15-366

Form 3160-3
(March 2012)

OCD Artesia
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 10 2019

DISTRICT II-ARTESIA O.C.D.

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM113937
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator EOG Resources, Inc.	7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 2267 Midland, TX 79702	8. Lease Name and Well No. Bodacious BSM Federal 2H 323147
3b. Phone No. (include area code) 432-686-3689	9. API Well No. 30-015- 45618
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 330' FNL & 200' FWL NWNW-1-26S-26E UNORTHODOX LOCATION At proposed prod. zone 2435' FNL & 760' FWL SWNW-12-26S-26E	10. Field and Pool, or Exploratory ~~Undesignated~~ Wildcat Bone Spring 97818 42-015-603
	11. Sec., T. R. M. or Blk. and Survey or Area 1-26S-26E 32S26E NM
14. Distance in miles and direction from nearest town or post office* Approximately +/-26 miles South from Carlsbad	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) 330 ft.	16. No. of acres in lease 1720 acres / 17. Spacing Unit dedicated to this well 240 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 7480' TVD, 14700' MD / 20. BLM/BIA Bond No. on file NM-2308
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3370'	22. Approximate date work will start* 01/01/2019 / 23. Estimated duration 25 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 Stan Wagner	Name (Printed Typed) Stan Wagner	Date 08/01/2018
Title Sr. Regulatory Specialist		
Approved by (Signature) /s/Cody Layton	Name (Printed Typed) FIELD MANAGER	Date 12/12/'18
Title	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)

Carlsbad Controlled Water Basin

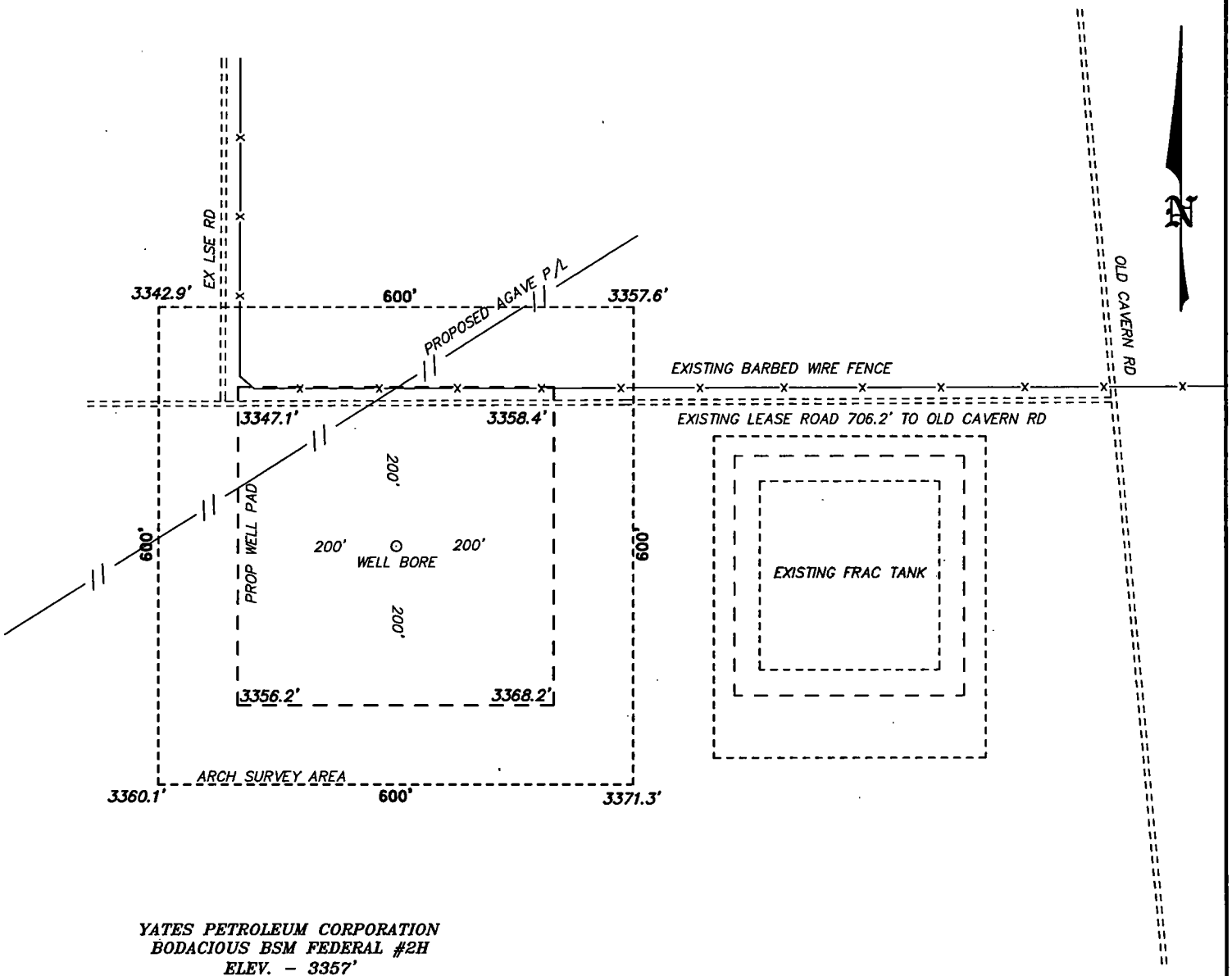
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

RWP 1-15-19

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

EDDY COUNTY, **NEW MEXICO.**



YATES PETROLEUM CORPORATION
BODACIOUS BSM FEDERAL #2H
ELEV. – 3357'
Lat – N 32°04'42.44"
Long – W 104°15'16.41"
NMSPCE– N 392288.8
E 565736.2
(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, TURN LEFT TO EXISTING LEASE ROAD 706.2 FEET TO PROPOSED LOCATION.

YATES PETROLEUM CORPORATION

REF: BODACIOUS BSM FEDERAL #2H / WELL PAD TOPO

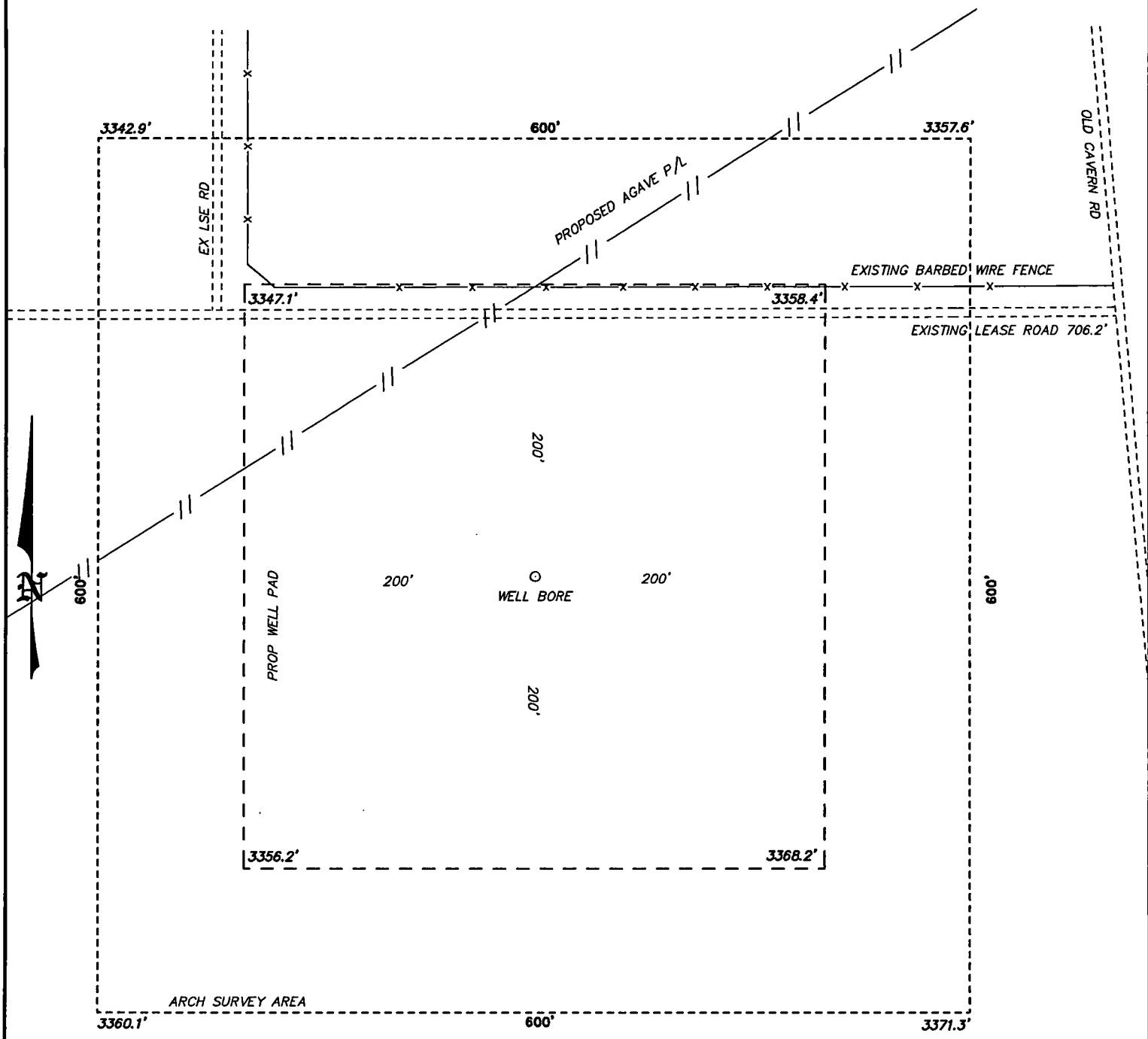
THE BODACIOUS BSM FEDERAL #2H LOCATED 200' FROM THE NORTH LINE AND 200' FROM THE WEST LINE OF SECTION 1, TOWNSHIP 26 SOUTH, RANGE 26 EAST. N.M.P.M., EDDY COUNTY, NEW MEXICO.

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: 30758	Drawn By: K. NORRIS	Date: 09-22-2014	Survey Date: 08-22-2014	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 #2H / WELL PAD TOPO

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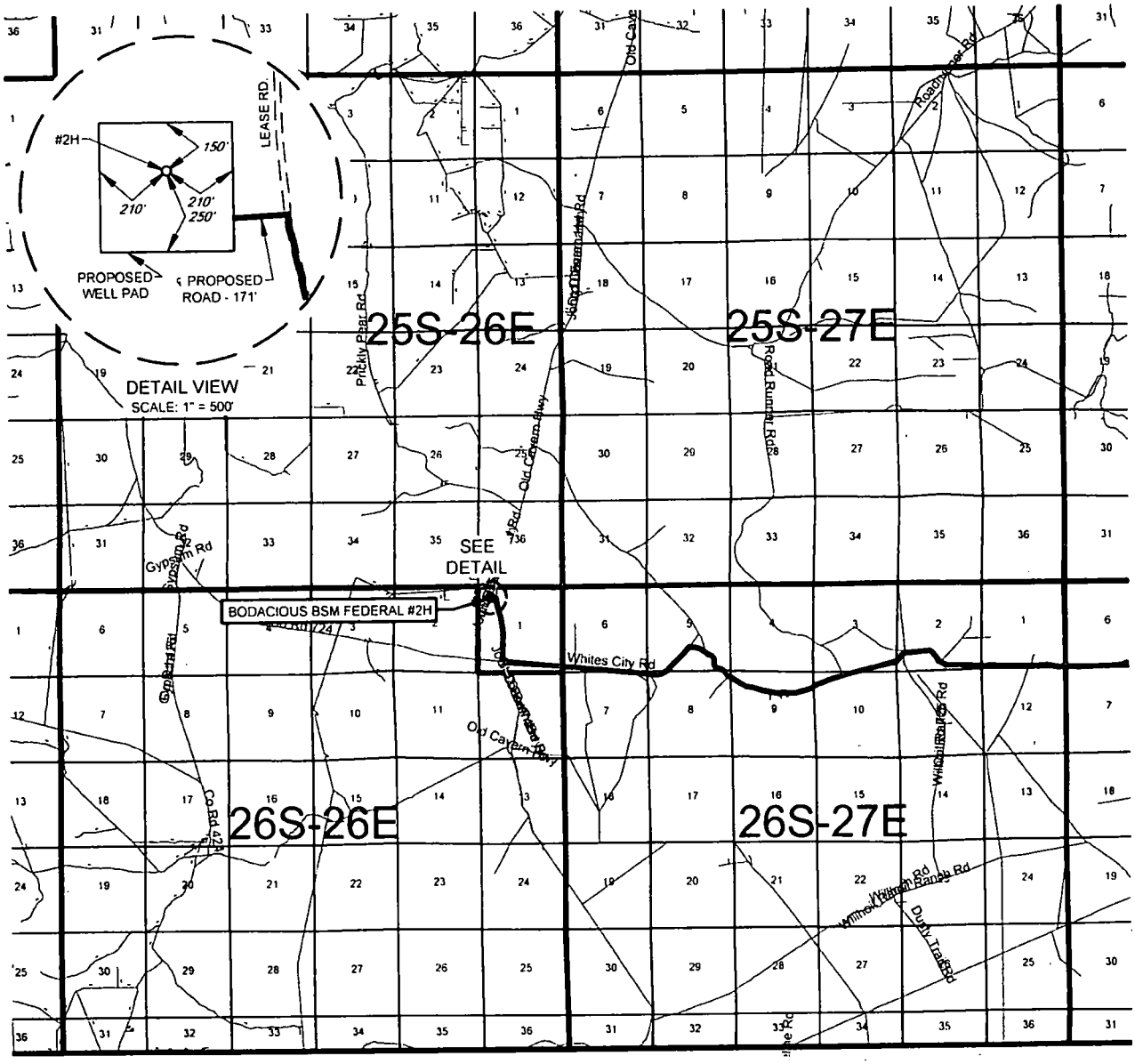
W.O. Number: 30758	Drawn By: K. NORRIS	Date: 09-22-2014	Survey Date: 08-22-2014	Sheet 1 of 1 Sheets

EXHIBIT 2

VICINITY MAP



eog resources, inc.

LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

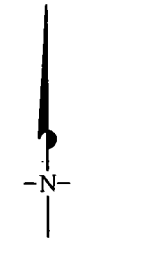
SECTION 1 TWP 26-S RGE 26-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 330' FNL & 200' FWL

DISTANCE & DIRECTION

FROM INT. OF BLACK RIVER VILLAGE RD AND US-285 S. GO SOUTH ON US-285 S ±11.5 MILES, THENCE WEST (RIGHT) ON WHITES CITY RD. ±11.4 MILES, THENCE NORTH (RIGHT) ON OLD CAVERN HWY. ±0.7 MILES, THENCE WEST (LEFT) ON A PROPOSED RD. ±171 FEET TO A POINT ±258 FEET SOUTHEAST OF THE LOCATION

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET.



SCALE: 1" = 10000'

0' 5000' 10000'

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 · FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 · FAX (817) 744-7548
2903 NORTH BIG SPRING · MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 · FAX (432) 682-1743
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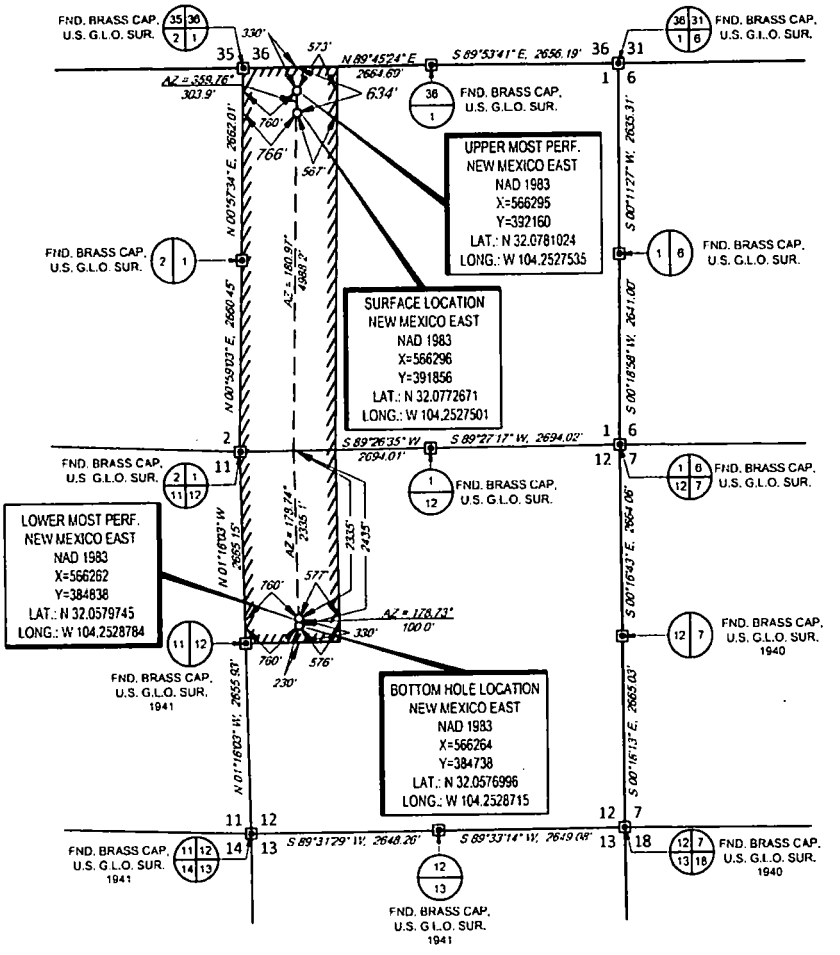
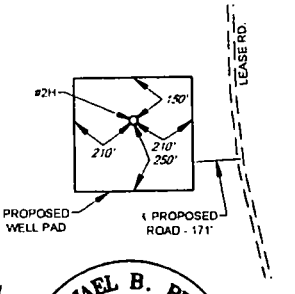
eog resources, Inc.

EXHIBIT 2A

SECTION 1, TOWNSHIP 26-S, RANGE 26-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO





DETAIL VIEW
SCALE 1" = 500'

LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

SECTION 1 TWP 26-S RGE 26-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 330' FNL & 200' FWL

DISTANCE & DIRECTION

FROM INT. OF BLACK RIVER VILLAGE RD AND US-285 S. GO SOUTH ON US-285 S ±11.5 MILES, THENCE WEST (RIGHT) ON WHITES CITY RD. ±11.4 MILES, THENCE NORTH (RIGHT) ON OLD CAVERN HWY. ±0.7 MILES, THENCE WEST (LEFT) ON A PROPOSED RD. ±171 FEET TO A POINT ±258 FEET SOUTHEAST OF THE LOCATION

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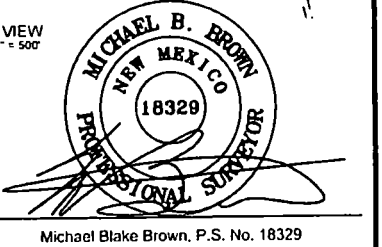

Michael Blake Brown, P.S. No. 18329
AUGUST 17, 2018

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 - FT. WORTH, TEXAS 76140
TELEPHONE (817) 744-7512 - FAX (817) 744-7548
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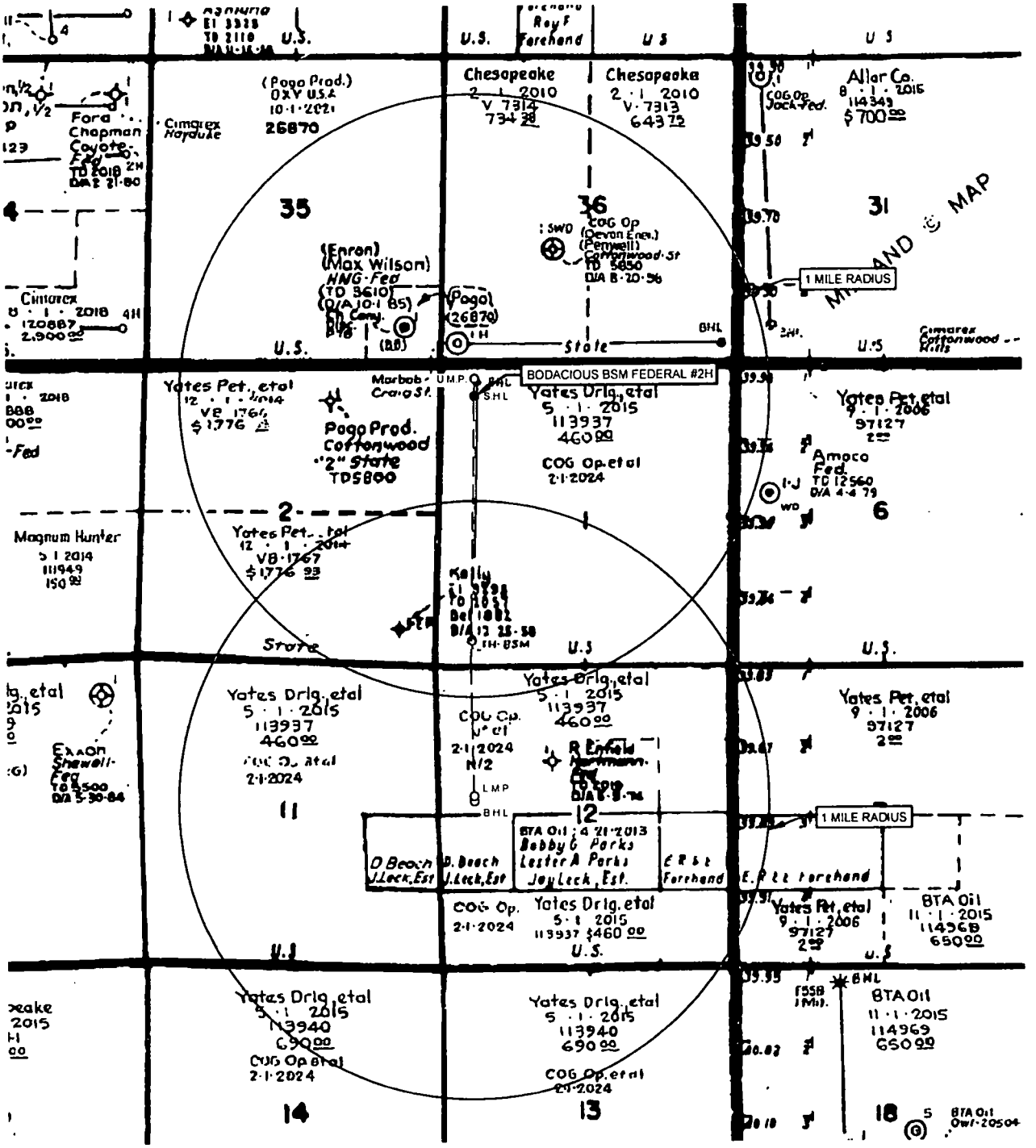
WWW.TOPOGRAPHIC.COM

EXHIBIT 3

eog resources, inc.

