

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

OCD
Artesia

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMLC028793A
2. Name of Operator COG OPERATING LLC Contact: KELLY J HOLLY E-Mail: kholly@conchoresources.com		6. If Indian, Allottee or Tribe Name
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-685-4384	7. If Unit or CA/Agreement, Name and/or No. NMNM88525X
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 18 T17S R30E Lot 4 585FSL 465FWL		8. Well Name and No. BURCH KEELY UNIT 945H
		9. API Well No. 30-015-39578-00-X1
		10. Field and Pool, or Exploratory BURCH KEELY-GLORIETA-UPPER Y
		11. County or Parish, and State EDDY 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
☐ Subsequent Report	☐ Deepen
☐ Final Abandonment Notice	☐ Fracture Treat
	☐ Production (Start/Resume)
	☐ Alter Casing
	☐ Reclamation
	☐ Casing Repair
	☐ New Construction
	☐ Recomplete
	☐ Change Plans
	☐ Plug and Abandon
	☐ Temporarily Abandon
	☐ Convert to Injection
	☐ Plug Back
	☐ Water Disposal
	☐ Water Shut-Off
	☐ Well Integrity
	☒ Other Change to Original APD

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 recompleate 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 recompleation 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 proposes to change the production casing program for this well from a straight 5 1/2" casing design to a 7" X 5 1/2" tapered design. The 7" 26# L80 LTC casing will be run from surface to KOP of 4473' and changed over to 5 1/2" 17# L80 LTC at this point. The 5 1/2" will be run through curve to TD of 9156' MD/4882' TVD. Isolation in the curve and lateral will be obtained with external casing packers. A 7" DV tool and ECP will be installed in 7" casing string at the KOP and the 7" will be cemented from KOP to surface in a single stage as follows: LEAD SLURRY of 400 sks 35:65:6 Poz Gel with 5% salt, 5 pps LCM, 0.2% SMS, 0.3% FL-52A, 0.125 pps CF, yield 2.01 cf/sk, wt. 12.5 ppg followed with TAIL SLURRY of 400 sks 50:50:2:C: Poz Gel with 5% salt, 3 pps LCM, 0.6% SMS, 1% FL-25, 1% BA-58, 0.125 pps CF, yield 1.37 cf/sk, wt 14.0 ppg. 96% excess. Minimum tieback is 200' above 9 5/8" casing shoe however cement volumes are calculated to surface.

A revised directional plan is attached for your review.

Accepted for record

RECEIVED
NOV 29 2012
NMOCD ARTES

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

SEE ATTACHED FOR

NMOCD

2012

Electronic Submission #160912 verified by the BLM Well Information System

For COG OPERATING LLC
Committed to AFMSS for processing by KU

sent to the Carlsbad
SIMMONS on 11/26/2012 (13KMS3948SE)

Name (Printed/Typed) KELLY J HOLLY

Title PERMITTING TECH

Signature (Electronic Submission)

Date 11/21/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ

Title PETROLEUM ENGINEER

Date 11 12

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 Carlsbad

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.

LAND MANAGEMENT
FIELD OFFICE

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL

Sundry dated 11/21/2012

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC028793C Unit – NM88525X
WELL NAME & NO.:	Burch Keely Unit 188H -→945H? 30-015-39578
LOCATION:	Section 18, T.17S., R.30E., NMPM
COUNTY:	Eddy County, New Mexico

Original COA still applies with the following changes:

Operator to install Centralizers: ONE centralizer per joint from KOP to 200 feet above previous casing shoe (9-5/8" casing shoe).

Cement job on the 7" by 5-1/2" tapered string design is approved as written with the new revised directional plan.

