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 & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Frances Dr.
Santa Fe, NM 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
30-025-40431	97838	WILDCAT, G-05 S263208P; BS UPPER SHALE

Property Code	Property Name	Well Number
39058	BUCK FEDERAL 20	1H

OGRID No.	Operator Name	Elevation
217817	CONOCOPHILLIPS	3157'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	26 S	32 E		105	SOUTH	397	EAST	LEA

Bottom Hole Location If Different From Surface

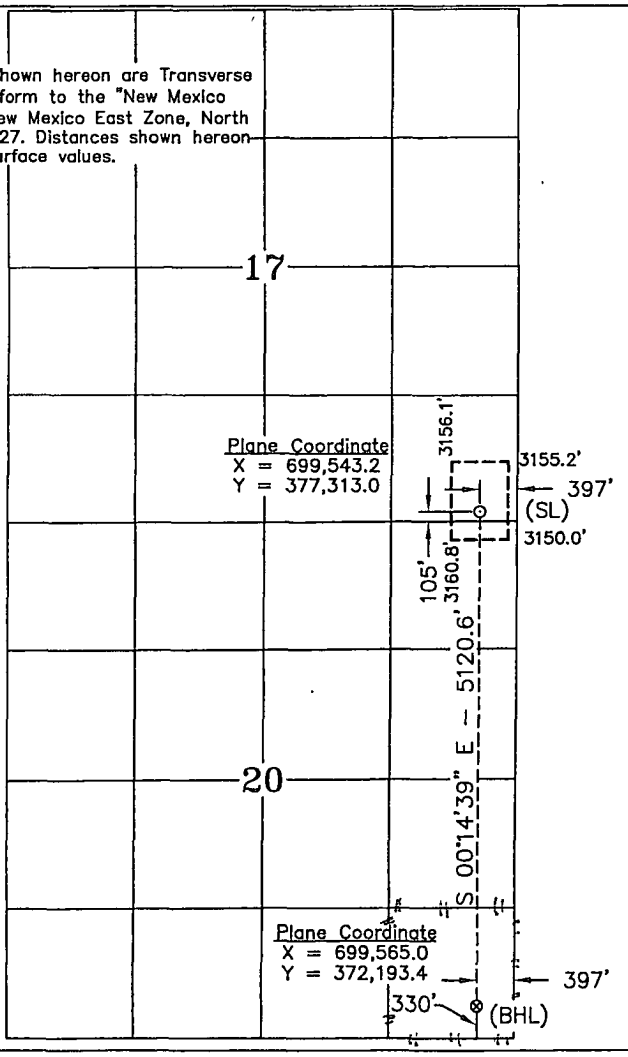
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	26 S	32 E		330	SOUTH	397	EAST	LEA

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

NOTE:

1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.



OPERATOR CERTIFICATION

I hereby certify the 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 interestin the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 1/6/12 Date

