

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION

ARIZONA DISTRICT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS** JAN 08 2016
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM013814
2. Name of Operator COG OPERATING LLC Contact: KELLY J HOLLY E-Mail: kholly@concho.com		6. If Indian, Allottee or Tribe Name
3a. Address 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.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 6 T17S R30E Lot 5 1650FNL 330FWL		8. Well Name and No. TWELVE-PACK FEDERAL COM LBB 3H
		9. API Well No. 30-015-40965-00-X1
		10. Field and Pool, or Exploratory LOCO HILLS
		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	☐ 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 PD
	☐ 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 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 Well # and TVD of this well as follows:

FROM: Twelve Pack Federal Com LBB #3H

TO: Twelve Pack Federal Com #13H

FROM: 5380' TVD; 9768' MD

TO: 4406' TVD; 8774' MD

UPD 1/15/16
Accepted for record
NMOCB

SUBJECT TO LIKE
APPROVAL BY STATE

A revised C-102, 1 mile map and directional plan are attached.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #291847 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by JAMIE RHOADES on 09/15/2015 (15JLR0391SE)	
Name (Printed/Typed) KELLY J HOLLY	Title PERMITTING TECH
Signature (Electronic Submission)	Date 02/16/2015
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By <i>CHS</i> <i>Wells</i>	Title
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.	

APPROVED

JAN 7 2016

BUREAU OF LAND MANAGEMENT

Form 1
1625 N French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720
Form 2
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1263 Fax: (505) 748-9720
Form 3
1000 Rio Brazos Road, Amarillo, NM 89410
Phone: (505) 334-6176 Fax: (505) 334-6177
Form 4
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

NM OIL CONSERVATION
ARTESIA DISTRICT Form C-102
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505
JAN 08 2016
Revised August 1, 2011
Submit one copy to appropriate District Office
RECEIVED ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-40965	² Pool Code 96718	³ Pool Name Loco Hills; Glorieta Yeso
⁴ Property Code 39626	⁵ Property Name TWELVE PACK FEDERAL COM	
⁶ OGRID No. 229137	⁷ Operator Name COG OPERATING, LLC	⁸ Well Number 13H
		⁹ Elevation 3689'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
5	6	17-S	30-E		1650	NORTH	330	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

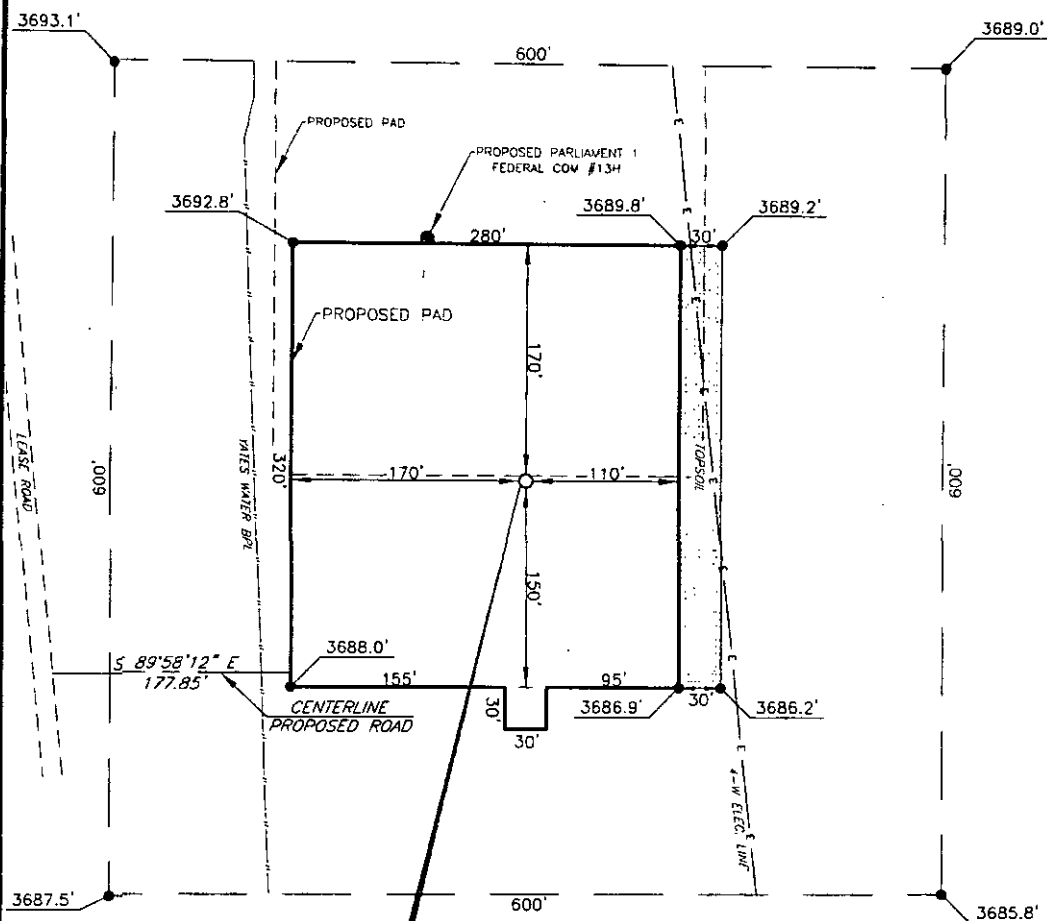
UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
H	6	17-S	30-E		1650	NORTH	330	EAST	EDDY

¹² Dedicated Acres 157.08	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

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.

