

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**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 reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM0315712	
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name	
3a. Address 600 W ILLINOIS AVE MIDLAND, TX 79701		7. If Unit or CA/Agreement, Name and/or No.	
3b. Phone No. (include area code) Ph: 432-685-4384		8. Well Name and No. BRANEX-COG FEDERAL COM 5H	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 9 T17S R32E NWSW 2075FSL 115FWL		9. API Well No. 30-025-41005	
		10. Field and Pool, or Exploratory MALJAMAR YESO WEST	
		11. County or Parish, and State LEA COUNTY, NM	

12. CHECK 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
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests permission to change the number of this well and TVD as follows:

OLD: BRANEX-COG FEDERAL COM #5H
NEW: BRANEX-COG FEDERAL COM #25H

OLD TVD: 6574'
OLD MD: 11288'

NEW TVD: 6275'
NEW TVD: 10970'

**SUBJECT TO LIKE
APPROVAL BY STATE****ORIGINAL COA STILL
APPLY**

14. I hereby certify that the foregoing is true and correct. Electronic Submission #290895 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Hobbs Committed to AFMSS for processing by LINDA JIMENEZ on 03/17/2015 ()	
Name (Printed/Typed) KELLY J HOLLY	Title PERMITTING TECH
Signature (Electronic Submission)	Date 02/09/2015

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 in any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.		

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ******JAN 06 2016****JAN 06 2016**

Additional data for EC transaction #290895 that would not fit on the form

32. Additional remarks, continued

A revised C-102 and directional plan are attached.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
111 S. First St., Aramis, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

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

DIAMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-41005	Pool Code 44500	Pool Name Maljamar, Yeso, West
Property Code 39744	Property Name BRANEX - COG FEDERAL COM	Well Number 25H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 4068'

Surface Location

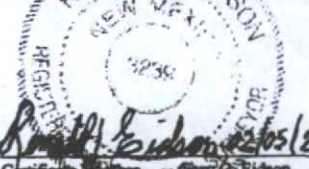
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	9	17-S	32-E		2075	SOUTH	115	WEST	LEA