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 14, 2011
Date of Survey

Signature Seal of Professional Surveyor

W.O. Num. 2011-1438

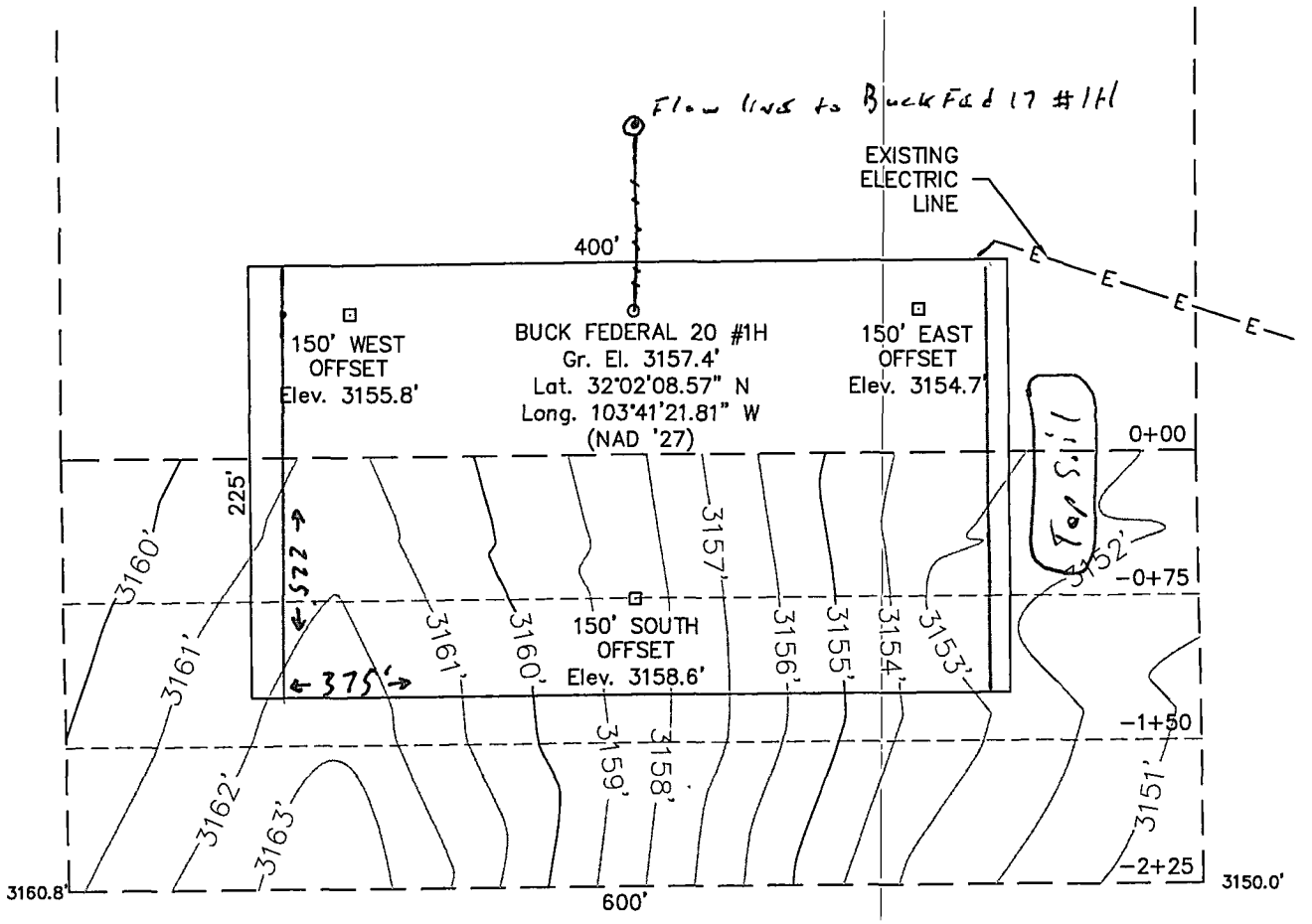
Certificate No. MACON McDONALD 12185

SECTION 17, TOWNSHIP 26 SOUTH, RANGE 32 EAST, N.M.P.M.

LEA COUNTY — NEW MEXICO

L-2011-1438-A

THIS IS NOT A BOUNDARY SURVEY
Apparent property corners and property lines, if shown, are for information only.



DRIVING DIRECTIONS

FROM ORLA, TEXAS. GO NORTHEAST ON HIGHWAY 652 FOR 18.0 MILES TO THE TEXAS / NEW MEXICO STATE LINE. KEEP GOING NORTHEAST ON COUNTY ROAD 1 FOR 2.8 MILES. TURN EAST ON LEASE ROAD AND GO 0.2 MILES. LOCATION IS APPROXIMATELY 300 FEET TO THE SOUTH.

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THE SAME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MACON McDONALD — PLS NO. 12185

NEW MEXICO (12185) REGISTERED PROFESSIONAL SURVEYOR

100 0 100 200
Graphic Scale in Feet

ConocoPhillips

Topographic Map

BUCK FEDERAL 20 #1H

Located 105' FSL & 397 FEL, Section 17
Township 26 South, Range 32 East, N.M.P.M.
Lea County, New Mexico

Drawn By: JCC	Date: October 31, 2011
Scale: 1" = 100'	Field Book: 534 / 23-24
Sheet 1 of 3	Quadrangle: Paduca Breaks West
W.O. No: 2011-1438	Dwg. No.: L-2011-1438-A

