

4-4-12	SUSPENSE	ENGINEER DB	LOGGED IN	TYPE USL	APP NO. 1209551553
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



CO 6 229137
 Berry A Fed #16

0607

ADMINISTRATIVE APPLICATION CHECKLIST

30-015

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication**
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement**
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery**
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify** _____

E-21-17530E

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply INTEREST ARE THE SAME

- [A]** ☐ Working, Royalty or Overriding Royalty Interest Owners
[B] ☒ Offset Operators, Leaseholders or Surface Owner
[C] ☐ Application is One Which Requires Published Legal Notice
[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
[F] ☐ Waivers are Attached

RECEIVED OCT 20 11 44 AM '12

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Kelly J. Holly
 Print or Type Name

Signature

Permitting Tech
 Title

4-3-12
 Date

(432) 685-4384
 Phone Number

kholly@concho.com
 E-mail Address

**Berry A Federal #16
Eddy County, NM**

COG proposes to drill a SW/4 NW/4, 40 acre spacing
MAR LOCO- Glorieta-Yeso oil well
TD of approximately 6000'

SHL:1393' FNL & 740' FWL	Sec 21, T17S, R30E, Unit E
SHL:1650' FNL & 990' FWL	Sec 21, T17S, R30E, Unit E

This well had to be drilled at a non-standard location due to buried pipelines.

The plan for this well is to complete it in the Yeso formation.
We won't know the exact perms until we drill & log it, but this is how we anticipate completing this well.

1st interval: 6050' – 5850',
acidized w/ 3500 gals,
frac'd w/ 121,616 gals gel, 148,759# 16/30 Ottawa sand & 29,927# 16/30 CRC.

2nd interval: 5550' – 5750',
acidized w/ 3500 gals,
frac'd w/ 115,358 gals gel, 145,867# 16/30 Ottawa sand & 33,867# 16/30 CRC.

3rd interval: 5250' – 5450',
acidized w/ 3500 gals,
frac'd w/ 112,712 gals gel, 143,362# 16/30 Ottawa sand & 30,017# 16/30 CRC.

4th interval: 4400' – 4810',
acidized w/ 3000 gals,
frac'd w/ 94,592 gals gel, 100,582# 16/30 Ottawa sand & 13,341# 16/30 CRC.

**Attachment 1
Plat**

**Attachment 2
Map & legend of offset wells.**

**Attachment 3
Updated land plat showing COG Operating LLC acreage.**

The acreage we are encroaching on is the NW/4 NW/4 of Section 21.

Offset acreage is owned by Apache Corp.

Proof of Notification is enclosed.

COG Operating LLC respectfully requests permission to have this NSL approved.

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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-39997	Pool Code 96718	Pool Name Loco Hills; Glorieta Yeso
Property Code	Property Name BERRY A FEDERAL	Well Number 16
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3657'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	17-S	30-E		1393	NORTH	740	WEST	EDDY

Bottom Hole Location If Different From Surface

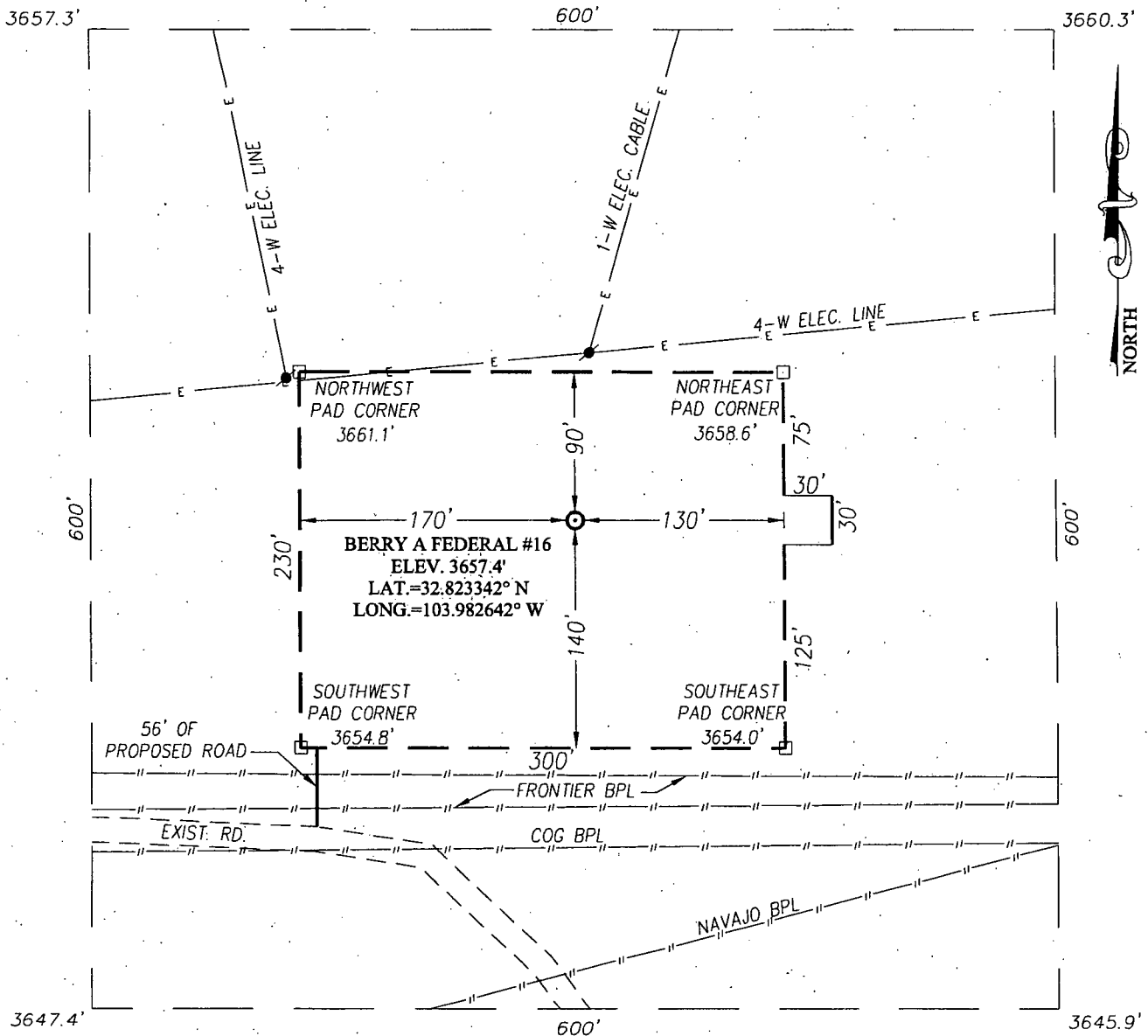
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	17-S	30-E		1650	NORTH	990	WEST	EDDY