EGF 112612



COG Operating LLC

Eddy County, NM (NAN27 NME)

Burch Keely Unit #945H

OH

Plan #3 - 7-7/8" Hole

Surface: 585' FSL, 465' FWL, Sec 18, T17S, R30E, Unit M (Lot 4)

BHL: 330' FSL, 330' FEL, Sec 18, T17S, R30E, Unit P

Standard Planning Report

20 November, 2012





Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db.
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Burch Keely Unit
Well: #945H
Wellbore: OH
Design: Plan #3 - 7-7/8" Hole

Local Co-ordinate Reference:
TVD Reference:
MID Reference:
North Reference:
Survey Calculation Method:
Well #945H
GL Elev @ 3631.00usft
GL Elev @ 3631.00usft
Grid
Minimum Curvature

Project:	Eddy County, NM (NAN27 NME)		
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		Using geodetic scale factor

Site	Burch Keely Unit		
Site Position:		Northing:	661,490.10 usft
From:	Map	Easting:	589,648.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 49' 5.462 N
		Longitude:	104° 2' 29.475 W
		Grid Convergence:	0.16 °

Well	#945H		
Well Position	+N-S	3,873.62 usft	Northing:
	+E-W	7,323.60 usft	Easting:
Position Uncertainty:	0.00 usft	Wellhead Elevation:	Ground Level:
			3,631.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	BGGM2012	11/22/2011	7.88
			Dip Angle
			60.63
			Field Strength
			48,895

Design	Plan #3 - 7-7/8" Hole		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			93.10

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,472.54	0.00	0.00	4,472.54	0.00	0.00	0.00	0.00	0.00	0.00	
5,230.98	91.00	93.10	4,950.00	-26.27	485.16	12.00	12.00	0.00	93.10	
9,155.91	91.00	93.10	4,881.50	-238.42	4,403.75	0.00	0.00	0.00	0.00	PBHL



Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAN27-NME)
Site: Burch Keely Unit
Well: #945H
Wellbore: OH
Design: Plan #3--7-7/8" Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well #945H
GL Elev @ 3631.00usft
GL Elev @ 3631.00usft
Grid
Minimum Curvature