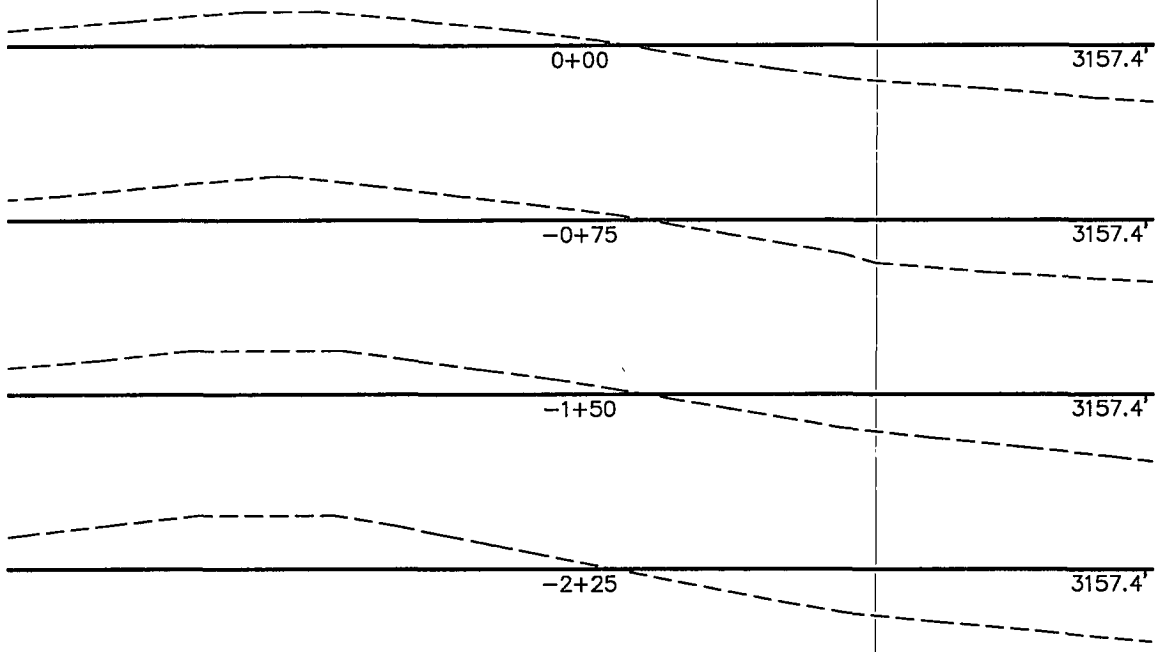
WEST COMPANY of Midland, Inc.
110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

SECTION 17, TOWNSHIP 26 SOUTH, RANGE 32 EAST, N.M.P.M.

LEA COUNTY — NEW MEXICO

L-2011-1438-B

THIS IS NOT A BOUNDARY SURVEY
Apparent property corners and property lines, if shown, are for information only.



20 0 20 40
Vertical Scale in Feet

100 0 100 200
Graphic Scale in Feet

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THE SAME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NEW MEXICO 12185 REGISTERED PROFESSIONAL SURVEYOR

MACON McDONALD PLS. NO. 12185

WEST COMPANY of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 – (432) 687-0868 FAX

