Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – *Other instructions on page 2.*

5. Lease Serial No.
NM-107383

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit of CA/Agreement, Name and/or No.
N/A

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Marcel BMM Federal #2H

2. Name of Operator
Yates Petroleum Corporation

9. API Well No.
30-015-41677

3a. Address
105 South Fourth Street, Artesia, NM 88210

3b. Phone No. *(include area code)*
575-748-4372

10. Field and Pool or Exploratory Area
County Line Tank ABO <97197>

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
2310' FNL & 150' FWL, Sec. 6-T16S-R30E, UL E (Lot 5), Surface Hole
1650' FNL & 330' FWL, Sec. 1-T16S-R29E, UL E (Lot 5), Bottom Hole

11. County or Parish, State
Eddy County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Change Drilling Program
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Yates Petroleum Corporation wishes to change our Drilling Plan. The changes are made and are bold print. The geological tops have changed as well as the formation. From Wolfcamp to Basil Abo.The pressure control equipment is different. They dropped the 5000# BOP and only using the 3000# BOP. The casing depths were changed as well as the statement under the casing program. The cementing program is changed also. The mud program is different. The depths taking samples were changed. The bottom hole pressures changed. A new Drilling Program is attached as well as a new C-102.

Accepted for record
NMOCD
1-13-2014

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED
JAN 13 2014
NMOCD ARTESIA

APPROVED
JAN 8 2014
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Cy Cowan

Title Land Regulatory Agent

Signature

Date 9/17/13

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice 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.	Office	

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.

(Instructions on page 2)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-41677	97197	County Line Tank ABO

Property Code	Property Name	Well Number
37533	MARCEL "BMM" FEDERAL	2H

OGRID No.	Operator Name	Elevation
025575	YATES PETROLEUM CORP.	3798'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 5	6	16 S	30 E		2310	NORTH	150	WEST	EDDY

Bottom Hole Location If Different From Surface

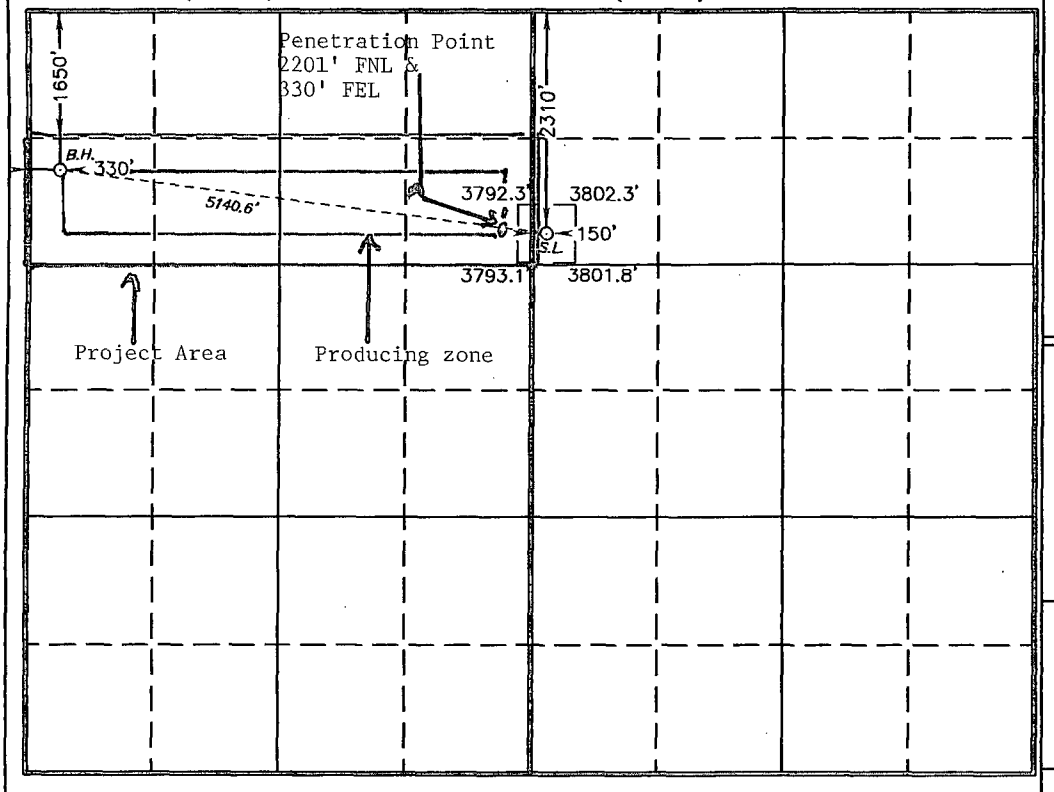
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 5	1	16 S	29 E		1650	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

