,650.8	325.8	1,634.9	1,062.3	572.58	2.855		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder
Anticollision Report



A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3335.0usft (Original Well Elev)
Reference Site:	Antwell "ANU" Federal	MD Reference:	WELL @ 3335.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Yates Federal - #1 - OH - OH													Offset Site Error:	0.0 usft
Survey Program 251-INC													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,600.0	8,364.2	8,351.7	8,350.1	63.8	516.4	82.07	1,650.8	325.8	1,734.1	1,160.5	573.57	3.023		
11,700.0	8,362.5	8,350.0	8,348.4	65.5	516.2	81.62	1,650.8	325.8	1,833.4	1,258.8	574.52	3.191		
11,800.0	8,360.8	8,348.2	8,346.7	67.3	516.1	81.16	1,650.8	325.8	1,932.7	1,357.3	575.45	3.359		
11,900.0	8,359.1	8,346.5	8,345.0	69.0	516.0	80.71	1,650.8	325.8	2,032.1	1,455.8	576.34	3.526		
12,000.0	8,357.4	8,344.8	8,343.3	70.8	515.9	80.26	1,650.8	325.8	2,131.6	1,554.4	577.19	3.693		
12,100.0	8,355.7	8,343.1	8,341.6	72.5	515.8	79.81	1,650.8	325.8	2,231.1	1,653.1	578.02	3.860		
12,200.0	8,354.0	8,341.4	8,339.9	74.3	515.6	79.36	1,650.8	325.8	2,330.7	1,751.8	578.81	4.027		
12,300.0	8,352.3	8,339.7	8,338.2	76.0	515.5	78.91	1,650.8	325.8	2,430.2	1,850.7	579.56	4.193		
12,400.0	8,350.5	8,338.0	8,336.4	77.8	515.4	78.47	1,650.8	325.8	2,529.9	1,949.6	580.29	4.360		
12,500.0	8,348.8	8,336.3	8,334.7	79.6	515.3	78.02	1,650.8	325.8	2,629.5	2,048.5	580.98	4.526		
12,600.0	8,347.1	8,334.5	8,333.0	81.3	515.1	77.58	1,650.8	325.8	2,729.2	2,147.5	581.63	4.692		
12,700.0	8,345.4	8,332.8	8,331.3	83.1	515.0	77.14	1,650.8	325.8	2,828.9	2,246.6	582.26	4.858		
12,800.0	8,343.7	8,331.1	8,329.6	84.9	514.9	76.70	1,650.8	325.8	2,928.6	2,345.7	582.85	5.025		
12,840.6	8,343.0	8,330.4	8,328.9	85.6	514.8	76.52	1,650.8	325.8	2,969.1	2,386.0	583.08	5.092		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Pathfinder Anticollision Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Antweil "ANU" Federal
Site Error: 0.0 usft
Reference Well: #2H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #1