ConocoPhillips

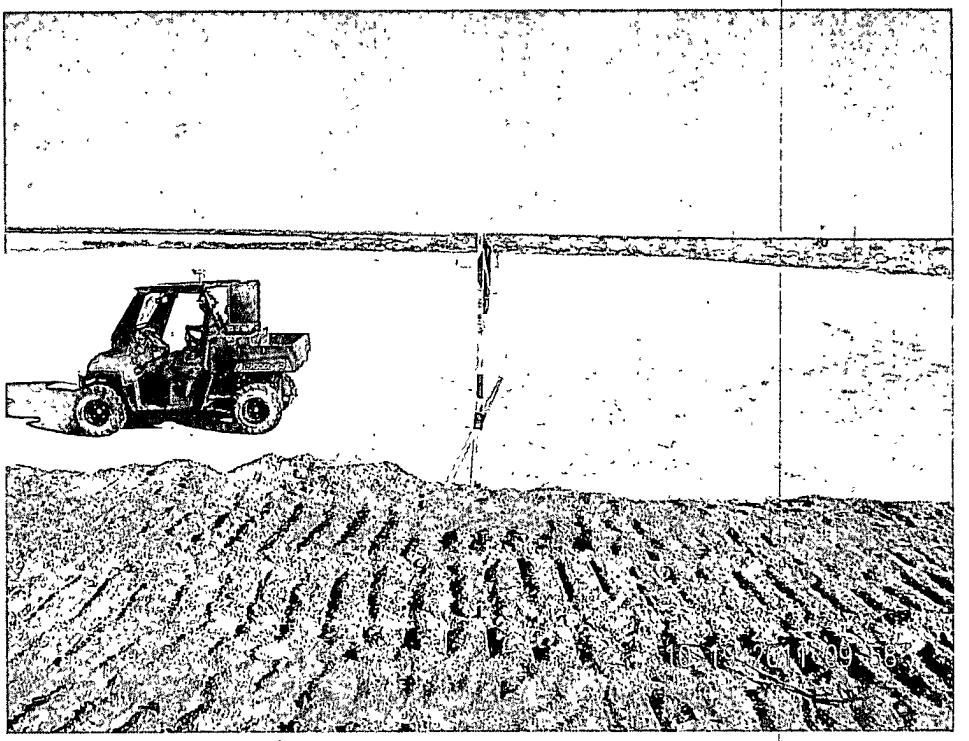
Topographic Map

BUCK FEDERAL 20 #1H

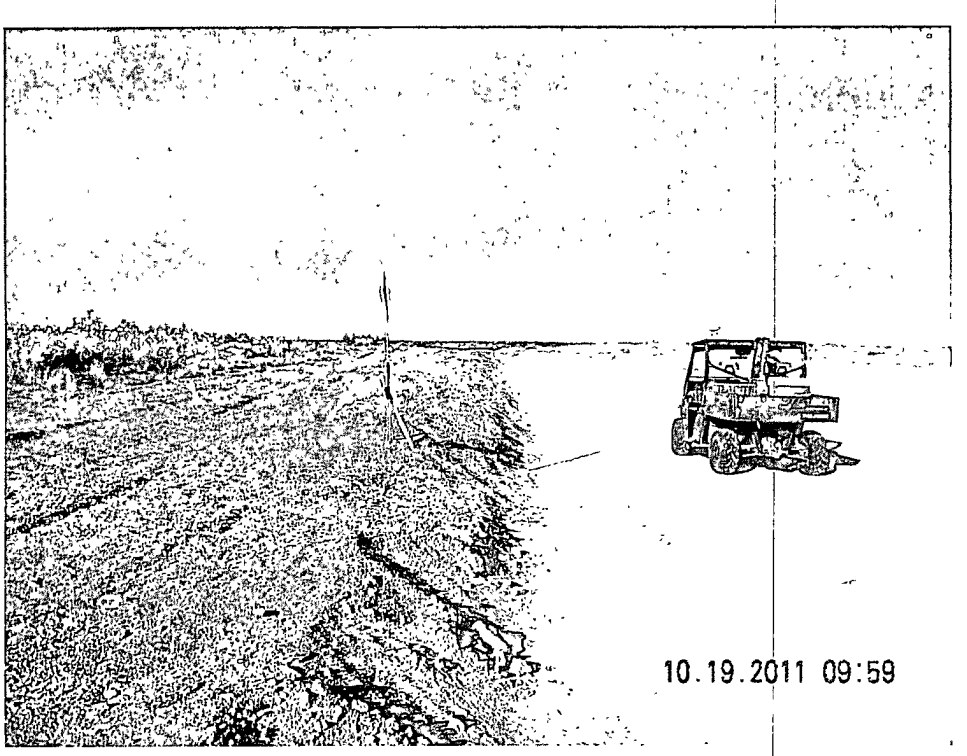
Located 105' FSL & 397 FEL, Section 17
Township 26 South, Range 32 East, N.M.P.M.
Lea County, New Mexico

Drawn By: JCC	Date: October 31, 2011
Scale: 1" = 100'	Field Book: 534 / 23-24
Sheet 2 of 3	Quadrangle: Paduca Breaks West
W.O. No: 2011-1438	Dwg. No.: L-2011-1438-B