Dedicated Acres 40	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

DETAIL 3657.3' 3660.3' 600' 3647.4' 3645.9' GRID AZ = 135°38'03" HORZ. DIST = 358.7' Estimated Completed Interval 1561 FNL + 892 FWL CORNER COORDINATES TABLE ① - Y=663492.2 N, X=606989.8 E ② - Y=663494.9 N, X=608310.5 E ③ - Y=662172.0 N, X=606994.4 E ④ - Y=662174.5 N, X=608314.8 E GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=663421.5 N X=607730.0 E LAT.=32.823342° N LONG.=103.982642° W BOTTOM HOLE LOCATION Y=663165.2 N X=607980.7 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 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>[Signature]</i> 1-4-2012 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. NOVEMBER 19, 2011 Date of Survey Signature & Seal of Professional Surveyor: <i>[Signature]</i> RONALD J. EIDSON NEW MEXICO 3239 12/07/2011 Certificate Number Gary C. Eidson 12641 Ronald J. Eidson 3239 AF JWSC W.O.: 11.11.2489
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SECTION 21, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY NEW MEXICO

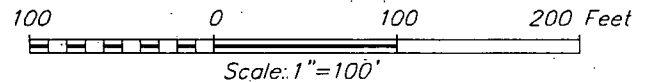


DIRECTIONS TO LOCATION

FROM THE INTERSECTION U.S. HWY. #82 AND C.R. #219 (GOAT ROPERS) GO NORTH ON C.R. APPROX. 0.3 MILES. TURN LEFT AND GO WEST APPROX. 0.25 MILES. THIS LOCATION STAKE IS APPROX. 220 FEET NORTH OF THE LEASE ROAD.



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



COG OPERATING, LLC

BERRY A FEDERAL #16 WELL
LOCATED 1393 FEET FROM THE NORTH LINE
AND 740 FEET FROM THE WEST LINE OF SECTION 21,
TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

Survey Date: 11/19/11	Sheet 1 of 1 Sheets
W.O. Number: 11.11.2489	Dr. By: AF Rev 1:
Date: 12/7/11	Rel. W.O.: 11112489 Scale: 1"=100'

Producing Wells in Sec 21, T17S, R30E

API#	Operator	Lease	Well#	County	Legal	Total Depth	Well Type	Well Status	First Prod.	Last Prod.	Avg. (BO/D)
30-015-25339	EASTLAND OIL CO	JO FEDERAL	001	EDDY	S:21, T:17S, R:30E	3,300	O	Pumping	Aug 1985	Aug 2004	0.00
30-015-04247		FEDERAL X	001	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1955	Dec 1970	0.00
30-015-04247	WOOLEY, M. A.	MCINTYRE A	001	EDDY	S:21, T:17S, R:30E		O	Active	Mar 1953	Dec 1956	0.00
30-015-04244	AMBASSADOR OIL CORP.	FEDERAL X	001	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1961	Aug 1965	0.00
30-015-04243	SOUTHLAND ROYALTIES INC	MCINTYRE G FEDERAL	001	EDDY	S:21, T:17S, R:30E	0	O	Temporarily Abandoned	Jan 1959	Dec 1977	0.13
30-015-04235	COG OPERATING LLC	BERRY A FEDERAL	4	EDDY	S:21, T:17S, R:30E	6,859	O	Pumping	Jan 1979	Sep 2011	0.17
30-015-04244	DORAL ENERGY CORP.	FEDERAL X	001	EDDY	S:21, T:17S, R:30E		O	Active	Jun 1959	Oct 2011	0.19
30-015-04246	DORAL ENERGY CORP.	FEDERAL X	003	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1958	Oct 2011	0.19
30-015-04249	DORAL ENERGY CORP.	FEDERAL X	005	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1959	Oct 2011	0.19
30-015-04247		FEDERAL X	001	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1960	Dec 1993	0.23
30-015-04248	DORAL ENERGY CORP.	FEDERAL X	004	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1959	Oct 2011	0.26
30-015-04237		W D MCINTYRE E	004	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1947	Aug 1963	0.39
30-015-04369	COG OPERATING LLC	WOOLLEY FEDERAL	001	EDDY	S:21, T:17S, R:30E	0	O	Active	Aug 1960	Sep 2011	0.40
30-015-04252	MACK ENERGY CORP	BERRY A FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,886	PO	Pumping	Jan 1947	Jul 2002	0.52
30-015-23155	COG OPERATING LLC	BERRY A FEDERAL	005	EDDY	S:21, T:17S, R:30E	0	O	Pumping	Jan 1993	Sep 2011	0.53
					S:21,						

30-015-04237		W D MCINTYRE E	004	EDDY	T:17S, R:30E		O	Active	Jan 1959	Dec 1959	0.55
30-015-04248	AMBASSADOR OIL CORP	FEDERAL X	004	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1961	Dec 1971	0.61
30-015-04248	HANSON ENERGY	FEDERAL X	004	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1967	Dec 1977	0.68
30-015-33486	COG OPERATING LLC	BERRY A FEDERAL	2	EDDY	S:21, T:17S, R:30E	4,950	O	Active	Dec 2005	Sep 2011	0.70
30-015-32348	COG OPERATING LLC	WOOLLEY FEDERAL	010	EDDY	S:21, T:17S, R:30E	5,050	O	Active	Sep 2002	Sep 2011	0.90
30-015-04233	MACK ENERGY CORP	BERRY A FEDERAL	003	EDDY	S:21, T:17S, R:30E	4,966	O	Pumping	Jan 1947	Jun 2002	0.97
30-015-29564	COG OPERATING LLC	BERRY A FEDERAL	7	EDDY	S:21, T:17S, R:30E	4,910	O	Pumping	Sep 1997	Sep 2011	1.00
30-015-04233	COG OPERATING LLC	BERRY A FEDERAL	003	EDDY	S:21, T:17S, R:30E	4,966	O	Pumping	Jan 1954	Sep 2011	1.03
30-015-04235	MACK ENERGY CORP	BERRY A FEDERAL	4	EDDY	S:21, T:17S, R:30E	6,859	O	Pumping	Jan 1972	Dec 1977	1.10
30-015-04236	COG OPERATING LLC	W D MCINTYRE C	001	EDDY	S:21, T:17S, R:30E	0	O	Pumping	Jan 1947	Sep 2011	1.10
30-015-20618	DORAL ENERGY CORP.	FEDERAL X	007	EDDY	S:21, T:17S, R:30E	3,012	O	Pumping	Jan 1993	Oct 2011	1.13
30-015-23517	MACK ENERGY CORP	BERRY A FEDERAL	006	EDDY	S:21, T:17S, R:30E	3,601	O	Active	Jan 1993	Aug 2001	1.13
30-015-04253	MACK ENERGY CORP	BERRY A FEDERAL	002	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1947	Jul 2002	1.16
30-015-33486	COG OPERATING LLC	BERRY A FEDERAL	2	EDDY	S:21, T:17S, R:30E	4,950	O	Active	Dec 2005	Sep 2011	1.27
30-015-25282	NADEL AND GUSSMAN PERMIAN, LLC	BROWN CROW FEDERAL	001	EDDY	S:21, T:17S, R:30E	3,600	PO	Active	Jun 1985	Sep 2011	1.67
30-015-31856	COG OPERATING LLC	BERRY A FEDERAL	013	EDDY	S:21, T:17S, R:30E	6,996	O	Pumping	Sep 2001	Sep 2011	1.67
30-015-30670	COG OPERATING LLC	BERRY A FEDERAL	012	EDDY	S:21, T:17S, R:30E	4,840	O	Pumping	Jan 2000	Sep 2011	1.70
					S:21,						

