Carlsbad Field Office
OCD Artesia

ATS-15-379

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HIGH CAVEKARST

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NM - 113937
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator Yates Petroleum Corporation (25575) EOG Y	7. If Unit or CA Agreement, Name and No.
3a. Address 105 South Fourth Street Artesia, NM 88210	3b. Phone No. (include area code) 575-748-1471
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface Unit Ltr. A, Sec. 1, T26S - R26E, 200' FNL & 1320' FEL At proposed prod. zone Unit Ltr. H, Sec 12, T26S - R26E, 2410' FNL & 660' FEL	8. Lease Name and Well No. Bodacious BSM Federal #5H 39756
	9. API Well No. 30-015-44033
	10. Field and Pool, or Exploratory Undesignated Bone Springs/ SD 98006
	11. Sec., T. R. M. or Blk. and Survey or Area Section 1, T26S - R26E
14. Distance in miles and direction from nearest town or post office* 12 Miles South East of White City	12. County or Parish Eddy / 13. State 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 1720 Acres / 17. Spacing Unit dedicated to this well E2E2 Sec1, E2NE Sec12 240 Arces
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2500'	19. Proposed Depth TVD - 7509' MD - 14830' / 20. BLM/BIA Bond No. on file Nationwide Bond #: NMB 000434 NMB 000920
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3339' GL	22. Approximate date work will start* / 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:

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) Rene P Bela	Date 01/29/2015
Title Land Regulatory Agent		
Approved by (Signature) /s/Cody Layton	Name (Printed/Typed)	Date DEC 21 2016
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)

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 03 2017
RWP 1-11-17

Carlsbad Controlled Water Basin

RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos 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

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-44033	98006	Undesignated / Bone Springs /SD

Property Code	Property Name	Well Number
39756	BODACIOUS BSM FEDERAL	5H

OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORPORATION	3339

Surface Location

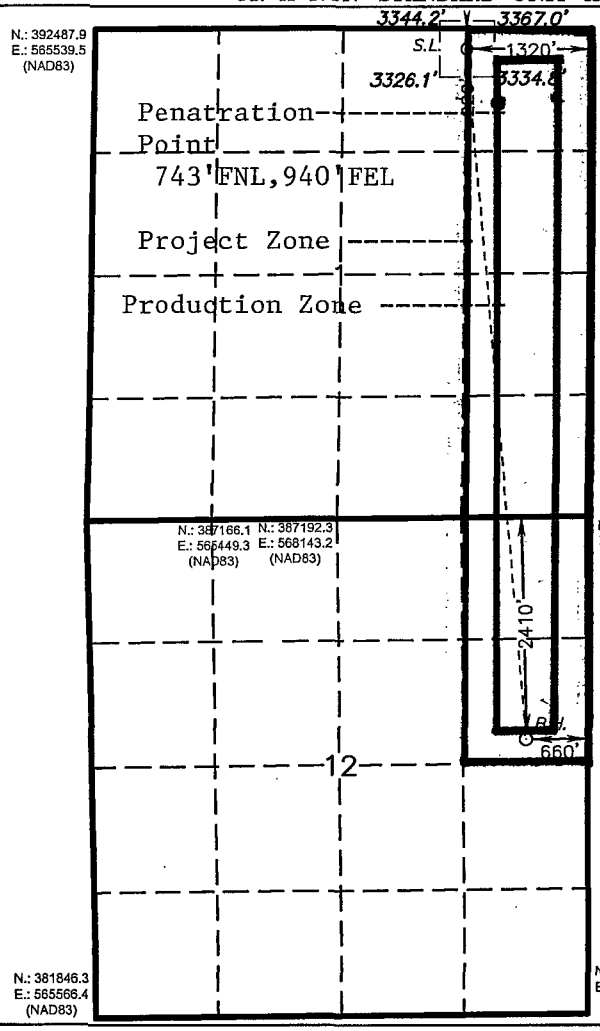
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
A	1	26 S	26 E		200	NORTH	1320	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
H	12	26 S	26 E		2410	NORTH	660	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			N.: 392499.2 E.: 568204.6 (NAD83)

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



SURFACE LOCATION
Lat – N 32°04'42.30"
Long – W 104°14'32.19"
NMSPCE– N 392276.8
E 569540.3
(NAD–83)

PROPOSED BOTTOM HOLE LOCATION
Lat – N 32°03'28.32"
Long – W 104°14'24.60"
NMSPCE– N 384802.4
E 570199.7
(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.

Signature Date

Rene P Bela
Printed Name

rbela@yatespetroleum.com
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 supervison, and that the same is true and correct to the best of my belief.

SEPTEMBER 08, 2014
Date Surveyed

Signature & Seal of Professional Surveyor

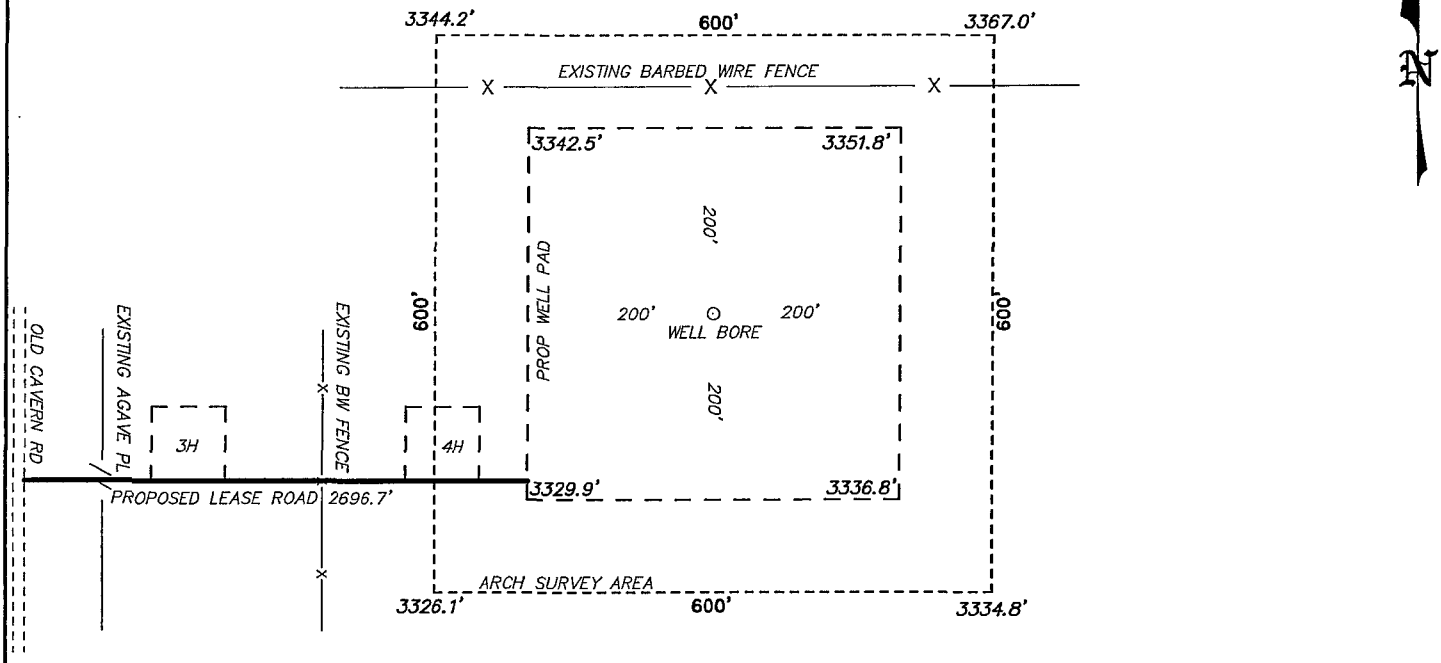
GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number Gary L. Jones 7977
BASIN SURVEYS

0' 1000' 2000' 3000' 4000' N
SCALE: 1" = 2000'
WO Num.: 30761

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



YATES PETROLEUM CORPORATION
BODACIOUS BSM FEDERAL #5H
ELEV. – 3339'
Lat – N 32°04'42.30"
Long – W 104°14'32.19"
NMSPCE– N 392276.8
E 569540.3
(NAD–83)

LOVING, NM IS ±16 MILES TO THE NORTHEAST OF LOCATION.

200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM JUNCTION OF WHITE CITY ROAD AND OLD CAVERN HWY, GO NORTH 0.89 MILES TO PROPOSED LEASE ROAD.

YATES PETROLEUM CORPORATION

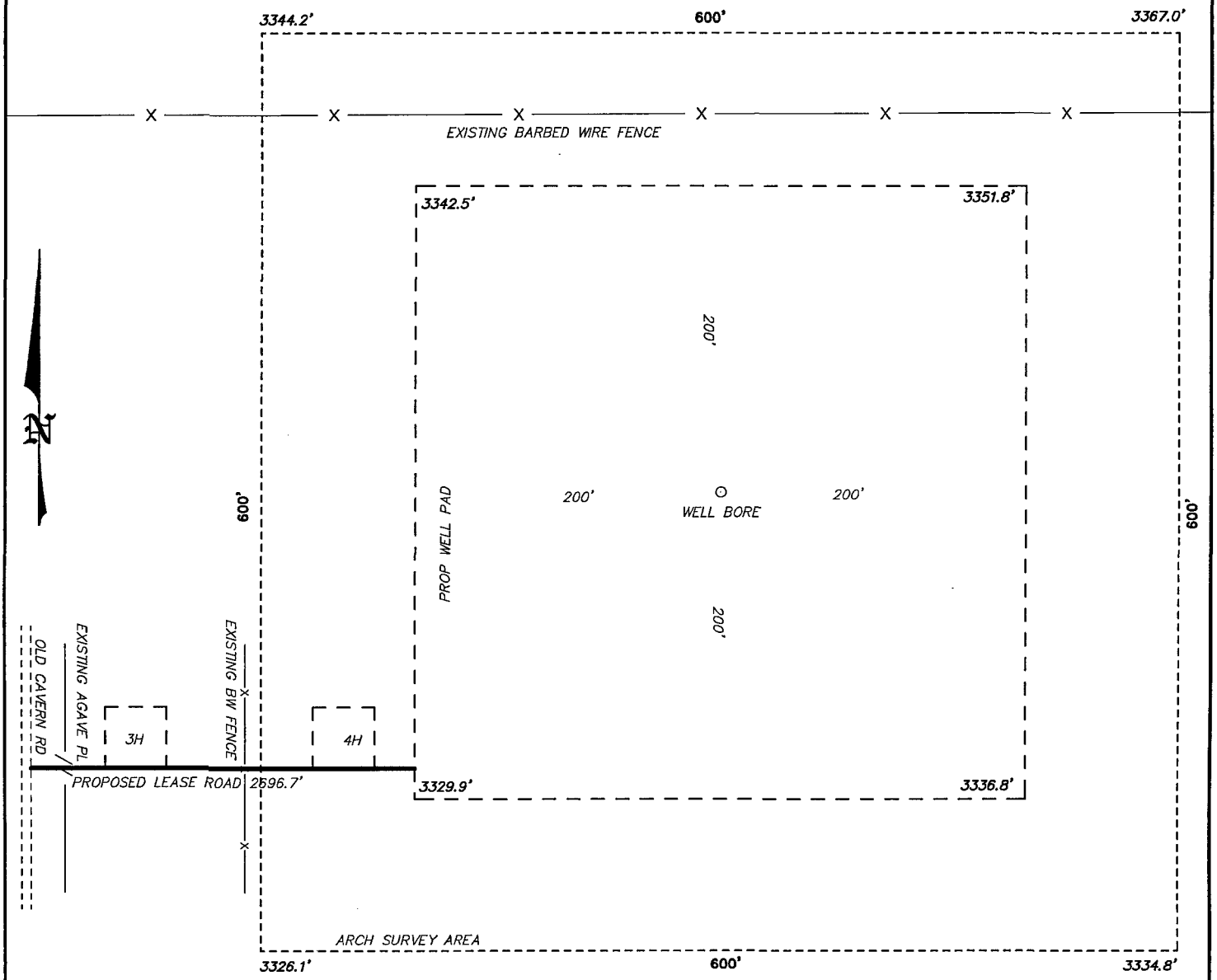
REF: BODACIOUS BSM FEDERAL #5H / WELL PAD TOPO

THE BODACIOUS BSM FEDERAL #5H LOCATED 220' FROM THE NORTH LINE AND 1320' FROM THE EAST LINE OF SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M., EDDY COUNTY, NEW MEXICO.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number: 30761	Drawn By: K. NORRIS	Date: 09-09-2014	Survey Date: 09-08-2014	Sheet 1 of 1 Sheets

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



100 0 100 200 FEET

SCALE: 1" = 150'