L-2011-1438-PHOTO



NORTHERLY VIEW TO LOCATION STAKE



WESTERLY VIEW TO LOCATION STAKE

ConocoPhillips

BUCK FEDERAL 20 #1H

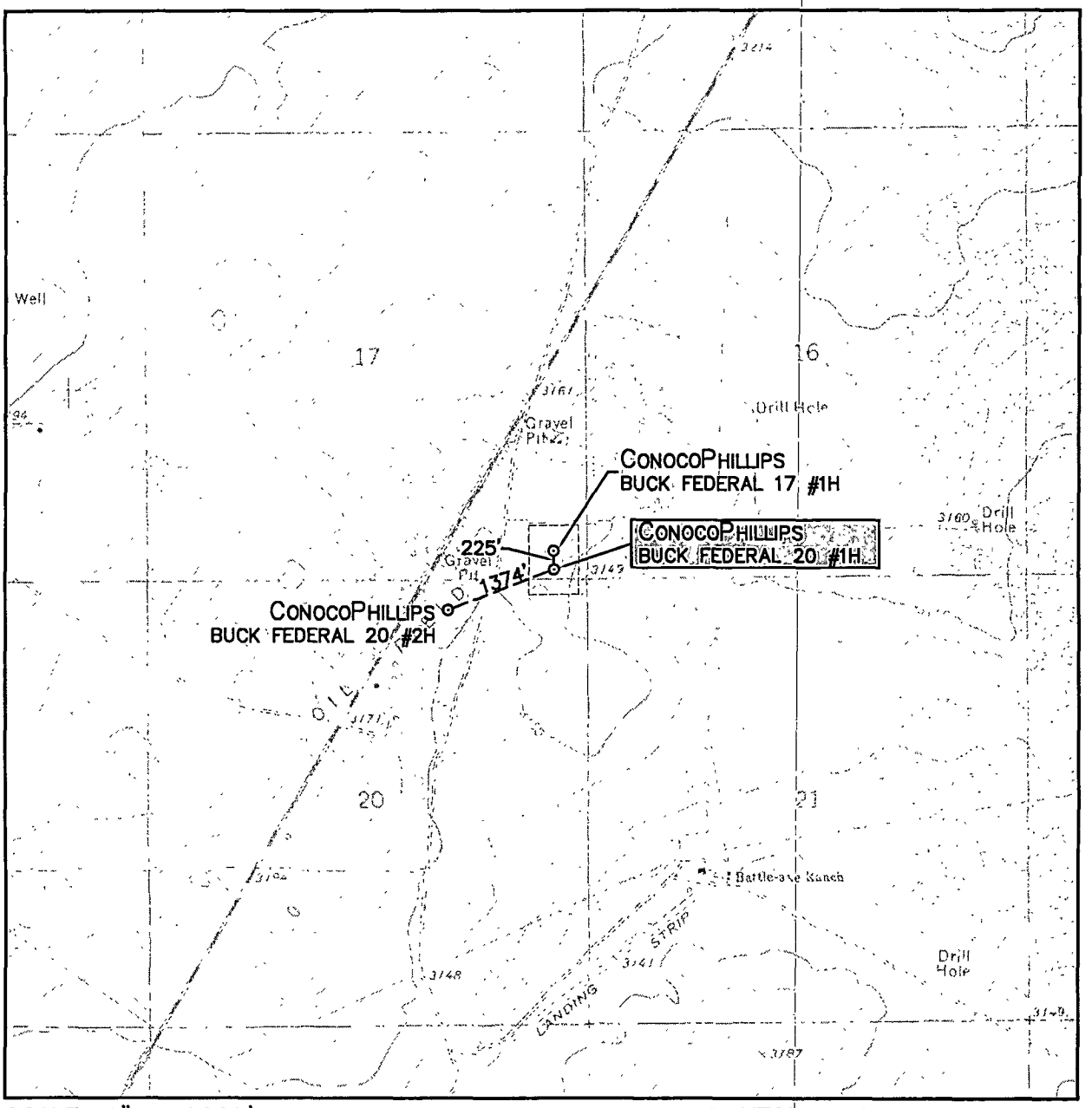
Located 105' FSL & 397 FEL, Section 17
Township 26 South, Range 32 East, N.M.P.M.
Lea County, New Mexico

Drawn By: JCC | Date: October 31, 2011

WEST COMPANY of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
PADUCA BREAKS WEST – 10'

SEC. 17 TWP. 26-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 105' FSL & 397' FEL

ELEVATION 3157'