	17 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 owner, working interest, or leased mineral interests 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order, and that I am duly qualified by the district. Signature: <i>[Signature]</i> Date: 2-16-15 Printed Name: Kelly J. Holly E-mail Address: kholly@concho.com
	18 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. Date of Survey: 4/8/13 Signature and Seal of Professional Surveyor: <i>[Signature]</i> 19680 Certificate Number REVISED: 2/4/15

Twelve Pack Federal Com #13H
(1650' FNL & 330' FWL)
Section 6, T-17-S, R-30-E,
N. M. P. M., Eddy Co., New Mexico



TWELVE PACK FEDERAL COM #13H
ELEVATION: 3689'
LAT: 32.866129° N
LONG: 104.018055° W

From CR-215 (Kewanee) and CR-257 (Mallett).

Go East on CR-257 approx. 1.0 mile.

Turn right on a lease road and go South approx. 0.4 mile.

The location is approx. 360 feet East of the lease road.



SCALE: 1" = 100'

BEARINGS ARE
MAG 27 - NM EAST
DISTANCES ARE
GROUND

Copyright 2012 - All Rights Reserved

2	WELL NAME	2/4/15
1	WELL NAME	5/2/13
NO.	REVISION	DATE
JOB NO.: LS130110		
DWG. NO.: 130110PAD		

PROSPERITY CONSULTANTS, LLC



SCALE: 1" = 100'