SECTION 1, TOWNSHIP 26-S, RANGE 26-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

SCALE: NTS

#2H LATITUDE N 32.0772671 #2H LONGITUDE W 104.2527501

N

ALL BEARINGS, DISTANCES AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U S SURVEY FEET

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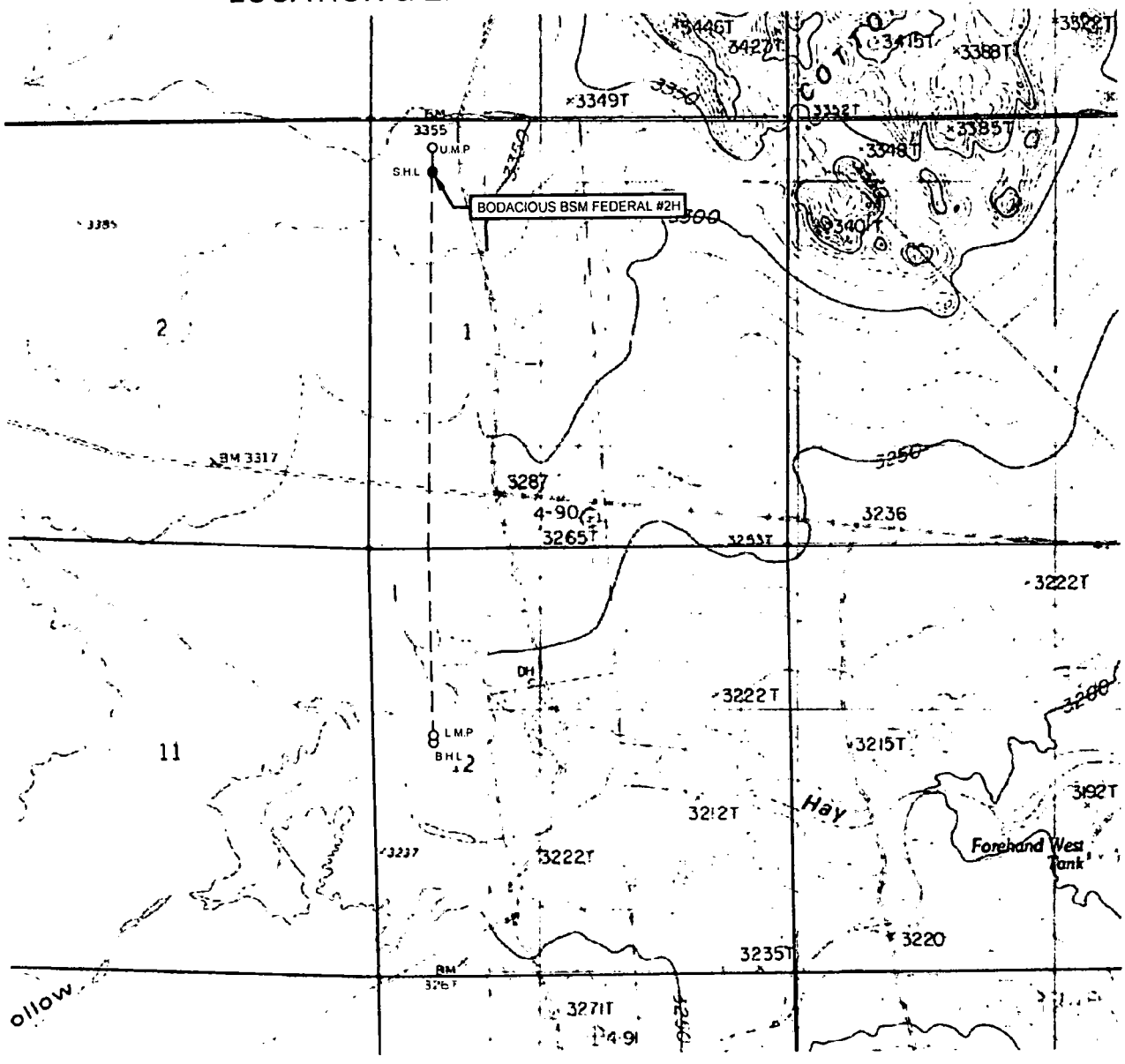
LOCATION & ELEVATION VERIFICATION MAP



eog resources, Inc.

LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

SECTION 1 TWP 26-S RGE 26-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3357'
DESCRIPTION 330' FNL & 200' FWL

LATITUDE N 32.0772671 LONGITUDE W 104.2527501

-N-

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

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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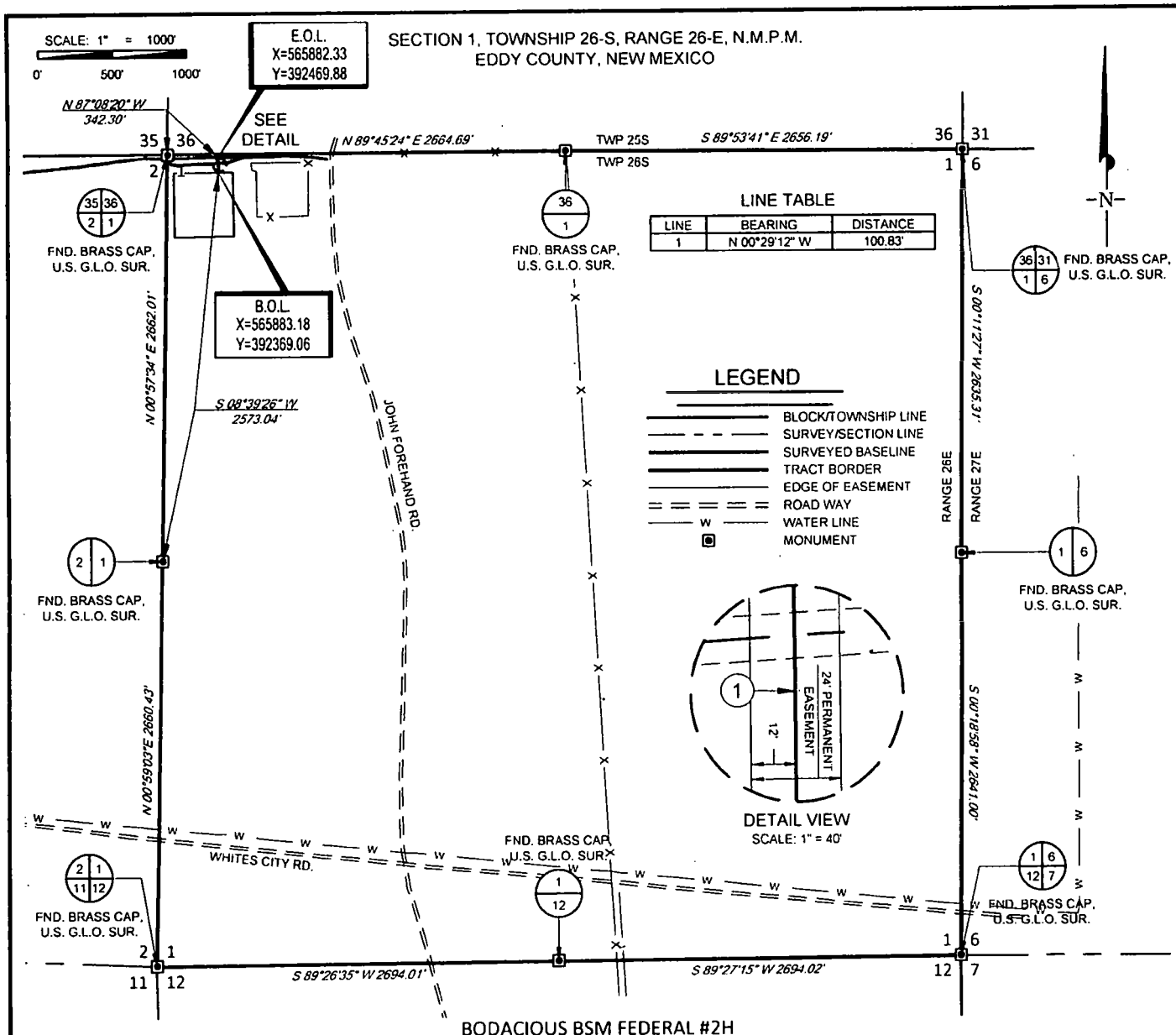
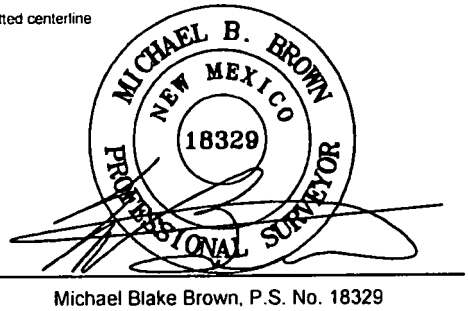


BODACIOUS BSM FEDERAL #2H
PROPOSED ROAD

Being a proposed produced water line easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 100.83 feet or 6.11 rods, containing 0.07 acres more or less



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1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

Michael Blake Brown, P.S. No. 18329
AUGUST 14, 2018

eog resources, Inc.

BODACIOUS BSM FEDERAL #2H PRODUCED PROPOSED ROAD	REVISION: INT	DATE
DATE: 08/06/2018		
FILE: EP_BODACIOUS_BSM_FEDERAL_2H_ROAD		
DRAWN BY: CSG/sme		
SHEET: 1 OF 1		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. P.O.B. = POINT OF BEGINNING
5. E.O.L. = END OF LINE

S:\SURVEYNEOG_MIDLAND\BODACIOUS_BSM_FEDERAL\FINAL_PRODUCTS\EP_BODACIOUS_BSM_FEDERAL_2H_ROAD.DWG 8/14/2018 4:26:52 PM tstewart

YATES PETROLEUM CORPORATION
Bodacious BSM Federal #2H
200' FNL & 200' FWL Section 1, T26S – R26E SHL
2410' FNL & 370' FWL Section 12, T26S – R26E BHL
Eddy County, New Mexico

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

Castile/LM	476'	Brushy Canyon Marker	5313'
Top of Salt	1323'	Bone Spring LM	5633' Oil
Base of Salt	1835'	Avalon Shale	5729' Oil
Lamar	2025'	Bone Spring 1/SD	6535' Oil
Bell Canyon	2076' Oil	Bone Springs 2/SD	7287' Oil
Cherry Canyon	2974' Oil	Bone Springs 2/Target	7861' Oil
Manzanita Marker	3069'	TVD	7465'
Brushy Canyon	4060' Oil	TD	14813'

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

Water: Approx.: 0' - 525'
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 Hybird

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
30"	20"	N/A	H-40	ST&C	0'-85'	85'
17.5"	13.375"	48#	J-55	ST&C	0'-525'	525'
12.25"	9.625"	36#	J-55	LT&C	0'-2050'	2050'
8.75"	5.5"	17#	P-110	Buttress Thread	0'-7861'	7861'
8.5"	5.5"	17#	P-110	Buttress Thread	7861'-14813'	6952'

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'-525'): Lead with 225 sacks of Class 36:65:6 PozC 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'-2050'): Lead with 500 sacks of Class PozC 35:65:6 (WT 12.5, YLD 2.0, H2O gal/sack 11.0); tail in with 210 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 (1550'-14813'): Lead with 505 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 2005 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, designed with 35% excess.

Well will be drilled on a tangent from approximately 2000' to the kick off point of 6856' (6952' TVD). At this point the well will then be kicked off and directionally drilled at 12 degrees per 100' with an 8.75" hole to 7861' MD (7525' TVD). Hole size will then be reduced to 8.5" and drilled to 14813' MD (7465' TVD) where 5.5" casing will be set and cemented 500' into the previous casing string 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 producing zone will be encountered at 778' FNL & 360' FWL, Section 1, Township 26S – Range 26E. Deepest TVD is 7525' in the lateral.

Mud Program and Auxiliary Equipment:

Interval	Type	Weight	Viscosity	Fluid Loss
0'-525'	Fresh Water	8.6-9.2	32-34	N/C
525'-2050'	Brine Water	10.0-10.2	28-29	N/C
2050'-14813'	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; Laterolog 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:	525'	Anticipated Max. BHP:	251 PSI
From:	450'	TO:	2050'	Anticipated Max. BHP:	1087 PSI
From:	2050'	TO:	7525'	Anticipated Max. BHP:	3600 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 CORPORATION

Yates Petroleum
Project: Eddy, NM (NAD-83)
Site: Bodacious BSM Federal
Well: #2H
Wellbore: OH
Plan: Plan #2 (#2H/OH)

WELL DETAILS: #2H

Ground Elevation:: 3357.0
RKB Elevation: RKB @ 3382.0usft (Cactus 124 - KB=25')
Rig Name: Cactus 124 - KB=25'

Surface Hole Location

Northing	Easting	Latittude	Longitude
392288.80	565736.20	32° 4' 42.446 N	104° 15' 16.408 W

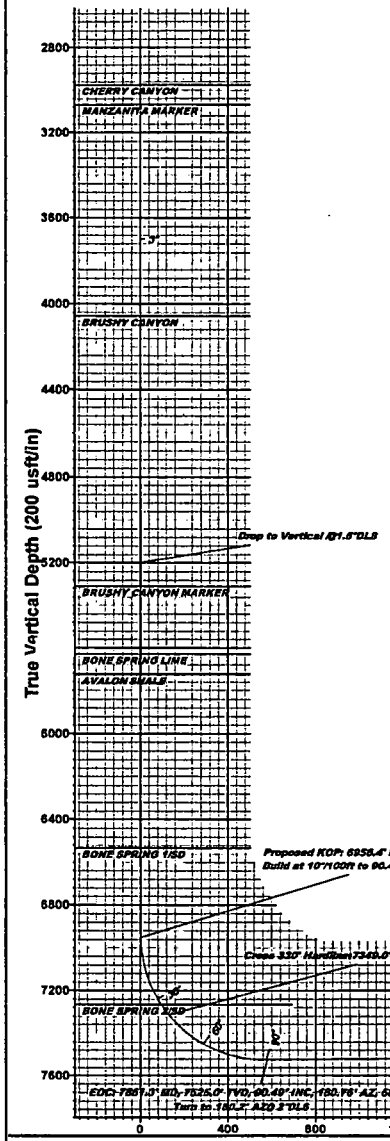
G T M

Azimuths to Grid North
True North: -0.04°
Magnetic North: 7.41°

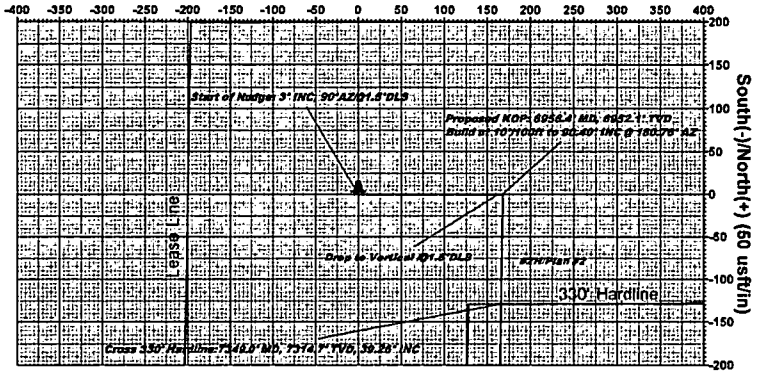
Magnetic Field
Strength: 48101.0snT
Dip Angle: 59.85°
Date: 12/30/2014
Model: IGRF2010

Section Details

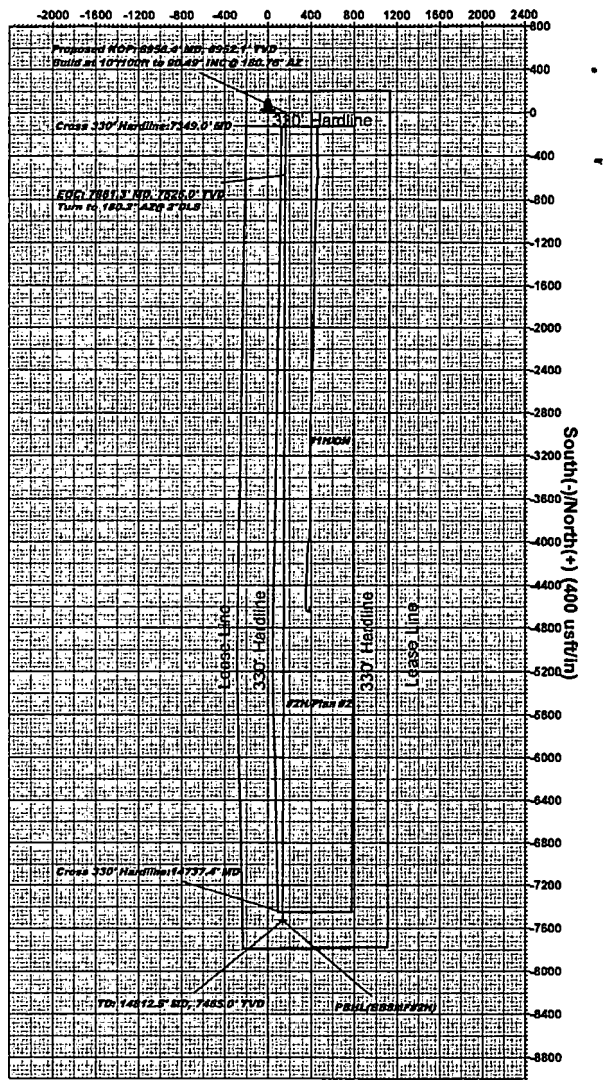
	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0
3	2200.0	3.00	90.00	2199.9	0.0	5.2	1.50	90.00	0.1
4	5204.2	3.00	90.00	5200.0	0.0	162.5	0.00	0.00	2.9
5	5404.2	0.00	0.00	5399.9	0.0	167.7	1.50	180.00	3.0
6	6956.4	0.00	0.00	6952.1	0.0	167.7	0.00	0.00	3.0
7	7861.3	90.49	180.76	7525.0	-577.8	160.0	10.00	180.76	580.6
8	7889.4	90.49	180.20	7524.8	-605.9	159.8	2.00	-89.50	608.7
9	14812.5	90.49	180.20	7465.0	-7528.7	135.9	0.00	0.00	7529.9



West(-)/East(+) (50 usft/in)



West(-)/East(+) (400 usft/in)



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting
BSSM2H	-4606.3	382.1	387582.50	566118.30
PBHL(BSSMF2H)	-7528.7	135.9	384760.10	565872.10

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

Vertical Section at 178.97° (200 usft/in)

CRESCENT DIRECTIONAL DRILLING
Crescent Directional Drilling
7715 West Industrial Ave. Midland, Tx 79706
Phone: 432-618-1135

Plan: Plan #2 (#2H/OH)
Created By: Gabriel Cruz Date: 15:01, January 08 2015

Yates Petroleum

Eddy, NM (NAD-83)
Bodacious BSM Federal
#2H

OH

Plan: Plan #2

Standard Planning Report

08 January, 2015

YATES PETROLEUM CORPORATION

Planning Report

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**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	#2H					
Well Position	**+N/-S**	4,606.3 usft	**Northing:**	392,288.80 usft	**Latitude:**	32° 4' 42.446 N
	+E/-W	-382.1 usft	**Easting:**	565,736.20 usft	**Longitude:**	104° 15' 16.408 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,357.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	12/30/2014	7.45	59.85	48,101

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	178.97	

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	3.00	90.00	2,199.9	0.0	5.2	1.50	1.50	0.00	90.00	
5,204.2	3.00	90.00	5,200.0	0.0	162.5	0.00	0.00	0.00	0.00	
5,404.2	0.00	0.00	5,399.9	0.0	167.7	1.50	-1.50	0.00	180.00	
6,956.4	0.00	0.00	6,952.1	0.0	167.7	0.00	0.00	0.00	0.00	
7,861.3	90.49	180.76	7,525.0	-577.8	160.0	10.00	10.00	0.00	180.76	
7,889.4	90.49	180.20	7,524.8	-605.9	159.8	2.00	0.02	-2.00	-89.50	
14,812.5	90.49	180.20	7,465.0	-7,528.7	135.9	0.00	0.00	0.00	0.00	PBHL(BBSMF#2H)