YATES PETROLEUM CORPORATION

REF: BODACIOUS BSM FEDERAL #5H / WELL PAD TOPO

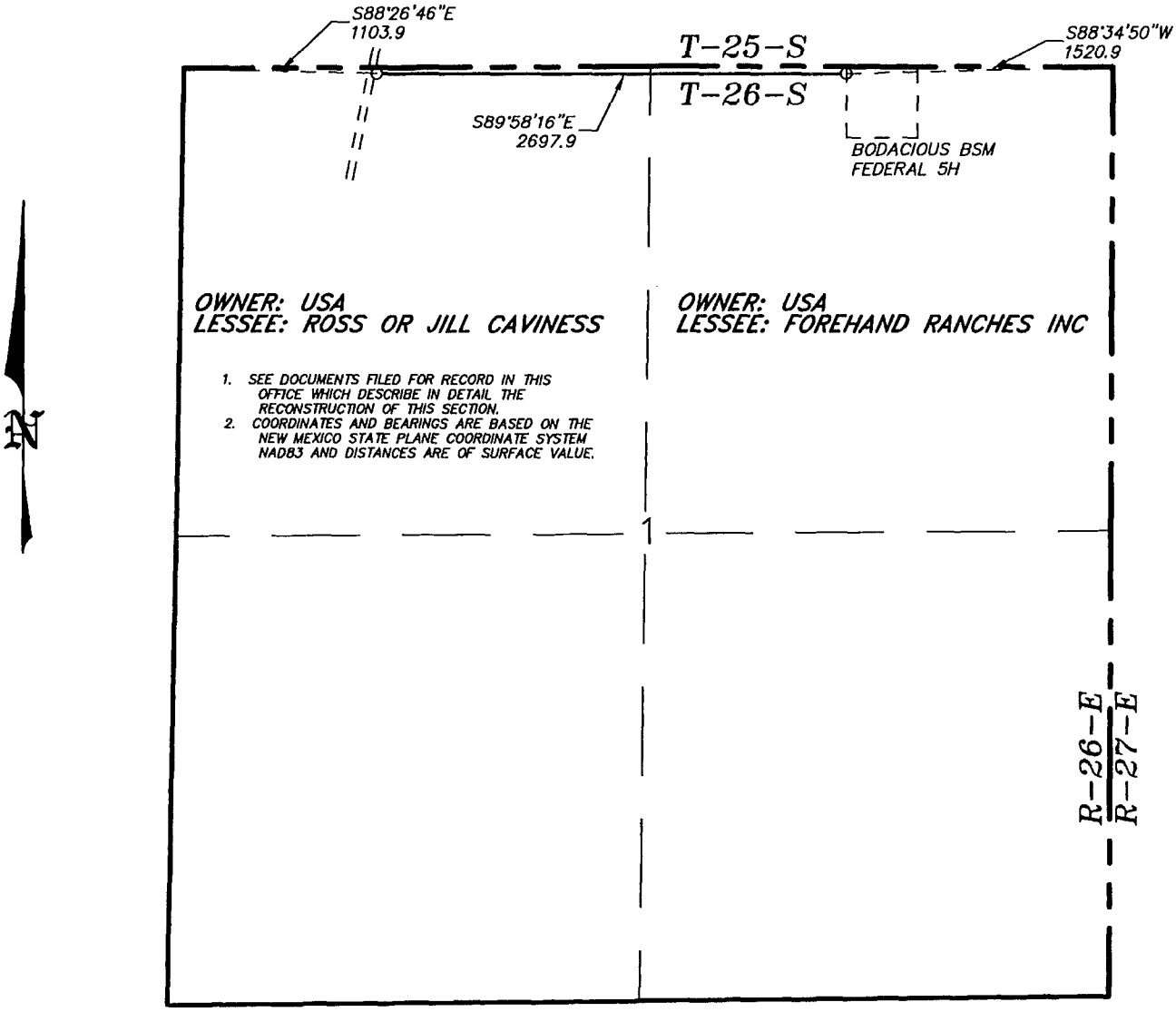
THE BODACIOUS BSM FEDERAL #5H LOCATED 220' FROM THE NORTH LINE AND 1320' FROM THE EAST LINE OF SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M., EDDY COUNTY, NEW MEXICO.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

I.O. Number: 30761	Drawn By: K. NORRIS	Date: 09-09-2014	Survey Date: 09-08-2014	Sheet 1 of 1 Sheets

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

2697.9 FEET = 0.51 MILES = 163.51 RODS = 1.86 ACRES

I HEREBY CERTIFY THAT THIS JOB WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M. P.S. No. 7977
TEXAS P.S. No. 5074

1000 0 1000 2000 FEET

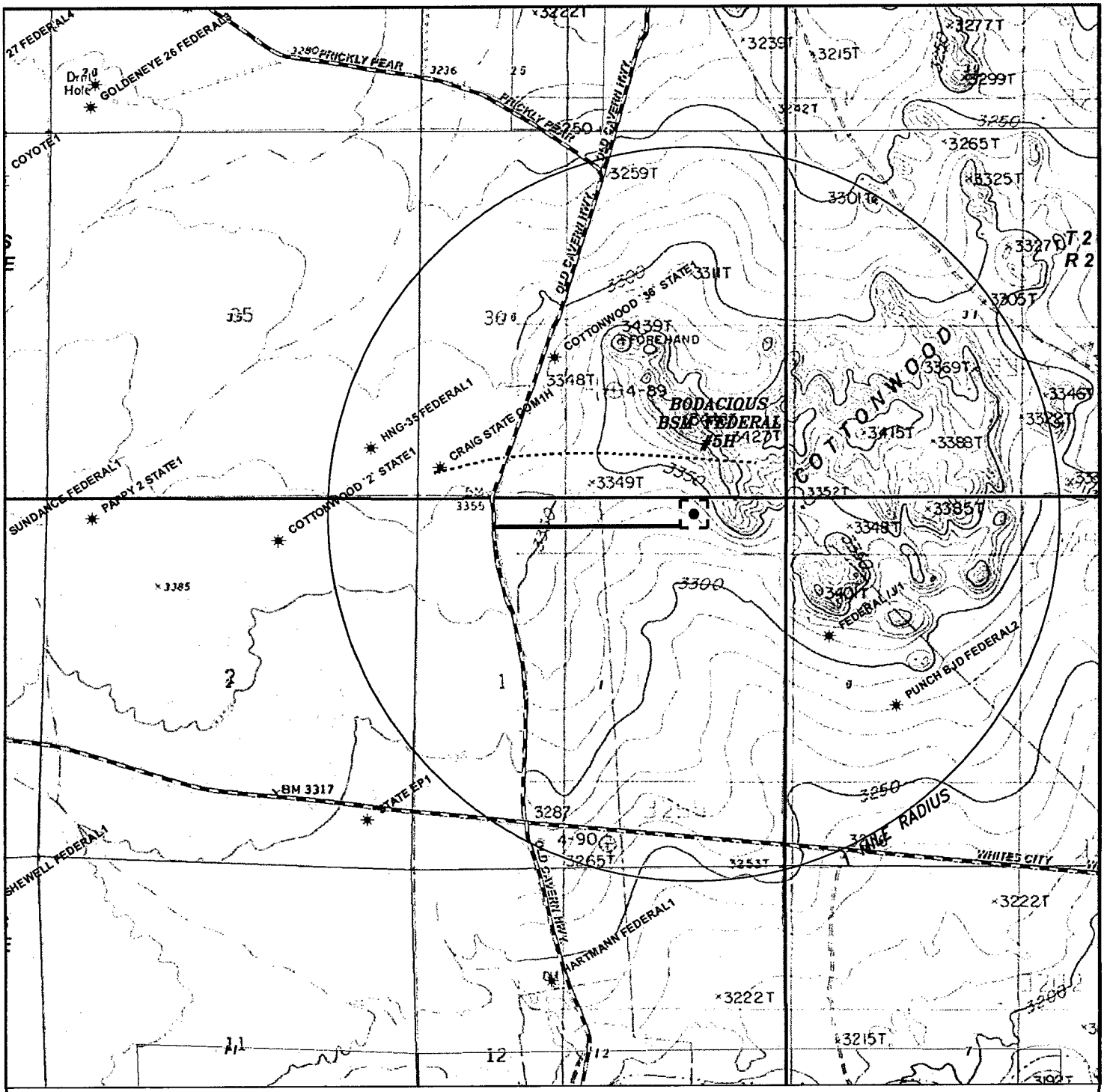
YATES PETROLEUM CORPORATION

REF: PROPOSED ROAD TO BODACIOUS WELLS #3,4&5H

A PROPOSED ROAD LOCATED ON USA LAND IN SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M., EDDY COUNTY, NEW MEXICO.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 ~ Office
(575) 392-2206 ~ Fax
basinsurveys.com

W.O. Number: 32362	Drawn By: J GOAD	Date: 6-28-2016	Survey Date: 6-25-2016	Sheet 1 of 1 Sheets



BODACIOUS BSM FEDERAL #5H
Located 220' FNL and 1320' FEL
Section 1, Township 26 South, Range 26 East, N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

0' 1000' 2000' 3000' 150'0'

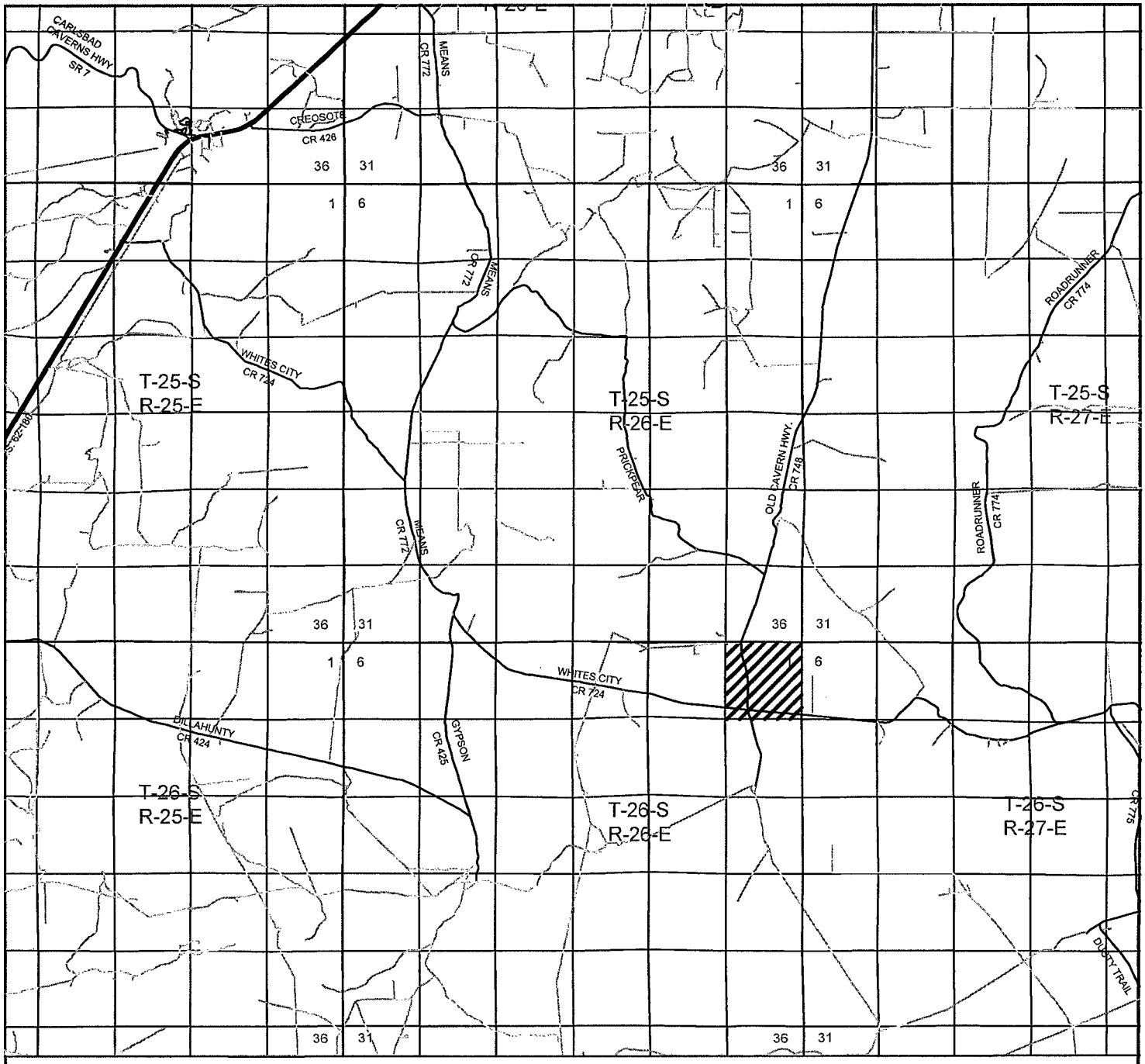
SCALE: 1" = 2000'

W.O. Number: KAN 30761

Survey Date: 09-08-2014

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

YATES PETROLEUM CORPORATION



BODACIOUS BSM FEDERAL #5H
Located 220' FNL and 1320' FEL
Section 1, Township 26 South, Range 26 East, N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

0 1 MI 2 MI 3 MI 4 MI
SCALE: 1" = 2 MILES

W.O. Number: KAN 30761

Survey Date: 09-08-2014

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

N

YATES PETROLEUM CORPORATION

BODACIOUS BSM FEDERAL #5H
Located 220' FNL and 1320' FEL
Section 1, Township 26 South, Range 26 East, N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

0' 1000' 2000' 3000' 150'0"
SCALE: 1" = 2000'

W.O. Number: KAN 30761

Survey Date: 09-08-2014

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

N

YATES PETROLEUM CORPORATION

YATES PETROLEUM CORPORATION
Bodacious BSM Federal #5H
220' FNL & 1320' FEL Section 1, T26S – R26E SHL
2410' FNL & 660' FEL Section 12, T26S – R26E BHL
Eddy County, New Mexico

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

Castile/LM	426'	Brushy Canyon Marker	5308'
Top of Salt	1610'	Bone Spring LM	5617' Oil
Base of Salt	1820'	Avalon Shale	5719' Oil
Lamar	2010'	Bone Spring 1/SD	6564' Oil
Bell Canyon	2060' Oil	Bone Springs 2/SD	7359' Oil
Cherry Canyon	2953' Oil	Bone Springs 2/Target	7893' Oil
Manzanita Marker	3052'	TVD	7509'
Brushy Canyon	4047' Oil	MD	14830'

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

Water: Approx.: 0' - 450'
Oil or Gas: See above--All Potential Zones

3. Pressure Control Equipment: A 3000 PSI BOP with a 13 5/8" opening will be installed on the 13 3/8" casing and a 5000 PSI BOP will be installed on the 9 5/8" casing. Test will be conducted by an independent tester, utilizing a test plug in the well head. BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes on each segment of the system tested if test is done with a test plug and 30 minutes without a test plug. Blind rams and pipe rams will be tested to the rated pressure of the BOP. Any leaks will be repaired at the time of the test. Annular preventers will be tested to 50% of rated pressure. Accumulator system will be inspected for correct pre charge pressures, and proper functionality, prior to connection to the BOP system. Tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit.