DATE: 4/8/13

SURVEYED BY: GB/BK

DRAWN BY: AF

APPROVED BY: LWB

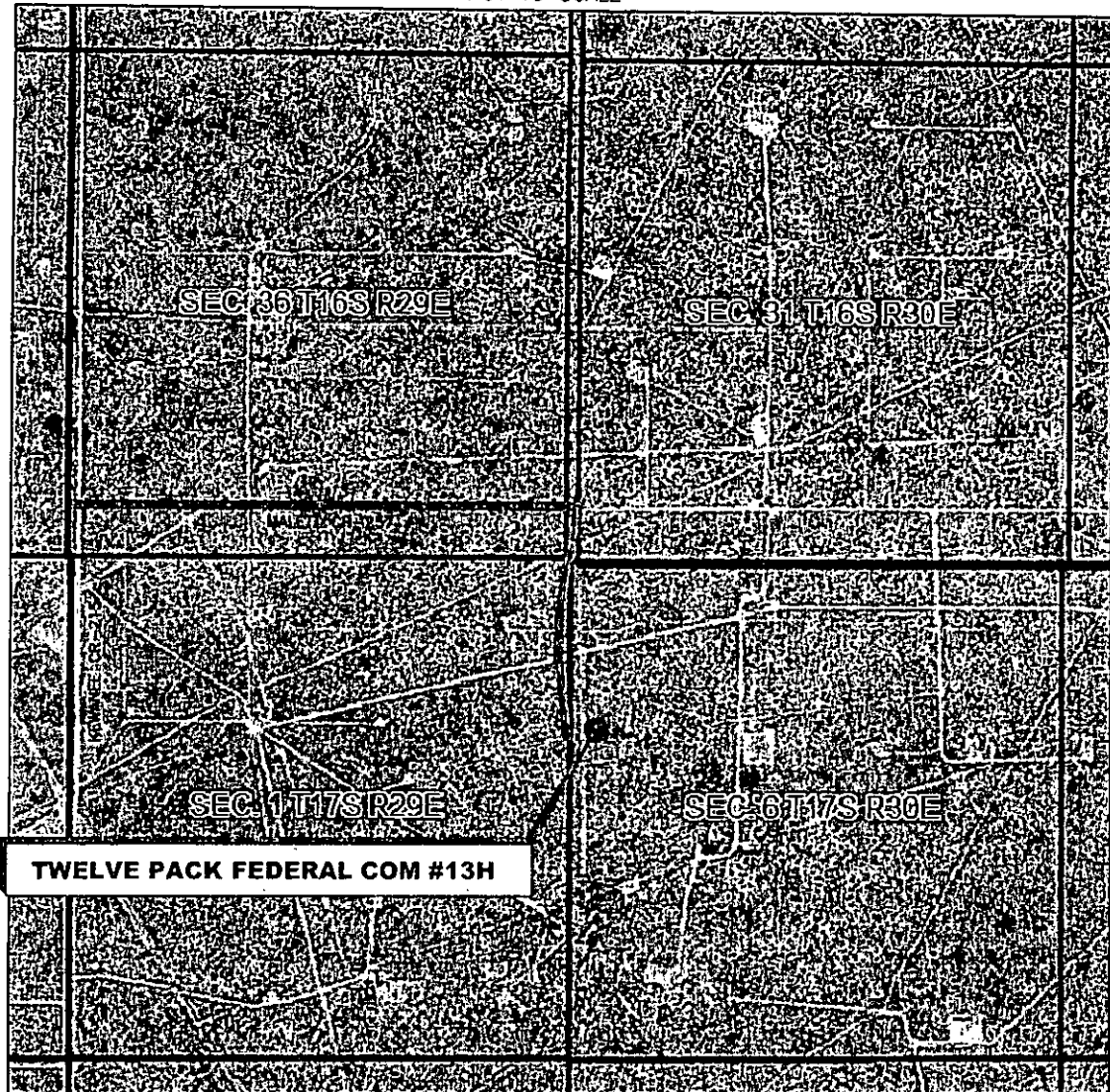
SHEET : 1 OF 1

2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 f (512) 251-2518

VICINITY MAP

NOT TO SCALE



SECTION 6, TWP. 17 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

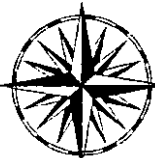
OPERATOR: COG Operating, LLC
LEASE: Twelve Pack Federal Com
WELL NO.: 13H

LOCATION: 1650' FNL & 330' FWL
ELEVATION: 3689'

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2	WELL NAME	2/4/15
1	WELL NAME	5/2/13
NO.	REVISION	DATE
JOB NO.: LS130110		
DWG. NO.: 130110VM		