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**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
79.0	0.00	0.00	79.0	0.0	0.0	0.0	0.00	0.00	0.00
BBSM#1H									
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
476.0	0.00	0.00	476.0	0.0	0.0	0.0	0.00	0.00	0.00
CASTILE LM/SD									
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
1,323.0	0.00	0.00	1,323.0	0.0	0.0	0.0	0.00	0.00	0.00
TOP OF SALT									
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
1,700.0	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
1,835.0	0.00	0.00	1,835.0	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
Start of Nudge: 3° INC, 90°AZ/@1.5°DLS									
2,025.0	0.38	90.00	2,025.0	0.0	0.1	0.0	1.50	1.50	0.00
LAMAR									
2,076.0	1.14	90.00	2,076.0	0.0	0.8	0.0	1.50	1.50	0.00
BELL CANYON									
2,100.0	1.50	90.00	2,100.0	0.0	1.3	0.0	1.50	1.50	0.00
2,200.0	3.00	90.00	2,199.9	0.0	5.2	0.1	1.50	1.50	0.00
2,300.0	3.00	90.00	2,299.8	0.0	10.5	0.2	0.00	0.00	0.00
2,400.0	3.00	90.00	2,399.6	0.0	15.7	0.3	0.00	0.00	0.00
2,500.0	3.00	90.00	2,499.5	0.0	20.9	0.4	0.00	0.00	0.00
2,600.0	3.00	90.00	2,599.4	0.0	26.2	0.5	0.00	0.00	0.00
2,700.0	3.00	90.00	2,699.2	0.0	31.4	0.6	0.00	0.00	0.00
2,800.0	3.00	90.00	2,799.1	0.0	36.6	0.7	0.00	0.00	0.00
2,900.0	3.00	90.00	2,898.9	0.0	41.9	0.8	0.00	0.00	0.00
2,974.2	3.00	90.00	2,973.0	0.0	45.8	0.8	0.00	0.00	0.00
CHERRY CANYON									
3,000.0	3.00	90.00	2,998.8	0.0	47.1	0.8	0.00	0.00	0.00
3,069.3	3.00	90.00	3,068.0	0.0	50.7	0.9	0.00	0.00	0.00
MANZANITA MARKER									
3,100.0	3.00	90.00	3,098.7	0.0	52.3	0.9	0.00	0.00	0.00
3,200.0	3.00	90.00	3,198.5	0.0	57.6	1.0	0.00	0.00	0.00
3,300.0	3.00	90.00	3,298.4	0.0	62.8	1.1	0.00	0.00	0.00
3,400.0	3.00	90.00	3,398.3	0.0	68.0	1.2	0.00	0.00	0.00
3,500.0	3.00	90.00	3,498.1	0.0	73.3	1.3	0.00	0.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**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)
3,600.0	3.00	90.00	3,598.0	0.0	78.5	1.4	0.00	0.00	0.00
3,700.0	3.00	90.00	3,697.9	0.0	83.7	1.5	0.00	0.00	0.00
3,800.0	3.00	90.00	3,797.7	0.0	89.0	1.6	0.00	0.00	0.00
3,900.0	3.00	90.00	3,897.6	0.0	94.2	1.7	0.00	0.00	0.00
4,000.0	3.00	90.00	3,997.4	0.0	99.4	1.8	0.00	0.00	0.00
4,059.6	3.00	90.00	4,057.0	0.0	102.6	1.8	0.00	0.00	0.00
BRUSHY CANYON									
4,100.0	3.00	90.00	4,097.3	0.0	104.7	1.9	0.00	0.00	0.00
4,200.0	3.00	90.00	4,197.2	0.0	109.9	2.0	0.00	0.00	0.00
4,300.0	3.00	90.00	4,297.0	0.0	115.1	2.1	0.00	0.00	0.00
4,400.0	3.00	90.00	4,396.9	0.0	120.4	2.2	0.00	0.00	0.00
4,500.0	3.00	90.00	4,496.8	0.0	125.6	2.3	0.00	0.00	0.00
4,600.0	3.00	90.00	4,596.6	0.0	130.8	2.4	0.00	0.00	0.00
4,700.0	3.00	90.00	4,696.5	0.0	136.1	2.4	0.00	0.00	0.00
4,800.0	3.00	90.00	4,796.3	0.0	141.3	2.5	0.00	0.00	0.00
4,900.0	3.00	90.00	4,896.2	0.0	146.5	2.6	0.00	0.00	0.00
5,000.0	3.00	90.00	4,996.1	0.0	151.8	2.7	0.00	0.00	0.00
5,100.0	3.00	90.00	5,095.9	0.0	157.0	2.8	0.00	0.00	0.00
5,204.2	3.00	90.00	5,200.0	0.0	162.5	2.9	0.00	0.00	0.00
Drop to Vertical /@1.5°DLS									
5,300.0	1.56	90.00	5,295.7	0.0	166.3	3.0	1.50	-1.50	0.00
5,313.3	1.36	90.00	5,309.0	0.0	166.6	3.0	1.50	-1.50	0.00
BRUSHY CANYON MARKER									
5,404.2	0.00	0.00	5,399.9	0.0	167.7	3.0	1.50	-1.50	0.00
5,500.0	0.00	0.00	5,495.7	0.0	167.7	3.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,595.7	0.0	167.7	3.0	0.00	0.00	0.00
5,633.3	0.00	0.00	5,629.0	0.0	167.7	3.0	0.00	0.00	0.00
BONE SPRING LIME									
5,700.0	0.00	0.00	5,695.7	0.0	167.7	3.0	0.00	0.00	0.00
5,729.3	0.00	0.00	5,725.0	0.0	167.7	3.0	0.00	0.00	0.00
AVALON SHALE									
5,800.0	0.00	0.00	5,795.7	0.0	167.7	3.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,895.7	0.0	167.7	3.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,995.7	0.0	167.7	3.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,095.7	0.0	167.7	3.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,195.7	0.0	167.7	3.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,295.7	0.0	167.7	3.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,395.7	0.0	167.7	3.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,495.7	0.0	167.7	3.0	0.00	0.00	0.00
6,535.3	0.00	0.00	6,531.0	0.0	167.7	3.0	0.00	0.00	0.00
BONE SPRING 1/SD									
6,600.0	0.00	0.00	6,595.7	0.0	167.7	3.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,695.7	0.0	167.7	3.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,795.7	0.0	167.7	3.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,895.7	0.0	167.7	3.0	0.00	0.00	0.00
6,956.4	0.00	0.00	6,952.1	0.0	167.7	3.0	0.00	0.00	0.00
Proposed KOP: 6956.4' MD, 6952.1' TVD - Build at 10°/100ft to 90.49° INC @ 180.76° AZ									
7,000.0	4.36	180.76	6,995.7	-1.7	167.7	4.7	10.00	10.00	0.00
7,050.0	9.36	180.76	7,045.3	-7.6	167.6	10.6	10.00	10.00	0.00
7,100.0	14.36	180.76	7,094.2	-17.9	167.5	20.9	10.00	10.00	0.00
7,150.0	19.36	180.76	7,142.0	-32.4	167.3	35.4	10.00	10.00	0.00
7,200.0	24.36	180.76	7,188.4	-51.0	167.0	54.0	10.00	10.00	0.00
7,250.0	29.36	180.76	7,233.0	-73.6	166.7	76.6	10.00	10.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**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)
7,287.4	33.10	180.76	7,265.0	-93.0	166.5	96.0	10.00	10.00	0.00
BONE SPRING 2/SD									
7,300.0	34.36	180.76	7,275.5	-100.0	166.4	102.9	10.00	10.00	0.00
7,349.0	39.26	180.76	7,314.7	-129.3	166.0	132.3	10.00	10.00	0.00
Cross 330' Hardline:7349.0' MD, 7314.7' TVD, 39.26° INC									
7,350.0	39.36	180.76	7,315.5	-129.9	166.0	132.9	10.00	10.00	0.00
7,400.0	44.36	180.76	7,352.7	-163.3	165.5	166.3	10.00	10.00	0.00
7,450.0	49.36	180.76	7,386.9	-199.8	165.0	202.7	10.00	10.00	0.00
7,500.0	54.36	180.76	7,417.7	-239.1	164.5	242.0	10.00	10.00	0.00
7,550.0	59.36	180.76	7,445.1	-280.9	164.0	283.8	10.00	10.00	0.00
7,600.0	64.36	180.76	7,468.6	-325.0	163.4	327.9	10.00	10.00	0.00
7,650.0	69.36	180.76	7,488.3	-371.0	162.8	373.8	10.00	10.00	0.00
7,700.0	74.36	180.76	7,503.8	-418.5	162.1	421.3	10.00	10.00	0.00
7,750.0	79.36	180.76	7,515.2	-467.1	161.5	470.0	10.00	10.00	0.00
7,800.0	84.36	180.76	7,522.3	-516.6	160.8	519.4	10.00	10.00	0.00
7,850.0	89.36	180.76	7,525.0	-566.5	160.2	569.3	10.00	10.00	0.00
7,861.3	90.49	180.76	7,525.0	-577.8	160.0	580.6	10.00	10.00	0.00
EOC: 7861.3' MD, 7525.0' TVD, 90.49° INC, 180.76° AZ, 580.6' VS - Turn to 180.2° AZ@ 2°DLS									
7,889.4	90.49	180.20	7,524.8	-605.9	159.8	608.7	2.00	0.02	-2.00
7,900.0	90.49	180.20	7,524.7	-616.5	159.8	619.3	0.00	0.00	0.00
8,000.0	90.49	180.20	7,523.8	-716.5	159.4	719.2	0.00	0.00	0.00
8,100.0	90.49	180.20	7,523.0	-816.5	159.1	819.2	0.00	0.00	0.00
8,200.0	90.49	180.20	7,522.1	-916.5	158.7	919.2	0.00	0.00	0.00
8,300.0	90.49	180.20	7,521.2	-1,016.5	158.4	1,019.2	0.00	0.00	0.00
8,400.0	90.49	180.20	7,520.4	-1,116.5	158.0	1,119.1	0.00	0.00	0.00
8,500.0	90.49	180.20	7,519.5	-1,216.5	157.7	1,219.1	0.00	0.00	0.00
8,600.0	90.49	180.20	7,518.7	-1,316.5	157.3	1,319.1	0.00	0.00	0.00
8,700.0	90.49	180.20	7,517.8	-1,416.5	157.0	1,419.1	0.00	0.00	0.00
8,800.0	90.49	180.20	7,516.9	-1,516.5	156.7	1,519.0	0.00	0.00	0.00
8,900.0	90.49	180.20	7,516.1	-1,616.5	156.3	1,619.0	0.00	0.00	0.00
9,000.0	90.49	180.20	7,515.2	-1,716.5	156.0	1,719.0	0.00	0.00	0.00
9,100.0	90.49	180.20	7,514.3	-1,816.5	155.6	1,819.0	0.00	0.00	0.00
9,200.0	90.49	180.20	7,513.5	-1,916.4	155.3	1,918.9	0.00	0.00	0.00
9,300.0	90.49	180.20	7,512.6	-2,016.4	154.9	2,018.9	0.00	0.00	0.00
9,400.0	90.49	180.20	7,511.7	-2,116.4	154.6	2,118.9	0.00	0.00	0.00
9,500.0	90.49	180.20	7,510.9	-2,216.4	154.2	2,218.8	0.00	0.00	0.00
9,600.0	90.49	180.20	7,510.0	-2,316.4	153.9	2,318.8	0.00	0.00	0.00
9,700.0	90.49	180.20	7,509.2	-2,416.4	153.5	2,418.8	0.00	0.00	0.00
9,800.0	90.49	180.20	7,508.3	-2,516.4	153.2	2,518.8	0.00	0.00	0.00
9,900.0	90.49	180.20	7,507.4	-2,616.4	152.9	2,618.7	0.00	0.00	0.00
10,000.0	90.49	180.20	7,506.6	-2,716.4	152.5	2,718.7	0.00	0.00	0.00
10,100.0	90.49	180.20	7,505.7	-2,816.4	152.2	2,818.7	0.00	0.00	0.00
10,200.0	90.49	180.20	7,504.8	-2,916.4	151.8	2,918.7	0.00	0.00	0.00
10,300.0	90.49	180.20	7,504.0	-3,016.4	151.5	3,018.6	0.00	0.00	0.00
10,400.0	90.49	180.20	7,503.1	-3,116.4	151.1	3,118.6	0.00	0.00	0.00
10,500.0	90.49	180.20	7,502.2	-3,216.4	150.8	3,218.6	0.00	0.00	0.00
10,600.0	90.49	180.20	7,501.4	-3,316.4	150.4	3,318.6	0.00	0.00	0.00
10,700.0	90.49	180.20	7,500.5	-3,416.4	150.1	3,418.5	0.00	0.00	0.00
10,800.0	90.49	180.20	7,499.7	-3,516.4	149.8	3,518.5	0.00	0.00	0.00
10,900.0	90.49	180.20	7,498.8	-3,616.4	149.4	3,618.5	0.00	0.00	0.00
11,000.0	90.49	180.20	7,497.9	-3,716.4	149.1	3,718.4	0.00	0.00	0.00
11,100.0	90.49	180.20	7,497.1	-3,816.4	148.7	3,818.4	0.00	0.00	0.00
11,200.0	90.49	180.20	7,496.2	-3,916.4	148.4	3,918.4	0.00	0.00	0.00

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**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)
11,300.0	90.49	180.20	7,495.3	-4,016.4	148.0	4,018.4	0.00	0.00	0.00
11,400.0	90.49	180.20	7,494.5	-4,116.4	147.7	4,118.3	0.00	0.00	0.00
11,500.0	90.49	180.20	7,493.6	-4,216.3	147.3	4,218.3	0.00	0.00	0.00
11,600.0	90.49	180.20	7,492.7	-4,316.3	147.0	4,318.3	0.00	0.00	0.00
11,700.0	90.49	180.20	7,491.9	-4,416.3	146.6	4,418.3	0.00	0.00	0.00
11,800.0	90.49	180.20	7,491.0	-4,516.3	146.3	4,518.2	0.00	0.00	0.00
11,900.0	90.49	180.20	7,490.2	-4,616.3	146.0	4,618.2	0.00	0.00	0.00
12,000.0	90.49	180.20	7,489.3	-4,716.3	145.6	4,718.2	0.00	0.00	0.00
12,100.0	90.49	180.20	7,488.4	-4,816.3	145.3	4,818.2	0.00	0.00	0.00
12,200.0	90.49	180.20	7,487.6	-4,916.3	144.9	4,918.1	0.00	0.00	0.00
12,300.0	90.49	180.20	7,486.7	-5,016.3	144.6	5,018.1	0.00	0.00	0.00
12,400.0	90.49	180.20	7,485.8	-5,116.3	144.2	5,118.1	0.00	0.00	0.00
12,500.0	90.49	180.20	7,485.0	-5,216.3	143.9	5,218.0	0.00	0.00	0.00
12,600.0	90.49	180.20	7,484.1	-5,316.3	143.5	5,318.0	0.00	0.00	0.00
12,700.0	90.49	180.20	7,483.2	-5,416.3	143.2	5,418.0	0.00	0.00	0.00
12,800.0	90.49	180.20	7,482.4	-5,516.3	142.8	5,518.0	0.00	0.00	0.00
12,900.0	90.49	180.20	7,481.5	-5,616.3	142.5	5,617.9	0.00	0.00	0.00
13,000.0	90.49	180.20	7,480.7	-5,716.3	142.2	5,717.9	0.00	0.00	0.00
13,100.0	90.49	180.20	7,479.8	-5,816.3	141.8	5,817.9	0.00	0.00	0.00
13,200.0	90.49	180.20	7,478.9	-5,916.3	141.5	5,917.9	0.00	0.00	0.00
13,300.0	90.49	180.20	7,478.1	-6,016.3	141.1	6,017.8	0.00	0.00	0.00
13,400.0	90.49	180.20	7,477.2	-6,116.3	140.8	6,117.8	0.00	0.00	0.00
13,500.0	90.49	180.20	7,476.3	-6,216.3	140.4	6,217.8	0.00	0.00	0.00
13,600.0	90.49	180.20	7,475.5	-6,316.3	140.1	6,317.8	0.00	0.00	0.00
13,700.0	90.49	180.20	7,474.6	-6,416.3	139.7	6,417.7	0.00	0.00	0.00
13,800.0	90.49	180.20	7,473.7	-6,516.2	139.4	6,517.7	0.00	0.00	0.00
13,900.0	90.49	180.20	7,472.9	-6,616.2	139.0	6,617.7	0.00	0.00	0.00
14,000.0	90.49	180.20	7,472.0	-6,716.2	138.7	6,717.6	0.00	0.00	0.00
14,100.0	90.49	180.20	7,471.2	-6,816.2	138.4	6,817.6	0.00	0.00	0.00
14,200.0	90.49	180.20	7,470.3	-6,916.2	138.0	6,917.6	0.00	0.00	0.00
14,300.0	90.49	180.20	7,469.4	-7,016.2	137.7	7,017.6	0.00	0.00	0.00
14,400.0	90.49	180.20	7,468.6	-7,116.2	137.3	7,117.5	0.00	0.00	0.00
14,500.0	90.49	180.20	7,467.7	-7,216.2	137.0	7,217.5	0.00	0.00	0.00
14,600.0	90.49	180.20	7,466.8	-7,316.2	136.6	7,317.5	0.00	0.00	0.00
14,700.0	90.49	180.20	7,466.0	-7,416.2	136.3	7,417.5	0.00	0.00	0.00
14,737.4	90.49	180.20	7,465.6	-7,453.6	136.2	7,454.9	0.00	0.00	0.00
Cross 330' Hardline:14737.4' MD, 7465.6' TVD, 90.49° INC									
14,800.0	90.49	180.20	7,465.1	-7,516.2	135.9	7,517.4	0.00	0.00	0.00
14,812.0	90.49	180.20	7,465.0	-7,528.2	135.9	7,529.4	0.00	0.00	0.00
TD: 14812.6' MD, 7465.0' TVD									
14,812.5	90.49	180.20	7,465.0	-7,528.7	135.9	7,529.9	0.00	0.00	0.00
PBHL(BBSMF#2H)									

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#2H) - plan hits target center - Point	0.00	0.00	7,465.0	-7,528.7	135.9	384,760.10	565,872.10	32° 3' 27.938 N	104° 15' 14.892 W

Database:	Houston R5000 Database	**Local Co-ordinate Reference:**	Well #2H
Company:	Yates Petroleum	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Project:	Eddy, NM (NAD-83)	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site:	Bodacious BSM Federal	**North Reference:**	Grid
Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
476.0	476.0	CASTILE LM/SD		0.00	
1,323.0	1,323.0	TOP OF SALT		0.00	
1,835.0	1,835.0	BASE OF SALT		0.00	
2,025.0	2,025.0	LAMAR		0.00	
2,076.0	2,076.0	BELL CANYON		0.00	
2,974.2	2,973.0	CHERRY CANYON		0.00	
3,069.3	3,068.0	MANZANITA MARKER		0.00	
4,059.6	4,057.0	BRUSHY CANYON		0.00	
5,313.3	5,309.0	BRUSHY CANYON MARKER		0.00	
5,633.3	5,629.0	BONE SPRING LIME		0.00	
5,729.3	5,725.0	AVALON SHALE		0.00	
6,535.3	6,531.0	BONE SPRING 1/SD		0.00	
7,287.4	7,265.0	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
2,000.0	2,000.0	0.0	0.0	Start of Nudge: 3° INC, 90°AZ/@1.5°DLS
5,204.2	5,200.0	0.0	162.5	Drop to Vertical /@1.5°DLS
6,956.4	6,952.1	0.0	167.7	Proposed KOP: 6956.4' MD, 6952.1' TVD
6,956.4	6,952.1	0.0	167.7	Build at 10°/100ft to 90.49° INC @ 180.76° AZ
7,349.0	7,314.7	-129.3	166.0	Cross 330' Hardline:7349.0' MD, 7314.7' TVD, 39.26° INC
7,861.3	7,525.0	-577.8	160.0	EOC: 7861.3' MD, 7525.0' TVD, 90.49° INC, 180.76° AZ, 580.6' VS
7,861.3	7,525.0	-577.8	160.0	Turn to 180.2° AZ@ 2°DLS
14,737.4	7,465.6	-7,453.6	136.2	Cross 330' Hardline:14737.4' MD, 7465.6' TVD, 90.49° INC
14,812.0	7,465.0	-7,528.2	135.9	TD: 14812.5' MD, 7465.0' TVD

Yates Petroleum

Eddy, NM (NAD-83)
Bodacious BSM Federal
#2H

OH
Plan #2

Anticollision Report

08 January, 2015

YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #2H
Project:	Eddy, NM (NAD-83)	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Reference Site:	Bodacious BSM Federal	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site Error:	2.0 usft	**North Reference:**	Grid
Reference Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum separation factor of 20.00	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	**Casing Method:**	Not applied

Survey Tool Program **Date** 1/8/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,812.4	Plan #2 (OH)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Bodacious BSM Federal						
#1H - OH - OH	11,875.0	7,421.0	205.5	105.7	2.059	CC, ES, SF

Offset Design Bodacious BSM Federal - #1H - OH - OH — Offset Site Error: 0.0 usft

