15-993

Form 3160-3
(March 2012)

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM-54290

6. If Indian, Allotee or Tribe Name:

7. If Unit or CA Agreement, Name and No.:

8. Lease Name and Well No. (316173): Reposado Federal #3H

1a. Type of Work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other [✓] Single Zone [ ] Multiple Zone

2. Name of Operator: COG Production LLC.

9. API Well No.: 30-015-40652

3a. Address: 2208 West Main Street, Artesia, NM 88210

3b. Phone No. (include area code): 575-748-6940

UNORTHODOX LOCATION

10. Field and Pool, or Exploratory (13354): Corral Canyon; Bone Spring, South

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: 191' FNL & 1841' FWL Unit Letter C (NENW) Sec 2-T26S-R29E SHL (Off lease)
At proposed prod. Zone: 813' FNL & 1662' FWL Unit Letter C (NENW) Sec 35-T25S-R29E

11. Sec., T.R.M. or Blk and Survey or Area: Sec. 2 - T26S - R29E

14. Distance in miles and direction from nearest town or post office*: Approximately 9 miles from Malaga

12. County or Parish: Eddy

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
191' (Off lease)	480	E/2W/2 Section 35.T25S.R29E 160 Acres
18. Distance from location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
539'	Lat 1 MD: 13400' TVD: 8822' Lat 2 MD: 12279' TVD: 7645'	NMB000860 &NMB000845
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3000' GL	10/7/2012	50 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the BLM.

THIS APD CANCELS AND SUPERSEDES STATE FORM C-101 APPROVED 9/10/12

25. Signature	Name (Printed/Typed)	Date
Melanie J. Wilson	Melanie J. Wilson	8/26/2015

Title: Regulatory Analyst

Approved by (Signature)	Name (Printed/Typed)	Date
/Cody Layton		APR 20 2016
Title	**Office**	
FIELD MANAGER	CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legan or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations theron.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 26 2016
RECEIVED

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 26 2016

RECEIVED

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 RD., 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
(As Drilled)

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015- 40652	13354	CORRAL CANYON; BONE SPRING, SOUTH

Property Code	Property Name	Well Number
316143	REPOSADO FEDERAL	3H

OGRID No.	Operator Name	Elevation
217955	COG PRODUCTION, LLC	3000.0

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	2	26-S	29-E		191	NORTH	1841	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
C	35	25-S	29-E		813	NORTH	1662	WEST	EDDY