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,472.54	0.00	0.00	4,472.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 12.00									
4,500.00	3.29	93.10	4,499.98	-0.04	0.79	0.79	12.00	12.00	0.00
4,600.00	15.29	93.10	4,598.49	-0.91	16.88	16.91	12.00	12.00	0.00
4,700.00	27.29	93.10	4,691.50	-2.87	53.08	53.16	12.00	12.00	0.00
4,800.00	39.29	93.10	4,774.93	-5.84	107.79	107.94	12.00	12.00	0.00
4,900.00	51.29	93.10	4,845.16	-9.67	178.62	178.88	12.00	12.00	0.00
5,000.00	63.29	93.10	4,899.10	-14.21	262.48	262.87	12.00	12.00	0.00
5,100.00	75.28	93.10	4,934.41	-19.26	355.71	356.23	12.00	12.00	0.00
5,200.00	87.28	93.10	4,949.54	-24.59	454.23	454.89	12.00	12.00	0.00
5,230.98	91.00	93.10	4,950.00	-26.27	485.16	485.87	12.00	12.00	0.00
EOC Start 3924.93 Hold at 5230.98 MD									
5,300.00	91.00	93.10	4,948.80	-30.00	554.06	554.88	0.00	0.00	0.00
5,400.00	91.00	93.10	4,947.05	-35.40	653.90	654.86	0.00	0.00	0.00
5,500.00	91.00	93.10	4,945.30	-40.81	753.74	754.84	0.00	0.00	0.00
5,600.00	91.00	93.10	4,943.56	-46.21	853.58	854.83	0.00	0.00	0.00
5,700.00	91.00	93.10	4,941.81	-51.62	953.42	954.81	0.00	0.00	0.00
5,800.00	91.00	93.10	4,940.07	-57.02	1,053.26	1,054.80	0.00	0.00	0.00
5,900.00	91.00	93.10	4,938.32	-62.43	1,153.10	1,154.78	0.00	0.00	0.00
6,000.00	91.00	93.10	4,936.58	-67.83	1,252.93	1,254.77	0.00	0.00	0.00
6,100.00	91.00	93.10	4,934.83	-73.24	1,352.77	1,354.75	0.00	0.00	0.00
6,200.00	91.00	93.10	4,933.09	-78.64	1,452.61	1,454.74	0.00	0.00	0.00
6,300.00	91.00	93.10	4,931.34	-84.05	1,552.45	1,554.72	0.00	0.00	0.00
6,400.00	91.00	93.10	4,929.60	-89.45	1,652.29	1,654.71	0.00	0.00	0.00
6,500.00	91.00	93.10	4,927.85	-94.86	1,752.13	1,754.69	0.00	0.00	0.00
6,600.00	91.00	93.10	4,926.11	-100.27	1,851.97	1,854.68	0.00	0.00	0.00
6,700.00	91.00	93.10	4,924.36	-105.67	1,951.80	1,954.66	0.00	0.00	0.00
6,800.00	91.00	93.10	4,922.62	-111.08	2,051.64	2,054.65	0.00	0.00	0.00
6,900.00	91.00	93.10	4,920.87	-116.48	2,151.48	2,154.63	0.00	0.00	0.00
7,000.00	91.00	93.10	4,919.13	-121.89	2,251.32	2,254.62	0.00	0.00	0.00
7,100.00	91.00	93.10	4,917.38	-127.29	2,351.16	2,354.60	0.00	0.00	0.00
7,200.00	91.00	93.10	4,915.64	-132.70	2,451.00	2,454.59	0.00	0.00	0.00
7,300.00	91.00	93.10	4,913.89	-138.10	2,550.84	2,554.57	0.00	0.00	0.00
7,400.00	91.00	93.10	4,912.15	-143.51	2,650.67	2,654.56	0.00	0.00	0.00
7,500.00	91.00	93.10	4,910.40	-148.91	2,750.51	2,754.54	0.00	0.00	0.00
7,600.00	91.00	93.10	4,908.65	-154.32	2,850.35	2,854.53	0.00	0.00	0.00
7,700.00	91.00	93.10	4,906.91	-159.72	2,950.19	2,954.51	0.00	0.00	0.00
7,800.00	91.00	93.10	4,905.16	-165.13	3,050.03	3,054.49	0.00	0.00	0.00
7,900.00	91.00	93.10	4,903.42	-170.53	3,149.87	3,154.48	0.00	0.00	0.00
8,000.00	91.00	93.10	4,901.67	-175.94	3,249.70	3,254.46	0.00	0.00	0.00
8,100.00	91.00	93.10	4,899.93	-181.34	3,349.54	3,354.45	0.00	0.00	0.00
8,200.00	91.00	93.10	4,898.18	-186.75	3,449.38	3,454.43	0.00	0.00	0.00
8,300.00	91.00	93.10	4,896.44	-192.15	3,549.22	3,554.42	0.00	0.00	0.00
8,400.00	91.00	93.10	4,894.69	-197.56	3,649.06	3,654.40	0.00	0.00	0.00
8,500.00	91.00	93.10	4,892.95	-202.97	3,748.90	3,754.39	0.00	0.00	0.00
8,600.00	91.00	93.10	4,891.20	-208.37	3,848.74	3,854.37	0.00	0.00	0.00
8,700.00	91.00	93.10	4,889.46	-213.78	3,948.57	3,954.36	0.00	0.00	0.00
8,800.00	91.00	93.10	4,887.71	-219.18	4,048.41	4,054.34	0.00	0.00	0.00
8,900.00	91.00	93.10	4,885.97	-224.59	4,148.25	4,154.33	0.00	0.00	0.00
9,000.00	91.00	93.10	4,884.22	-229.99	4,248.09	4,254.31	0.00	0.00	0.00
9,100.00	91.00	93.10	4,882.48	-235.40	4,347.93	4,354.30	0.00	0.00	0.00
9,155.91	91.00	93.10	4,881.50	-238.42	4,403.75	4,410.20	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database: EDM 5000.1 Single User Db
Company: COG Operating LLC
Project: Eddy County, NM (NAN27, NME)
Site: Burch Keely Unit
Well: #945H
Wellbore: OH
Design: Plan #3 - 7-7/8" Hole

Local Co-ordinate Reference: Well #945H
TVD Reference: GL Elev @ 3631.00usft
MD Reference: GL Elev @ 3631.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hitless target									
- Shape									
PBHL	0.00	0.01	4,881.50	-238.42	4,403.75	665,125.00	601,374.40	32° 49' 41.089 N	104° 0' 11.930 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	
		+N-S (usft)	+E-W (usft)
4,472.54	4,472.54	0.00	0.00
5,230.98	4,950.00	-26.27	485.16