Bottom Hole Location If Different From Surface

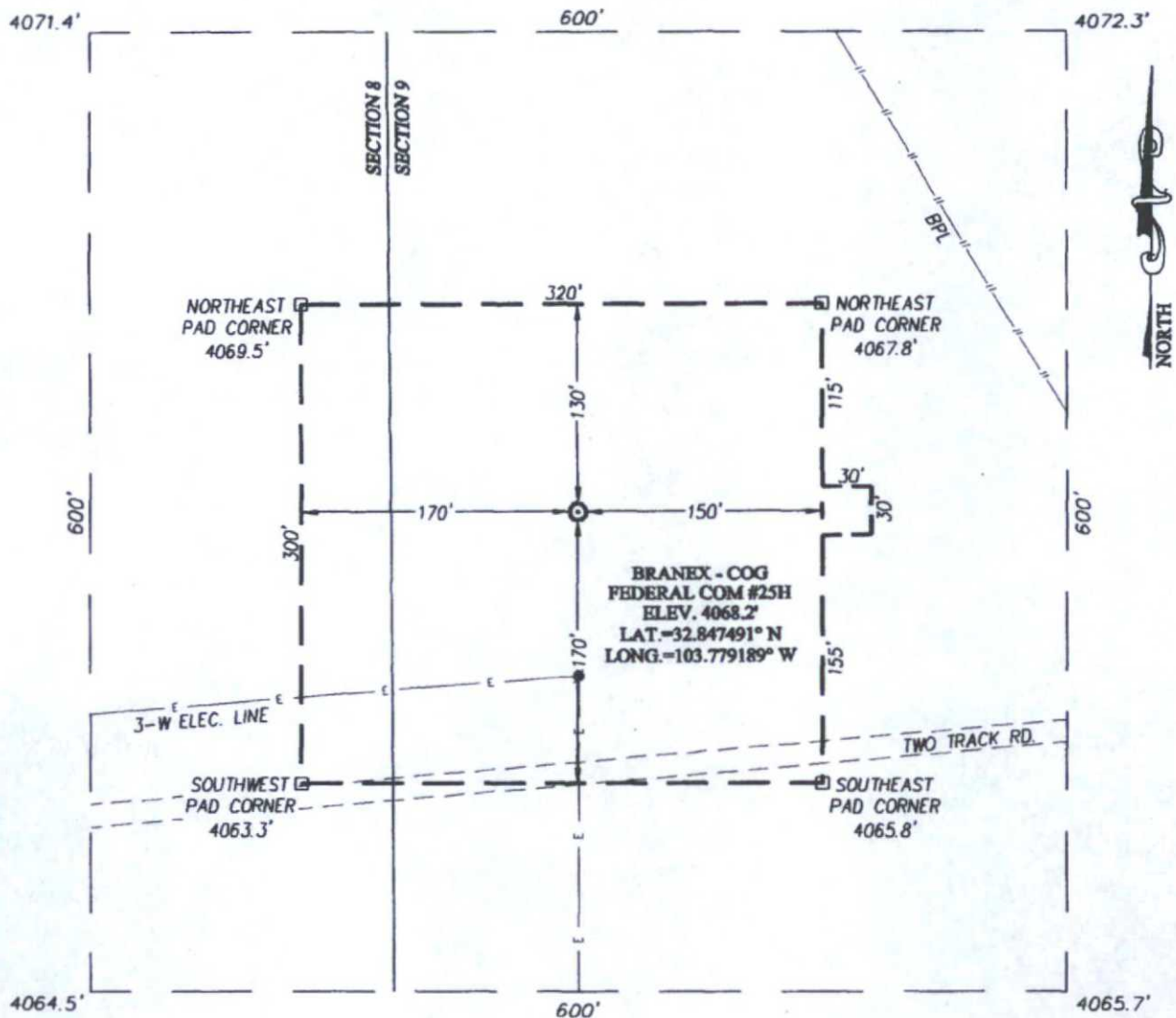
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	9	17-S	32-E		2310	SOUTH	330	EAST	LEA

Dedicated Acres 1.60	Joint or Infill	Consolidation Code	Order No.
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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

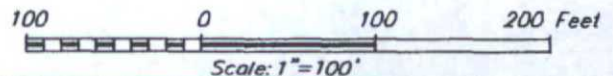
GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=672474.9 N X=670187.3 E LAT.=32.847491° N LONG.=103.779179° W BOTTOM HOLE LOCATION Y=672723.8 N X=675023.3 E DETAIL 4071.4' 4072.3' 600' 4064.5' 4065.7' Project Area GRID AZ.=87°03'10" HORIZ. DIST.=4843.6' Producing Area CORNER COORDINATES TABLE <table border="1"> <tr> <td>A)</td> <td>Y=673038.2 N, X=670068.4 E</td> </tr> <tr> <td>B)</td> <td>Y=673055.1 N, X=675351.4 E</td> </tr> <tr> <td>C)</td> <td>Y=671719.2 N, X=670077.3 E</td> </tr> <tr> <td>D)</td> <td>Y=671735.3 N, X=675358.9 E</td> </tr> </table> Estimated Completed Interval: 2085 FSL 330 FWL	A)	Y=673038.2 N, X=670068.4 E	B)	Y=673055.1 N, X=675351.4 E	C)	Y=671719.2 N, X=670077.3 E	D)	Y=671735.3 N, X=675358.9 E	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  2-9-15 Signature Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 7, 2012 Date of Survey  Signature of Professional Surveyor  Ronald J. Eidson 12/05/2015 Certification Date Ronald J. Eidson 12641 Surveyor No. RONALD J. EIDSON 3239 Surveyor No. L.S.L. REL W.O.: 12.11.1548 JWSC W.O.: 15.13.0179
A)	Y=673038.2 N, X=670068.4 E								
B)	Y=673055.1 N, X=675351.4 E								
C)	Y=671719.2 N, X=670077.3 E								
D)	Y=671735.3 N, X=675358.9 E								

SECTION 9, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY **NEW MEXICO**



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. #82 AND L-126 (MALJAMAR RD.) GO SOUTH ON L-126 APPROX. 0.6 MILES. TURN RIGHT AND GO SOUTHWEST APPROX. 0.8 MILES. TURN RIGHT AND GO NORTH APPROX. 0.3 MILES. TURN LEFT AND GO WEST APPROX. 0.2 MILES. THE LOCATION STAKE IS 165 FEET NORTH OF THE TWO TRACK RD.