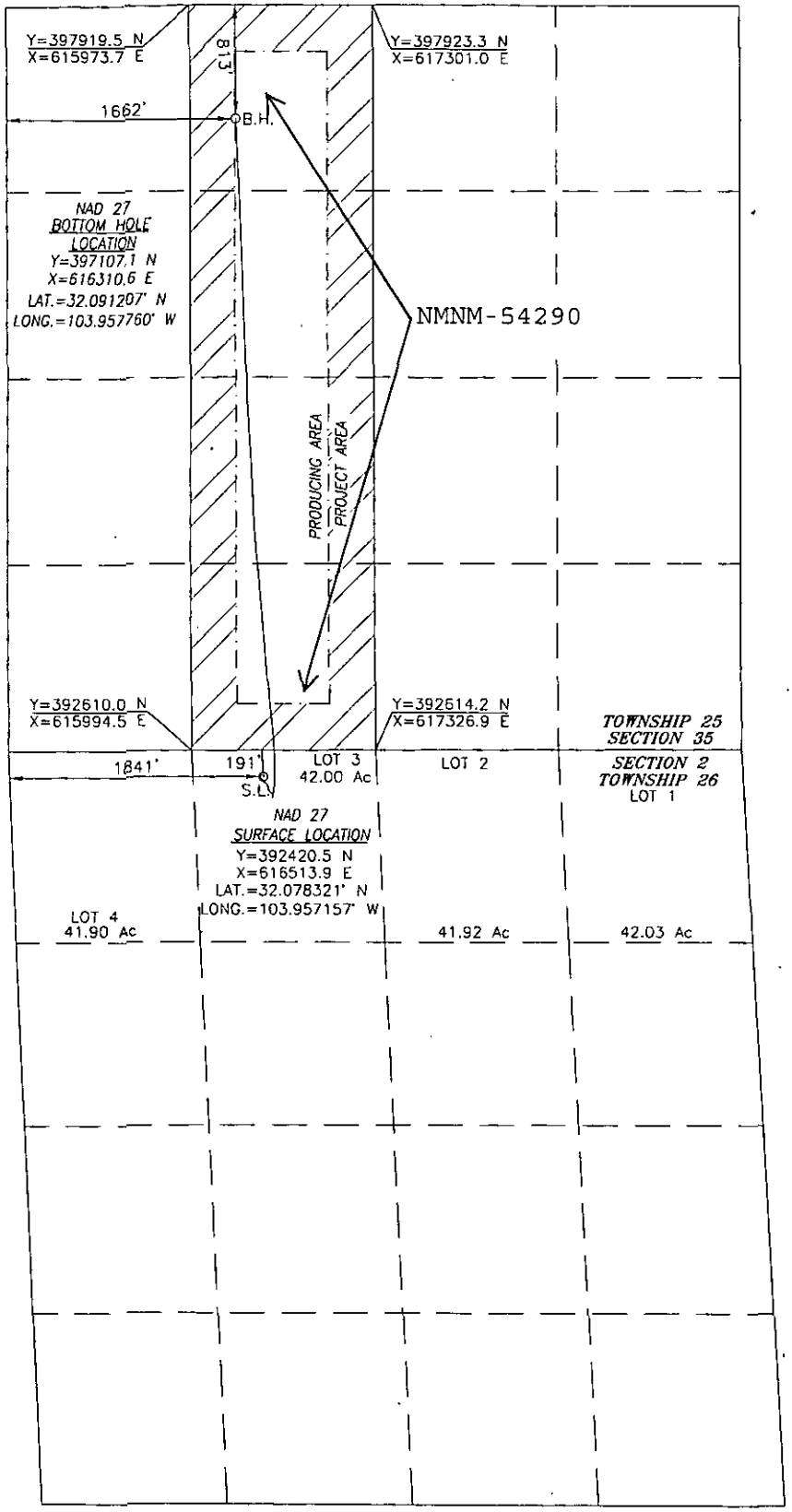
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

LAT 1
SEE PAGE 2

W.O. # 15-618 DRAWN BY: AF

Property Code	Property Name	Well Number
	REPOSADO FEDERAL	3H
OGRID No.	Operator Name	Elevation
217955	COG PRODUCTION, LLC	3000.0



BOREPATH SHOWN HEREON IS BASED ON A DIRECTIONAL SURVEY REPORT PROVIDED BY TDS FOR THE OSPREY 20 STATE COM #1H ON SEPTEMBER 23, 2014.

1200 0 1200

SCALE: 1"=1200'

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.

Melanie J Wilson 8/26/2015

Signature Date

Melanie J WIlson

Printed Name

mwilson@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.

MAY 13, 2015

SURVEY DATE/DATE OF GEOGRAPHIC REPORT

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 5/25/15

Certificate No. CHAD HARCROW 17777

W.O. # 15-889 DRAWN BY: AF

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 26 2016
RECEIVED

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Form C-102
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☒ AMENDED REPORT
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API Number	Pool Code	Pool Name
30-015-40652	13354	CORRAL CANYON; BONE SPRING, SOUTH