PROSPERITY CONSULTANTS, LLC

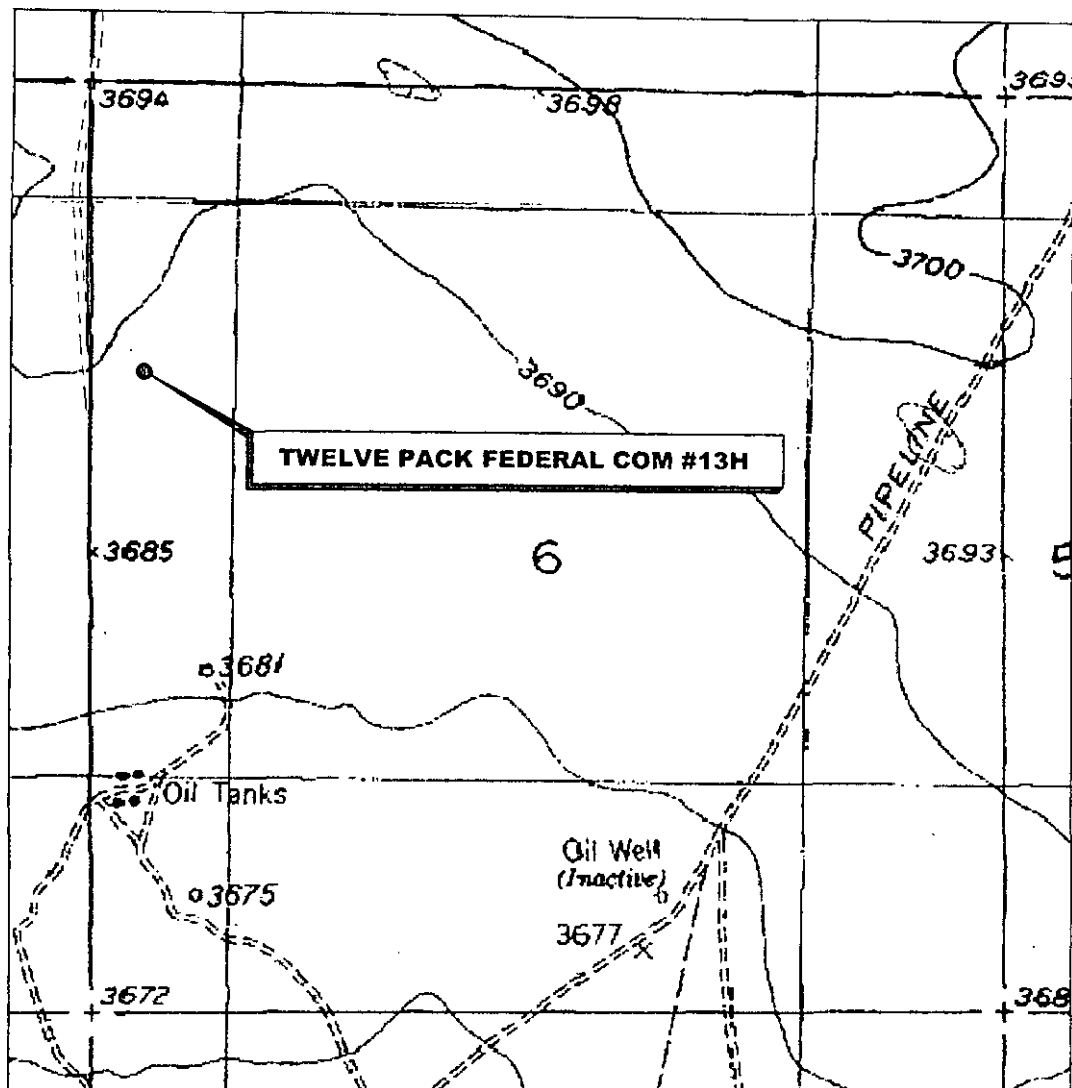


2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 1000'
DATE: 4/8/13
SURVEYED BY: GB/BK
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



SECTION 6, TWP. 17 SOUTH, RGE. 30 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC
LEASE: Twelve Pack Federal Com
WELL NO.: 13H
ELEVATION: 3689'

LOCATION: 1650' FNL & 330' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Red Lake SE, NM (1955)

Copyright 2012 - All Rights Reserved

2	WELL NAME	2/4/15
1	WELL NAME	5/2/13
NO.	REVISION	DATE
JOB NO.: LS130110		
DWG. NO.: 130110LVM		

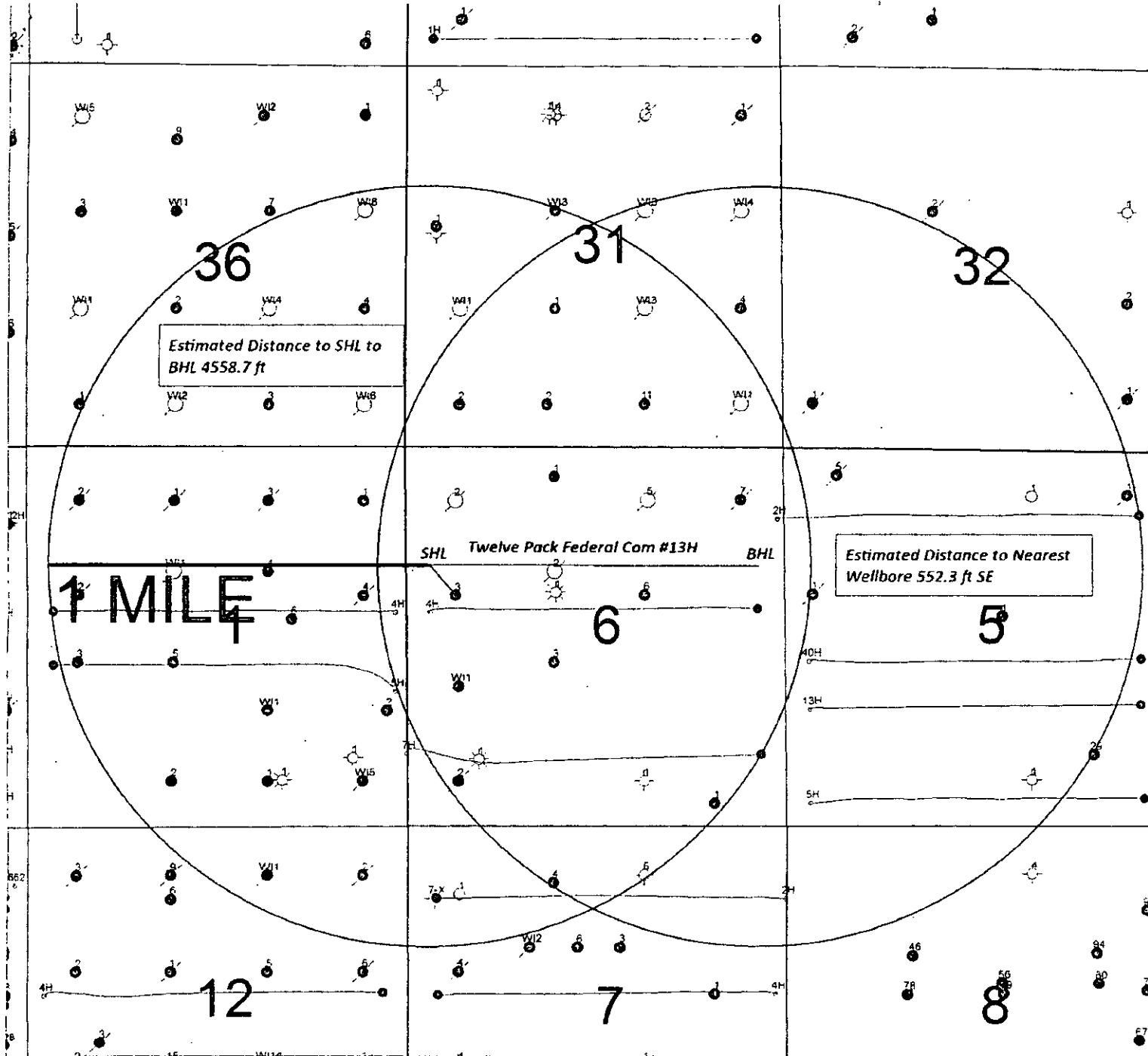
PROSPERITY CONSULTANTS, LLC



2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 1000'
DATE: 4/8/13
SURVEYED BY: GB/BK
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