Survey Program: 100-CB-GYRO-MS, 412-MWD, 7278-MWD, 12037-BLIND — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,200.0	6,195.7	12,036.8	7,806.9	13.6	78.3	113.70	-128.1	459.5	1,720.0	1,633.7	86.33	19.924	
6,300.0	6,295.7	12,036.8	7,806.9	13.9	78.3	113.70	-128.1	459.5	1,621.8	1,535.3	86.54	18.740	
6,400.0	6,395.7	12,036.8	7,806.9	14.1	78.3	113.70	-128.1	459.5	1,523.9	1,437.1	86.76	17.565	
6,500.0	6,495.7	12,036.8	7,806.9	14.3	78.3	113.70	-128.1	459.5	1,426.3	1,339.3	86.97	16.399	
6,600.0	6,595.7	12,036.8	7,806.9	14.5	78.3	113.70	-128.1	459.5	1,329.0	1,241.8	87.19	15.243	
6,700.0	6,695.7	12,036.8	7,806.9	14.7	78.3	113.70	-128.1	459.5	1,232.1	1,144.7	87.40	14.097	
6,800.0	6,795.7	12,036.8	7,806.9	14.9	78.3	113.70	-128.1	459.5	1,135.8	1,048.2	87.62	12.963	
6,900.0	6,895.7	12,036.8	7,806.9	15.1	78.3	113.70	-128.1	459.5	1,040.2	952.4	87.84	11.843	
6,956.4	6,952.1	12,036.8	7,806.9	15.2	78.3	113.70	-128.1	459.5	986.7	898.7	87.96	11.217	
7,000.0	6,995.7	12,036.8	7,806.9	15.3	78.3	-79.48	-128.1	459.5	945.3	853.2	92.18	10.255	
7,050.0	7,045.3	12,036.8	7,806.9	15.4	78.3	-94.23	-128.1	459.5	898.0	804.8	93.20	9.635	
7,100.0	7,094.2	12,036.8	7,806.9	15.5	78.3	-107.65	-128.1	459.5	851.0	761.1	89.86	9.470	
7,150.0	7,142.0	12,036.8	7,806.9	15.6	78.3	-118.60	-128.1	459.5	804.9	720.7	84.23	9.557	
7,200.0	7,188.4	12,036.8	7,806.9	15.7	78.3	-126.98	-128.1	459.5	760.2	681.9	78.29	9.711	
7,250.0	7,233.0	12,036.8	7,806.9	15.8	78.3	-133.24	-128.1	459.5	717.6	644.5	73.06	9.822	
7,300.0	7,275.5	12,036.8	7,806.9	16.0	78.3	-137.88	-128.1	459.5	677.7	608.9	68.83	9.846	
7,350.0	7,315.5	12,022.0	7,806.6	16.1	78.2	-140.37	-142.9	459.4	641.4	574.7	66.62	9.627	
7,400.0	7,352.7	11,989.4	7,805.9	16.2	77.9	-141.25	-175.5	459.3	608.0	542.0	66.03	9.208	
7,450.0	7,386.9	11,952.2	7,805.1	16.4	77.3	-141.61	-212.7	459.2	577.9	512.4	65.49	8.824	
7,500.0	7,417.7	11,913.9	7,804.1	16.6	76.7	-141.74	-250.9	459.1	550.9	485.9	65.04	8.470	
7,550.0	7,445.1	11,875.8	7,803.3	16.9	76.0	-141.73	-289.0	459.0	527.6	462.8	64.71	8.153	
7,600.0	7,468.6	11,835.0	7,802.7	17.2	75.4	-141.52	-329.8	459.0	508.0	443.5	64.53	7.872	
7,650.0	7,488.3	11,787.3	7,801.9	17.5	74.5	-141.02	-377.6	459.3	492.0	427.5	64.55	7.622	
7,700.0	7,503.8	11,740.0	7,800.6	17.8	73.7	-140.50	-424.8	459.8	479.4	414.8	64.60	7.420	
7,750.0	7,515.2	11,695.6	7,799.5	18.2	73.0	-140.10	-469.2	460.3	470.4	405.8	64.61	7.280	
7,800.0	7,522.3	11,651.8	7,799.2	18.7	72.3	-139.81	-513.0	460.8	465.5	400.9	64.56	7.210	

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

YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #2H
Project:	Eddy, NM (NAD-83)	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Reference Site:	Bodacious BSM Federal	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site Error:	2.0 usft	**North Reference:**	Grid
Reference Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Bodacious BSM Federal - #1H - OH - OH — **Offset Site Error:** 0.0 usft

Survey Program: 100-CB-GYRO-MS, 412-MWD, 7278-MWD, 12037-BLIND — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,848.4	7,525.0	11,600.8	7,799.6	19.1	71.4	-139.64	-563.9	460.8	464.1	399.8	64.33	7.215	
7,850.0	7,525.0	11,599.1	7,799.6	19.2	71.4	-139.64	-565.7	460.8	464.1	399.8	64.31	7.217	
7,861.3	7,525.0	11,586.8	7,799.8	19.3	71.2	-139.65	-578.0	460.6	464.2	400.0	64.22	7.229	
7,889.4	7,524.8	11,556.3	7,800.3	19.5	70.7	-139.76	-608.5	459.8	464.5	400.5	63.95	7.263	
7,900.0	7,524.7	11,545.0	7,800.6	19.6	70.5	-139.82	-619.8	459.4	464.5	400.7	63.84	7.276	
8,000.0	7,523.8	11,439.4	7,802.7	20.7	68.7	-140.44	-725.2	455.0	464.2	401.4	62.76	7.396	
8,100.0	7,523.0	11,331.8	7,803.1	21.9	66.9	-141.06	-832.7	449.3	462.1	400.3	61.75	7.483	
8,200.0	7,522.1	11,234.0	7,802.2	23.1	65.3	-141.39	-930.4	445.5	459.7	398.5	61.19	7.513	
8,300.0	7,521.2	11,134.2	7,801.1	24.5	63.6	-141.66	-1,030.1	442.2	457.7	397.0	60.72	7.538	
8,400.0	7,520.4	11,034.0	7,800.0	25.9	61.9	-141.98	-1,130.3	438.4	455.5	395.2	60.24	7.561	
8,500.0	7,519.5	10,933.9	7,798.7	27.3	60.2	-142.20	-1,230.3	435.5	453.5	393.6	59.88	7.573	
8,600.0	7,518.7	10,833.5	7,796.2	28.8	58.6	-142.27	-1,330.7	433.3	451.1	391.4	59.71	7.555	
8,700.0	7,517.8	10,738.6	7,794.1	30.3	57.0	-142.28	-1,425.5	431.8	449.3	389.6	59.69	7.527	
8,784.6	7,517.1	10,659.1	7,793.3	31.6	55.7	-142.31	-1,505.0	431.1	448.9	389.2	59.69	7.520	
8,800.0	7,516.9	10,644.3	7,793.2	31.9	55.5	-142.33	-1,519.8	431.0	448.9	389.2	59.67	7.523	
8,900.0	7,516.1	10,544.0	7,793.6	33.5	53.8	-142.53	-1,620.1	429.6	449.2	389.8	59.43	7.559	
9,000.0	7,515.2	10,442.0	7,793.6	35.1	52.1	-142.76	-1,722.1	427.7	449.0	389.8	59.17	7.588	
9,100.0	7,514.3	10,339.9	7,793.4	36.7	50.4	-142.99	-1,824.1	425.5	448.5	389.5	58.93	7.611	
9,200.0	7,513.5	10,236.5	7,792.7	38.3	48.7	-143.23	-1,927.5	422.9	447.3	388.6	58.67	7.625	
9,300.0	7,512.6	10,132.4	7,790.4	40.0	46.9	-143.31	-2,031.5	420.9	445.3	386.7	58.57	7.603	
9,400.0	7,511.7	10,034.9	7,787.5	41.7	45.4	-143.23	-2,129.0	419.7	443.0	384.3	58.71	7.545	
9,500.0	7,510.9	9,932.8	7,784.7	43.4	43.7	-143.20	-2,231.1	418.2	440.9	382.1	58.79	7.499	
9,600.0	7,510.0	9,831.6	7,782.6	45.1	42.1	-143.40	-2,332.2	415.0	438.2	379.6	58.68	7.468	
9,700.0	7,509.2	9,735.8	7,781.2	46.8	40.6	-143.65	-2,427.9	411.9	436.1	377.5	58.58	7.444	
9,800.0	7,508.3	9,635.8	7,780.0	48.5	38.9	-143.88	-2,527.9	409.2	434.3	375.9	58.44	7.431	
9,900.0	7,507.4	9,533.9	7,778.4	50.2	37.3	-144.06	-2,629.7	406.6	432.5	374.1	58.37	7.409	
10,000.0	7,506.6	9,430.8	7,776.8	51.9	35.7	-144.44	-2,732.7	402.2	429.6	371.5	58.14	7.389	
10,100.0	7,505.7	9,335.9	7,776.2	53.7	34.3	-144.88	-2,827.6	398.0	427.4	369.5	57.94	7.376	
10,200.0	7,504.8	9,239.3	7,775.6	55.4	32.8	-145.20	-2,924.1	394.9	426.1	368.2	57.85	7.364	
10,291.2	7,504.1	9,151.9	7,775.9	57.0	31.5	-145.51	-3,011.5	392.5	425.7	367.9	57.77	7.369	
10,300.0	7,504.0	9,143.3	7,776.0	57.2	31.4	-145.54	-3,020.1	392.3	425.7	368.0	57.76	7.371	
10,400.0	7,503.1	9,043.6	7,776.3	58.9	29.9	-145.79	-3,119.8	390.6	425.9	368.2	57.72	7.379	
10,471.9	7,502.5	8,971.1	7,775.9	60.2	28.8	-145.85	-3,192.2	389.9	425.9	368.0	57.81	7.367	
10,500.0	7,502.2	8,944.7	7,775.8	60.7	28.4	-145.86	-3,218.6	389.8	425.9	368.0	57.89	7.358	
10,600.0	7,501.4	8,847.1	7,775.5	62.4	27.0	-145.83	-3,316.2	390.2	426.8	368.7	58.17	7.338	
10,700.0	7,500.5	8,743.3	7,774.3	64.2	25.5	-145.64	-3,420.0	391.3	427.4	368.8	58.56	7.298	
10,759.1	7,500.0	8,684.0	7,772.9	65.2	24.7	-145.44	-3,479.3	392.3	427.3	368.4	58.92	7.252	
10,800.0	7,499.7	8,647.0	7,772.3	66.0	24.2	-145.34	-3,516.3	392.9	427.5	368.3	59.18	7.223	
10,900.0	7,498.8	8,547.5	7,772.2	67.7	22.9	-145.22	-3,615.8	394.1	429.0	369.3	59.64	7.193	
11,000.0	7,497.9	8,447.0	7,772.1	69.5	21.6	-145.27	-3,716.2	393.8	429.7	369.7	60.00	7.161	
11,100.0	7,497.1	8,353.6	7,774.1	71.3	20.6	-145.67	-3,809.7	391.9	431.2	371.1	60.14	7.171	
11,200.0	7,496.2	8,226.0	7,777.4	73.1	19.2	-146.58	-3,937.1	386.1	432.0	372.4	59.60	7.249	
11,300.0	7,495.3	8,116.1	7,776.9	74.8	18.0	-147.84	-4,046.3	374.8	427.0	368.1	58.89	7.251	
11,400.0	7,494.5	7,963.4	7,760.4	76.6	16.6	-148.09	-4,197.3	362.6	414.4	355.4	59.02	7.021	
11,500.0	7,493.6	7,716.5	7,646.9	78.4	15.2	-138.46	-4,413.2	354.0	368.0	299.6	68.44	5.377	
11,600.0	7,492.7	7,610.5	7,575.2	80.2	15.0	-128.56	-4,491.1	350.9	313.3	235.1	78.19	4.007	
11,700.0	7,491.9	7,511.3	7,497.1	82.0	14.8	-112.71	-4,552.0	350.3	258.8	168.3	90.45	2.861	
11,800.0	7,491.0	7,452.6	7,445.5	83.8	14.8	-99.43	-4,579.8	350.8	216.8	119.4	97.34	2.227	
11,875.0	7,490.4	7,421.0	7,416.5	85.1	14.8	-91.42	-4,592.1	351.5	205.5	105.7	99.81	2.059	CC, ES, SF
11,900.0	7,490.2	7,412.5	7,408.5	85.6	14.8	-89.20	-4,595.1	351.7	206.8	106.5	100.29	2.062	
12,000.0	7,489.3	7,384.7	7,382.0	87.4	14.8	-81.93	-4,603.7	352.3	237.1	135.7	101.32	2.340	
12,100.0	7,488.4	7,365.0	7,363.0	89.2	14.8	-76.86	-4,608.8	352.7	297.1	195.3	101.76	2.919	

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

YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #2H
Project:	Eddy, NM (NAD-83)	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Reference Site:	Bodacious BSM Federal	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site Error:	2.0 usft	**North Reference:**	Grid
Reference Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design Bodacious BSM Federal - #1H - OH - OH — **Offset Site Error:** 0.0 usft

Survey Program: 100-CB-GYRO-MS, 412-MWD, 7278-MWD, 12037-BLIND — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,200.0	7,487.6	7,350.6	7,349.0	91.0	14.8	-73.27	-4,611.9	352.9	373.5	271.3	102.14	3.656	
12,300.0	7,486.7	7,341.0	7,339.5	92.8	14.8	-70.91	-4,613.7	353.0	458.4	355.7	102.78	4.460	
12,400.0	7,485.8	7,331.4	7,330.1	94.6	14.8	-68.61	-4,615.3	353.0	548.2	444.9	103.28	5.308	
12,500.0	7,485.0	7,324.7	7,323.4	96.4	14.8	-67.04	-4,616.3	353.1	640.8	536.7	104.05	6.158	
12,600.0	7,484.1	7,310.0	7,308.8	98.2	14.8	-63.71	-4,618.0	353.0	735.4	631.8	103.54	7.102	
12,700.0	7,483.2	7,310.0	7,308.8	100.0	14.8	-63.71	-4,618.0	353.0	830.9	725.7	105.19	7.899	
12,800.0	7,482.4	7,310.0	7,308.8	101.8	14.8	-63.71	-4,618.0	353.0	927.4	820.5	106.84	8.680	
12,900.0	7,481.5	7,310.0	7,308.8	103.6	14.8	-63.71	-4,618.0	353.0	1,024.5	916.0	108.49	9.444	
13,000.0	7,480.7	7,310.0	7,308.8	105.4	14.8	-63.71	-4,618.0	353.0	1,122.2	1,012.0	110.14	10.189	
13,100.0	7,479.8	7,310.0	7,308.8	107.2	14.8	-63.71	-4,618.0	353.0	1,220.2	1,108.4	111.79	10.916	
13,200.0	7,478.9	7,310.0	7,308.8	109.0	14.8	-63.71	-4,618.0	353.0	1,318.5	1,205.1	113.44	11.624	
13,300.0	7,478.1	7,297.2	7,296.1	110.8	14.8	-60.93	-4,619.1	353.0	1,416.9	1,304.0	112.82	12.558	
13,400.0	7,477.2	7,295.3	7,294.2	112.6	14.8	-60.54	-4,619.3	353.0	1,515.5	1,401.5	114.09	13.283	
13,500.0	7,476.3	7,293.6	7,292.5	114.4	14.8	-60.18	-4,619.4	353.0	1,614.4	1,499.0	115.39	13.991	
13,600.0	7,475.5	7,292.0	7,290.9	116.2	14.8	-59.86	-4,619.5	353.0	1,713.3	1,596.6	116.71	14.681	
13,700.0	7,474.6	7,278.0	7,276.9	118.0	14.8	-57.03	-4,620.1	352.9	1,812.6	1,697.0	115.58	15.683	
13,800.0	7,473.7	7,278.0	7,276.9	119.8	14.8	-57.03	-4,620.1	352.9	1,911.7	1,794.6	117.15	16.319	
13,900.0	7,472.9	7,278.0	7,276.9	121.6	14.8	-57.03	-4,620.1	352.9	2,011.0	1,892.2	118.72	16.939	
14,000.0	7,472.0	7,278.0	7,276.9	123.4	14.8	-57.03	-4,620.1	352.9	2,110.2	1,989.9	120.29	17.543	
14,100.0	7,471.2	7,278.0	7,276.9	125.2	14.8	-57.03	-4,620.1	352.9	2,209.6	2,087.7	121.86	18.132	
14,200.0	7,470.3	7,278.0	7,276.9	127.1	14.8	-57.03	-4,620.1	352.9	2,309.0	2,185.6	123.43	18.707	
14,300.0	7,469.4	7,278.0	7,276.9	128.9	14.8	-57.03	-4,620.1	352.9	2,408.4	2,283.4	125.00	19.267	
14,400.0	7,468.6	7,278.0	7,276.9	130.7	14.8	-57.03	-4,620.1	352.9	2,507.9	2,381.4	126.57	19.814	

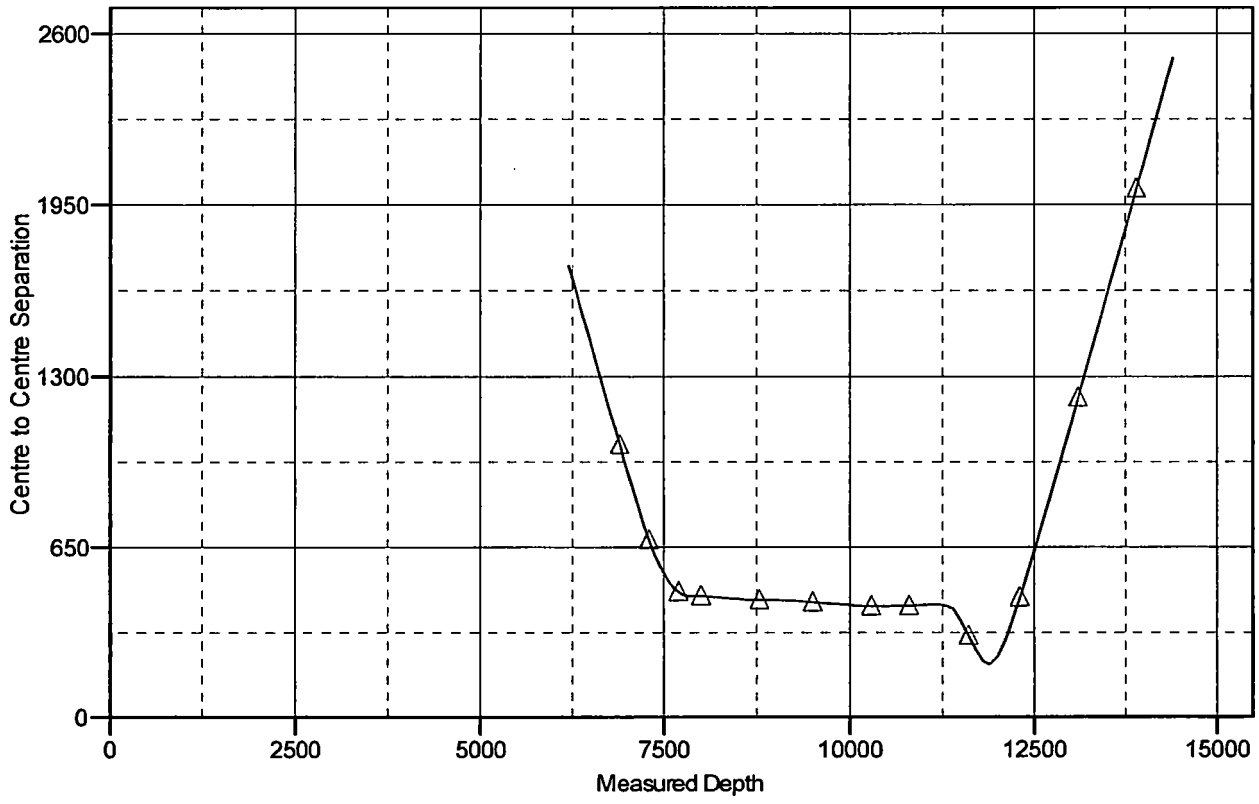
YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #2H
Project:	Eddy, NM (NAD-83)	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Reference Site:	Bodacious BSM Federal	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site Error:	2.0 usft	**North Reference:**	Grid
Reference Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3382.0usft (Cactus 124 - KB=	Coordinates are relative to: #2H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.04°

Ladder Plot



LEGEND

#1H, OH, OHV0

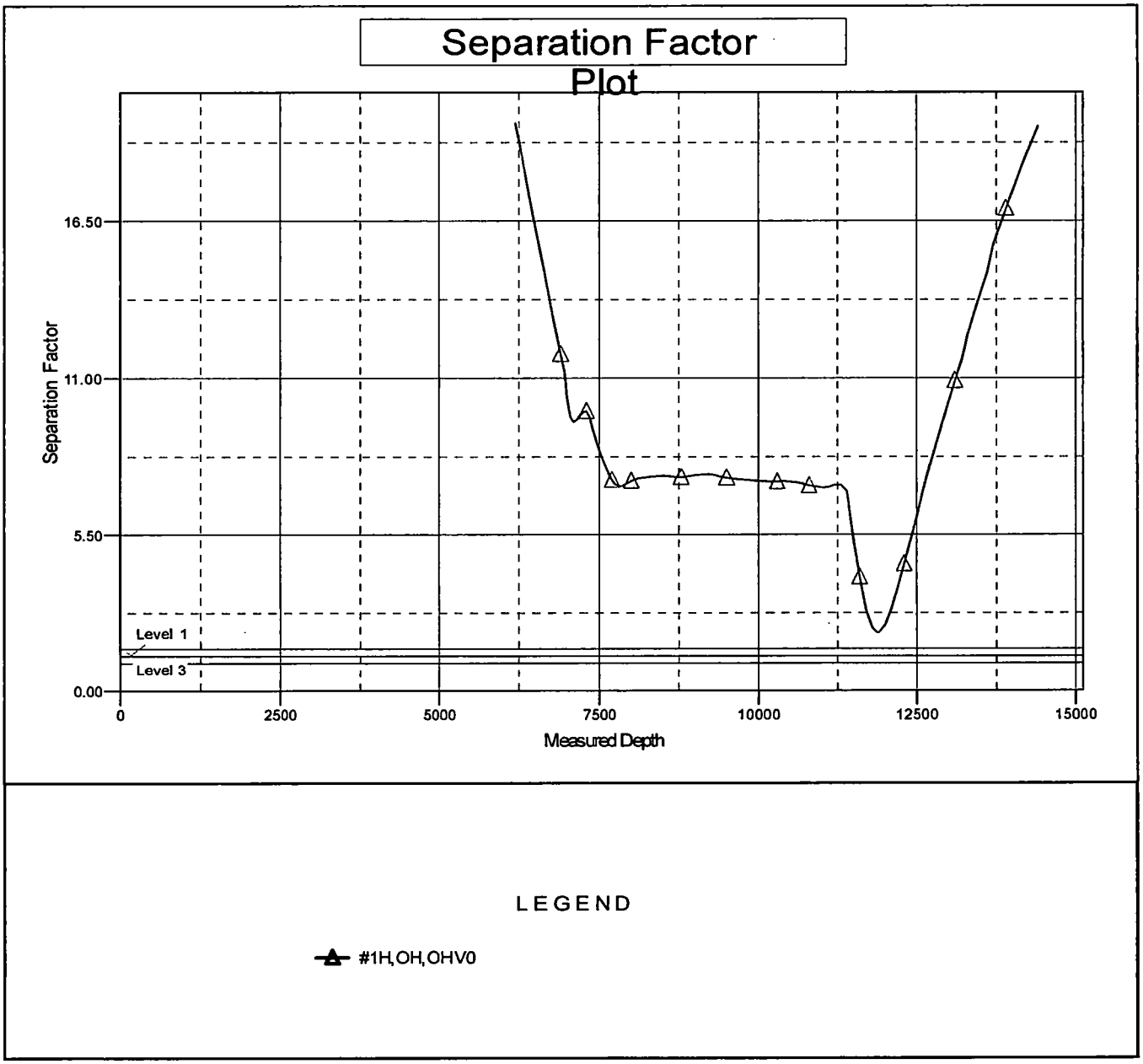
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

