OCD Artesia

Form 3160-5
(August 2007)

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMLC028784A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM88525X

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

8. Well Name and No.
BURCH KEELY UNIT 534

2. Name of Operator
COG OPERATING LLC
Contact: KELLY J HOLLY
E-Mail: kholly@concho.com

9. API Well No.
30-015-41562-00-X1

3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432.685.4384

10. Field and Pool, or Exploratory
BURCH KEELY-GLORIETA-UPPER YE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 13 T17S R29E NESE 1815FSL 199FEL
32.832150 N Lat, 104.019800 W Lon

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 to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 shall 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 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 submitted APD for this well at this location:

SHL: 1815' FSL & 199' FEL, Unit I, Sec 13
BHL: 1980' FSL & 10' FEL, Unit I, Sec 13

COG Operating LLC respectfully requests permission to change the SHL as follows:

SHL: 1740' FSL & 225' FEL, Unit I, Sec 13
BHL: 1980' FSL & 10' FEL, Unit I, Sec 13

A revised C-102, 1 mile map, flowline, Surface Use Plan and Directional Plan are attached.

Surface ok per OC 11/18/14
Eng. Rev. 11/24/14 - JAM - COAs updated.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 09 2014

RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #274854 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER MASON on 11/04/2014 (15JAM0053SE)

Name *(Printed/Typed)* KELLY J HOLLY — Title PERMITTING TECH

Signature (Electronic Submission) — Date 10/30/2014

Accepted for record
NMOCD
12/9/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Stephen J Caffey — Title — Date 12/5/14

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.

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, 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, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-41562	97918	Burch Keely; Glorieta Upper Yeso

4 Property Code	5 Property Name	6 Well Number
308086	BURCH KEELY UNIT	534

7 OGRID NO.	8 Operator Name	9 Elevation
229137	COG OPERATING, LLC	3630'

10 Surface Location

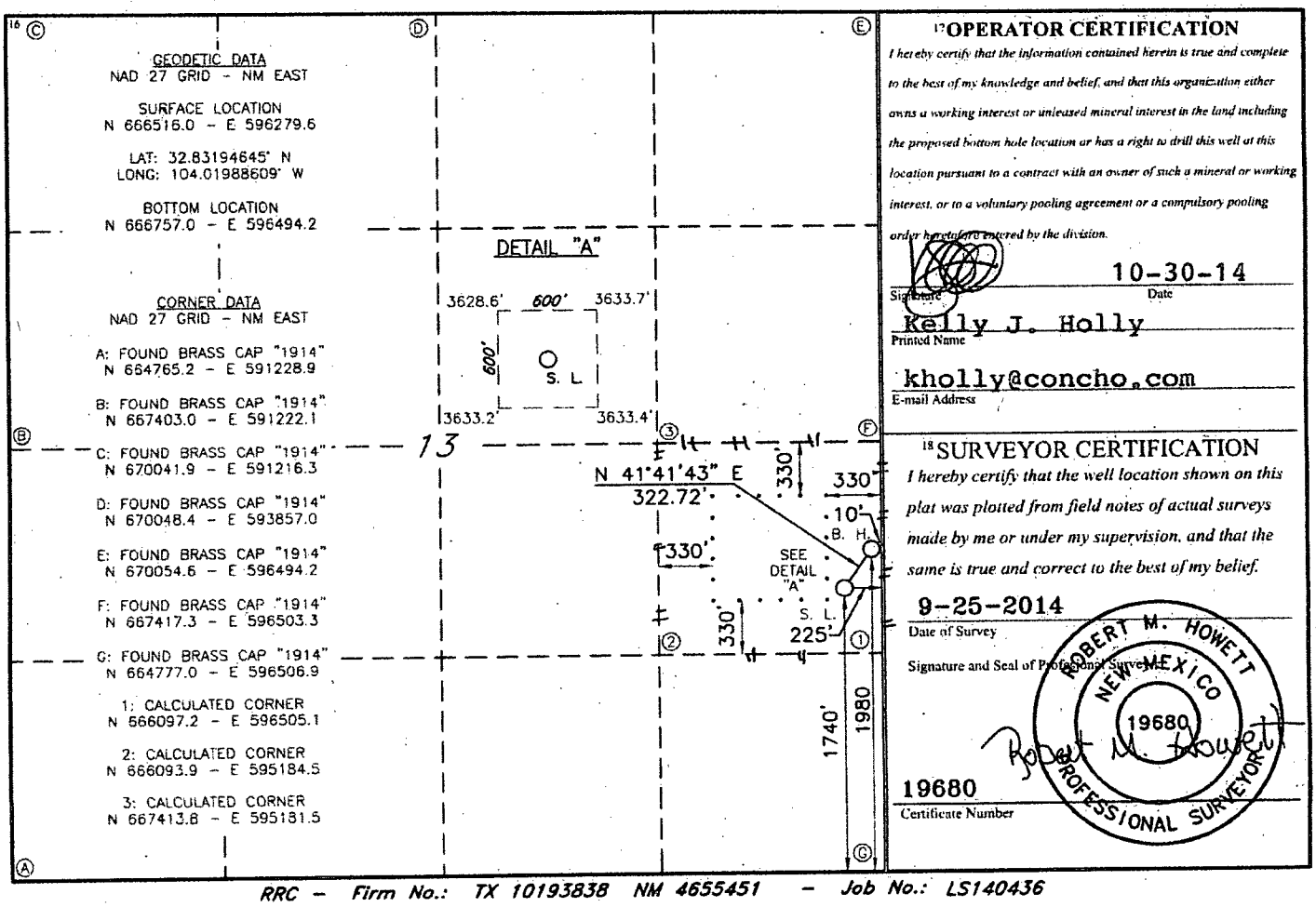
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
I	13	17S	29E		1740	SOUTH	225	EAST	EDDY

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
I	13	17S	29E		1980	SOUTH	10	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
40			

No allowable will be assigned to this completion until all interest 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 owns a working interest or unleased 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — 10-30-14 Date

Kelly J. Holly
Printed Name

kholly@concho.com
E-mail Address

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.