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.

5. THE PROPOSED CASING AND CEMENTING PROGRAM:

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

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
30"	20"	94#	H-40	ST&C	0'-85'	85'
17.5"	13.375"	48#	J-55	ST&C	0'-450'	450'
12.25"	9.625"	36#	J-55	LT&C	0'-2035'	2035'
8.75"	5.5"	17#	P-110	Buttress Thread	0'-7893'	7893'
8.5"	5.5"	17#	P-110	Buttress Thread	7893'-14830'	6937'

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

B. CEMENTING PROGRAM:
Conductor Cement (0'-85'): Lead with Ready Mix cement.

Surface Cement (0'-450'): Lead with 175 sacks of Class 36:65:6 PzC plus 2% CaCl2 (Wt. 12.5, Yld. 2.0, H2O gal/sack 11.0); tail in with 205 sacks of Class 50/50 PozC (Wt. 14.2, Yld. 1.34, H2O gal/sack 6.2). This is designed with 100% excess, TOC is surface.

Intermediate Cement (0'-2035'): Lead with 495 sacks of Class PzC 35:65:6 (WT 12.5, YLD 2.0, H2O gal/sack 11.0); tail in with 215 sacks of Class PozC 50/50 (WT 14.2, YLD 1.34, H2O gal/sack 6.2). Designed with 100% excess, TOC is surface.

Production Cement (1535'-14830'): Lead with 560 sacks of Class Lite Crete (WT. 9.0, YLD 2.73, H2O gal/sack 8.98) with the additives being 0.03 gal/sack retarder, 0.2% Anti foam, 0.1% Dispersant, and 39 lbs/sack Extender; tail in with 2050 sacks of Pecos Valley Lite (WT. 13.5, YLD 1.36, H2O gal/sack 6.2). Additives include 30% CaCO3 Weight, 3.2% Expansion additive, 2% Antifoam, .8% Retarder, 15 Fluid loss. TOC is ~~surface~~ 1535', designed with 35% excess.

TOC's 1535' because 500' tie back

Well will be drilled on a tangent from 2010' to 6990' MD (6974' TVD). Well will be kicked off at approx. 6990' MD (6974' TVD) and directionally drilled at 10 degrees per 100' with a 8 3/4" hole to 7893' MD (7547' TVD). Hole size will be reduced to 8 1/2" and drilled to 14830' MD (7509 TVD), where a 5 1/2" casing will be set and cemented 500' into the previous casing in a single stage. The bottom 100' will not be produced and will consist of our float shoe and collar. Our bottom perforation will not go beyond the 330' hardline. Penetration point of the producing zone will be encountered at 743' FNL 940' FEL, Sec.1-T26S-R26E. Deepest TVD is 7547' in the lateral.

Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0'-450'	Fresh Water	8.6-9.2	32-34	N/C
450'-2035'	Brine Water	10.0-10.2	28-29	N/C
2035'-14830'	Cut Brine	8.8-9.2	28-32	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations. After surface casing is set an electronic PVT system will be installed as our primary mud level monitoring system. A secondary system will also be implemented as to insure the PVT system is functioning properly. The secondary system will be comprised of a derrick hand checking the fluid level in the pits hourly using a nut on the end of a rope hanging just above the fluid level in the pit.

6. EVALUATION PROGRAM:
Samples: 10' samples from the surface to TD.
Logging: GR Neutron 30° deviation to the surface casing; Neutron density 30° deviation to the intermediate casing; later log 30° deviation to the intermediate casing; CMR 30° deviation to intermediate casing; Horizontal – MWD – GR.
Mudlogging: On after surface casing

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

From:	0	TO:	450'	Anticipated Max. BHP:	215 PSI
From:	450'	TO:	2035'	Anticipated Max. BHP:	1079 PSI
From:	2035'	TO:	7547'	Anticipated Max. BHP:	3601 PSI

No abnormal pressures or temperatures are anticipated.
H2S Zones 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.

Yates Petroleum

Eddy, NM (NAD-83)
Bodacious BSM Federal
#5H

OH

Plan: Plan #2

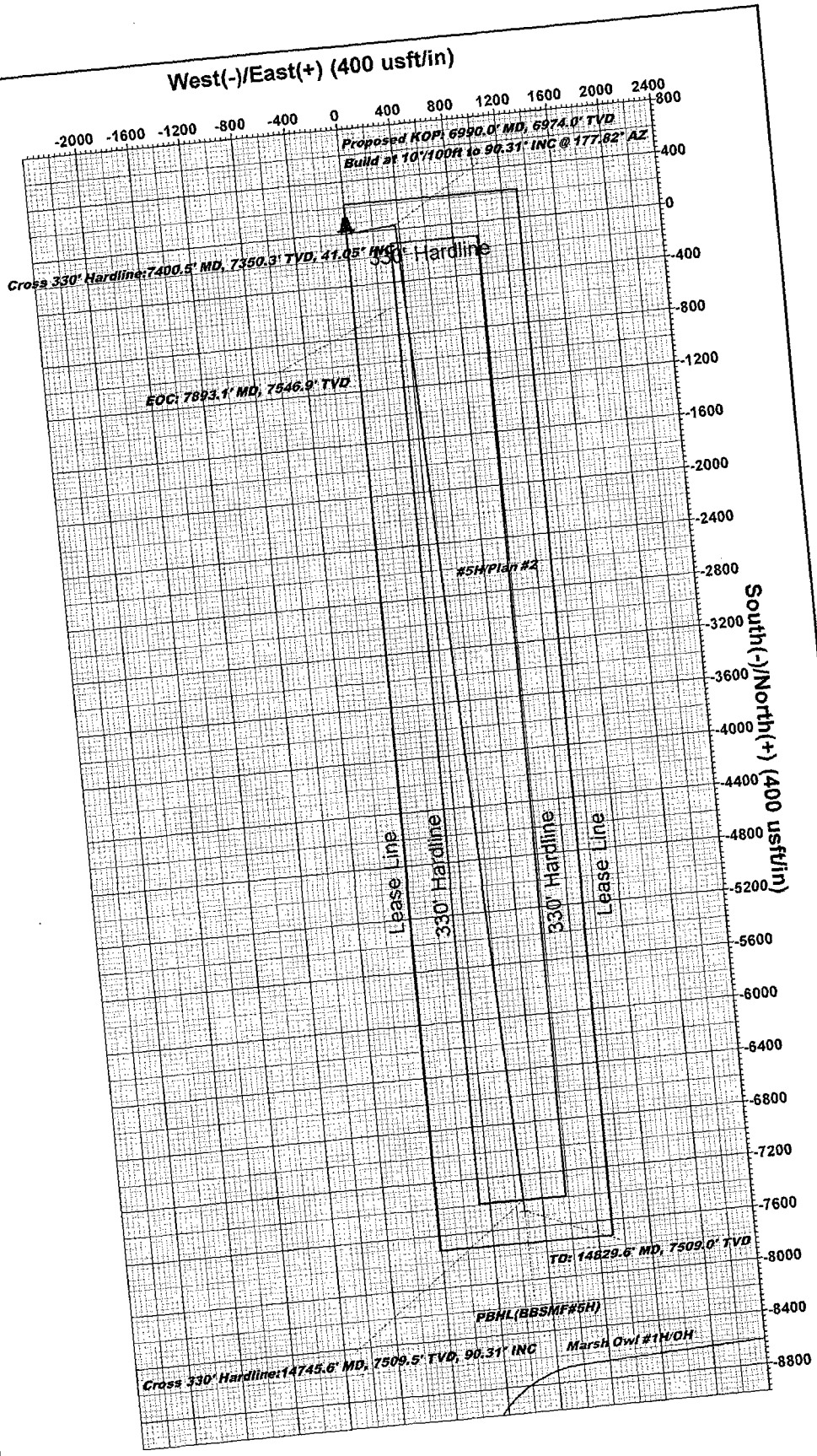
Standard Planning Report

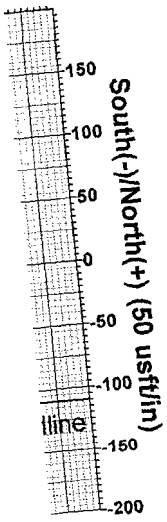
11 January, 2015

zimuths to Grid North
True North: -0.05°
Magnetic North: 7.41°

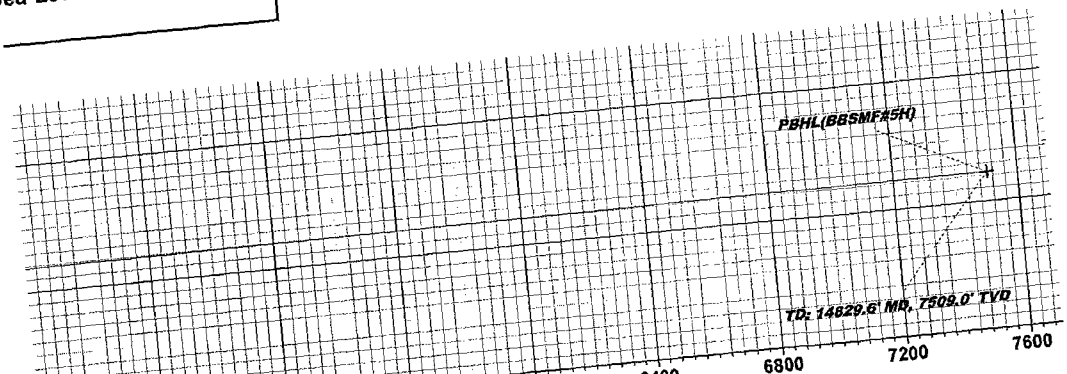
Magnetic Field
Strength: 48115.1snT
Dip Angle: 59.85°
Date: 11/13/2014
Model: IGRF2010

VSect
0.0
0.0
0.0
0.3
0.3
0.3
575.6
7503.4





ddy, NM (NAD-83)
te Plane 1983
\merican Datum 1983
980
exico Eastern Zone
ea Level



Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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

Site	Bodacious BSM Federal				
Site Position:		**Northing:**	387,682.50 usft	**Latitude:**	32° 3' 56.857 N
From:	Map	**Easting:**	566,118.30 usft	**Longitude:**	104° 15' 12.006 W
Position Uncertainty:	2.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.04 °

Well	#5H					
Well Position	**+N/-S**	4,594.3 usft	**Northing:**	392,276.80 usft	**Latitude:**	32° 4' 42.297 N
	+E/-W	3,422.0 usft	**Easting:**	569,540.30 usft	**Longitude:**	104° 14' 32.192 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,339.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/13/2014	7.46	59.85	48,115

Design	Plan #2				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	174.96	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,010.0	0.00	0.00	2,010.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,343.3	5.00	85.00	2,342.9	1.3	14.5	1.50	1.50	0.00	85.00	
6,315.5	5.00	85.00	6,300.0	31.4	359.4	0.00	0.00	0.00	0.00	
6,648.9	0.00	0.00	6,632.9	32.7	373.8	1.50	-1.50	0.00	180.00	
6,990.0	0.00	0.00	6,974.0	32.7	373.8	0.00	0.00	0.00	0.00	
7,893.1	90.31	177.82	7,546.9	-543.0	395.7	10.00	10.00	19.69	177.82	
14,829.6	90.31	177.82	7,509.0	-7,474.4	659.4	0.00	0.00	0.00	0.00	PBHL(BBSMF#5H)