YATES PETROLEUM CORPORATION

Anticollision Report

Company:	Yates Petroleum	**Local Co-ordinate Reference:**	Well #2H
Project:	Eddy, NM (NAD-83)	**TVD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Reference Site:	Bodacious BSM Federal	**MD Reference:**	RKB @ 3382.0usft (Cactus 124 - KB=25')
Site Error:	2.0 usft	**North Reference:**	Grid
Reference Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	Houston R5000 Database
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3382.0usft (Cactus 124 - KB=	Coordinates are relative to: #2H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.04°



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 Mayfield	**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

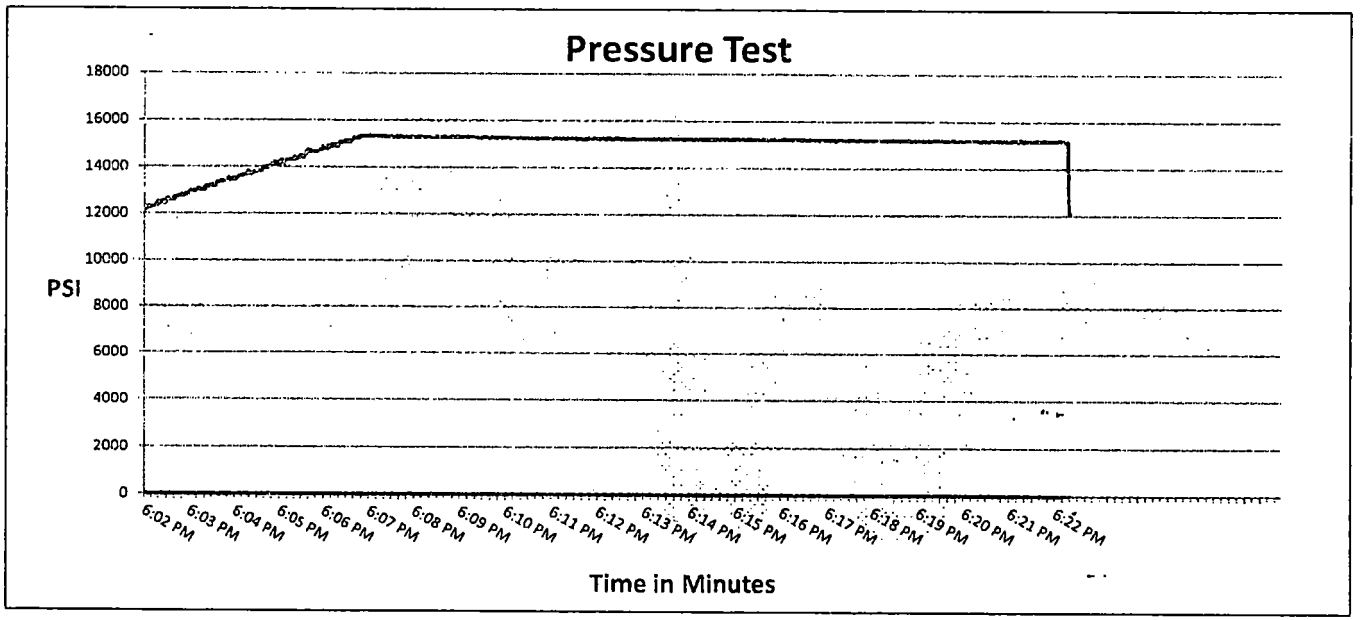
Pick Ticket #: 229391

Hose Specifications

Hose Type	Length
Mud	35'
I.D.	O.D.
4"	6.13"
Working Pressure	Burst Pressure
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	Final O.D.
6.62"	6.66"
Hose Serial #	Hose Assembly Serial #
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 Kellington