9-25-2014
Date of Survey

Signature and Seal of Professional Surveyor

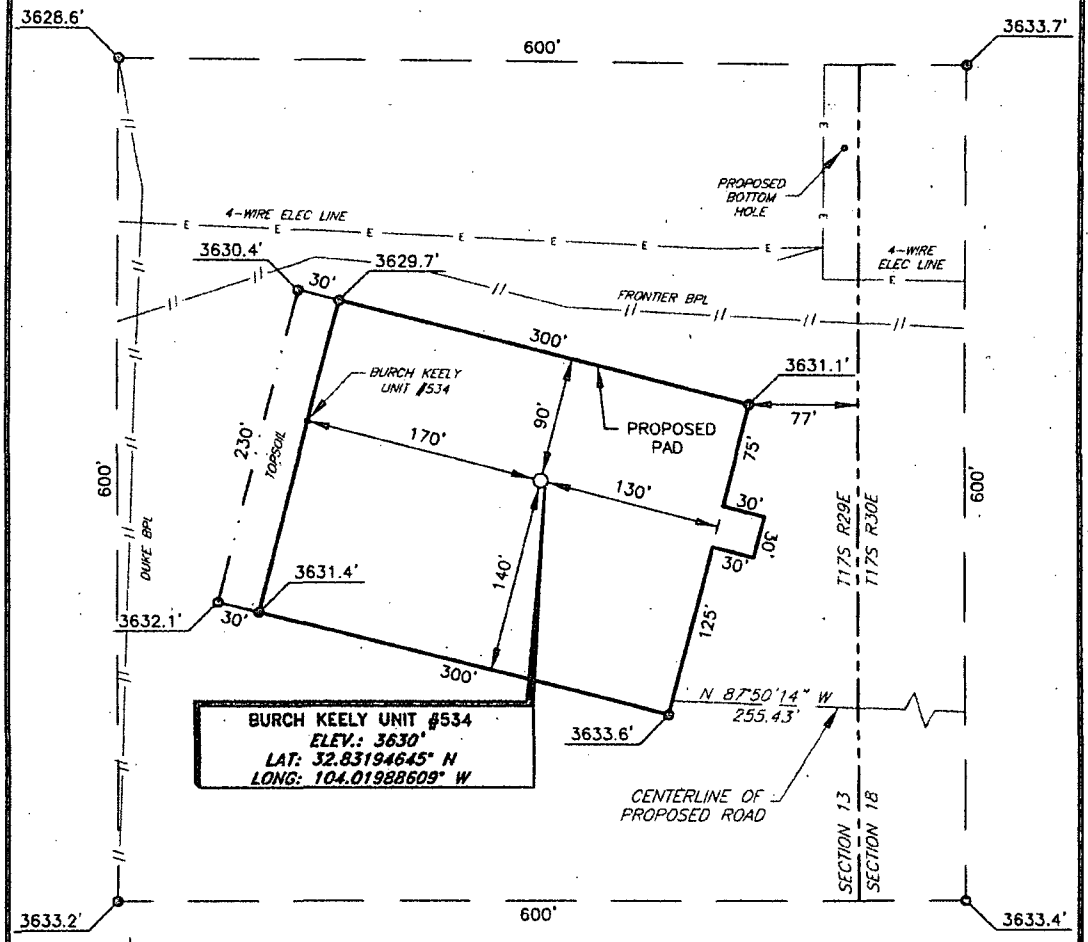
ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

RRC – Firm No.: TX 10193838 NM 4655451 – Job No.: LS140436

COG OPERATING, LLC

BURCH KEELY UNIT #534
(1740' FSL & 225' FEL)
SECTION 13, T17S, R29E
N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of U.S. HWY. 82 and CR-215 (Kewanee) go North on CR-215 approx. 0.8 miles to a lease road;

Turn right and go East on lease road approx. 0.9 miles to a lease road;

Turn right and go South approx. 0.2 miles to a lease road;

Turn left and go Northeast approx. 0.2 miles to a lease road;

Turn left and go North approx. 0.1 miles to proposed road;

Continue North on proposed road approx. 193 feet;

Turn left on proposed road and go West approx. 255' to the location.

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 27 GRID - NM EAST
DISTANCES ARE GROUND.

Firm No.: TX 10193838 NM 4655451

NO.	REVISION	DATE

JOB NO.: LS140436
DWG. NO.: 140436PAD

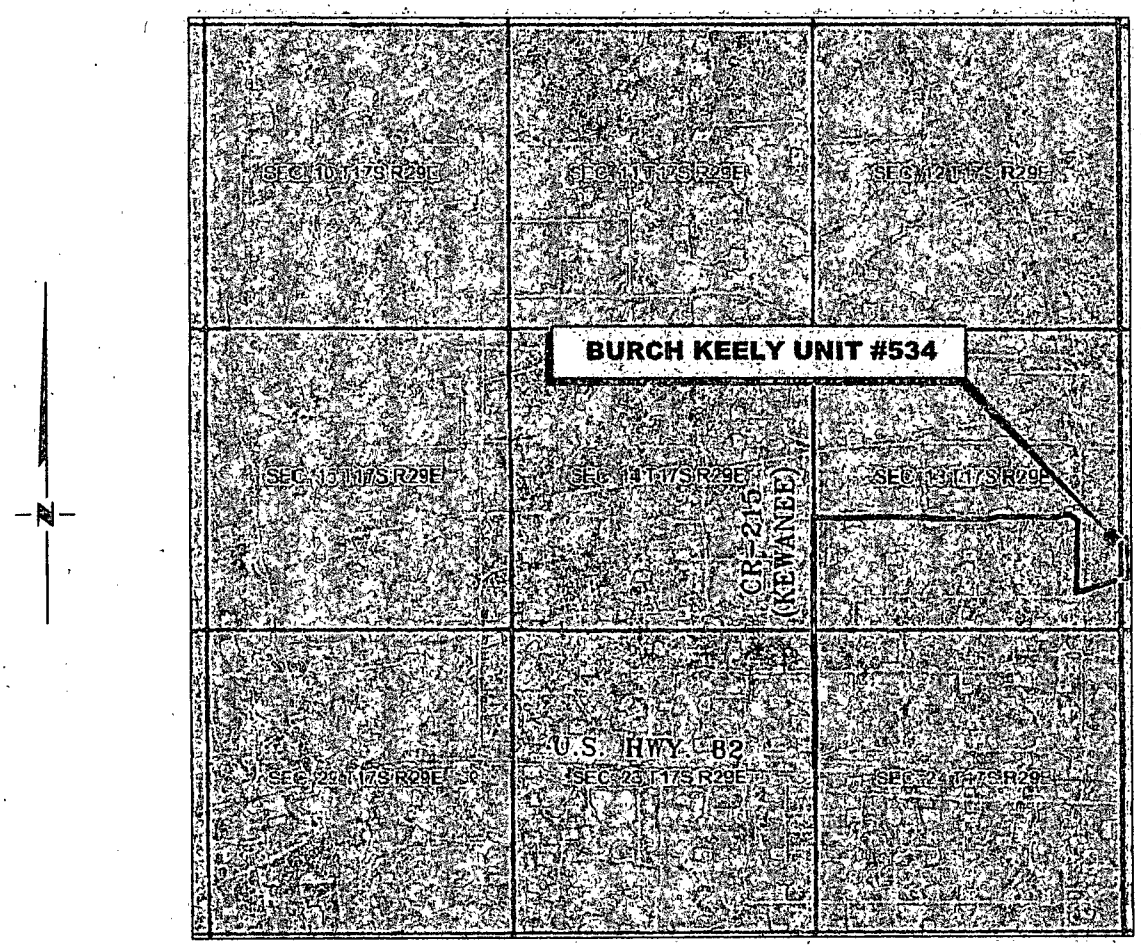
RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 9-25-2014
SURVEYED BY: IE/DH
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET : 1 OF 1

