

ATS-12-814

Form 3160-3
(August 2007)

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

HIGH CAVEKARST

UNITED 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-01165	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name YES 1/31/2008	
2. Name of Operator Yates Petroleum Corporation		7. If Unit or CA Agreement, Name and No.	
3a. Address 105 S. Fourth St. Artesia, NM 88210		8. Lease Name and Well No. Williamson BC Federal #6H <39675>	
3b. Phone No. (include area code) 575-748-4120		9. API Well No. 30-015-41029	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1980' FSL & 200' FWL SHL At proposed prod. zone 1780' FSL & 330' FEL BHL		10. Field and Pool, or Exploratory Undesignated/Bone Springs <65010>	
11. Sec., T. R. M. or Blk. and Survey or Area Section 7, T20S-R29E		12. County or Parish Eddy	
13. State NM		14. Distance in miles and direction from nearest town or post office* 20 miles east of Carlsbad, NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200'		16. No. of acres in lease 2494.41	
17. Spacing Unit dedicated to this well N2S2 151.22		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1650' 80'	
19. Proposed Depth 7834' TVD 12024' MD		20. BLM/BIA Bond No. on file NMB-000920 + NMB000434	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3269'		22. Approximate date work will start* 09/01/2013	
23. Estimated duration 30 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:

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

25. Signature	Name (Printed/Typed) Travis Hahn	Date 10/02/2012
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Title
Land Regulatory Agent

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JAN 23 2013
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Title
FIELD MANAGER Office
CARLSBAD FIELD OFFICEApplication 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.

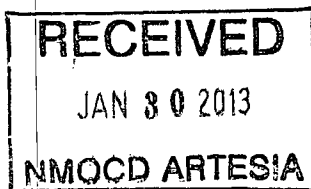
APPROVAL FOR TWO YEARS

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

1825 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) 334-6178 Fax: (505) 334-6170

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) 476-3460 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 30-015-41029	Pool Code 65010	Pool Name Winchester Undesignated/Bone Springs
Property Code 39675	Property Name WILLIAMSON BC FEDERAL	Well Number 6H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3269'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	7	20 S	29 E		1980	SOUTH	200	WEST	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
1	7	20 S	29 E		1780	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			23 12-024

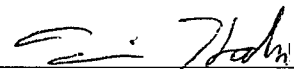
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

LOT 1 LOT 2 SURFACE LOCATION Lot - N 32°35'10.43" Long - W 104°07'16.87" NMSPCE- N 577060.040 E 606629.903 (NAD-83) PROPOSED BOTTOM HOLE LOCATION Lot - N 32°35'08.43" Long - W 104°06'24.73" NMSPCE- N 576867.412 E 611091.354 (NAD-83) LOT 3 LOT 4 Penetration Point: 668' FWL & 1960' FSL	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> 10/9/12 Signature Date <u>Travis Hahn</u> Printed Name <u>thahn@yatespetroleum.com</u> Email Address 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. Date Surveyed: <u>10/9/12</u> Signature & Seal of Professional Surveyor: <u>[Signature]</u> 7977 Certificate No. Gary L. Jones 7977 BASIN SURVEYS 26557
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CERTIFICATION
YATES PETROLEUM CORPORATION
Williamson BC Federal #6H

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 9 day of October 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

YATES PETROLEUM CORPORATION

Williamson BC Federal #6H
1980' FSL & 200' FWL, Surface Hole
1780' FSL & 330' FEL, Bottom Hole
Section 7 -T20S-R29E
Eddy County, New Mexico

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

Rustler	129'	Brushy Canyon	4031' Oil
Top of Salt	249'	Bone Spring Lime	5489' Oil
Base of Salt	609'	Bone Springs 1/SD	6894' Oil
Tansill	829'	Bone Springs 2/SD	7553' Oil
Yates	939'	Target Zone SBSG	8026'
Seven Rivers	1234'	TD (Lateral Hole)	12024' MD
Capitan Reef	1339' Water		
Cherry Canyon	3169' Oil		

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

Water: Approx: 0' - 375' & 1300' - 3250'
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 21.25" opening ~~will be installed~~ on the 20" casing. A 3000 PSI BOP with a 13.625" opening will be installed on the 13.375" casing and also a 5000 PSI BOP on the 9.625" casing. Pressure tests to 3000 PSI and 5000 respectively, 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.

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))

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
26"	20"	94#	H-40	ST&C	0'-200'	200'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	0'-80'	80'
17 1/2"	13 3/8"	48#	J-55	ST&C	80'-1220'	1140'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	1220'-1300'	80'
12 1/4"	9 5/8"	36#	J-55	LT&C	0'-3250'	3250'
8 3/4"	5 1/2"	17#	P-110	LT&C	0'-7280'	7280'
8 1/2"	5 1/2"	17#	P-110	Buttress Thread	7280'-12024'	4744'

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

B. CEMENTING PROGRAM:

Surface casing: Lead in with 450 sacks of Class C +2% CaCl (YLD 1.34 WT 14.80). Designed with 100% excess, TOC-Surface.

Intermediate Casing 1 0'-1300': Lead with 765 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 0'-3250': Lead with 875 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 a DV tool set at 8000' and 5480' Packers and Ports system in the lateral.

Stage 2 from 1300'-5480'; Lead cement with 580 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 35% excess, TOC-1300'.

Stage 1 from 5480'-8000'; Lead with 295 sacks Class PozC 35:65:6 (YLD 2.00 WT 12.50); tail in with 190 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- 5480' Designed with 35% excess.

Well will be drilled vertically depth to 7285' then kicked off and drilled directionally at 12 degrees per 100' with a 8 3/4" hole to 8026' MD (7762' TVD). Hole will then be reduced to 8 1/2" and drilled to 12024' MD (7834' TVD) where 5 1/2" casing will be set and cemented. Packer's Plus packer port system will be utilized in the lateral. A hydraulic DV tool will be set at approximately 8000' and at 5480'. Penetration point of producing zone will be encountered at 668' FWL & 1960' FSL, Section 7-20S-29E. Deepest TVD is 7834' in the lateral.

5. Mud Program and Auxiliary Equipment:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-200'	Fresh Water	8.6-9.2	32-34	N/C
200'-1300'	Brine Water	10.0-10.2	28-29	N/C
1300'-3250'	Fresh Water	8.6-9.2	32-34	N/C
3250'-12024'	Cut Brine	8.8-9.2	28-32	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: 30' samples to 3250'. 10' samples 3250' to TD (12024').

Logging: Platform HRLA CMR to 30 degree deviation.

Coring: As warranted.

DST's: As warranted.

Mudlogging: Surface casing (200') to TD (12024')

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

Anticipated BHP:

From: 0	To: 200'	Anticipated Max. BHP:	96 PSI
From: 200'	To: 1300'	Anticipated Max. BHP:	690 PSI
From: 1300'	To: 3250'	Anticipated Max. BHP:	1555 PSI
From: 3250'	To: 7834'	Anticipated Max. BHP:	3748 PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: Possible in Capitan Reef

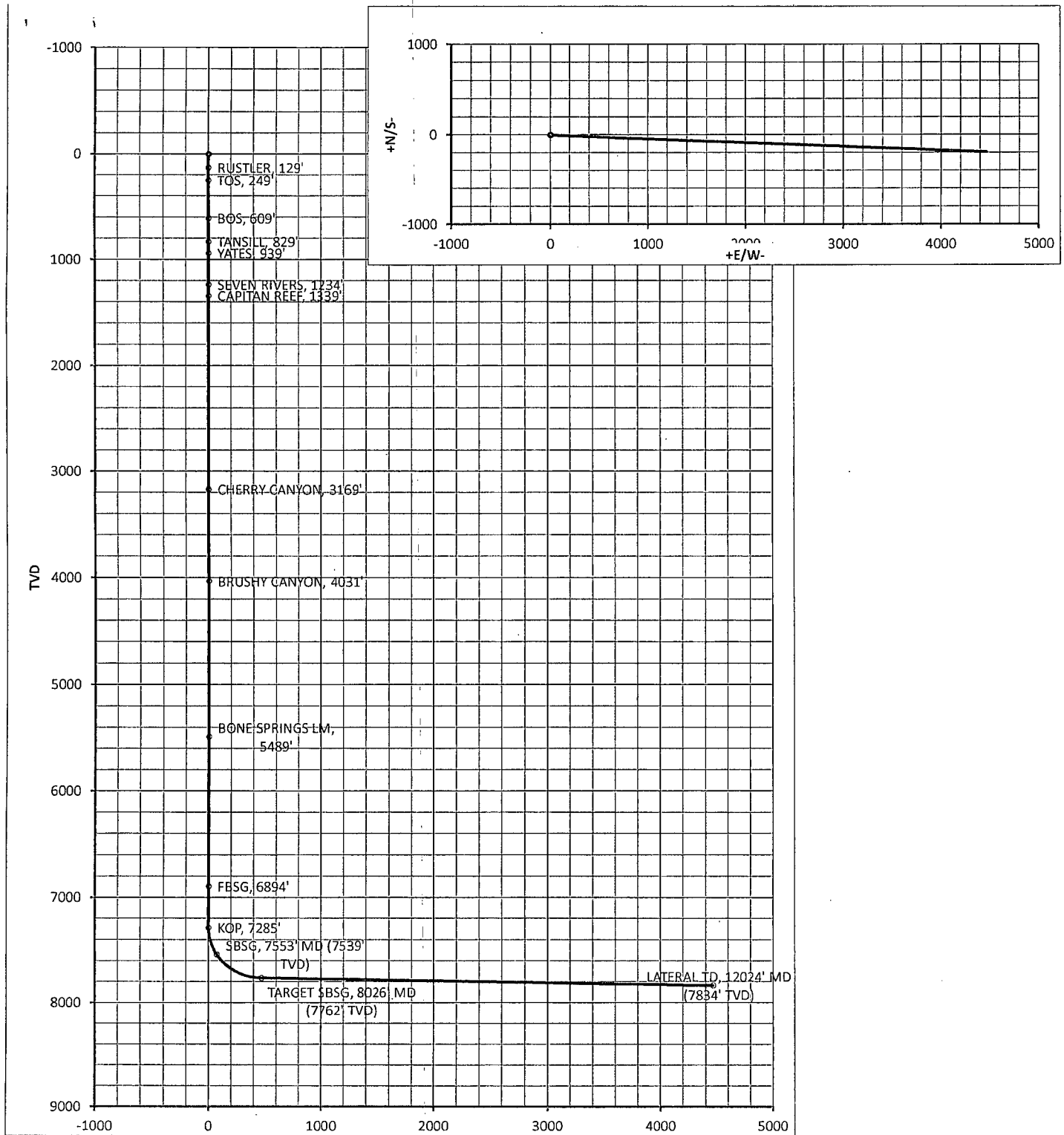
H₂S is not anticipated.