Comment
KOP Start Build 12.00
EOC Start 3924.93 hold at 5230.98 MD



Burch Keely Unit #845H
Eddy County, NM (NAN27 NME)
Northing: (Y) 885363.40
Easting: (X) 596971.00
Plan #3 - 7-7/8" Hole



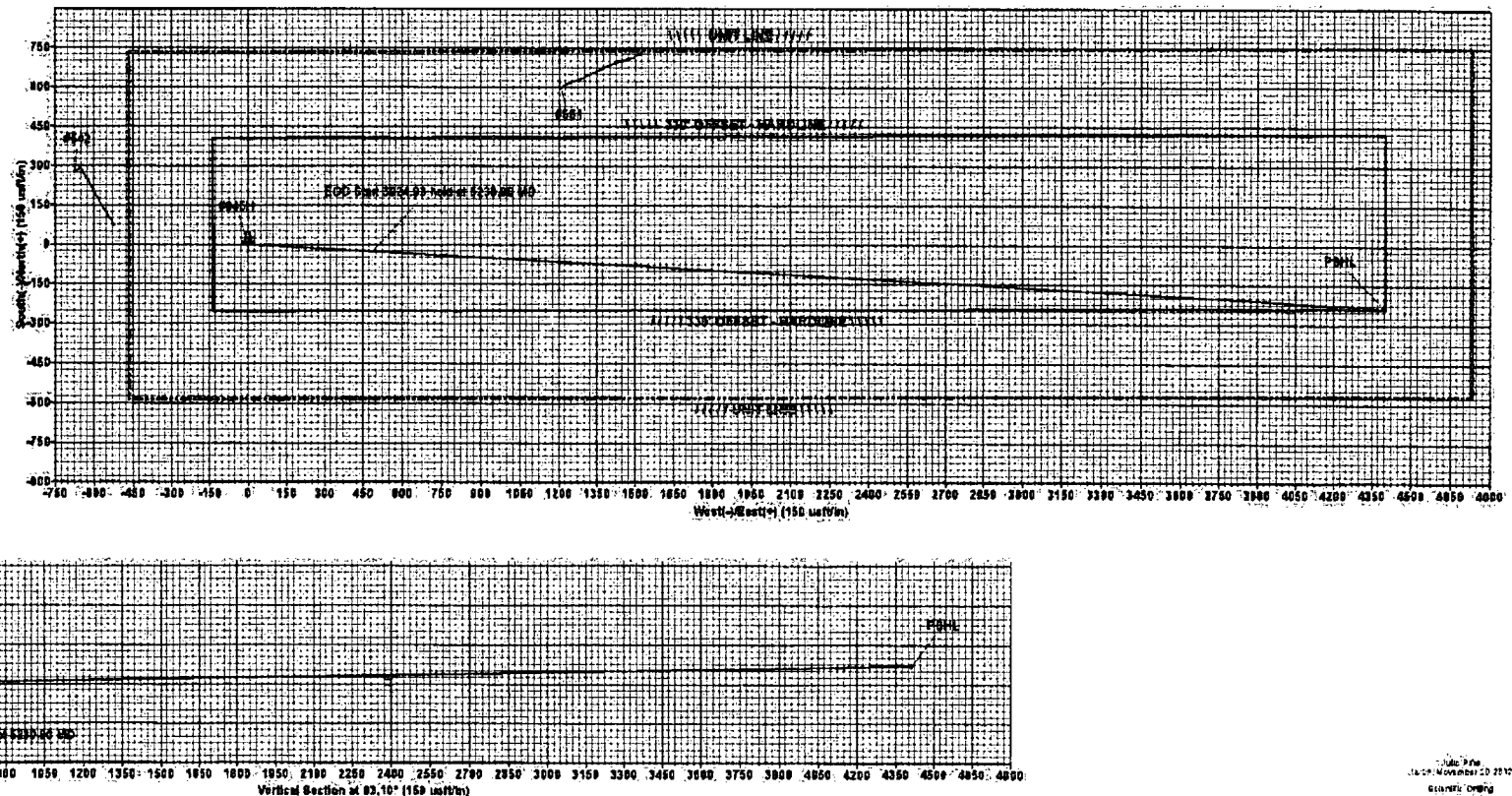
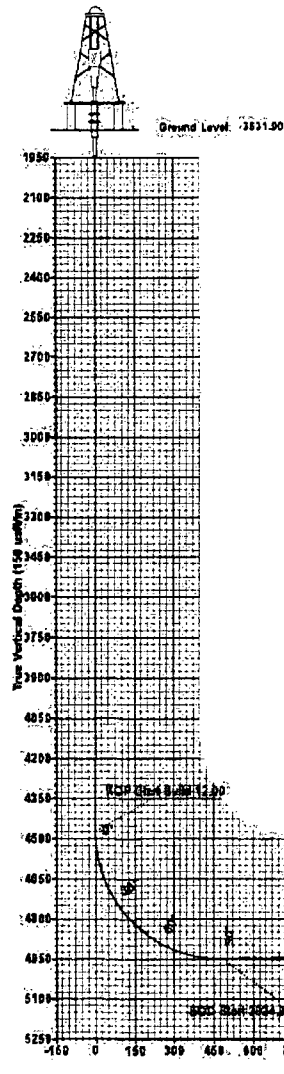
Azimuth to Grid North
True North: +0.17°
Magnetic North: 7.71°