VICINITY MAP

NOT TO SCALE



SECTION 13, TWP. 17 SOUTH, RGE. 29 EAST, N. M. P. M., EDDY CO., NEW MEXICO

OPERATOR: COG Operating, LLC
LEASE: Burch Keely Unit
WELL NO.: 534

LOCATION: 1740' FSL & 225' FEL
ELEVATION: 3630'

NO.	REVISION	DATE

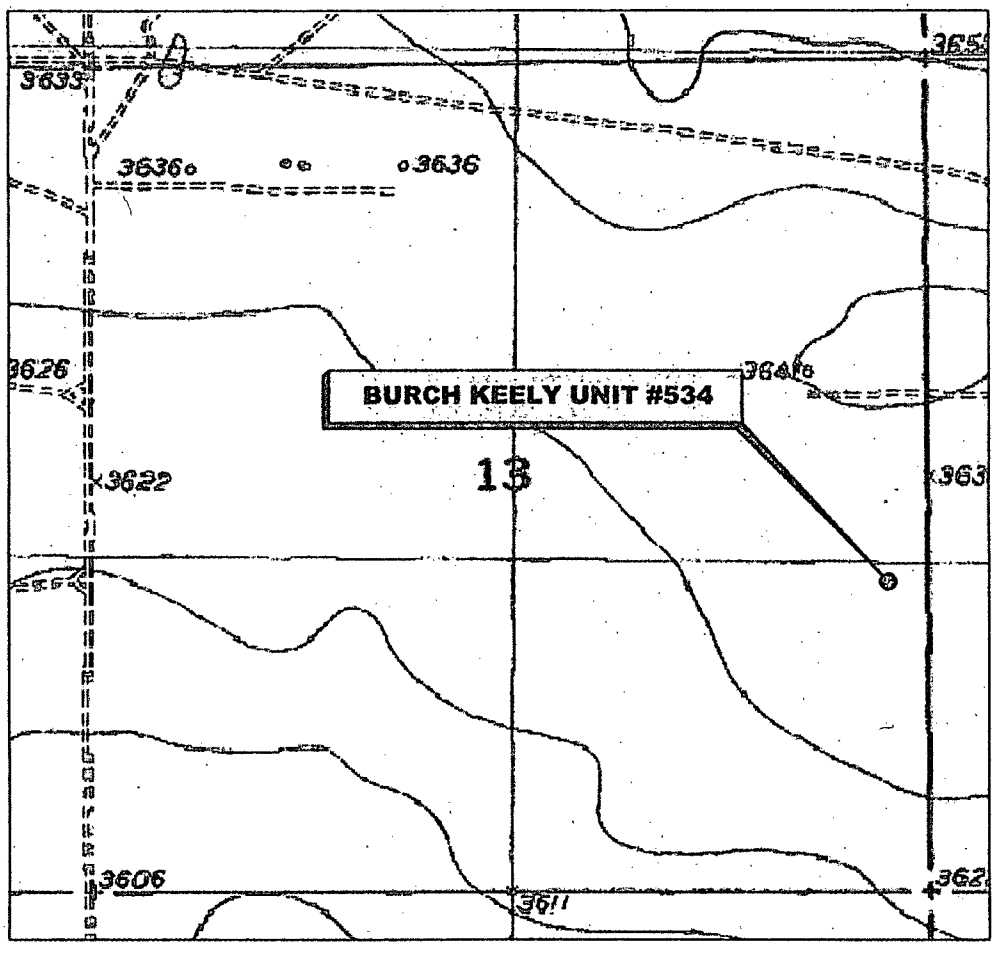
JOB NO.: LS140436
DWG. NO.: 140436VM

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: NTS
DATE: 9-25-2014
SURVEYED BY: IE/DH
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



SECTION 13, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY CO., NEW MEXICO

OPERATOR: COG, Operating, LLC
LEASE: Burch Keely Unit
WELL NO.: 534
ELEVATION: 3630'

LOCATION: 1740' FSL & 225' FEL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Red Lake SE, NM (1955)