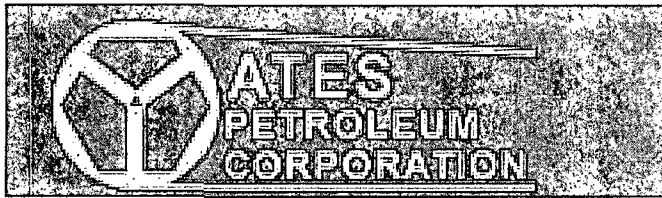
8. ANTICIPATED STARTING DATE:

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.

Williamson BC Fed.

Co:	Yates Petroleum Corporation					Units:	Feet, ° 7100ft		VS Az:	92.47		Method:	Minimum Curvature	
Drillers:	0					Elevation:			Map System:	NAD83, St. Plane, Wyoming West				
Well Name:	Williamson BC Federal #6H					Northing:			Latitude:					
Location:	Sec. 7, 20S-29E					Easting:			Longitude:					
Yates Petroleum Corporation: Williamson BC Fed. #6H														
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	129.00	129.00	0.00	0.00	129.00	0.00	0.00	0.00	0.00	0.00	0.00	RUSTLER, 129'		
2	249.00	120.00	0.00	0.00	249.00	0.00	0.00	0.00	0.00	0.00	0.00	TOS, 249'		
3	609.00	360.00	0.00	0.00	609.00	0.00	0.00	0.00	0.00	0.00	0.00	BOS, 609'		
4	829.00	220.00	0.00	0.00	829.00	0.00	0.00	0.00	0.00	0.00	0.00	TANSILL, 829'		
5	939.00	110.00	0.00	0.00	939.00	0.00	0.00	0.00	0.00	0.00	0.00	YATES, 939'		
6	1234.00	295.00	0.00	0.00	1234.00	0.00	0.00	0.00	0.00	0.00	0.00	SEVEN RIVERS, 1234'		
7	1339.00	105.00	0.00	0.00	1339.00	0.00	0.00	0.00	0.00	0.00	0.00	CAPITAN REEF, 1339'		
8	3169.00	1830.00	0.00	0.00	3169.00	0.00	0.00	0.00	0.00	0.00	0.00	CHERRY CANYON, 3169'		
9	4031.00	862.00	0.00	0.00	4031.00	0.00	0.00	0.00	0.00	0.00	0.00	BRUSHY CANYON, 4031'		
10	5489.00	1458.00	0.00	0.00	5489.00	0.00	0.00	0.00	0.00	0.00	0.00	BONE SPRINGS LM, 5489'		
11	6894.00	1405.00	0.00	0.00	6894.00	0.00	0.01	0.00	0.00	0.00	0.00	FBSG, 6894'		
12	7284.76	390.76	0.00	92.47	7284.76	0.00	0.01	0.00	0.00	1.27	0.00	KOP, 7285'		
13	7300.00	15.24	1.83	92.47	7300.00	0.24	0.00	0.24	12.00	0.00	12.00			
14	7400.00	100.00	13.83	92.47	7398.88	13.84	-0.59	13.83	12.00	0.00	12.00			
15	7500.00	100.00	25.83	92.47	7492.78	47.70	-2.05	47.66	12.00	0.00	12.00			
16	7552.87	52.87	32.17	92.47	7539.00	73.32	-3.16	73.25	12.00	0.00	12.00	SBSG, 7553' MD (7539' T		
17	7600.00	47.13	37.83	92.47	7577.59	100.34	-4.32	100.25	12.00	0.00	12.00			
18	7700.00	100.00	49.83	92.47	7649.60	169.47	-7.30	169.31	12.00	0.00	12.00			
19	7800.00	100.00	61.83	92.47	7705.66	252.05	-10.87	251.82	12.00	0.00	12.00			
20	7900.00	100.00	73.83	92.47	7743.33	344.49	-14.85	344.17	12.00	0.00	12.00			
21	8026.17	126.17	88.97	92.47	7762.14	468.88	-20.22	468.45	12.00	0.00	12.00	TARGET SBSG, 8026' MI		
22	12023.54	3997.37	88.97	92.47	7834.00	4465.61	-192.63	4461.45	0.00	0.00	0.00	LATERAL TD, 12024' MD		





Yates Petroleum Corp.

Eddy County (NAD 83)

Williamson BC Federal Com

#6H

OH

Plan #1

Anticollision Report

21 May, 2012

PATHFINDER[®]

A Schlumberger Company



Pathfinder

Anticollision Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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	5/21/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,023.2	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						
Williamson BC Federal Com						
#4 - OH - OH	9,043.4	7,783.9	67.2	-133.3	0.335	Level 1, CC, ES, SF

Offset Design				Williamson BC Federal Com - #4 - OH - OH							Offset Site Error: 0.0 usft		
Survey Program: 306-INC											Offset Well Error: 0.0 usft		
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.88	3.0	1,487.6	1,487.6				
100.0	100.0	100.0	100.0	0.1	3.0	89.91	2.4	1,487.6	1,487.6	1,486.2	1.45	1,026.200	
147.6	147.6	147.6	147.6	0.2	4.5	89.91	2.3	1,487.6	1,487.6	1,485.5	2.19	678.576	
200.0	200.0	200.0	200.0	0.3	6.1	89.91	2.4	1,487.6	1,487.6	1,484.6	3.01	494.073	
300.0	300.0	300.0	300.0	0.6	9.1	89.89	2.9	1,487.6	1,487.6	1,483.1	4.57	325.359	
400.0	400.0	400.0	400.0	0.8	15.5	89.89	2.9	1,487.6	1,487.6	1,480.6	7.00	212.529	
445.0	445.0	445.0	445.0	0.9	18.4	89.89	2.8	1,487.6	1,487.6	1,479.5	8.12	183.304	
500.0	500.0	500.0	500.0	1.0	22.0	89.89	2.9	1,487.6	1,487.6	1,478.2	9.48	156.902	
600.0	600.0	600.1	600.0	1.2	28.8	89.89	2.9	1,487.6	1,487.6	1,475.7	11.95	124.496	
700.0	700.0	700.1	700.0	1.5	37.9	89.90	2.6	1,487.6	1,487.6	1,473.4	14.28	104.197	
734.1	734.1	734.2	734.1	1.5	41.0	89.90	2.5	1,487.6	1,487.6	1,472.6	15.07	98.703	
800.0	800.0	800.1	800.0	1.7	47.0	89.90	2.6	1,487.6	1,487.6	1,471.0	16.61	89.581	
900.0	900.0	900.2	900.0	1.9	56.5	89.88	3.1	1,487.6	1,487.6	1,468.8	18.88	78.802	
1,000.0	1,000.0	1,000.2	1,000.0	2.1	66.9	89.88	3.1	1,487.6	1,487.6	1,466.7	20.99	70.886	
1,100.0	1,100.0	1,100.3	1,100.0	2.4	77.3	89.88	3.0	1,487.6	1,487.6	1,464.5	23.10	64.413	
1,112.1	1,112.1	1,112.3	1,112.0	2.4	78.3	89.88	3.1	1,487.6	1,487.6	1,464.3	23.36	63.672	
1,200.0	1,200.0	1,200.3	1,200.0	2.6	84.6	89.86	3.5	1,487.6	1,487.6	1,462.3	25.39	58.596	
1,300.0	1,300.0	1,300.4	1,300.0	2.8	91.7	89.87	3.4	1,487.6	1,487.6	1,460.0	27.68	53.735	
1,400.0	1,400.0	1,400.4	1,400.0	3.0	97.7	89.88	3.0	1,487.6	1,487.6	1,457.7	29.91	49.741	
1,500.0	1,500.0	1,500.4	1,500.0	3.3	102.1	89.88	3.0	1,487.6	1,487.6	1,455.6	32.05	46.416	
1,600.0	1,600.0	1,600.4	1,600.0	3.5	106.6	89.88	3.0	1,487.6	1,487.6	1,453.5	34.19	43.507	
1,700.0	1,700.0	1,700.4	1,700.0	3.7	111.8	89.89	2.8	1,487.6	1,487.6	1,451.1	36.52	40.740	
1,800.0	1,800.0	1,800.4	1,800.0	3.9	117.0	89.89	2.8	1,487.6	1,487.6	1,448.8	38.86	38.286	
1,826.4	1,826.4	1,826.8	1,826.4	4.0	118.3	89.89	2.8	1,487.6	1,487.6	1,448.2	39.47	37.688	
1,900.0	1,900.0	1,900.4	1,900.0	4.2	122.2	89.89	2.8	1,487.6	1,487.6	1,446.4	41.20	36.111	
2,000.0	2,000.0	2,000.4	2,000.0	4.4	127.4	89.89	3.0	1,487.6	1,487.6	1,444.1	43.54	34.168	