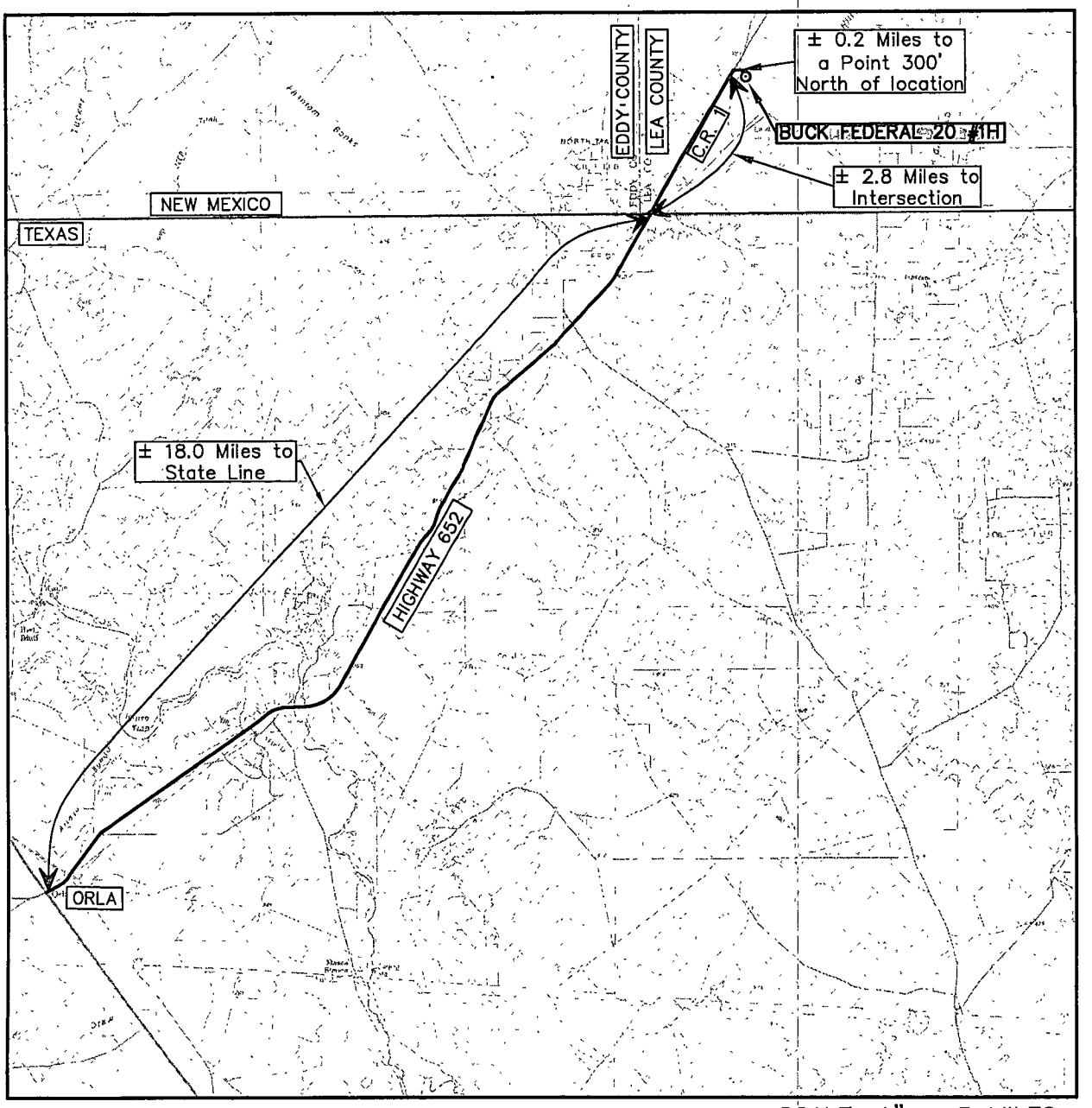
OPERATOR CONOCOPHILLIPS

LEASE BUCK FEDERAL 20

U.S.G.S. TOPOGRAPHIC MAP
PADUCA BREAKS WEST

WEST COMPANY of Midland, Inc.
110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 – (432) 687-0868 FAX

VICINITY MAP



SCALE: 1" = 3 MILES

SEC. 17 TWP. 26-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 105' FSL & 397' FEL

ELEVATION 3157'

OPERATOR CONOCOPHILLIPS

LEASE BUCK FEDERAL 20

WEST COMPANY of Midland, Inc.