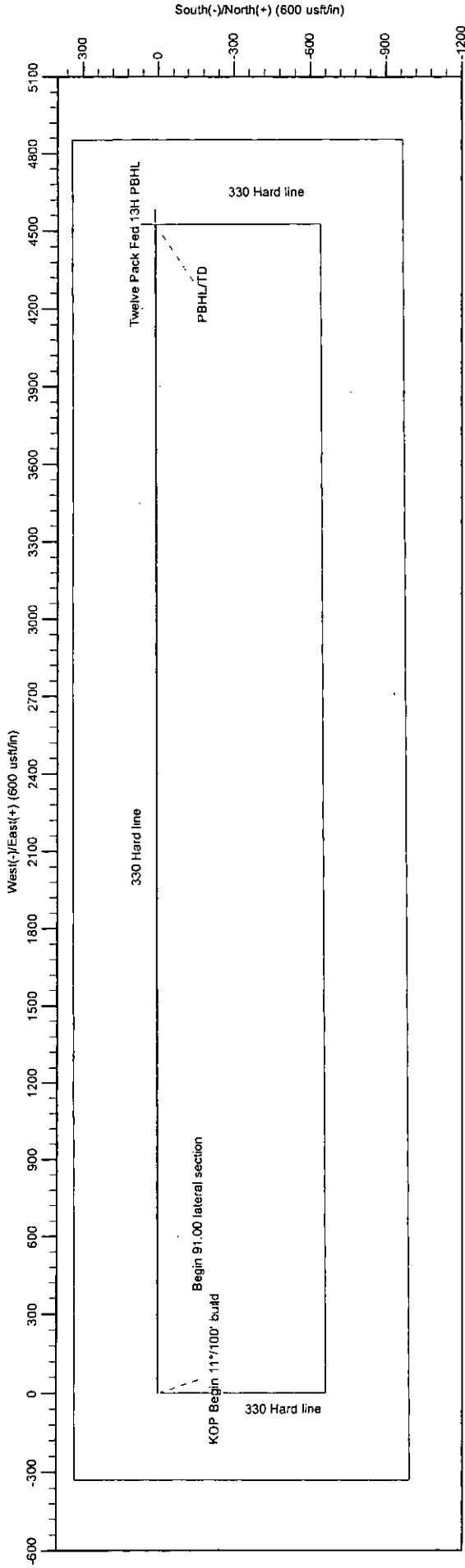


	
SENM Shelf Area Twelve Pack Federal Com #13H	
SEC. 6. T17S - R30E SHL 1650 FNL 330 FWL UNIT E SEC. 6. T17S - R30E SHL 1650 FNL 330 FEL UNIT H	
Author:	Date:



COG Operating LLC

Well: Twelve Pack Federal Com Well No. 13H
Site: Twelve Pack Federal Com
Project: Eddy County, New Mexico
Design: rev0
Rig: United #43