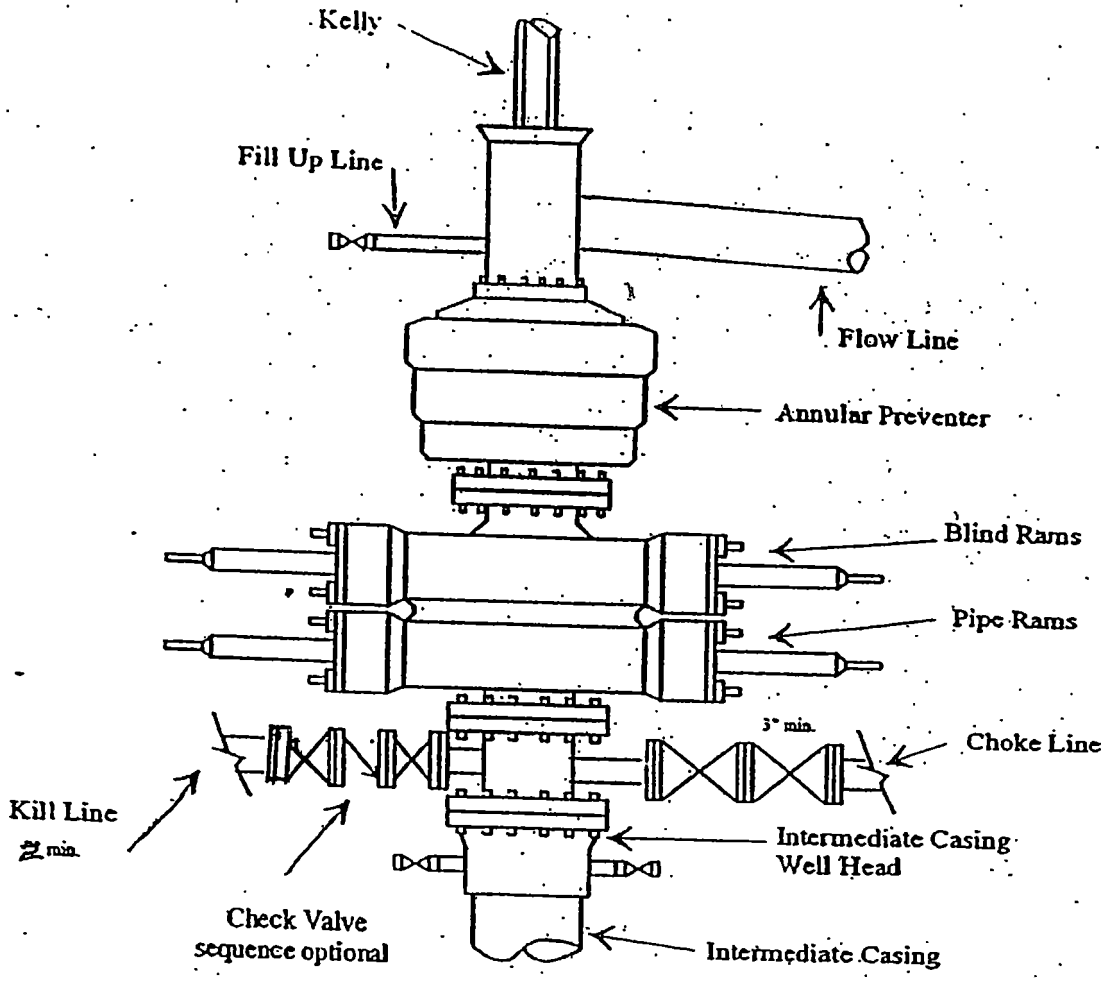
Approved By: *Phil Maytubby*

x Phil Maytubby

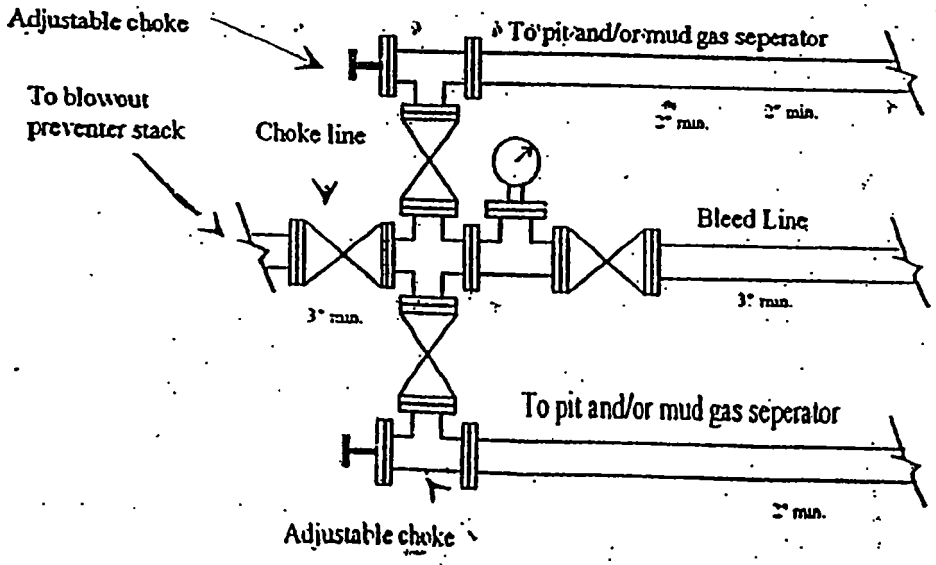
Yates Petroleum Corporation

BOP-3

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

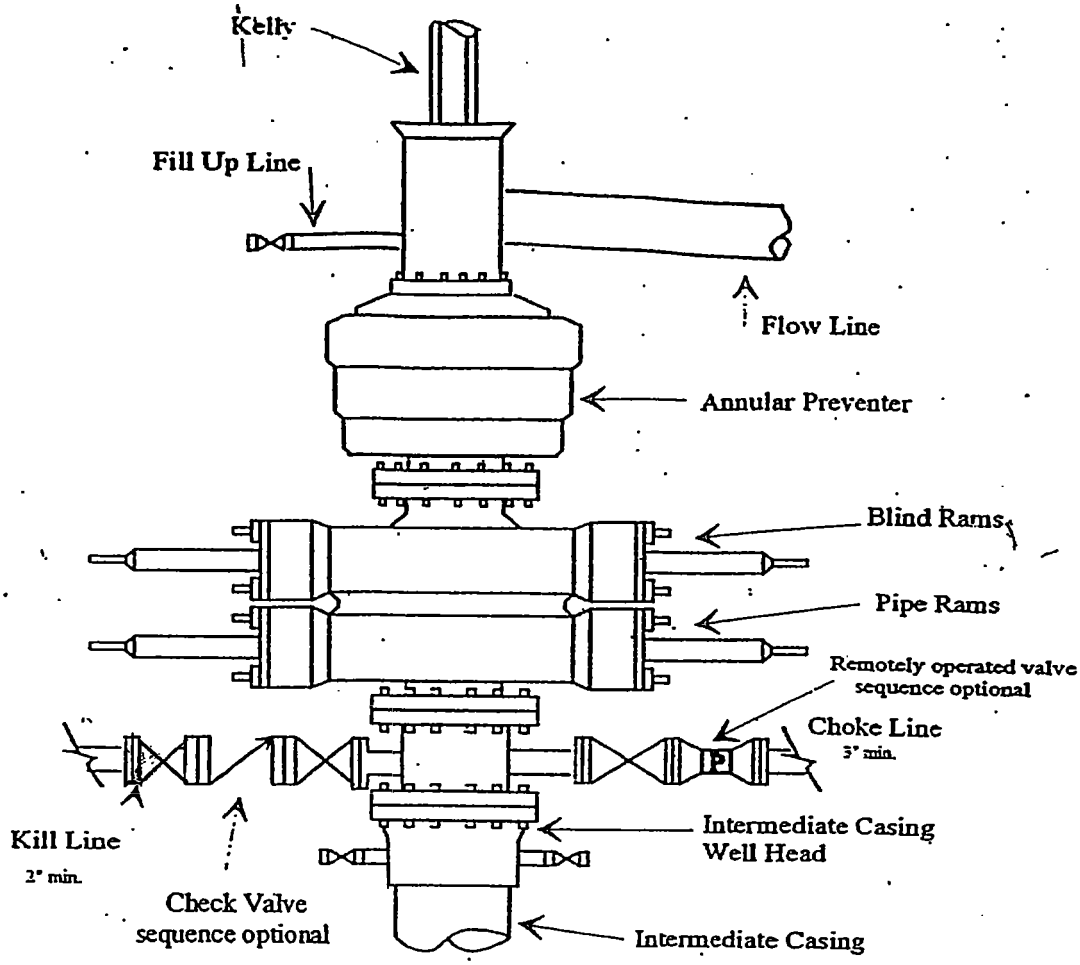


Typical 3,000 psi choke manifold assembly with at least these minimun features

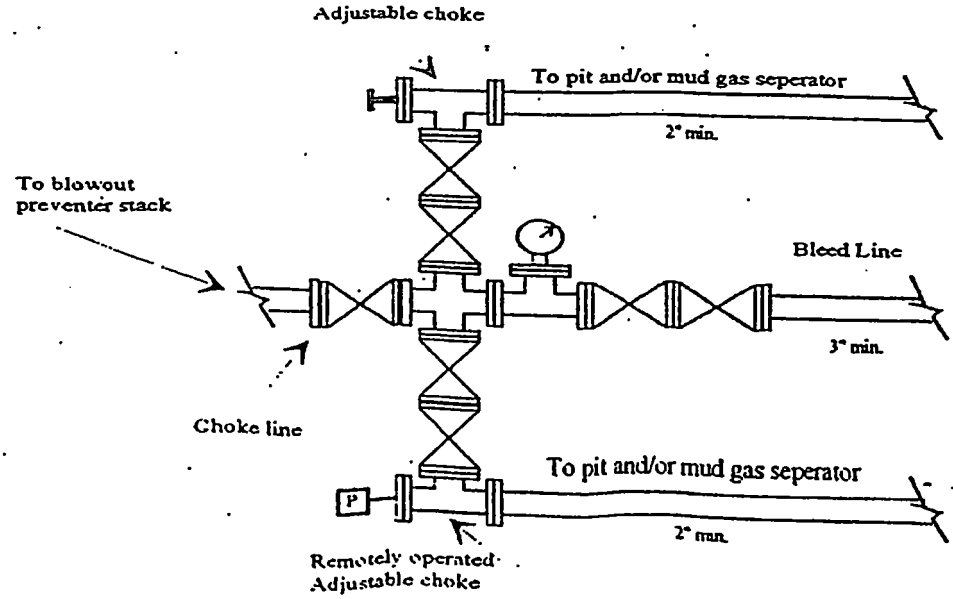


Yates Petroleum Corporation

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

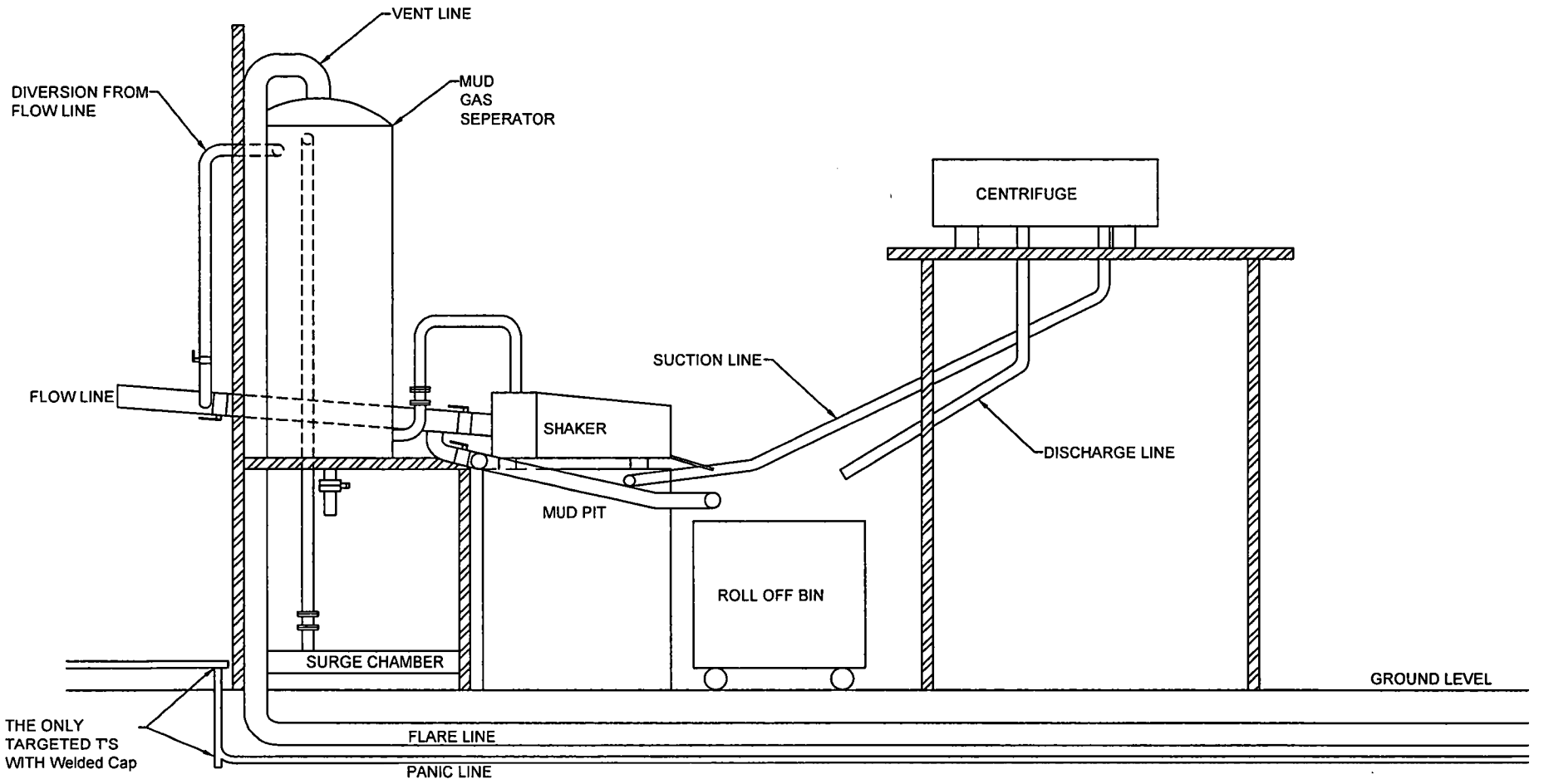


Typical 5,000 psi choke manifold assembly with at least these minimun features

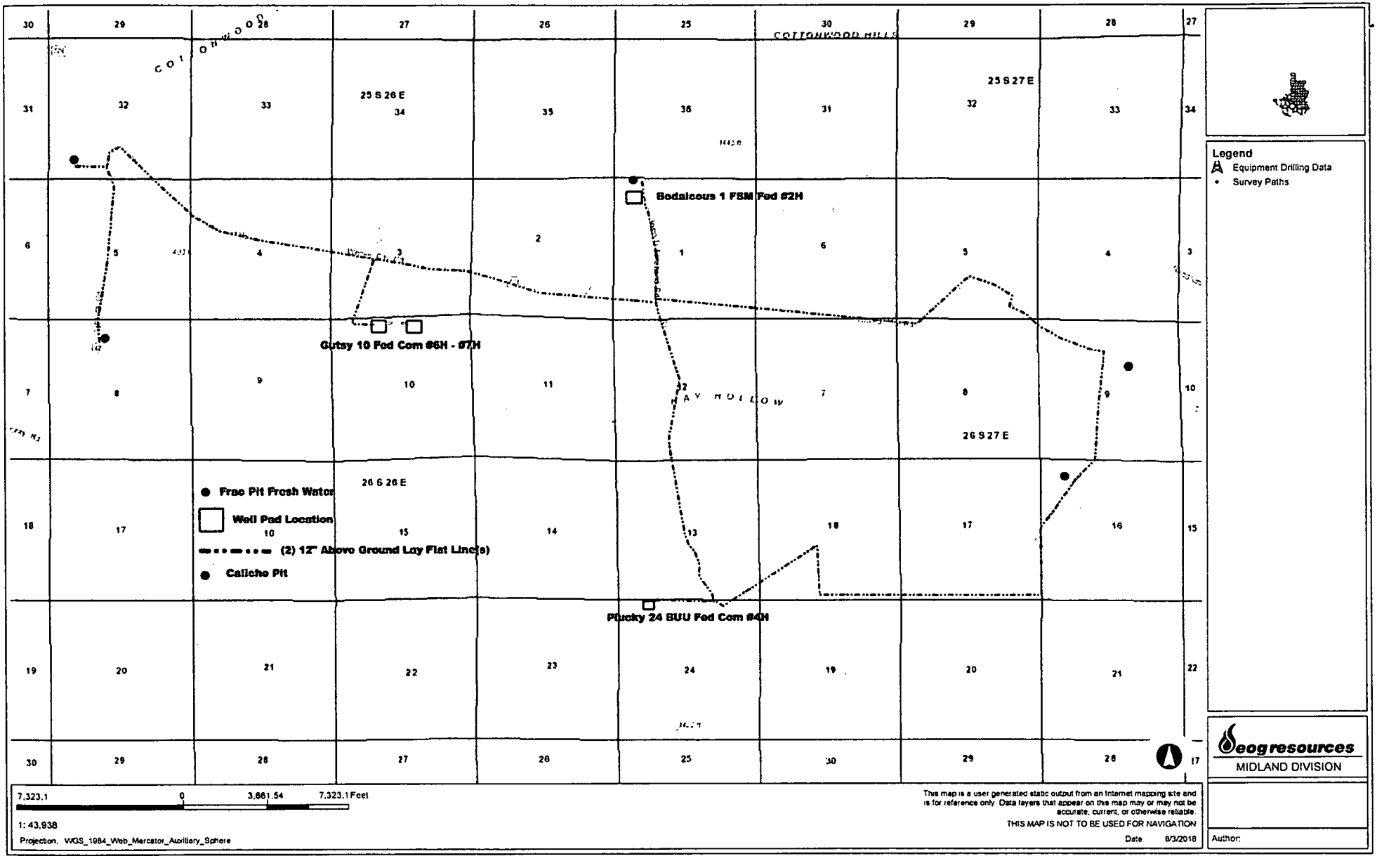


YATES PETROLEUM CORPORATION

Piping from Choke Manifold
to the Closed Loop Drilling Mud System



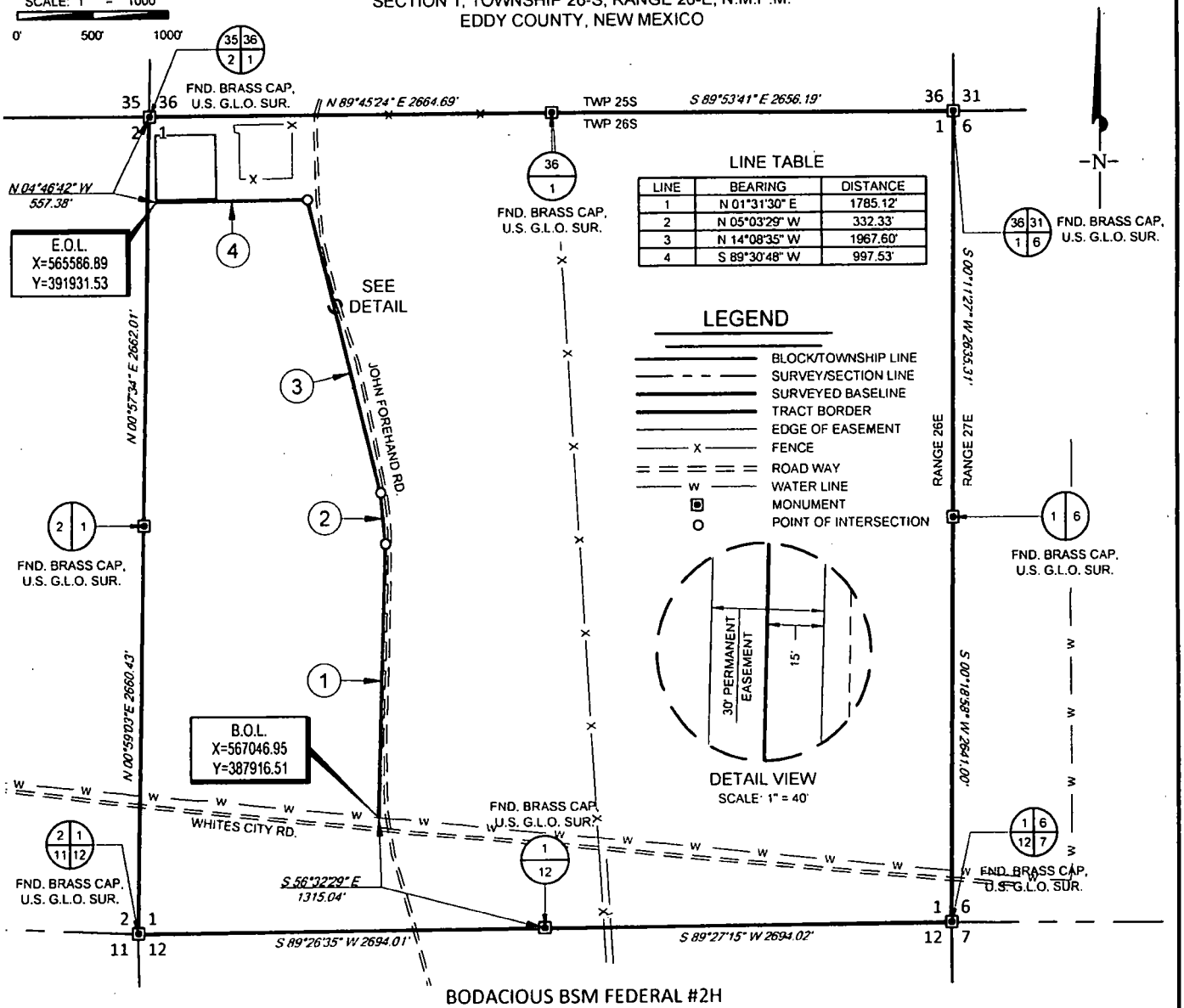
The flare discharge must be 100' from wellhead for non H2S wells and 150' from wellhead for wells expected to encounter H2S.


Bodaicous 1 FSM Fed #2H
Gutsy 10 Fed Com #6H - #7H
Plucky 24 BUU Fed Com #4H
Frac Pit Fresh Water
Well Pad Location
(2) 12" Above Ground Lay Flat Line(s)
Caliche Pit
25 S 26 E
26 S 26 E
25 S 27 E
26 S 27 E
COTTONWOOD HILLS
HAY HOLLOW
Legend
Equipment Drilling Data
Survey Paths
7,323.1
0
3,661.54
7,323.1 Feet
1: 43,938
Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION
Date: 8/3/2018
eog resources
MIDLAND DIVISION
Author:

SCALE: 1" = 1000'

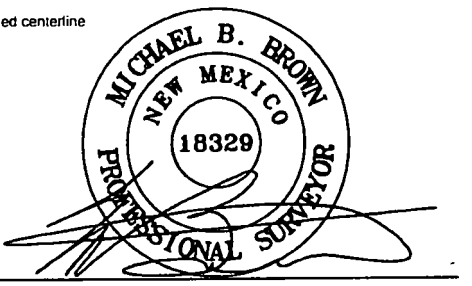
0' 500' 1000'

SECTION 1, TOWNSHIP 26-S, RANGE 26-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



BODACIOUS BSM FEDERAL #2H
PRODUCED WATER LINE

Being a proposed produced water line easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 5082.58 feet or 308.04 rods, containing 3.50 acres more or less.



Michael Blake Brown, P.S. No. 18329
AUGUST 14, 2018

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

eog resources, inc.

BODACIOUS BSM FEDERAL #2H PRODUCED WATER LINE	REVISION: INT	DATE
DATE: 08/09/2018		
FILE: EP_BODACIOUS_BSM_FEDERAL_2H_WATER		
DRAWN BY: CSG/sme		
SHEET: 1 OF 1		

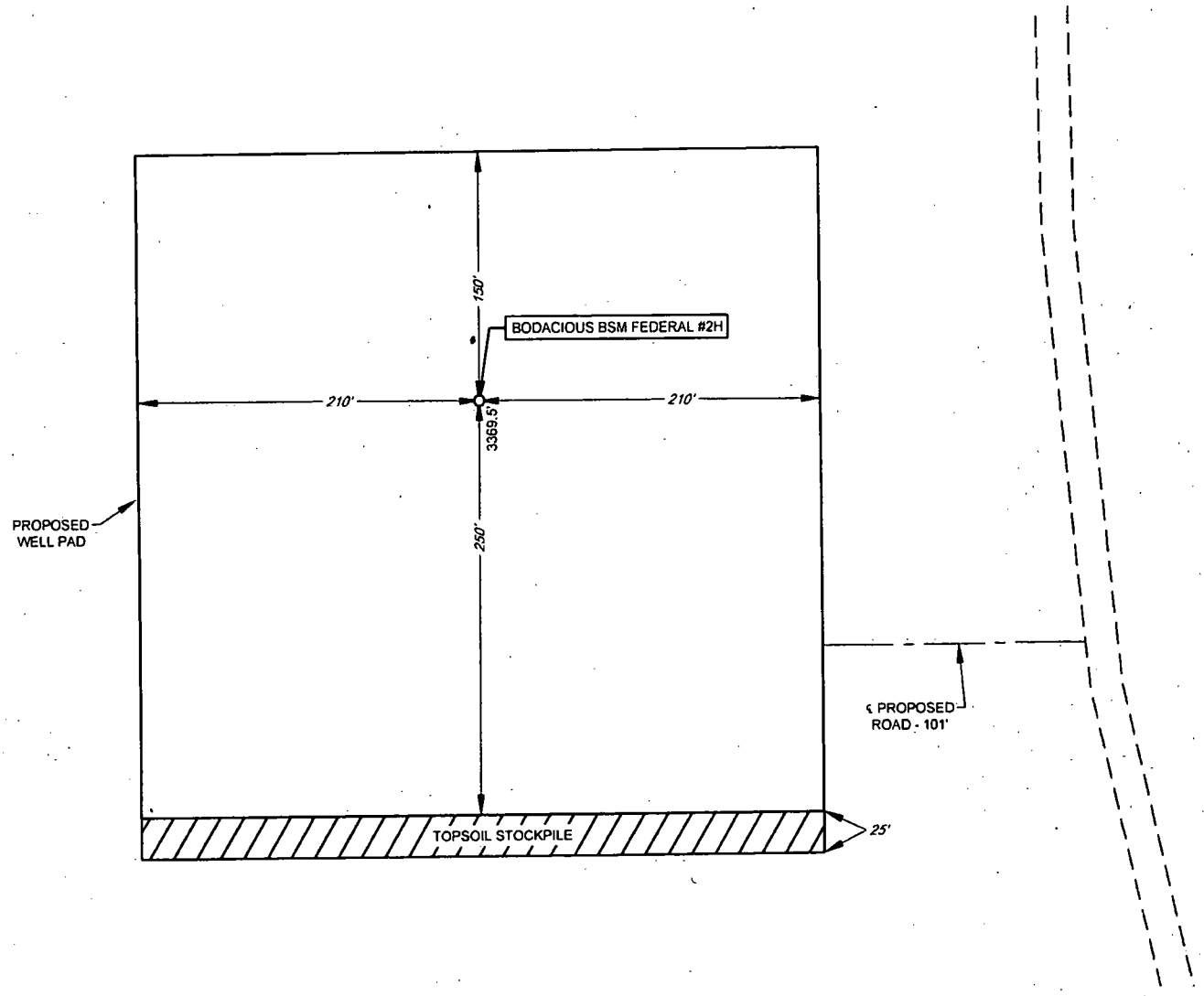
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. P.O.B. = POINT OF BEGINNING
5. E.O.L. = END OF LINE

EXHIBIT 2B

eog resources, inc.

SECTION 1, TOWNSHIP 26-S, RANGE 26-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

#2H LATITUDE N 32.0780969 #2H LONGITUDE W 104.2545620

LEGEND

PROPOSED ROAD

ROAD WAY

N

SCALE: 1" = 100'

0' 50' 100'

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

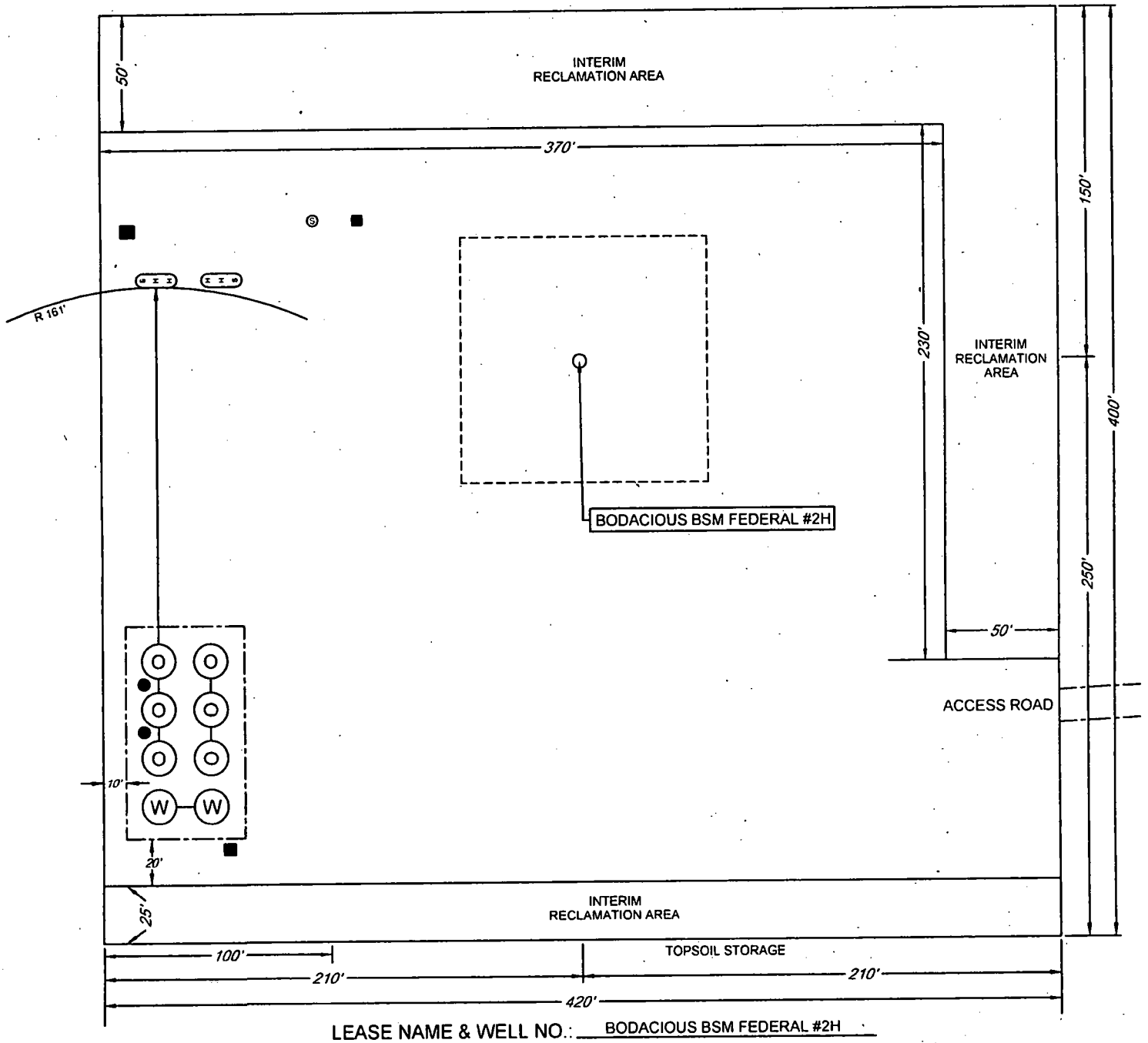
S:\SURVEY\EOG_MIDLAND\BODACIOUS_BSM_FEDERAL\FINAL_PRODUCTS\LO_BODACIOUS_BSM_FEDERAL_2H_REV1.DWG 8/20/2018 3:48:38 PM tstewart

EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 1, TOWNSHIP 26-S, RANGE 26-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 60'



LEASE NAME & WELL NO.: BODACIOUS BSM FEDERAL #2H

#2H LATITUDE N 32.0780969 #2H LONGITUDE W 104.2545620

LEGEND

O	500 BBL OIL TANK	S	FLARE SEPARATOR
W	500 BBL WATER TANK		VRU
H S	36 x 15 HEATER/ SEPARATOR		48 X 25 VRT
			FP FLARE
			OP FLARE

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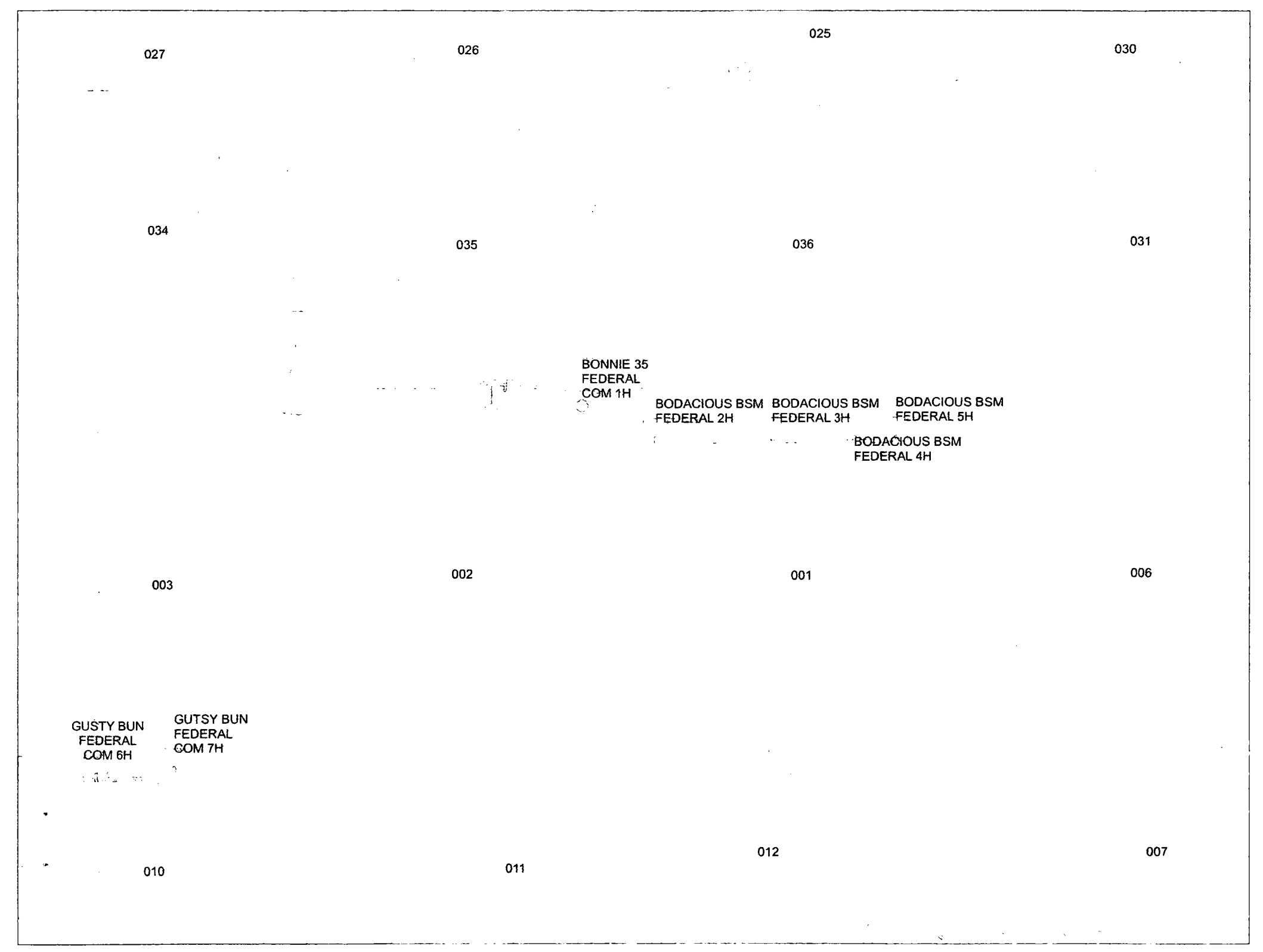
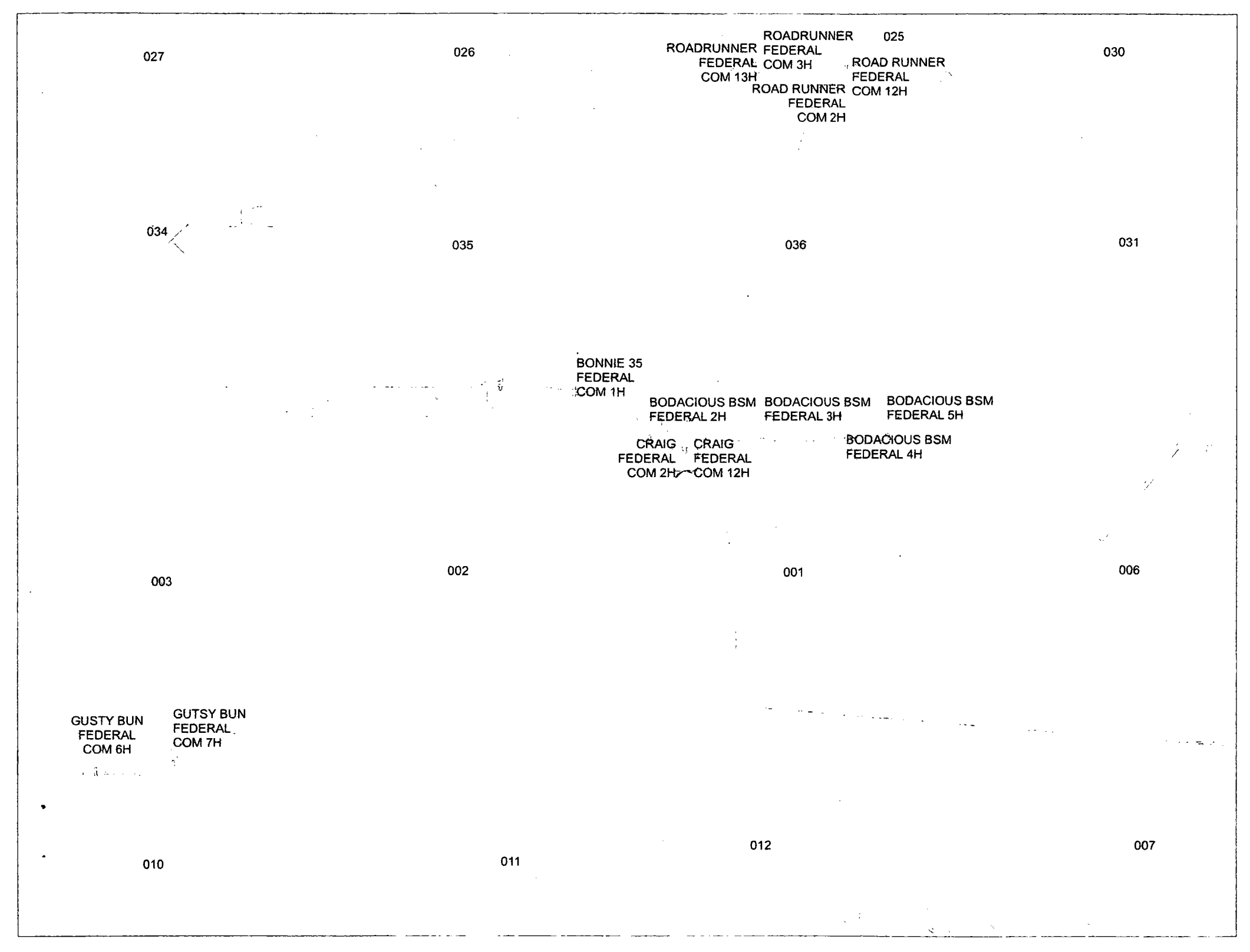