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 – (432) 687-0868 FAX

30-025-40431

OPERATORS NAME:	**ConocoPhillips Company**
LEASE NAME AND WELL NO.:	**Buck Federal 20 #1H**
SURFACE LOCATION:	**105 FSL & 397 FEL**
BHL:	**330 FSL & 397 FEL**
FIELD NAME:	**Red Hills**
POOL NAME:	**Bone Spring**
COUNTY:	**Lea County, New Mexico**

The following information is to supplement the Application for Permit to Drill.

DRILLING PLAN

1. Name and estimated tops of all geologic groups, formations, members, or zones.

Quaternary	Surface	Water
Rustler	748	Salt
Castile	2498	Salt
Delaware Top	4292	Oil/gas/water
Ramsey	4373	Oil/gas/water
Ford Sand	4443	Oil/gas/water
Olds	4448	Oil/gas/water
Cherry Canyon lower Top	6545	Oil/gas/water
Bone Spring	8226	Oil/gas/water
Bone Spring 1st carbonate top	8451	Oil/gas/water
Bone Spring 1st carbonate base	8528	Oil/gas/water
KOP	8550	
Avalon A shale Top	8726	Oil/gas/water
Avalon A shale base	8937	Oil/gas/water
Avalon B zone top	8937	Oil/gas/water
Avalon B zone base	9087	Oil/gas/water
Avalon C shale top	9087	Oil/gas/water
		Oil/gas/water
Avalon C Shale Base	9349	Oil/gas/water

30/2012
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2. Estimated depths and thickness of formations, members or zones potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals that the operator expects to encounter, and the operator's plans for protecting such resources.

Quanternary	748 (water)
Rustler	4292 (Salt)

All of the water bearing and salt formations identified above will be protected by the intermediate setting of the 9-5/8" casing and circulating of cement to surface

Bone Spring	8451-9349 (gas & gas/oil)

The geologic tops identified above from the Bone Spring/Avalon are part of the target formation.

3. The operator's minimum specifications for blowout prevention equipment and diverter systems to be used, including size, pressure rating, configuration, and the testing procedure and frequency.

See COA

A 5000# system will be installed, used, maintained, and tested accordingly. After nippling up, and every 30 days thereafter, preventors will be pressure tested. BOP will be inspected and operated at least daily to insure good working order. All pressure and operating tests will be recorded on the daily drilling reports. Ram Type preventors will be tested to rated working pressure. Annular type preventer(s) shall be tested to 50% of the approved BOP stack working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer. ConocoPhillips Company request a ~~variance to the testing~~ as follows: The 13 3/8 surface casing will be set at a depth of 740' and a Wood Group Pressure Control SH2 type wellhead will be installed on the 13 3/8" casing string. The SH2 type wellhead is a "multi-bowl" type wellhead system that allows the landing of multiple casing strings without having to remove the BOP to install additional wellhead components. This specific wellhead design consists of a 13 3/8" SOW x 13 5/8" 3M psi lower flange assembly with a 13 5/8" x 5M psi upper flange assembly. For the initial installation on the 13 3/8" surface casing, the maximum pressure application to the wellhead system is limited by the 3M psi flange rating. Once installed, the 3M psi wellhead flange will be isolated and all subsequent BOPe pressure testing can be performed to 5000 psi, consistent with the requirements of a 5M system as set forth in Onshore Order No. 2 and the APD Conditions of Approval. The SH2 wellhead schematic and proposed BOPe configuration is attached for reference. COP also request approval for use of one flex hose on the drilling rig. **See Attached BOPe Schematic and Testing Information and hose specifications.**

See COA

See COA

See COA

11/30/2012
TMM

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition. For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.