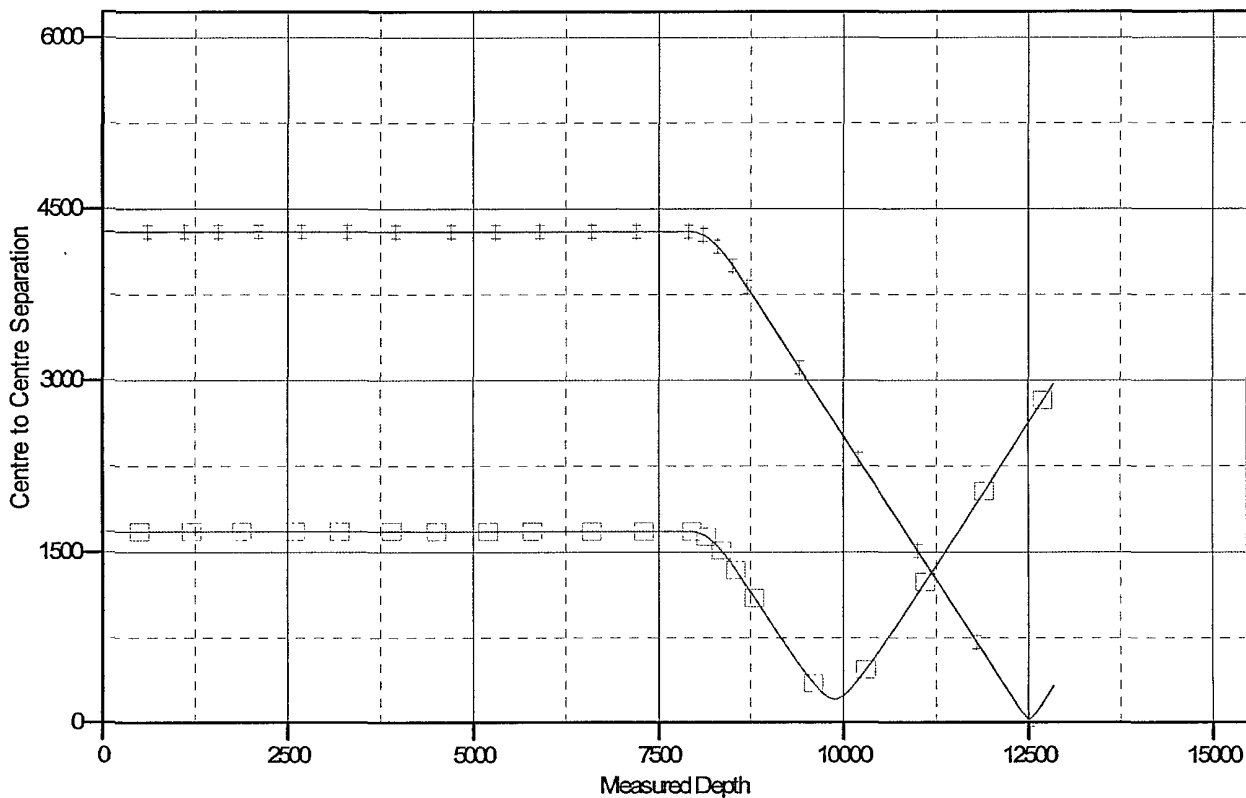
Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at:
Database:
Offset TVD Reference:

Well #2H
WELL @ 3335.0usft (Original Well Elev)
WELL @ 3335.0usft (Original Well Elev)
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Offset Datum

Reference Depths are relative to WELL @ 3335.0usft (Original Well Ele)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: #2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.17°

Ladder Plot



LEGEND

—x— #1, OH, OHV0 —□— #1, OH, OHV0



Pathfinder Anticollision Report



A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Antwell "ANU" Federal
Site Error: 0.0 usft
Reference Well: #2H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at:
Database:
Offset TVD Reference:

Well #2H
WELL @ 3335.0usft (Original Well Elev)
WELL @ 3335.0usft (Original Well Elev)
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Offset Datum