027
026
025
030
034
035
036
031
BONNIE 35
FEDERAL
COM 1H
BODACIOUS BSM
FEDERAL 2H
BODACIOUS BSM
FEDERAL 3H
BODACIOUS BSM
FEDERAL 5H
BODACIOUS BSM
FEDERAL 4H
003
002
001
006
GUSTY BUN
FEDERAL
COM 6H
GUTSY BUN
FEDERAL
COM 7H
010
011
012
007


027
026
ROADRUNNER FEDERAL COM 13H
ROADRUNNER FEDERAL COM 3H
025
ROAD RUNNER FEDERAL COM 12H
ROAD RUNNER FEDERAL COM 2H
030
034
035
036
031
BONNIE 35 FEDERAL COM 1H
BODACIOUS BSM FEDERAL 2H
BODACIOUS BSM FEDERAL 3H
BODACIOUS BSM FEDERAL 5H
CRAIG FEDERAL COM 2H
CRAIG FEDERAL COM 12H
BODACIOUS BSM FEDERAL 4H
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GUSTY BUN FEDERAL COM 6H
GUTSY BUN FEDERAL COM 7H
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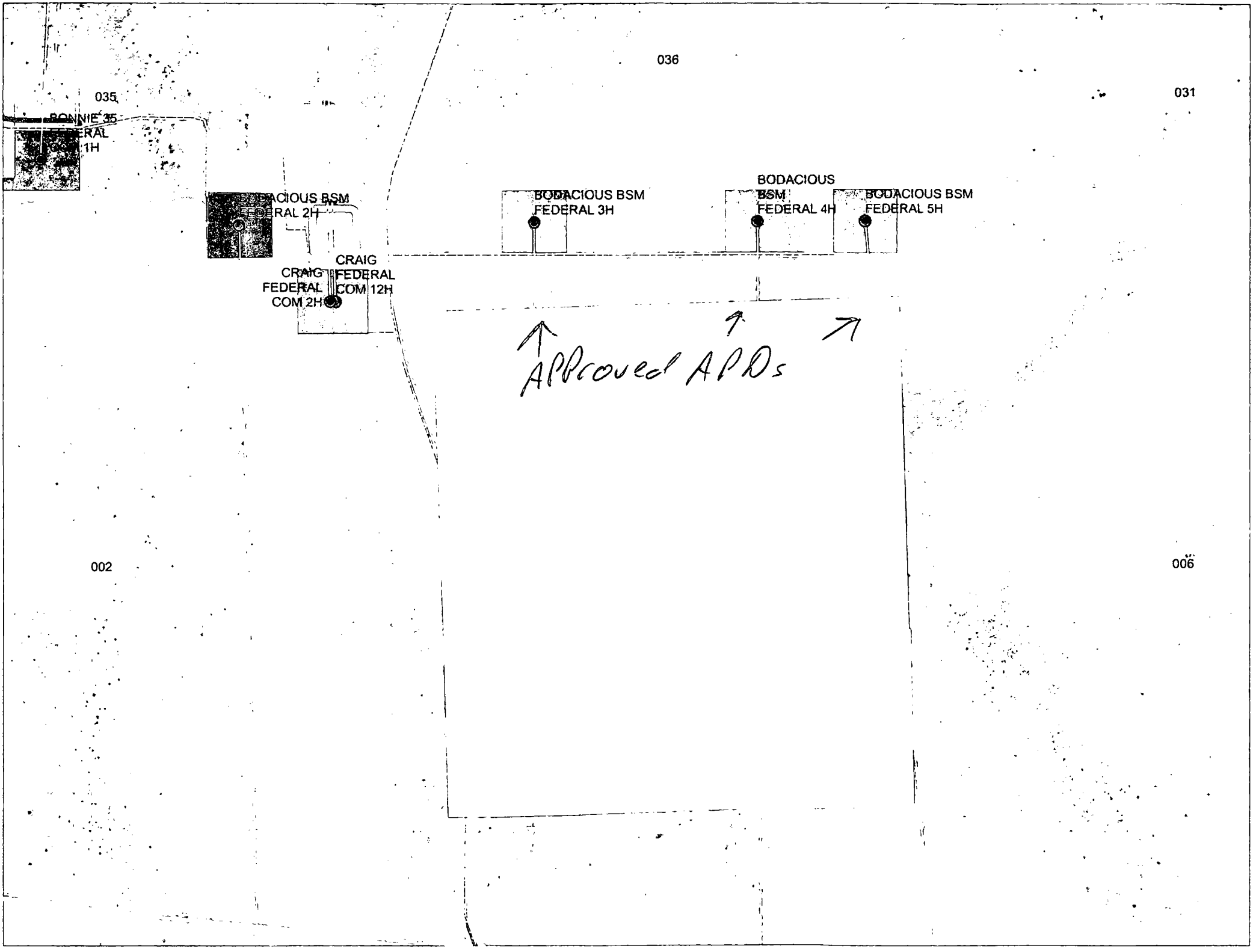
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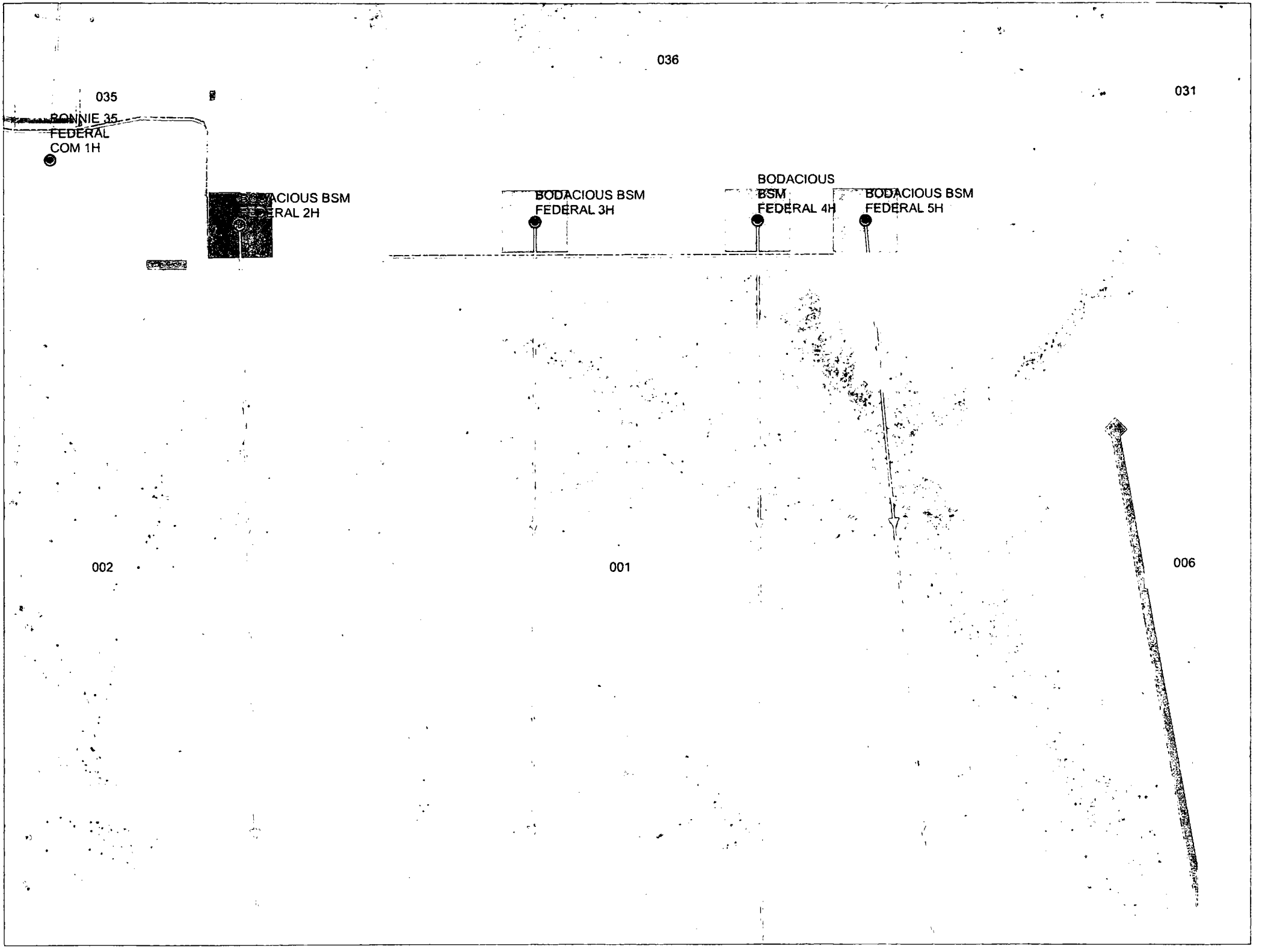
031
BONNIE 35
1H
BODACIOUS BSM
FEDERAL 2H
BODACIOUS BSM
FEDERAL 3H
BODACIOUS
BSM
FEDERAL 4H
BODACIOUS BSM
FEDERAL 5H
CRAIG
FEDERAL
COM 12H
CRAIG
FEDERAL
COM 2H
Approved APDs
002
006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ACIOUS BSM
ERAL 2H
BODACIOUS BSM
FEDERAL 3H
BODACIOUS
BSM
FEDERAL 4H
BODACIOUS BSM
FEDERAL 5H
002
001
006


036
035
031
002
001
006

APD Tracking #: ATS-15-366

Well-Site Evaluation Field Form Bodacious BSM

Operator Name: YATES Well Name Federal #2H

SHL: Section #1 T. 26 S. R. 26 E. Footage 330 FNL & 200 FWL

Well Type: (Horizontal) Vertical / (Oil) Gas NOS/APD Received? NOS (APD) No

Surface Management Agency (SMA): (BLM) FEE STATE SMA Contacted? Yes No

Operator Representative/ Contact Name: Cy Cowan; Travis Hahn Phone

BLM Onsite Representatives Paul Murphy & Bob Ballard Date 6/20/16 6/21/16

Description & Topography: (cut & fill, etc.) Slope from the South

Soils: Loam Cave Area: High

Vegetation: Creosote, Cactus, Yucca, Mesquite

Hydrology: (playas, floodplain, drainages, erosive soils, etc.) Drainage along West and from the South Toward North East

Wildlife: (habitat, LPC, SDL, etc.)

Range Improvements: (fences, etc.) Hay Hollow #78107

Well Infrastructure

V-Door Direction: Topsoil:

Pad Size: 400 x 400

Road Route:

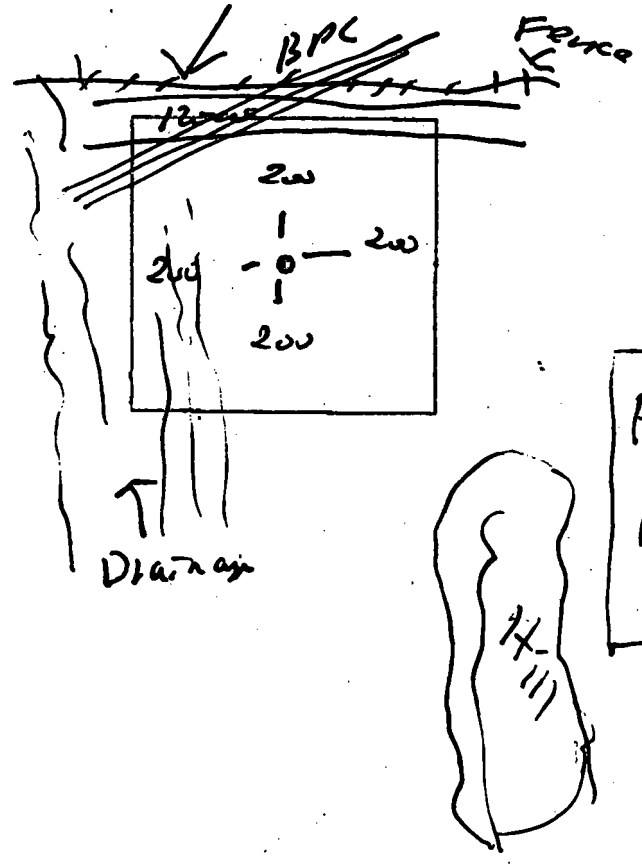
Prod. Facility Placement:

Interim Rec:

Other: Berm W / N to Protect the Drainage

Evaluation: (Moved?) Moved 130 S to Bring out of Drainage

Road Cut & Fill Diagram



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.

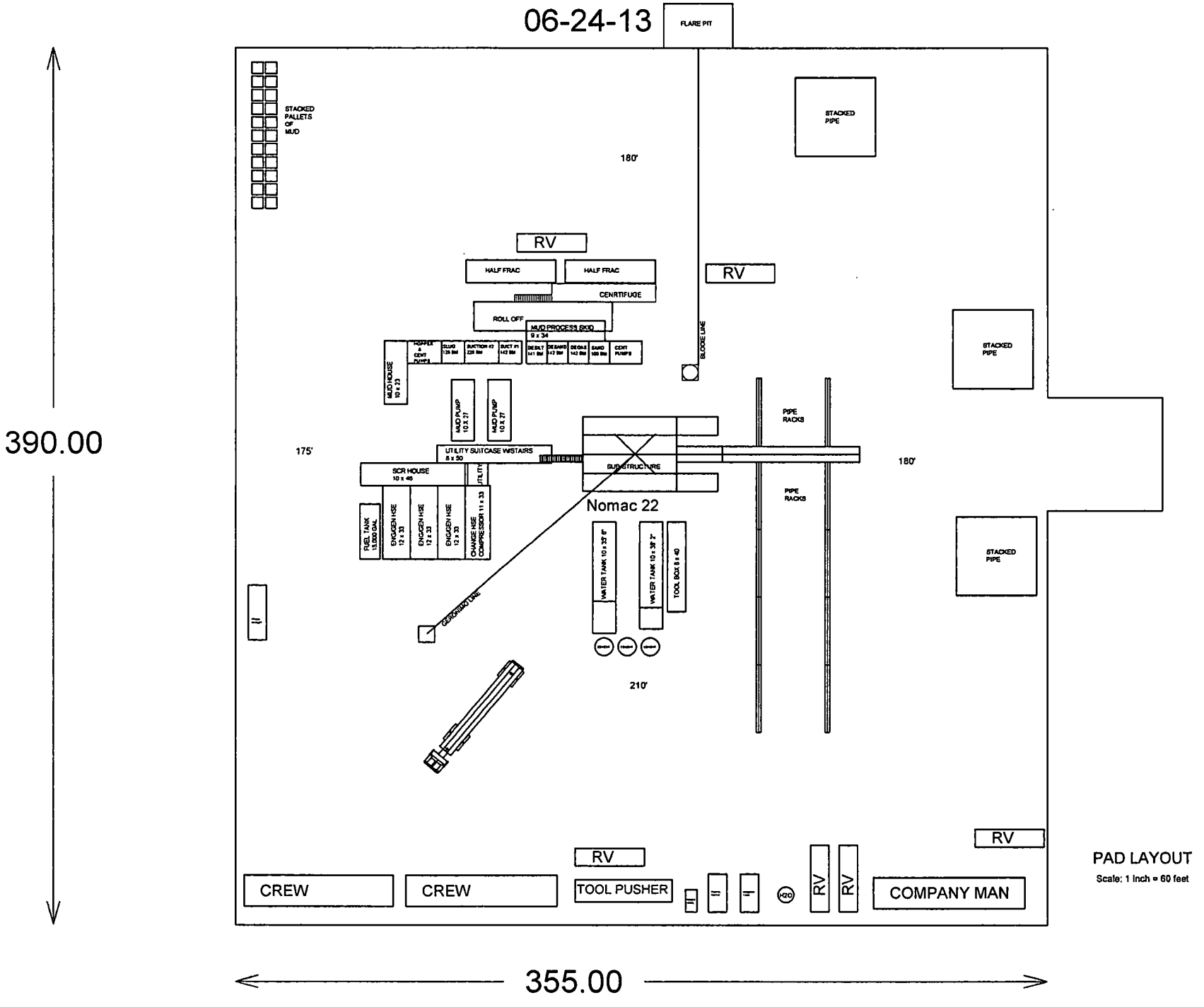
Closure Plan

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

Nomac 22

06-24-13



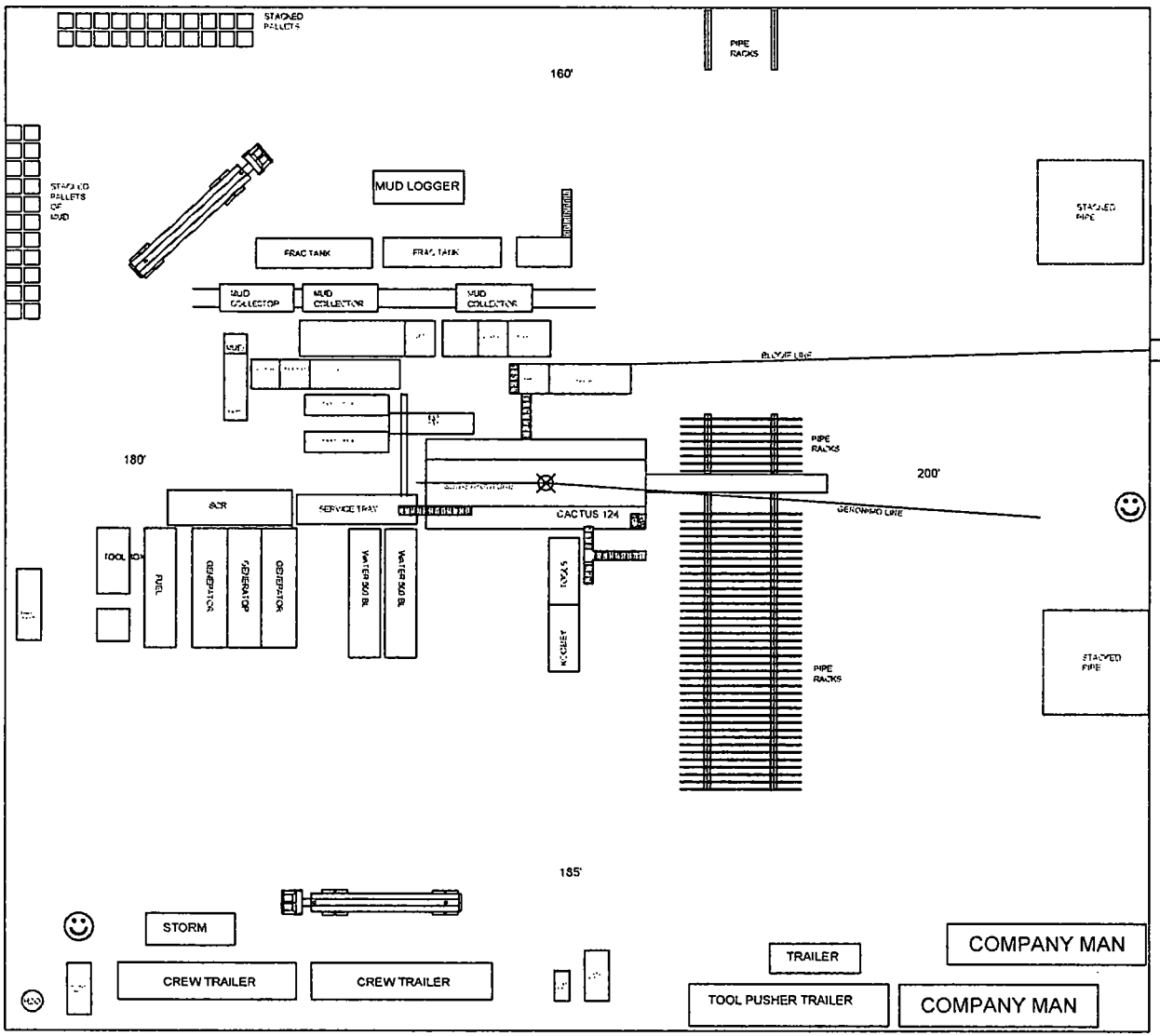
390.00

355.00

PAD LAYOUT

Scale: 1 Inch = 60 feet

YATES PETROLEUM CORPORATION
CACTUS 124
07-24-13



345.00

380.00

Safe Briefing Area with caution signs and breathing equipment

Wind Direction Indicators

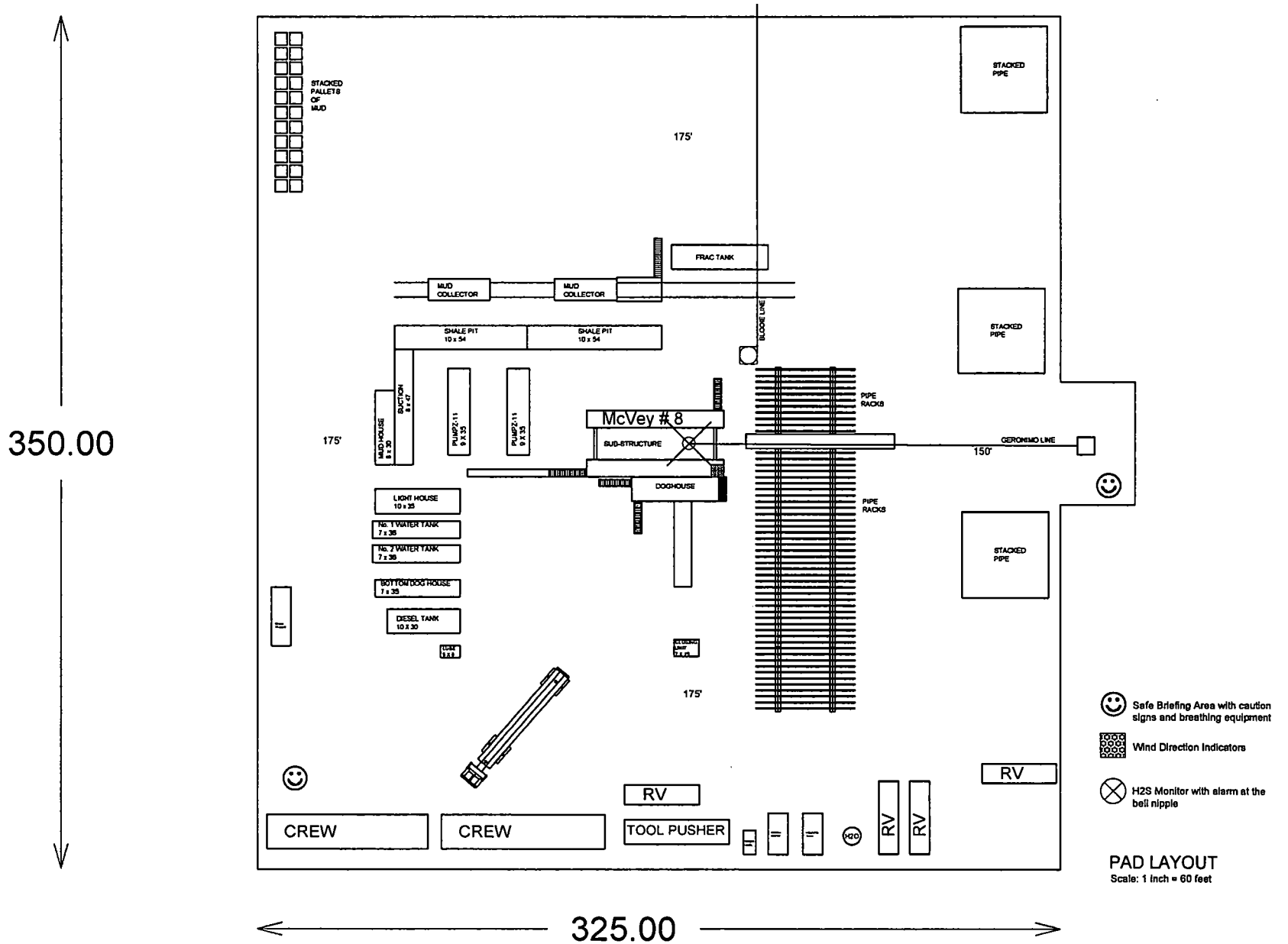
H2S Monitor with alarm at the bell nipple