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



Pathfinder Anticollision Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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 Williamson BC Federal Com - #4 - OH - OH													Offset Site Error:
Survey Program: 306-INC													0.0 usft
Reference		Offset		Semi Major Axis		Distance		Warning		Offset Well Error:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,100.0	2,100.0	2,100.5	2,100.0	4.6	133.6	89.89	2.9	1,487.6	1,487.6	1,441.8	45.88	32.423	
2,200.0	2,200.0	2,200.5	2,200.0	4.8	140.1	89.89	2.7	1,487.6	1,487.6	1,439.4	48.22	30.849	
2,230.9	2,230.9	2,231.4	2,230.9	4.9	142.2	89.89	2.7	1,487.6	1,487.6	1,438.7	48.95	30.393	
2,300.0	2,300.0	2,300.5	2,300.0	5.1	146.7	89.90	2.7	1,487.6	1,487.6	1,437.1	50.57	29.420	
2,327.1	2,327.1	2,327.6	2,327.1	5.1	148.4	89.89	2.7	1,487.6	1,487.6	1,436.4	51.20	29.055	
2,400.0	2,400.0	2,400.5	2,400.0	5.3	153.2	89.89	2.8	1,487.6	1,487.6	1,434.7	52.91	28.117	
2,500.0	2,500.0	2,500.4	2,500.0	5.5	159.7	89.89	2.9	1,487.6	1,487.6	1,432.4	55.25	26.924	
2,600.0	2,600.0	2,600.5	2,600.0	5.7	165.7	89.87	3.3	1,487.6	1,487.6	1,430.2	57.49	25.878	
2,700.0	2,700.0	2,700.5	2,700.0	6.0	171.5	89.87	3.5	1,487.6	1,487.6	1,428.0	59.67	24.931	
2,800.0	2,800.0	2,800.6	2,800.0	6.2	177.3	89.86	3.6	1,487.6	1,487.6	1,425.8	61.85	24.051	
2,900.0	2,900.0	2,900.6	2,900.0	6.4	183.2	89.87	3.5	1,487.6	1,487.6	1,423.6	64.03	23.232	
3,000.0	3,000.0	3,000.6	3,000.0	6.6	189.0	89.88	3.2	1,487.6	1,487.6	1,421.4	66.21	22.468	
3,052.7	3,052.7	3,053.4	3,052.8	6.7	192.0	89.88	3.0	1,487.6	1,487.6	1,420.3	67.36	22.085	
3,100.0	3,100.0	3,100.6	3,100.0	6.9	194.2	89.88	3.0	1,487.6	1,487.6	1,419.2	68.39	21.751	
3,200.0	3,200.0	3,200.6	3,200.0	7.1	198.7	89.88	3.0	1,487.6	1,487.6	1,417.1	70.59	21.075	
3,300.0	3,300.0	3,300.6	3,300.0	7.3	203.2	89.88	3.0	1,487.6	1,487.6	1,414.9	72.78	20.440	
3,400.0	3,400.0	3,400.6	3,400.0	7.5	207.8	89.88	3.0	1,487.6	1,487.6	1,412.7	74.97	19.843	
3,500.0	3,500.0	3,500.6	3,500.0	7.8	212.3	89.88	3.0	1,487.6	1,487.6	1,410.5	77.16	19.279	
3,600.0	3,600.0	3,600.7	3,600.0	8.0	218.5	89.90	2.5	1,487.6	1,487.6	1,408.2	79.45	18.724	
3,700.0	3,700.0	3,700.7	3,700.0	8.2	225.0	89.91	2.2	1,487.6	1,487.6	1,405.9	81.76	18.196	
3,735.0	3,735.0	3,735.7	3,735.1	8.3	227.3	89.92	2.2	1,487.6	1,487.6	1,405.1	82.57	18.018	
3,800.0	3,800.0	3,800.7	3,800.0	8.4	231.5	89.92	2.2	1,487.6	1,487.6	1,403.6	84.07	17.696	
3,831.6	3,831.6	3,832.3	3,831.6	8.5	233.5	89.91	2.2	1,487.6	1,487.6	1,402.8	84.80	17.543	
3,900.0	3,900.0	3,900.7	3,900.0	8.7	238.0	89.91	2.4	1,487.6	1,487.6	1,401.3	86.38	17.222	
3,952.1	3,952.1	3,952.8	3,952.1	8.8	241.4	89.90	2.6	1,487.6	1,487.6	1,400.1	87.59	16.984	
4,000.0	4,000.0	4,000.6	3,999.9	8.9	244.5	89.89	2.9	1,487.6	1,487.6	1,398.9	88.70	16.771	
4,100.0	4,100.0	4,100.7	4,100.0	9.1	250.4	89.86	3.6	1,487.6	1,487.6	1,396.7	90.94	16.358	
4,200.0	4,200.0	4,200.8	4,200.0	9.3	256.3	89.85	3.8	1,487.6	1,487.6	1,394.5	93.16	15.969	
4,300.0	4,300.0	4,300.8	4,300.0	9.6	262.1	89.86	3.6	1,487.6	1,487.6	1,392.3	95.36	15.600	
4,400.0	4,400.0	4,400.8	4,400.0	9.8	267.8	89.89	2.9	1,487.6	1,487.6	1,390.1	97.56	15.248	
4,500.0	4,500.0	4,500.8	4,500.0	10.0	272.3	89.90	2.7	1,487.6	1,487.6	1,387.9	99.76	14.912	
4,543.7	4,543.7	4,544.5	4,543.7	10.1	274.3	89.90	2.7	1,487.6	1,487.6	1,386.9	100.73	14.769	
4,600.0	4,600.0	4,600.8	4,600.0	10.2	276.8	89.90	2.7	1,487.6	1,487.6	1,385.7	101.97	14.589	
4,700.0	4,700.0	4,700.8	4,700.0	10.5	281.4	89.88	3.0	1,487.6	1,487.6	1,383.5	104.18	14.279	
4,800.0	4,800.0	4,800.9	4,800.0	10.7	287.2	89.88	3.0	1,487.6	1,487.6	1,381.2	106.48	13.972	
4,900.0	4,900.0	4,900.9	4,900.0	10.9	293.0	89.88	3.0	1,487.6	1,487.6	1,378.9	108.77	13.677	
5,000.0	5,000.0	5,000.9	5,000.0	11.1	298.9	89.88	3.0	1,487.6	1,487.6	1,376.6	111.06	13.394	
5,100.0	5,100.0	5,100.9	5,100.0	11.4	304.7	89.88	3.0	1,487.6	1,487.6	1,374.3	113.36	13.123	
5,200.0	5,200.0	5,200.9	5,200.0	11.6	310.6	89.88	3.0	1,487.6	1,487.6	1,372.0	115.65	12.863	
5,300.0	5,300.0	5,301.0	5,300.0	11.8	318.4	89.90	2.5	1,487.6	1,487.6	1,369.7	117.92	12.616	
5,341.8	5,341.8	5,342.8	5,341.8	11.9	321.7	89.90	2.5	1,487.6	1,487.6	1,368.8	118.87	12.515	
5,400.0	5,400.0	5,400.9	5,400.0	12.0	326.2	89.90	2.5	1,487.6	1,487.6	1,367.5	120.19	12.377	
5,442.5	5,442.5	5,443.5	5,442.5	12.1	329.5	89.90	2.6	1,487.6	1,487.6	1,366.5	121.16	12.278	
5,500.0	5,500.0	5,500.9	5,499.9	12.2	334.0	89.89	2.9	1,487.6	1,487.6	1,365.2	122.47	12.147	
5,600.0	5,600.0	5,601.1	5,600.1	12.5	345.5	89.91	2.4	1,487.6	1,487.6	1,362.9	124.78	11.923	
5,700.0	5,700.0	5,701.1	5,700.1	12.7	357.9	89.92	2.0	1,487.6	1,487.6	1,360.6	127.08	11.706	
5,734.3	5,734.3	5,735.4	5,734.4	12.8	362.1	89.92	2.0	1,487.6	1,487.6	1,359.8	127.88	11.633	
5,800.0	5,800.0	5,801.1	5,800.0	12.9	370.2	89.92	2.0	1,487.6	1,487.6	1,358.2	129.40	11.496	
5,846.7	5,846.7	5,847.8	5,846.7	13.0	376.0	89.92	2.1	1,487.6	1,487.6	1,357.2	130.49	11.401	
5,900.0	5,900.0	5,901.0	5,899.9	13.1	382.6	89.91	2.4	1,487.6	1,487.6	1,355.9	131.73	11.293	
6,000.0	6,000.0	6,001.4	6,000.0	13.4	395.6	89.89	2.9	1,487.6	1,487.6	1,353.6	134.08	11.095	
6,062.9	6,062.9	6,064.3	6,062.9	13.5	406.2	89.89	2.7	1,487.6	1,487.6	1,352.1	135.53	10.977	