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
426.0	0.00	0.00	426.0	0.0	0.0	0.0	0.00	0.00	0.00
Castille									
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,610.0	0.00	0.00	1,610.0	0.0	0.0	0.0	0.00	0.00	0.00
Top of Salt									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,820.0	0.00	0.00	1,820.0	0.0	0.0	0.0	0.00	0.00	0.00
Base of Salt									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,010.0	0.00	0.00	2,010.0	0.0	0.0	0.0	0.00	0.00	0.00
Start of Nudge: 5° INC, 90°AZ/@2°DLS - Lamar									
2,060.0	0.75	85.00	2,060.0	0.0	0.3	0.0	1.50	1.50	0.00
Bell Canyon									
2,100.0	1.35	85.00	2,100.0	0.1	1.1	0.0	1.50	1.50	0.00
2,200.0	2.85	85.00	2,199.9	0.4	4.7	0.0	1.50	1.50	0.00
2,300.0	4.35	85.00	2,299.7	1.0	11.0	0.0	1.50	1.50	0.00
2,343.3	5.00	85.00	2,342.9	1.3	14.5	0.0	1.50	1.50	0.00
2,400.0	5.00	85.00	2,399.4	1.7	19.4	0.0	0.00	0.00	0.00
2,500.0	5.00	85.00	2,499.0	2.5	28.1	0.0	0.00	0.00	0.00
2,600.0	5.00	85.00	2,598.6	3.2	36.8	0.0	0.00	0.00	0.00
2,700.0	5.00	85.00	2,698.2	4.0	45.4	0.0	0.00	0.00	0.00
2,800.0	5.00	85.00	2,797.8	4.7	54.1	0.0	0.00	0.00	0.00
2,900.0	5.00	85.00	2,897.5	5.5	62.8	0.0	0.00	0.00	0.00
2,952.7	5.00	85.00	2,950.0	5.9	67.4	0.0	0.00	0.00	0.00
Cherry Canyon									
3,000.0	5.00	85.00	2,997.1	6.3	71.5	0.1	0.00	0.00	0.00
3,052.1	5.00	85.00	3,049.0	6.7	76.0	0.1	0.00	0.00	0.00
Manzanita Marker									
3,100.0	5.00	85.00	3,096.7	7.0	80.2	0.1	0.00	0.00	0.00
3,200.0	5.00	85.00	3,196.3	7.8	88.9	0.1	0.00	0.00	0.00
3,300.0	5.00	85.00	3,295.9	8.5	97.5	0.1	0.00	0.00	0.00
3,400.0	5.00	85.00	3,395.6	9.3	106.2	0.1	0.00	0.00	0.00
3,500.0	5.00	85.00	3,495.2	10.1	114.9	0.1	0.00	0.00	0.00
3,600.0	5.00	85.00	3,594.8	10.8	123.6	0.1	0.00	0.00	0.00
3,700.0	5.00	85.00	3,694.4	11.6	132.3	0.1	0.00	0.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.0	5.00	85.00	3,794.0	12.3	141.0	0.1	0.00	0.00	0.00
3,900.0	5.00	85.00	3,893.7	13.1	149.6	0.1	0.00	0.00	0.00
4,000.0	5.00	85.00	3,993.3	13.9	158.3	0.1	0.00	0.00	0.00
4,046.9	5.00	85.00	4,040.0	14.2	162.4	0.1	0.00	0.00	0.00
Brushy Canyon									
4,100.0	5.00	85.00	4,092.9	14.6	167.0	0.1	0.00	0.00	0.00
4,200.0	5.00	85.00	4,192.5	15.4	175.7	0.1	0.00	0.00	0.00
4,300.0	5.00	85.00	4,292.1	16.1	184.4	0.1	0.00	0.00	0.00
4,400.0	5.00	85.00	4,391.8	16.9	193.0	0.1	0.00	0.00	0.00
4,500.0	5.00	85.00	4,491.4	17.6	201.7	0.1	0.00	0.00	0.00
4,600.0	5.00	85.00	4,591.0	18.4	210.4	0.2	0.00	0.00	0.00
4,700.0	5.00	85.00	4,690.6	19.2	219.1	0.2	0.00	0.00	0.00
4,800.0	5.00	85.00	4,790.2	19.9	227.8	0.2	0.00	0.00	0.00
4,900.0	5.00	85.00	4,889.8	20.7	236.5	0.2	0.00	0.00	0.00
5,000.0	5.00	85.00	4,989.5	21.4	245.1	0.2	0.00	0.00	0.00
5,100.0	5.00	85.00	5,089.1	22.2	253.8	0.2	0.00	0.00	0.00
5,200.0	5.00	85.00	5,188.7	23.0	262.5	0.2	0.00	0.00	0.00
5,300.0	5.00	85.00	5,288.3	23.7	271.2	0.2	0.00	0.00	0.00
5,307.7	5.00	85.00	5,296.0	23.8	271.9	0.2	0.00	0.00	0.00
Brushy Canyon Marker									
5,400.0	5.00	85.00	5,387.9	24.5	279.9	0.2	0.00	0.00	0.00
5,500.0	5.00	85.00	5,487.6	25.2	288.6	0.2	0.00	0.00	0.00
5,600.0	5.00	85.00	5,587.2	26.0	297.2	0.2	0.00	0.00	0.00
5,616.9	5.00	85.00	5,604.0	26.1	298.7	0.2	0.00	0.00	0.00
Bone Spring Lime									
5,700.0	5.00	85.00	5,686.8	26.8	305.9	0.2	0.00	0.00	0.00
5,719.3	5.00	85.00	5,706.0	26.9	307.6	0.2	0.00	0.00	0.00
Avalon Shale									
5,800.0	5.00	85.00	5,786.4	27.5	314.6	0.2	0.00	0.00	0.00
5,900.0	5.00	85.00	5,886.0	28.3	323.3	0.2	0.00	0.00	0.00
6,000.0	5.00	85.00	5,985.7	29.0	332.0	0.2	0.00	0.00	0.00
6,100.0	5.00	85.00	6,085.3	29.8	340.6	0.2	0.00	0.00	0.00
6,200.0	5.00	85.00	6,184.9	30.6	349.3	0.3	0.00	0.00	0.00
6,300.0	5.00	85.00	6,284.5	31.3	358.0	0.3	0.00	0.00	0.00
6,315.5	5.00	85.00	6,300.0	31.4	359.4	0.3	0.00	0.00	0.00
Drop to Vertical /@1.5°DLS									
6,400.0	3.73	85.00	6,384.2	32.0	365.8	0.3	1.50	-1.50	0.00
6,500.0	2.23	85.00	6,484.1	32.5	371.0	0.3	1.50	-1.50	0.00
6,564.0	1.27	85.00	6,548.0	32.6	372.9	0.3	1.50	-1.50	0.00
Bone Spring 1/SD									
6,600.0	0.73	85.00	6,584.0	32.7	373.5	0.3	1.50	-1.50	0.00
6,648.9	0.00	0.00	6,632.9	32.7	373.8	0.3	1.50	-1.50	0.00
6,700.0	0.00	0.00	6,684.0	32.7	373.8	0.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,784.0	32.7	373.8	0.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,884.0	32.7	373.8	0.3	0.00	0.00	0.00
6,990.0	0.00	0.00	6,974.0	32.7	373.8	0.3	0.00	0.00	0.00
Proposed KOP: 6990.0' MD, 6974.0' TVD - Build at 10°/100ft to 90.31° INC @ 177.82° AZ									
7,000.0	1.00	177.82	6,984.0	32.6	373.8	0.4	10.04	10.04	0.00
7,050.0	6.00	177.82	7,033.9	29.6	374.0	3.4	10.00	10.00	0.00
7,100.0	11.00	177.82	7,083.4	22.2	374.2	10.8	10.00	10.00	0.00
7,150.0	16.00	177.82	7,132.0	10.5	374.7	22.5	10.00	10.00	0.00
7,200.0	21.00	177.82	7,179.4	-5.3	375.3	38.3	10.00	10.00	0.00
7,250.0	26.00	177.82	7,225.2	-25.3	376.0	58.2	10.00	10.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,300.0	31.00	177.82	7,269.1	-49.1	377.0	82.0	10.00	10.00	0.00
7,350.0	36.00	177.82	7,310.8	-76.7	378.0	109.6	10.00	10.00	0.00
7,358.9	36.90	177.82	7,318.0	-82.0	378.2	114.9	10.00	10.00	0.00
Bone Spring 2/SD									
7,400.0	41.00	177.82	7,349.9	-107.8	379.2	140.7	10.00	10.00	0.00
7,400.5	41.05	177.82	7,350.3	-108.1	379.2	141.0	10.00	10.00	0.00
Cross 330' Hardline:7400.5' MD, 7350.3' TVD, 41.05° INC									
7,450.0	46.00	177.82	7,386.2	-142.1	380.5	175.0	10.00	10.00	0.00
7,500.0	51.00	177.82	7,419.3	-179.6	381.9	212.4	10.00	10.00	0.00
7,550.0	56.00	177.82	7,449.0	-219.7	383.4	252.6	10.00	10.00	0.00
7,600.0	61.00	177.82	7,475.1	-262.3	385.1	295.1	10.00	10.00	0.00
7,650.0	66.00	177.82	7,497.4	-307.0	386.8	339.8	10.00	10.00	0.00
7,700.0	71.00	177.82	7,515.8	-353.5	388.5	386.2	10.00	10.00	0.00
7,750.0	76.00	177.82	7,529.9	-401.4	390.4	434.1	10.00	10.00	0.00
7,800.0	81.00	177.82	7,539.9	-450.3	392.2	483.0	10.00	10.00	0.00
7,850.0	86.00	177.82	7,545.6	-499.9	394.1	532.6	10.00	10.00	0.00
7,893.1	90.31	177.82	7,546.9	-543.0	395.7	575.7	10.00	10.00	0.00
EOC: 7893.1' MD, 7546.9' TVD, 90.31° INC, 177.82° AZ, 575.7' VS									
7,900.0	90.31	177.82	7,546.9	-549.9	396.0	582.5	0.00	0.00	0.00
8,000.0	90.31	177.82	7,546.4	-649.8	399.8	682.4	0.00	0.00	0.00
8,100.0	90.31	177.82	7,545.8	-749.7	403.6	782.3	0.00	0.00	0.00
8,200.0	90.31	177.82	7,545.3	-849.6	407.4	882.2	0.00	0.00	0.00
8,300.0	90.31	177.82	7,544.7	-949.6	411.2	982.0	0.00	0.00	0.00
8,400.0	90.31	177.82	7,544.2	-1,049.5	415.0	1,081.9	0.00	0.00	0.00
8,500.0	90.31	177.82	7,543.6	-1,149.4	418.8	1,181.8	0.00	0.00	0.00
8,600.0	90.31	177.82	7,543.1	-1,249.4	422.6	1,281.7	0.00	0.00	0.00
8,700.0	90.31	177.82	7,542.5	-1,349.3	426.4	1,381.5	0.00	0.00	0.00
8,800.0	90.31	177.82	7,542.0	-1,449.2	430.2	1,481.4	0.00	0.00	0.00
8,900.0	90.31	177.82	7,541.4	-1,549.1	434.0	1,581.3	0.00	0.00	0.00
9,000.0	90.31	177.82	7,540.9	-1,649.1	437.8	1,681.2	0.00	0.00	0.00
9,100.0	90.31	177.82	7,540.3	-1,749.0	441.6	1,781.0	0.00	0.00	0.00
9,200.0	90.31	177.82	7,539.8	-1,848.9	445.4	1,880.9	0.00	0.00	0.00
9,300.0	90.31	177.82	7,539.3	-1,948.8	449.2	1,980.8	0.00	0.00	0.00
9,400.0	90.31	177.82	7,538.7	-2,048.8	453.0	2,080.6	0.00	0.00	0.00
9,500.0	90.31	177.82	7,538.2	-2,148.7	456.8	2,180.5	0.00	0.00	0.00
9,600.0	90.31	177.82	7,537.6	-2,248.6	460.6	2,280.4	0.00	0.00	0.00
9,700.0	90.31	177.82	7,537.1	-2,348.5	464.4	2,380.3	0.00	0.00	0.00
9,800.0	90.31	177.82	7,536.5	-2,448.5	468.2	2,480.1	0.00	0.00	0.00
9,900.0	90.31	177.82	7,536.0	-2,548.4	472.0	2,580.0	0.00	0.00	0.00
10,000.0	90.31	177.82	7,535.4	-2,648.3	475.8	2,679.9	0.00	0.00	0.00
10,100.0	90.31	177.82	7,534.9	-2,748.2	479.6	2,779.8	0.00	0.00	0.00
10,200.0	90.31	177.82	7,534.3	-2,848.2	483.4	2,879.6	0.00	0.00	0.00
10,300.0	90.31	177.82	7,533.8	-2,948.1	487.2	2,979.5	0.00	0.00	0.00
10,400.0	90.31	177.82	7,533.2	-3,048.0	491.0	3,079.4	0.00	0.00	0.00
10,500.0	90.31	177.82	7,532.7	-3,148.0	494.8	3,179.3	0.00	0.00	0.00
10,600.0	90.31	177.82	7,532.1	-3,247.9	498.6	3,279.1	0.00	0.00	0.00
10,700.0	90.31	177.82	7,531.6	-3,347.8	502.4	3,379.0	0.00	0.00	0.00
10,800.0	90.31	177.82	7,531.0	-3,447.7	506.2	3,478.9	0.00	0.00	0.00
10,900.0	90.31	177.82	7,530.5	-3,547.7	510.0	3,578.8	0.00	0.00	0.00
11,000.0	90.31	177.82	7,530.0	-3,647.6	513.8	3,678.6	0.00	0.00	0.00
11,100.0	90.31	177.82	7,529.4	-3,747.5	517.6	3,778.5	0.00	0.00	0.00
11,200.0	90.31	177.82	7,528.9	-3,847.4	521.4	3,878.4	0.00	0.00	0.00
11,300.0	90.31	177.82	7,528.3	-3,947.4	525.2	3,978.2	0.00	0.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,400.0	90.31	177.82	7,527.8	-4,047.3	529.0	4,078.1	0.00	0.00	0.00
11,500.0	90.31	177.82	7,527.2	-4,147.2	532.8	4,178.0	0.00	0.00	0.00
11,600.0	90.31	177.82	7,526.7	-4,247.1	536.6	4,277.9	0.00	0.00	0.00
11,700.0	90.31	177.82	7,526.1	-4,347.1	540.4	4,377.7	0.00	0.00	0.00
11,800.0	90.31	177.82	7,525.6	-4,447.0	544.2	4,477.6	0.00	0.00	0.00
11,900.0	90.31	177.82	7,525.0	-4,546.9	548.0	4,577.5	0.00	0.00	0.00
12,000.0	90.31	177.82	7,524.5	-4,646.8	551.8	4,677.4	0.00	0.00	0.00
12,100.0	90.31	177.82	7,523.9	-4,746.8	555.6	4,777.2	0.00	0.00	0.00
12,200.0	90.31	177.82	7,523.4	-4,846.7	559.4	4,877.1	0.00	0.00	0.00
12,300.0	90.31	177.82	7,522.8	-4,946.6	563.2	4,977.0	0.00	0.00	0.00
12,400.0	90.31	177.82	7,522.3	-5,046.5	567.0	5,076.9	0.00	0.00	0.00
12,500.0	90.31	177.82	7,521.7	-5,146.5	570.8	5,176.7	0.00	0.00	0.00
12,600.0	90.31	177.82	7,521.2	-5,246.4	574.7	5,276.6	0.00	0.00	0.00
12,700.0	90.31	177.82	7,520.7	-5,346.3	578.5	5,376.5	0.00	0.00	0.00
12,800.0	90.31	177.82	7,520.1	-5,446.3	582.3	5,476.4	0.00	0.00	0.00
12,900.0	90.31	177.82	7,519.6	-5,546.2	586.1	5,576.2	0.00	0.00	0.00
13,000.0	90.31	177.82	7,519.0	-5,646.1	589.9	5,676.1	0.00	0.00	0.00
13,100.0	90.31	177.82	7,518.5	-5,746.0	593.7	5,776.0	0.00	0.00	0.00
13,200.0	90.31	177.82	7,517.9	-5,846.0	597.5	5,875.8	0.00	0.00	0.00
13,300.0	90.31	177.82	7,517.4	-5,945.9	601.3	5,975.7	0.00	0.00	0.00
13,400.0	90.31	177.82	7,516.8	-6,045.8	605.1	6,075.6	0.00	0.00	0.00
13,500.0	90.31	177.82	7,516.3	-6,145.7	608.9	6,175.5	0.00	0.00	0.00
13,600.0	90.31	177.82	7,515.7	-6,245.7	612.7	6,275.3	0.00	0.00	0.00
13,700.0	90.31	177.82	7,515.2	-6,345.6	616.5	6,375.2	0.00	0.00	0.00
13,800.0	90.31	177.82	7,514.6	-6,445.5	620.3	6,475.1	0.00	0.00	0.00
13,900.0	90.31	177.82	7,514.1	-6,545.4	624.1	6,575.0	0.00	0.00	0.00
14,000.0	90.31	177.82	7,513.5	-6,645.4	627.9	6,674.8	0.00	0.00	0.00
14,100.0	90.31	177.82	7,513.0	-6,745.3	631.7	6,774.7	0.00	0.00	0.00
14,200.0	90.31	177.82	7,512.4	-6,845.2	635.5	6,874.6	0.00	0.00	0.00
14,300.0	90.31	177.82	7,511.9	-6,945.1	639.3	6,974.5	0.00	0.00	0.00
14,400.0	90.31	177.82	7,511.4	-7,045.1	643.1	7,074.3	0.00	0.00	0.00
14,500.0	90.31	177.82	7,510.8	-7,145.0	646.9	7,174.2	0.00	0.00	0.00
14,600.0	90.31	177.82	7,510.3	-7,244.9	650.7	7,274.1	0.00	0.00	0.00
14,700.0	90.31	177.82	7,509.7	-7,344.9	654.5	7,374.0	0.00	0.00	0.00
14,745.6	90.31	177.82	7,509.5	-7,390.4	656.2	7,419.5	0.00	0.00	0.00
Cross 330' Hardline:14745.6' MD, 7509.5' TVD, 90.31° INC									
14,800.0	90.31	177.82	7,509.2	-7,444.8	658.3	7,473.8	0.00	0.00	0.00
14,829.6	90.31	177.82	7,509.0	-7,474.4	659.4	7,503.4	0.00	0.00	0.00
TD: 14829.6' MD, 7509.0' TVD - PBHL(BBSMF#5H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL(BBSMF#5H) - plan hits target center - Point	0.00	0.00	7,509.0	-7,474.4	659.4	384,802.40	570,199.70	32° 3' 28.323 N	104° 14' 24.602 W