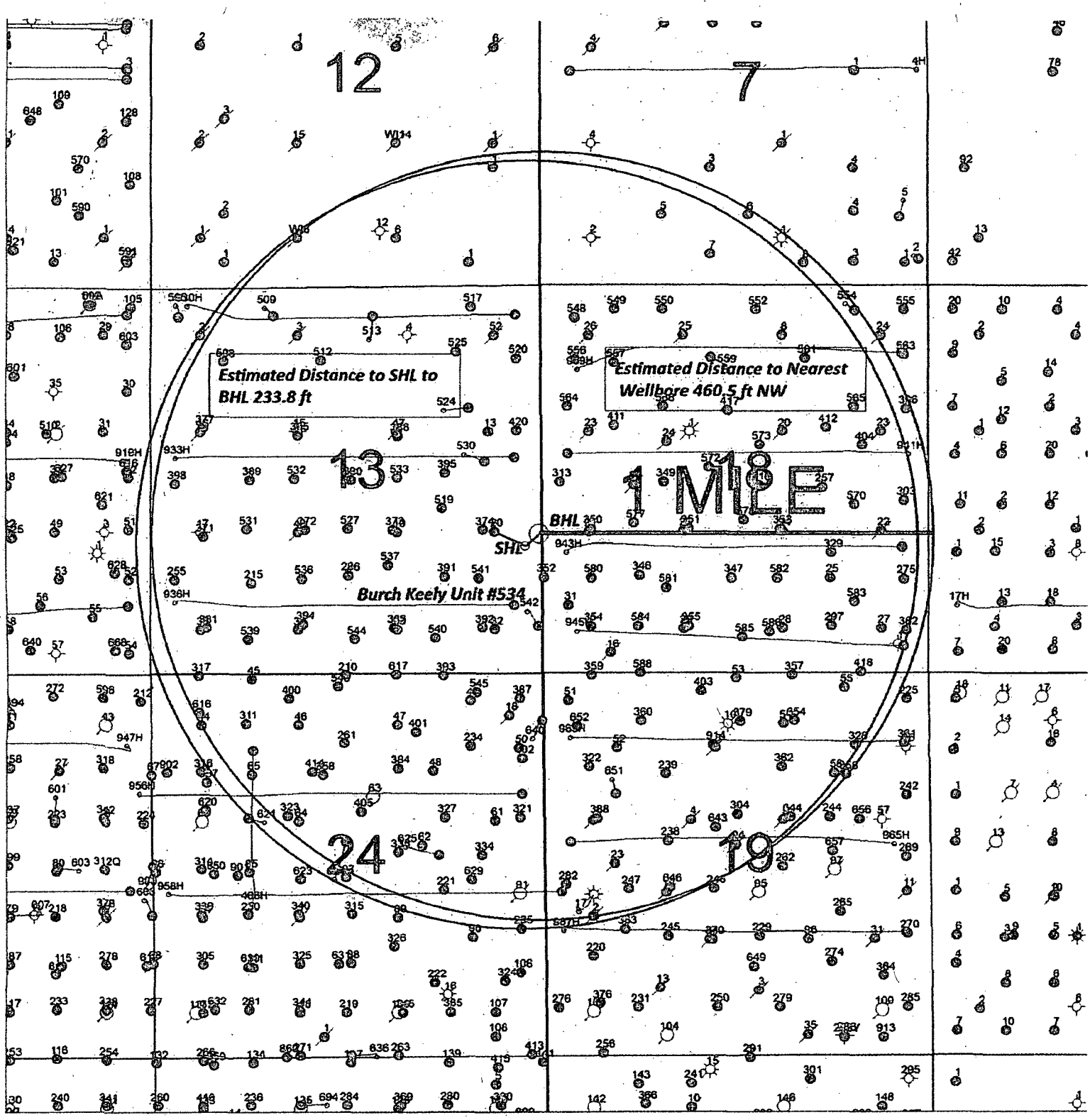
NO.	REVISION	DATE

JOB NO.: LS140436
DWG. NO.: 140436LVM

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1"=1000'
DATE: 9-25-2014
SURVEYED BY: IE/DH
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET : 1 OF 1

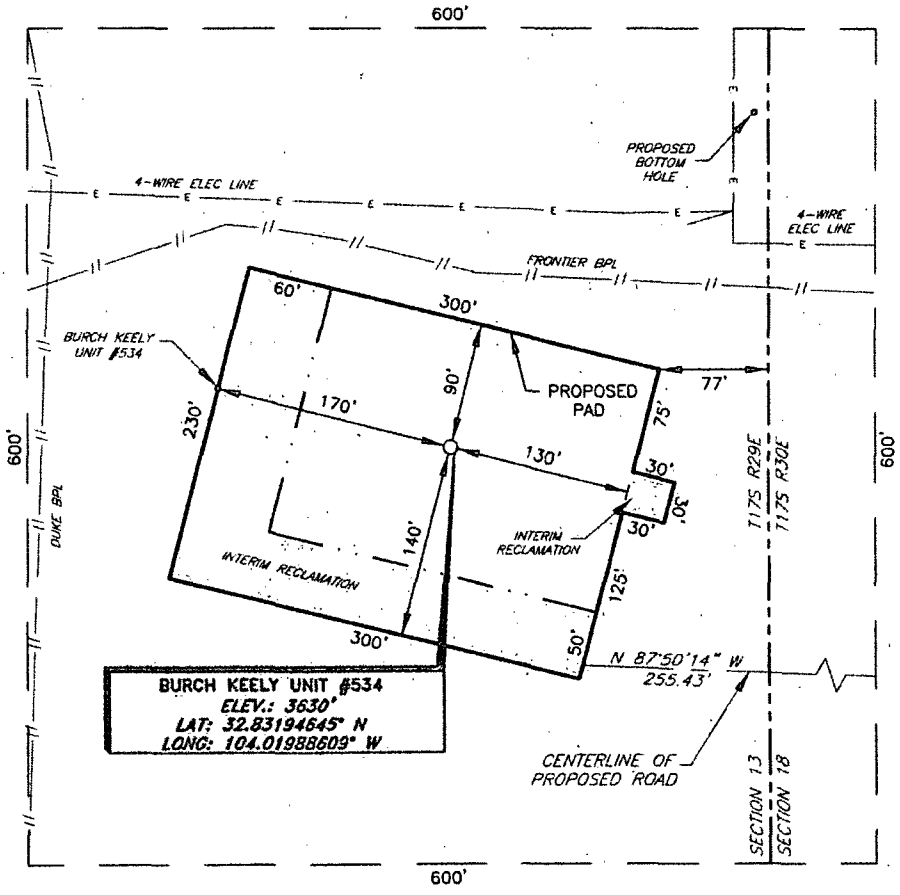


CONCHO

SENM Shelf Area
Burch Keely Unit #534

SEC. 13, T17S – R29E SHL 1740 FSL 225 FEL, UNIT I
SEC. 13, T17S – R29E BHL 1980 FSL 10 FEL, UNIT I

COG OPERATING, LLC
INTERIM RECLAMATION
BURCH KEELY UNIT #534
(1740' FSL & 225' FEL)
SECTION 13, T17S, R29E
N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

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0 50 100

BEARINGS ARE NAD 27 GRID - NM EAST
DISTANCES ARE GROUND.

Firm No.: TX 10193838 NM 4655451

NO.	REVISION	DATE

JOB NO.: LS140436
DWG. NO.: 140436REC

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 9-25-2014
SURVEYED BY: IE/DH
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET : 1 OF 1

CONCHO

Project: Eddy County, NM (NAD27 NME)
Site: Burch Keely Unit
Well: #534
Wellbore: WB1
Design: Plan #2 10-29-14
Rig: Silver Oak 3

PHOENIX TECHNOLOGY SERVICES

T G M

Azimuths to Grid North
True North: -0.17°
Magnetic North: 7.25°

Magnetic Field
Strength: 48593.5snT
Dip Angle: 60.59°
Date: 10/29/2014
Model: IGRF2010_14

WELL DETAILS

Ground Level: 3629.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	666516.00	596279.60	32° 49' 55.00678 N	104° 1' 11.59036 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00	0.00		KOP, Begin 2°/100' Build
3	1637.02	5.74	41.74	1636.54	10.72	9.56	2.00	41.74	14.37		EOC, Hold 5.71° Inc, 41.74° Azm
4	4715.92	5.74	41.74	4700.00	240.50	214.60	0.00	0.00	322.33	PBHL-BKU #534	TD at 4715.92' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-BKU #534	4700.00 - plan hits target center	240.50	214.60	666756.50	596494.20	32° 49' 57.38029 N	104° 1' 9.06687 W	Circle (Radius: 10.00)

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 #534, Grid North

Latitude: 32° 49' 55.00678 N
Longitude: 104° 1' 11.59036 W

Grid East: 596279.60
Grid North: 666516.00
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 29-Oct-14
Magnetic Declination: 7.42°
Dip Angle from Horizontal: 60.59°
Magnetic Field Strength: 48594

To convert a Magnetic Direction to a Grid Direction, Add 7.25°
To convert a Magnetic Direction to a True Direction, Add 7.42° East
To convert a True Direction to a Grid Direction, Subtract 0.17°