COG OPERATING, LLC

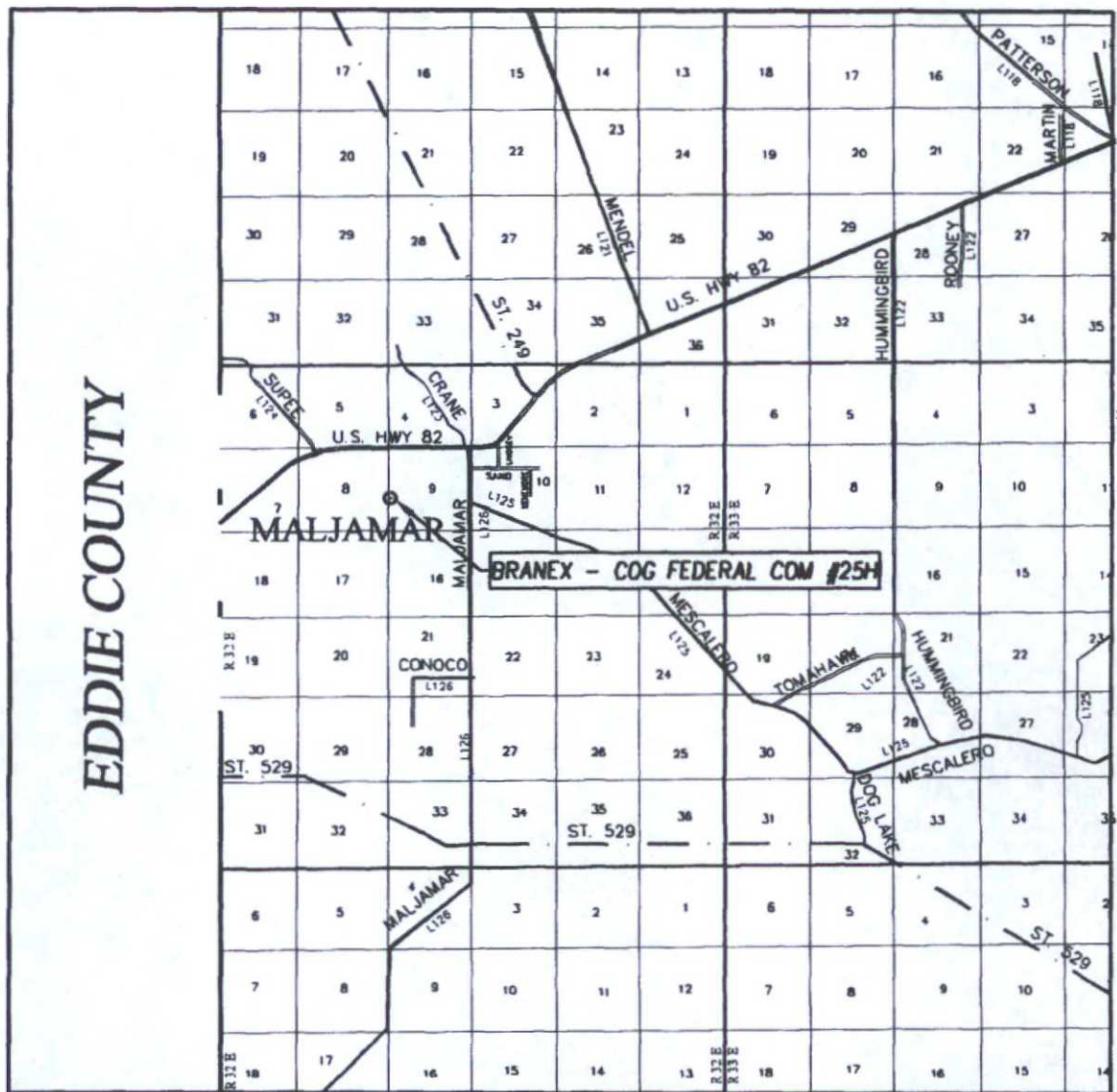
**BRANEX - COG FEDERAL COM #25H WELL
 LOCATED 2075 FEET FROM THE SOUTH LINE
 AND 115 FEET FROM THE WEST LINE OF SECTION 9,
 TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO**

PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (575) 393-3117 www.jwsc.biz

Survey Date: 9/7/12	CAD Date: 2/5/15	Drawn By: LSL
W.O. No.: 15130179	Rev.:	Rel. W.O.: 12111548

Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 9 TWP. 17-S RGE. 32-E

SURVEY N.M.P.M.

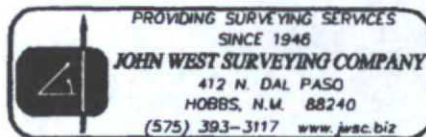
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2075' FSL & 115' FWL

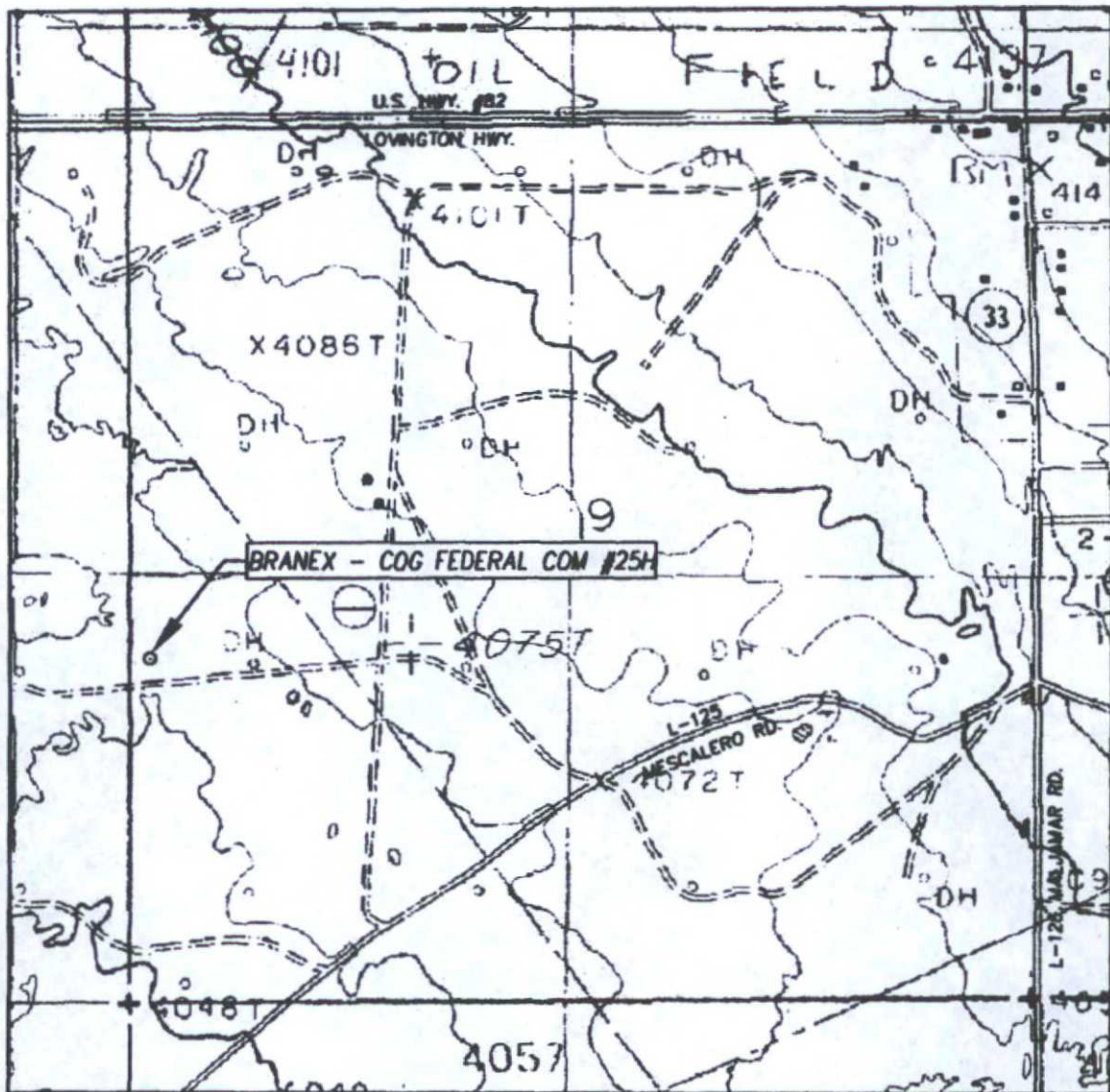
ELEVATION 4068'