BOTTOM HOLE LOCATION
Lat - N32°57'39.01"
Long - W104°02'08.69"
SPC- N.: 713417.119
E.: 632611.025
(NAD-83)

SURFACE LOCATION
Lat - N32°57'32.32"
Long - W104°01'08.88"
SPC- N.: 712755.598
E.: 637708.888
(NAD-83)



SCALE - 1" = 2000'

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Cy Cowan
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

OCTOBER 21, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO
GARY L. JONES
7977
REGISTERED PROFESSIONAL SURVEYOR

W.O. Num. 20721

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Note: Manufacturer has no anchor recommendations

Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	Customer P.O. Number:
CACTUS DRILLING	ASSET#M10750 SO#7431

HOSE SPECIFICATIONS

Type: CHOKE & KILL		Hose Length: 39'	
I.D. 4	INCHES	O.D. 8	INCHES

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 PSI	15,000 PSI	N/A PSI

COUPLINGS

Part Number	Stem Lot Number	Ferrule Lot Number
E4.0X64WB	1Q11 LOT1	1Q11 LOT1
E4.0X64WB	1Q11 LOT1	1Q11 LOT1

Type of Coupling:	Die Size:
Swage-It	

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
1	N/A PSI

Hose Assembly Serial Number:	Hose Serial Number:
74310	M10750

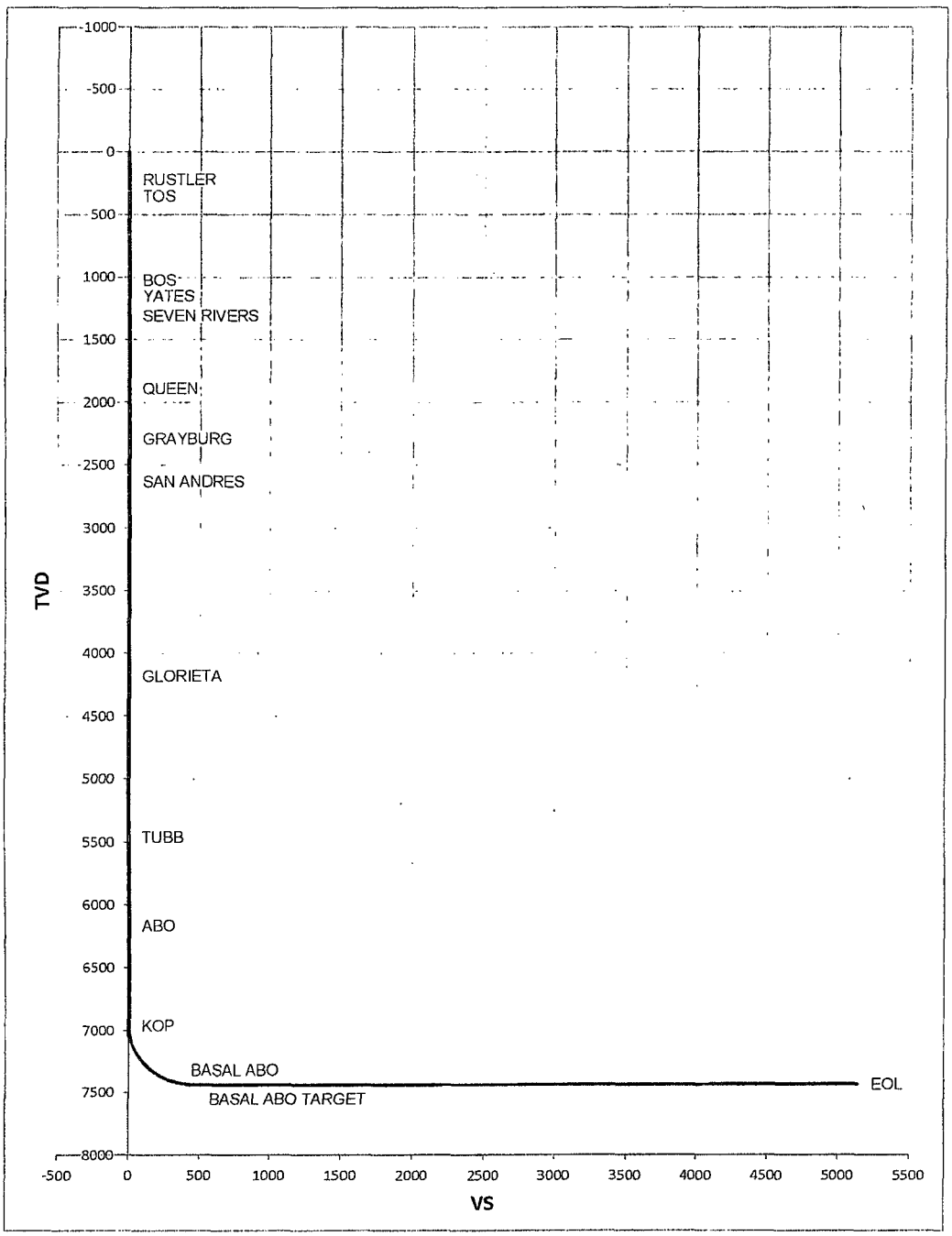
Comments:

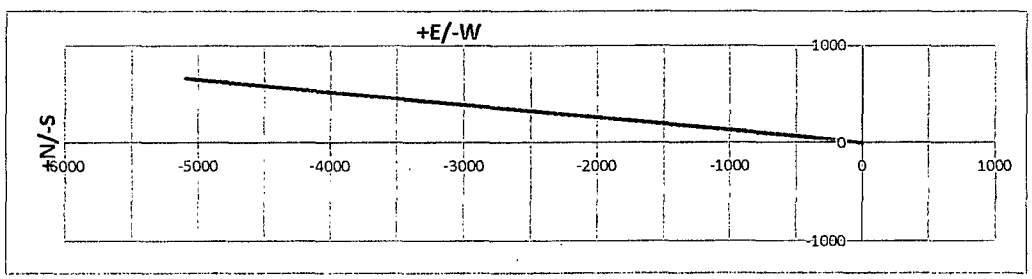
Date:	Tested:	Approved:
12/2/2010	[signature]	Brent Burnett

Well Name:	Marcel BMM Federal #2H	**Tgt N/-S:**	661.52		
		Tgt E/-W:	-5097.86	**EOC TVD/MD:**	7439.07 / 7712.53
Surface Location:	Section 6 , Township 16S Range 30E	**VS:**	5140.60		
Bottom Hole Location:	Section 1 , Township 16S Range 30E	**VS Az:**	277.39	**EOL TVD/MD:**	7430.00 / 12374.75