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



Pathfinder

Anticollision Report



A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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 Williamson BC Federal Com - #4 - OH - OH													Offset Site Error:	0.0 usft
Survey Program: 306-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		
6,100.0	6,100.0	6,101.4	6,100.0	13.6	412.5	89.89	2.8	1,487.6	1,487.6	1,351.3	136.38	10.908		
6,200.0	6,200.0	6,201.6	6,200.0	13.8	430.3	89.88	3.1	1,487.6	1,487.6	1,348.9	138.71	10.725		
6,300.0	6,300.0	6,301.9	6,300.0	14.0	448.6	89.88	3.0	1,487.6	1,487.6	1,346.6	141.01	10.550		
6,400.0	6,400.0	6,402.0	6,400.0	14.3	466.9	89.89	2.9	1,487.6	1,487.6	1,344.3	143.32	10.380		
6,413.1	6,413.1	6,415.0	6,413.1	14.3	469.3	89.89	2.9	1,487.6	1,487.6	1,344.0	143.62	10.358		
6,500.0	6,500.0	6,502.2	6,500.0	14.5	485.3	89.88	3.0	1,487.6	1,487.6	1,342.0	145.64	10.214		
6,600.0	6,600.0	6,602.3	6,600.0	14.7	503.7	89.88	3.0	1,487.6	1,487.6	1,339.7	147.96	10.054		
6,611.0	6,611.0	6,613.5	6,611.0	14.7	505.7	89.88	3.0	1,487.6	1,487.6	1,339.4	148.22	10.037		
6,700.0	6,700.0	6,702.5	6,700.0	14.9	519.7	89.88	3.2	1,487.6	1,487.6	1,337.4	150.28	9.899		
6,800.0	6,800.0	6,802.6	6,800.0	15.2	533.8	89.88	3.0	1,487.6	1,487.6	1,335.1	152.58	9.750		
6,900.0	6,900.0	6,902.7	6,900.0	15.4	547.3	89.89	2.7	1,487.6	1,487.6	1,332.8	154.85	9.607		
7,000.0	7,000.0	7,002.8	7,000.0	15.6	561.1	89.90	2.6	1,487.6	1,487.6	1,330.5	157.12	9.468		
7,032.7	7,032.7	7,035.5	7,032.7	15.7	565.6	89.90	2.6	1,487.6	1,487.6	1,329.8	157.87	9.423		
7,100.0	7,100.0	7,102.7	7,100.0	15.8	574.9	89.90	2.6	1,487.6	1,487.6	1,328.2	159.41	9.332		
7,152.9	7,152.9	7,155.7	7,152.9	16.0	582.2	89.90	2.7	1,487.6	1,487.6	1,327.0	160.63	9.261		
7,200.0	7,200.0	7,202.7	7,199.9	16.1	588.7	89.89	2.9	1,487.6	1,487.6	1,325.9	161.72	9.199		
7,284.6	7,284.6	7,287.7	7,284.6	16.3	601.3	89.89	2.9	1,487.6	1,487.6	1,324.0	163.68	9.089		
7,300.0	7,300.0	7,303.1	7,300.0	16.3	603.8	-2.59	3.0	1,487.6	1,487.4	867.7	619.73	2.400		
7,325.0	7,325.0	7,328.0	7,324.9	16.3	607.7	-2.60	3.0	1,487.6	1,485.9	864.1	621.82	2.390		
7,350.0	7,349.8	7,353.0	7,349.8	16.4	611.8	-2.62	3.0	1,487.6	1,483.2	860.9	622.32	2.383		
7,375.0	7,374.5	7,377.7	7,374.5	16.4	615.8	-2.65	3.0	1,487.6	1,479.1	858.1	621.06	2.382		
7,400.0	7,398.9	7,402.1	7,398.9	16.5	619.8	-2.69	3.0	1,487.6	1,473.8	855.8	617.99	2.385		
7,425.0	7,423.0	7,426.2	7,423.0	16.5	623.8	-2.74	3.0	1,487.6	1,467.2	854.1	613.09	2.393		
7,450.0	7,446.7	7,449.9	7,446.7	16.6	627.7	-2.80	3.0	1,487.6	1,459.3	853.0	606.35	2.407		
7,475.0	7,470.0	7,473.2	7,470.0	16.7	631.5	-2.88	3.0	1,487.6	1,450.2	852.5	597.76	2.426		
7,500.0	7,492.8	7,496.1	7,492.7	16.7	635.0	-2.97	3.1	1,487.6	1,439.9	852.9	587.05	2.453		
7,525.0	7,515.0	7,518.4	7,515.0	16.8	638.2	-3.08	3.2	1,487.6	1,428.5	854.1	574.39	2.487		
7,550.0	7,536.5	7,540.0	7,536.5	16.8	641.3	-3.21	3.2	1,487.6	1,415.8	855.9	559.94	2.529		
7,575.0	7,557.4	7,560.9	7,557.5	16.9	644.3	-3.35	3.1	1,487.6	1,402.1	858.4	543.72	2.579		
7,600.0	7,577.6	7,581.1	7,577.6	17.0	647.3	-3.51	3.0	1,487.6	1,387.3	861.5	525.78	2.639		
7,625.0	7,596.9	7,600.4	7,596.9	17.1	649.6	-3.71	3.0	1,487.6	1,371.5	865.7	505.77	2.712		
7,650.0	7,615.4	7,618.9	7,615.4	17.2	651.7	-3.94	3.0	1,487.6	1,354.7	870.5	484.17	2.798		
7,675.0	7,632.9	7,636.4	7,632.9	17.3	653.8	-4.21	3.0	1,487.6	1,336.9	875.9	461.05	2.900		
7,700.0	7,649.5	7,653.1	7,649.6	17.4	655.8	-4.53	3.0	1,487.6	1,318.3	881.8	436.48	3.020		
7,725.0	7,665.2	7,668.7	7,665.2	17.6	657.6	-4.90	3.0	1,487.6	1,298.8	888.2	410.55	3.163		
7,750.0	7,679.7	7,683.3	7,679.7	17.7	659.3	-5.35	3.0	1,487.6	1,278.5	895.2	383.31	3.335		
7,775.0	7,693.2	7,696.8	7,693.2	17.9	660.8	-5.90	3.0	1,487.6	1,257.5	902.6	354.88	3.543		
7,800.0	7,705.6	7,709.1	7,705.6	18.1	662.2	-6.58	3.0	1,487.6	1,235.8	910.4	325.41	3.798		
7,825.0	7,716.8	7,720.4	7,716.8	18.3	663.4	-7.43	3.0	1,487.6	1,213.5	918.4	295.04	4.113		
7,850.0	7,726.8	7,730.4	7,726.8	18.5	664.5	-8.52	3.0	1,487.6	1,190.6	926.6	263.97	4.510		
7,875.0	7,735.6	7,739.2	7,735.6	18.8	665.5	-9.96	3.0	1,487.6	1,167.2	934.8	232.45	5.021		
7,900.0	7,743.2	7,746.8	7,743.2	19.1	666.4	-11.94	3.0	1,487.6	1,143.5	942.5	200.96	5.690		
7,925.0	7,749.5	7,753.1	7,749.5	19.4	667.1	-14.80	3.0	1,487.6	1,119.3	948.9	170.44	6.567		
7,950.0	7,754.6	7,758.2	7,754.6	19.7	667.6	-19.22	3.0	1,487.6	1,094.9	951.6	143.27	7.642		
7,975.0	7,758.3	7,761.9	7,758.3	20.0	668.0	-26.80	3.0	1,487.6	1,070.2	944.2	126.06	8.490		
8,000.0	7,760.8	7,764.4	7,760.8	20.4	668.3	-41.64	3.0	1,487.6	1,045.4	910.9	134.44	7.776		
8,026.0	7,762.0	7,765.6	7,762.0	20.8	668.4	-74.74	3.0	1,487.6	1,019.5	846.0	173.44	5.878		
8,100.0	7,763.3	7,766.9	7,763.3	21.9	668.6	-75.80	3.0	1,487.6	945.7	770.4	175.30	5.395		
8,200.0	7,765.1	7,768.7	7,765.1	23.7	668.8	-77.26	3.0	1,487.6	846.0	668.0	177.94	4.754		
8,300.0	7,766.9	7,770.5	7,766.9	25.7	669.0	-78.73	3.0	1,487.6	746.3	565.7	180.66	4.131		
8,400.0	7,768.7	7,772.3	7,768.7	27.7	669.2	-80.21	3.0	1,487.6	646.8	463.4	183.44	3.526		
8,500.0	7,770.5	7,774.1	7,770.5	29.9	669.4	-81.71	3.0	1,487.6	547.5	361.3	186.22	2.940		

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 #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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													Offset Site Error:	0.0 usft
Survey Program: 306-INC													Offset Well Error:	0.0 usft
Reference														
Offset														
Semi Major Axis														
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,600.0	7,772.3	7,775.9	7,772.3	32.2	669.6	-83.22	3.0	1,487.6	448.4	259.4	188.99	2.373		
8,700.0	7,774.1	7,777.7	7,774.1	34.6	669.8	-84.74	3.0	1,487.6	349.9	158.2	191.72	1.825		
8,800.0	7,775.9	7,779.5	7,775.9	37.0	670.0	-86.27	3.0	1,487.6	252.5	58.1	194.39	1.299 Level 3		
8,900.0	7,777.7	7,781.3	7,777.7	39.4	670.2	-87.80	3.0	1,487.6	158.4	-38.6	196.97	0.804 Level 1		
9,000.0	7,779.5	7,783.1	7,779.5	41.9	670.4	-89.33	3.0	1,487.6	80.0	-119.5	199.46	0.401 Level 1		
9,043.4	7,780.3	7,783.9	7,780.3	43.0	670.5	-90.00	3.0	1,487.6	67.2	-133.3	200.51	0.335 Level 1, CC, ES, SF		
9,100.0	7,781.3	7,784.9	7,781.3	44.5	670.6	-90.87	3.0	1,487.6	87.8	-114.0	201.85	0.435 Level 1		
9,200.0	7,783.1	7,786.7	7,783.1	47.0	670.8	-92.40	3.0	1,487.6	170.3	-33.8	204.11	0.835 Level 1		
9,300.0	7,784.9	7,788.5	7,784.9	49.6	671.0	-93.94	3.0	1,487.6	265.2	58.9	206.25	1.286 Level 3		
9,400.0	7,786.7	7,790.3	7,786.7	52.2	671.2	-95.46	3.0	1,487.6	362.8	154.5	208.27	1.742		
9,500.0	7,788.5	7,792.1	7,788.5	54.8	671.4	-96.98	3.0	1,487.6	461.4	251.3	210.14	2.196		
9,600.0	7,790.3	7,793.9	7,790.3	57.4	671.6	-98.49	3.0	1,487.6	560.5	348.6	211.88	2.646		
9,700.0	7,792.1	7,795.7	7,792.1	60.0	671.8	-99.99	3.0	1,487.6	659.9	446.4	213.47	3.091		
9,800.0	7,793.9	7,797.5	7,793.9	62.7	672.0	-101.47	3.0	1,487.6	759.4	544.5	214.92	3.533		
9,900.0	7,795.7	7,799.3	7,795.7	65.4	672.2	-102.94	3.0	1,487.6	859.1	642.8	216.24	3.973		
10,000.0	7,797.5	7,801.1	7,797.5	68.0	672.4	-104.39	3.0	1,487.6	958.8	741.4	217.41	4.410		
10,100.0	7,799.4	7,802.9	7,799.4	70.7	672.6	-105.82	3.0	1,487.6	1,058.5	840.1	218.44	4.846		
10,200.0	7,801.2	7,804.7	7,801.2	73.4	672.8	-107.23	3.0	1,487.6	1,158.3	939.0	219.34	5.281		
10,300.0	7,803.0	7,806.5	7,803.0	76.1	673.0	-108.62	3.0	1,487.6	1,258.2	1,038.1	220.10	5.716		
10,400.0	7,804.8	7,808.3	7,804.8	78.7	673.2	-109.99	3.0	1,487.6	1,358.0	1,137.3	220.74	6.152		
10,500.0	7,806.6	7,810.1	7,806.6	81.4	673.4	-111.34	3.0	1,487.6	1,457.9	1,236.6	221.26	6.589		
10,600.0	7,808.4	7,811.9	7,808.4	84.1	673.6	-112.66	3.0	1,487.6	1,557.8	1,336.1	221.66	7.028		
10,700.0	7,810.2	7,813.7	7,810.2	86.8	673.8	-113.95	3.0	1,487.6	1,657.7	1,435.7	221.96	7.468		
10,800.0	7,812.0	7,815.5	7,812.0	89.5	674.0	-115.22	3.0	1,487.6	1,757.6	1,535.4	222.15	7.912		
10,900.0	7,813.8	7,817.3	7,813.8	92.3	674.2	-116.47	3.0	1,487.6	1,857.5	1,635.2	222.24	8.358		
11,000.0	7,815.6	7,819.1	7,815.6	95.0	674.4	-117.69	3.0	1,487.6	1,957.4	1,735.2	222.24	8.808		
11,100.0	7,817.4	7,820.9	7,817.4	97.7	674.6	-118.88	3.0	1,487.6	2,057.3	1,835.2	222.15	9.261		
11,200.0	7,819.2	7,822.8	7,819.2	100.4	674.8	-120.04	3.0	1,487.6	2,157.3	1,935.3	221.98	9.718		
11,300.0	7,821.0	7,824.6	7,821.0	103.1	675.0	-121.18	3.0	1,487.6	2,257.2	2,035.5	221.75	10.179		
11,400.0	7,822.8	7,826.4	7,822.8	105.8	675.2	-122.29	3.0	1,487.6	2,357.1	2,135.7	221.44	10.645		
11,500.0	7,824.6	7,828.2	7,824.6	108.6	675.4	-123.38	3.0	1,487.6	2,457.1	2,236.0	221.07	11.114		
11,600.0	7,826.4	7,830.0	7,826.4	111.3	675.6	-124.43	3.0	1,487.6	2,557.0	2,336.4	220.65	11.589		
11,700.0	7,828.2	7,831.8	7,828.2	114.0	675.8	-125.47	3.0	1,487.6	2,657.0	2,436.8	220.18	12.067		
11,800.0	7,830.0	7,833.6	7,830.0	116.7	676.0	-126.47	3.0	1,487.6	2,756.9	2,537.3	219.66	12.551		
11,900.0	7,831.8	7,835.4	7,831.8	119.5	676.2	-127.45	3.0	1,487.6	2,856.9	2,637.8	219.11	13.039		
12,000.0	7,833.6	7,837.2	7,833.6	122.2	676.4	-128.41	3.0	1,487.6	2,956.9	2,738.3	218.51	13.532		
12,023.4	7,834.0	7,837.6	7,834.0	122.8	676.5	-128.63	3.0	1,487.6	2,980.2	2,761.9	218.37	13.648		
12,023.8	7,834.0	7,837.6	7,834.0	122.9	676.5	-128.63	3.0	1,487.6	2,980.6	2,762.3	218.37	13.650		