FORMATION TOP DETAILS

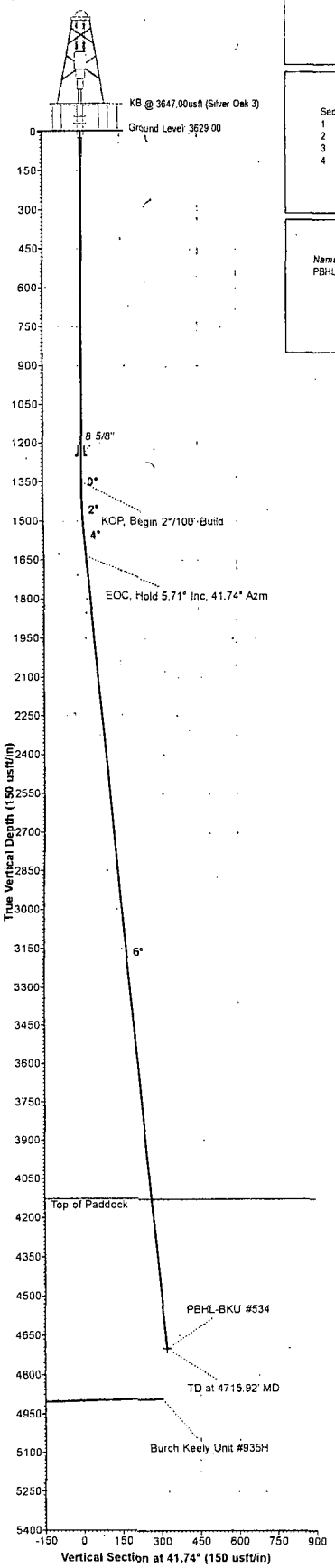
TVDPath	MDPath	Formation	DipAngle	DipDir
4130.00	4143.05	Top of Paddock	0.00	0.00

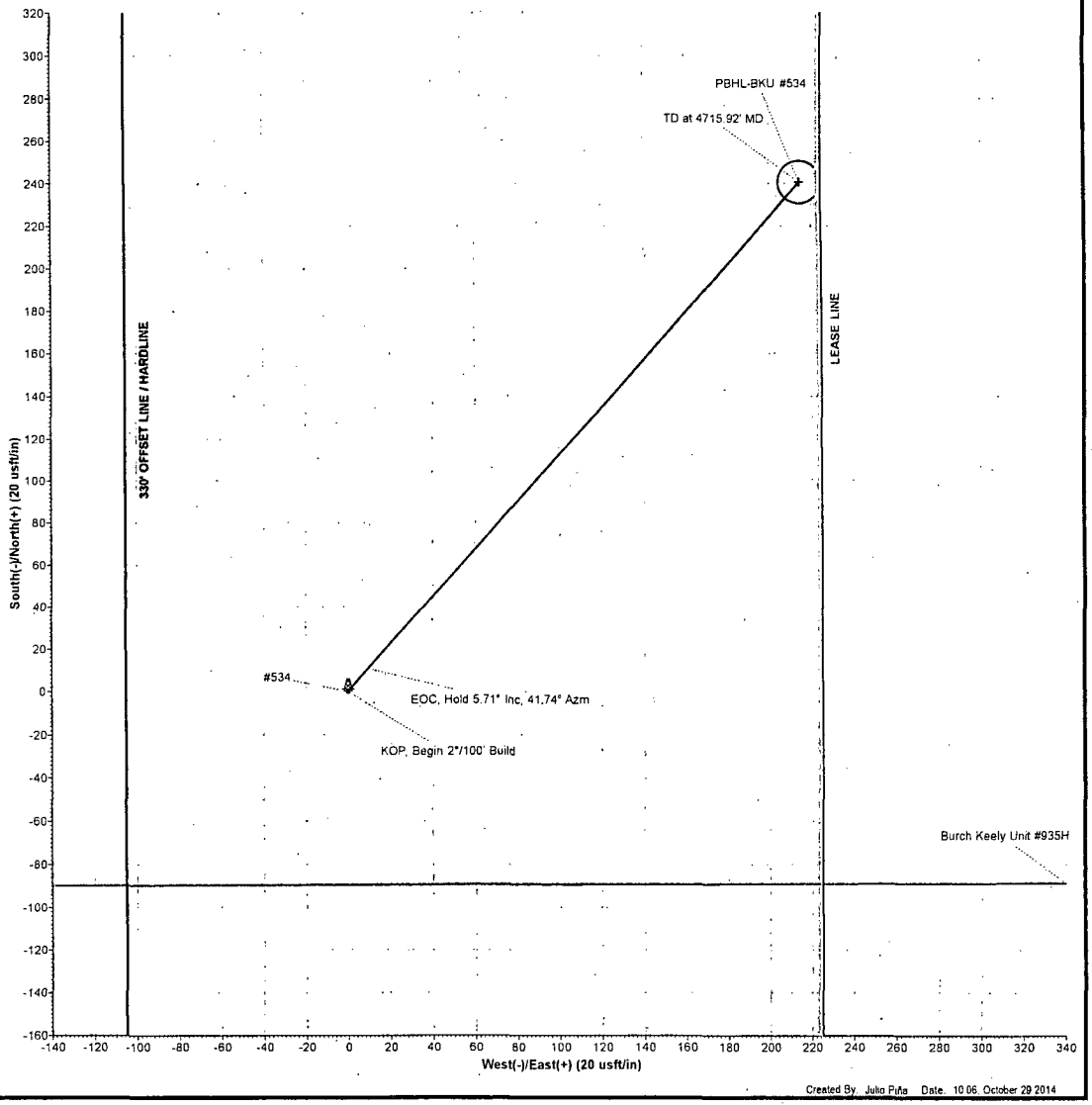
CASING DETAILS

TVD	MD	Name	Size
1250.00	1250.00	8 5/8"	8-5/8

LEGEND

#935H, WB1, Plan #1 02-03-14 V0
Plan #2 10-29-14





Created By: Julio Pina Date: 10:06, October 29 2014

CONCHO

COG Operating LLC

Eddy County, NM (NAD27 NME)
Burch Keely Unit
#534

WB1

Plan: Plan #2 10-29-14
Surface: 1740' FSL, 225' FEL, Sec 13, T17S, R29E, Unit I
BHL: 1980' FSL, 10' FEL, Sec 13, T17S, R29E, Unit I

Standard Planning Report

29 October, 2014

PHOENIX
TECHNOLOGY SERVICES

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well #534
Company:	COG Operating LLC	**TVD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Site:	Burch Keely Unit	**North Reference:**	Grid
Well:	#534	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #2 10-29-14		

Project Eddy County, NM (NAD27 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		

Site Burch Keely Unit

Site Position:		**Northing:**	666,591.10 usft	**Latitude:**	32° 49' 55.74916 N
From:	Map	**Easting:**	596,305.50 usft	**Longitude:**	104° 1' 11.28420 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.17 °