30-015-04246	AMBASSADOR OIL CORP	FEDERAL X	003	EDDY	T:17S, R:30E	0	O	Active	Jan 1961	Dec 1971	1.71
30-015-30290	COG OPERATING LLC	WOOLLEY FEDERAL	004	EDDY	S:21, T:17S, R:30E	5,170	O	Pumping	Oct 1999	Sep 2011	1.80
30-015-30502	COG OPERATING LLC	WOOLLEY FEDERAL	005	EDDY	S:21, T:17S, R:30E	4,964	O	Pumping	Dec 1999	Sep 2011	1.80
30-015-30669	COG OPERATING LLC	BERRY A FEDERAL	011	EDDY	S:21, T:17S, R:30E	4,922	O	Pumping	Nov 1999	Sep 2011	1.83
30-015-30289	COG OPERATING LLC	BERRY A FEDERAL	010	EDDY	S:21, T:17S, R:30E	4,950	O	Pumping	Jun 1999	Sep 2011	1.87
30-015-04249	AMBASSADOR OIL CORP	FEDERAL X	005	EDDY	S:21, T:17S, R:30E	0	O	Active	Mar 1962	Dec 1965	2.00
30-015-00000	WOOLEY, M.A.	MCINTYRE A	005	EDDY	S:21, T:17S, R:30E		O	Active	Sep 1952	Dec 1958	2.03
30-015-30984	COG OPERATING LLC	BRIGHAM H	004	EDDY	S:21, T:17S, R:30E	5,104	O	Pumping	Apr 2000	Sep 2011	2.23
30-015-31662	COG OPERATING LLC	BRIGHAM H	005	EDDY	S:21, T:17S, R:30E	6,098	PO	Pumping	Jun 2001	Sep 2011	2.27
30-015-30677	COG OPERATING LLC	BRIGHAM H	003	EDDY	S:21, T:17S, R:30E	5,034	O	Pumping	Mar 2000	Sep 2011	2.30
30-015-04455		SINCLAIR FEDERAL	002	EDDY	S:21, T:17S, R:30E	6,866	O	Active	Nov 1961	May 1962	2.39
30-015-04242	EOG RESOURCES INC	BRIGHAM H	001	EDDY	S:21, T:17S, R:30E	3,455	O	Flowing	Jan 1967	Dec 1971	2.58
30-015-00000	WOOLLEY, R. R.	ARNOLD B	005	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1947	Dec 1952	2.61
30-015-04233	MACK ENERGY CORP	BERRY A FEDERAL	003	EDDY	S:21, T:17S, R:30E	4,966	O	Pumping	Jan 1959	Dec 1977	2.68
30-015-00000	WOOLLEY, R. R.	MCINTYRE A	002	EDDY	S:21, T:17S, R:30E		O	Active	Feb 1948	Jul 1948	2.68
30-015-32138	COG OPERATING LLC	WOOLLEY FEDERAL	009	EDDY	S:21, T:17S, R:30E	5,005	O	Pumping	Mar 2002	Sep 2011	2.73
30-015-04252	COG OPERATING LLC	BERRY A FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,886	PO	Pumping	Aug 2002	Dec 2009	3.03
					S:21,						