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #5H
Company:	Yates Petroleum	**TVD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	WELL @ 3364.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
426.0	426.0	Castille		0.00	
1,610.0	1,610.0	Top of Salt		0.00	
1,820.0	1,820.0	Base of Salt		0.00	
2,010.0	2,010.0	Lamar		0.00	
2,060.0	2,060.0	Bell Canyon		0.00	
2,952.7	2,950.0	Cherry Canyon		0.00	
3,052.1	3,049.0	Manzanita Marker		0.00	
4,046.9	4,040.0	Brushy Canyon		0.00	
5,307.7	5,296.0	Brushy Canyon Marker		0.00	
5,616.9	5,604.0	Bone Spring Lime		0.00	
5,719.3	5,706.0	Avalon Shale		0.00	
6,564.0	6,548.0	Bone Spring 1/SD		0.00	
7,358.9	7,318.0	Bone Spring 2/SD		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,010.0	2,010.0	0.0	0.0	Start of Nudge: 5° INC, 90°AZ/@2°DLS
6,315.5	6,300.0	31.4	359.4	Drop to Vertical /@1.5°DLS
6,990.0	6,974.0	32.7	373.8	Proposed KOP: 6990.0' MD, 6974.0' TVD
6,990.0	6,974.0	32.7	373.8	Build at 10°/100ft to 90.31° INC @ 177.82° AZ
7,400.5	7,350.3	-108.1	379.2	Cross 330' Hardline:7400.5' MD, 7350.3' TVD, 41.05° INC
7,893.1	7,546.9	-543.0	395.7	EOC: 7893.1' MD, 7546.9' TVD, 90.31° INC, 177.82° AZ, 575.7' VS
14,745.6	7,509.5	-7,390.4	656.2	Cross 330' Hardline:14745.6' MD, 7509.5' TVD, 90.31° INC
14,829.6	7,509.0	-7,474.4	659.4	TD: 14829.6' MD, 7509.0' TVD

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **CACTUS**	*Customer P.O.#* **RIG#137 M12653**
Sales Order # **191672**	*Date Assembled:* **12/11/2013**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**229391**	*Hose Lot # and Date Code*	**11060 10/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	*Date*
Phillip Wagstaff	**12/11/2013**

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	CACTUS	*Hose Assembly Type*	Choke & Kill
MWH Sales Representative	EVAN SPARKMAN	*Certification*	API 7K
Date Assembled	12/11/2013	*Hose Grade*	MUD
Location Assembled	OKC	*Hose Working Pressure*	10000
Sales Order #	191672	*Hose Lot # and Date Code*	11060 10/13
Customer Purchase Order #	RIG#137 M12653	*Hose I.D. (Inches)*	4"
Assembly Serial # (Pick Ticket #)	229391	*Hose O.D. (Inches)*	6.60"
Hose Assembly Length	35 FEET	*Armor (yes/no)*	YES

Fittings			
End A		**End B**	
Stem (Part and Revision #)	R4.0X64WB	*Stem (Part and Revision #)*	R4.0X64WB
Stem (Heat #)	1311405220	*Stem (Heat #)*	1311405220
Ferrule (Part and Revision #)	RF4.0	*Ferrule (Part and Revision #)*	RF4.0
Ferrule (Heat #)	120368	*Ferrule (Heat #)*	120368
Connection (Part #)	4 1/16" 10K	*Connection (Part #)*	4 1/16" 10K
Connection (Heat #)		*Connection (Heat #)*	
Dies Used	6.62"	*Dies Used*	6.62"

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	16 1/2	

Date Tested	*Tested By*	*Approved By*
12/11/2013		

M12653

Midwest Hose & Specialty, Inc.

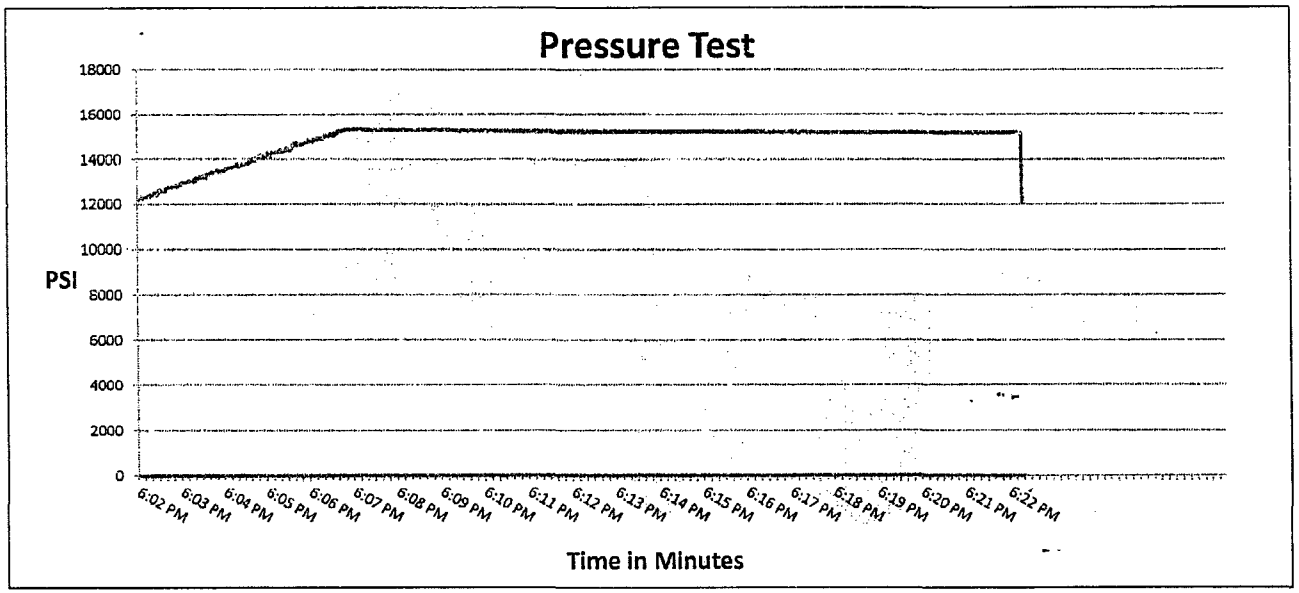
Internal Hydrostatic Test Graph

December 11, 2013

Customer: Cactus

Pick Ticket #: 229391

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Mud	35'	4 1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
4"	6.13"	6.62"	6.66"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	11060	229391



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 2/4 Minutes		15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Tony Kellington*