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



Pathfinder

Anticollision Report

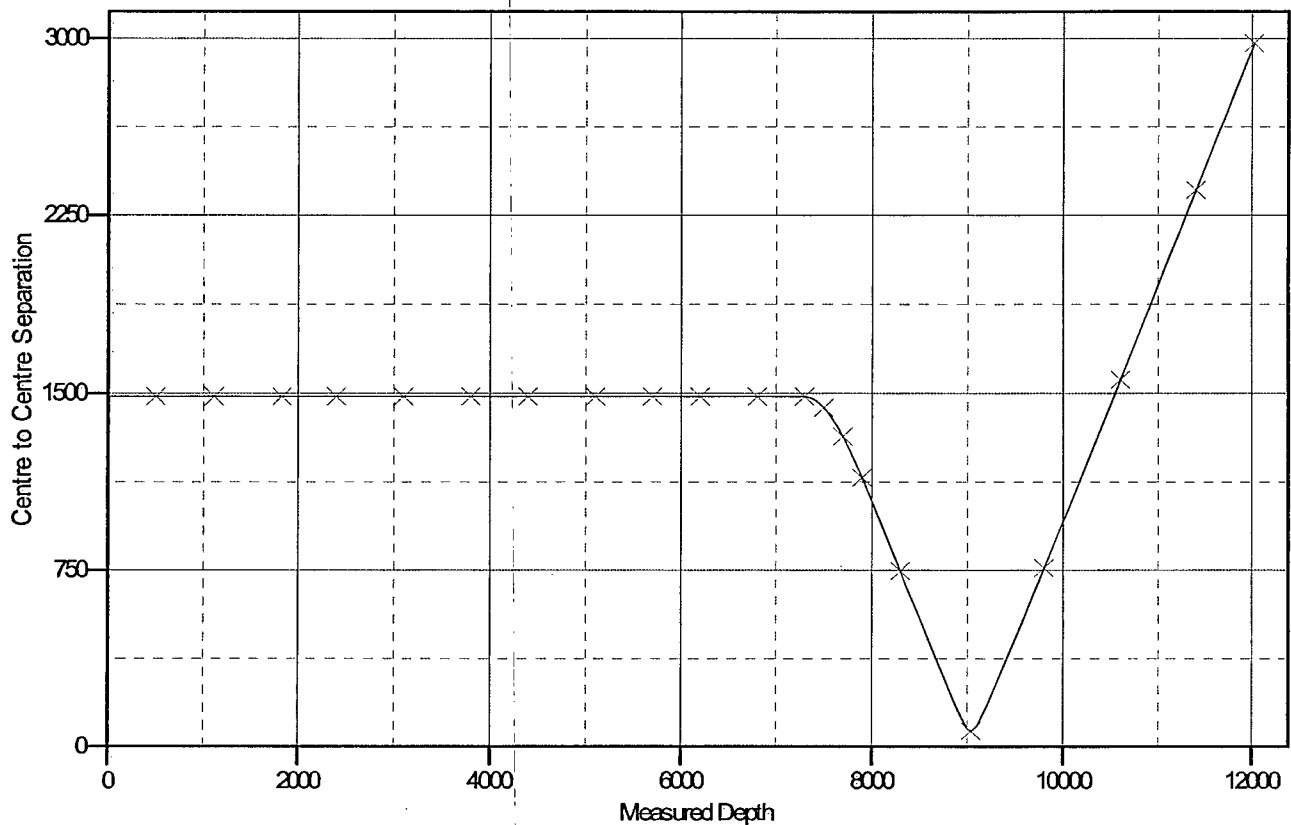
PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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 WELL @ 3270.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -104.333

Coordinates are relative to: #6H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.11°

Ladder Plot



LEGEND

✱ #4, OH, OHV0

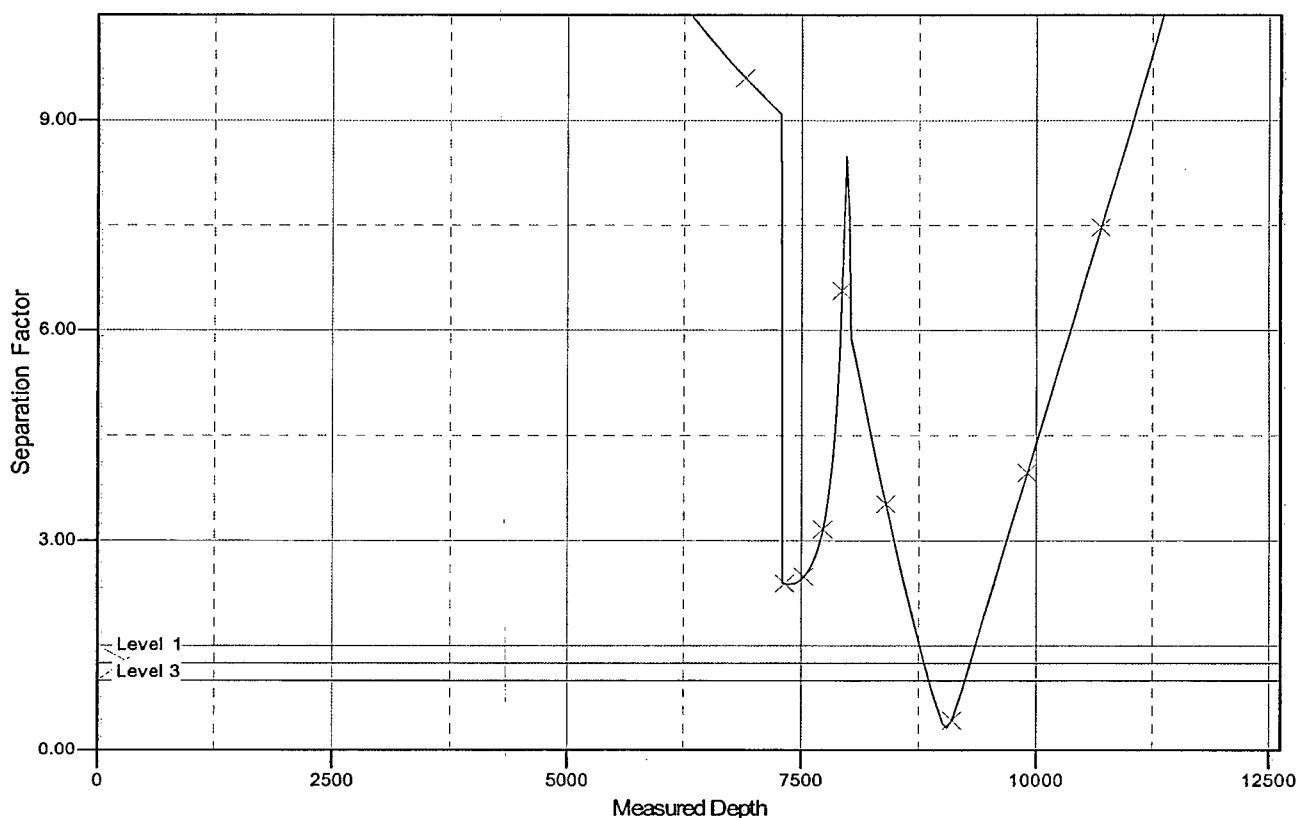


Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County (NAD 83)	TVD Reference:	WELL @ 3270.0usft (Original Well Elev)
Reference Site:	Williamson BC Federal Com	MD Reference:	WELL @ 3270.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	#6H	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 WELL @ 3270.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -104.333