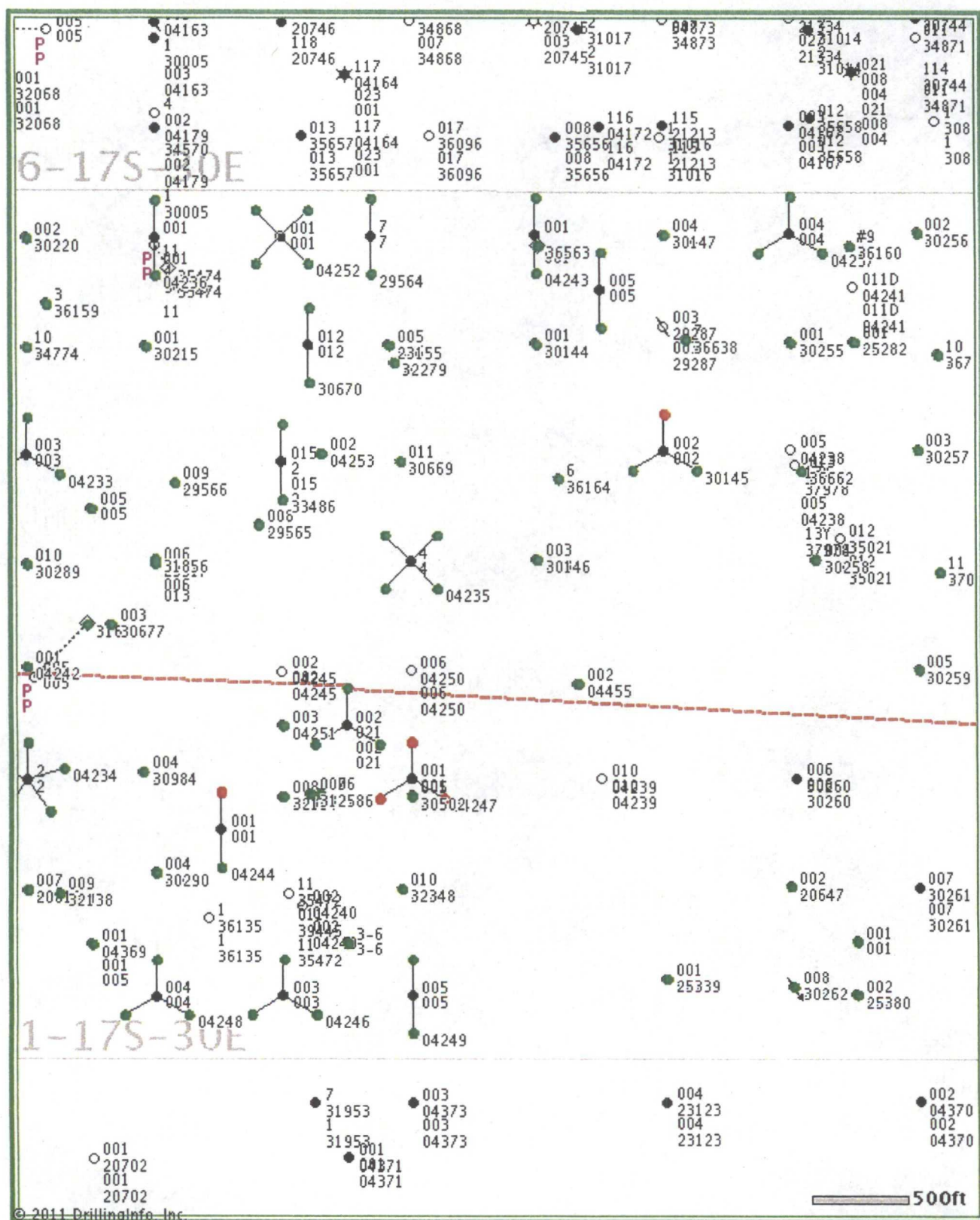
30-015-30145		MCINTYRE G	002	EDDY	T:17S, R:30E	4,968	O	Pumping	Jan 1979	Dec 1993	3.29
30-015-29566	COG OPERATING LLC	BERRY A FEDERAL	009	EDDY	S:21, T:17S, R:30E	4,920	PO	Pumping	Aug 1998	Nov 2008	3.47
30-015-04251	MACK ENERGY CORP	WOOLLEY FEDERAL	003	EDDY	S:21, T:17S, R:30E	0	O	Pumping	Oct 1961	Dec 1993	3.52
30-015-32194	COG OPERATING LLC	WOOLLEY FEDERAL	008	EDDY	S:21, T:17S, R:30E	4,966	O	Pumping	Apr 2002	Sep 2011	3.63
30-015-31256	COG OPERATING LLC	WOOLLEY FEDERAL	006	EDDY	S:21, T:17S, R:30E	5,230	O	Pumping	Sep 2000	Sep 2011	3.87
30-015-04234	COG OPERATING LLC	BRIGHAM H	2	EDDY	S:21, T:17S, R:30E	6,840	U	Salt Water Disposal	Jan 2010	Sep 2011	3.93
30-015-29565	COG OPERATING LLC	BERRY A FEDERAL	008	EDDY	S:21, T:17S, R:30E	4,940	O	Pumping	Jan 1998	Sep 2011	4.37
30-015-25380	NADEL AND GUSSMAN PERMIAN, LLC	BROWN CROW FEDERAL	002	EDDY	S:21, T:17S, R:30E	3,300	PO	Pumping	Oct 1985	Sep 2011	4.50
30-015-04252	FLINT PROD. CO.	BERRY A	001	EDDY	S:21, T:17S, R:30E	4,886	PO	Pumping	Jan 1948	Dec 1957	4.61
30-015-04234	FRANKLIN, ASTON AND FAIR INCORPORATED	BRIGHAM H	2	EDDY	S:21, T:17S, R:30E	6,840	U	Salt Water Disposal	Jan 1964	Oct 1968	4.71
30-015-04252	MACK ENERGY CORP	BERRY A FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,886	PO	Pumping	Jan 1959	Dec 1977	4.87
30-015-04236	MACK ENERGY CORP	W D MCINTYRE C	001	EDDY	S:21, T:17S, R:30E	0	O	Pumping	Jan 1959	Dec 1977	4.94
30-015-30256	MARBOB ENERGY CORP	E L FEDERAL	002	EDDY	S:21, T:17S, R:30E	4,960	O	Pumping	Nov 1999	Sep 2011	5.13
30-015-30145		MCINTYRE G	002	EDDY	S:21, T:17S, R:30E	4,968	O	Pumping	Jun 1972	Dec 1977	5.16
30-015-04246	WOOLEY M A	MCINTYRE A FED	003	EDDY	S:21, T:17S, R:30E	0	O	Active	Jan 1958	Dec 1958	5.35
30-015-04235	COG OPERATING LLC	BERRY A FEDERAL	4	EDDY	S:21, T:17S, R:30E	6,859	O	Pumping	Mar 2008	Sep 2011	5.53
30-015-04237	REPOLLO OIL CO.	MCINTYRE D	004	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1948	Dec 1948	5.87
					S:21,						

