

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

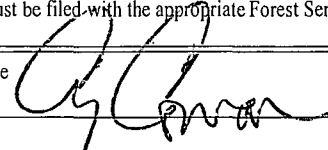
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-94614 & NM-82902
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		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) 575-748-4347	8. Lease Name and Well No. Checker "BIC" Federal Com #4H
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface UL HA Section 9-T19S-R31E, 660' FNL & 330' FEL At proposed prod. zone UL D, Section 9-T19S-R31E, 660 FNL & 330' FWL		9. API Well No. 30-015-40962
14. Distance in miles and direction from nearest town or post office* Approximately 28 miles east of Artesia, New Mexico		10. Field and Pool, or Exploratory Undesignated Bone Spring
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of acres in lease NM-9464--320 acres NM-82902-- 920 acres	11. Sec., T. R. M. or Blk. and Survey or Area Section 9-T19S-R31E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 282'	19. Proposed Depth 9133' PH TVD; 8923' TVD 13340' MD	12. County or Parish Eddy County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3577' GL	22. Approximate date work will start* 10/04/2012	13. State NM
17. Spacing Unit dedicated to this well N2N2 of Section 9-19S-31E		
20. BLM/BIA Bond No. on file NMB000434 NMB000920		
23. Estimated duration 60 days		

24. Attachments

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

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

25. Signature 	Name (Printed/Typed) Cy Cowan	Date 9/24/12
Title Land Regulatory Agent		
Approved by (Signature) /s/ James A. Amos	Name (Printed/Typed)	Date JAN 8 2013
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

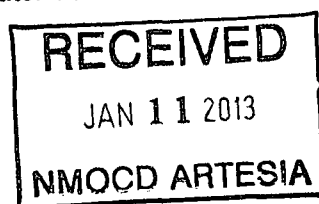
APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 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) 478-3460 Fax: (505) 478-3462

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 30-015-40962	Pool Code 97056	Pool Name Hackberry Undesignated Bone Spring ; North
Property Code 35567	Property Name CHECKER BIC FEDERAL COM	Well Number 4H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3577'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	19 S	31 E		660	NORTH	330	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	9	19 S	31 E		660	NORTH	330	WEST	EDDY

Dedicated Acres 160 N2N2	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

PROPOSED BOTTOM HOLE LOCATION Lat - N 32°40'49.38" Long - W 103°52'54.79" NMSPC- N 611549.965 E 680238.251 (NAD-83) Project Area	Producing Zone	Penetration Point 663' FNL & 817' FEL	SURFACE LOCATION Lat - N 32°40'49.46" Long - W 103°52'00.73" NMSPC- N 611578.452 E 684858.879 (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. <i>Cy Cowan</i> 8/21/12 Signature Date Cy Cowan Printed Name cy@yatespetroleum.com Email Address
Lease NM-94614 NWNW		Lease NM-82902 NENW; N2NE		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. APR 14 2012 Date Surveyed Signature & Seal of Professional Surveyor 7977 Certificate No. Gary L. Jones 7977 BASIN SURVEYS 26592

CERTIFICATION
YATES PETROLEUM CORPORATION
Checker BIC Federal Com. #4H

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 21st day of August, 2012

Signature Cy Cowan

Name Cy Cowan

Position Title Land Regulatory Agent

Address 105 South Fourth Street, Artesia, New Mexico 88210

Telephone (505) 748-1471

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) _____

YATES PETROLEUM CORPORATION

Checker "BIC" Federal Com #4H
 1980' FNL & 330' FEL, Surface Hole
 1980' FNL & 330' FWL, Bottom Hole
 Section 9 -T19S-R31-E
 Eddy County, New Mexico

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

Rustler	479'	Brushy Canyon	5129'-Oil	
Tansill	2035'	Bone Springs	6649'-Oil	
Yates	2176'	1 st Bone Spring	7979'-Oil	
Seven Rivers	2397'	KOP	8446'	
Queen	3337'	2 nd Bone Spring	8677'-Oil	8687' MD
Capitan Reef	3611'	Target Zone SBSG	8924'-Oil	9205' MD
Cherry Canyon	4249'-Oil	TD---lateral	8924'	13352' MD
		TD---Pilot Hole	9133'	

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

Water: Approx 250' - 350'

Oil or Gas: See above--All Potential Zones

3. Pressure Control Equipment: 3000 PSI BOPE with a 13.625" opening will be installed and tested on the 13.3/8" casing and a 5000 PSI will be installed and tested on the 9 5/8" casing. Pressure tests to 3000 PSI on the 3000 PSI BOP and 5000 PSI on the 5000 PSI BOP 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.

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.

4. THE PROPOSED CASING AND CEMENTING PROGRAM:

- A. Casing Program: (All New)

HOLE SIZE	CASING SIZE	WT/FT	GRADE	COUPLING	INTERVAL	LENGTH
17 1/2"	13 3/8"	48#	J-55 Hybrid	ST&C	0'-510'	510'
12 1/4"	9 5/8"	40#	J-55	LT&C	0'-80'	80'
12 1/4"	9 5/8"	36#	J-55	LT&C	80'-3200'	3120'
12 1/4"	9 5/8"	40#	J-55	LT&C	3200'-3400'	200'
8 3/4"	5 1/2"	17#	P-110	LT&C	0'-8400'	8400'
8 1/2"	5 1/2"	17#	P-110	Buttress	8400'-13352'	4952'

PLEASE NOTE: Yates Petroleum Corporation wishes to drill this well using a three string casing design program.

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

B. CEMENTING PROGRAM:

See COA Isolation Plug: 200' plug with Class H cement with fresh water=3.352 gal/sack, D080-dispersant=.030 gal/sack, D197-Retarder=0.070 gal/sk, D206-Antifoam=0.20 gal/sack (Wt. 17.5 Yld. 0.94). Cement designed with 35% excess. TOC-8933'.

Kick-Off Plug: 600' plug from 8740' to 8140' with 360 sacks Class H cement with fresh water=3.352 gal/sack, D080-Dispersant=.030 gal/sack, D197-Retarder=0.060 gal/sack, D206-Antifoam=0.020 gal/sack (Wt.17.5 Yld. 0.94). Cement designed with 35% excess. TOC-8140'.

Surface casing: 414 sacks Class C with 2% CaCl₂ (Wt. 13.50 Yld. 1.71). Cement designed with 100% excess. TOC-Surface.

Intermediate Casing Stage 1: DV tool at 3550'. Lead with 100 sacks 35:65:6PzC (Wt. 12.50 Yld 2.00); Tail in with 200 sacks Class C with 2% CaCl₂ (Wt. 14.80 Yld 1.34). Cement designed with 100% excess. TOC-3550'

Intermediate Casing Stage 2: Lead with 980 sacks 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in with 200 sacks Class C with CaCl₂ (Wt. 14.80 Yld. 1.34). Cement designed with 100% excess. TOC is surface.

Production Casing: Cement to be done in two stages with DV cementer tools at approximately 6600'.

Stage 1 from 13340' MD to 6600'; cement with 425 sacks 35:65:6PxC (Wt.12.50 Yld. 2.00). Tail in with 1025 sacks PecosVILt with D112, Fluid Loss 0.4%; D151, Calcium Carbonate, 22.5 lb/sack' D-174, Extender 1.5 lb/sack; D-177, Retarder 0.01 lb/sack; D-800, Retarder 0.5 lb/sack and D46, Antifoam Agent, 0.15 lb/sack (Wt. 13.00 Yld. 1.41). Cement designed with 35% excess. TOC-6600'.

Stage 2 from 6600' to 2900'; Lead with 490 sacks 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail In with 200 sacks PecosVILt with D112, Fluid Loss 0.4%; D151, Calcium Carbonate, 22.5 lb/sack' D-174, Extender 1.5 lb/sack; D-177, Retarder 0.01 lb/sack; D-800, Retarder 0.5 lb/sack and D46, Antifoam Agent, 0.15 lb/sack (Wt. 13.00 Yld. 1.41). Cement designed with 35% excess. TOC- 2900'.

See COA Pilot hole drilled vertically to 9133' and kicked off at approximately 8446'. A 200' isolation plug will be set at pilot hole TD and a 600' plug from 8740' to 8140'. The well will then be directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 9205' MD (8924' TVD). At this point, reduce the hole size to 8 1/2" and drill to 13352' MD (8844' TVD). 5 1/2" casing will then be set and cemented in two stages with a DV tool at approximately 6600'. Penetration point of producing zone will be encountered at 663' FNL & 817' FEL, Section 9-19S-31E. Deepest TVD in the well will be 9133' in the pilot hole. Deepest TVD in the lateral is 8924'.

5. Mud Program and Auxiliary Equipment:

See COA

INTERVAL	TYPE	WEIGHT	VISCOSITY	FLUID LOSS
0'-510'	Fresh Water	8.60-9.20	28-34	N/C
510'-4300'	Brine Water	10.00-10.20	28-30	N/C
4300'-9133'	Cut Brine	8.80-9.20	30-36	N/C
8446'-13352'	Cut Brine (Lateral Section)	8.80-9.20	30-36	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. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM: *See COA*

Samples: 10 foot samples 3000' to TD.

Logging: Platform Express/HALS/NGT w/CMR from into the curve to surface casing; Horizontal-MWD-GR.

Coring: None

DST's: None

Mudlogging: On from 3000' to TD

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

Anticipated BHP: Depths are TVD.

From: 0	TO: 510'	Anticipated Max. BHP:	244	PSI
From: 510'	TO: 4300'	Anticipated Max. BHP:	2281	PSI
From: 4300'	TO: 9133'	Anticipated Max. BHP:	4369	PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.



A Schlumberger Company

Yates Petroleum Corp.

Eddy County (NAD 83)

Checker BIC Federal Com

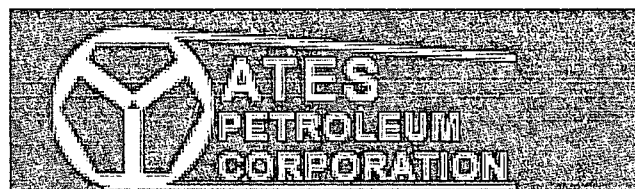
#4H

OH

Plan #1

Anticollision Report

09 August, 2012



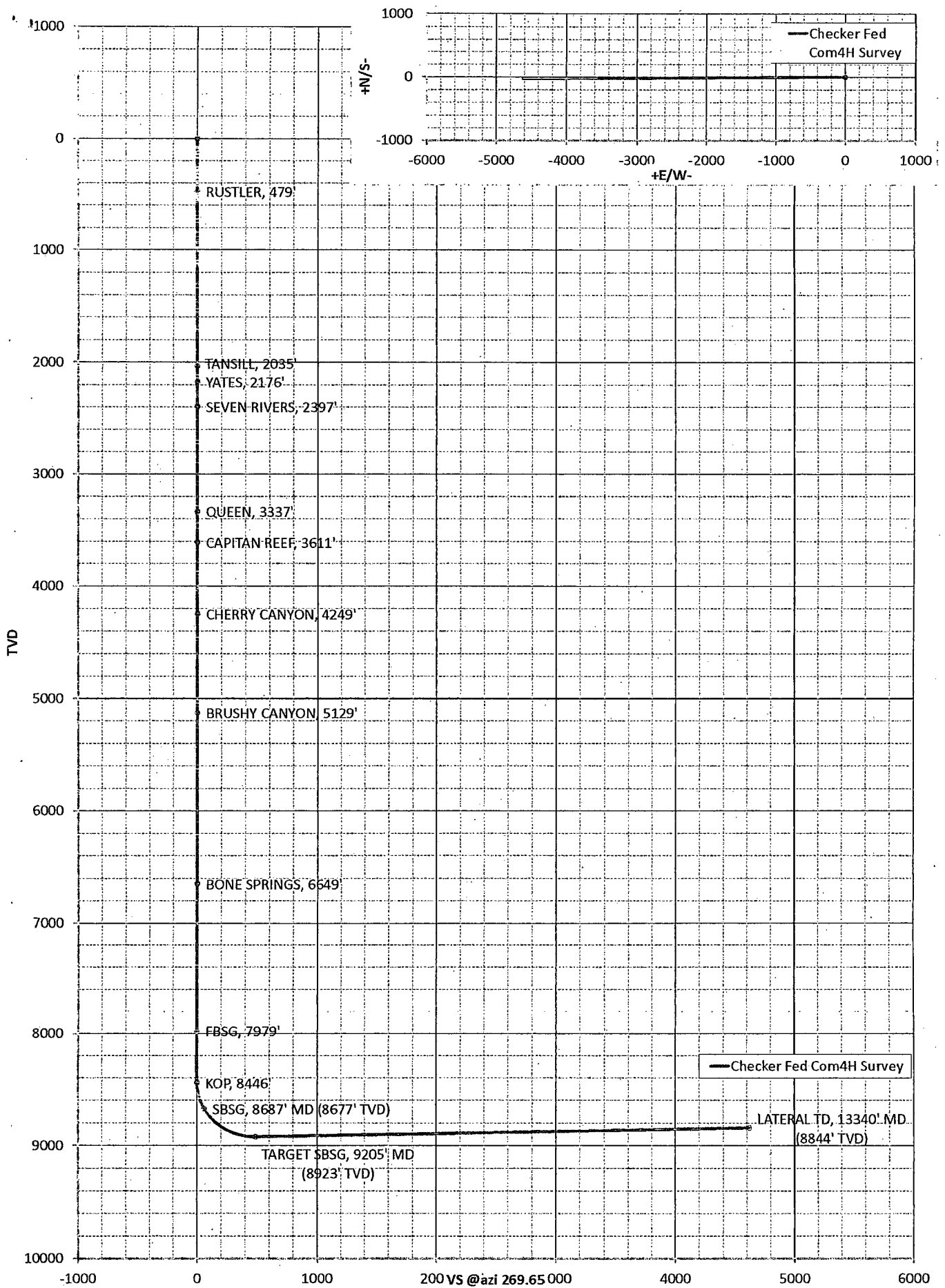
Operator Co.

Your Co.