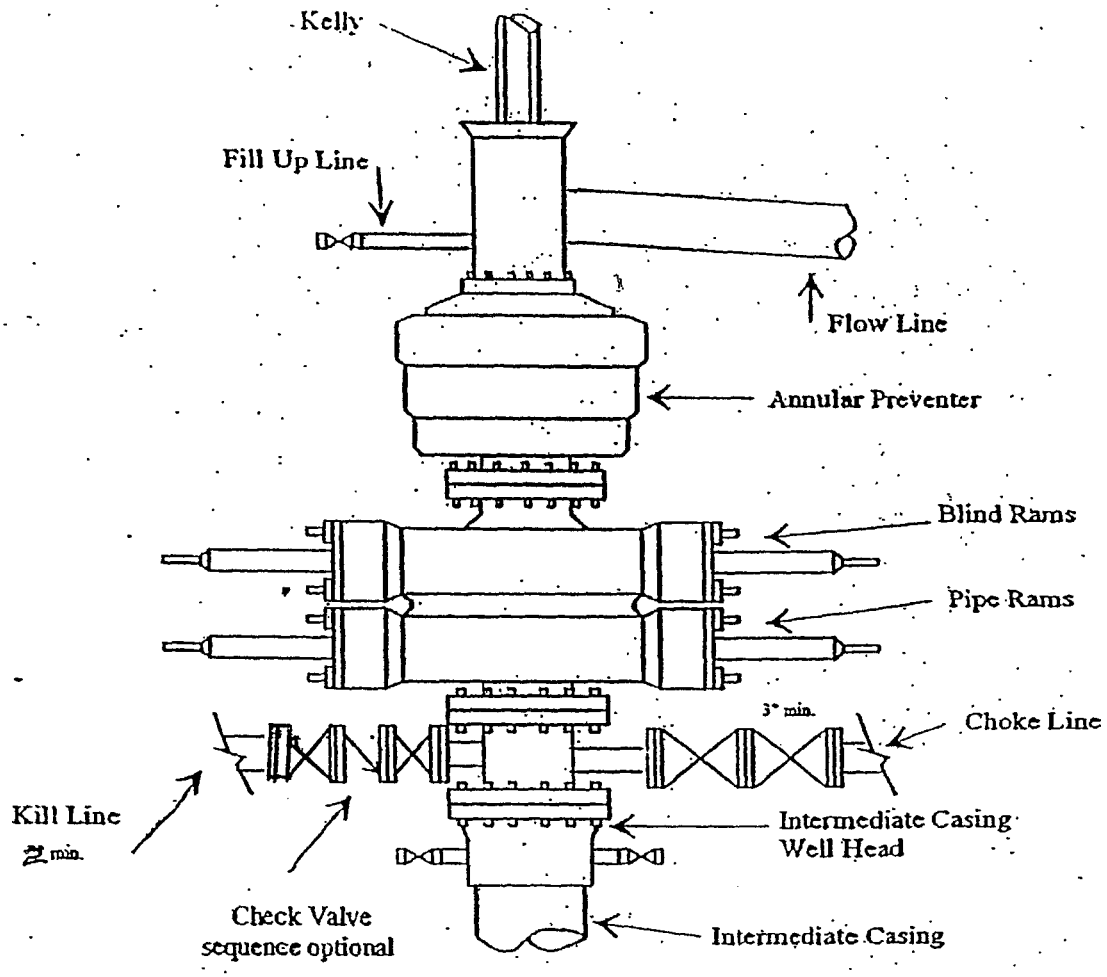
x Tony McGirk

Approved By: *Phil Maytubby*

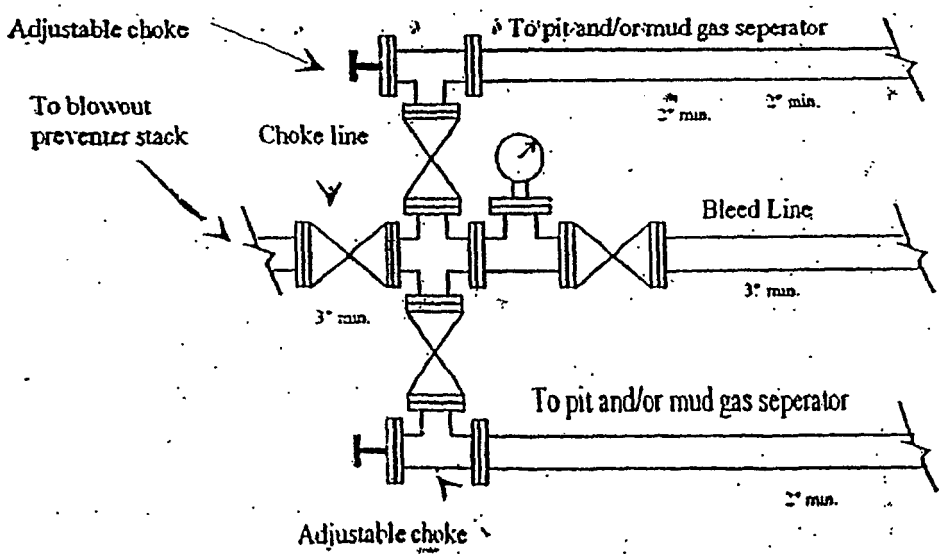
x P Maytubby

Yates Petroleum Corporation

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

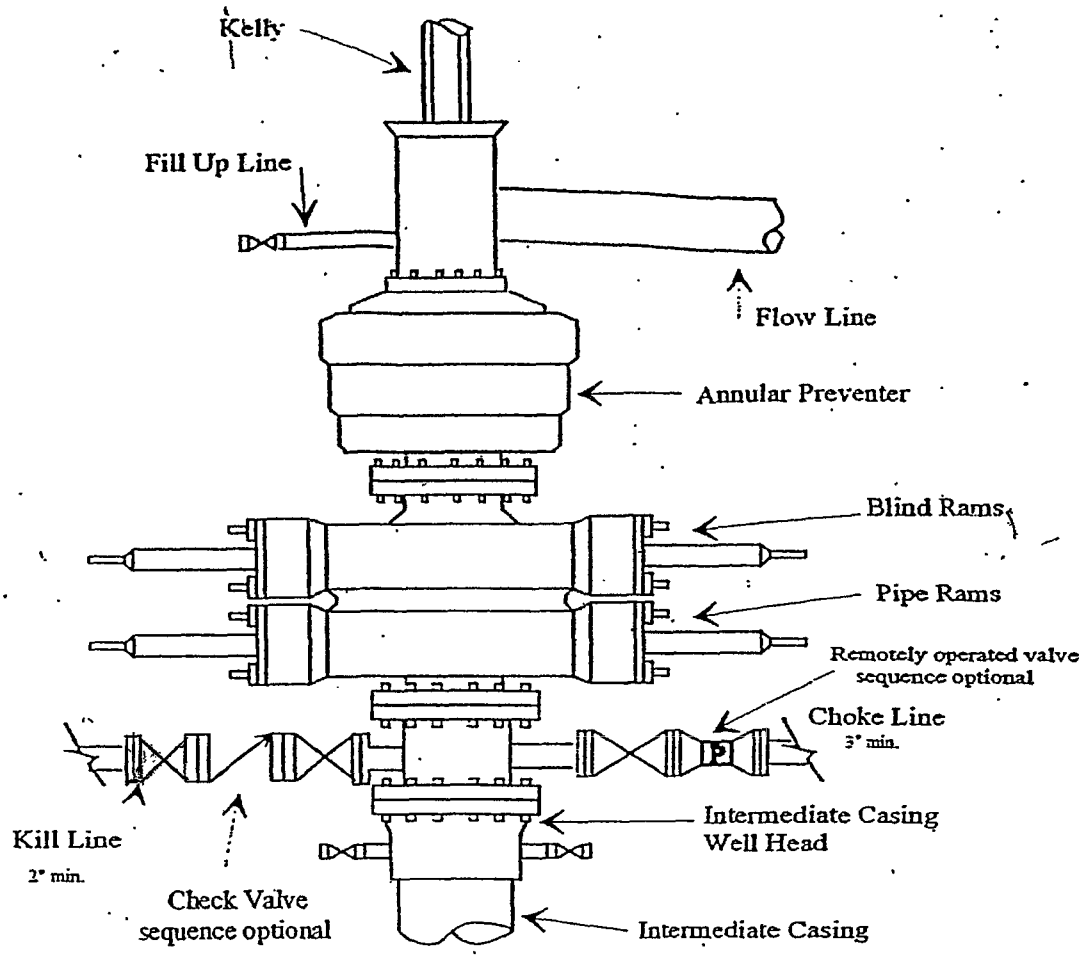


Typical 3,000 psi choke manifold assembly with at least these minimun features

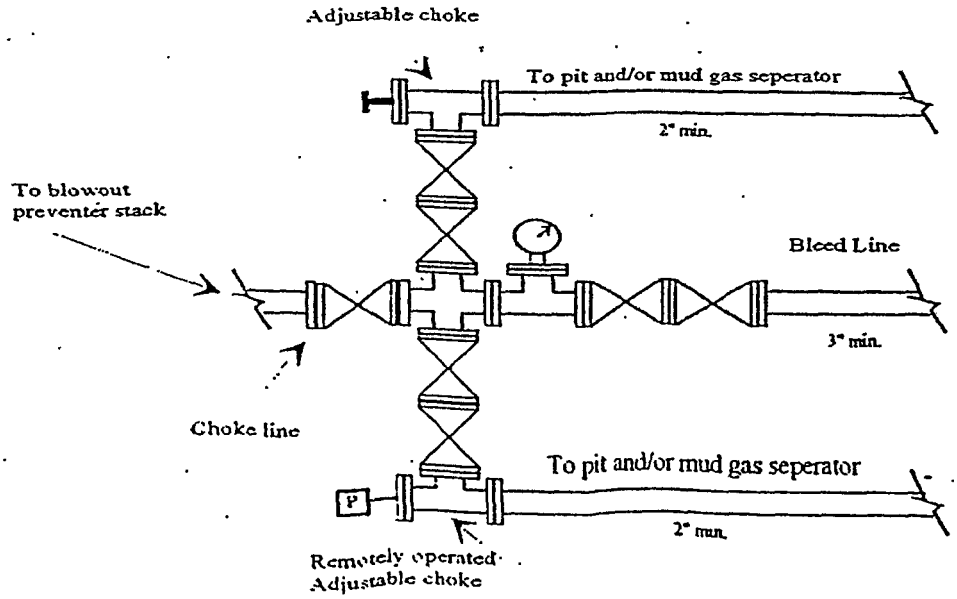


Yates Petroleum Corporation

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



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



Yates Petroleum Corporation
Closed Loop System

Equipment Design Plan

Closed Loop System will consist of:
1 – double panel shale shaker
1 – (minimum) Centrifuge, certain wells and flow rates may require 2 centrifuges
On certain wells, the Centrifuge will be replaced by a Clackco Settling Tank System
1 – minimum centrifugal pump to transfer fluids
2- 500 bbl. FW Tanks
1 – 500 bbl. BW Tank
1 – half round frac tank – 250 bbl. capacity as necessary to catch cement / excess mud returns generated during a cement job.
1 Set of rail cars / catch bins
Certain wells will use an ASC Auger Tank

Operation Plan

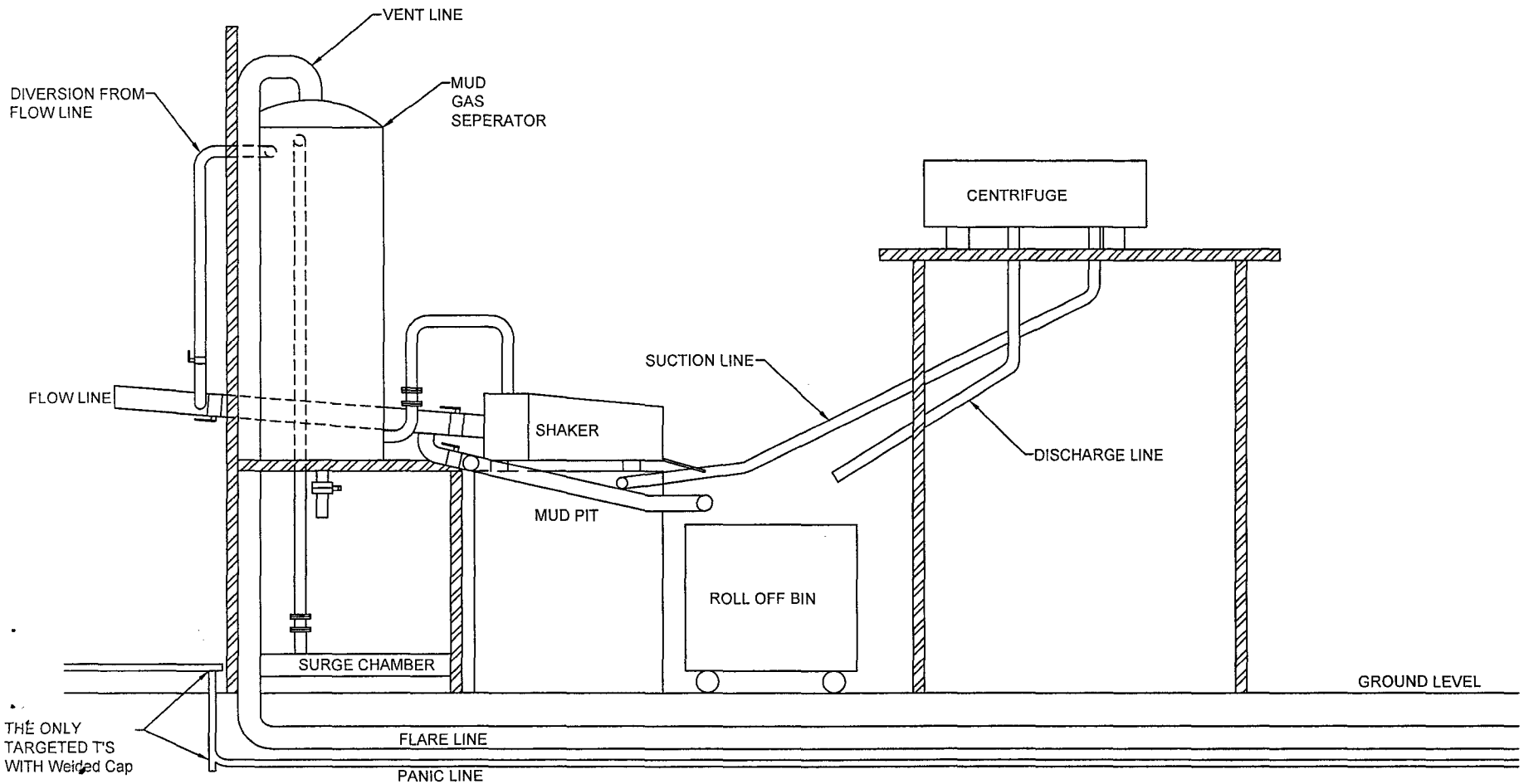
All equipment will be inspected at least hourly by rig personnel and daily by contractors' personnel.
Any spills / leaks will be reported to YPC, NMOCD, and cleaned up without delay.