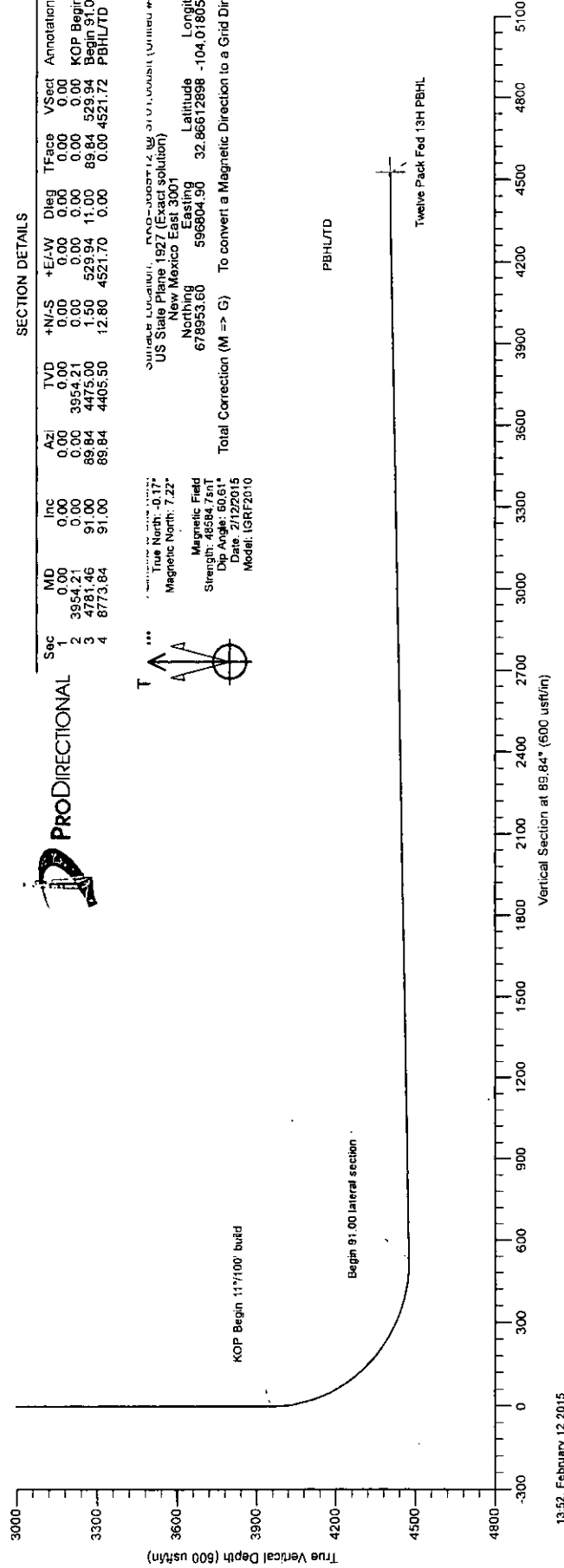
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3954.21	0.00	0.00	3954.21	0.00	0.00	0.00	0.00	0.00	KOP Begin 11 1/2 100' build
3	4781.46	91.00	89.84	4475.00	1.50	529.94	11.00	89.84	529.94	Begin 91.00 lateral section
4	8773.84	91.00	89.84	4405.50	12.80	4521.70	0.00	0.00	4521.72	PBHL/TD

True North: 0.17°
Magnetic North: 7.22°
Magnetic Field
Strength: 4584.17 nT
Dip Angle: 60.61°
Date: 2/12/2015
Model: IGRF2010

US State Plane 1927 (Exact solution)
New Mexico East 3001
Northing
678953.60
Easting
596804.90
Latitude
32.86612898
Longitude
-104.01805521

Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Add 7.22°





COG Operating LLC

Eddy County, New Mexico

Twelve Pack Federal Com

Twelve Pack Federal Com Well No. 13H

Original Hole

SHL: 1650 FNL 330 FWL Sect 6-T17S-R30E Lot 5

BHL: 1650 FNL 330 FEL Sect 6-T17S-R30E Lot H

Plan: rev0

Standard_report

12 February, 2015

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 08 2016

RECEIVED



Standard_report

Company: COG Operating LLC		Local Co-ordinate Reference: Well Twelve Pack Federal Com Well No. 13H	
Project: Eddy County, New Mexico		TVD Reference: RKB=3689+12 @ 3701.00usft (United #43)	
Site: Twelve Pack Federal Com		MD Reference: RKB=3689+12 @ 3701.00usft (United #43)	
Well: Twelve Pack Federal Com Well No. 13H		North Reference: Grid	
Wellbore: Original Hole		Survey Calculation Method: Minimum Curvature	
Design: rev0		Database: Dbase Nov0914	
Project: Eddy County, New Mexico		System Datum: Mean Sea Level	
Map System: US State Plane 1927 (Exact solution)			
Geo Datum: NAD 1927 (NADCON CONUS)			
Map Zone: New Mexico East 3001			
Site: Twelve Pack Federal Com			
Site Position:		Northing: 680 272.30 usft	
From:		Easting: 596 455.40 usft	
Position Uncertainty: 0.00 usft		Slot Radius: 13-3/16 "	
		Latitude: 32.86975651	
		Longitude: -104.01918068	
		Grid Convergence: 0.17 °	
Well: Twelve Pack Federal Com Well No. 13H, Surf Loc: 1650 FSL 330 FWL Sect 6-T17S-R30E Unit 5			
Well Position		Northing: 678 953.60 usft	
+N/S		Easting: 596 804.90 usft	
+E/W		Wellhead Elevation: usft	
Position Uncertainty 0.00 usft		Latitude: 32.86612898	
		Longitude: -104.01805521	
		Ground Level: 3 689.00 usft	
Wellbore: Original Hole			
Magnetics		Dip Angle	
Model Name		Field Strength	
Sample Date		(nT)	
IGRF2010		60.61	
2/12/2015		7.39	
Design: rev0			
Audit Notes:			
Version:		Tie On Depth: 0.00	
Phase: PLAN			
Vertical Section		Direction: 89.84	
Depth From (TVD)		+E/W (usft)	
0.00		0.00	
Survey Tool Program		Date 2/12/2015	
From (usft)		To (usft)	
0.00		8 773.76 rev0 (Original Hole)	
		MWD	
		MWD - Standard	