OPERATOR COG OPERATING, LLC

LEASE BRANEX - COG FEDERAL COM



LOCATION VERIFICATION MAP



SCALE: 1" = 1000'

CONTOUR INTERVAL:
MALJAMAR, N.M. - 10'
DOG LAKE, N.M. - 10'

SEC. 9 TWP. 18-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

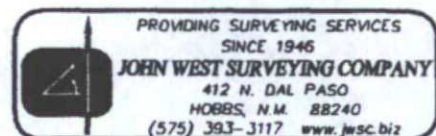
DESCRIPTION 2075' FSL & 115' FWL

ELEVATION 4068'

OPERATOR COG OPERATING, LLC

LEASE BRANEX - COG FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR, N.M.





NEW MEXICO SHELF

LEA COUNTY, NM

MALJAMAR

BRANEX -COG FEDERAL COM #25H

OWB

Plan: PWP0

Standard Planning Report

05 February, 2015

SHL: 2075' FSL, 115' FWL

Sec.9, T17S, R32E

PP: 2085' FSL, 330 FWL

Sec.9, T17S, R32E

BHL: 2310' FSL, 330' FEL

Sec.9, T17S, R32E



COG Operating LLC
Planning Report

Database:	EDM_Users	Local Co-ordinate Reference:	Well BRANEX -COG FEDERAL COM #25H
Company:	NEW MEXICO SHELF	TVD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Project:	LEA COUNTY, NM	MD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Site:	MALJAMAR	North Reference:	Grid
Well:	BRANEX -COG FEDERAL COM #25H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	LEA COUNTY, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		MALJAMAR			
Site Position:		Northing:	675,386.60 usft	Latitude:	32° 51' 19.093 N
From:	Map	Easting:	682,929.80 usft	Longitude:	103° 44' 15.489 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	BRANEX -COG FEDERAL COM #25H					
Well Position	+N/-S	-2,911.7 usft	Northing:	672,474.90 usft	Latitude:	32° 50' 50.968 N
	+E/-W	-12,742.5 usft	Easting:	670,187.30 usft	Longitude:	103° 46' 45.043 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,068.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM_2005	12/31/2009	7.90	60.77	49,136

Design	PWP0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	6,274.6	0.0	0.0	87.05

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	
5,829.1	0.00	0.00	5,829.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,656.6	91.00	87.05	6,350.0	27.2	529.4	11.00	11.00	0.00	87.05	
10,969.5	91.00	87.05	6,274.6	248.9	4,836.0	0.00	0.00	0.00	0.00	PBHL-Branex-COG F



COG Operating LLC
Planning Report

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Company:	NEW MEXICO SHELF	TVD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Project:	LEA COUNTY, NM	MD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Site:	MALJAMAR	North Reference:	Grid
Well:	BRANEX -COG FEDERAL COM #25H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	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
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