Survey/Planning Report

Operator	Yates Petroleum Corp.	North	East	Elev	Lat	Long	Units	Date	System	Datum	Zone	Scale Fac.	Converg.
Dir. Co.	Yates Petroleum Corp.						Feet	30-Jul-12	2 - St. Plane	1983 - NAD83	4302 - Utah Central		
Well Name	Checker Fed Com4H Survey												
Location	Sec. 9, 19S-31E												
Rig													
Job													
MD	INC	AZI	TVD	+N/S	+E/W	VS@269.65°	BR	TR	DLS				
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
479.00	0.00	360.00	479.00	0.00	0.00	0.00	0.00	0.00	0.00				
479: RUSTLER, 479'													
2035.00	0.00	360.00	2035.00	0.00	0.00	0.00	0.00	0.00	0.00				
2035: TANSILL, 2035'													
2176.00	0.00	360.00	2176.00	0.00	0.00	0.00	0.00	0.00	0.00				
2176: YATES, 2176'													
2397.00	0.00	360.00	2397.00	0.00	0.00	0.00	0.00	0.00	0.00				
2397: SEVEN RIVERS, 2397'													
3337.00	0.00	360.00	3337.00	0.00	0.00	0.00	0.00	0.00	0.00				
3337: QUEEN, 3337'													
3611.00	0.00	360.00	3611.00	0.00	0.00	0.00	0.00	0.00	0.00				
3611: CAPITAN REEF, 3611'													
4249.00	0.00	360.00	4249.00	0.00	0.00	0.00	0.00	0.00	0.00				
4249: CHERRY CANYON, 4249'													
5129.00	0.00	360.00	5129.00	0.00	0.00	0.00	0.00	0.00	0.00				
5129: BRUSHY CANYON, 5129'													
6649.00	0.00	360.00	6649.00	0.01	0.00	0.00	0.00	0.00	0.00				
6649: BONE SPRINGS, 6649'													
7979.00	0.00	360.00	7979.00	0.01	0.00	0.00	0.00	0.00	0.00				
7979: FBSG, 7979'													
8446.00	0.00	269.65	8446.00	0.01	0.00	0.00	0.00	3.19	0.00				
8446: KOP, 8446'													
8500.00	6.48	269.65	8499.88	-0.01	-3.05	3.05	12.00	0.00	12.00				
8600.00	18.48	269.65	8597.34	-0.14	-24.62	24.62	12.00	0.00	12.00				
8687.12	28.93	269.65	8677.00	-0.36	-59.60	59.60	12.00	0.00	12.00				
8687.12: SBSG, 8687' MD (8677' TVD)													
8700.00	30.48	269.65	8688.19	-0.40	-65.98	65.98	12.00	0.00	12.00				
8800.00	42.48	269.65	8768.45	-0.77	-125.33	125.33	12.00	0.00	12.00				
8900.00	54.48	269.65	8834.61	-1.23	-200.06	200.07	12.00	0.00	12.00				
9000.00	66.48	269.65	8883.80	-1.76	-286.92	286.93	12.00	0.00	12.00				
9100.00	78.48	269.65	8913.84	-2.35	-382.10	382.11	12.00	0.00	12.00				
9205.17	91.10	269.65	8923.38	-2.99	-486.62	486.63	12.00	0.00	12.00				
9205.17: TARGET SBSG, 9205' MD (8923' TVD)													
13340.02	91.10	269.65	8844.00	-28.48	-4620.63	4620.72	0.00	0.00	0.00				
13340.02: LATERAL TD, 13340' MD (8844' TVD)													







A Schlumberger Company

Pathfinder Anticollision Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	8/9/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,339.6	Plan #1 (OH)	MWD	MWD - Standard	

Summary						
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						
Checker BIC Federal Com						
Checker BIC Federal Com - OH - OH	12,457.3	8,811.8	1.2	-350.9	0.003	Level 1, CC, ES, SF

Offset Design													Offset Site Error:	0.0 usft
Checker BIC Federal Com - Checker BIC Federal Com - OH - OH													Offset Well Error:	0.0 usft
Survey Program: 171-INC+TREND														
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)	Separation Factor			
12,000.0	8,869.6	8,838.5	8,834.5	90.9	249.8	-177.40	-24.3	-3,737.4	456.5	412.3	44.23	10.320		
12,100.0	8,867.7	8,832.7	8,828.7	93.6	249.6	-176.68	-24.3	-3,737.6	356.7	309.5	47.21	7.554		
12,200.0	8,865.8	8,826.8	8,822.8	96.3	249.4	-175.39	-24.3	-3,737.9	256.8	204.2	52.66	4.877		
12,300.0	8,863.9	8,821.0	8,817.0	99.0	249.2	-172.50	-24.3	-3,738.1	157.0	91.1	65.95	2.381		
12,400.0	8,861.9	8,815.2	8,811.2	101.7	249.0	-160.14	-24.3	-3,738.3	57.2	-72.3	129.46	0.442	Level 1	
12,457.3	8,860.9	8,811.8	8,807.9	103.2	248.9	-89.97	-24.3	-3,738.5	1.2	-350.9	352.07	0.003	Level 1, CC, ES, SF	
12,500.0	8,860.0	8,809.3	8,805.4	104.4	248.8	-25.80	-24.3	-3,738.6	42.7	-118.7	161.39	0.264	Level 1	
12,600.0	8,858.1	8,803.5	8,799.5	107.1	248.6	-8.23	-24.3	-3,738.8	142.5	71.1	71.42	1.995		
12,700.0	8,856.2	8,797.7	8,793.7	109.8	248.4	-4.85	-24.3	-3,739.0	242.3	185.3	57.00	4.251		
12,800.0	8,854.3	8,791.8	8,787.9	112.5	248.2	-3.44	-24.3	-3,739.3	342.1	289.9	52.25	6.549		
12,900.0	8,852.4	8,786.0	8,782.0	115.2	247.9	-2.66	-24.3	-3,739.5	442.0	391.6	50.35	8.777		

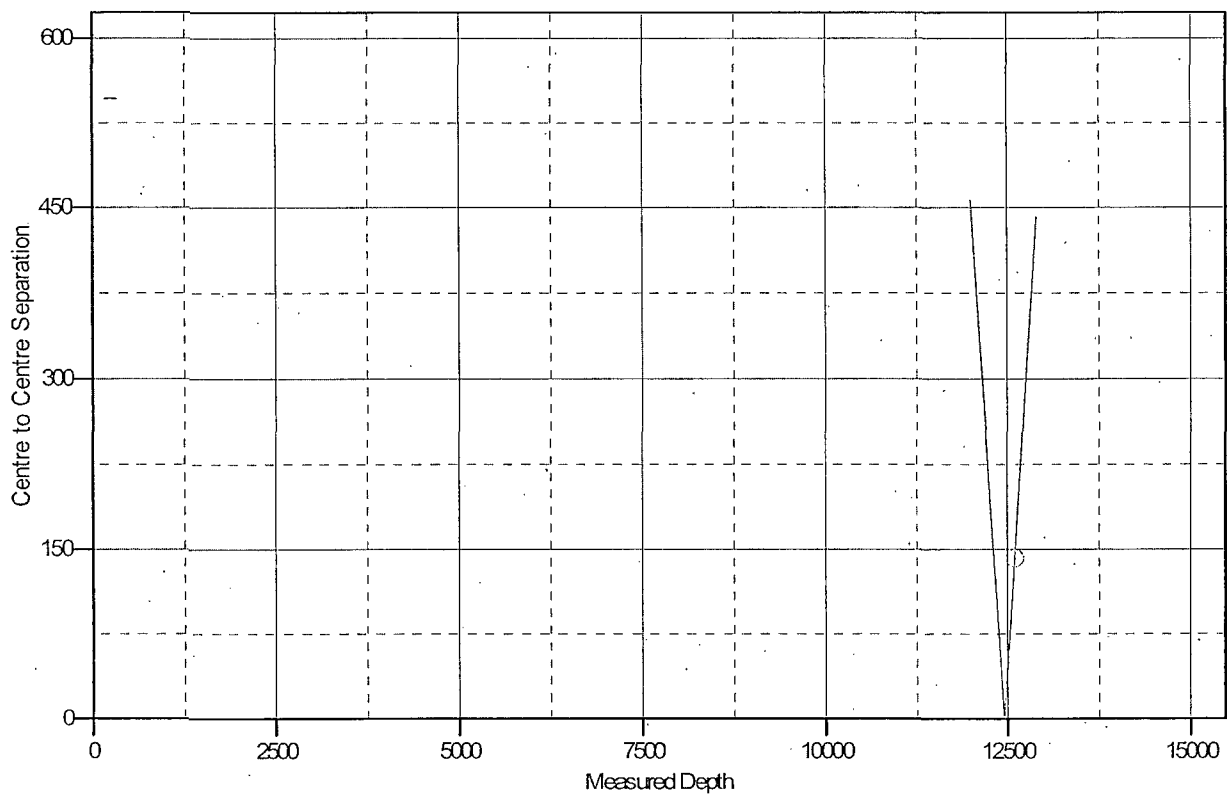
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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 Depths are relative to KB = 18' @ 3595.0usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333°

Coordinates are relative to: #4H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.25°

Ladder Plot



LEGEND

Checker BIC Federal Com, OH, OHV0

Company:	Yates Petroleum Corp.	Local/Co-ordinate Reference:	Well #4H:
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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 Depths are relative to KB = 18' @ 3595.0usft

Offset Depths are relative to Offset Datum

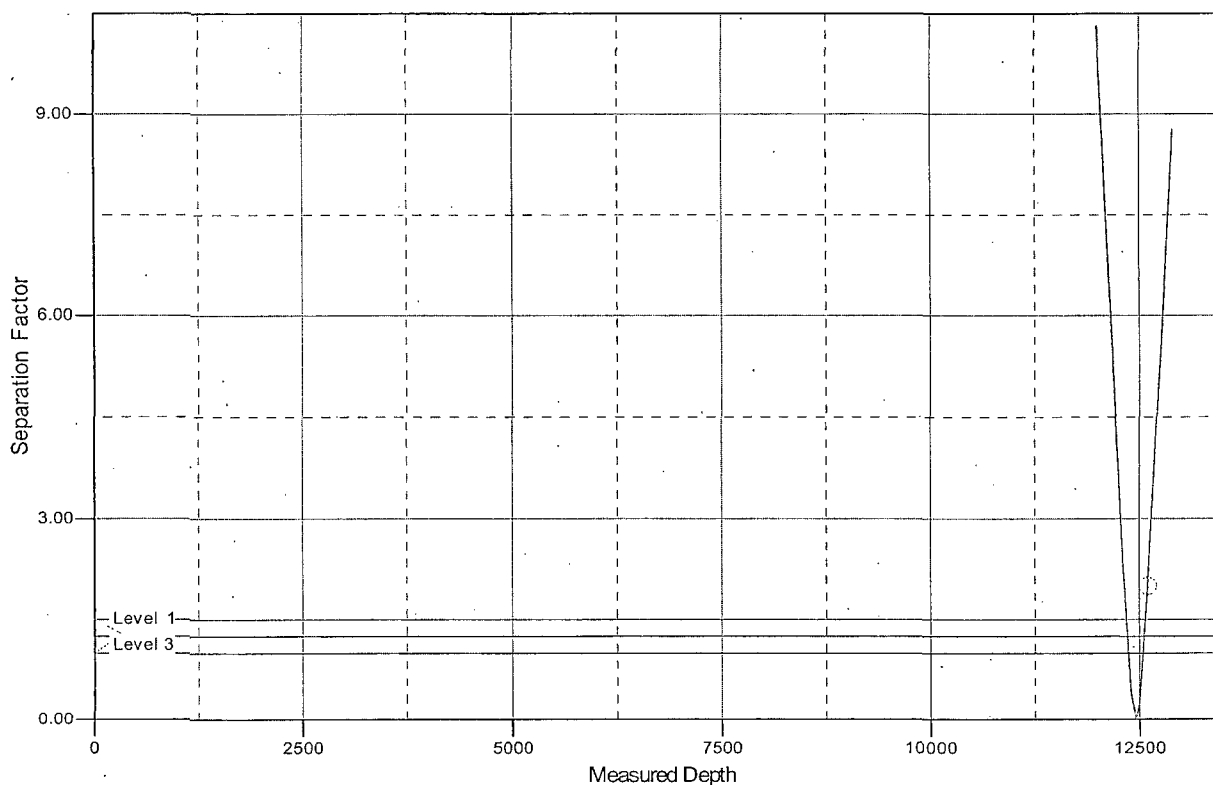
Central Meridian is -104.333

Coordinates are relative to: #4H

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

Grid Convergence at Surface is: 0.25°

Separation Factor Plot



LEGEND

 Checker BIC Federal Com, OH, OHV0



A Schlumberger Company

Yates Petroleum Corp.

Eddy County (NAD 83)
Checker BIC Federal Com
#4H
OH

Plan: Plan #1

Pathfinder X&Y Report

09 August, 2012





A Schlumberger Company

Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project	Eddy County (NAD 83)
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Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Checker BIC Federal Com
------	-------------------------

Site Position:	Map	Northing:	611,578.452 usft	Latitude:	32.680
From:		Easting:	684,858.879 usft	Longitude:	-103.867
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.25 "

Well	#4H
------	-----

Well Position	+N/-S	0.0 usft	Northing:	611,578.452 usft	Latitude:	32.680
	+E/-W	0.0 usft	Easting:	684,858.879 usft	Longitude:	-103.867
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,577.0 usft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	8/9/2012	7.61	60.56	48,783

Design	Plan #1
--------	---------

Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	269.65

Survey Tool Program	Date	8/9/2012
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From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
0.0	13,339.6	Plan #1 (OH)	MWD	MWD - Standard



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Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLag (*/100usft)	Northing (usft)	Easting (usft)		
0.0	0.00	0.00	0.0	-3,595.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
100.0	0.00	0.00	100.0	-3,495.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
200.0	0.00	0.00	200.0	-3,395.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
300.0	0.00	0.00	300.0	-3,295.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
400.0	0.00	0.00	400.0	-3,195.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
500.0	0.00	0.00	500.0	-3,095.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
600.0	0.00	0.00	600.0	-2,995.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
700.0	0.00	0.00	700.0	-2,895.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
800.0	0.00	0.00	800.0	-2,795.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
900.0	0.00	0.00	900.0	-2,695.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,000.0	0.00	0.00	1,000.0	-2,595.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,100.0	0.00	0.00	1,100.0	-2,495.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,200.0	0.00	0.00	1,200.0	-2,395.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,300.0	0.00	0.00	1,300.0	-2,295.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,400.0	0.00	0.00	1,400.0	-2,195.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,500.0	0.00	0.00	1,500.0	-2,095.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,600.0	0.00	0.00	1,600.0	-1,995.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,700.0	0.00	0.00	1,700.0	-1,895.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,800.0	0.00	0.00	1,800.0	-1,795.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
1,900.0	0.00	0.00	1,900.0	-1,695.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,000.0	0.00	0.00	2,000.0	-1,595.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,100.0	0.00	0.00	2,100.0	-1,495.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,200.0	0.00	0.00	2,200.0	-1,395.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,300.0	0.00	0.00	2,300.0	-1,295.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,400.0	0.00	0.00	2,400.0	-1,195.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,500.0	0.00	0.00	2,500.0	-1,095.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		
2,600.0	0.00	0.00	2,600.0	-995.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88		



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Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Coordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Incl (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D. Leg (°/100usft)	Northings (usft)	Easting (usft)	
2,700.0	0.00	0.00	2,700.0	-895.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
2,800.0	0.00	0.00	2,800.0	-795.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
2,900.0	0.00	0.00	2,900.0	-695.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,000.0	0.00	0.00	3,000.0	-595.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,100.0	0.00	0.00	3,100.0	-495.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,200.0	0.00	0.00	3,200.0	-395.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,300.0	0.00	0.00	3,300.0	-295.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,400.0	0.00	0.00	3,400.0	-195.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,500.0	0.00	0.00	3,500.0	-95.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,600.0	0.00	0.00	3,600.0	5.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,700.0	0.00	0.00	3,700.0	105.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,800.0	0.00	0.00	3,800.0	205.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
3,900.0	0.00	0.00	3,900.0	305.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,000.0	0.00	0.00	4,000.0	405.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,100.0	0.00	0.00	4,100.0	505.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,200.0	0.00	0.00	4,200.0	605.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,300.0	0.00	0.00	4,300.0	705.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,400.0	0.00	0.00	4,400.0	805.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,500.0	0.00	0.00	4,500.0	905.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,600.0	0.00	0.00	4,600.0	1,005.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,700.0	0.00	0.00	4,700.0	1,105.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,800.0	0.00	0.00	4,800.0	1,205.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
4,900.0	0.00	0.00	4,900.0	1,305.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,000.0	0.00	0.00	5,000.0	1,405.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,100.0	0.00	0.00	5,100.0	1,505.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,200.0	0.00	0.00	5,200.0	1,605.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,300.0	0.00	0.00	5,300.0	1,705.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	