Reference Depths are relative to WELL @ 3335.0usft (Original Well Ele

Offset Depths are relative to Offset Datum

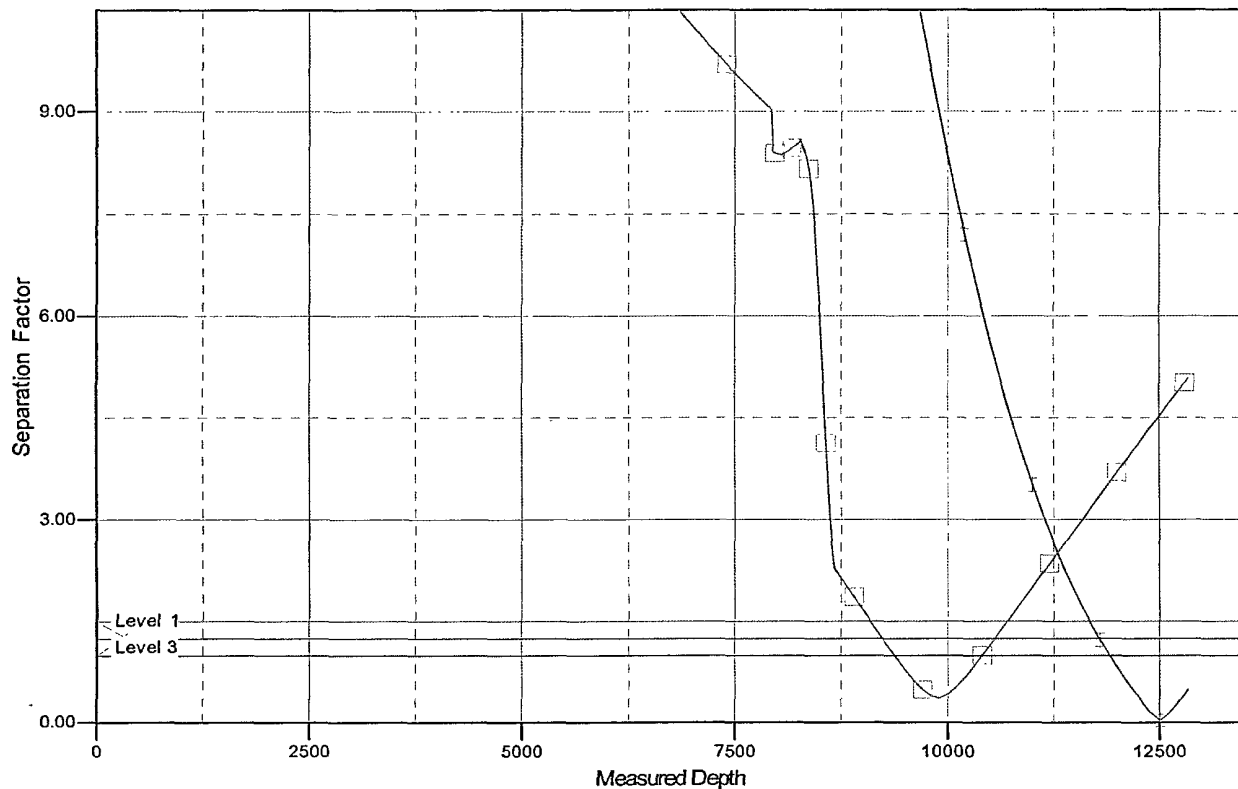
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: #2H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.17°