MD	Inc.	Azi.	TVD	+N/-S	+E/-W	VS	DLS	Comments
0	0	0	0	0	0	0	0	
220.00	0.00	0.00	220.00	0.00	0.00	0.00	0.00	RUSTLER
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	TOS
1020.00	0.00	0.00	1020.00	0.00	0.00	0.00	0.00	BOS
1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	YATES
1308.00	0.00	0.00	1308.00	0.00	0.00	0.00	0.00	SEVEN RIVERS
1890.00	0.00	0.00	1890.00	0.00	0.00	0.00	0.00	QUEEN
2290.00	0.00	0.00	2290.00	0.00	0.00	0.00	0.00	GRAYBURG
2630.00	0.00	0.00	2630.00	0.00	0.00	0.00	0.00	SAN ANDRES
4180.00	0.00	0.00	4180.00	0.00	0.00	0.00	0.00	GLORIETA
5460.00	0.00	0.00	5460.00	0.00	0.00	0.00	0.00	TUBB
6160.00	0.00	0.00	6160.00	0.00	0.00	0.00	0.00	ABO
6961.61	0.00	0.00	6961.61	0.00	0.00	0.00	0.00	KOP
6975.00	1.61	277.39	6975.00	0.02	-0.19	0.19	12.00	
7000.00	4.61	277.39	6999.96	0.20	-1.53	1.54	12.00	
7025.00	7.61	277.39	7024.81	0.54	-4.17	4.20	12.00	
7050.00	10.61	277.39	7049.50	1.05	-8.09	8.16	12.00	
7075.00	13.61	277.39	7073.94	1.72	-13.29	13.40	12.00	
7100.00	16.61	277.39	7098.07	2.56	-19.75	19.92	12.00	
7125.00	19.61	277.39	7121.83	3.56	-27.46	27.69	12.00	
7150.00	22.61	277.39	7145.15	4.72	-36.38	36.69	12.00	
7175.00	25.61	277.39	7167.97	6.04	-46.51	46.90	12.00	
7200.00	28.61	277.39	7190.22	7.50	-57.80	58.29	12.00	
7225.00	31.61	277.39	7211.84	9.11	-70.24	70.83	12.00	
7250.00	34.61	277.39	7232.78	10.87	-83.78	84.48	12.00	
7275.00	37.61	277.39	7252.98	12.77	-98.39	99.21	12.00	
7300.00	40.61	277.39	7272.37	14.80	-114.02	114.98	12.00	
7325.00	43.61	277.39	7290.92	16.95	-130.65	131.74	12.00	
7350.00	46.61	277.39	7308.56	19.23	-148.21	149.45	12.00	
7375.00	49.61	277.39	7325.25	21.63	-166.66	168.06	12.00	
7400.00	52.61	277.39	7340.95	24.13	-185.95	187.51	12.00	
7425.00	55.61	277.39	7355.60	26.74	-206.04	207.76	12.00	
7450.00	58.61	277.39	7369.18	29.44	-226.85	228.75	12.00	
7475.00	61.61	277.39	7381.64	32.23	-248.34	250.42	12.00	
7500.00	64.61	277.39	7392.94	35.09	-270.45	272.72	12.00	
7525.00	67.61	277.39	7403.07	38.04	-293.12	295.57	12.00	
7550.00	70.61	277.39	7411.98	41.04	-316.28	318.93	12.00	
7575.00	73.61	277.39	7419.66	44.10	-339.87	342.72	12.00	
7600.00	76.61	277.39	7426.09	47.21	-363.82	366.87	12.00	
7618.26	78.79	277.39	7430.00	49.50	-381.50	384.69	12.00	BASAL ABO
7625.00	79.61	277.39	7431.24	50.36	-388.08	391.33	12.00	
7650.00	82.61	277.39	7435.10	53.54	-412.57	416.03	12.00	
7675.00	85.61	277.39	7437.67	56.74	-437.23	440.90	12.00	
7700.00	88.61	277.39	7438.93	59.95	-461.99	465.86	12.00	
7712.53	90.11	277.39	7439.07	61.56	-474.42	478.39	12.00	BASAL ABO TARGET
12374.75	90.11	277.39	7430.00	661.52	-5097.86	5140.60	0.00	EOL

Marcel BMM Federal #2H





YATES PETROLEUM CORPORATION
Marcel BMM Federal #2H
2310' FNL and 150' FEL, Section 6-16S-30E (Surface Hole Location)
1650' FNL and 330' FWL, Section 1-16S-29E (Bottom Hole Location)
Eddy County, New Mexico

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

Rustler	220'	San Andres	**2630'** Oil
Top of Salt	350'	Glorieta	**4180'**
Base of Salt	1020'	Tubb	**5460'**
Yates	**1150'**	ABO	**6160'** Gas
Seven Rivers	**1308'**	**Basil Abo**	**7618'** Oil
Queen	**1890'** Oil/Gas	**Basal Abo Target**	**7713'**
Grayburg	**2290'** Oil	**TVD**	**7430'**
		TMD Lateral	**12375'**