Well #534

Well Position	**+N/-S**	-75.10 usft	**Northing:**	666,516.00 usft	**Latitude:**	32° 49' 55.00679 N
	+E/-W	-25.90 usft	**Easting:**	596,279.60 usft	**Longitude:**	104° 1' 11.59036 W
Position Uncertainty	/	0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,629.00 usft

Wellbore WB1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	10/29/2014	7.42	60.59	48,594

Design Plan #2 10-29-14

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	41.74

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	
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,637.02	5.74	41.74	1,636.54	10.72	9.56	2.00	2.00	14.54	41.74	
4,715.92	5.74	41.74	4,700.00	240.50	214.60	0.00	0.00	0.00	0.00	PBHL-BKU #534

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well #534
Company:	COG Operating LLC	**TVD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Site:	Burch Keely Unit	**North Reference:**	Grid
Well:	#534	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #2 10-29-14		

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
1,250.00	0.00	0.00	1,250.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"									
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2°/100' Build									
1,400.00	1.00	41.74	1,400.00	0.33	0.29	0.44	2.00	2.00	0.00
1,500.00	3.00	41.74	1,499.93	2.93	2.61	3.93	2.00	2.00	0.00
1,600.00	5.00	41.74	1,599.68	8.13	7.26	10.90	2.00	2.00	0.00
1,637.02	5.74	41.74	1,636.54	10.72	9.56	14.37	2.00	2.00	0.00
EOC, Hold 5.71° Inc, 41.74° Azm									
1,700.00	5.74	41.74	1,699.20	15.42	13.76	20.67	0.00	0.00	0.00
1,800.00	5.74	41.74	1,798.70	22.88	20.42	30.67	0.00	0.00	0.00
1,900.00	5.74	41.74	1,898.20	30.35	27.08	40.67	0.00	0.00	0.00
2,000.00	5.74	41.74	1,997.70	37.81	33.74	50.67	0.00	0.00	0.00
2,100.00	5.74	41.74	2,097.20	45.27	40.40	60.67	0.00	0.00	0.00
2,200.00	5.74	41.74	2,196.70	52.73	47.06	70.68	0.00	0.00	0.00
2,300.00	5.74	41.74	2,296.20	60.20	53.72	80.68	0.00	0.00	0.00
2,400.00	5.74	41.74	2,395.69	67.66	60.37	90.68	0.00	0.00	0.00
2,500.00	5.74	41.74	2,495.19	75.12	67.03	100.68	0.00	0.00	0.00
2,600.00	5.74	41.74	2,594.69	82.59	73.69	110.69	0.00	0.00	0.00
2,700.00	5.74	41.74	2,694.19	90.05	80.35	120.69	0.00	0.00	0.00
2,800.00	5.74	41.74	2,793.69	97.51	87.01	130.69	0.00	0.00	0.00
2,900.00	5.74	41.74	2,893.19	104.98	93.67	140.69	0.00	0.00	0.00
3,000.00	5.74	41.74	2,992.69	112.44	100.33	150.69	0.00	0.00	0.00
3,100.00	5.74	41.74	3,092.18	119.90	106.99	160.70	0.00	0.00	0.00
3,200.00	5.74	41.74	3,191.68	127.37	113.65	170.70	0.00	0.00	0.00
3,300.00	5.74	41.74	3,291.18	134.83	120.31	180.70	0.00	0.00	0.00
3,400.00	5.74	41.74	3,390.68	142.29	126.97	190.70	0.00	0.00	0.00
3,500.00	5.74	41.74	3,490.18	149.75	133.63	200.71	0.00	0.00	0.00
3,600.00	5.74	41.74	3,589.68	157.22	140.29	210.71	0.00	0.00	0.00
3,700.00	5.74	41.74	3,689.17	164.68	146.95	220.71	0.00	0.00	0.00
3,800.00	5.74	41.74	3,788.67	172.14	153.61	230.71	0.00	0.00	0.00
3,900.00	5.74	41.74	3,888.17	179.61	160.26	240.71	0.00	0.00	0.00
4,000.00	5.74	41.74	3,987.67	187.07	166.92	250.72	0.00	0.00	0.00
4,100.00	5.74	41.74	4,087.17	194.53	173.58	260.72	0.00	0.00	0.00
4,143.05	5.74	41.74	4,130.00	197.75	176.45	265.02	0.00	0.00	0.00
Top of Paddock									
4,200.00	5.74	41.74	4,186.67	202.00	180.24	270.72	0.00	0.00	0.00
4,300.00	5.74	41.74	4,286.17	209.46	186.90	280.72	0.00	0.00	0.00
4,400.00	5.74	41.74	4,385.66	216.92	193.56	290.73	0.00	0.00	0.00
4,500.00	5.74	41.74	4,485.16	224.39	200.22	300.73	0.00	0.00	0.00
4,600.00	5.74	41.74	4,584.66	231.85	206.88	310.73	0.00	0.00	0.00
4,700.00	5.74	41.74	4,684.16	239.31	213.54	320.73	0.00	0.00	0.00
4,715.92	5.74	41.74	4,700.00	240.50	214.60	322.33	0.00	0.00	0.00
TD at 4715.92' MD									

Database:	Compass 5000 GCR epdm	**Local Co-ordinate Reference:**	Well #534
Company:	COG Operating LLC	**TVD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Project:	Eddy County, NM (NAD27 NME)	**MD Reference:**	KB @ 3647.00usft (Silver Oak 3)
Site:	Burch Keely Unit	**North Reference:**	Grid
Well:	#534	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #2 10-29-14		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL-BKU #534 - plan hits target center - Circle (radius 10.00)	0.00	0.00	4,700.00	240.50	214.60	666,756.50	596,494.20	32° 49' 57.38029 N	104° 1' 9.06687 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,250.00	1,250.00	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,143.05	4,130.00	Top of Paddock		0.00	0.01