30-015-30220	MARBOB ENERGY CORP	TYLER FEDERAL	002	EDDY	T:17S, R:30E	4,836	O	Pumping	Jul 1999	Sep 2011	5.93
30-015-30258	MARBOB ENERGY CORP	E L FEDERAL	004	EDDY	S:21, T:17S, R:30E	5,000	O	Pumping	May 1999	Sep 2011	6.00
30-015-30255	MARBOB ENERGY CORP	E L FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,966	O	Pumping	May 1999	Sep 2011	6.03
30-015-00000		MCINTYRE	002	EDDY	S:21, T:17S, R:30E		O	Active	Jun 1947	Dec 1975	6.06
30-015-00000	FRANKLIN , ASTON & FAIR - CONT'D.	BRIGHAAM	001	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1948	Dec 1950	6.06
30-015-00000	WOOLEY, M.A.	MCINTYRE A	'3-6	EDDY	S:21, T:17S, R:30E		O	Active	Mar 1952	Dec 1957	6.13
30-015-31258	COG OPERATING LLC	WOOLLEY FEDERAL	007	EDDY	S:21, T:17S, R:30E	5,180	O	Pumping	Sep 2000	Sep 2011	6.37
30-015-30670	COG OPERATING LLC	BERRY A FEDERAL	012	EDDY	S:21, T:17S, R:30E	4,840	O	Pumping	Jun 2006	Sep 2011	6.87
30-015-00000	WOOLLEY, R. R.	ARNOLD B	005	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1957	Dec 1957	7.16
30-015-00000	WOOLEY,R.R.	ARNOLD	005	EDDY	S:21, T:17S, R:30E		O	Active	Jan 1953	Dec 1956	7.74
30-015-30215	MARBOB ENERGY CORP	TYLER FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,885	O	Pumping	Jun 1998	Sep 2011	7.77
30-015-29564	COG OPERATING LLC	BERRY A FEDERAL	7	EDDY	S:21, T:17S, R:30E	4,910	O	Pumping	May 2006	Sep 2011	7.90
30-015-03662		GO GEO DOOLEY A		EDDY	S:21, T:17S, R:30E	6,030	PO	Active	Jan 1950	Jun 1965	8.00
30-015-04234	FRANKLIN ASTON AND FAIR INC	BRIGHAM H	2	EDDY	S:21, T:17S, R:30E	6,840	U	Salt Water Disposal	Jan 1965	Dec 1965	8.23
30-015-30144	MARBOB ENERGY CORP	LOCO FEDERAL	001	EDDY	S:21, T:17S, R:30E	4,900	O	Pumping	May 1998	Sep 2011	8.40
30-015-30147	MARBOB ENERGY CORP	LOCO FEDERAL	004	EDDY	S:21, T:17S, R:30E	4,927	O	Pumping	Dec 1999	Sep 2011	8.87
30-015-36662	MARBOB ENERGY CORP	E L FEDERAL	013	EDDY	S:21, T:17S, R:30E	6,050	PO	Active Permit	Jan 2009	Nov 2009	9.07
					S:21,						

30-015-30257	MARBOB ENERGY CORP	E L FEDERAL	003	EDDY	T:17S, R:30E	5,000	O	Pumping	Jul 1999	Sep 2011	9.57
30-015-36159	MARBOB ENERGY CORP	TYLER FEDERAL	3	EDDY	S:21, T:17S, R:30E	6,000	O	Active Permit	Jul 2008	Sep 2011	10.07
30-015-34774	COG OPERATING LLC	W D MCINTYRE C	10	EDDY	S:21, T:17S, R:30E	4,290	O	Active Permit	May 2006	Sep 2011	10.20
30-015-30259	MARBOB ENERGY CORP	E L FEDERAL	005	EDDY	S:21, T:17S, R:30E	5,050	O	Pumping	May 1999	Sep 2011	10.60
30-015-36164	MARBOB ENERGY CORP	LOCO FEDERAL	6	EDDY	S:21, T:17S, R:30E	6,062	O	Active Permit	Aug 2008	Sep 2011	15.13
30-015-36160	MARBOB ENERGY CORP	E L FEDERAL	#9	EDDY	S:21, T:17S, R:30E	6,100	O	Active Permit	Jun 2008	Sep 2011	15.60
30-015-03662	PACIFIC WESTERN OIL CORPORATION	DOOLEY		EDDY	S:21, T:17S, R:30E	6,030	PO	Active	Jan 1947	Dec 1957	19.87
30-015-30145	MARBOB ENERGY CORP	LOCO FEDERAL	002	EDDY	S:21, T:17S, R:30E	4,968	O	Pumping	Jul 1999	Sep 2011	21.27
30-015-30146	MARBOB ENERGY CORP	LOCO FEDERAL	003	EDDY	S:21, T:17S, R:30E	4,900	O	Pumping	May 1998	Sep 2011	22.43
30-015-00000	BUFFALO OIL COMPANY	BAISH A	021	EDDY	S:21, T:17S, R:30E		O	Active	Oct 1949	Dec 1952	22.65
30-015-04234	FRANKLIN ASTON AND FAIR	BRIGHAM FED	2	EDDY	S:21, T:17S, R:30E	6,840	U	Salt Water Disposal	Aug 1961	Dec 1963	22.90
30-015-04235	PETROLEUM CORPORATION OF TEXAS	BERRY A	4	EDDY	S:21, T:17S, R:30E	6,859	O	Pumping	Mar 1962	Dec 1967	25.74
30-015-32279	COG OPERATING LLC	BERRY A FEDERAL	14	EDDY	S:21, T:17S, R:30E	4,900	O	Pumping	Jun 2002	Sep 2011	28.77
30-015-36718	MARBOB ENERGY CORP	E L FEDERAL	10	EDDY	S:21, T:17S, R:30E	6,190	O	Active Permit	Feb 2009	Sep 2011	38.97
30-015-37099	APACHE CORP	E L FEDERAL	11	EDDY	S:21, T:17S, R:30E	6,208	O	Active Permit	Mar 2010	Sep 2011	41.33
30-015-36563	MARBOB ENERGY CORP	LOCO FEDERAL	5	EDDY	S:21, T:17S, R:30E	6,100	O	Active Permit	Dec 2008	Sep 2011	45.50
30-015-36638	MARBOB ENERGY CORP	LOCO FEDERAL	7	EDDY	S:21, T:17S, R:30E	6,290	O	Active Permit	Feb 2009	Sep 2011	65.10
					S:21,						

30-015-04243	SOUTHWEST ROYALTIES INC	MCINTYRE G FEDERAL	001	EDDY	T:17S, R:30E	0	O	Temporarily Abandoned	Jan 1947	Oct 2011	
30-015-20647	SOUTHWEST ROYALTIES INC	MCINTYRE G FEDERAL	002	EDDY	S:21, T:17S, R:30E	3,610	O	Pumping	Jan 1993	Oct 2011	
30-015-30262	MARBOB ENERGY CORP	E L FEDERAL	008	EDDY	S:21, T:17S, R:30E	5,300	D	Salt Water Disposal	Jan 2001	Sep 2011	
30-015-04234	COG OPERATING LLC	BRIGHAM H	2	EDDY	S:21, T:17S, R:30E	6,840	U	Salt Water Disposal	Jan 1963	May 2009	

Producing Wells in Sec 21, T17S, R30E



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Non Standard Location
Operator: Apache Corp.
T17S-R30E Sec 21 UL-D

Well name: Berry A Federal #16
Operator: COG Operating LLC
T17S-R30E Sec 21 UL-E
Lease #:NMLC-054988A



COG Operating LLC

Eddy County, NM (NAN27 NME)