Property Code	Property Name	Well Number
	REPOSADO FEDERAL	3H

OGRID No.	Operator Name	Elevation
217955	COG PRODUCTION, LLC	3000.0

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C	35	25-S	29-E		818	NORTH	1662	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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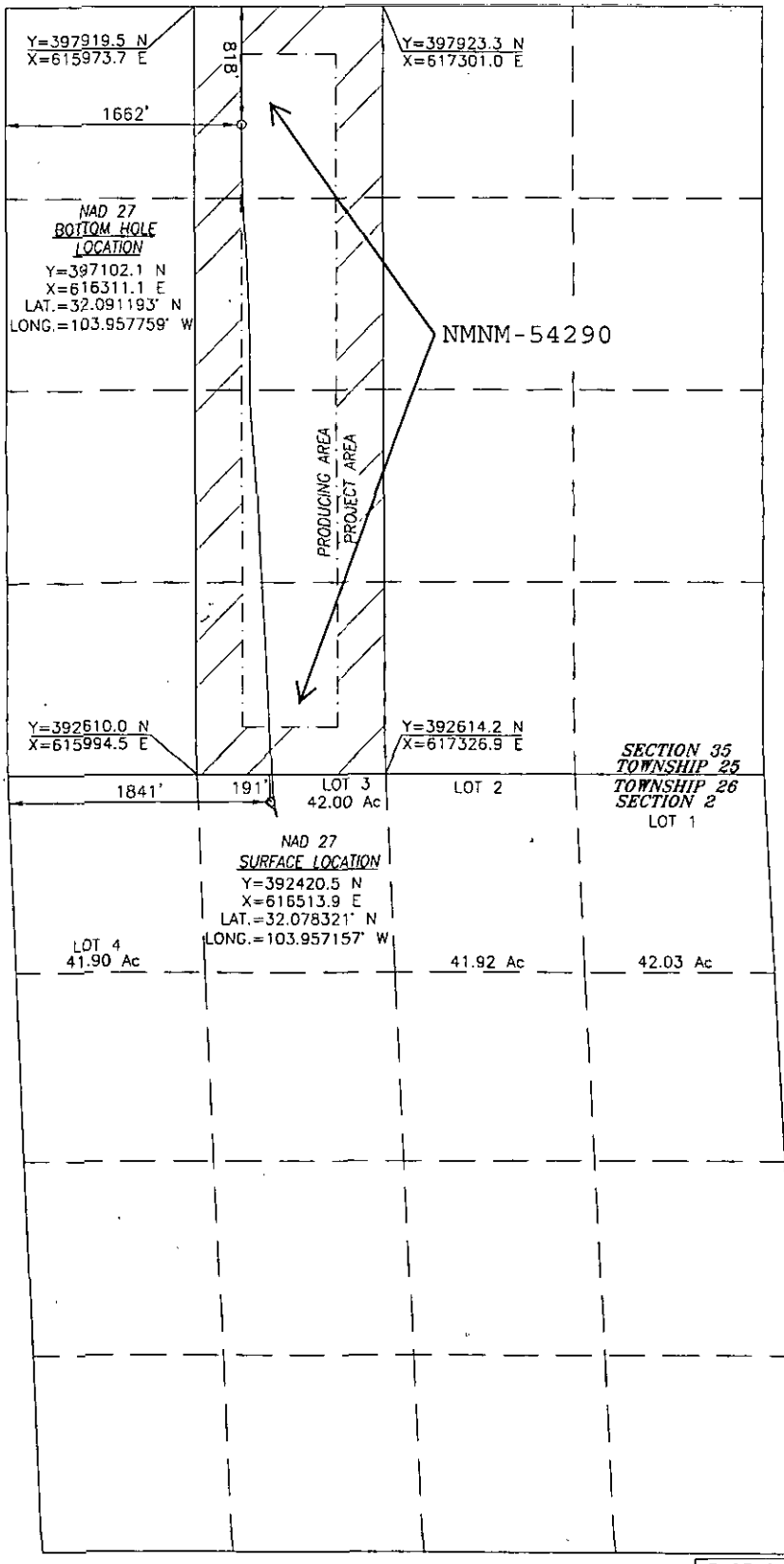
LAT 2
SEE PAGE 2

W.O. # 15-889 DRAWN BY: AF

Property Code	Property Name	Well Number
	REPOSADO FEDERAL	3H
OGRID No.	Operator Name	Elevation
217955	COG PRODUCTION, LLC	3000.0



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1200 0 1200

SCALE: 1"=1200'

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Melanie J Wilson 8/26/2015

Signature Date

Melanie J Wilson

Printed Name

mwilson@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.