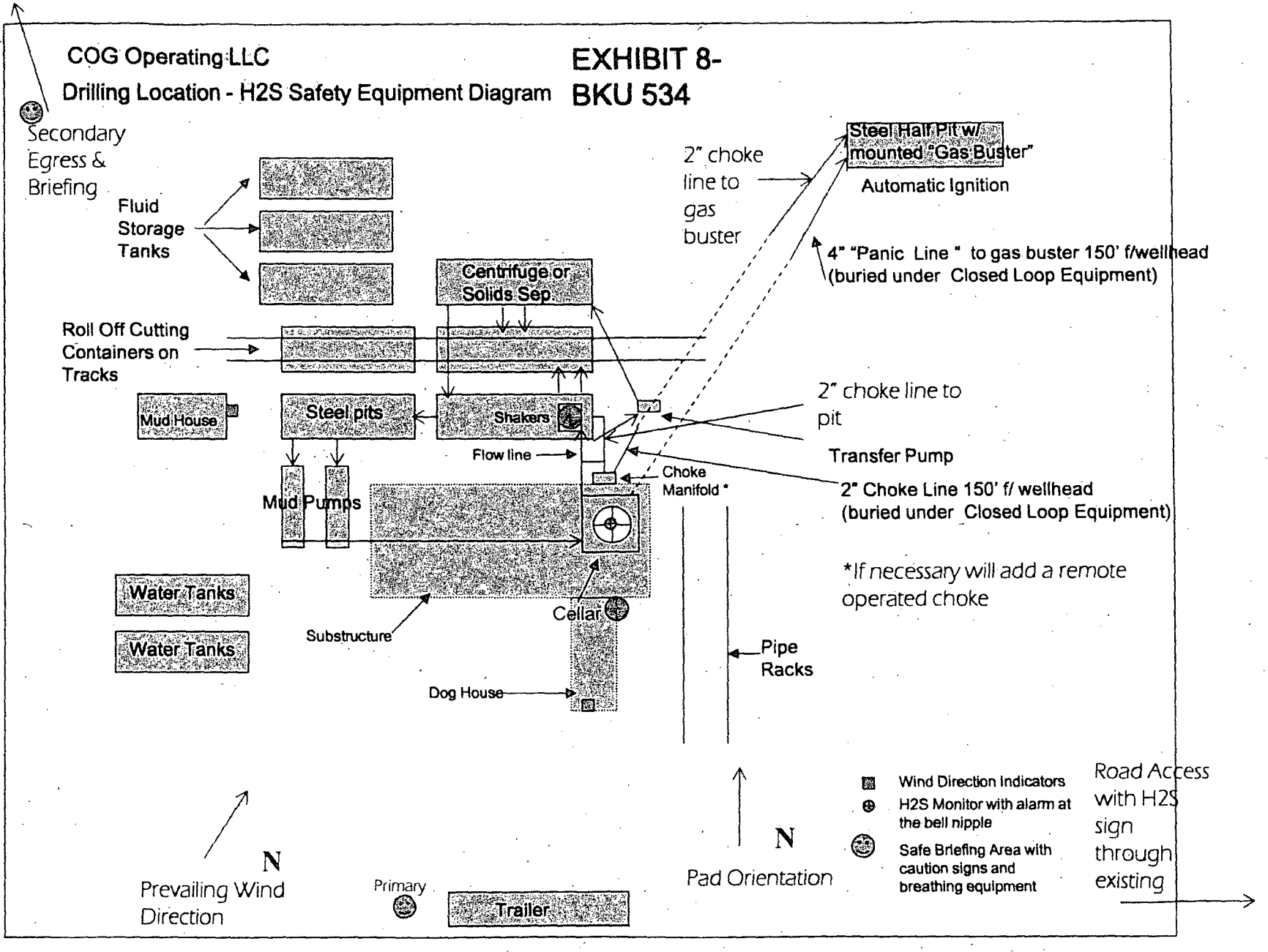
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,350.00	1,350.00	0.00	0.00	KOP, Begin 2°/100' Build
1,637.02	1,636.54	10.72	9.56	EOC, Hold 5.71° Inc, 41.74° Azm
4,715.92	4,700.00	240.50	214.60	TD at 4715.92' MD

COG Operating LLC

Drilling Location - H2S Safety Equipment Diagram

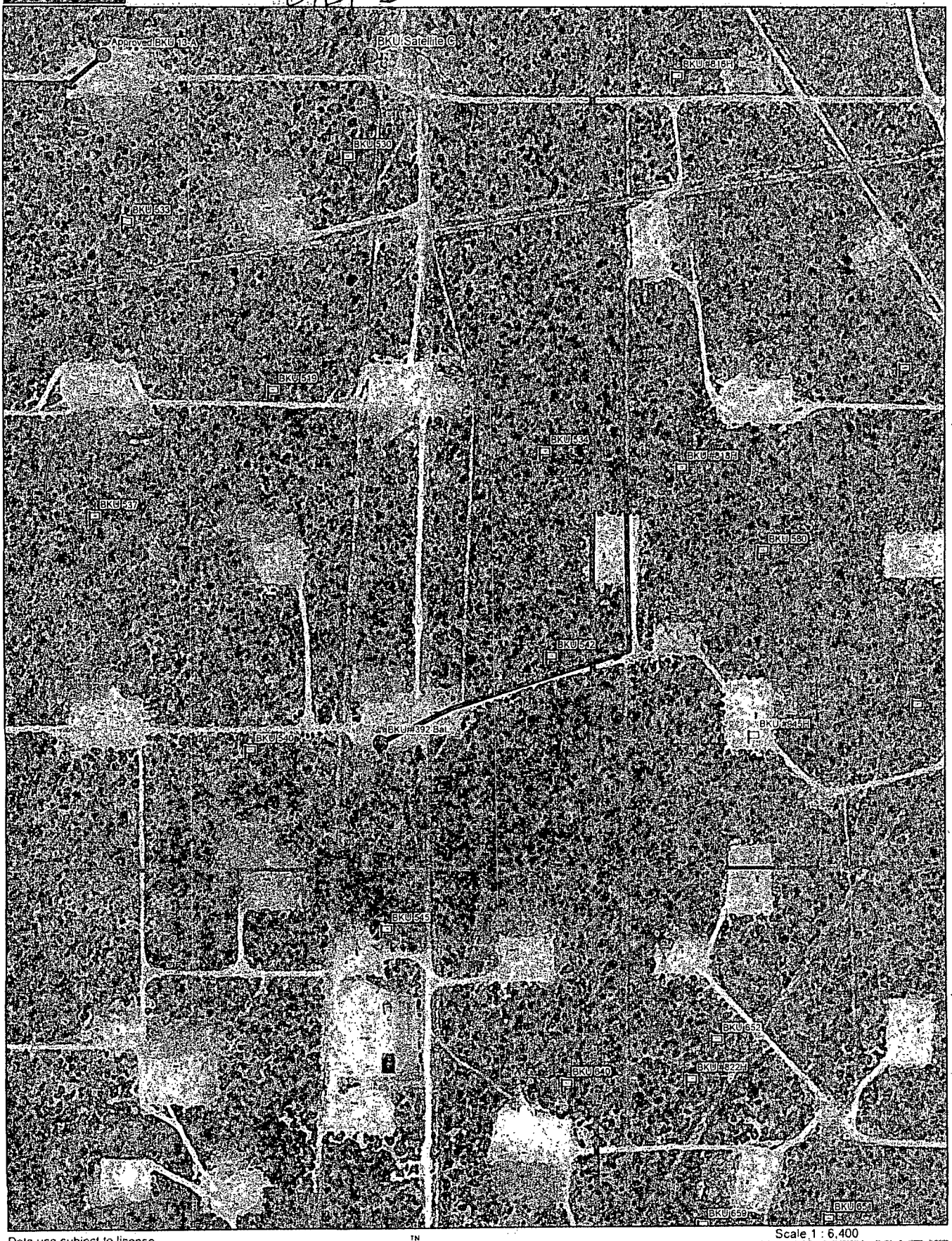
EXHIBIT 8-
BKU 534



DeLORME

EXBT 1

XMap® 7



Data use subject to license.