Standard_report

Company: COG Operating LLC
Project: Eddy County, New Mexico
Site: Twelve Pack Federal Com
Well: Twelve Pack Federal Com Well No. 13H
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Twelve Pack Federal Com Well No. 13H
TVD Reference: RKB=3689+12 @ 3701.00usft (United #43)
MD Reference: RKB=3689+12 @ 3701.00usft (United #43)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Dbase Nov0914

Planned Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	D Leg (°/100usft)	IV Sec (usft)	Northing (usft)	Easting (usft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
	2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90



Standard_report

Company: COG Operating LLC
Project: Eddy County, New Mexico
Site: Twelve Pack Federal Com
Well: Twelve Pack Federal Com Well No. 13H
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Twelve Pack Federal Com Well No. 13H
TVD Reference: RKB=3689+12 @ 3701.00usft (United #43)
MD Reference: RKB=3689+12 @ 3701.00usft (United #43)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Dbase Nov0914

Planned Survey										
MD (usft)	Inc (°)	SAZ (azimuth) (°)	TVD (usft)	NIS (usft)	EW (usft)	DLeg (%100usft)	DLeg (usft)	Sec (usft)	North (usft)	East (usft)
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
3,954.21	0.00	0.00	3,954.21	0.00	0.00	0.00	0.00	0.00	678,953.60	596,804.90
KOP Begin 11°/100' build										
4,000.00	5.04	89.84	3,999.94	0.01	2.01	11.00	11.00	2.01	678,953.61	596,806.91
4,100.00	16.04	89.84	4,098.10	0.06	20.27	11.00	11.00	20.27	678,953.66	596,825.17
4,200.00	27.04	89.84	4,190.98	0.16	56.92	11.00	11.00	56.92	678,953.76	596,861.82
4,300.00	38.04	89.84	4,275.15	0.31	110.63	11.00	11.00	110.63	678,953.91	596,915.53
4,400.00	49.04	89.84	4,347.54	0.51	179.40	11.00	11.00	179.40	678,954.11	596,984.30
4,500.00	60.04	89.84	4,405.46	0.74	260.72	11.00	11.00	260.73	678,954.34	597,065.62
4,600.00	71.04	89.84	4,446.81	1.00	351.61	11.00	11.00	351.61	678,954.60	597,156.51
4,700.00	82.04	89.84	4,470.06	1.27	448.71	11.00	11.00	448.71	678,954.87	597,253.61
4,781.46	91.00	89.84	4,475.00	1.50	528.94	11.00	11.00	528.94	678,955.10	597,334.84
Begin 91.00 lateral section										
4,800.00	91.00	89.84	4,474.68	1.55	548.47	0.00	0.00	548.48	678,955.15	597,353.37
4,900.00	91.00	89.84	4,472.94	1.84	648.46	0.00	0.00	648.46	678,955.44	597,453.36



Standard_report

Company: COG Operating LLC
Project: Eddy County, New Mexico
Site: Twelve Pack Federal Com
Well: Twelve Pack Federal Com Well No. 13H
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Twelve Pack Federal Com Well No. 13H
TVD Reference: RKB=3689+12 @ 3701.00ust (United #43)
MD Reference: RKB=3689+12 @ 3701.00ust (United #43)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Doase Nov0914