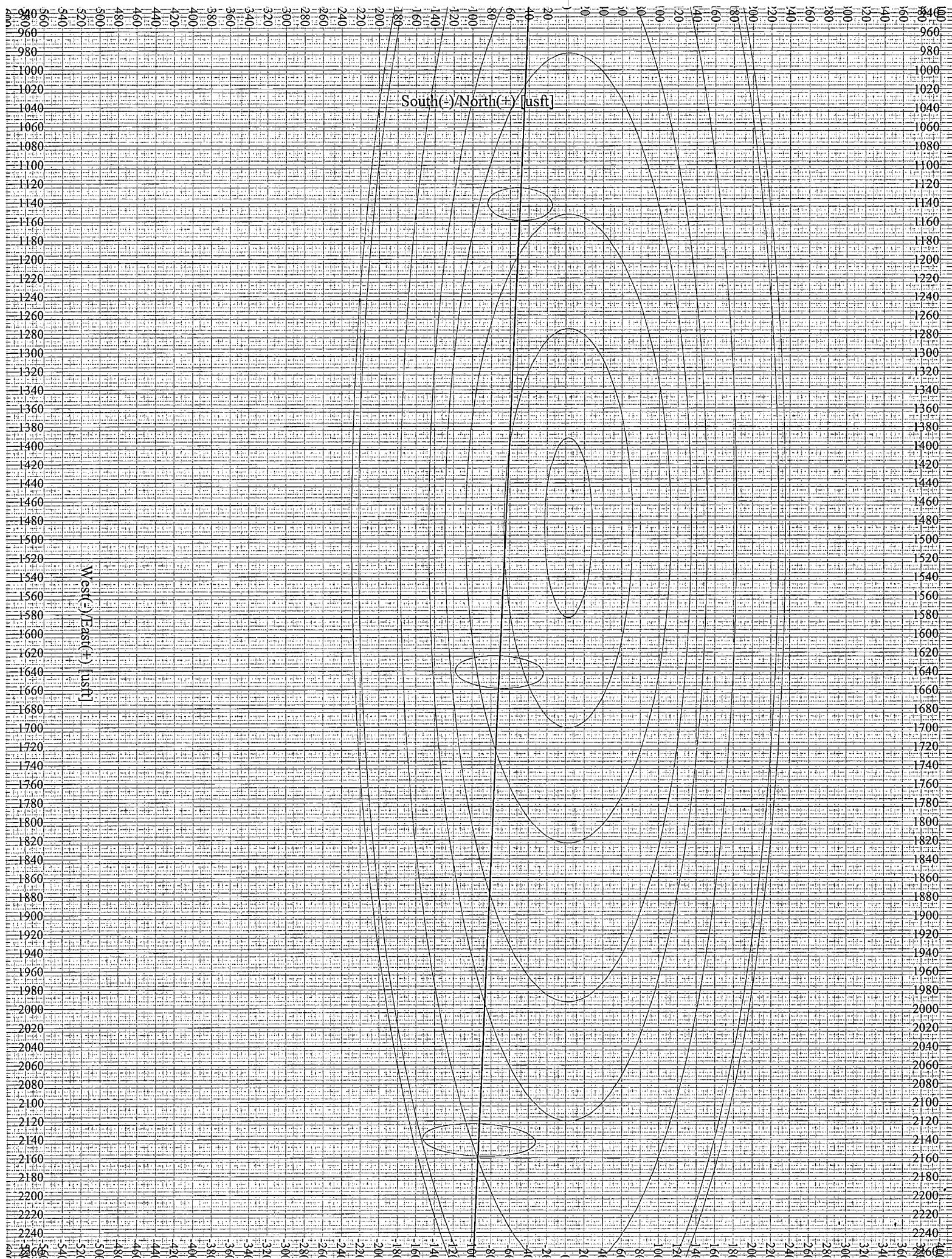
Coordinates are relative to: #6H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.11°

Separation Factor Plot



LEGEND

✕ #4, OH, OHV0



DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3482

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

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

☐ AMENDED REPORT

API Number		Pool Code		Pool Name	
				Undesignated / Bone Spring	
Property Code		Property Name			Well Number
		WILLIAMSON BC FEDERAL			6H
OGRID No.		Operator Name			Elevation
025575		YATES PETROLEUM CORP.			3269'

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	7	20 S	29 E		1980	SOUTH	200	WEST	EDDY

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	7	20 S	29 E		1780	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
151.22			

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

LOT 1	
LOT 2 <u>SURFACE LOCATION</u> Lat - N 32°35'10.43" Long - W 104°07'16.87" NMSPCE- N 577060.040 E 606629.903 (NAD-83)	<u>PROPOSED BOTTOM HOLE LOCATION</u> Lat - N 32°35'08.43" Long - W 104°06'24.73" NMSPCE- N 576867.412 E 611091.354 (NAD-83)
LOT 3	LOT 4

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.

Date 10/29/12

Signature _____
 Printed Name Travis Hahn
 Email Address Hahn@yatespetroleum.com

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.

Date Surveyed _____
 Signature of Professional Surveyor _____
 Certificate No. Gary L. Jones 7977

BASIN SURVEYS 26557

YATES PETROLEUM CORPORATION

Williamson BC Federal #6H

1980' FSL & 200' FWL, Surface Hole

1780' FSL & 330' FEL, Bottom Hole

Section 7 - T20S-R29E

Eddy County, New Mexico

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

Rustler	129'	Brushy Canyon	4031' Oil
Top of Salt	249'	Bone Spring Lime	5489' Oil
Base of Salt	609'	Bone Springs 1/SD	6894' Oil
Tansill	829'	Bone Springs 2/SD	7553' Oil
Yates	939'	Target Zone SBSG	8026'
Seven Rivers	1234'	TD (Lateral Hole)	12024' MD
Capitan Reef	1339' Water		
Cherry Canyon	3169' Oil		

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

Water: Approx: 0' - 375' & 1300' - 3250'

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 21.25" opening will be installed on the 20" casing, a pressure test will be conducted by pressuring up to 1000 PSI and hold for 30 minutes before drilling begins. A 3000 PSI BOP with a 13.625" opening will be installed on the 13.375" casing and also a 5000 PSI BOP on the 9.625" casing. Pressure tests to 3000 PSI and 5000 respectively, 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.

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:

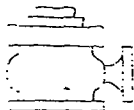
- A. Casing Program: (All New) 13 3/8" 48# will be J-55/H-40 Hybrid

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
26"	20"	94#	H-40	ST&C	0'-200'	200'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	0'-80'	80'
17 1/2"	13 3/8"	48#	J-55	ST&C	80'-1220'	1140'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	1220'-1300'	80'
12 1/4"	9 5/8"	36#	J-55	LT&C	0'-3250'	3250'
8 3/4"	5 1/2"	17#	P-110	LT&C	0'-7280'	7280'
8 1/2"	5 1/2"	17#	P-110	Buttress Thread	7280'-12024'	4744'

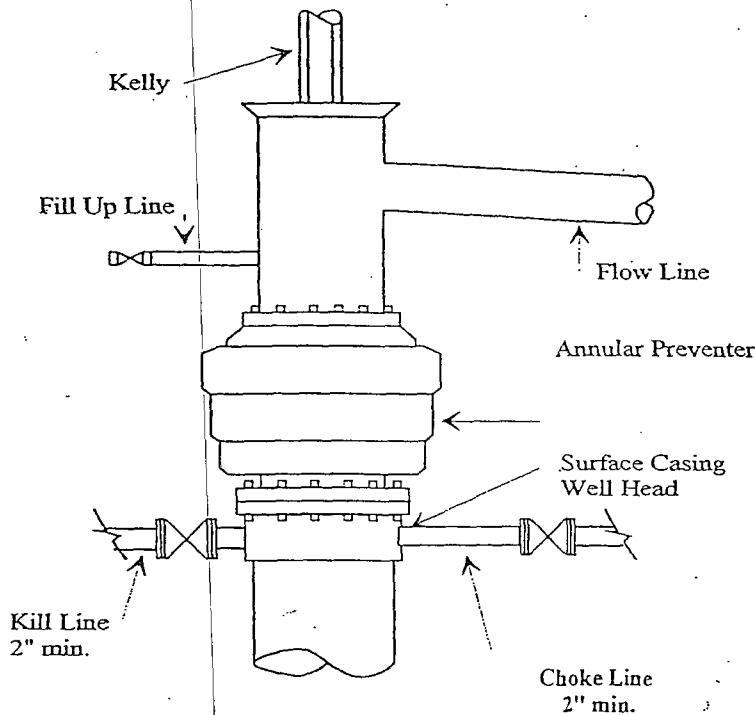
Minimum Casing Design Factors: Burst 1.0, Tensile 1.8, Collapse 1.125

Yates Petroleum Corporation

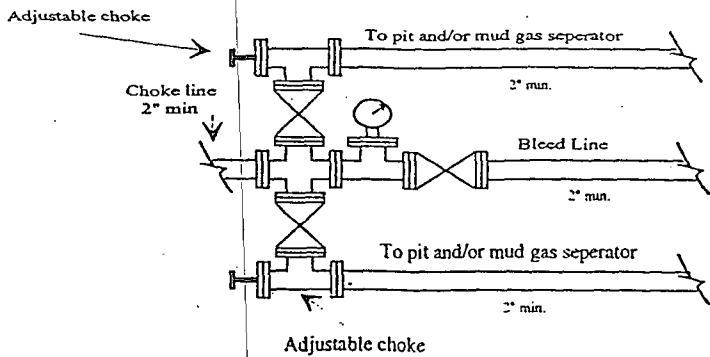
BOP-1

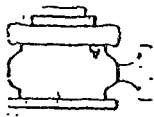


Typical low Pressure System
Schematic
Annular Preventer 2,000 psi



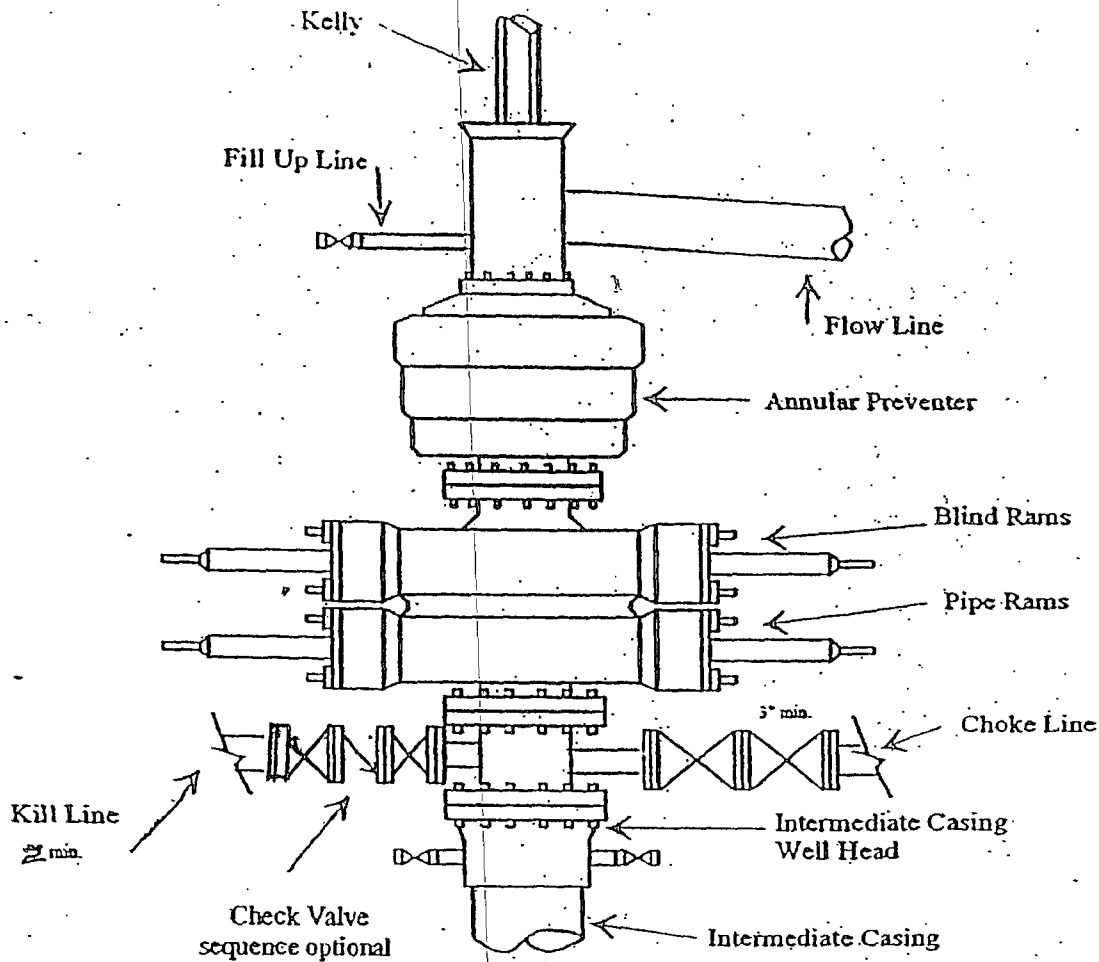
Typical 2,000 psi choke manifold assembly with at least these minimum features