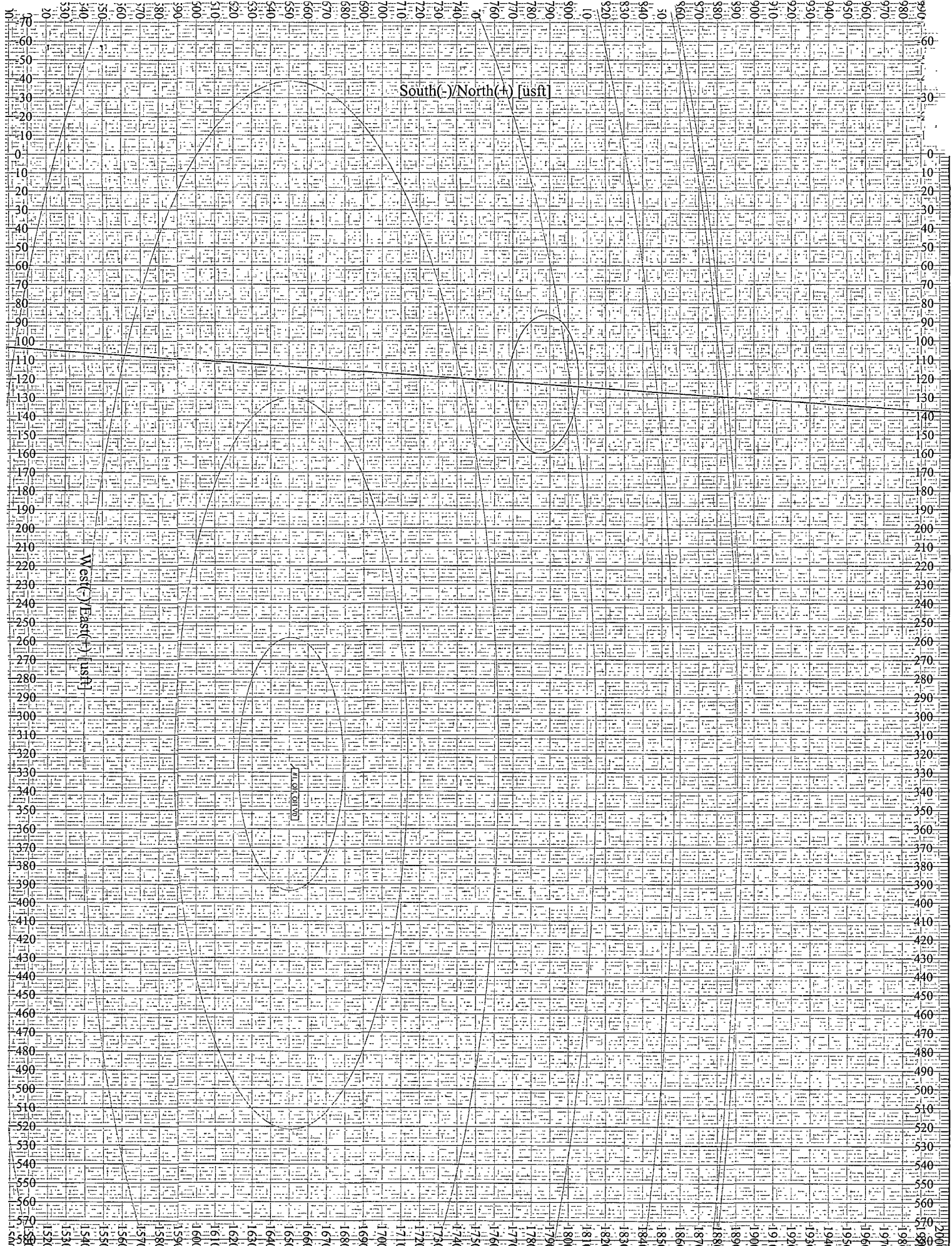
Separation Factor Plot

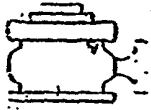


LEGEND

— #1, OH, OHV0 — #1, OH, OHV0

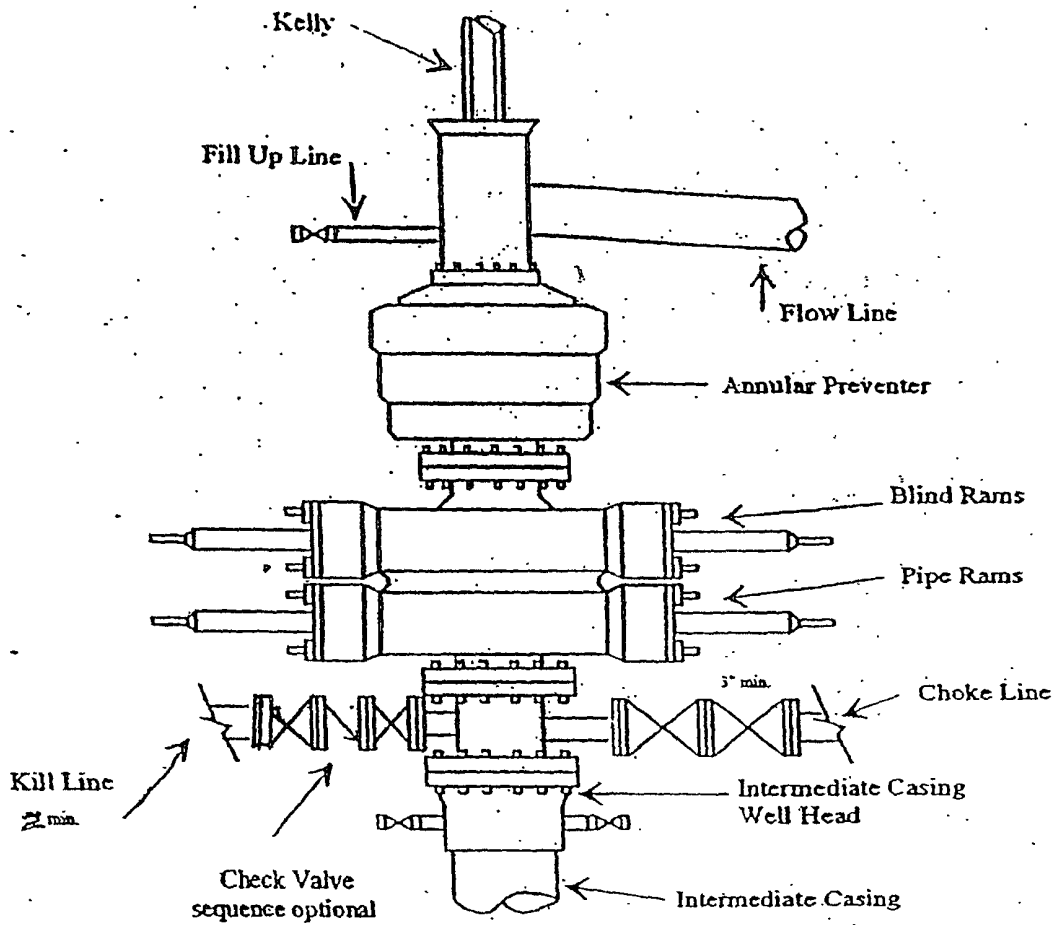
620	600	580	560	540	520	500	480	460	440	420	400	380	360	340	320	300	280	260	240	220	200	180	160	140	120	100	80	60	40	20	0	-20	-40	-60	-80	-100	-120	-140	-160	