NEW CASING: See COA

Surface: 17 1/2" hole, 13 3/8" 54.5# J-55 STC csg, set @ ~~850~~'. Drill out with 12 ¼" bit and perform shoe test to 11.0 ppg MWE.
Burst: 2.67/Collapse: 4.92/Tension: 3.43

Inter 1: 12 1/4" hole, 9 5/8" 40# L-80 BTC csg, set @ ~~4500~~' See COA
Burst: 2.88/Collapse: 2.62/Tension: 6.31

Production Lateral: 8-3/4" hole, 5 ½" 17# P-110 BTC csg set @ 14,050' MD 9302 TVD. Burst 1.93/Collapse 5.32/Tension 3.79

Casing Sring	Settig Depth TVD	OD"	Wt lb/ft	Grade	Conn	MIY (psi)	Collapse (psi)	Jt Str (Klbs)	MASP	Burst DF	Collapse DF	Axial DF
Surface See COA	~~850~~	13-3/8	54.5	J-55	STC	2730	1130	514	1024	2.67	4.92	2.57
Intermdiate See COA	~~4400~~	9-5/8	40.0	L-80	BTC	5750	3090	947	1995	2.88	2.62	4.74
Production	9235	5-1/2	17.0	P-110	BTC	10640	7840	568	-	2.17	5.32	2.84

The Plan is to set casing and drill in a southern direction to a proposed bottom hole location of 330 FSL 397 FEL Unit letter "P" Section 20, 26S, 32E

5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.

a. 13-3/8" Csg: lead w/230 sx Class C cement + HalCem-C (Yeild: 1.33 cft)
Tail w/870 sx Class C cement + 1 lbm/sk EconoChem-HRLTRRC (Yield 1.85 cft/sk)
Circulate to surface. Based on 17-1/2" OH, with 200% excess
b. 9-5/8" Csg: lead w/1200 sx 50/50 Class C Poz + 2.5 gal/bbl WG-19 +
1 lbm/sk EconoCem-C (Yield: 2.48 cft/sk) Tail w/270 sx 'H' + HalCem C
(Yield 1.33 cft/sk) Circulate to surface. Based on 12.25" hole with 150% excess
c. 5-1/2" Csg lead w/1340 sx HLH+ 0.3% Halad-9 + 5lbs/sk silicalite + 0.3% HR- 800 (Yield: 2.00 cft/sk) Tail w/1105 sx 'H' + 0.4% Halad-9 + 0.1% WG-17 + 3.0% KCL + 0.3% HR-800 (Yield 1.2 cft/sk) circulate cement 500' into 9-5/8" casing. Based on 8-3/4" Hole w/150% excess

1/30/2012 TMM

6. The anticipated type and characteristics of the proposed circulating medium or mediums proposed for the drilling of each wellbore section, the quantities and types of mud and weighting material to be maintained, and the monitoring equipment to be used on the circulating system.

Mud Program:

0-850'	Aquagel/Spudmud	8.9#	Vis 32-36	WL: NC
850-4500'	Brine	10.1#	Vis 28-30	WL: 5-8
4500-13,720'	Cut Brine	9.2-9.3#	Vis 30-40	WL: <=5

Gas detection equipment and pit level flow monitoring equipment will be on location. See COA
ConocoPhillips Company will maintain sufficient mud and weighted material on location at all times.

7. The anticipated testing, logging, and coring procedures to be used, including drill stem testing procedures, equipment, and safety measures.

a. DST Program: None
b. Mud Logging: Two-Man – 2800'-TD' Vertical and Horizontal Lateral
Logs to be run: GR-MWD 13720'-8550'

See COA

8. List the expected bottom-hole pressure and any anticipated abnormal pressures, temperatures or potential hazards that are expected to be encountered, such as lost circulation zones and hydrogen sulfide. The operator's plans for mitigating such hazards shall be discussed. Should the potential to encounter hydrogen sulfide exist, the mitigation procedures shall comply with the provisions of the BLM.

The expected pressure gradient is 0.433 psi/ft or 9.0-9.1 ppg equivalent
.The average anticipated bottom hole pressure ranges on average 4360 psi.
No hydrogen sulfide is expected to be encountered during drilling operations; however, the potential does exist for H2S. Please see attached H2S contingency plan to be used in the event of occurrence.

Any other facets of the proposed operation which the operator wishes to be considered in reviewing the application.

Anticipated Spud date of March 13, 2012. Construction of well pad and road will begin as soon as all agency approvals are obtained.

9. Address the proposed directional design, plan view, and vertical section in true vertical and measured depth for directional, horizontal, or coil tubing operations.

The proposed directional/horizontal documents are attached.

1/30/2012 TMA