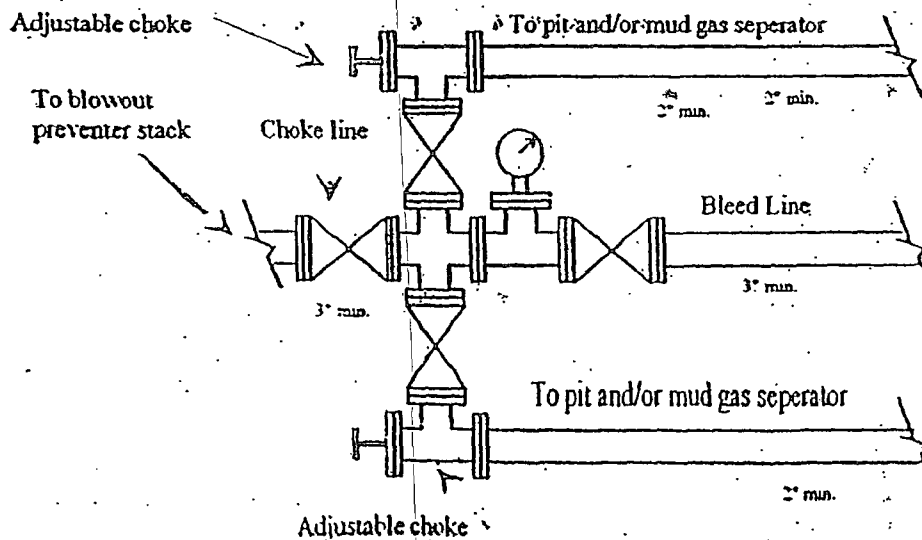


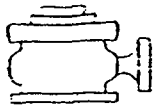
Yates Petroleum Corporation
 Typical 3,000 psi Pressure System
 Schematic
 Annular with Double Ram Preventer Stack

BOP-3



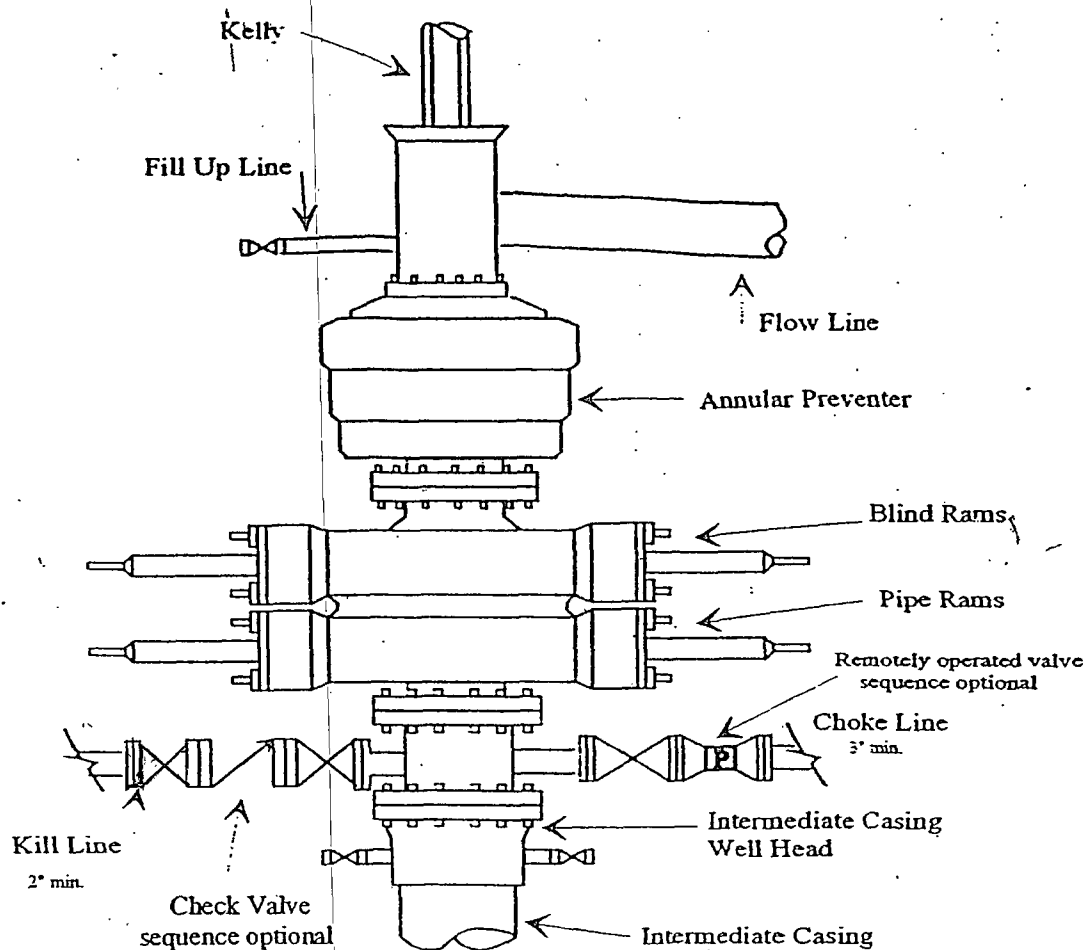
Typical 3,000 psi choke manifold assembly with at least these minimum features



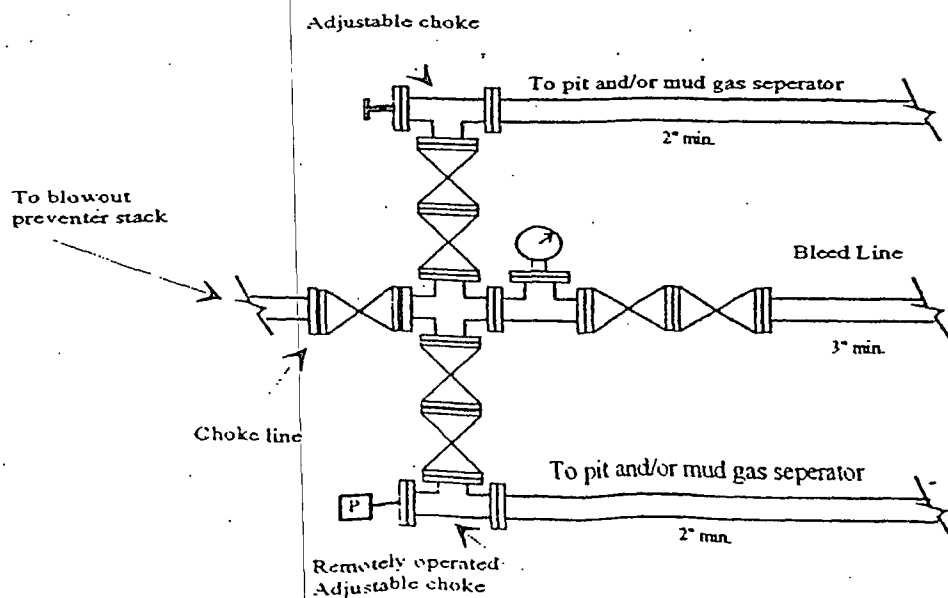


Yates Petroleum Corporation
Typical 5,000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack

BOP-4

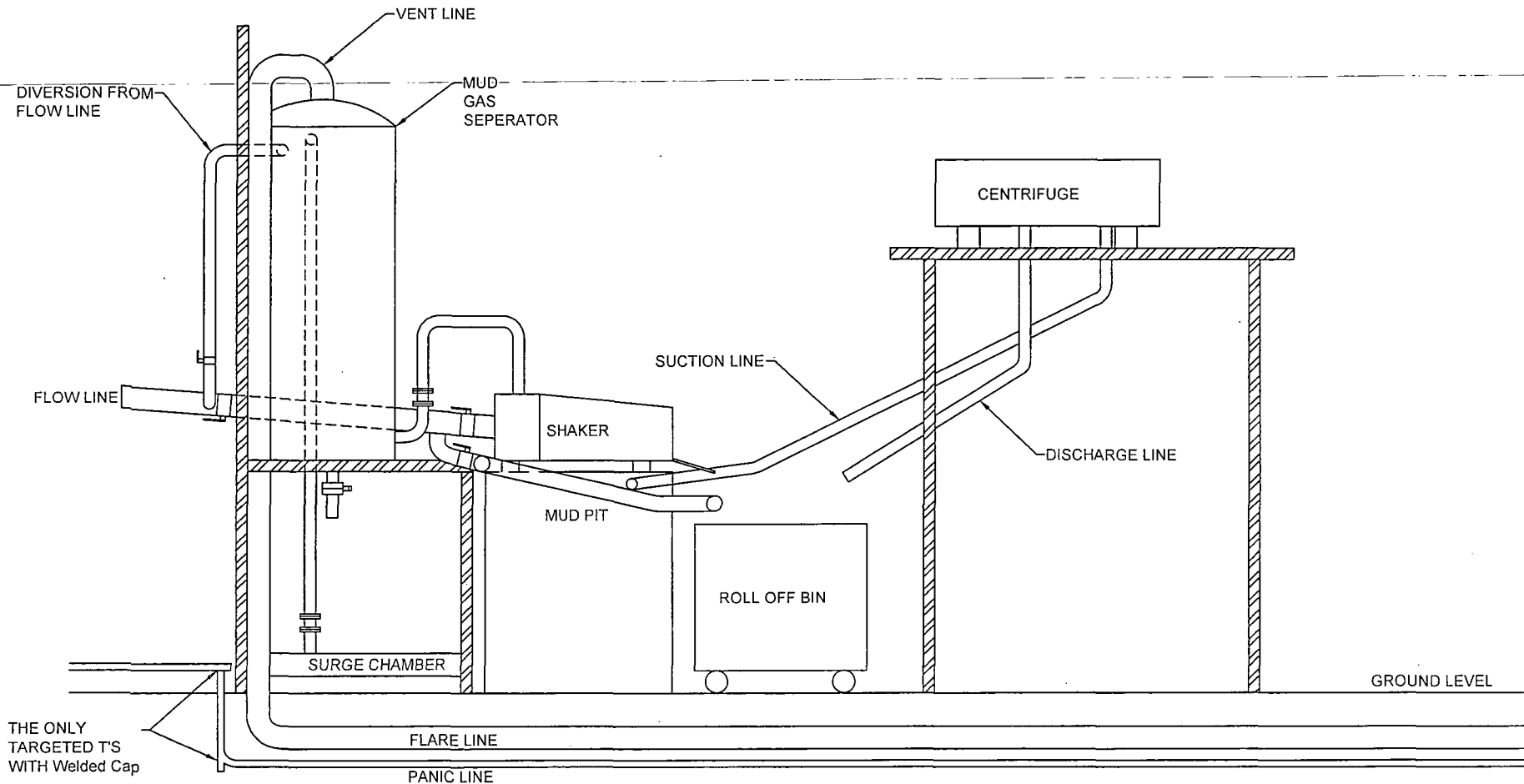


Typical 5,000 psi choke manifold assembly with at least these minimum features



YATES PETROLEUM CORPORATION

Piping from Choke Manifold
to the Closed Loop Drilling Mud System

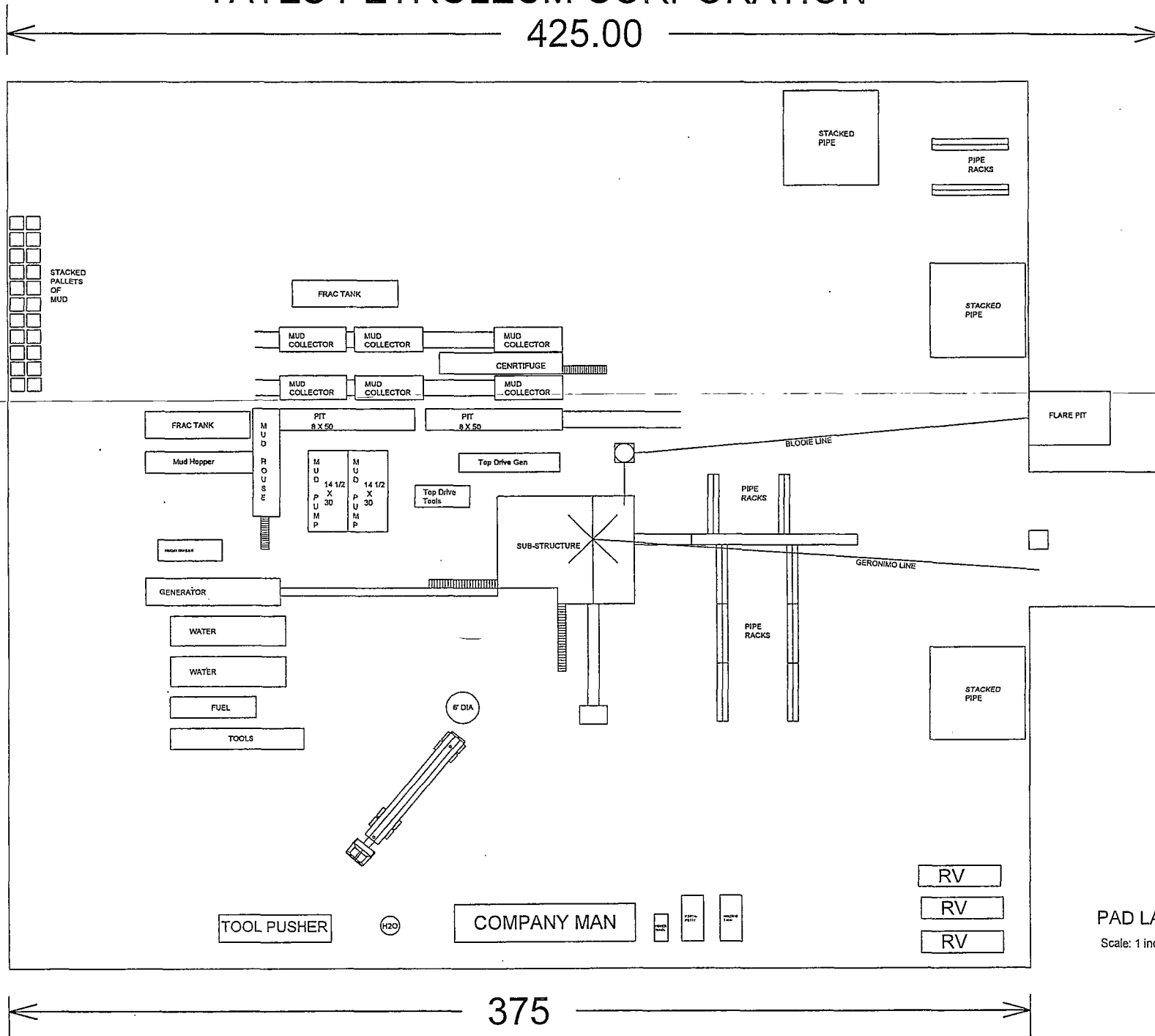


The flare discharge must be 100' from wellhead for non H₂S wells and 150' from wellhead for wells expected to encounter H₂S.

YATES PETROLEUM CORPORATION

425.00

330



PAD LAYOUT

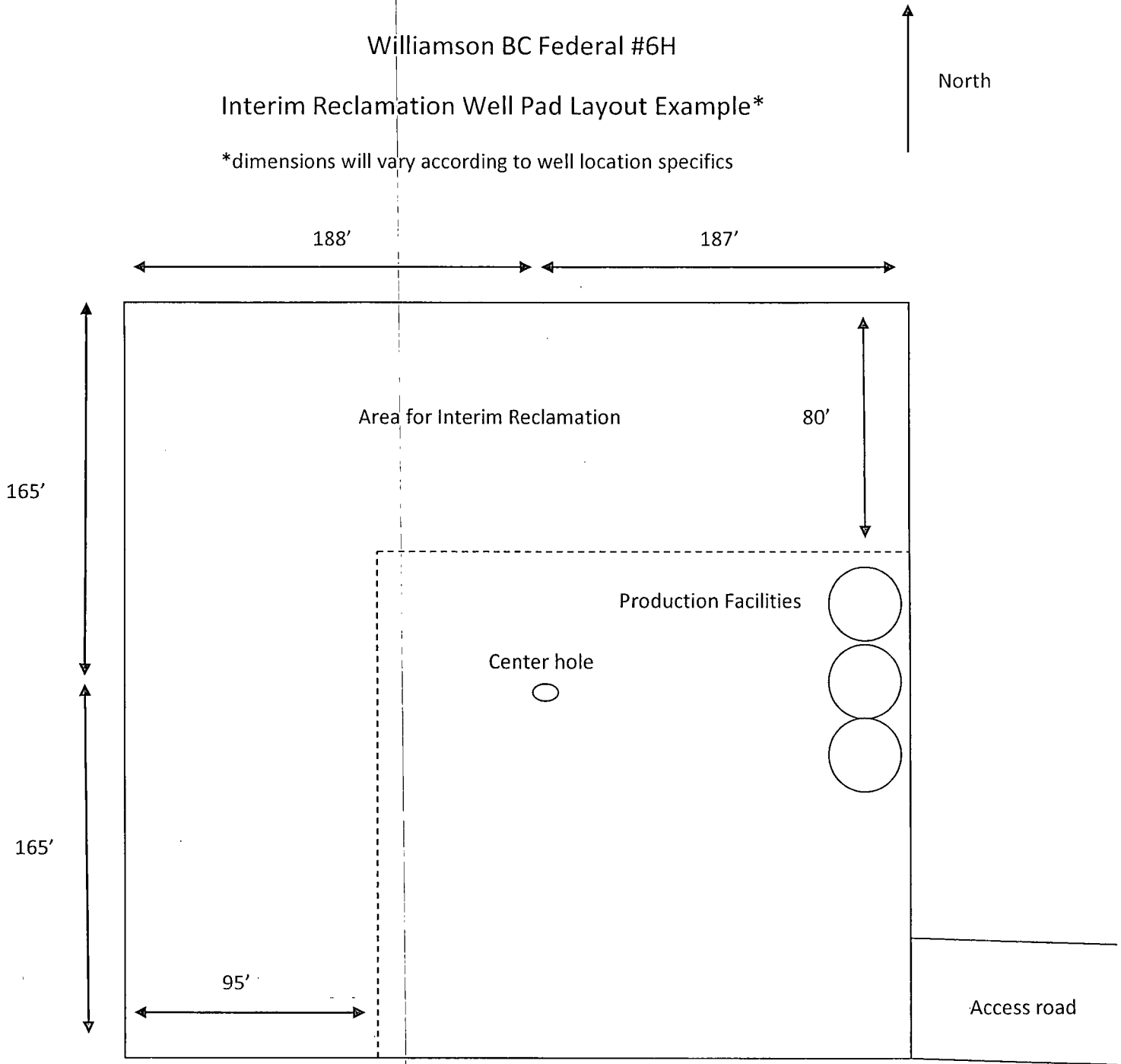
Scale: 1 inch = 50 feet

375

Williamson BC Federal #6H

Interim Reclamation Well Pad Layout Example*

*dimensions will vary according to well location specifics



Created 10/2/2012

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM01165
WELL NAME & NO.:	6H Williamson BC Federal
SURFACE HOLE FOOTAGE:	1980' / FSL & 200' / FWL
BOTTOM HOLE FOOTAGE:	1780' / FSL & 330' / FEL
LOCATION:	Section 7, T.20 S., R.29 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**
 - Access road
 - Berming
 - Cave/karst
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - High Cave/Karst
 - Logging Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**