PAD LAYOUT

Scale: 1 Inch = 60 feet

07-24-13

YATES PETROLEUM CORPORATION
McVay # 8
10-09-13

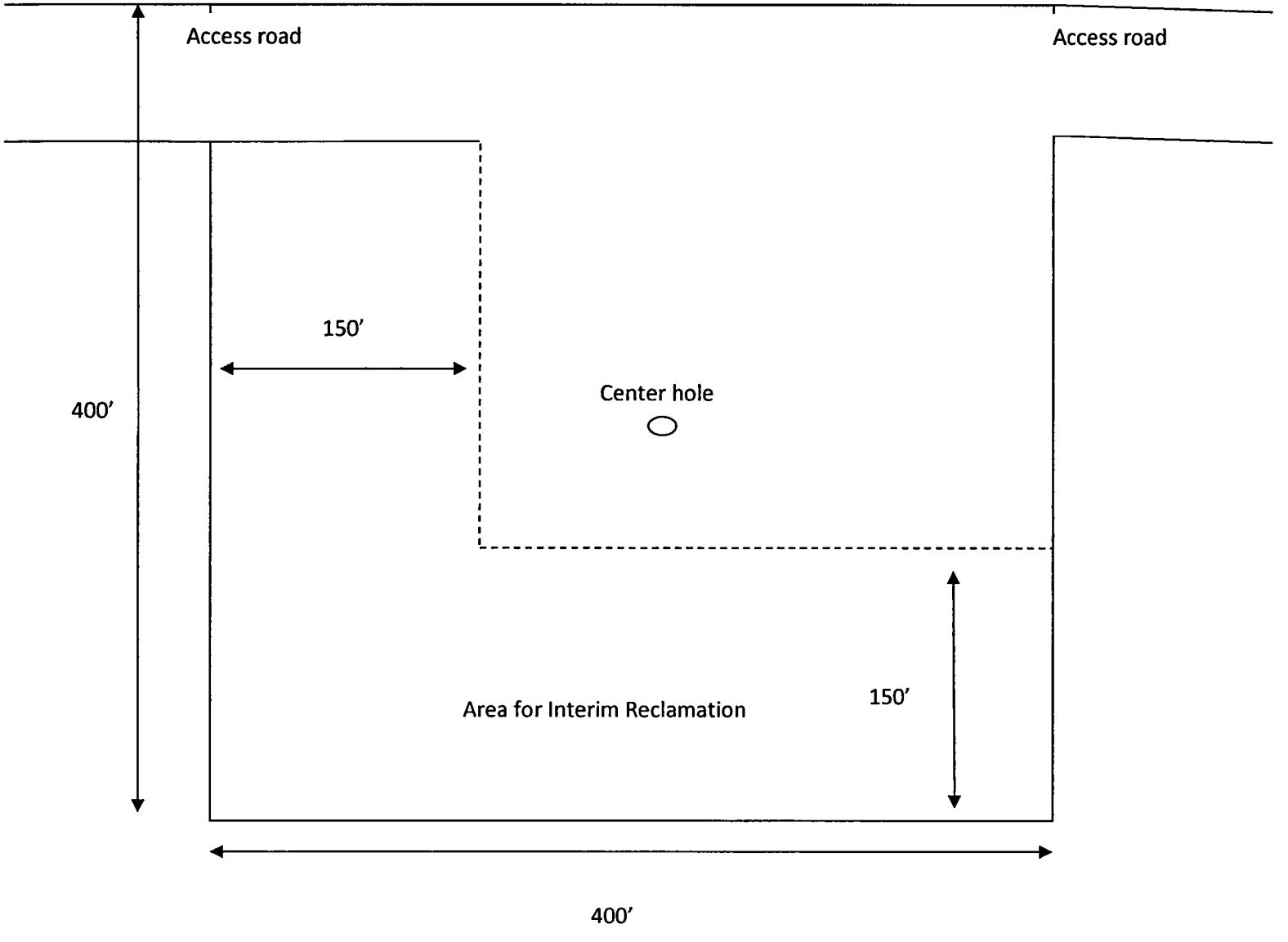


Bodacious BSM Federal #2H

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



Surface Use Plan of Operations

Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

a. The existing access road route to the proposed project is depicted on Bodacious BSM Federal 2H vicinity map. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan..

b. The existing access road route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed road route.

c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.

d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

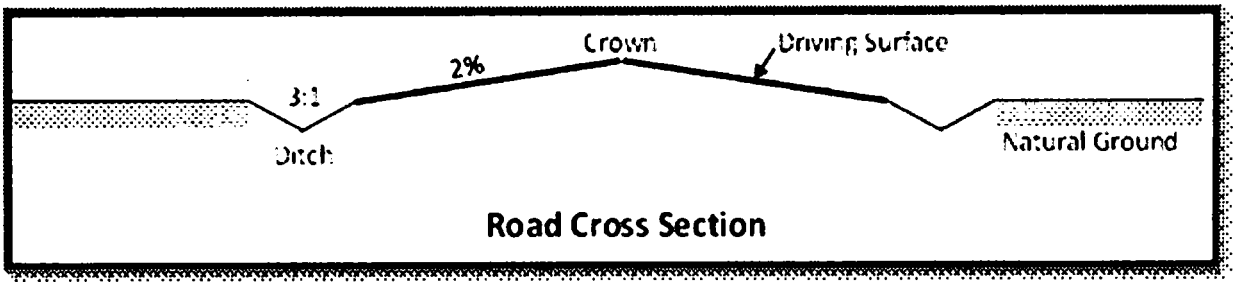
a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.

b. The length of access road needed to be constructed for this proposed project is about 101 feet.

c. The maximum driving width of the access road will be 24 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.

d. The access road will be constructed with 6 inches of compacted caliche.

e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



f. The access road will be constructed with a ditch on each side of the road.

g. The maximum grade for the access road will be 2 percent.

h. No turnouts will be constructed on the proposed access road.

i. No cattleguards will be installed for this proposed access road.

j. No BLM right-of-way grant is needed for the construction of this access road.

k. No culverts will be constructed for this proposed access road.

l. No low water crossings will be constructed for the access road.

m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.

n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

3. Location of Existing Wells

a. Bodacious BSM Federal 2H pad site of the APD depicts all known wells within a one mile radius of the proposed well.

b. There is no other information regarding wells within a one mile radius.

4. Location of Existing and/or Proposed Production Facilities

a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.

c. A production facility is proposed to be installed on the proposed well location. Production from the well will be processed on site in the production facility. Bodacious BSM Federal 2H Reclamation depicts the location of the production facilities as they relate to the well and well pad.

d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for percipitation, unless more stringent protective requirements are deemed necessary.

e. There is no other diagram that depicts production facilities.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Additional Pipeline(s)

We propose to install 1 additional pipeline(s):

1. Buried produced water pipeline:

a. We plan to install a 12 inch buried poly pipeline from the proposed well to water disposal tie-in. The proposed length of the pipeline will be 5082 feet. The working pressure of the pipeline will be about 225 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Bodacious BSM Fed 2H produced water line depicts the proposed produced water pipeline route.

c. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

Electric Line(s)

a. An electric line will be applied for through a sundry notice or BLM right of way at a later date.

5. Location and Types of Water

a. The source and location of the water supply are as follows: Water will be supplied from the frac pond as shown on the attached water source map This location will be drilled using a combination of water mud systems (outlined in the drilling program) The water will be obtained from commercial water stations in the area or recycled treated water and hauled to location by trucks or poly pipelines using existing and proposed roads depicted on the proposed existing access road maps In these cases where a poly pipeline is used to transport fresh water for drilling purposes_ proper authorizations will be secured by the contractor.

b. Bodacious Water and Caliche map depicts the proposed route for a 12 inch poly temporary (<90 days) water pipeline supplying water for drilling operations.

6. Construction Material

a. Caliche will be supplied from pits shown on the attached caliche source map.
Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "Flipping" a well location is as follows:
*

-An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat.
-An area will be used within the proposed well site dimensions to excavate caliche.
Subsoil will be removed and stockpiled within the surveyed well pad dimensions.

-Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions.
-Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available).
-Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.
*
In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

7. Methods for Handling Waste

a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

a. No ancillary facilities will be needed for this proposed project.

9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

i. reasonable scale (near 1":50')
ii. well pad dimensions
iii. well pad orientation
iv. drilling rig components
v. proposed access road
vi. elevations of all points
vii. topsoil stockpile
viii. reserve pit location/dimensions if applicable
ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
x. existing structures within the 600' x 600' archaeoligical surveyed area (pipelines, electric lines, well pads, etc

b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the

well site depicts the drilling pad layout as staked.

c. A title of a well site diagram is Bodacious BSm Federal 2H rig layout. This diagram depicts the rig layout.

d. Topsoil Salvaging

i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

10. Plans for Surface Reclamation

Reclamation Objectives

i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.

iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.

v. Interim reclamation will be performed on the well site after the well is drilled and completed. Bodacious BSM Federal 2H reclamation depicts the location and dimensions of the planned interim reclamation for the well site.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.

2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed

for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

a. The surface ownership of the proposed project is Federal.

12. Other Information

a. We plan to use 2, 12-inch lay flat hoses to transport water with an option to use 7, 4-inch poly lines for drilling and frac operations.
We will lay 2 associated pipelines on the wellsite.
One 4-inch flex steel gas lift line.
One 4-inch flex steel production flowline.
The well is planned to be produced using gas lift as the artificial lift method.
Produced water will be transported via 8" buried pipeline from the wellsite to the EOG produced water gathering system.

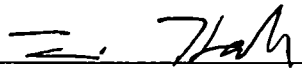
13. Maps and Diagrams

Bodacious BSM Federal 2H vicinity map - Existing Road
Bodacious BSM Federal 2H pad site - Wells Within One Mile
Bodacious BSM Federal 2H Reclamation - Production Facilities Diagram
Bodacious BSM Fed 2H produced water line - produced water Pipeline
Gutsy BUN Fed 7H Water and Caliche map - Drilling Water Pipeline
Bodacious BSM Federal 2H rig layout - Well Site Diagram
Bodacious BSM Federal 2H reclamation - Interim Reclamation

CERTIFICATION
YATES PETROLEUM CORPORATION
Bodacious BSM Federal #2H

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

Executed this 20 day of January 2015

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Yates Petroleum Corporation**
LEASE NO.:	**NMNM-113937**
WELL NAME & NO.:	**Bodacious BSM Federal 2H**
SURFACE HOLE FOOTAGE:	**0330' FNL & 0200' FWL**
BOTTOM HOLE FOOTAGE	**2435' FNL & 0760' FWL Sec. 12, T. 26 S., R 26 E.**
LOCATION:	**Section 01, 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)

** 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.)
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

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, or equivalent, 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 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:

The operator will perform annual pressure monitoring 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.

Hydrology:

The entire 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 with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. 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 water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. 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.

Tank battery locations 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 or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Range

When constructing the well pad the allotment fence will not be damaged.

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.

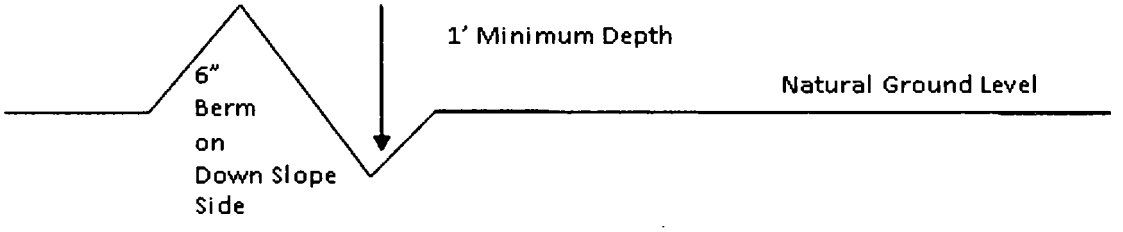
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

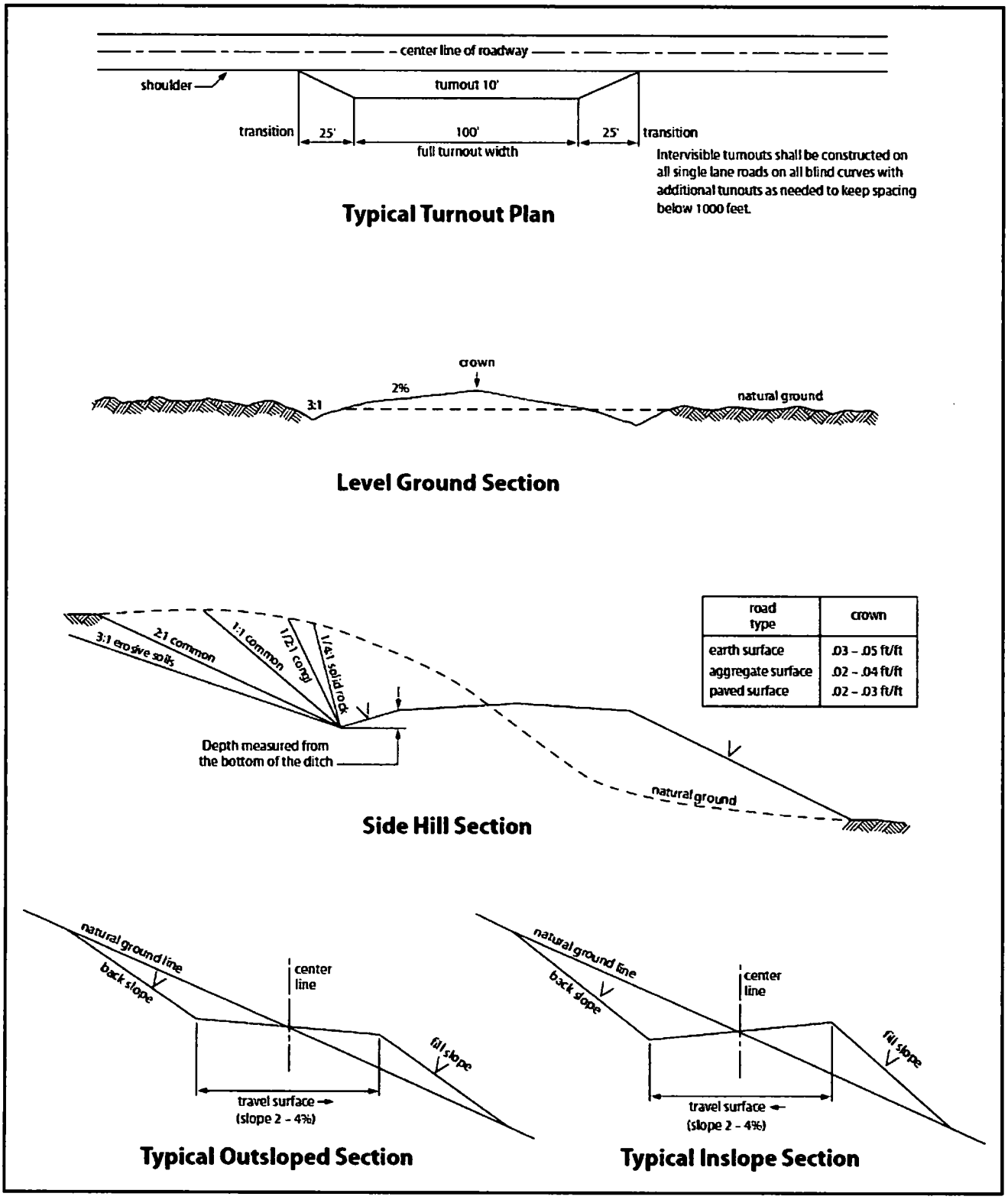


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **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 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 or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

Wait on cement (WOC) for Water Basin:
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.

High Cave/Karst
Possibility of water flows in the Salado and Castile
Possibility of lost circulation in the Castile, Salado, and Delaware

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. 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 **525** feet 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.**

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 9% - Additional cement may be required.**

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 53.

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.
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 **3000 (3M)** psi **(Installing 5M, testing to 3,000 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 (8 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.

JAM 031716

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).

Pipelines

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the

passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

(X) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
() seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

IX. 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
Carlsbad Field Office
620 E. Green St.
Carlsbad, NM 88220-6292

TAKE PRIDE IN AMERICA

In reply, refer to
3162.4
NMNM113937

July 11, 2018

EOG Y Resources, Inc.
Attn: Nathan Stephenson
105 South Fourth Street
Artesia, NM 88201-2118

Re: Bodacious BSM Federal 2H, LEASE NM113937
As submitted: 200' FNL & 200' FWL, Sec. 1, T26S, R26E, SHL, Eddy County, NM

Your Application for Permit to Drill (APD) for the referenced well was received on January 26, 2015. The APD has been reviewed pursuant to Onshore Oil and Gas Order No. 1. III.D. and was found to be incomplete on April 10, 2015, due to Onsite Inspection: not conducted.

As per Onshore Oil and Gas Order No. 1 III.E. (APD Posting and Processing) 2. (Processing) a. **States:** ... Within 10 days of receiving the application, the BLM, in coordination with the operator and Surface Managing Agency, ... will schedule a date for the onsite inspection. ...The operator has 45 days after receiving notice from the BLM to provide any additional information necessary to complete the APD, or the APD may be returned to the operator.

Yates Petroleum Corporation was notified of an onsite inspection to be conducted by Paul Murphy & Bobby Ballard of the Carlsbad Field office on July 20, 2016. Present at the onsite was Cy Cowan and Travis Hahn, on the onsite inspection BLM notified them that the well would have to be moved 130 feet south.

The new location was 330 FNL and 200 FWL Section 1, T26S, R26E. Yates Petroleum Corporation was to provide:

1. New APD Form 3160-3 with correct information
2. New Form C-102 Survey Plat
3. New surface use plan for the APD with new plats and maps

EOG Y Resources, Inc. took over operations to the proposed permit December 1, 2016.

This Letter is to inform you of the deficiencies which are needed to complete the approval process for this APD. If BLM Carlsbad Field office does not receive the information needed to approve this APD within 45 days of this notice or by August 27, 2018, the CFO will make the determination to return the APD.

If EOG Y Resources, Inc. does not plan to drill this well, submit an e-mail to dwhitloc@blm.gov to withdraw the permit.

If you have any questions, please contact Duncan Whitlock or Bobby Ballard at (575) 234-5972.

Sincerely,

Cody Layton
Assistant Field Manager,
Lands and Minerals

Operator Copy

United States Department of the Interior

Bureau of Land Management
Carlsbad Field Office
620 E. Green St.
Carlsbad, NM 88220-6292

TAKE PRIDE IN AMERICA

In reply, refer to
3162.4
NMNM113937

OCD Artesia

July 11, 2018

Replacement
Pgs
8-24-18

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Artesia, NM 88201-2118

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