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www.delorme.com

TN

MN (7.4°E)

Scale 1 : 6,400

1" = 533.3 ft

Data Zoom 15-0

Surface Use & Operating Plan

Burch Keely Unit 534

- Surface Tenant: Bogle Farms, Lewis Derrick, P O Box 441, Artesia, NM 88211.
- New Road: approx. 255.43'
- Flow Line: approx. 0.4 mi
- Facilities: BKU #392 Federal Battery

Well Site Information

V Door: East

Topsoil: West

Interim Reclamation: West/South

Notes

-90' pit

Onsite: 10/2/2014

Indra Dahal (BLM), Caden Jameson (COG), Gary Box (RRC)

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

A. The well site survey and elevation plat for the proposed well is attached with this application. It was staked by Renewable Resource Consultants, LLC, Midland, TX.

B. All roads to the location are shown in the Vicinity Map. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary. The road route to the well site is depicted in Vicinity Map. The road highlighted in the Vicinity Map will be used to access the well.

C. Directions to location: See Vicinity Map.

D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease. Roads will be maintained according to specifications in section 2A of this Surface Use and Operating Plan.

2. Proposed Access Road:

The Elevation Plat shows that 255.43' of new access road will be required for this location. If any road is required it will be constructed as follows:

A. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

B. The average grade will be less than 1%.

C. No turnouts are planned.

D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.

E. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from the nearest BLM approved caliche pit.

3. Location of Existing Well:

The 1-mile Map shows all existing wells within a one-mile radius of this well.

As shown on this plat there are numerous wells producing from the San Andres and Yeso formations.

4. Location of Existing and/or Proposed Facilities:

A. COG Operating LLC does operate a production facility on this lease.

B. If the well is productive, contemplated facilities will be as follows:

1.) Production will be sent to the BKU 13-A Production Facility located in section 13 at the Burch Keely Unit #386 located in T17S R29E at 2010' FNL & 1980' FEL. The facility location is shown in Exhibit #1.

1) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.

2) Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.

3) Production will be sent to the BKU #392 Federal Battery located in Section 13 at the Burch Keely Unit #392 well location at approx. 660' FSL & 830' FEL. The flowline will be SDR 7 3" poly line laid on the surface and will be approximately 0.4 mi in length. See Exhibit #1.

4) It will be necessary to run electric power if this well is productive. Power will be provided by CVE and they will submit a separate plan and ROW for service to the well location.

5) If the well is productive, rehabilitation plans will include the following:

- The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

5. Location and Type of Water Supply:

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Vicinity Map. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials and Location "Turn-Over" Procedure:

Obtaining caliche: The primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well sight. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu. Yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.

B. An approximate 120' X 120' area is used within the proposed well site to remove caliche.

C. Subsoil is removed and piled alongside the 120' by 120' area within the pad site.

D. When caliche is found, material will be stock piled within the pad site to build the location and road.

E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.

F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in attached plat.

- In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit.

7. Methods of Handling Water Disposal:

A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.

B. Drilling fluids will be contained in steel mud pits.

C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.

D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.

E. Human waste and grey water will need to be properly contained and disposed of. Proper disposal and elimination of waste and grey water may include but are not limited to portable septic systems and/or portable waste gathering systems (i.e. portable toilets).

F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

9. Well Site Layout:

A. The drill pad layout, with elevations staked by Renewable Resource Consultants, LLC, Midland, TX, is shown in the Elevation Plat. Dimensions of the pad and pits are shown on the Rig Layout. V door direction is East. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.

B. The Rig Layout Closed-Loop exhibit shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

10. Plans for Restoration of the Surface:

A. Interim Reclamation will take place after the well has been completed. The pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed after work is complete.

B. Final Reclamation: Upon plugging and abandoning the well all caliche for well pad and lease road will be removed and surface will be recountoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be re-seeded with a BLM approved mixture and re-vegetated as per BLM orders.

11.Surface Ownership:

A. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas.

B. The surface tenant is Bogle Farms, Lewis Derrick, P.O. Box 441, Artesia, NM 88211.

C. The proposed road routes and surface location will be restored as directed by the BLM

12.Other Information:

A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.

B. There is no permanent or live water in the immediate area.

C. There are no dwellings within 2 miles of this location.

D. If needed, a Cultural Resources Examination is being prepared by Boone Arch Services of New Mexico, LLC. Carlsbad, NM, 88220. 506 E Chapman Rd. , phone # 575.887.7667 and the results will be forwarded to your office in the near future. Otherwise, **COG will be participating in the Permian Basin MOA Program.**

13. Bond Coverage:

Bond Coverage is Nationwide Bond # 000215

14. Lessee's and Operator's Representative:

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

Jim Evans
Drilling Superintendent
COG Operating LLC
One Concho Center
600 W. Illinois
Midland, TX 79701
Phone (432) 685-4304 (office)
(432) 221-0346 (business)

Ray Peterson
Drilling Manager
COG Operating LLC
One Concho Center
600 W. Illinois
Midland, TX 79701
Phone (432) 685-4304 (office)
(432) 818-2254 (business)

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or COG Operating, LLC, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 16th day of October, 2014.

Signed: Carl Bird

Printed Name: Carl Bird

Position: Sr. Drilling Engineer

Address: One Concho Center, 600 W. Illinois, Midland, Texas 79701

Telephone: (432) 683-7443

Field Representative (if not above signatory): Same

E-mail: cbird@concho.com

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**COG Operating LLC**
LEASE NO.:	**NMLC-028784A**
WELL NAME & NO.:	**Burch Keely Unit 534**
SURFACE HOLE FOOTAGE:	**1740' FSL & 0225' FEL**
BOTTOM HOLE FOOTAGE	**1980' FSL & 0010' FEL**
LOCATION:	**Section 13, T. 17 S., R 29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

The original COAs still stand with the following drilling modifications:

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. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values 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. **The record of the drilling rate along with the GR/N well log run from TD to surface 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 or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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 water flows in the Salado, Tansil, Yates, Seven Rivers.
Possibility of lost circulation in the Rustler, Tansil, Yates, Seven Rivers, and San Andres.

1. The **13-3/8** inch surface casing shall be set at approximately **284** 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 **8-5/8** inch intermediate casing, which shall be set at approximately **1050** feet, is:

Option #1 (Single Stage):

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

Option #2:

Operator has proposed DV tool at depth of 375', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

b. Second stage above DV tool:

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Option #1 (Single Stage):

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

Option #2:

Operator has proposed DV tool at depth of 2500', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least 200 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. **Operator approved for either 13-5/8" or 11" BOP stack.**

2. **In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

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**.

   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. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two 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.

JAM 112414