A Schlumberger Company

Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D Leg (°/100usft)	Northing (usft)	Easting (usft)	
5,400.0	0.00	0.00	5,400.0	1,805.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,500.0	0.00	0.00	5,500.0	1,905.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,600.0	0.00	0.00	5,600.0	2,005.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,700.0	0.00	0.00	5,700.0	2,105.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,800.0	0.00	0.00	5,800.0	2,205.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
5,900.0	0.00	0.00	5,900.0	2,305.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,000.0	0.00	0.00	6,000.0	2,405.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,100.0	0.00	0.00	6,100.0	2,505.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,200.0	0.00	0.00	6,200.0	2,605.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,300.0	0.00	0.00	6,300.0	2,705.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,400.0	0.00	0.00	6,400.0	2,805.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,500.0	0.00	0.00	6,500.0	2,905.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,600.0	0.00	0.00	6,600.0	3,005.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,700.0	0.00	0.00	6,700.0	3,105.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,800.0	0.00	0.00	6,800.0	3,205.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
6,900.0	0.00	0.00	6,900.0	3,305.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,000.0	0.00	0.00	7,000.0	3,405.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,100.0	0.00	0.00	7,100.0	3,505.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,200.0	0.00	0.00	7,200.0	3,605.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,300.0	0.00	0.00	7,300.0	3,705.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,400.0	0.00	0.00	7,400.0	3,805.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,500.0	0.00	0.00	7,500.0	3,905.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,600.0	0.00	0.00	7,600.0	4,005.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,700.0	0.00	0.00	7,700.0	4,105.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,800.0	0.00	0.00	7,800.0	4,205.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
7,900.0	0.00	0.00	7,900.0	4,305.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,000.0	0.00	0.00	8,000.0	4,405.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V/Sec (usft)	DLog (°/100usft)	Northing (usft)	Easting (usft)	
8,100.0	0.00	0.00	8,100.0	4,505.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,200.0	0.00	0.00	8,200.0	4,605.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,300.0	0.00	0.00	8,300.0	4,705.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,400.0	0.00	0.00	8,400.0	4,805.0	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,445.6	0.00	0.00	8,445.6	4,850.6	0.0	0.0	0.0	0.00	611,578.45	684,858.88	
8,450.0	0.53	269.65	8,450.0	4,855.0	0.0	0.0	0.0	12.00	611,578.45	684,858.86	
8,475.0	3.53	269.65	8,475.0	4,880.0	0.0	-0.9	0.9	12.00	611,578.45	684,857.97	
8,500.0	6.53	269.65	8,499.9	4,904.9	0.0	-3.1	3.1	12.00	611,578.43	684,855.78	
8,525.0	9.53	269.65	8,524.6	4,929.6	0.0	-6.6	6.6	12.00	611,578.41	684,852.29	
8,550.0	12.53	269.65	8,549.2	4,954.2	-0.1	-11.4	11.4	12.00	611,578.38	684,847.51	
8,575.0	15.53	269.65	8,573.4	4,978.4	-0.1	-17.4	17.4	12.00	611,578.34	684,841.45	
8,600.0	18.53	269.65	8,597.3	5,002.3	-0.2	-24.7	24.7	12.00	611,578.30	684,834.13	
8,625.0	21.53	269.65	8,620.8	5,025.8	-0.2	-33.3	33.3	12.00	611,578.25	684,825.57	
8,650.0	24.53	269.65	8,643.8	5,048.8	-0.3	-43.1	43.1	12.00	611,578.19	684,815.79	
8,675.0	27.53	269.65	8,666.3	5,071.3	-0.3	-54.1	54.1	12.00	611,578.12	684,804.82	
8,700.0	30.53	269.65	8,688.1	5,093.1	-0.4	-66.2	66.2	12.00	611,578.04	684,792.69	
8,725.0	33.53	269.65	8,709.3	5,114.3	-0.5	-79.4	79.4	12.00	611,577.96	684,779.44	
8,750.0	36.53	269.65	8,729.8	5,134.8	-0.6	-93.8	93.8	12.00	611,577.87	684,765.09	
8,775.0	39.53	269.65	8,749.5	5,154.5	-0.7	-109.2	109.2	12.00	611,577.78	684,749.69	
8,800.0	42.53	269.65	8,768.3	5,173.3	-0.8	-125.6	125.6	12.00	611,577.68	684,733.28	
8,825.0	45.53	269.65	8,786.3	5,191.3	-0.9	-143.0	143.0	12.00	611,577.57	684,715.91	
8,850.0	48.53	269.65	8,803.4	5,208.4	-1.0	-161.3	161.3	12.00	611,577.46	684,697.62	
8,875.0	51.53	269.65	8,819.4	5,224.4	-1.1	-180.4	180.4	12.00	611,577.34	684,678.46	
8,900.0	54.53	269.65	8,834.4	5,239.4	-1.2	-200.4	200.4	12.00	611,577.22	684,658.49	
8,925.0	57.53	269.65	8,848.4	5,253.4	-1.4	-221.1	221.1	12.00	611,577.09	684,637.76	
8,950.0	60.53	269.65	8,861.3	5,266.3	-1.5	-242.5	242.6	12.00	611,576.96	684,616.33	
8,975.0	63.53	269.65	8,873.0	5,278.0	-1.6	-264.6	264.6	12.00	611,576.82	684,594.25	



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Pathfinder Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (7/100usft)	Northing (usft)	Easting (usft)	
9,000.0	66.53	269.65	8,883.6	5,288.6	-1.8	-287.3	287.3	12.00	611,576.68	684,571.59	
9,025.0	69.53	269.65	8,892.9	5,297.9	-1.9	-310.5	310.5	12.00	611,576.54	684,548.41	
9,050.0	72.53	269.65	8,901.0	5,306.0	-2.1	-334.1	334.1	12.00	611,576.39	684,524.77	
9,075.0	75.53	269.65	8,907.9	5,312.9	-2.2	-358.1	358.1	12.00	611,576.24	684,500.74	
9,100.0	78.53	269.65	8,913.5	5,318.5	-2.4	-382.5	382.5	12.00	611,576.09	684,476.38	
9,125.0	81.53	269.65	8,917.9	5,322.9	-2.5	-407.1	407.1	12.00	611,575.94	684,451.76	
9,150.0	84.53	269.65	8,920.9	5,325.9	-2.7	-431.9	431.9	12.00	611,575.79	684,426.95	
9,175.0	87.53	269.65	8,922.6	5,327.6	-2.8	-456.9	456.9	12.00	611,575.64	684,402.02	
9,200.0	90.53	269.65	8,923.0	5,328.0	-3.0	-481.9	481.9	12.00	611,575.48	684,377.02	
9,204.7	91.09	269.65	8,923.0	5,328.0	-3.0	-486.6	486.6	12.00	611,575.45	684,372.30	
9,300.0	91.09	269.65	8,921.2	5,326.2	-3.6	-581.8	581.8	0.00	611,574.86	684,277.04	
9,400.0	91.09	269.65	8,919.2	5,324.2	-4.2	-681.8	681.8	0.00	611,574.25	684,177.06	
9,500.0	91.09	269.65	8,917.3	5,322.3	-4.8	-781.8	781.8	0.00	611,573.63	684,077.08	
9,600.0	91.09	269.65	8,915.4	5,320.4	-5.4	-881.8	881.8	0.00	611,573.02	683,977.10	
9,700.0	91.09	269.65	8,913.5	5,318.5	-6.1	-981.8	981.8	0.00	611,572.40	683,877.12	
9,800.0	91.09	269.65	8,911.6	5,316.6	-6.7	-1,081.7	1,081.8	0.00	611,571.78	683,777.14	
9,900.0	91.09	269.65	8,909.7	5,314.7	-7.3	-1,181.7	1,181.7	0.00	611,571.17	683,677.16	
10,000.0	91.09	269.65	8,907.8	5,312.8	-7.9	-1,281.7	1,281.7	0.00	611,570.55	683,577.18	
10,100.0	91.09	269.65	8,905.9	5,310.9	-8.5	-1,381.7	1,381.7	0.00	611,569.93	683,477.20	
10,200.0	91.09	269.65	8,904.0	5,309.0	-9.1	-1,481.7	1,481.7	0.00	611,569.32	683,377.22	
10,300.0	91.09	269.65	8,902.1	5,307.1	-9.8	-1,581.6	1,581.7	0.00	611,568.70	683,277.24	
10,400.0	91.09	269.65	8,900.1	5,305.1	-10.4	-1,681.6	1,681.6	0.00	611,568.08	683,177.26	
10,500.0	91.09	269.65	8,898.2	5,303.2	-11.0	-1,781.6	1,781.6	0.00	611,567.47	683,077.28	
10,600.0	91.09	269.65	8,896.3	5,301.3	-11.6	-1,881.6	1,881.6	0.00	611,566.85	682,977.31	
10,700.0	91.09	269.65	8,894.4	5,299.4	-12.2	-1,981.6	1,981.6	0.00	611,566.24	682,877.33	
10,800.0	91.09	269.65	8,892.5	5,297.5	-12.8	-2,081.5	2,081.6	0.00	611,565.62	682,777.35	
10,900.0	91.09	269.65	8,890.6	5,295.6	-13.4	-2,181.5	2,181.6	0.00	611,565.00	682,677.37	



A Schlumberger Company

Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey:

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec. (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,000.0	91.09	269.65	8,888.7	5,293.7	-14.1	-2,281.5	2,281.5	0.00	611,564.39	682,577.39
11,100.0	91.09	269.65	8,886.8	5,291.8	-14.7	-2,381.5	2,381.5	0.00	611,563.77	682,477.41
11,200.0	91.09	269.65	8,884.9	5,289.9	-15.3	-2,481.5	2,481.5	0.00	611,563.15	682,377.43
11,300.0	91.09	269.65	8,883.0	5,288.0	-15.9	-2,581.4	2,581.5	0.00	611,562.54	682,277.45
11,400.0	91.09	269.65	8,881.0	5,286.0	-16.5	-2,681.4	2,681.5	0.00	611,561.92	682,177.47
11,500.0	91.09	269.65	8,879.1	5,284.1	-17.1	-2,781.4	2,781.4	0.00	611,561.30	682,077.49
11,600.0	91.09	269.65	8,877.2	5,282.2	-17.8	-2,881.4	2,881.4	0.00	611,560.69	681,977.51
11,700.0	91.09	269.65	8,875.3	5,280.3	-18.4	-2,981.4	2,981.4	0.00	611,560.07	681,877.53
11,800.0	91.09	269.65	8,873.4	5,278.4	-19.0	-3,081.3	3,081.4	0.00	611,559.46	681,777.55
11,900.0	91.09	269.65	8,871.5	5,276.5	-19.6	-3,181.3	3,181.4	0.00	611,558.84	681,677.57
12,000.0	91.09	269.65	8,869.6	5,274.6	-20.2	-3,281.3	3,281.4	0.00	611,558.22	681,577.59
12,100.0	91.09	269.65	8,867.7	5,272.7	-20.8	-3,381.3	3,381.3	0.00	611,557.61	681,477.61
12,200.0	91.09	269.65	8,865.8	5,270.8	-21.5	-3,481.3	3,481.3	0.00	611,556.99	681,377.63
12,300.0	91.09	269.65	8,863.9	5,268.9	-22.1	-3,581.2	3,581.3	0.00	611,556.37	681,277.65
12,400.0	91.09	269.65	8,861.9	5,266.9	-22.7	-3,681.2	3,681.3	0.00	611,555.76	681,177.67
12,500.0	91.09	269.65	8,860.0	5,265.0	-23.3	-3,781.2	3,781.3	0.00	611,555.14	681,077.69
12,600.0	91.09	269.65	8,858.1	5,263.1	-23.9	-3,881.2	3,881.2	0.00	611,554.52	680,977.71
12,700.0	91.09	269.65	8,856.2	5,261.2	-24.5	-3,981.2	3,981.2	0.00	611,553.91	680,877.73
12,800.0	91.09	269.65	8,854.3	5,259.3	-25.2	-4,081.1	4,081.2	0.00	611,553.29	680,777.75
12,900.0	91.09	269.65	8,852.4	5,257.4	-25.8	-4,181.1	4,181.2	0.00	611,552.67	680,677.77
13,000.0	91.09	269.65	8,850.5	5,255.5	-26.4	-4,281.1	4,281.2	0.00	611,552.06	680,577.79
13,100.0	91.09	269.65	8,848.6	5,253.6	-27.0	-4,381.1	4,381.2	0.00	611,551.44	680,477.81
13,200.0	91.09	269.65	8,846.7	5,251.7	-27.6	-4,481.1	4,481.1	0.00	611,550.83	680,377.83
13,300.0	91.09	269.65	8,844.8	5,249.8	-28.2	-4,581.0	4,581.1	0.00	611,550.21	680,277.85
13,339.6	91.09	269.65	8,844.0	5,249.0	-28.5	-4,620.6	4,620.7	0.00	611,549.97	680,238.25



A Schlumberger Company

Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0ust
Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0ust
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County (NAD 83)
Site: Checker BIC Federal Com
Well: #4H
Wellbore: OH
Plan: Plan #1

PROJECT DETAILS: Eddy County (NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

PATHFINDER

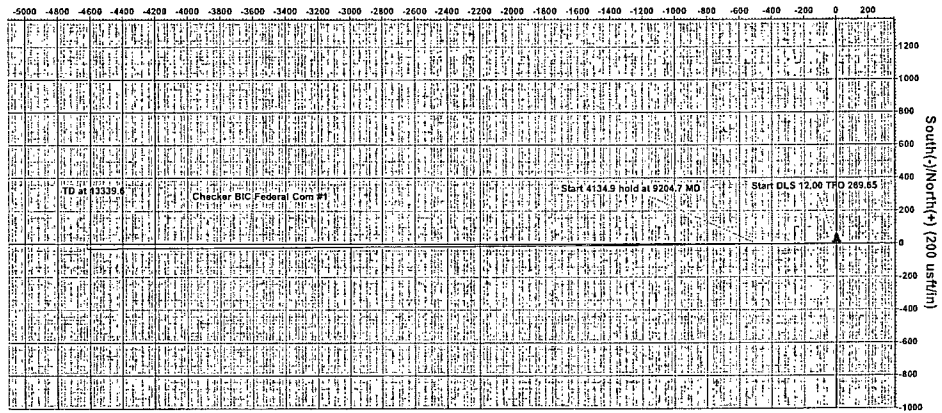
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WELL DETAILS: #4H

Ground Elevation: 3577.0
RKB Elevation: KB = 1' @ 3595.0usft
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.0	0.0	611578.452	684858.879	32.680	-103.867	

West(-)/East(+) (200 usft/in)



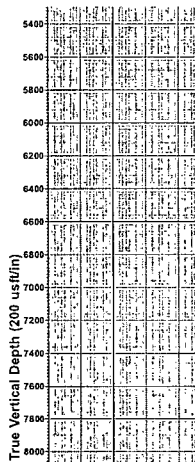
Project: Eddy County (NAD 83)
Site: Checker BIC Federal Com
Well: #4H
Wellbore: OH
Plan: Plan #1 (#4H/OH)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dipg	TFace	VSecl	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	8445.6	0.00	0.00	8445.6	0.0	0.0	0.00	0.00	0.0	
3	9204.7	91.09	269.65	8923.0	-3.0	-486.6	12.00	269.65	486.6	
4	13339.6	91.09	269.65	8844.0	-28.5	-4620.6	0.00	4620.7		PBHL (Checker #4H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (Checker #4H)	8844.0	-28.5	-4620.6	611549.965	680238.251	32.680	-103.882



Azimuths to Grid North
True North: -0.25°
Magnetic North: 7.35°

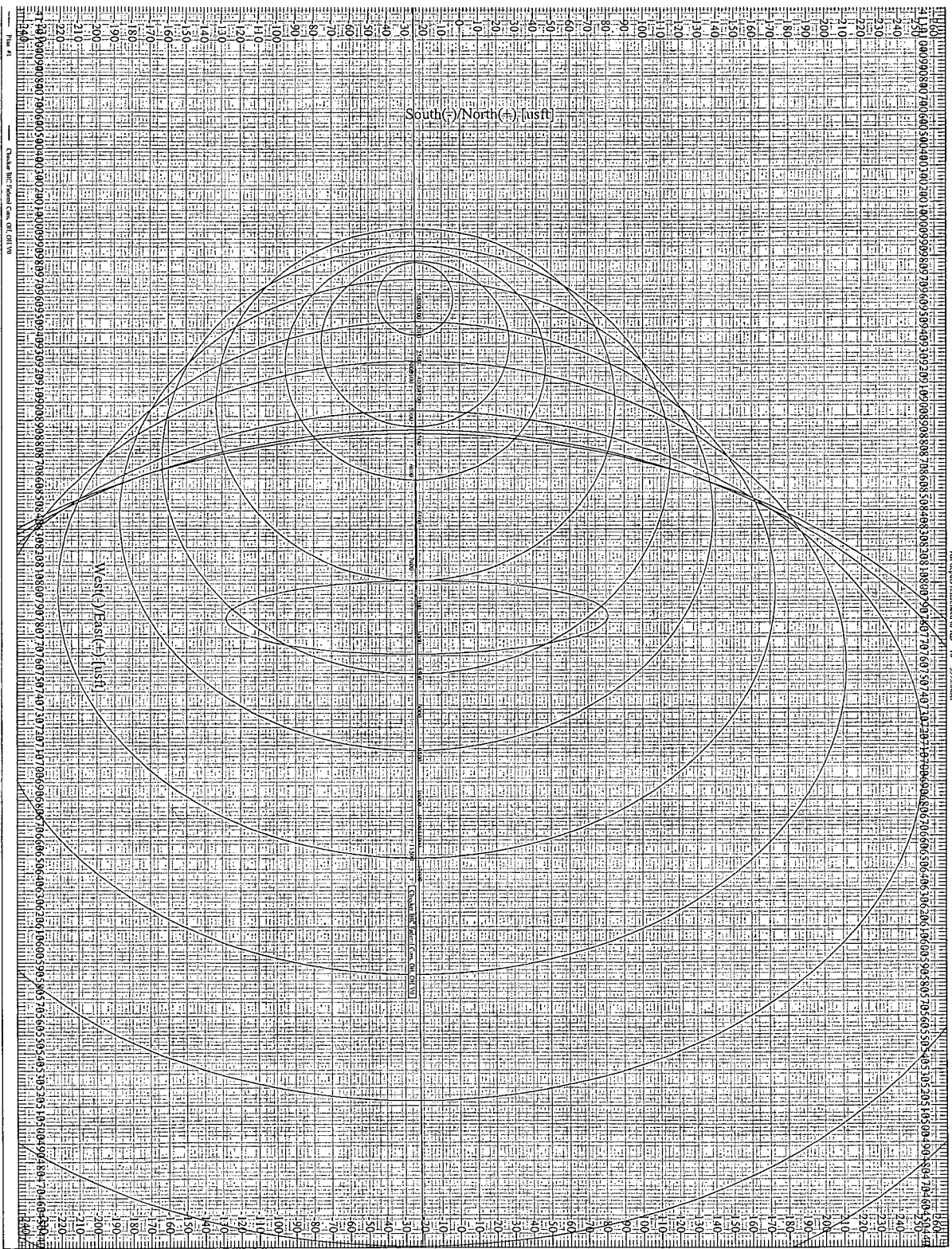
Magnetic Field
Strength: 48782.7nT
Dip Angle: 60.56°
Date: 8/9/2012
Model: IGRF200510

Vertical Section at 269.65° (200 usft/in)

Plan: Plan #1 (#4H/OH)
Created By: Michael Trout Date: 13:44, August 09 2012
Checked: _____ Date: _____

Eddy Current (MAD 83) - Check for Eddy Current

All depths referenced to 100' ± 15' (15' ± 15')





Yates Petroleum Corp.