Magnetic Field
Strength: 48084.8mT
Dip Angle: 60.83°
Date: 11/22/2011
To convert a Magnetic Direction to a Grid Direction, Add 7.71°
To convert a True Direction to a Grid Direction, Subtract 0.17°
Model: BQM2012

WELL DETAILS:									
		Ground Level:		3831.00					
+N/S	+E/W	Northing	Easting	Latitude	Longitude				
0.00	0.00	885363.40	596971.00	32° 49' 43.581" N	104° 1' 3.528" W				
SECTION DETAILS:									
MD	Inc	Ad	TVD	+N/S	+E/W	Olsg	TFace	VFace	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4472.54	0.00	0.00	4472.54	0.00	0.00	0.00	0.00	0.00	
5230.88	91.00	93.10	4950.00	-28.27	485.18	12.00	93.10	485.87	
9155.91	91.00	93.10	4891.50	-238.42	4403.75	0.00	0.00	4410.20	PBHL
DESIGN/TARGET DETAILS:									
Name	TVD		+N/S	+E/W	Northing	Easting			
PBHL	4891.50		-238.42	4403.75	885363.40	596971.00			

SITE DETAILS:	
Burch Keely Unit #845H	
Site Centre Northing: 885363.40	
Easting: 596971.00	
Positional Uncertainty: 0.00	
Convergence: 0.18	
Local North: Grid	
PROJECT DETAILS:	
Eddy County, NM (NAN27 NME)	
Geodetic System: US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: New Mexico East 3001	
System Datum: Mean Sea Level	

Map System:	
US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone Name: New Mexico East 3001	
Local Origin: Well #845H, Grid North	
Latitude: 32° 49' 43.581" N	
Longitude: 104° 1' 3.528" W	
Grid East: 596971.00	
Grid North: 885363.40	
Scale Factor: 1.000	
Geometric Model:	
BQM2012	
Sample Date: 22-Nov-11	
Magnetic Declination: 7.88°	
Dip Angle: 60.83°	
Magnetic Field Strength: 48084	
To convert a Magnetic Direction to a Grid Direction, Add 7.71°	
To convert a Magnetic Direction to a True Direction, Add 7.88° East	
To convert a True Direction to a Grid Direction, Subtract 0.17°	



CONDITIONS OF APPROVAL

Sundry dated 11/21/2012

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC028793C Unit – NM88525X
WELL NAME & NO.:	Burch Keely Unit 188H ->945H? 30-015-39578
LOCATION:	Section 18, T.17S., R.30E., NMPM
COUNTY:	Eddy County, New Mexico

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Cement job on the 7" by 5-1/2" tapered string design is approved as written with the new revised directional plan.

EGF 112612