-180	-200	-220	-240	-260	-280	-300	-320	-340	-360	-380	-400	-420	-440	-460	-480	-500	-520	-540	-560	-580	-600	-620
est(-)East(+) [usft]																																																														



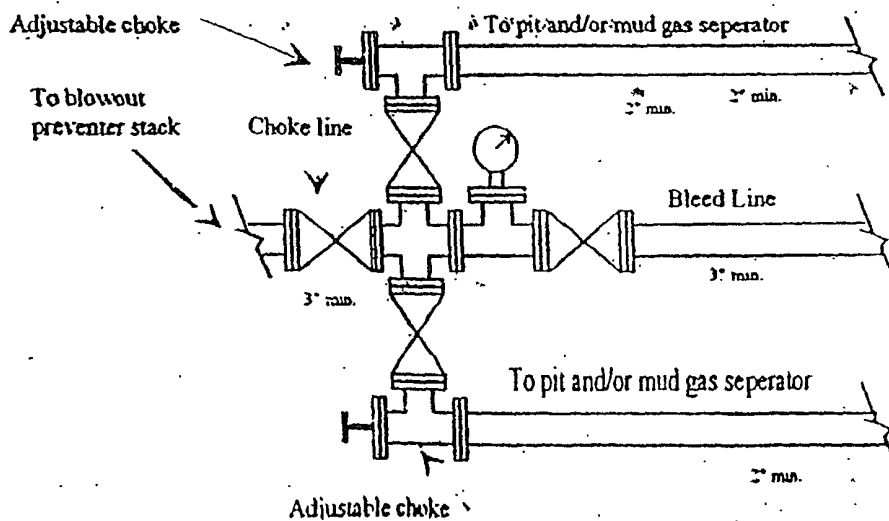


Yates Petroleum Corporation
Typical 3,000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack

BOP-3

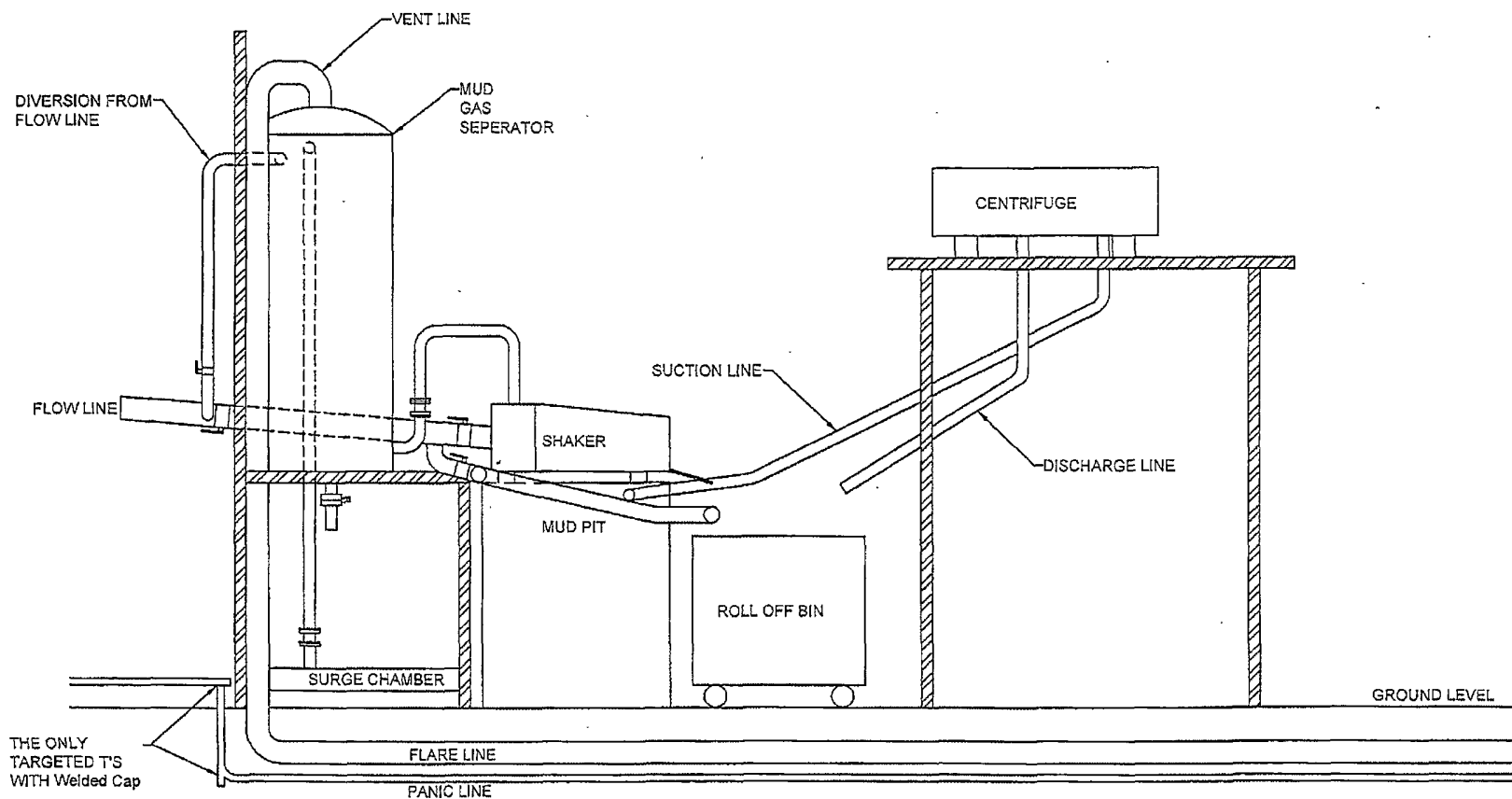


Typical 3,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION

Piping from Choke Manifold
to the Closed Loop Drilling Mud System



The flare discharge must be 100' from wellhead for non H₂S wells and 150' from wellhead for wells expected to encounter H₂S.

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.