Berry A Federal #16

Berry A Federal #16

OH

Plan: Plan #2 - 7-7/8" Hole

SHL = 1393' FNL & 740' FWL

BHL = 1660' FNL & 980' FWL

Top of Paddock = 147' S of surface & 152' E of surface @ 4200' TVD

Standard Planning Report

22 December, 2011



Scientific Drilling
Directional Drilling Operations

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Berry A Federal #16
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3657.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3657.00usft
Site:	Berry A Federal #16	North Reference:	Grid
Well:	Berry A Federal #16	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

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		

Site:	Berry A Federal #16		
Site Position:		Northing:	663,421.50 usft
From:	Map	Easting:	607,730.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	0"
		Latitude:	32° 49' 24.030 N
		Longitude:	103° 58' 57.513 W
		Grid Convergence:	- 0.19°

Well:	Berry A Federal #16					
Well Position	+N/-S	0.00 usft	Northing:	663,421.50 usft	Latitude:	32° 49' 24.030 N
	+E/-W	0.00 usft	Easting:	607,730.00 usft	Longitude:	103° 58' 57.513 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,657.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	(°)	(°)	(nT)		
	IGRF2010	2011/12/13	7.76	60.66	48,880

Design	Plan #2 - 7-7/8" Hole			
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	137.89

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	
1,571.22	4.42	137.89	1,571.00	-6.33	5.72	2.00	2.00	62.33	137.89	
6,113.76	4.42	137.89	6,100.00	-266.30	240.70	0.00	0.00	0.00	0.00	PBHL-Berry A Fed #1

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Berry A Federal #16
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3657.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3657.00usft
Site:	Berry A Federal #16	North Reference:	Grid
Well:	Berry A Federal #16	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

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" Casing										
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP Start Build 2.00°/100'										
1,400.00	1.00	137.89	1,400.00	-0.32	0.29	0.44	2.00	2.00	0.00	
1,500.00	3.00	137.89	1,499.93	-2.91	2.63	3.93	2.00	2.00	0.00	
1,571.22	4.42	137.89	1,571.00	-6.33	5.72	8.54	2.00	2.00	0.00	
EOC Hold 4.42°										
1,600.00	4.42	137.89	1,599.69	-7.98	7.21	10.76	0.00	0.00	0.00	
1,700.00	4.42	137.89	1,699.40	-13.70	12.39	18.47	0.00	0.00	0.00	
1,800.00	4.42	137.89	1,799.10	-19.43	17.56	26.19	0.00	0.00	0.00	
1,900.00	4.42	137.89	1,898.80	-25.15	22.73	33.90	0.00	0.00	0.00	
2,000.00	4.42	137.89	1,998.50	-30.87	27.90	41.61	0.00	0.00	0.00	
2,100.00	4.42	137.89	2,098.20	-36.60	33.08	49.33	0.00	0.00	0.00	
2,200.00	4.42	137.89	2,197.91	-42.32	38.25	57.04	0.00	0.00	0.00	
2,300.00	4.42	137.89	2,297.61	-48.04	43.42	64.76	0.00	0.00	0.00	
2,400.00	4.42	137.89	2,397.31	-53.76	48.60	72.47	0.00	0.00	0.00	
2,500.00	4.42	137.89	2,497.01	-59.49	53.77	80.19	0.00	0.00	0.00	
2,600.00	4.42	137.89	2,596.71	-65.21	58.94	87.90	0.00	0.00	0.00	
2,700.00	4.42	137.89	2,696.42	-70.93	64.11	95.61	0.00	0.00	0.00	
2,800.00	4.42	137.89	2,796.12	-76.66	69.29	103.33	0.00	0.00	0.00	
2,900.00	4.42	137.89	2,895.82	-82.38	74.46	111.04	0.00	0.00	0.00	
3,000.00	4.42	137.89	2,995.52	-88.10	79.63	118.76	0.00	0.00	0.00	
3,100.00	4.42	137.89	3,095.22	-93.82	84.80	126.47	0.00	0.00	0.00	
3,200.00	4.42	137.89	3,194.93	-99.55	89.98	134.19	0.00	0.00	0.00	
3,300.00	4.42	137.89	3,294.63	-105.27	95.15	141.90	0.00	0.00	0.00	
3,400.00	4.42	137.89	3,394.33	-110.99	100.32	149.61	0.00	0.00	0.00	
3,500.00	4.42	137.89	3,494.03	-116.72	105.50	157.33	0.00	0.00	0.00	
3,600.00	4.42	137.89	3,593.73	-122.44	110.67	165.04	0.00	0.00	0.00	
3,700.00	4.42	137.89	3,693.44	-128.16	115.84	172.76	0.00	0.00	0.00	
3,800.00	4.42	137.89	3,793.14	-133.89	121.01	180.47	0.00	0.00	0.00	
3,900.00	4.42	137.89	3,892.84	-139.61	126.19	188.19	0.00	0.00	0.00	
4,000.00	4.42	137.89	3,992.54	-145.33	131.36	195.90	0.00	0.00	0.00	
4,100.00	4.42	137.89	4,092.24	-151.05	136.53	203.61	0.00	0.00	0.00	
4,200.00	4.42	137.89	4,191.95	-156.78	141.71	211.33	0.00	0.00	0.00	
4,208.08	4.42	137.89	4,200.00	-157.24	142.12	211.95	0.00	0.00	0.00	
Top of Paddock										
4,300.00	4.42	137.89	4,291.65	-162.50	146.88	219.04	0.00	0.00	0.00	
4,400.00	4.42	137.89	4,391.35	-168.22	152.05	226.76	0.00	0.00	0.00	
4,500.00	4.42	137.89	4,491.05	-173.95	157.22	234.47	0.00	0.00	0.00	
4,600.00	4.42	137.89	4,590.75	-179.67	162.40	242.18	0.00	0.00	0.00	
4,700.00	4.42	137.89	4,690.46	-185.39	167.57	249.90	0.00	0.00	0.00	
4,800.00	4.42	137.89	4,790.16	-191.11	172.74	257.61	0.00	0.00	0.00	
4,900.00	4.42	137.89	4,889.86	-196.84	177.92	265.33	0.00	0.00	0.00	
5,000.00	4.42	137.89	4,989.56	-202.56	183.09	273.04	0.00	0.00	0.00	
5,100.00	4.42	137.89	5,089.26	-208.28	188.26	280.76	0.00	0.00	0.00	
5,200.00	4.42	137.89	5,188.97	-214.01	193.43	288.47	0.00	0.00	0.00	
5,300.00	4.42	137.89	5,288.67	-219.73	198.61	296.18	0.00	0.00	0.00	
5,400.00	4.42	137.89	5,388.37	-225.45	203.78	303.90	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site: Berry A Federal #16
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3657.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3657.00usft
Site:	Berry A Federal #16	North Reference:	Grid
Well:	Berry A Federal #16	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 - 7-7/8" Hole		