COG Operating LLC Planning Report

Database:	EDM_Users	Local Co-ordinate Reference:	Well BRANEX -COG FEDERAL COM #25H
Company:	NEW MEXICO SHELF	TVD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Project:	LEA COUNTY, NM	MD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Site:	MALJAMAR	North Reference:	Grid
Well:	BRANEX -COG FEDERAL COM #25H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,829.1	0.00	0.00	5,829.1	0.0	0.0	0.0	0.00	0.00	0.00
KOP, BEGIN 11°/100' BUILD									
5,900.0	7.80	87.05	5,899.8	0.2	4.8	4.8	11.00	11.00	0.00
6,000.0	18.80	87.05	5,997.0	1.4	27.7	27.8	11.00	11.00	0.00
6,100.0	29.79	87.05	6,088.0	3.5	68.8	68.9	11.00	11.00	0.00
6,200.0	40.79	87.05	6,169.5	6.5	126.4	126.5	11.00	11.00	0.00
6,300.0	51.79	87.05	6,238.4	10.2	198.5	198.7	11.00	11.00	0.00
6,320.5	54.04	87.05	6,250.8	11.1	214.8	215.1	11.00	11.00	0.00
PP Branex-COG Fed Com #25H									
6,400.0	62.79	87.05	6,292.4	14.5	282.4	282.7	11.00	11.00	0.00
6,500.0	73.78	87.05	6,329.3	19.3	375.0	375.5	11.00	11.00	0.00
6,600.0	84.78	87.05	6,347.9	24.3	473.0	473.6	11.00	11.00	0.00
6,656.6	91.00	87.05	6,350.0	27.2	529.4	530.1	10.99	10.99	0.00
EOC, HOLD 91° INC, 87.05° AZI									
6,700.0	91.00	87.05	6,349.2	29.5	572.8	573.5	0.00	0.00	0.00
6,800.0	91.00	87.05	6,347.5	34.6	672.6	673.5	0.00	0.00	0.00
6,900.0	91.00	87.05	6,345.7	39.8	772.5	773.5	0.00	0.00	0.00
7,000.0	91.00	87.05	6,344.0	44.9	872.3	873.5	0.00	0.00	0.00
7,100.0	91.00	87.05	6,342.2	50.0	972.2	973.5	0.00	0.00	0.00
7,200.0	91.00	87.05	6,340.5	55.2	1,072.0	1,073.4	0.00	0.00	0.00
7,300.0	91.00	87.05	6,338.7	60.3	1,171.9	1,173.4	0.00	0.00	0.00
7,400.0	91.00	87.05	6,337.0	65.5	1,271.7	1,273.4	0.00	0.00	0.00
7,500.0	91.00	87.05	6,335.2	70.6	1,371.6	1,373.4	0.00	0.00	0.00
7,600.0	91.00	87.05	6,333.5	75.7	1,471.4	1,473.4	0.00	0.00	0.00
7,700.0	91.00	87.05	6,331.7	80.9	1,571.3	1,573.4	0.00	0.00	0.00
7,800.0	91.00	87.05	6,330.0	86.0	1,671.1	1,673.4	0.00	0.00	0.00
7,900.0	91.00	87.05	6,328.2	91.1	1,771.0	1,773.3	0.00	0.00	0.00
8,000.0	91.00	87.05	6,326.5	96.3	1,870.8	1,873.3	0.00	0.00	0.00
8,100.0	91.00	87.05	6,324.7	101.4	1,970.7	1,973.3	0.00	0.00	0.00
8,200.0	91.00	87.05	6,323.0	106.6	2,070.6	2,073.3	0.00	0.00	0.00
8,300.0	91.00	87.05	6,321.2	111.7	2,170.4	2,173.3	0.00	0.00	0.00
8,400.0	91.00	87.05	6,319.5	116.8	2,270.3	2,273.3	0.00	0.00	0.00
8,500.0	91.00	87.05	6,317.8	122.0	2,370.1	2,373.2	0.00	0.00	0.00
8,600.0	91.00	87.05	6,316.0	127.1	2,470.0	2,473.2	0.00	0.00	0.00
8,700.0	91.00	87.05	6,314.3	132.3	2,569.8	2,573.2	0.00	0.00	0.00
8,800.0	91.00	87.05	6,312.5	137.4	2,669.7	2,673.2	0.00	0.00	0.00
8,900.0	91.00	87.05	6,310.8	142.5	2,769.5	2,773.2	0.00	0.00	0.00
9,000.0	91.00	87.05	6,309.0	147.7	2,869.4	2,873.2	0.00	0.00	0.00
9,100.0	91.00	87.05	6,307.3	152.8	2,969.2	2,973.2	0.00	0.00	0.00
9,200.0	91.00	87.05	6,305.5	158.0	3,069.1	3,073.1	0.00	0.00	0.00
9,300.0	91.00	87.05	6,303.8	163.1	3,168.9	3,173.1	0.00	0.00	0.00
9,400.0	91.00	87.05	6,302.0	168.2	3,268.8	3,273.1	0.00	0.00	0.00
9,500.0	91.00	87.05	6,300.3	173.4	3,368.6	3,373.1	0.00	0.00	0.00
9,600.0	91.00	87.05	6,298.5	178.5	3,468.5	3,473.1	0.00	0.00	0.00
9,700.0	91.00	87.05	6,296.8	183.7	3,568.3	3,573.1	0.00	0.00	0.00
9,800.0	91.00	87.05	6,295.0	188.8	3,668.2	3,673.0	0.00	0.00	0.00
9,900.0	91.00	87.05	6,293.3	193.9	3,768.0	3,773.0	0.00	0.00	0.00
10,000.0	91.00	87.05	6,291.5	199.1	3,867.9	3,873.0	0.00	0.00	0.00