Eddy County (NAD 83)

Checker BIC Federal Com

#4H

OH

Plan #2

Anticollision Report

17 August, 2012

PATHFINDER[®]

A Schlumberger Company



Pathfinder

Anticollision Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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 #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2		
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	8/17/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,351.0	Plan #2 (OH)	MWD	MWD - Standard	

Summary						
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						
Checker BIC Federal Com						
#1 - OH - OH	12,670.7	8,807.9	282.6	6.9	1.025	Level 2, CC, ES, SF

Checker BIC Federal Com - #1 - OH - OH													
Survey Program: 171-HNC-TREND													
Reference Offset													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	53.0	0.0	0.0	-90.35	-24.3	-3,962.0	3,962.4				
100.0	100.0	47.0	100.0	0.1	0.6	-90.35	-24.2	-3,962.0	3,962.1	3,961.3	0.72	5,515.244	
138.5	138.5	85.5	138.5	0.2	1.1	-90.35	-24.2	-3,962.0	3,962.1	3,960.7	1.32	3,008.226	
200.0	200.0	147.0	200.0	0.3	2.0	-90.35	-24.2	-3,962.0	3,962.1	3,959.8	2.27	1,742.627	
300.0	300.0	246.9	299.9	0.5	2.3	-90.35	-24.5	-3,962.0	3,962.1	3,959.2	2.85	1,389.213	
400.0	400.0	347.0	400.0	0.8	2.4	-90.36	-24.6	-3,962.0	3,962.1	3,958.9	3.12	1,269.452	
500.0	500.0	447.1	500.1	1.0	2.4	-90.35	-24.4	-3,962.0	3,962.1	3,958.7	3.39	1,168.700	
526.0	526.0	473.0	526.0	1.0	2.4	-90.35	-24.3	-3,962.0	3,962.1	3,958.6	3.46	1,145.085	
600.0	600.0	547.0	600.0	1.2	2.8	-90.35	-24.4	-3,962.0	3,962.1	3,958.1	3.94	1,004.699	
700.0	700.0	647.0	700.0	1.4	3.6	-90.35	-24.1	-3,962.0	3,962.1	3,957.1	4.96	798.601	
710.5	710.5	657.5	710.5	1.5	3.8	-90.35	-24.1	-3,962.0	3,962.1	3,956.9	5.11	775.931	
800.0	800.0	747.0	800.0	1.7	5.1	-90.35	-24.3	-3,962.0	3,962.1	3,955.5	6.53	606.386	
900.0	900.0	847.0	900.0	1.9	6.9	-90.35	-24.3	-3,962.0	3,962.1	3,953.5	8.57	462.110	
1,000.0	1,000.0	947.0	1,000.0	2.1	8.8	-90.35	-24.3	-3,962.0	3,962.1	3,951.4	10.61	373.293	
1,064.5	1,064.5	1,011.6	1,064.5	2.3	10.0	-90.35	-24.3	-3,962.0	3,962.1	3,950.1	11.93	332.097	
1,100.0	1,100.0	1,046.9	1,099.9	2.3	10.6	-90.35	-24.3	-3,962.0	3,962.1	3,949.4	12.66	312.847	
1,200.0	1,200.0	1,147.0	1,200.0	2.6	13.0	-90.36	-24.6	-3,962.0	3,962.1	3,946.9	15.14	261.718	
1,300.0	1,300.0	1,247.0	1,300.0	2.8	15.3	-90.36	-24.6	-3,962.0	3,962.1	3,944.4	17.61	224.956	
1,400.0	1,400.0	1,347.1	1,400.1	3.0	17.7	-90.35	-24.3	-3,962.0	3,962.1	3,942.0	20.09	197.251	
1,421.4	1,421.4	1,368.4	1,421.3	3.1	18.2	-90.35	-24.3	-3,962.0	3,962.1	3,941.5	20.59	192.417	
1,500.0	1,500.0	1,447.0	1,500.0	3.2	20.0	-90.35	-24.3	-3,962.0	3,962.1	3,939.7	22.36	177.232	
1,561.1	1,561.1	1,508.2	1,561.1	3.4	21.3	-90.35	-24.3	-3,962.0	3,962.1	3,938.3	23.73	166.994	
1,600.0	1,600.0	1,547.0	1,599.9	3.5	22.3	-90.35	-24.4	-3,962.0	3,962.1	3,937.4	24.64	160.774	
1,700.0	1,700.0	1,647.0	1,700.0	3.7	25.0	-90.36	-24.7	-3,962.0	3,962.1	3,935.0	27.05	146.499	
1,800.0	1,800.0	1,747.1	1,800.0	3.9	27.7	-90.36	-24.8	-3,962.0	3,962.1	3,932.6	29.45	134.552	
1,900.0	1,900.0	1,847.1	1,900.0	4.1	30.3	-90.36	-24.7	-3,962.0	3,962.1	3,930.2	31.85	124.409	

CC - Min centre to center distance or covergent 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: Checker BIC Federal Com
Site Error: 0.0 usft
Reference Well: #4H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #2

Local Co-ordinate Reference: Well #4H
TVD Reference: KB = 18' @ 3595.0usft
MD Reference: KB = 18' @ 3595.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Offset Design: Checker BIC Federal Com - #1 - OH - OH													Offset Site Error: 0.0 usft
Survey Program: 171 INC-TREND													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	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)			
2,000.0	2,000.0	1,947.1	2,000.1	4.4	33.0	-90.35	-24.4	-3,962.0	3,962.1	3,927.8	34.25	115.688	
2,046.8	2,046.8	1,993.7	2,046.5	4.5	34.2	-90.35	-24.3	-3,962.0	3,962.1	3,926.7	35.36	112.037	
2,100.0	2,100.0	2,047.1	2,100.0	4.6	35.7	-90.35	-24.4	-3,962.0	3,962.1	3,925.5	36.54	108.436	
2,200.0	2,200.0	2,147.3	2,200.1	4.8	38.6	-90.35	-24.3	-3,962.0	3,962.1	3,923.3	38.74	102.280	
2,235.8	2,235.8	2,183.0	2,235.8	4.9	39.7	-90.35	-24.3	-3,962.0	3,962.1	3,922.5	39.52	100.253	
2,300.0	2,300.0	2,247.3	2,300.0	5.0	41.6	-90.35	-24.3	-3,962.0	3,962.1	3,921.1	40.93	96.807	
2,374.7	2,374.7	2,322.0	2,374.7	5.2	43.8	-90.35	-24.0	-3,962.0	3,962.1	3,919.5	42.54	93.130	
2,400.0	2,400.0	2,347.2	2,399.9	5.3	44.4	-90.35	-24.1	-3,962.0	3,962.1	3,919.0	43.08	91.961	
2,500.0	2,500.0	2,447.3	2,500.0	5.5	46.9	-90.35	-24.3	-3,962.0	3,962.1	3,916.8	45.24	87.575	
2,600.0	2,600.0	2,547.4	2,600.0	5.7	49.2	-90.35	-24.3	-3,962.0	3,962.1	3,914.7	47.40	83.587	
2,700.0	2,700.0	2,647.4	2,700.0	5.9	51.5	-90.35	-24.1	-3,962.0	3,962.1	3,912.5	49.56	79.940	
2,700.0	2,700.0	2,647.4	2,700.0	5.9	51.5	-90.35	-24.1	-3,962.0	3,962.1	3,912.5	49.56	79.939	
2,800.0	2,800.0	2,747.4	2,800.0	6.2	53.5	-90.35	-24.3	-3,962.0	3,962.1	3,910.3	51.74	76.583	
2,900.0	2,900.0	2,847.4	2,900.0	6.4	55.4	-90.35	-24.3	-3,962.0	3,962.1	3,908.1	53.91	73.492	
2,959.6	2,959.6	2,907.0	2,959.6	6.5	56.6	-90.35	-24.3	-3,962.0	3,962.1	3,906.8	55.21	71.766	
3,000.0	3,000.0	2,947.4	3,000.0	6.6	57.5	-90.35	-24.3	-3,962.0	3,962.1	3,905.9	56.12	70.600	
3,100.0	3,100.0	3,047.4	3,100.0	6.8	59.7	-90.35	-24.4	-3,962.0	3,962.1	3,903.7	58.38	67.868	
3,200.0	3,200.0	3,147.4	3,200.0	7.1	61.9	-90.35	-24.3	-3,962.0	3,962.1	3,901.4	60.64	65.339	
3,300.0	3,300.0	3,247.4	3,300.0	7.3	64.0	-90.35	-24.1	-3,962.0	3,962.1	3,899.2	62.84	63.053	
3,326.1	3,326.1	3,273.5	3,326.1	7.3	64.5	-90.35	-24.1	-3,962.0	3,962.1	3,898.6	63.41	62.485	
3,400.0	3,400.0	3,347.4	3,400.0	7.5	66.1	-90.35	-24.2	-3,962.0	3,962.1	3,897.0	65.02	60.931	
3,500.0	3,500.0	3,447.4	3,500.0	7.7	68.2	-90.35	-24.2	-3,962.0	3,962.1	3,894.8	67.25	58.912	
3,555.1	3,555.1	3,502.5	3,555.1	7.9	69.3	-90.35	-24.1	-3,962.0	3,962.1	3,893.6	68.49	57.846	
3,600.0	3,600.0	3,547.4	3,600.0	8.0	70.2	-90.35	-24.1	-3,962.0	3,962.1	3,892.5	69.50	57.005	
3,700.0	3,700.0	3,647.3	3,699.9	8.2	72.2	-90.35	-24.4	-3,962.0	3,962.1	3,890.3	71.74	55.229	
3,800.0	3,800.0	3,747.4	3,800.0	8.4	74.3	-90.36	-24.7	-3,962.0	3,962.1	3,888.1	73.94	53.585	
3,900.0	3,900.0	3,847.4	3,900.0	8.6	76.4	-90.36	-24.8	-3,962.0	3,962.1	3,885.9	76.14	52.036	
4,000.0	4,000.0	3,947.5	4,000.0	8.9	78.4	-90.36	-24.8	-3,962.0	3,962.1	3,883.7	78.34	50.574	
4,100.0	4,100.0	4,047.5	4,100.1	9.1	80.5	-90.35	-24.5	-3,962.0	3,962.1	3,881.5	80.54	49.192	
4,177.6	4,177.6	4,125.0	4,177.6	9.3	82.1	-90.35	-24.3	-3,962.0	3,962.1	3,879.8	82.25	48.172	
4,200.0	4,200.0	4,147.4	4,199.9	9.3	82.7	-90.35	-24.3	-3,962.0	3,962.1	3,879.3	82.76	47.873	
4,300.0	4,300.0	4,247.4	4,300.0	9.5	85.1	-90.36	-24.7	-3,962.0	3,962.1	3,877.0	85.06	46.579	
4,400.0	4,400.0	4,347.5	4,400.0	9.8	87.6	-90.36	-24.8	-3,962.0	3,962.1	3,874.7	87.36	45.353	
4,500.0	4,500.0	4,447.5	4,500.0	10.0	90.1	-90.36	-24.7	-3,962.0	3,962.1	3,872.4	89.66	44.189	
4,600.0	4,600.0	4,547.5	4,600.1	10.2	92.6	-90.35	-24.5	-3,962.0	3,962.1	3,870.1	91.96	43.084	
4,700.0	4,700.0	4,647.6	4,700.0	10.4	95.0	-90.35	-24.2	-3,962.0	3,962.1	3,867.8	94.22	42.051	
4,782.9	4,782.9	4,730.5	4,782.9	10.6	97.1	-90.35	-24.1	-3,962.0	3,962.1	3,866.0	96.05	41.250	
4,800.0	4,800.0	4,747.5	4,800.0	10.7	97.5	-90.35	-24.1	-3,962.0	3,962.1	3,865.6	96.43	41.089	
4,900.0	4,900.0	4,847.5	4,900.0	10.9	100.0	-90.35	-24.2	-3,962.0	3,962.1	3,863.4	98.63	40.170	
5,000.0	5,000.0	4,947.5	4,999.9	11.1	102.6	-90.36	-24.7	-3,962.0	3,962.1	3,861.2	100.84	39.290	
5,100.0	5,100.0	5,047.6	5,100.0	11.3	105.3	-90.36	-25.0	-3,962.0	3,962.1	3,859.0	103.05	38.446	
5,200.0	5,200.0	5,147.6	5,200.0	11.6	107.9	-90.36	-25.0	-3,962.0	3,962.1	3,856.8	105.27	37.638	
5,300.0	5,300.0	5,247.7	5,300.1	11.8	110.6	-90.36	-24.7	-3,962.0	3,962.1	3,854.6	107.48	36.864	
5,400.0	5,400.0	5,347.7	5,400.0	12.0	113.3	-90.35	-24.3	-3,962.0	3,962.1	3,852.4	109.70	36.118	
5,500.0	5,500.0	5,447.7	5,500.0	12.2	116.2	-90.35	-24.3	-3,962.0	3,962.1	3,850.1	111.94	35.395	
5,600.0	5,600.0	5,547.8	5,600.0	12.5	119.3	-90.35	-24.3	-3,962.0	3,962.1	3,847.9	114.18	34.701	
5,700.0	5,700.0	5,647.9	5,700.0	12.7	122.4	-90.35	-24.3	-3,962.0	3,962.1	3,845.6	116.41	34.034	
5,762.8	5,762.8	5,710.7	5,762.8	12.8	124.3	-90.35	-24.3	-3,962.0	3,962.1	3,844.2	117.82	33.628	
5,800.0	5,800.0	5,747.9	5,800.0	12.9	125.5	-90.35	-24.3	-3,962.0	3,962.1	3,843.4	118.65	33.392	
5,900.0	5,900.0	5,848.0	5,900.0	13.1	128.8	-90.35	-24.3	-3,962.0	3,962.1	3,841.2	120.89	32.773	
5,923.6	5,923.6	5,871.6	5,923.6	13.2	129.6	-90.35	-24.3	-3,962.0	3,962.1	3,840.6	121.42	32.630	
6,000.0	6,000.0	5,948.0	6,000.0	13.4	132.2	-90.35	-24.4	-3,962.0	3,962.1	3,838.9	123.14	32.176	

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 #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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 #2	Offset TVD Reference:	Reference Datum