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)	
5,500.00	4.42	137.89	5,488.07	-231.18	208.95	311.61	0.00	0.00	0.00	
5,600.00	4.42	137.89	5,587.77	-236.90	214.12	319.33	0.00	0.00	0.00	
5,700.00	4.42	137.89	5,687.48	-242.62	219.30	327.04	0.00	0.00	0.00	
5,800.00	4.42	137.89	5,787.18	-248.34	224.47	334.76	0.00	0.00	0.00	
5,900.00	4.42	137.89	5,886.88	-254.07	229.64	342.47	0.00	0.00	0.00	
6,000.00	4.42	137.89	5,986.58	-259.79	234.82	350.18	0.00	0.00	0.00	
6,100.00	4.42	137.89	6,086.28	-265.51	239.99	357.90	0.00	0.00	0.00	
6,113.76	4.42	137.89	6,100.00	-266.30	240.70	358.96	0.00	0.00	0.00	
PBHL-Berry A Fed #16										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
North HL-Berry A Fed #1	- plan misses target center by 358.53usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)	0.00	0.00	0.00	-256.30	250.70	663,165.20	607,980.70	32° 49' 21.486 N	103° 58' 54.585 W
	- Rectangle (sides W100.00 H0.00 D0.00)									
East HL-Berry A Fed #1	- plan misses target center by 358.53usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)	0.00	0.00	0.00	-256.30	250.70	663,165.20	607,980.70	32° 49' 21.486 N	103° 58' 54.585 W
	- Rectangle (sides W0.00 H100.00 D0.00)									
PBHL-Berry A Fed #16	- plan hits target center	0.00	0.01	6,100.00	-266.30	240.70	663,155.20	607,970.70	32° 49' 21.387 N	103° 58' 54.702 W
	- Circle (radius 10.00)									

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

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,208.08	4,200.00	Top of Paddock		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment	
1,350.00	1,350.00	0.00	0.00	KOP Start Build 2.00°/100'	
1,571.22	1,571.00	-6.33	5.72	EOC Hold 4.42°	



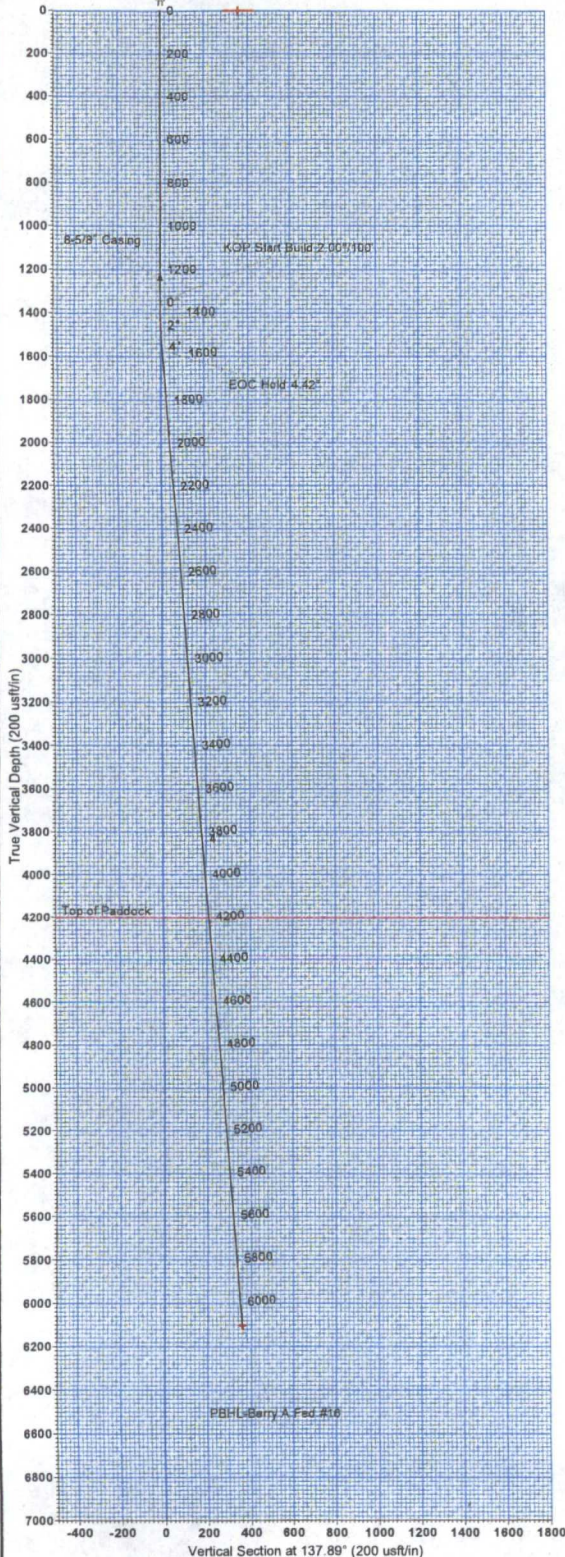
To convert a Magnetic Direction to a Grid Direction, Add 7.57°
To convert a True Direction to a Grid Direction, Subtract 0.19°

True North: -0.19°
Magnetic North: 7.57°
Magnetic
Strength: 46
Dip Angle
Date: 2010
Model: IGRF2010

Berry A Federal #16
Eddy County, NM (NAN27 NME)
Northing: (Y) 663421.50
Easting: (X) 607730.00
Plan #2 - 7-7/8" Hole



Ground Elev.: 3657.00



WELL DETAILS: Berry A Federal #16

+N-S	+E-W	Northing	Ground Level	Easting	Latitude	Longitude	Slot
0.00	0.00	663421.50	3657.00	607730.00	32° 49' 24.030 N	103° 56' 57.513 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1360.00	0.00	0.00	1360.00	0.00	0.00	0.00	0.00	0.00	
3	1571.22	4.42	137.89	1571.00	-6.33	5.72	2.00	137.89	8.54	
4	6113.76	4.42	137.89	6100.00	-266.30	240.70	0.00	0.00	356.96	PBHL-Berry A Fed #16