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

Water: 110'
Oil or Gas: **Basil Abo** Oil

3. **Pressure Control Equipment: 3000 PSI BOPE with a 13.625" opening will be installed on the 13 3/8" and the 9 5/8" casing. A variance is requested for the use of a flex hose between the well head and manifold if Cactus Rig #124 is used to drill this well. 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 B.***

Auxiliary Equipment:

A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

4. **THE PROPOSED CASING AND CEMENTING PROGRAM:**

A. Casing Program: (**All New**)

Hole Size	Casing Size	Wt./Ft	Grade	Thread	Interval	Length
17 1/2"	13 3/8"	48#	J-55 Hybrid	ST&C	~~**0-300'**~~ 400'	~~**300'**~~
12 1/4"	9 5/8"	36#	**J-55/K-55**	LT&C	**0-2700'**	**2700'**
8 3/4"	5 1/2"	17#	P-110	Buttress	**0-12375'** MD	**12375'**

This well will be drilled vertically to 6961'. At 6961' the well will be kicked off and directionally drilled at 12 degrees per 100' with an 8 ¾" hole to 7713' MD (7439' TVD). The hole size will then be reduced to an 8 ½" hole and drilled to 12375' MD (7430' TVD) where 5 1/2" casing will

No DV tool per Nadine 1/16/14

be set and cemented 500' into the intermediate casing with a Hydraulic DV tool set approximately at 7500' and a DV/Stage Packer tool set between 3750' and 4250'. If the DV/Stage tools are moved the cement will be distributed proportionately. Penetration point of the producing zone will be encountered at 2201' FNL & 330' FEL, Section 1-T16S-R29E. Deepest TVD in this well is 7439' in the lateral.

Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.12

B. CEMENTING PROGRAM:

13 3/8' Surface Casing 0-300': 310 sacks "C" w/CaCl2 (WT 14.80 YLD 1.34). Cement designed with 100% excess. TOC at surface.

9 5/8' Intermediate Casing 0-2700': 980 sacks 35:65:6PzC (Wt. 12.50 YLD 2.00). Tail in with **210** sacks C w/CaCl2 (Wt 14.80 YLD 1.34). Cement designed with 100% excess. TOC at surface.

5 1/2' PRODUCTION CASING 12375'-2200': TOC **2200'**. Lead w/**800** sacks 35:65:6PzC (WT 12.50 YLD 2.00). Tail in with **945** sacks PecosVILt with D151-CaCo3 Wt.=30% BWOC; D174-Expanding Ce=1.5% BWOC; D046-Antifoam=.2% BWOC; D800-Retarder=.6% BWOC; D112-Fluid Loss=.5% BWCO; D208-Viscosifer =.1% BWOC (WT 13.00 YLD 1.82). Cement designed with 35% excess.

5. Mud Program and Auxiliary Equipment:

400'

Interval	Type	Weight	Viscosity	Fluid Loss
0 to **300'**	Fresh Water	8.60-9.20	32-34	N/C
300'-2700'	Brine Water	10.00-10.20	28-29	N/C
2700'-12375'	Cut Brine (Lateral Section)	**8.80**-9.00	**28-32**	N/C

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. The slow pump speed will be recorded on the daily drilling report after mudding up. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH. 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 the derrick hand visually checking the fluid level in the pits periodically using a nut on the end of a rope hanging just above the fluid level in the pit.

6. EVALUATION PROGRAM:

Samples: 30' samples to **2700';** 10' out from under intermediate casing (**2700'**) to TD.
Logging: Horizontal MWD / GR TD to surface..
Coring: None anticipated.
DST's: None anticipated.
MUDLOGGING: Yes from surface to TD.
H2S: None anticipated.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE AND POTENTAL HAZARDS:

Anticipated BHP:

From:	0	TO	**300'** TVD	Anticipated Max. BHP:	**144**	PSI
From:	**300'**	TO	**2700'** TVD	Anticipated Max. BHP:	**1432**	PSI
From:	**2700'**	to	**7439'** TVD	Anticipated Max. BHP.	**3481**	PSI

Abnormal Pressures Anticipated: None
Lost Circulation Zones Anticipated: None
H2S Zones Anticipated: None
Maximum Bottom Hole Temperature: **140° F**

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately **60** days to drill the well with completion taking another 30 days.