Offset Design														Offset Site Error:	0.0 usft
Survey Program: 171-INC-TREND														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre N-S (usft)	Offset Wellbore Centre E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning:		
6,079.8	6,079.8	6,028.0	6,079.8	13.5	135.1	-90.35	-24.3	-3,962.0	3,962.1	3,837.1	124.93	31.715			
6,100.0	6,100.0	6,048.1	6,099.9	13.6	135.9	-90.35	-24.3	-3,962.0	3,962.1	3,836.7	125.38	31.601			
6,200.0	6,200.0	6,148.3	6,200.0	13.8	139.9	-90.35	-24.2	-3,962.0	3,962.1	3,834.4	127.61	31.047			
6,207.1	6,207.1	6,155.4	6,207.1	13.8	140.2	-90.35	-24.2	-3,962.0	3,962.1	3,834.3	127.77	31.009			
6,300.0	6,300.0	6,249.0	6,300.5	14.0	144.1	-90.35	-24.3	-3,962.0	3,962.1	3,832.2	129.85	30.512			
6,333.5	6,333.5	6,282.0	6,333.5	14.1	145.4	-90.35	-24.3	-3,962.0	3,962.1	3,831.5	130.59	30.340			
6,400.0	6,400.0	6,348.5	6,400.0	14.3	148.1	-90.35	-24.3	-3,962.0	3,962.1	3,830.0	132.07	30.000			
6,500.0	6,500.0	6,448.7	6,500.0	14.5	152.2	-90.35	-24.3	-3,962.0	3,962.1	3,827.7	134.31	29.499			
6,600.0	6,600.0	6,548.8	6,600.0	14.7	156.4	-90.35	-24.3	-3,962.0	3,962.1	3,825.5	136.56	29.013			
6,700.0	6,700.0	6,648.9	6,700.0	14.9	160.5	-90.35	-24.3	-3,962.0	3,962.1	3,823.2	138.82	28.542			
6,800.0	6,800.0	6,749.1	6,800.0	15.2	164.7	-90.35	-24.2	-3,962.0	3,962.1	3,821.0	141.06	28.088			
6,805.6	6,805.6	6,754.7	6,805.6	15.2	164.9	-90.35	-24.2	-3,962.0	3,962.1	3,820.9	141.18	28.063			
6,900.0	6,900.0	6,850.0	6,900.7	15.4	168.8	-90.35	-24.3	-3,962.0	3,962.1	3,818.7	143.31	27.648			
6,933.7	6,933.7	6,883.0	6,933.7	15.5	170.1	-90.35	-24.3	-3,962.0	3,962.1	3,818.0	144.04	27.506			
7,000.0	7,000.0	6,949.5	7,000.1	15.6	172.7	-90.35	-24.1	-3,962.0	3,962.1	3,816.5	145.52	27.226			
7,083.5	7,083.5	7,032.9	7,083.5	15.8	175.7	-90.35	-23.9	-3,962.0	3,962.1	3,814.7	147.38	26.882			
7,100.0	7,100.0	7,049.4	7,100.0	15.8	176.3	-90.35	-23.9	-3,962.0	3,962.1	3,814.3	147.75	26.816			
7,200.0	7,200.0	7,149.4	7,199.8	16.1	180.0	-90.35	-24.3	-3,962.0	3,962.1	3,812.1	149.98	26.417			
7,300.0	7,300.0	7,249.6	7,300.0	16.3	183.8	-90.36	-24.8	-3,962.0	3,962.1	3,809.8	152.21	26.030			
7,400.0	7,400.0	7,349.7	7,400.1	16.5	187.6	-90.36	-24.6	-3,962.0	3,962.1	3,807.6	154.45	25.653			
7,500.0	7,500.0	7,449.8	7,500.0	16.7	191.4	-90.35	-24.0	-3,962.0	3,962.1	3,805.4	156.68	25.287			
7,509.7	7,509.7	7,459.5	7,509.7	16.7	191.8	-90.35	-24.0	-3,962.0	3,962.1	3,805.2	156.90	25.253			
7,600.0	7,600.0	7,550.0	7,600.1	16.9	195.3	-90.35	-24.2	-3,962.0	3,962.1	3,803.1	158.92	24.932			
7,700.0	7,700.0	7,650.0	7,700.0	17.2	198.8	-90.35	-24.1	-3,962.0	3,962.1	3,800.9	161.17	24.583			
7,717.3	7,717.3	7,667.3	7,717.3	17.2	199.4	-90.35	-24.1	-3,962.0	3,962.1	3,800.5	161.56	24.523			
7,800.0	7,800.0	7,750.0	7,800.0	17.4	202.3	-90.35	-24.2	-3,962.0	3,962.1	3,798.6	163.43	24.243			
7,900.0	7,900.0	7,850.1	7,899.9	17.6	205.8	-90.35	-24.4	-3,962.0	3,962.1	3,796.4	165.67	23.915			
8,000.0	8,000.0	7,950.2	8,000.0	17.8	209.4	-90.35	-24.5	-3,962.0	3,962.1	3,794.1	167.91	23.597			
8,100.0	8,100.0	8,050.3	8,100.1	18.1	213.0	-90.35	-24.3	-3,962.0	3,962.1	3,791.9	170.14	23.287			
8,200.0	8,200.0	8,150.4	8,200.0	18.3	216.6	-90.35	-24.0	-3,962.0	3,962.1	3,789.7	172.37	22.985			
8,206.5	8,206.5	8,156.9	8,206.5	18.3	216.8	-90.35	-24.0	-3,962.0	3,962.1	3,789.5	172.52	22.966			
8,300.0	8,300.0	8,250.3	8,299.9	18.5	220.2	-90.35	-24.2	-3,962.0	3,962.1	3,787.4	174.60	22.692			
8,400.0	8,400.0	8,350.5	8,400.0	18.7	223.9	-90.36	-24.6	-3,962.0	3,962.1	3,785.2	176.84	22.405			
8,445.6	8,445.6	8,396.2	8,445.6	18.9	225.6	-90.35	-24.5	-3,962.0	3,962.1	3,784.2	177.96	22.276			
8,450.0	8,450.0	8,400.6	8,450.1	18.9	225.7	-90.35	-24.5	-3,962.0	3,962.0	3,717.5	244.58	16.199			
8,475.0	8,475.0	8,425.6	8,475.1	18.9	226.7	-90.35	-24.5	-3,962.0	3,961.2	3,716.0	245.12	16.160			
8,500.0	8,499.9	8,450.5	8,500.0	19.0	227.6	-90.35	-24.3	-3,962.0	3,959.0	3,714.0	245.00	16.159			
8,525.0	8,524.6	8,475.4	8,524.7	19.0	228.5	-90.34	-24.2	-3,962.0	3,955.5	3,711.3	244.22	16.196			
8,550.0	8,549.2	8,499.9	8,549.2	19.1	229.5	-90.34	-24.1	-3,962.0	3,950.7	3,707.9	242.79	16.272			
8,575.0	8,573.4	8,524.1	8,573.4	19.1	230.4	-90.33	-24.1	-3,962.0	3,944.7	3,704.0	240.69	16.389			
8,600.0	8,597.3	8,548.0	8,597.3	19.2	231.3	-90.32	-24.0	-3,962.0	3,937.4	3,699.5	237.92	16.549			
8,625.0	8,620.8	8,571.5	8,620.8	19.2	232.2	-90.31	-24.0	-3,962.0	3,928.8	3,694.4	234.47	16.756			
8,650.0	8,643.8	8,594.5	8,643.8	19.3	233.1	-90.30	-24.1	-3,962.0	3,919.1	3,688.7	230.36	17.013			
8,675.0	8,666.3	8,617.0	8,666.2	19.3	234.0	-90.29	-24.1	-3,962.0	3,908.1	3,682.5	225.59	17.324			
8,700.0	8,688.1	8,638.8	8,688.1	19.4	234.8	-90.28	-24.2	-3,962.0	3,896.0	3,675.9	220.19	17.694			
8,725.0	8,709.3	8,660.2	8,709.3	19.5	235.6	-90.27	-24.3	-3,962.0	3,882.8	3,668.7	214.15	18.132			
8,750.0	8,729.8	8,680.7	8,729.8	19.5	236.4	-90.25	-24.3	-3,962.0	3,868.5	3,661.0	207.46	18.647			
8,775.0	8,749.5	8,700.3	8,749.5	19.6	237.1	-90.23	-24.3	-3,962.0	3,853.1	3,653.0	200.19	19.247			
8,800.0	8,768.3	8,719.2	8,768.3	19.7	237.8	-90.22	-24.3	-3,962.0	3,836.8	3,644.4	192.37	19.944			
8,825.0	8,786.3	8,737.2	8,786.3	19.8	238.4	-90.20	-24.3	-3,962.0	3,819.5	3,635.4	184.03	20.754			
8,850.0	8,803.4	8,754.2	8,803.4	19.9	239.0	-90.18	-24.3	-3,962.0	3,801.2	3,626.0	175.21	21.695			
8,875.0	8,819.4	8,770.3	8,819.4	20.0	239.6	-90.16	-24.3	-3,962.0	3,782.1	3,616.1	165.97	22.788			

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 #4H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18' @ 3595.0usft
Reference Site:	Checker BIC Federal Com	MD Reference:	KB = 18' @ 3595.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#4H	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 #2	Offset-TVD Reference:	Reference Datum

Offset Design: Checker BIC Federal Com - #1 - OH - OH														Offset Site Error:	0.0 usft
Survey Program: 171-INC-1-REND														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	Offset	Azimuth from North (°)	Offset Wellbore Centre: N-S (usft)	Offset Wellbore Centre: E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,900.0	8,834.4	8,785.3	8,834.4	20.2	240.1	-90.13	-24.3	-3,962.0	3,762.2	3,605.8	156.36	24.061			
8,925.0	8,848.4	8,799.3	8,848.4	20.3	240.7	-90.11	-24.3	-3,962.0	3,741.5	3,595.1	146.47	25.544			
8,950.0	8,861.3	8,812.2	8,861.3	20.5	241.1	-90.08	-24.3	-3,962.0	3,720.2	3,583.7	136.42	27.269			
8,975.0	8,873.0	8,823.9	8,873.0	20.7	241.5	-90.06	-24.3	-3,962.0	3,698.1	3,571.8	126.39	29.260			
9,000.0	8,883.6	8,834.5	8,883.6	20.9	241.9	-90.03	-24.3	-3,962.0	3,675.6	3,558.9	116.64	31.513			
9,025.0	8,892.9	8,843.8	8,892.9	21.1	242.3	-90.00	-24.3	-3,962.0	3,652.4	3,544.8	107.62	33.937			
9,050.0	8,901.0	8,851.9	8,901.0	21.3	242.6	-89.97	-24.3	-3,962.0	3,628.9	3,528.7	100.15	36.236			
9,075.0	8,907.9	8,858.8	8,907.9	21.6	242.8	-89.94	-24.3	-3,962.0	3,604.9	3,509.3	95.63	37.698			
9,100.0	8,913.5	8,864.4	8,913.5	21.8	243.0	-89.91	-24.3	-3,962.0	3,580.6	3,484.1	96.54	37.089			
9,125.0	8,917.9	8,868.8	8,917.9	22.1	243.2	-89.88	-24.3	-3,962.0	3,556.1	3,449.3	106.83	33.288			
9,150.0	8,920.9	8,871.8	8,920.9	22.4	243.3	-89.85	-24.3	-3,962.0	3,531.4	3,399.5	131.81	26.792			
9,175.0	8,922.6	8,873.5	8,922.6	22.8	243.3	-89.82	-24.3	-3,962.0	3,506.5	3,334.2	172.26	20.356			
9,200.0	8,923.0	8,874.0	8,923.0	23.1	243.3	-89.79	-24.3	-3,962.0	3,481.6	3,291.5	190.11	18.314			
9,204.7	8,923.0	8,873.9	8,923.0	23.1	243.3	-89.78	-24.3	-3,962.0	3,476.9	3,290.9	186.02	18.691			
9,300.0	8,921.2	8,872.1	8,921.2	24.6	243.3	-89.65	-24.3	-3,962.0	3,381.9	3,194.3	187.63	18.024			
9,400.0	8,919.3	8,870.2	8,919.3	26.2	243.2	-89.50	-24.3	-3,962.0	3,282.3	3,092.8	189.52	17.319			
9,500.0	8,917.4	8,868.3	8,917.4	28.1	243.1	-89.35	-24.3	-3,962.0	3,182.7	2,991.2	191.56	16.614			
9,600.0	8,915.4	8,866.4	8,915.4	30.1	243.1	-89.18	-24.3	-3,962.0	3,083.1	2,889.4	193.74	15.914			
9,700.0	8,913.5	8,864.5	8,913.5	32.2	243.0	-89.01	-24.3	-3,962.0	2,983.6	2,787.6	196.03	15.220			
9,800.0	8,911.6	8,862.5	8,911.6	34.3	242.9	-88.82	-24.3	-3,962.0	2,884.1	2,685.7	198.40	14.536			
9,900.0	8,909.7	8,860.6	8,909.7	36.6	242.9	-88.62	-24.3	-3,962.0	2,784.6	2,583.8	200.85	13.864			
10,000.0	8,907.8	8,858.7	8,907.8	38.9	242.8	-88.40	-24.3	-3,962.0	2,685.2	2,481.8	203.35	13.204			
10,100.0	8,905.9	8,856.8	8,905.9	41.3	242.7	-88.17	-24.3	-3,962.0	2,585.7	2,379.8	205.91	12.558			
10,200.0	8,904.0	8,854.9	8,904.0	43.7	242.7	-87.91	-24.3	-3,962.0	2,486.4	2,277.9	208.50	11.925			
10,300.0	8,902.1	8,853.0	8,902.1	46.1	242.6	-87.64	-24.3	-3,962.0	2,387.1	2,176.0	211.12	11.307			
10,400.0	8,900.2	8,851.1	8,900.2	48.6	242.5	-87.35	-24.3	-3,962.0	2,287.8	2,074.1	213.78	10.702			
10,500.0	8,898.3	8,849.2	8,898.3	51.1	242.5	-87.02	-24.3	-3,962.0	2,188.7	1,972.2	216.45	10.112			
10,600.0	8,896.4	8,847.3	8,896.4	53.6	242.4	-86.67	-24.3	-3,962.0	2,089.5	1,870.4	219.14	9.535			
10,700.0	8,894.5	8,845.4	8,894.5	56.2	242.3	-86.28	-24.3	-3,962.0	1,990.5	1,768.7	221.85	8.972			
10,800.0	8,892.6	8,843.5	8,892.6	58.8	242.2	-85.85	-24.3	-3,962.0	1,891.6	1,667.0	224.57	8.423			
10,900.0	8,890.7	8,841.6	8,890.7	61.3	242.2	-85.37	-24.3	-3,962.0	1,792.8	1,565.5	227.30	7.887			
11,000.0	8,888.8	8,839.7	8,888.8	63.9	242.1	-84.84	-24.3	-3,962.0	1,694.2	1,464.1	230.04	7.365			
11,100.0	8,886.9	8,837.8	8,886.9	66.5	242.0	-84.24	-24.3	-3,962.0	1,595.7	1,362.9	232.78	6.855			
11,200.0	8,885.0	8,835.9	8,885.0	69.1	242.0	-83.56	-24.3	-3,962.0	1,497.4	1,261.8	235.53	6.357			
11,300.0	8,883.1	8,834.0	8,883.1	71.8	241.9	-82.79	-24.3	-3,962.0	1,399.3	1,161.0	238.28	5.873			
11,400.0	8,881.2	8,832.1	8,881.2	74.4	241.8	-81.90	-24.3	-3,962.0	1,301.5	1,060.5	241.03	5.400			
11,500.0	8,879.3	8,830.2	8,879.3	77.0	241.8	-80.87	-24.3	-3,962.0	1,204.1	960.4	243.78	4.940			
11,600.0	8,877.4	8,828.3	8,877.4	79.7	241.7	-79.65	-24.3	-3,962.0	1,107.2	860.7	246.53	4.491			
11,700.0	8,875.4	8,826.3	8,875.4	82.3	241.6	-78.21	-24.3	-3,962.0	1,010.8	761.6	249.27	4.055			
11,800.0	8,873.5	8,824.4	8,873.5	85.0	241.6	-76.46	-24.3	-3,962.0	915.3	663.3	252.01	3.632			
11,900.0	8,871.6	8,822.5	8,871.6	87.7	241.5	-74.30	-24.3	-3,962.0	820.8	566.0	254.75	3.222			
12,000.0	8,869.7	8,820.6	8,869.7	90.3	241.4	-71.59	-24.3	-3,962.0	727.7	470.2	257.49	2.826			
12,100.0	8,867.8	8,818.7	8,867.8	93.0	241.4	-68.10	-24.3	-3,962.0	636.8	376.5	260.22	2.447			
12,200.0	8,865.9	8,816.8	8,865.9	95.7	241.3	-63.46	-24.3	-3,962.0	549.0	286.0	262.94	2.088			
12,300.0	8,864.0	8,814.9	8,864.0	98.3	241.2	-57.12	-24.3	-3,962.0	466.1	200.4	265.65	1.754			
12,400.0	8,862.1	8,813.0	8,862.1	101.0	241.1	-48.21	-24.3	-3,962.0	391.3	122.9	268.36	1.458 Level 3			
12,500.0	8,860.2	8,811.1	8,860.2	103.7	241.1	-35.58	-24.3	-3,962.0	330.1	59.1	271.06	1.218 Level 2			
12,600.0	8,858.3	8,809.2	8,858.3	106.4	241.0	-18.49	-24.3	-3,962.0	291.3	17.5	273.75	1.064 Level 2			
12,670.7	8,857.0	8,807.9	8,857.0	108.3	241.0	-4.44	-24.3	-3,962.0	282.6	6.9	275.65	1.025 Level 2, CC, ES, SF			
12,700.0	8,856.4	8,807.3	8,856.4	109.1	240.9	1.47	-24.3	-3,962.0	284.1	7.6	276.43	1.028 Level 2			
12,800.0	8,854.5	8,805.4	8,854.5	111.8	240.9	20.14	-24.3	-3,962.0	310.7	31.6	279.11	1.113 Level 2			
12,900.0	8,852.6	8,803.5	8,852.6	114.5	240.8	34.61	-24.3	-3,962.0	363.9	82.1	281.77	1.291 Level 3			