COG Operating LLC
Planning Report

Database:	EDM_Users	Local Co-ordinate Reference:	Well BRANEX -COG FEDERAL COM #25H
Company:	NEW MEXICO SHELF	TVD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Project:	LEA COUNTY, NM	MD Reference:	RKB=4068+12.5 @ 4080.5usft (UNITED #43)
Site:	MALJAMAR	North Reference:	Grid
Well:	BRANEX -COG FEDERAL COM #25H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
10,100.0	91.00	87.05	6,289.8	204.2	3,967.8	3,973.0	0.00	0.00	0.00
10,200.0	91.00	87.05	6,288.0	209.4	4,067.6	4,073.0	0.00	0.00	0.00
10,300.0	91.00	87.05	6,286.3	214.5	4,167.5	4,173.0	0.00	0.00	0.00
10,400.0	91.00	87.05	6,284.5	219.6	4,267.3	4,273.0	0.00	0.00	0.00
10,500.0	91.00	87.05	6,282.8	224.8	4,367.2	4,372.9	0.00	0.00	0.00
10,600.0	91.00	87.05	6,281.0	229.9	4,467.0	4,472.9	0.00	0.00	0.00
10,700.0	91.00	87.05	6,279.3	235.0	4,566.9	4,572.9	0.00	0.00	0.00
10,800.0	91.00	87.05	6,277.5	240.2	4,666.7	4,672.9	0.00	0.00	0.00
10,900.0	91.00	87.05	6,275.8	245.3	4,766.6	4,772.9	0.00	0.00	0.00
10,969.5	91.00	87.05	6,274.6	248.9	4,836.0	4,842.4	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL-Branex-COG Fed	0.00	0.01	6,274.6	248.9	4,836.0	672,723.80	675,023.30	32° 50' 53.176 N	103° 45' 48.342 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,829.1	5,829.1	0.0	0.0	KOP, BEGIN 11°/100' BUILD
6,320.5	6,250.8	11.1	214.8	PP Branex-COG Fed Com #25H
6,656.6	6,350.0	27.2	529.4	EOC, HOLD 91° INC, 87.05° AZI



Sec	SECTION DETAILS							
	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect
1	0.0	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	5829.1	0.00	0.0	0.0	0.0	0.00	0.00	0.0
3	6950.8	87.05	6350.0	27.2	529.4	11.00	87.05	530.1
4	10969.5	91.00	6274.6	248.9	4836.0	0.00	0.00	4842.4

Annotation
KOP, BEGIN 11°103' BUILD
EOC, HOLD 91° INC, 87.05° AZI

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well BRANEX -COG FEDERAL COM #25H, Grid North
Vertical (TVD) Reference: RKB-4068+12.5 @ 4080.5ustf (UNITED #43)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: RKB-4068+12.5 @ 4080.5ustf (UNITED #43)
Calculation Method: Minimum Curvature