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

March 5, 2012

Customer: FW Texas

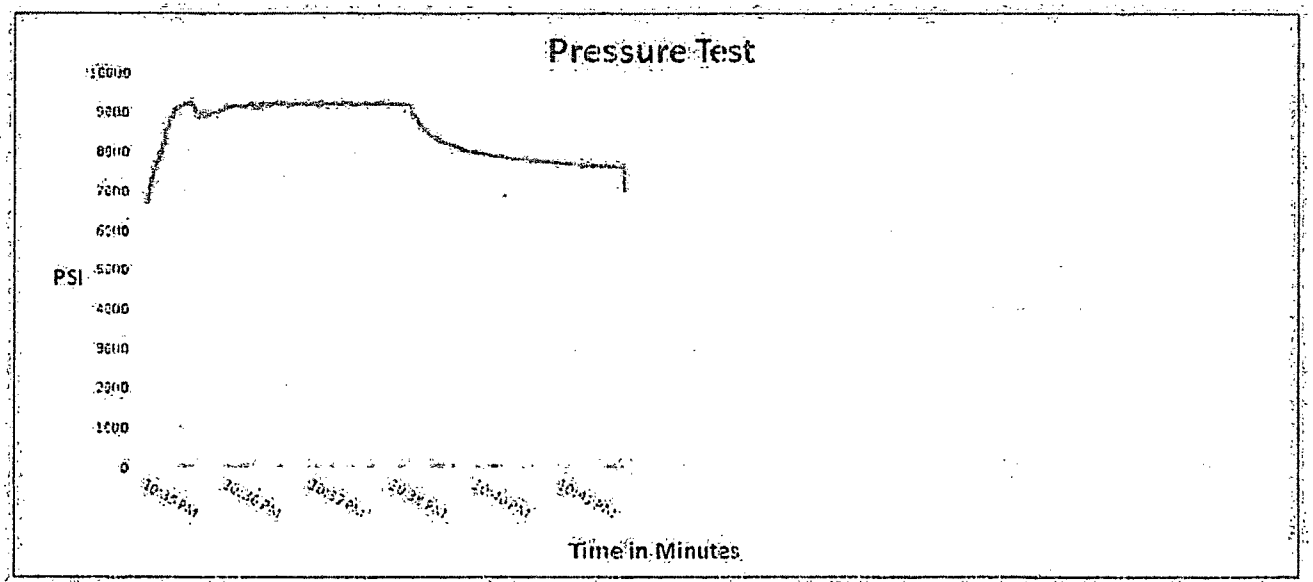
Pick Ticket #: 141521

Hose Specifications

Hose Type	Length
Red E	50'
I.D.	O.D.
2"	4 4/5
Working Pressure	Burst Pressure
10000 PSI	Range to Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
41/16 5K	Swage
Die Size	Final O.D.
5.25	5 1/4
Hose Serial #	Hose Assembly Serial #
7584	141521



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Proof Pressure
5000 PSI	5 3/4 Minutes		9388 PSI

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

Tested By: Donnie McLemore

Donnie mclemore

Approved By: Brent Burnett

Brent Burnett

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Yates Petroleum Corporation**
LEASE NO.:	**NMNM-107383**
WELL NAME & NO.:	**Marcel BMM Federal 2H**
SURFACE HOLE FOOTAGE:	**2310' FNL & 0150' FWL**
BOTTOM HOLE FOOTAGE	**1650' FNL & 0330' FWL Sec. 1, T. 16 S., R 29 E.**
LOCATION:	**Section 6, T. 16 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

I. 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 Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

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

Possibility of lost circulation in the Grayburg and San Andres.
Abnormal pressures may be encountered when penetrating the Wolfcamp Formation.

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

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 should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

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

C. PRESSURE CONTROL

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

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

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

    a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

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

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

    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.

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