Yates Petroleum Corporation

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and H₂S Contingency Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operation Plan and the H₂S Contingency Plan. **The location of this well does not require a Public Protection Plan.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

NOTE: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

1. Well Control Equipment:

- A. Flare line
- B. Choke manifold
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. Protective equipment for essential personnel:

- A. Mark II Survive Air (or equivalent) 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

- A. 3 portable H2S monitors positioned at: Shale Shaker, Bell Nipple, and Rig Floor. These units have warning lights and audible sirens when H2S levels of 10 PPM are reached.

4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram (attached).
- B. Caution/Danger signs (attached) shall be posted on roads providing direct access to location. Signs will be painted with high visibility yellow with black lettering of a sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. Mud program:

- A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. Metallurgy:

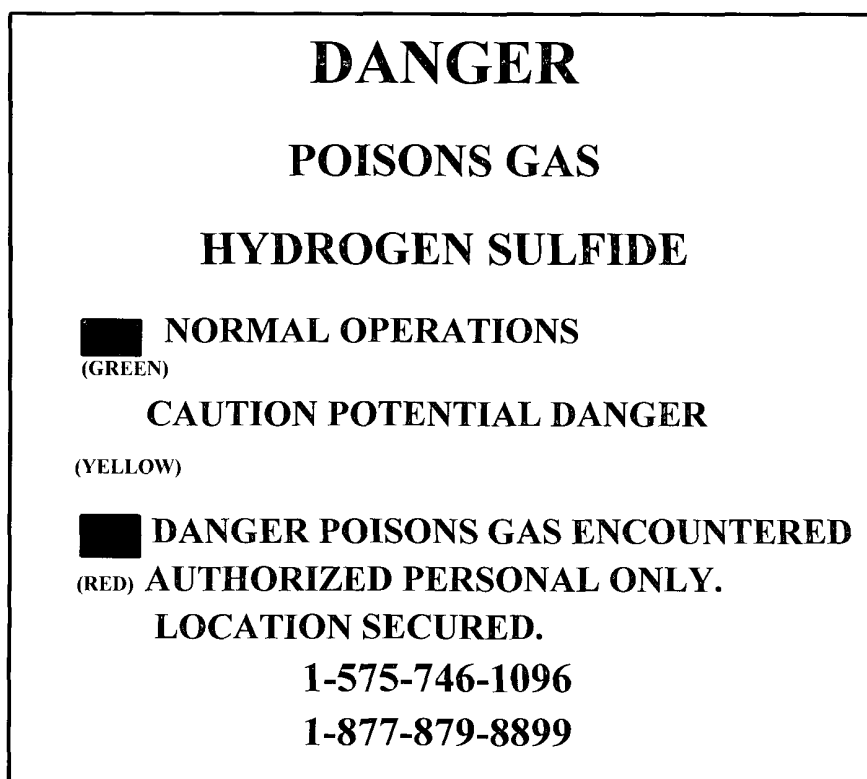
- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

- A. Cellular communications in company vehicles.
- B. Land line (telephone) communication at the Office.

8. Well testing:

- A. There will be no drill stem testing.