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: Checker BIC Federal Com
Site Error: 0.0 usft
Reference Well: #4H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #2

Local Co-ordinate Reference: Well #4H
TVD Reference: KB = 18' @ 3595.0usft
MD Reference: KB = 18' @ 3595.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Checker BIC Federal Com - #1 - OH - OH														Offset Site Error:	0.0 usft
Survey Program: 171-INC-TREND														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)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
13,000.0	8,850.7	8,801.6	8,850.7	117.1	240.7	44.92	-24.3	-3,962.0	433.8	149.4	284.42	1.525			
13,100.0	8,848.8	8,799.7	8,848.8	119.8	240.7	52.20	-24.3	-3,962.0	513.9	226.8	287.06	1.790			
13,200.0	8,846.9	8,797.8	8,846.9	122.5	240.6	57.46	-24.3	-3,962.0	599.9	310.2	289.69	2.071			
13,300.0	8,845.0	8,795.9	8,845.0	125.2	240.5	61.37	-24.3	-3,962.0	689.7	397.4	292.30	2.360			
13,351.0	8,844.0	8,794.9	8,844.0	126.6	240.5	63.00	-24.3	-3,962.0	736.5	442.9	293.63	2.508			



Pathfinder
Anticollision Report

PATHFINDER

A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Checker BIC Federal Com
Site Error: 0.0 usft
Reference Well: #4H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #2

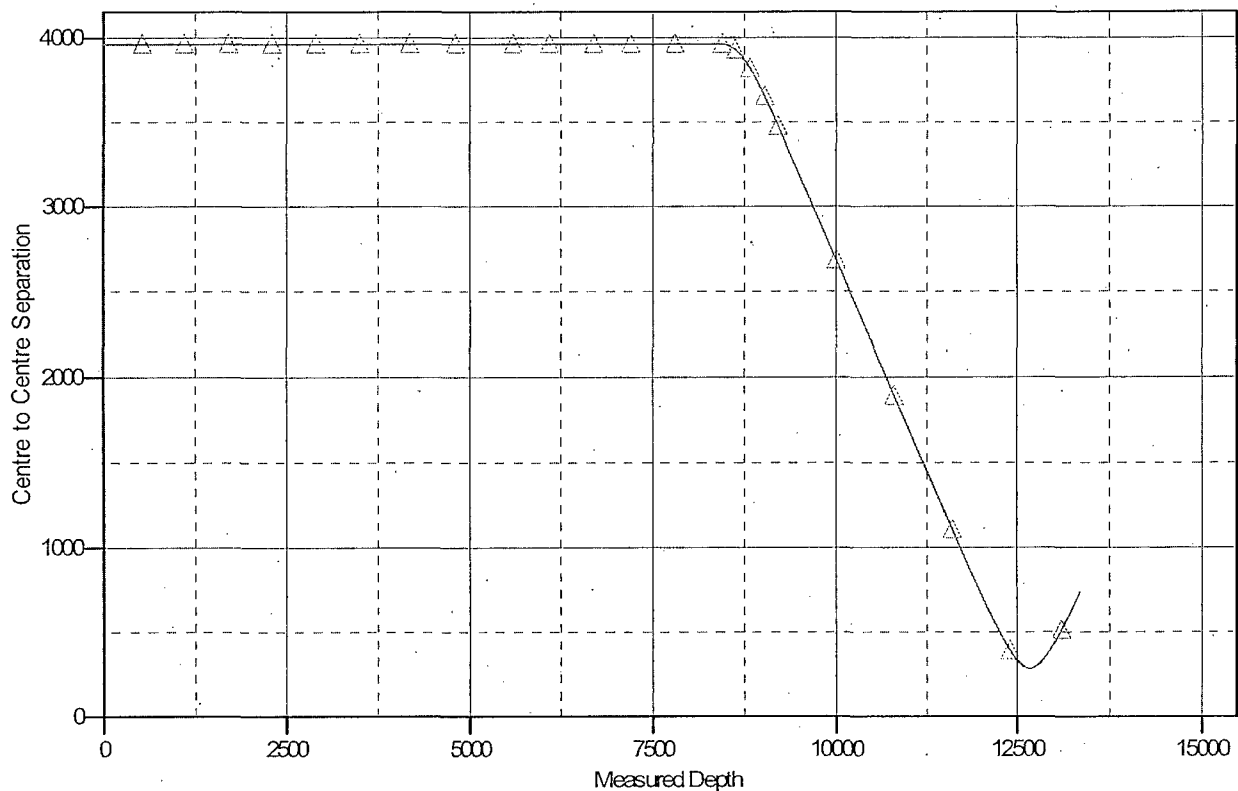
Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:

Well #4H
KB = 18' @ 3595.0usft
KB = 18' @ 3595.0usft
Grid
Minimum Curvature
2.00 sigma
EDM 5000.1 Single User Db
Reference Datum

Reference Depths are relative to KB = 18' @ 3595.0usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: #4H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.25°

Ladder Plot



LEGEND

—△— #1, OH, CHV0



Pathfinder Anticollision Report

PATHFINDER
A Schlumberger Company

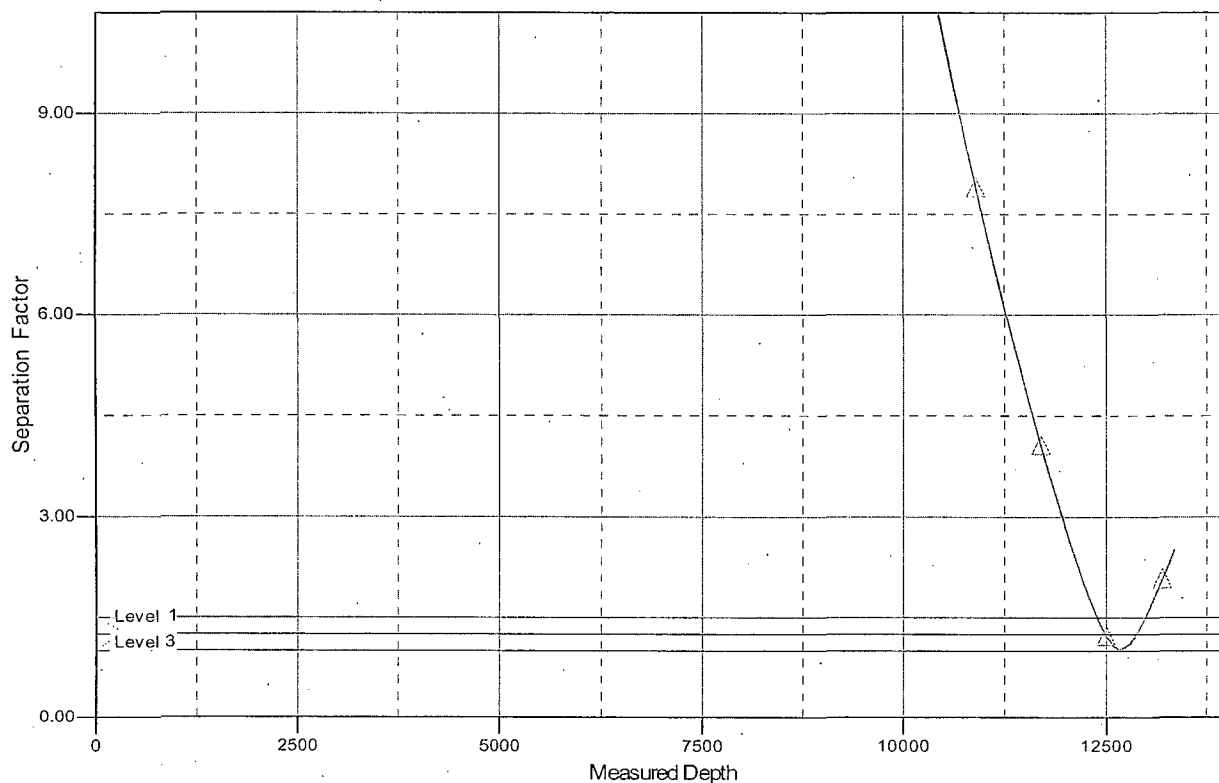
Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Reference Site: Checker BIC Federal Com
Site Error: 0.0 usft
Reference Well: #4H
Well Error: 0.0 usft
Reference Wellbore: OH
Reference Design: Plan #2

Local Co-ordinate Reference: Well #4H
TVD Reference: KB = 18' @ 3595.0usft
MD Reference: KB = 18' @ 3595.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to KB = 18' @ 3595.0usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

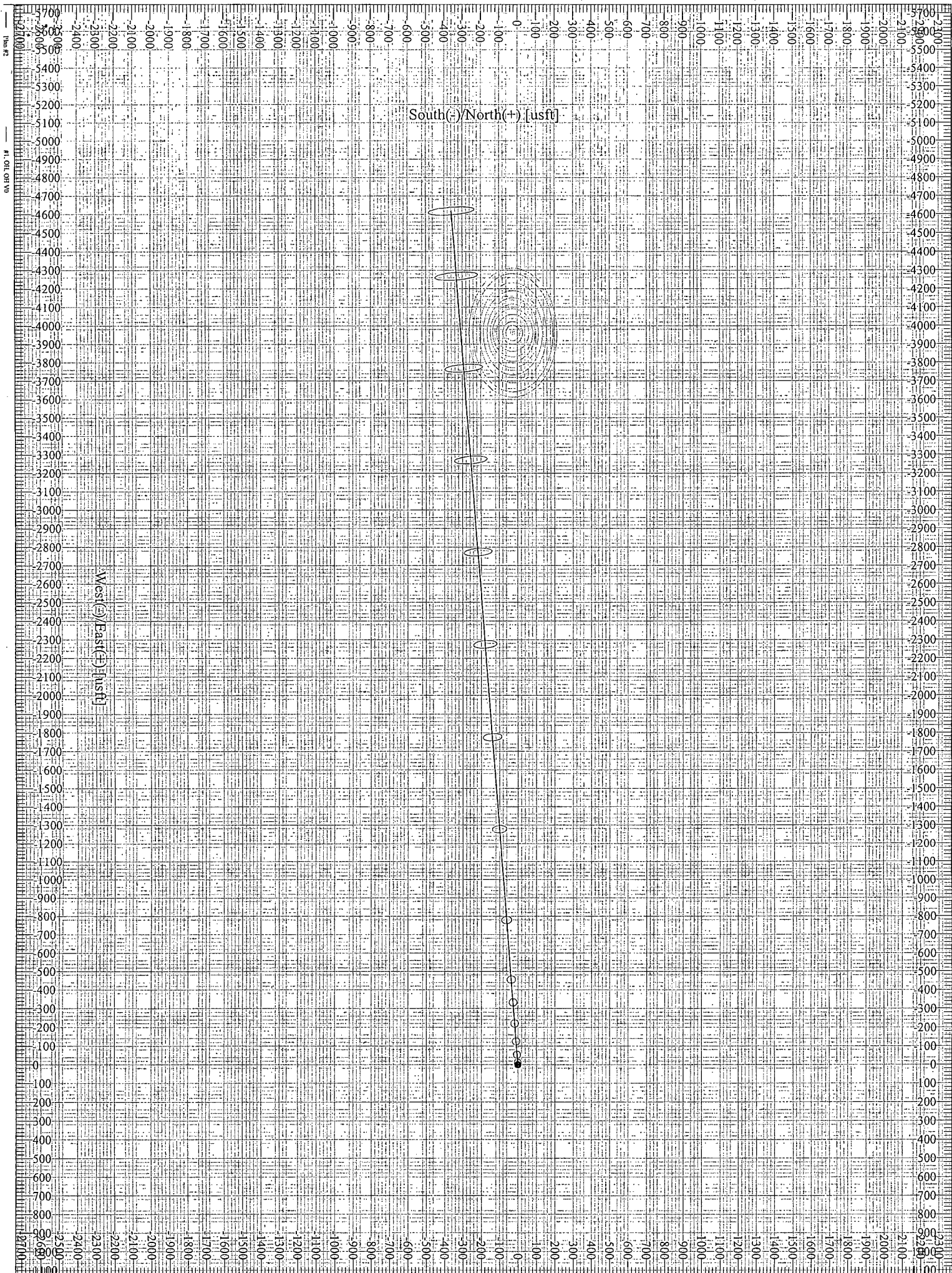
Coordinates are relative to: #4H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.25°