Planned Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Eastng (usft)
	5,000.00	91.00	89.84	4,471.20	2.12	748.44	0.00	748.45	678,955.72	597,553.34
	5,100.00	91.00	89.84	4,469.46	2.40	848.43	0.00	848.43	678,956.00	597,653.33
	5,200.00	91.00	89.84	4,467.72	2.68	948.41	0.00	948.42	678,956.28	597,753.31
	5,300.00	91.00	89.84	4,465.97	2.97	1,048.40	0.00	1,048.40	678,956.57	597,853.30
	5,400.00	91.00	89.84	4,464.23	3.25	1,148.38	0.00	1,148.38	678,956.85	597,953.28
	5,500.00	91.00	89.84	4,462.49	3.53	1,248.36	0.00	1,248.37	678,957.13	598,053.26
	5,600.00	91.00	89.84	4,460.75	3.82	1,348.35	0.00	1,348.35	678,957.42	598,153.25
	5,700.00	91.00	89.84	4,459.01	4.10	1,448.33	0.00	1,448.34	678,957.70	598,253.23
	5,800.00	91.00	89.84	4,457.27	4.38	1,548.32	0.00	1,548.32	678,957.98	598,353.22
	5,900.00	91.00	89.84	4,455.53	4.67	1,648.30	0.00	1,648.31	678,958.27	598,453.20
	6,000.00	91.00	89.84	4,453.79	4.95	1,748.29	0.00	1,748.29	678,958.55	598,553.19
	6,100.00	91.00	89.84	4,452.05	5.23	1,848.27	0.00	1,848.28	678,958.83	598,653.17
	6,200.00	91.00	89.84	4,450.31	5.52	1,948.26	0.00	1,948.26	678,959.12	598,753.16
	6,300.00	91.00	89.84	4,448.57	5.80	2,048.24	0.00	2,048.25	678,959.40	598,853.14
	6,400.00	91.00	89.84	4,446.83	6.08	2,148.22	0.00	2,148.23	678,959.68	598,953.12
	6,500.00	91.00	89.84	4,445.08	6.36	2,248.21	0.00	2,248.22	678,959.96	599,053.11
	6,600.00	91.00	89.84	4,443.34	6.65	2,348.19	0.00	2,348.20	678,960.25	599,153.09
	6,700.00	91.00	89.84	4,441.60	6.93	2,448.18	0.00	2,448.19	678,960.53	599,253.08
	6,800.00	91.00	89.84	4,439.86	7.21	2,548.16	0.00	2,548.17	678,960.81	599,353.06
	6,900.00	91.00	89.84	4,438.12	7.50	2,648.15	0.00	2,648.16	678,961.10	599,453.05
	7,000.00	91.00	89.84	4,436.38	7.78	2,748.13	0.00	2,748.14	678,961.38	599,553.03
	7,100.00	91.00	89.84	4,434.64	8.06	2,848.12	0.00	2,848.13	678,961.66	599,653.02
	7,200.00	91.00	89.84	4,432.90	8.35	2,948.10	0.00	2,948.11	678,961.95	599,753.00
	7,300.00	91.00	89.84	4,431.16	8.63	3,048.08	0.00	3,048.10	678,962.23	599,852.98
	7,400.00	91.00	89.84	4,429.42	8.91	3,148.07	0.00	3,148.08	678,962.51	599,952.97
	7,500.00	91.00	89.84	4,427.68	9.19	3,248.05	0.00	3,248.07	678,962.79	600,052.95
	7,600.00	91.00	89.84	4,425.93	9.48	3,348.04	0.00	3,348.05	678,963.08	600,152.94



Standard_report

Company:	COG Operating LLC	Well:	Twelve Pack Federal Com Well No. 13H
Project:	Eddy County, New Mexico	Wellbore:	Original Hole
Site:	Twelve Pack Federal Com	Design:	rev0
Local Co-ordinate Reference:	Well Twelve Pack Federal Com Well No. 13H		
TVD Reference:	RKB=3689+12 @ 3701.00usft (United #43)		
MD Reference:	RKB=3689+12 @ 3701.00usft (United #43)		
North Reference:	Grid		
Survey Calculation Method:	Minimum Curvature		
Database:	Dbase Nov0914		

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D/leg (°/100usft)	V/Sec (usft)	Northing (usft)	Easting (usft)		
7,700.00		91.00	89.84	4,424.19	9.76	3,448.02	0.00	3,448.04	678,963.36	600,252.92	
7,800.00		91.00	89.84	4,422.45	10.04	3,548.01	0.00	3,548.02	678,963.64	600,352.91	
7,900.00		91.00	89.84	4,420.71	10.33	3,647.99	0.00	3,648.01	678,963.93	600,452.89	
8,000.00		91.00	89.84	4,418.97	10.61	3,747.98	0.00	3,747.99	678,964.21	600,552.88	
8,100.00		91.00	89.84	4,417.23	10.89	3,847.96	0.00	3,847.98	678,964.49	600,652.86	
8,200.00		91.00	89.84	4,415.49	11.18	3,947.94	0.00	3,947.96	678,964.78	600,752.84	
8,300.00		91.00	89.84	4,413.75	11.46	4,047.93	0.00	4,047.95	678,965.06	600,852.83	
8,400.00		91.00	89.84	4,412.01	11.74	4,147.91	0.00	4,147.93	678,965.34	600,952.81	
8,500.00		91.00	89.84	4,410.27	12.02	4,247.90	0.00	4,247.91	678,965.62	601,052.80	
8,600.00		91.00	89.84	4,408.53	12.31	4,347.88	0.00	4,347.90	678,965.91	601,152.78	
8,700.00		91.00	89.84	4,406.79	12.59	4,447.87	0.00	4,447.88	678,966.19	601,252.77	
8,773.84		91.00	89.84	4,405.50	12.80	4,521.70	0.00	4,521.72	678,966.40	601,326.60	
PBHLTD											

Plan Annotations	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
	3,954.21	3,954.21	N/S (usft)	0.00
	4,781.46	4,475.00	E/W (usft)	529.94
	8,773.84	4,405.50	E/W (usft)	4,521.70
				KOP Begin 11'/'100' build
				Begin 91.00 lateral section
				PBHLTD