EXHIBITEDDY COUNTY EMERGENCY NUMBERS

ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

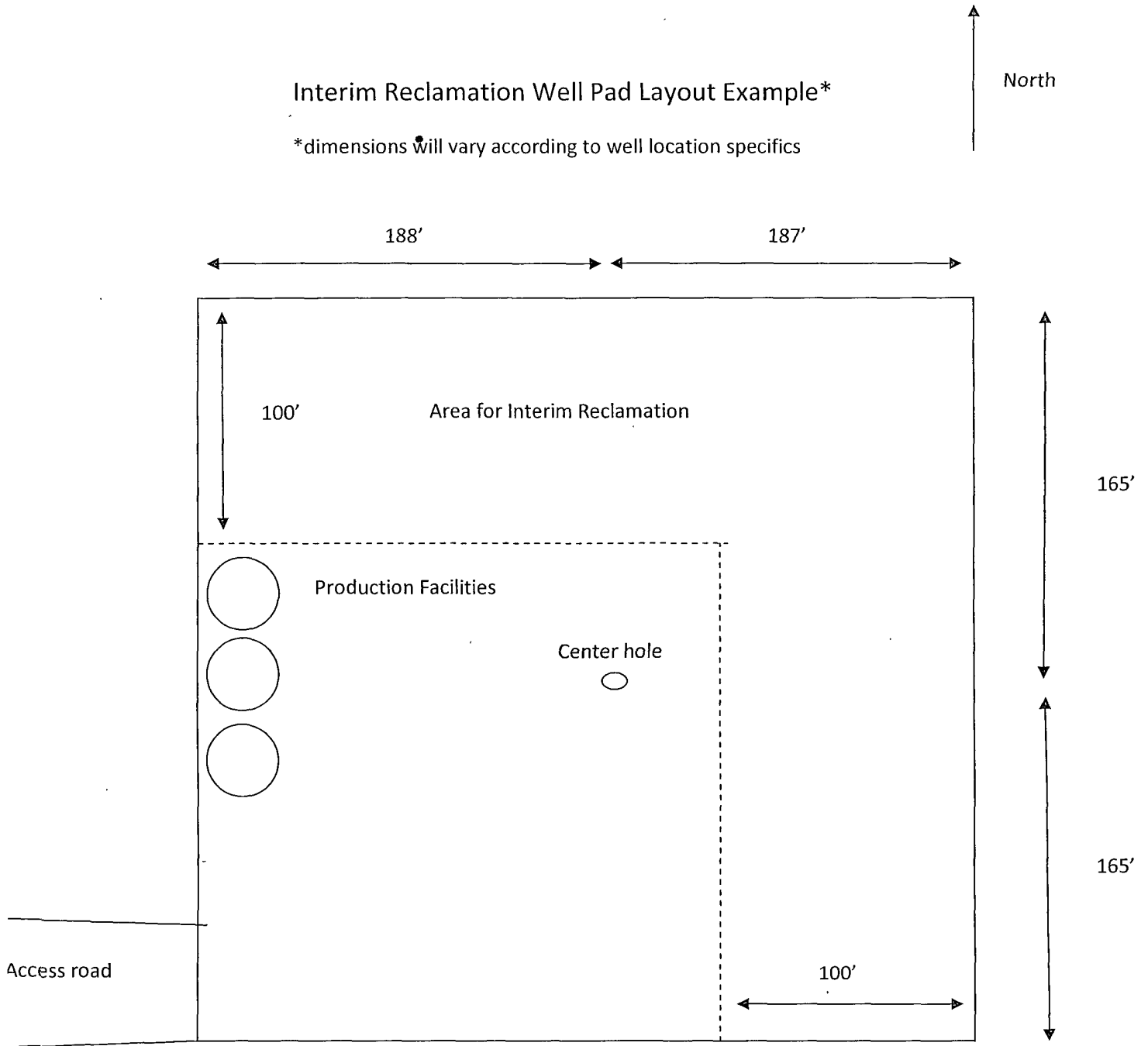
LEA COUNTY EMERGENCY NUMBERS

HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9285
LEA CO. SHERIFF DEPT. 575-396-1196

Interim Reclamation Well Pad Layout Example*

*dimensions will vary according to well location specifics

North



Created 1/31/2012

Antweil ANU Federal #2H

Interim Reclamation Plat

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	YATES PETROLEUM CORPORATION
LEASE NO.:	LC-062376
WELL NAME & NO.:	ANTWEIL ANU FEDERAL #2H
SURFACE HOLE FOOTAGE:	330' FSL & 2310' FEL
BOTTOM HOLE FOOTAGE:	330' FNL & 1980' FEL
LOCATION:	Section 30, T.19 S., R.30 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**
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - High Cave/Karst
 - Capitan Reef
 - Secretary's Potash
 - Logging Requirements
 - Waste Material and Fluids
 - Downhole Collision Requirement
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☒ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**