Closure Plan

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

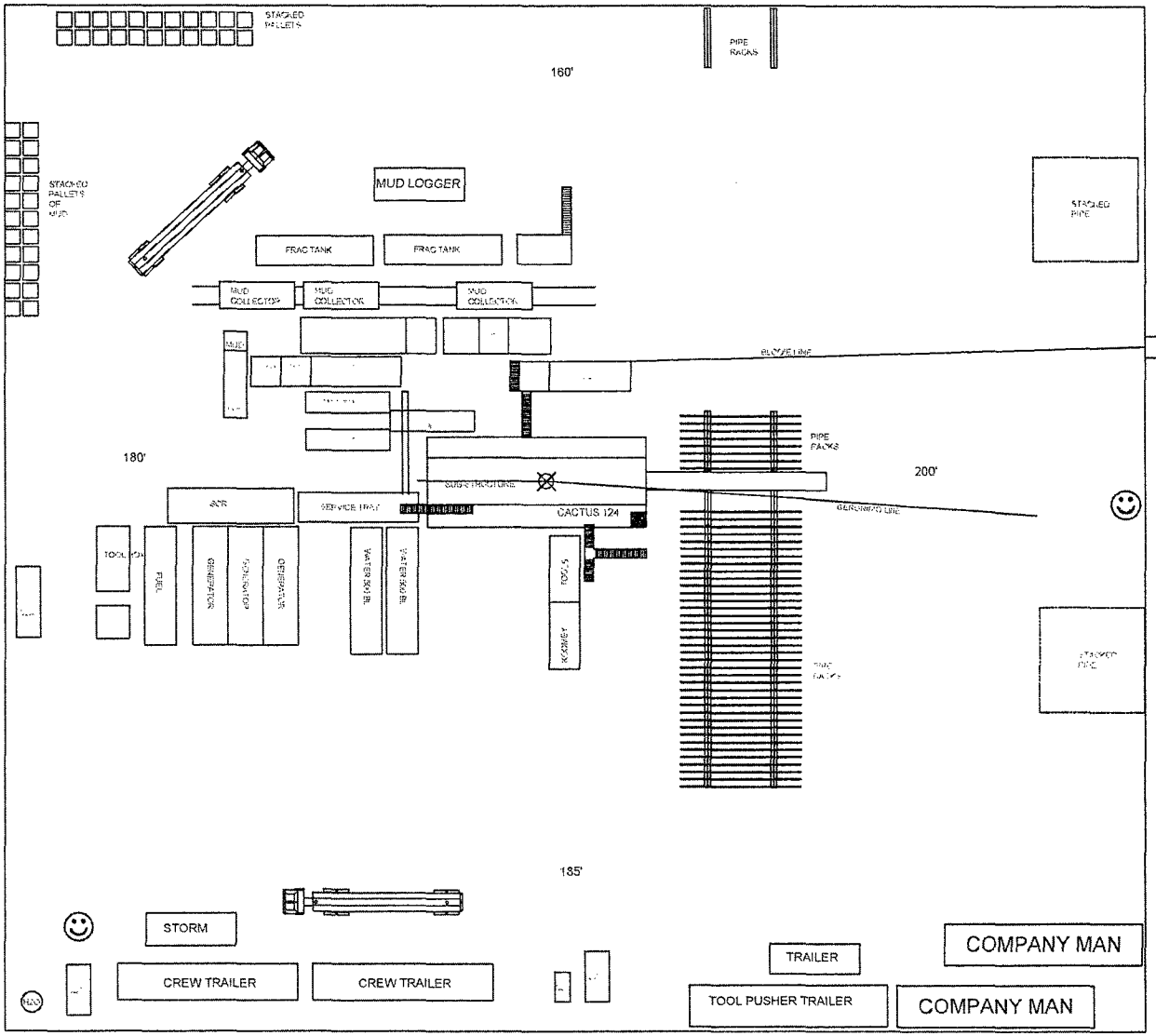
YATES PETROLEUM CORPORATION

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
CACTUS 124
07-24-13



345.00

380.00

Safe Briefing Area with caution signs and breathing equipment

Wind Direction Indicators

H2S Monitor with alarm at the bell nipple

PAD LAYOUT

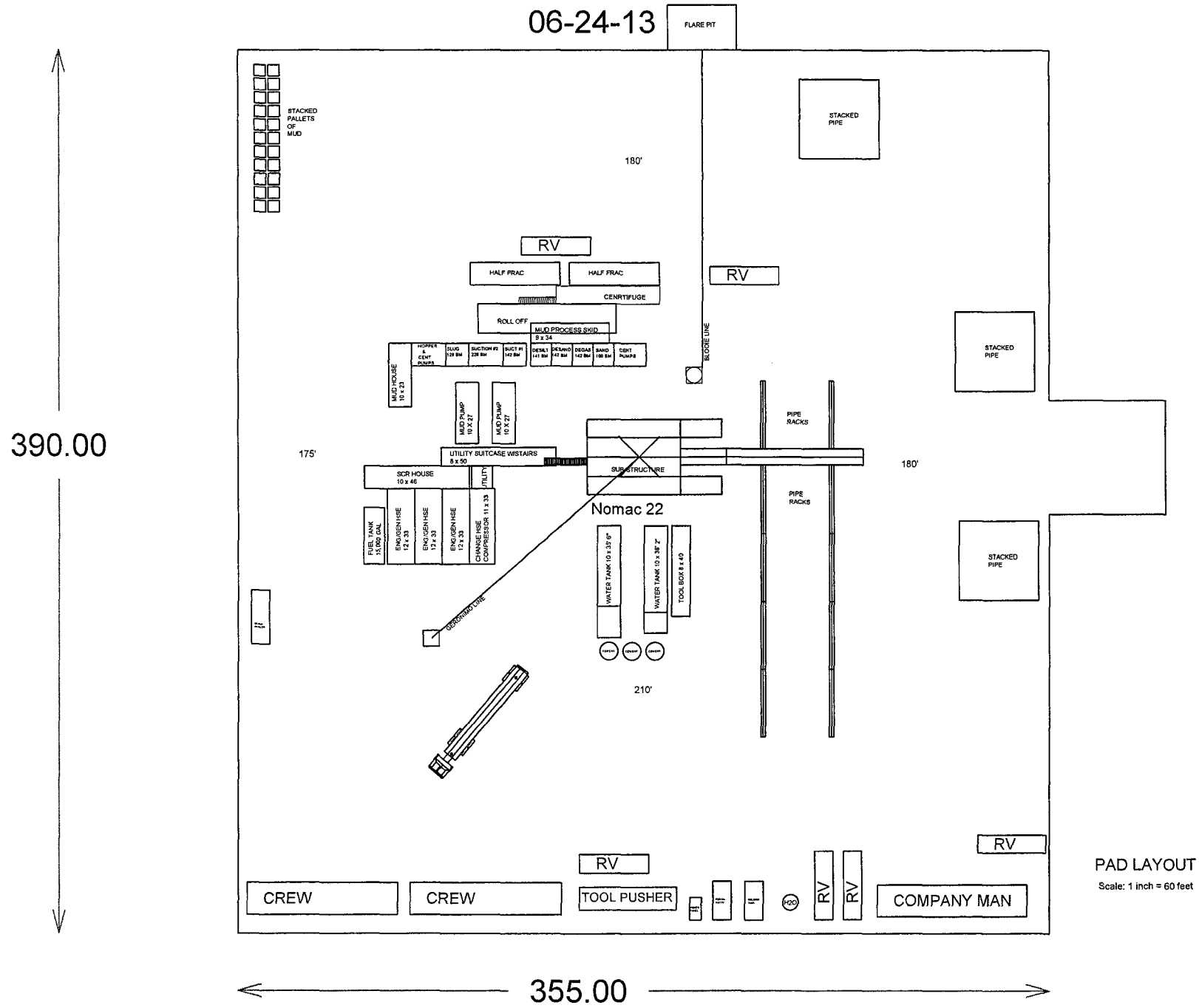
Scale: 1 inch = 60 feet

07-24-13

YATES PETROLEUM CORPORATION

Nomac 22

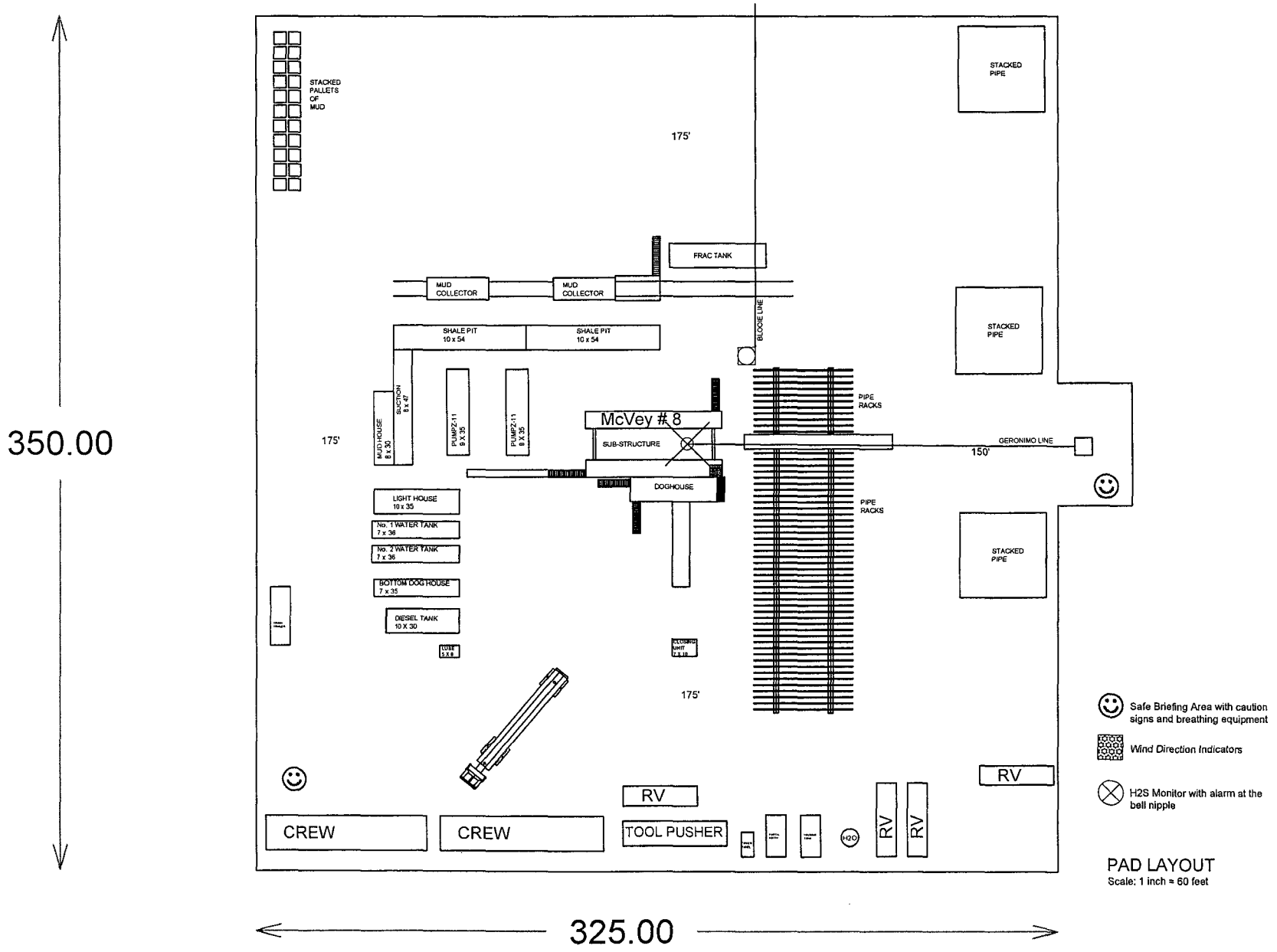
06-24-13



PAD LAYOUT

Scale: 1 inch = 60 feet

YATES PETROLEUM CORPORATION
McVay # 8
10-09-13



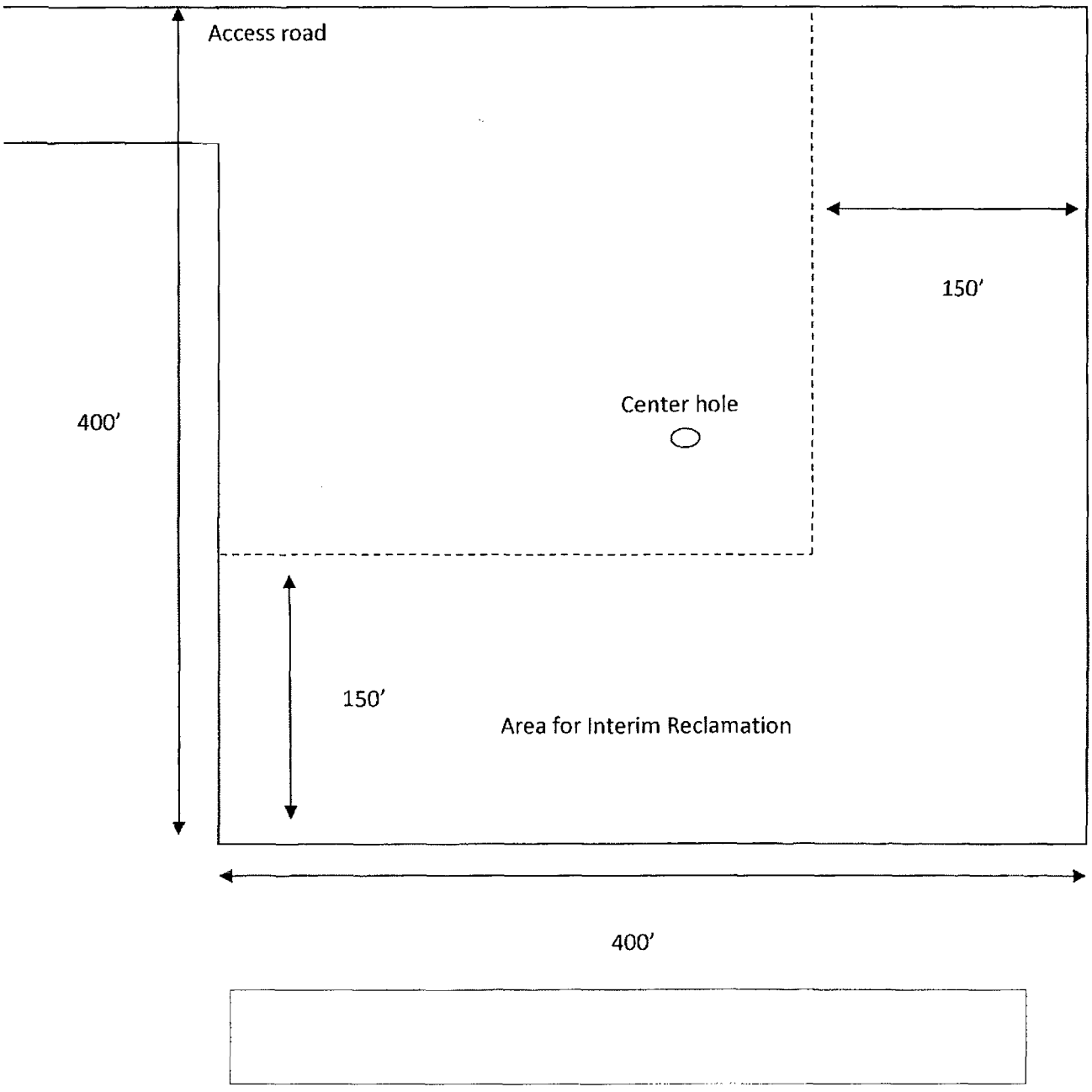
PAD LAYOUT
Scale: 1 inch = 60 feet

Bodacious BSM Federal #5H

Interim Reclamation Well Pad Layout

Example**dimensions and locations may vary depending on discussions between Yates Petroleum Corporation and the BLM at the time of Interim reclamation.

North



MULTI-POINT SURFACE USE AND OPERATIONS PLAN
YATES PETROLEUM CORPORATION
Bodacious BSM Federal #5H
200' FNL & 1320' FEL
Section 1-T26S-R26E
Eddy County, New Mexico

The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Attached exhibit is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 34 miles south of Carlsbad, New Mexico and the access route to the location is indicated in green on the attached exhibit.