Separation Factor Plot



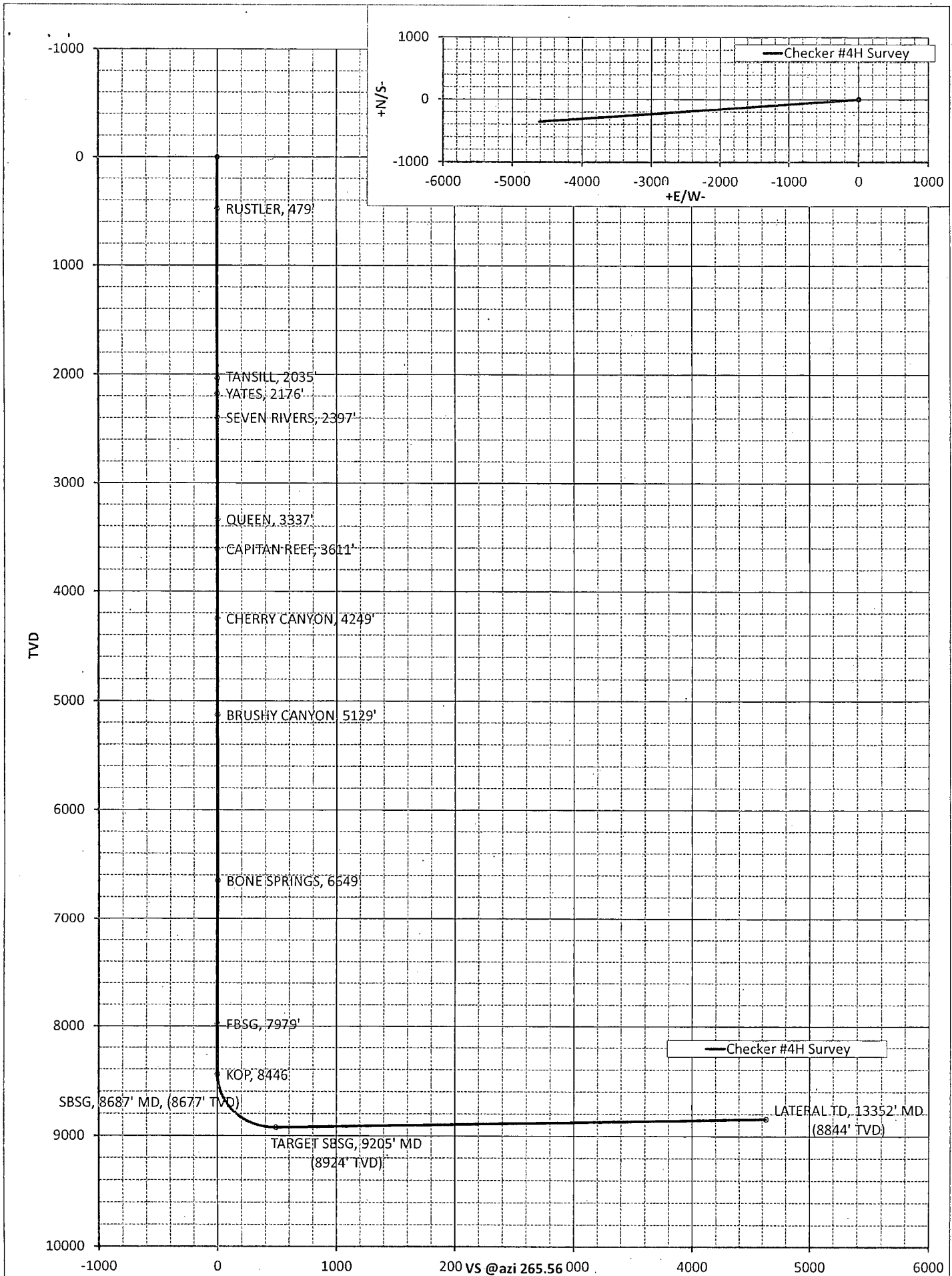
LEGEND

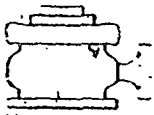
△ #1, OH, OHV0



Survey/Planning Report									
Operator	Yates Petroleum Corp.	Northing Easting Elevation Latitude Longitude Units	Feet	Date	17-Aug-12	System	2 - St. Plane	Datum	1983 - NAD83
Dir. Co.	Yates Petroleum Corp.								
Well Name	Checker #4H Survey								
Location	Sec. 9, 19S-31E								
Rig		Scale Fac.	Converg.	Zone	4302 - Utah Central				
Job									
MD	INC	AZI	TVD	N/S	E/W	VS@265.56°	BR	TR	DLS
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
479.00	0.00	360.00	479.00	0.00	0.00	0.00	0.00	0.00	0.00
479: RUSTLER, 479'									
2035.00	0.00	360.00	2035.00	0.00	0.00	0.00	0.00	0.00	0.00
2035: TANSILL, 2035'									
2176.00	0.00	360.00	2176.00	0.00	0.00	0.00	0.00	0.00	0.00
2176: YATES, 2176'									
2397.00	0.00	360.00	2397.00	0.00	0.00	0.00	0.00	0.00	0.00
2397: SEVEN RIVERS, 2397'									
3337.00	0.00	360.00	3337.00	0.00	0.00	0.00	0.00	0.00	0.00
3337: QUEEN, 3337'									
3611.00	0.00	360.00	3611.00	0.00	0.00	0.00	0.00	0.00	0.00
3611: CAPITAN REEF, 3611'									
4249.00	0.00	360.00	4249.00	0.00	0.00	0.00	0.00	0.00	0.00
4249: CHERRY CANYON, 4249'									
5129.00	0.00	360.00	5129.00	0.00	0.00	0.00	0.00	0.00	0.00
5129: BRUSHY CANYON, 5129'									
6649.00	0.00	360.00	6649.00	0.01	0.00	0.00	0.00	0.00	0.00
6649: BONE SPRINGS, 6649'									
7979.00	0.00	360.00	7979.00	0.01	0.00	0.00	0.00	0.00	0.00
7979: FBSG, 7979'									
8446.22	0.00	265.56	8446.22	0.01	0.00	0.00	0.00	3.14	0.00
8446.22: KOP, 8446'									
8500.00	6.45	265.56	8499.89	-0.23	-3.02	3.02	12.00	0.00	12.00
8600.00	18.45	265.56	8597.36	-1.89	-24.48	24.55	12.00	0.00	12.00
8687.09	28.90	265.56	8677.01	-4.60	-59.30	59.48	12.00	0.00	12.00
8687.09: SBSG, 8687' MD, (8677' TVD)									
8700.00	30.45	265.56	8688.22	-5.09	-65.67	65.87	12.00	0.00	12.00
8800.00	42.45	265.56	8768.51	-9.68	-124.80	125.18	12.00	0.00	12.00
8900.00	54.45	265.56	8834.71	-15.47	-199.28	199.88	12.00	0.00	12.00
9000.00	66.45	265.56	8883.93	-22.19	-285.86	286.72	12.00	0.00	12.00
9100.00	78.45	265.56	8914.03	-29.56	-380.74	381.89	12.00	0.00	12.00
9205.39	91.10	265.56	8923.60	-37.67	-485.17	486.63	12.00	0.00	12.00
9205.39: TARGET SBSG, 9205' MD (8924' TVD)									
13351.67	91.10	265.56	8844.01	-358.62	-4618.24	4632.14	0.00	0.00	0.00
13351.67: LATERAL TD, 13352' MD (8844' TVD)									







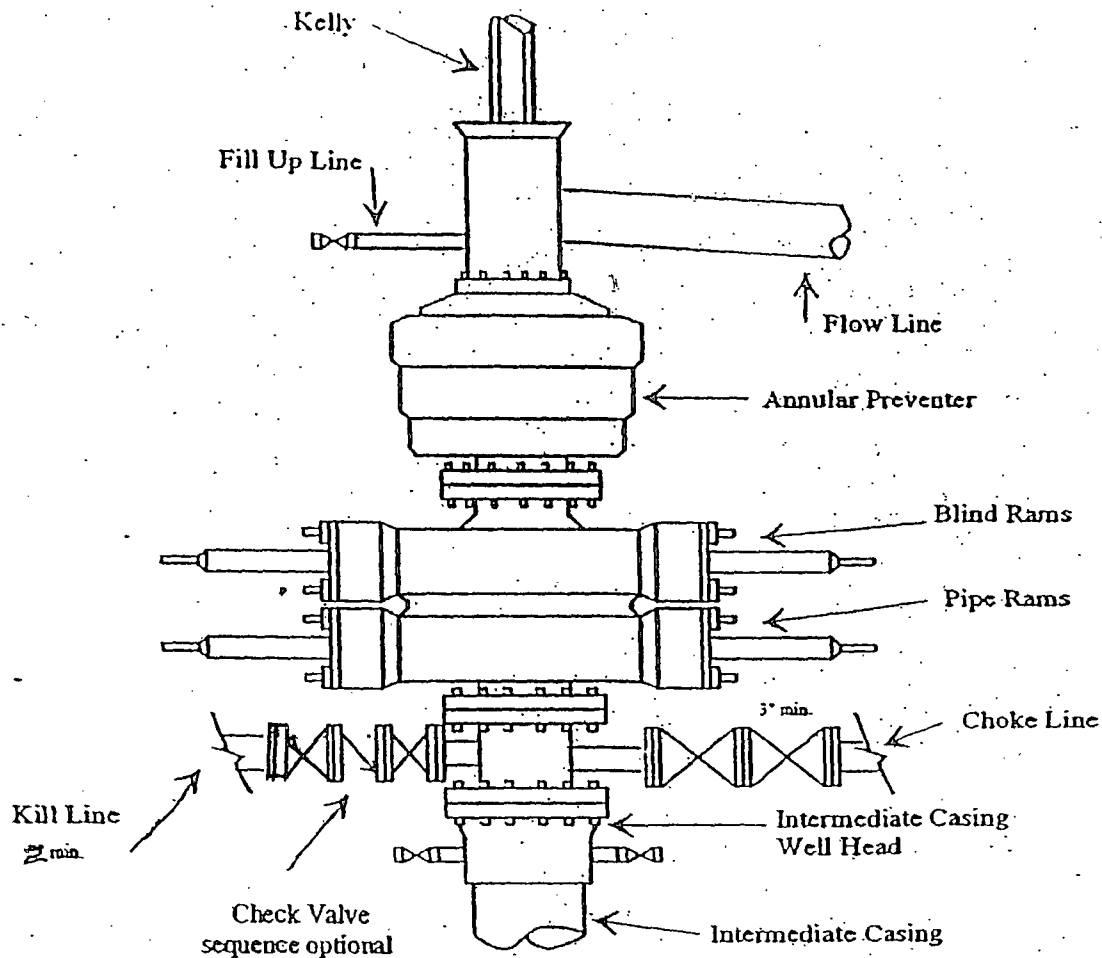
Yates Petroleum Corporation

BOP-3

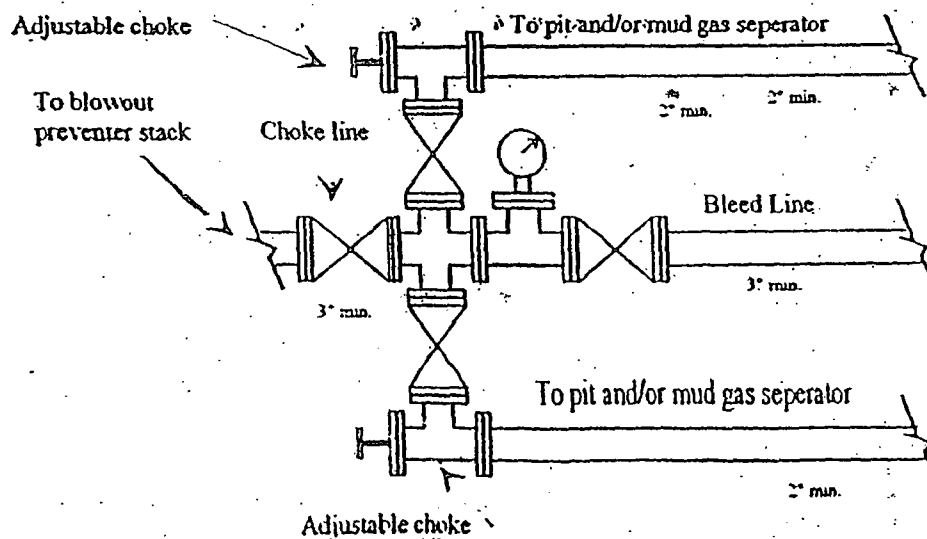
Typical 3,000 psi Pressure System
Schematic

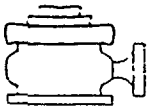
Annular with Double Ram Preventer Stack

Exhibit



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

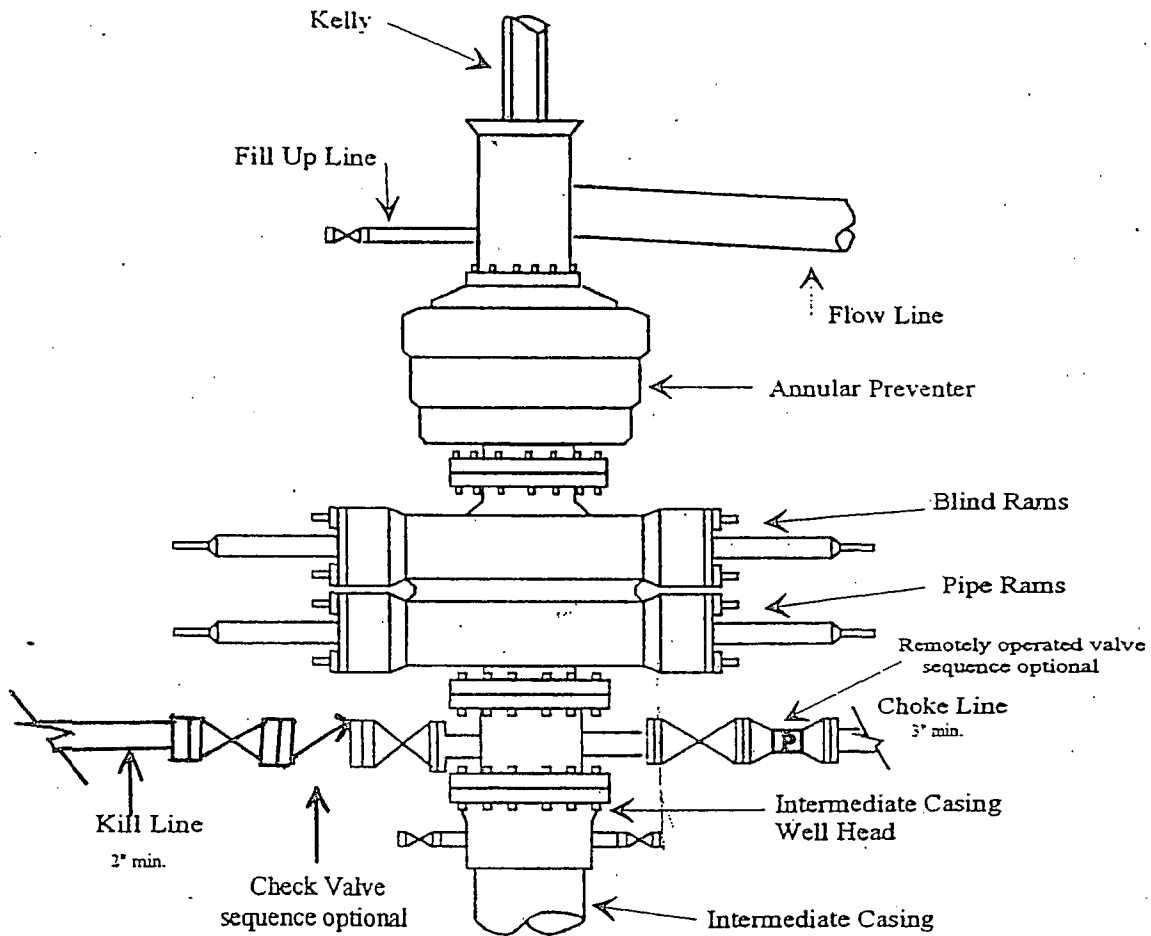




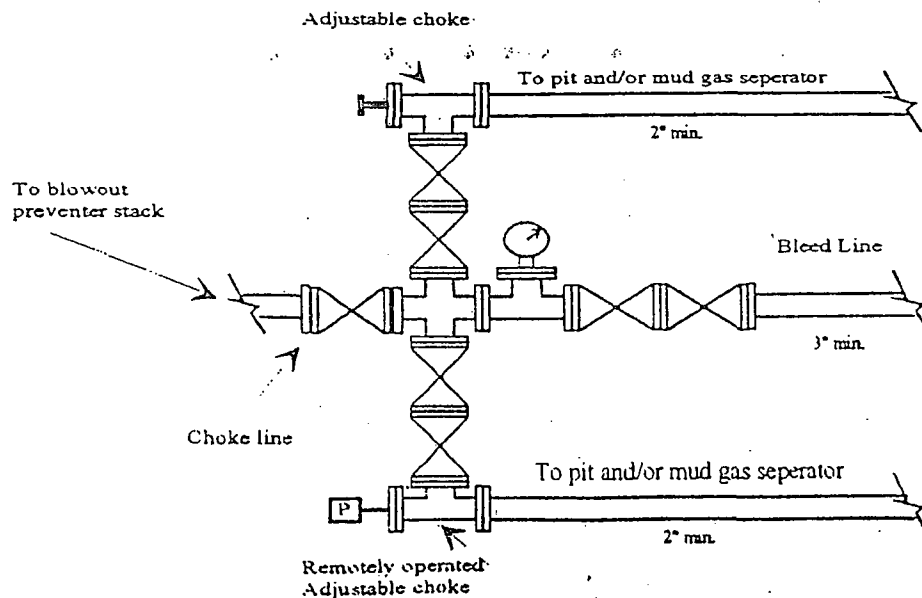
Yates Petroleum Corporation
Typical 5,000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack

BOP-4

Exhibit

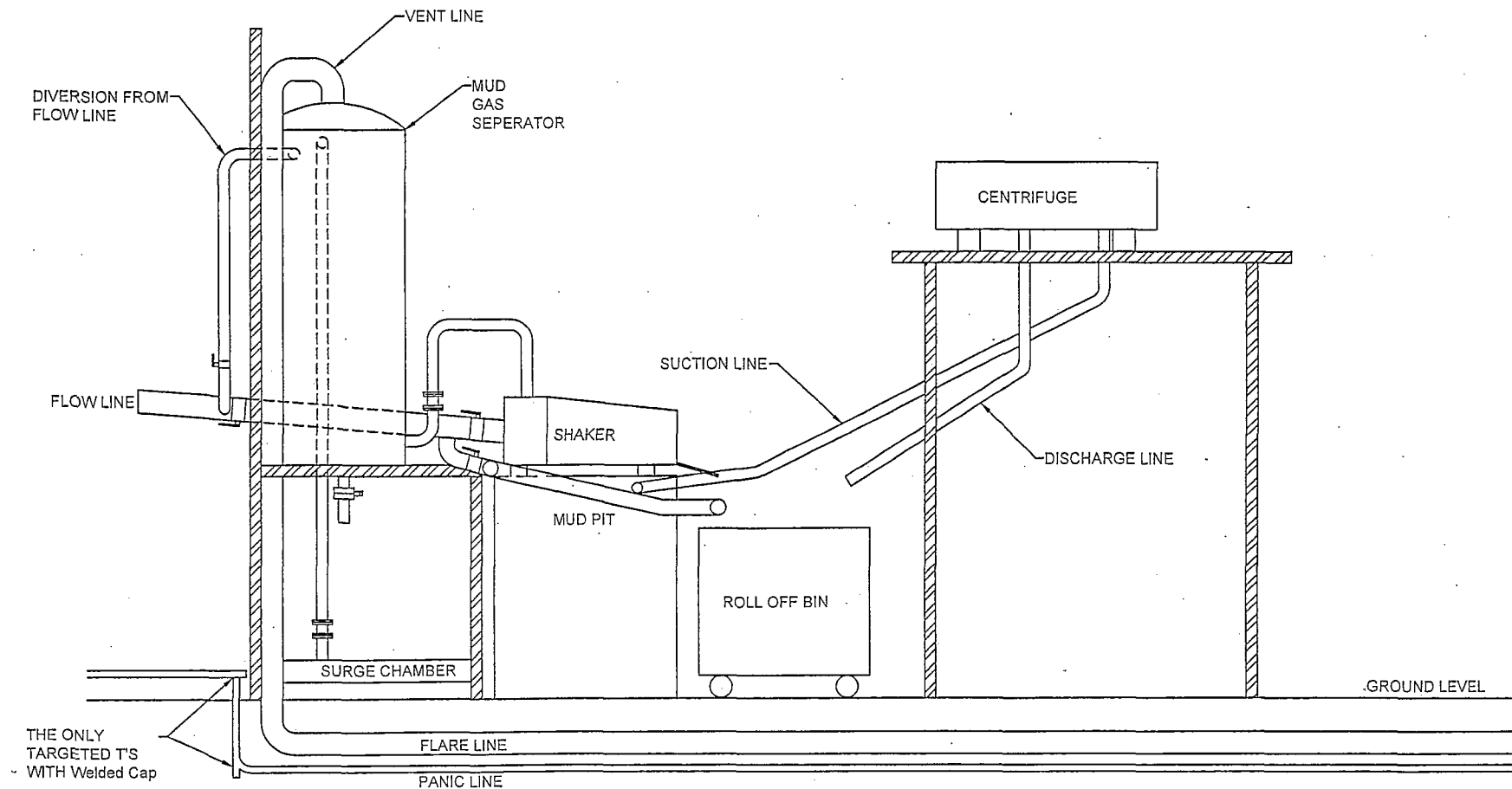


Typical 5,000 psi choke manifold assembly with at least these minimum features



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

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

Hydrogen Sulfide (H₂S) Contingency Plan

For

Checker BIP Federal Com. #4H

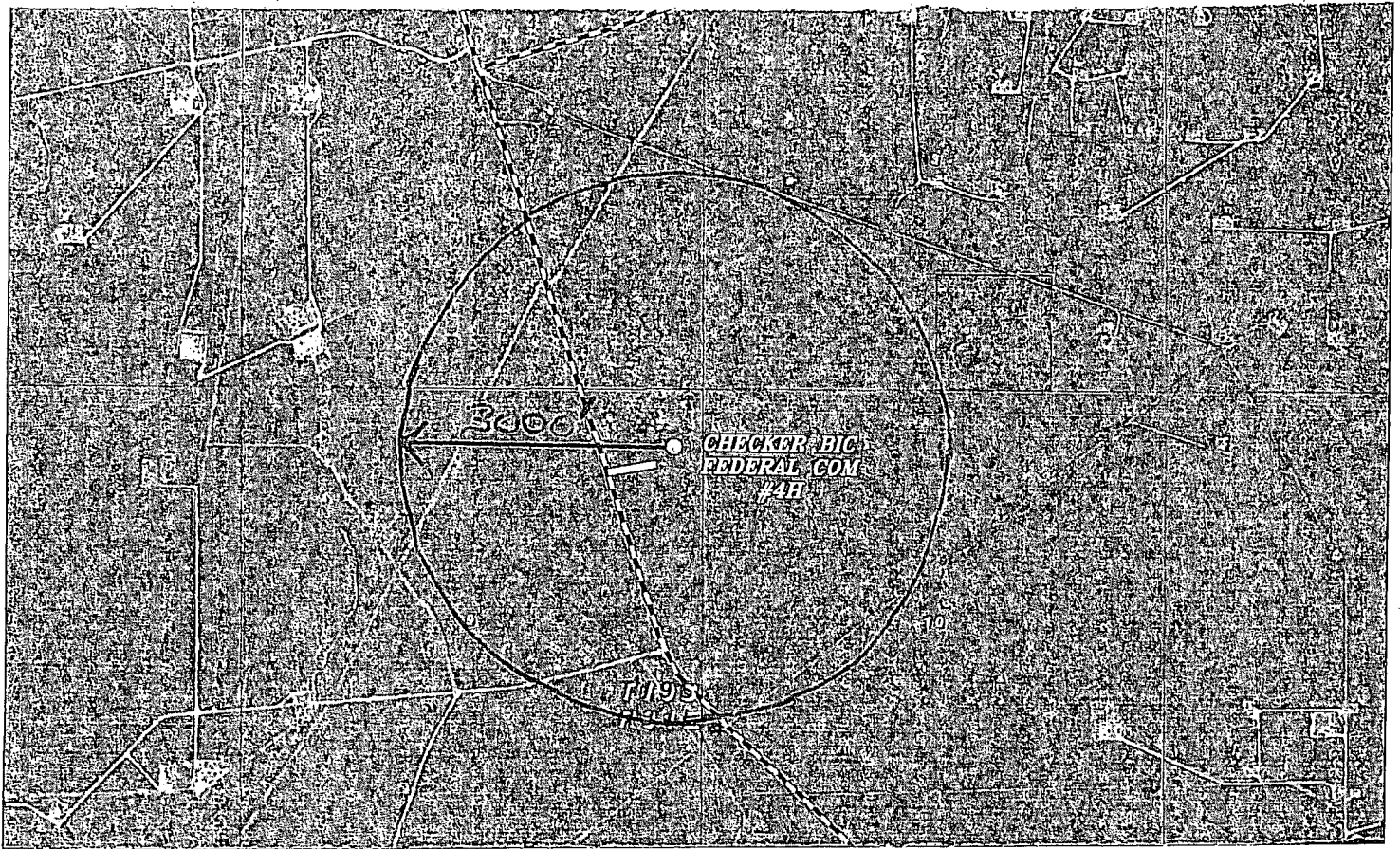
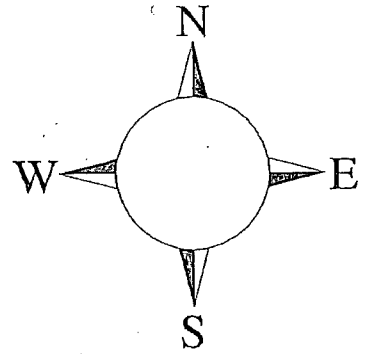
660' FNL and 330' FEL

Section 9, T19S,-R31E

Eddy County, NM

Checker BIP Federal Com. #4H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the case of a release of gas containing H₂S, 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 H₂S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H₂S 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	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	(575) 748-1471
Pinson Mc Whorter/Operations Manager	(575) 748-4189
Wade Bennett/Prod Superintendent	(575) 748-4236
LeeRoy Richards/Assistant Prod Superintendent	(575) 748-4228
Mike Larkin/Drilling	(575) 748-4222
Paul Hanes/Prod. Foreman/Roswell	(575) 624-2805
Tim Bussell/Drilling Superintendent	(575) 748-4221
Artesia Answering Service	(575) 748-4302
(During non-office hours)	

Agency Call List

Eddy County (575)

Artesia

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

Carlsbad

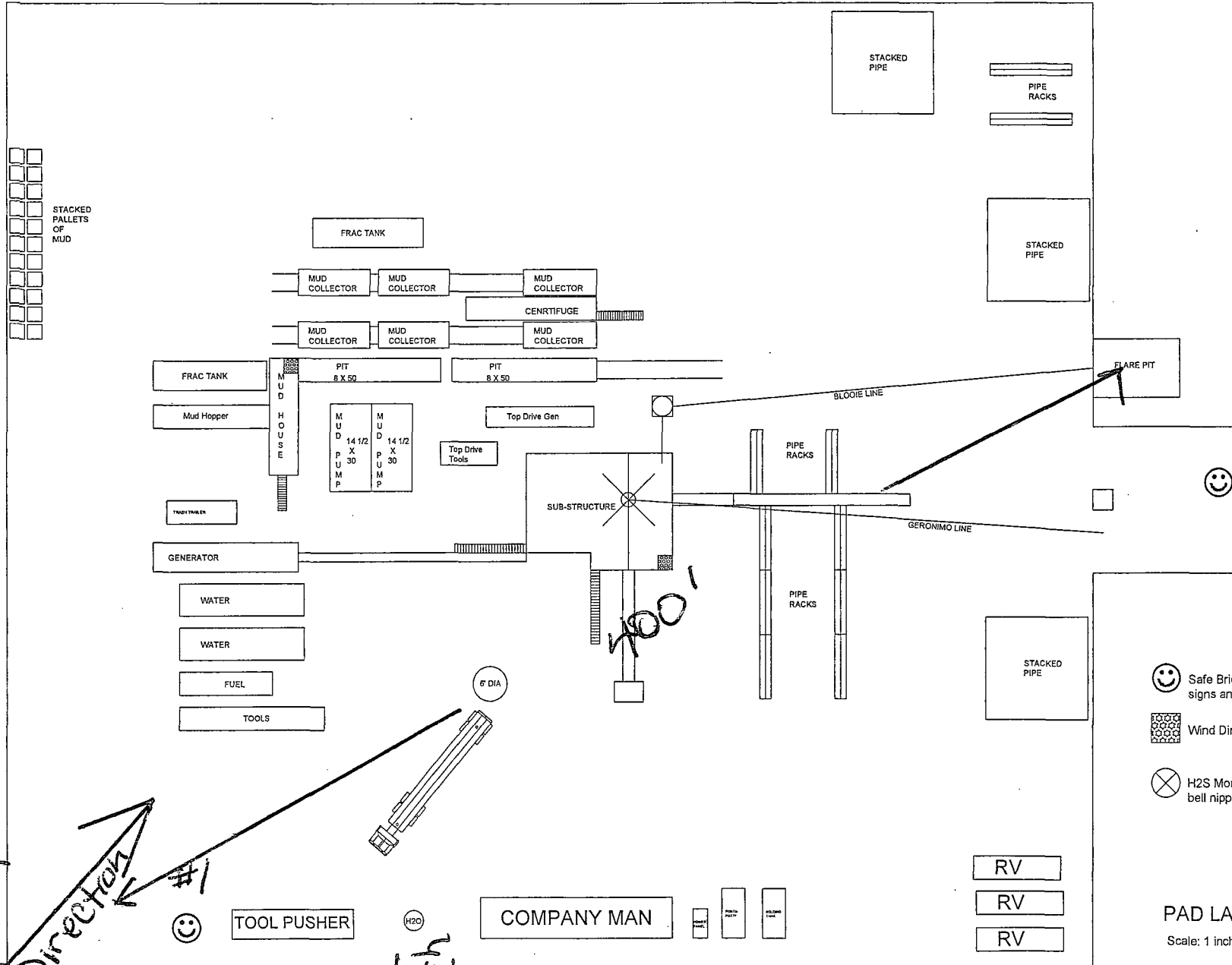
State Police	885-3137
City Police.....	885-2111
Sheriff's Office	887-7551
Ambulance.....	911
Fire Department	885-2111
LEPC (Local Emergency Planning Committee).....	887-3798
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(505)476-9600
24 HR	(505) 827-9126
New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

Other

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

Flight For Life -4000 24th St, Lubbock, TX	(806) 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

YATES PETROLEUM CORPORATION



- ☺ Safe Briefing Area with caution signs and breathing equipment
- ▨ Wind Direction Indicators
- ⊗ H2S Monitor with alarm at the bell nipple

PAD LAYOUT
Scale: 1 inch = 50 feet

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.

EXHIBIT

DANGER
POISONS GAS
HYDROGEN SULFIDE
 **NORMAL OPERATIONS**
(GREEN)
 **CAUTION POTENTIAL DANGER**
(YELLOW)
 **DANGER POISONS GAS ENCOUNTERED**
(RED) **AUTHORIZED PERSONAL ONLY.**
LOCATION SECURED.
1-575-746-1096
1-877-879-8899

EDDY COUNTY EMERGENCY NUMBERS

ARTESIA FIRE DEPT. 575-746-5050

ARTESIA POLICE DEPT. 575-746-5000

EDDY CO. SHERIFF DEPT. 575-746-9888

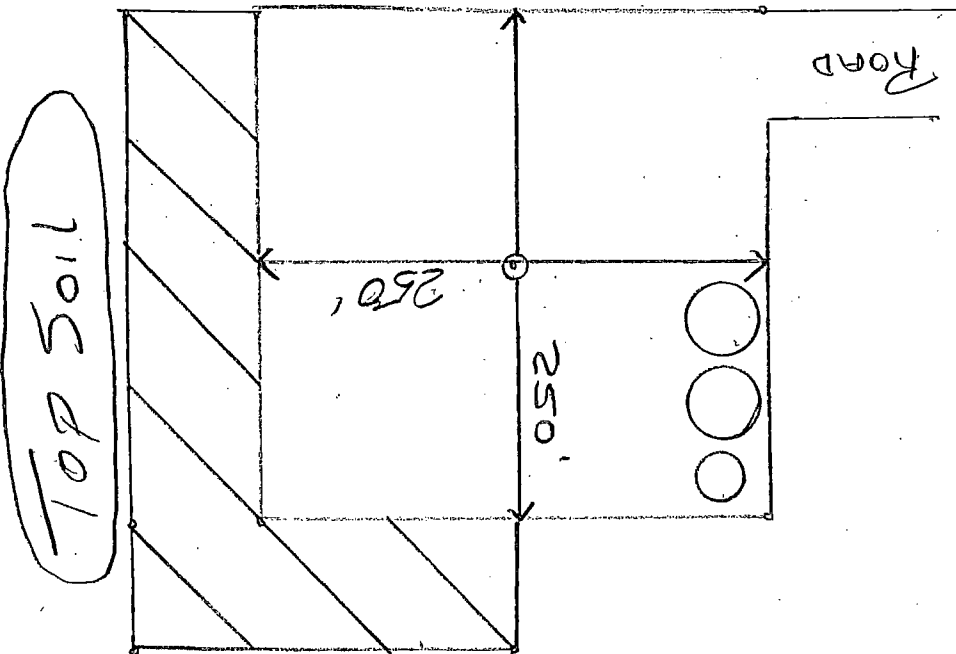
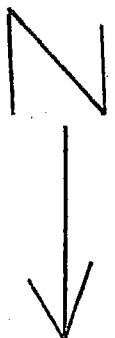
LEA COUNTY EMERGENCY NUMBERS

HOBBS FIRE DEPT. 575-397-9308

HOBBS POLICE DEPT. 575-397-9285

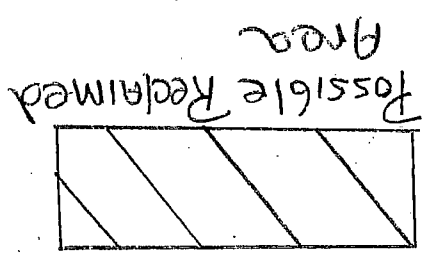
LEA CO. SHERIFF DEPT. 575-396-1196

Reclamation
PLAT



NOT TO SCALE

Final Reclamation
May not look like
this PLAT



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM94614
WELL NAME & NO.:	4H Checker BIC Federal Com
SURFACE HOLE FOOTAGE:	660' FNL & 330' FEL
BOTTOM HOLE FOOTAGE	660' FNL & 330' FWL
LOCATION:	Section 9, T.19 S., R.31 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**
 - Communitization Agreement
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - H2S – Onshore Order 6 Requirements
 - Casing/Mud Requirements
 - Special Requirements for Capitan Reef
 - Logging Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**