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
East HL-Berry A Fed #16	0.00	-266.30	250.70	663165.20	607980.70	32° 49' 21.486 N	103° 58' 54.585 W	Rectangle (Sides: L100.00 W0.00)
North HL-Berry A Fed #16	0.00	-266.30	250.70	663165.20	607980.70	32° 49' 21.486 N	103° 58' 54.585 W	Rectangle (Sides: L0.00 W100.00)
PBHL-Berry A Fed #16	6100.00	-266.30	240.70	663155.20	607970.70	32° 49' 21.387 N	103° 58' 54.702 W	Circle (Radius: 10.00)

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

SITE DETAILS: Berry A Federal #16

Site Centre Northing: 663421.50
Easting: 607730.00
Positional Uncertainty: 0.00
Convergence: 0.19
Local North: Grid

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
4260.00	4208.08	Top of Paddock	0.00	

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001

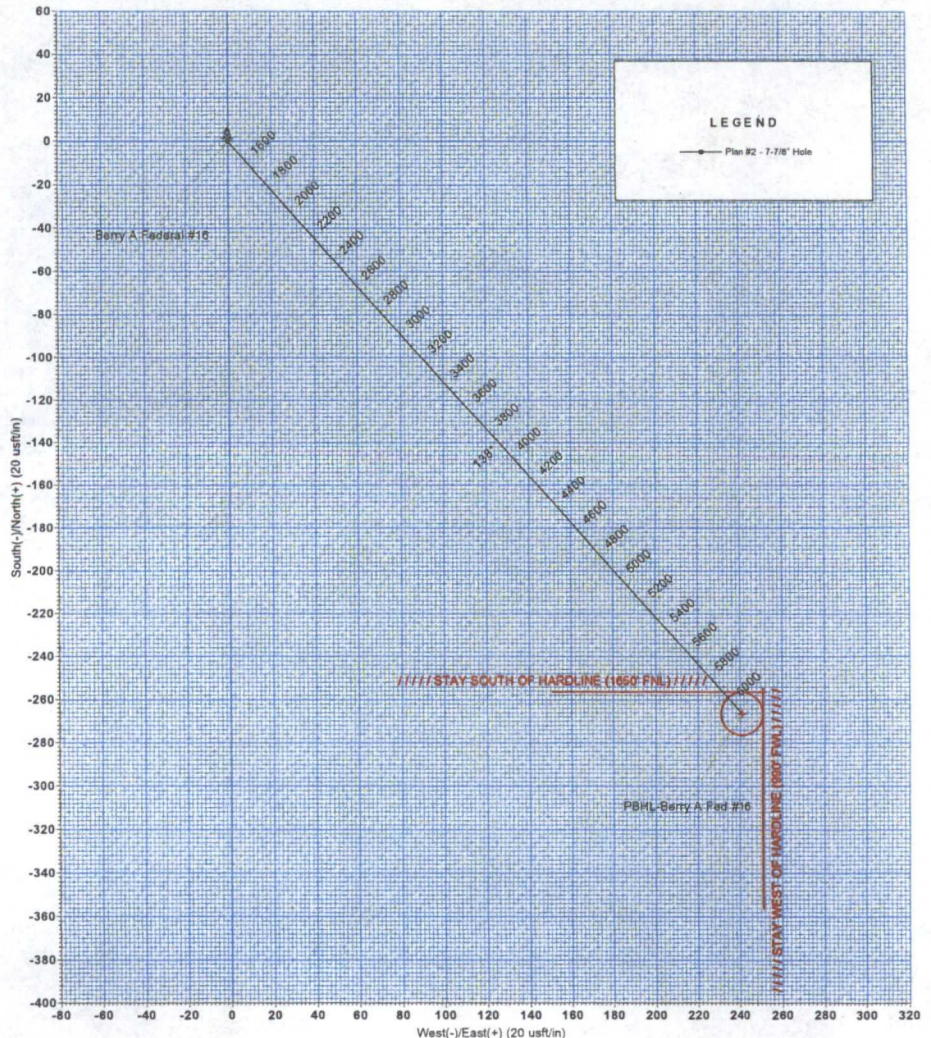
Local Origin: Site Berry A Federal #16, Grid North
Latitude: 32° 49' 24.030 N
Longitude: 103° 56' 57.513 W

Grid East: 607730.00
Grid North: 663421.50
Scale Factor: 1.000

Geomagnetic Model: IGRF2010
Sample Date: 13-Dec-11
Magnetic Declination: 7.76°
Dip Angle from Horizontal: 60.66°
Magnetic Field Strength: 46860
To convert a Magnetic Direction to a Grid Direction, Add 7.57°
To convert a Magnetic Direction to a True Direction, Add 7.76° East
To convert a True Direction to a Grid Direction, Subtract 0.19°

CASING DETAILS

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



**COG OPERATING LLC
550 W. TEXAS, SUITE 100
MIDLAND, TX 79701**

03/29/2012

Apache Corp.
303 Veterans Airpark Lane Suite 3000
Midland, TX 79705

Re: Request for Unorthodox Well Location

To Whom It May Concern:

This letter will serve as notice under Rule 104.F (3) that COG Operating LLC has requested administrative approval from the Oil Conservation Division in Santa Fe, NM for an unorthodox Maljamar: YESO oil well.

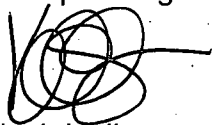
**Berry A Federal #16
Eddy County, NM**

**SHL:1393' FNL & 740' FWL Sec 21, T17S, R30E, Unit E
SHL:1650' FNL & 990' FWL Sec 21, T17S, R30E, Unit E**

Should your company have any objection, it must be filed in writing within twenty (20) days from the date of this notice. The Division Director may allow COG to produce from the unorthodox location after the well is drilled, if no objection has been made within the 20 days after the application has been received.

Sincerely,

COG Operating LLC


Kelly J. Holly
Permitting Tech

432-685-4384
kholly@concho.com

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
☒ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ☒ Print your name and address on the reverse so that we can return the card to you. ☒ Attach this card to the back of the mailpiece, or on the front if space permits.		A. Signature <i>x Ashley Murdoch</i> ☐ Agent ☐ Addressee	
1. Article Addressed to: Apache Corp. 303 Veterans Airpark Lane Suite 3000 Midland TX 79705		B. Received by (Printed Name) <i>Ashley Murdoch</i> C. Date of Delivery <i>3-2-12</i>	
2. Article Number (Transfer from service label)		D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No	
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