DIRECTIONS: From Carlsbad go so on U. S. Highway 285 south towards Pecos, TX. At White's City turn right (west) and continue west for approximately 11 miles, to CO RD 742 (John Forehand Rd/Old Caverns Rd), turn right (North) onto CO RD 742 and continue for 0.89 miles. Turn right (East) here onto lease road and continue for 2697.9' to the northwest corner of the location.

2. PLANNED ACCESS ROAD:

A. The existing roads are county roads to allow access and the new road constructed will be 2697.9' in length to the Bodacious BSM Federal 5H.
B. The road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
C. The road will be bladed with drainage on both sides. Traffic turnouts will be every 1000'.
D. The route of the road is visible.
E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

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

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. There are production facilities, located on the Bodacious BSM Federal #1H at this time.
B. In the event that the well can be used, the necessary production facilities will be installed on the existing pad or a Sundry asking for a flowline to the Bodacious #1H will be submitted. If the well is able to be used a diesel self-contained unit will be used to provide the necessary power until an electric line can be built, if needed.

5. LOCATION AND TYPE OF WATER SUPPLY:

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

6. SOURCE OF CONSTRUCTION MATERIALS:

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

7. METHODS OF HANDLING WASTE DISPOSAL:

A. A closed loop system will be used to drill this well and reserve pits will not be used.
B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC. Form C-144.
C. Drilling fluids will be removed after drilling and completions are completed.
D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
E. No oil will be produced during drilling operations.
F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: NONE

9. WELLSITE LAYOUT:

A. Exhibit attached shows the relative location and dimensions of the well pad, the closed loop design plan, the location of the drilling equipment, orientation and access road approach of three of the rigs Yates Petroleum is currently using. It is yet to be determined which drilling rig will drill this well, a 400' x 400' area has been staked, all drilling rigs being used by Yates Petroleum Corporation at this time will fit within these dimensions. At the time the determination is made a Sundry notice will be submitted with the appropriate information. (Approximately 3.5 acres).
B. The closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC.
C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION:

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
B. Well location will be contoured to resemble the original topography as closely as possible. Surface reclamation measures will be taken to avoid new erosion on the well location and the area surrounding the well location. These measures will be overseen by Yates' personnel following a structured plan for the reclamation of each individual site.
C. Major drainage systems will be avoided as determined at the onsite with the BLM. Minor drainages may be rerouted around the well site within the 600' x 600' cleared area to avoid moving the well location.
D. Segregation of topsoil or like soils will be placed in low lift rows on one or two sides of the cliché pad where the top soil is more spread out to preserve the seed bed better rather than in a stockpile just off the caliche well pad. Placement of these lift rows will be determined at the BLM onsite or at the time of construction by Yates Personnel.

E. Yates will use prudent oil field practices when constructing well locations and related facilities. Yates personnel will determine the size of the well location needed for safe working conditions for personnel during all aspects on the drilling and production process.

F. Back fill requirements for above ground reserve pits will be met by using cut, fill, and contouring of available top soil and like soils from the pit area. Should additional material be needed it will be brought in from a BLM approved source.

G. All topsoil will be spread over the area reclaimed during interim reclamation using a front end loader. For final reclamation enough topsoil will be evenly distributed between the interim reclaimed area and the final reclaimed area. This method of soil stabilization should help maintain the productivity and viability of the topsoil.

H. Soil treatments will be determined at the time of final reclamation by Yates' Environmental Specialist or other designated personnel to meet BLM final reclamation goals.

I. Reseeding of disturbed areas will be accordance with the seed mixtures attached to the approved APD as Conditions of Approval. Planting and soil preparation will be done during the rainy season between June 1st and September 1st.

J. Yates' personnel will control weeds during the productive period through final abandonment of the well. Yates may also use the option to hire a third party to be in charge of weed control or participate in the Eddy Soil and Water District program to pool monies for weed control.

K. Well pads, roads and related facilities with caliche or other surfacing material will be picked up at the time of final abandonment. These materials may be used on other projects in the area if possible or placed back in the caliche pit or other designated site. Buried pipelines will be left in place after being bled down and purged. Above surface support equipment will be removed or cut down below plow depth and removed. Pipeline right-of-ways will be reseeded according to BLM Best Management Practices.

L. If the proposed well is plugged and abandoned, all rehabilitation and/or vegetation requirements of the State of New Mexico will be complied with and will be accomplished as expeditiously as possible.

11. SURFACE OWNERSHIP:
Federal Land

12. OTHER INFORMATION:

A. The primary use of the surface is for grazing.

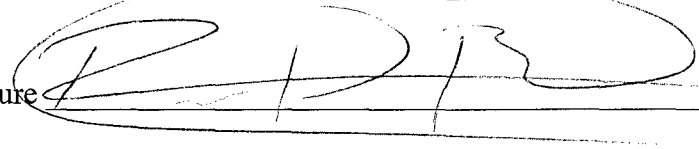
Minerals: USA-Federal-NM-113937
Administered by: Bureau of Land Management
Carlsbad Field Office
620 E. Greene Street
Carlsbad, NM 88220-6292

B. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, and historical and cultural sites.

CERTIFICATION
YATES PETROLEUM CORPORATION
Bodacious BSM Federal #5H

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 30 day of January 2015

Signature 

Name Rene P Bela

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Yates Petroleum Corp
LEASE NO.:	NM113937
WELL NAME & NO.:	5H-Bodacious BSM Federal
SURFACE HOLE FOOTAGE:	200'/N & 1320'/E
BOTTOM HOLE FOOTAGE	2410'/N & 660'/E
LOCATION:	Section 1, T. 26 S., R. 26 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.

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Cave and Karst Conditions of Approval

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

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

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

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

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

Ditching
Ditching shall be required on both sides of the road.

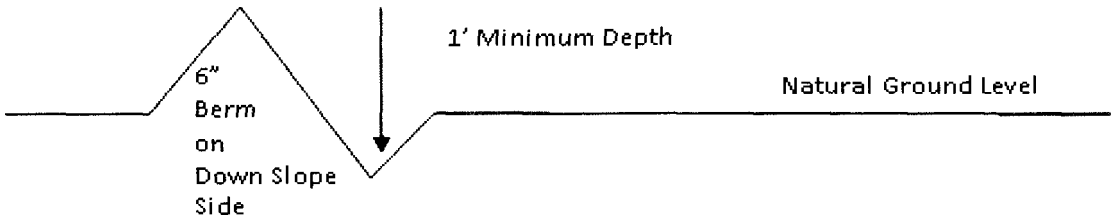
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

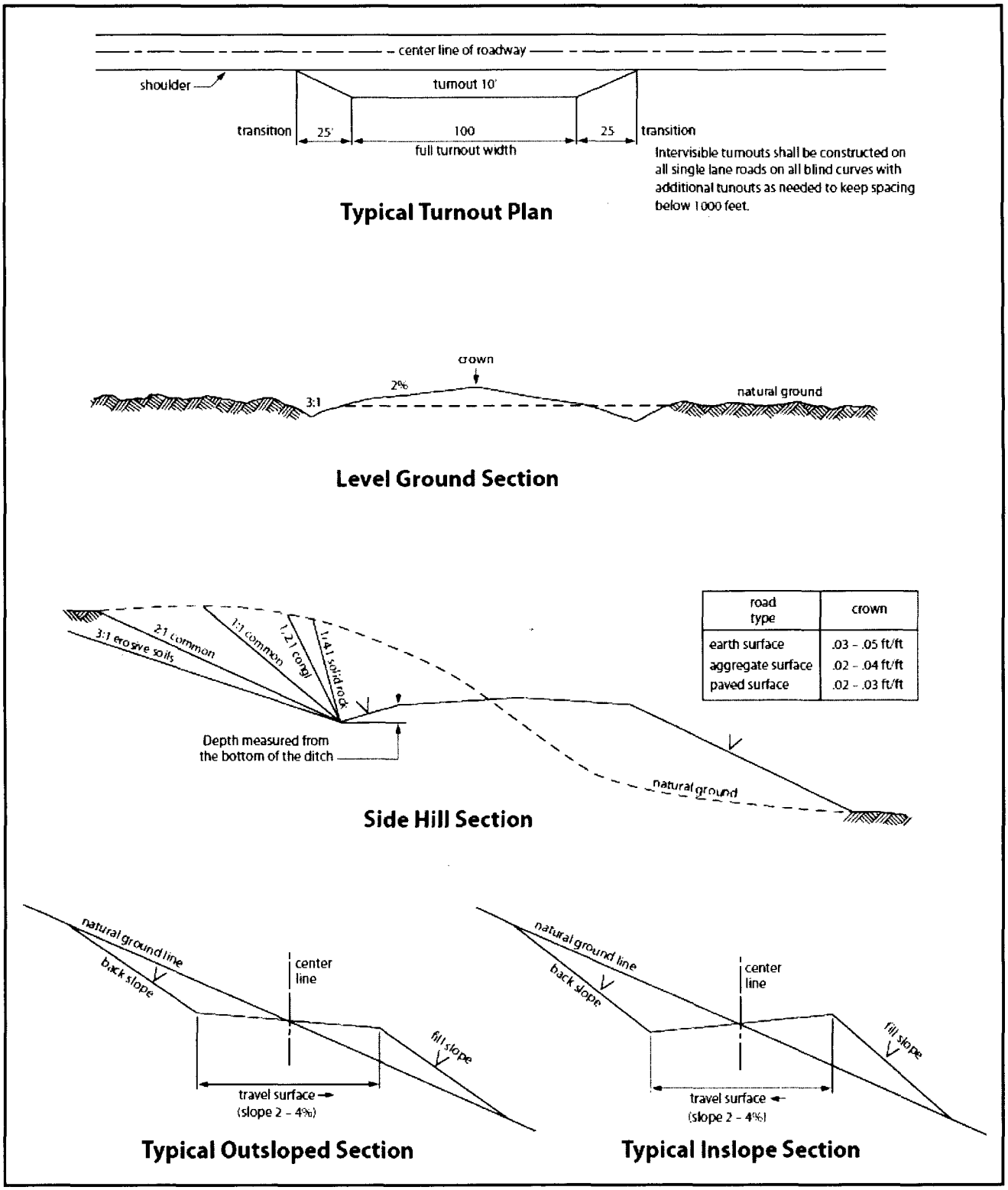


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

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

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

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

<u>Wait on cement (WOC) for Water Basin:</u>

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

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

Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Salado, Castile and Delaware.

HIGH CAVE/KARST
A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. ON A THREE STRING DESIGN; IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
d. The results of the test shall be reported to the appropriate BLM office.
e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CLN 032316

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

IX.

X. INTERIM RECLAMATION

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

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1 for Loamy Sites

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

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

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

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115
www.blm.gov/nm

IN REPLY REFER TO
3106 (921-js)

TAKE PRIDE IN AMERICA

December 1, 2016

Notice

EOG Y Resources, Inc.
Attn: Kathy H. Porter
105 S. 4th Street
Artesia, NM 88210

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 03 2017
RECEIVED

U.S. Specialty Insurance Company
13403 Northwest Freeway
Houston, TX 77040-6094

Name Change Recognized
Yates Petroleum Corporation to EOG Y Resources, Inc.
Bond Rider Accepted

We received acceptable evidence of the name change from Yates Petroleum Corporation to EOG Y Resources, Inc. effective November 1, 2016.

The oil and gas leases identified on the enclosed exhibit have been noted as to the name change. These lease numbers were obtained from our Legacy Rehost System (LR2000). If you identify additional leases, please contact this office and we will note our records accordingly. We have not abstracted the lease files to determine if the entity affected by the name change holds an interest in the leases nor have we attempted to identify leases where the entity is the operator on the ground.

We are notifying the Office of Natural Resources Revenue (ONRR) and all Bureau of Land Management offices of the name change by copies of this notice. If additional documentation for changes of operator is required by our Field Offices, they will contact you.

There are Four BLM bonds affected by this name change:

Yates Petroleum Corporation is a principal on the following bonds held by the BLM Wyoming State Office:

- BLM Statewide Bond Number: WYB000104
  Surety Number: B002818
  Amount: $4,594,173
  Surety: U.S. Specialty Insurance Company

- BLM Individual Bond Number : WYB001919
  Surety Number : B009716
  Amout: $10.000
  Surety: U.S. Specialty Insurance Company

For requirements concerning this bond, please contact Angela Montgomery in the Wyoming State Office at 307-775-6299.

Yates Petroleum Corporation is the principal on the following bond held by the BLM New Mexico State Office:

- BLM Statewide Bond Number: NMB000920
  Surety Number: B007414
  Amount: $150.000
  Surety: U.S. Specialty Insurance Company

For requirements concerning this bond, please contact JulieAnn Serrano in the New Mexico State Office at 505-954-2149.

On November 14, 2016, we received Bond Rider No. 2, for BLM Nationwide Bond No. NMB000434 changing the name from Yates Petroleum Corporation to EOG Y Recourses, Inc. The rider has been examined and found satisfactory and is accepted effective November 16, 2016, the date filed in this office.

If you have any questions, please contact JulieAnn Serrano at (505) 954-2149.

Gloria D Baca

Gloria Baca
Supervisory Land Law Examiner
Branch of Adjudication

Enclosure
List of Leases

cc:
Electronic Copies (w/encl):
BLM_Bond_Surety
BLM_Fluids_Forum
BLM Wyoming State Office

ONRR
Roswell FO
Carlsbad FO
IAC Name Change Log
Name Change Log Book

NMOCD CONDITION OF APPROVAL

The ***New!*** Gas Capture Plan (GCP) notice is posted on the NMOCD website under Announcements. The Plan became effective May 1, 2016. A copy of the GCP form is included with the NOTICE and is also in our FORMS section under Unnumbered Forms. Please review filing dates for all applicable activities currently approved or pending and submit accordingly. Failure to file a GCP may jeopardize the operator's ability to obtain C-129 approval to flare gas after the initial 60-day completion period.