MAY 13, 2015

SURVEY DATE/DATE OF GEOGRAPHIC REPORT

Signature & Seal of Professional Surveyor

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

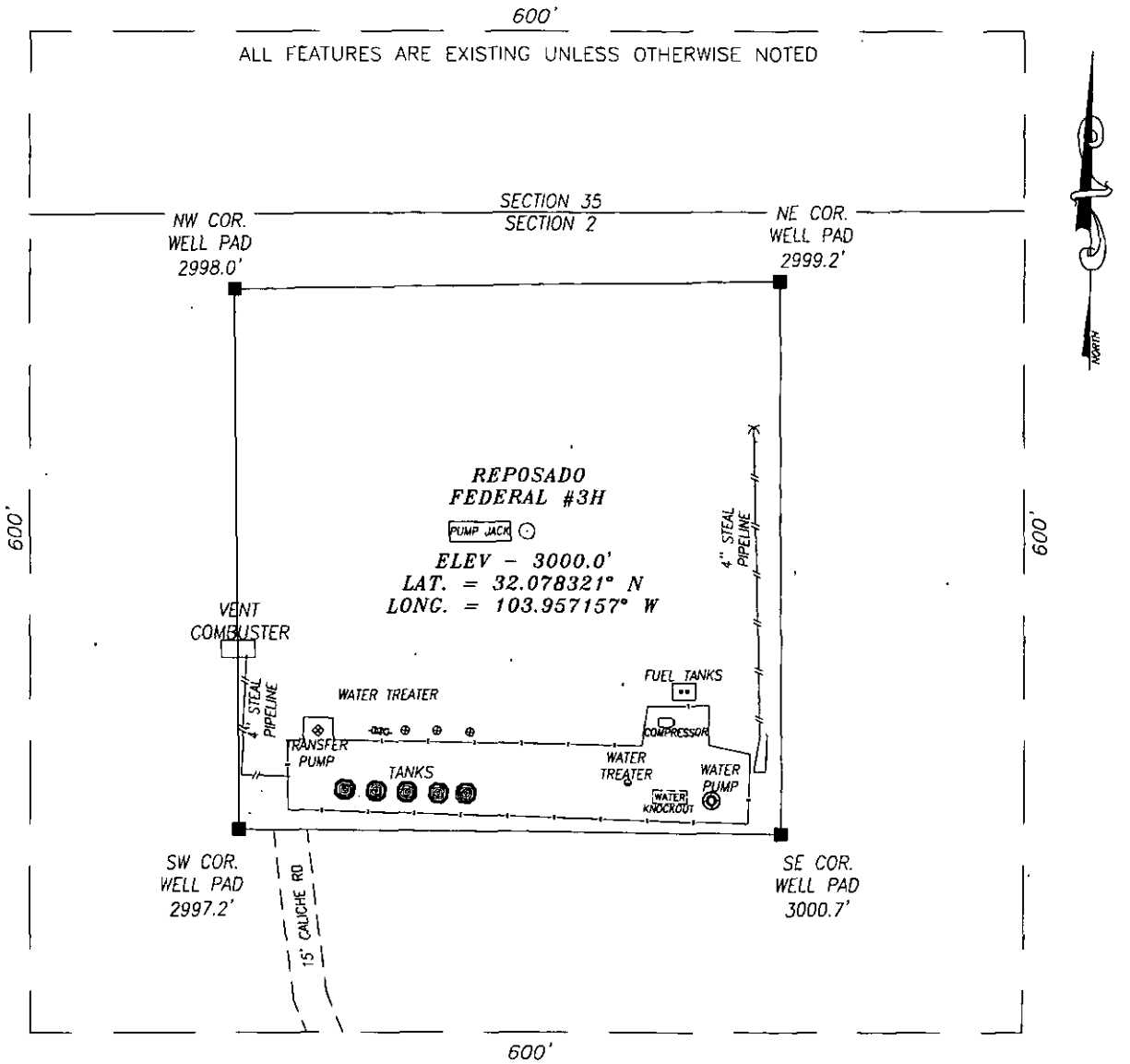
Chad Harcrow 5/25/15

Certificate No. CHAD HARCROW 17777

W.O. # 15-889 DRAWN BY: AF

SECTION 2, TOWNSHIP 26 SOUTH, RANGE 29 EAST, N.M.P.M.,

EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF LONGHORN ROAD (CR 725) AND PIPELINE ROAD, TURN LEFT (NORTHEAST) ONTO PIPELINE ROAD AND GO APPROX 0.1 MILE; THEN TURN RIGHT (EAST) AND GO APPROX. 2.6 MILES; THEN TURN LEFT (NORTHEAST) AND GO APPROX. 0.7 MILE; THEN TURN LEFT (NORTH) AND GO APPROX. 0.3 MILES; THEN TURN LEFT (NORTHWEST) AND GO APPROX. 0.2 MILES; THEN TURN RIGHT AND MEANDER NORTHERLY AND NORTHWESTERLY APPROX. 0.1 MILES; THEN TURN LEFT (WEST) AND GO APPROX. 0.5 MILE; THEN TURN RIGHT (NORTH) AND GO APPROX. 0.1 MILES TO AN EXISITING WELL PAD.

100 0 100 200 Feet

Scale: 1"=100'

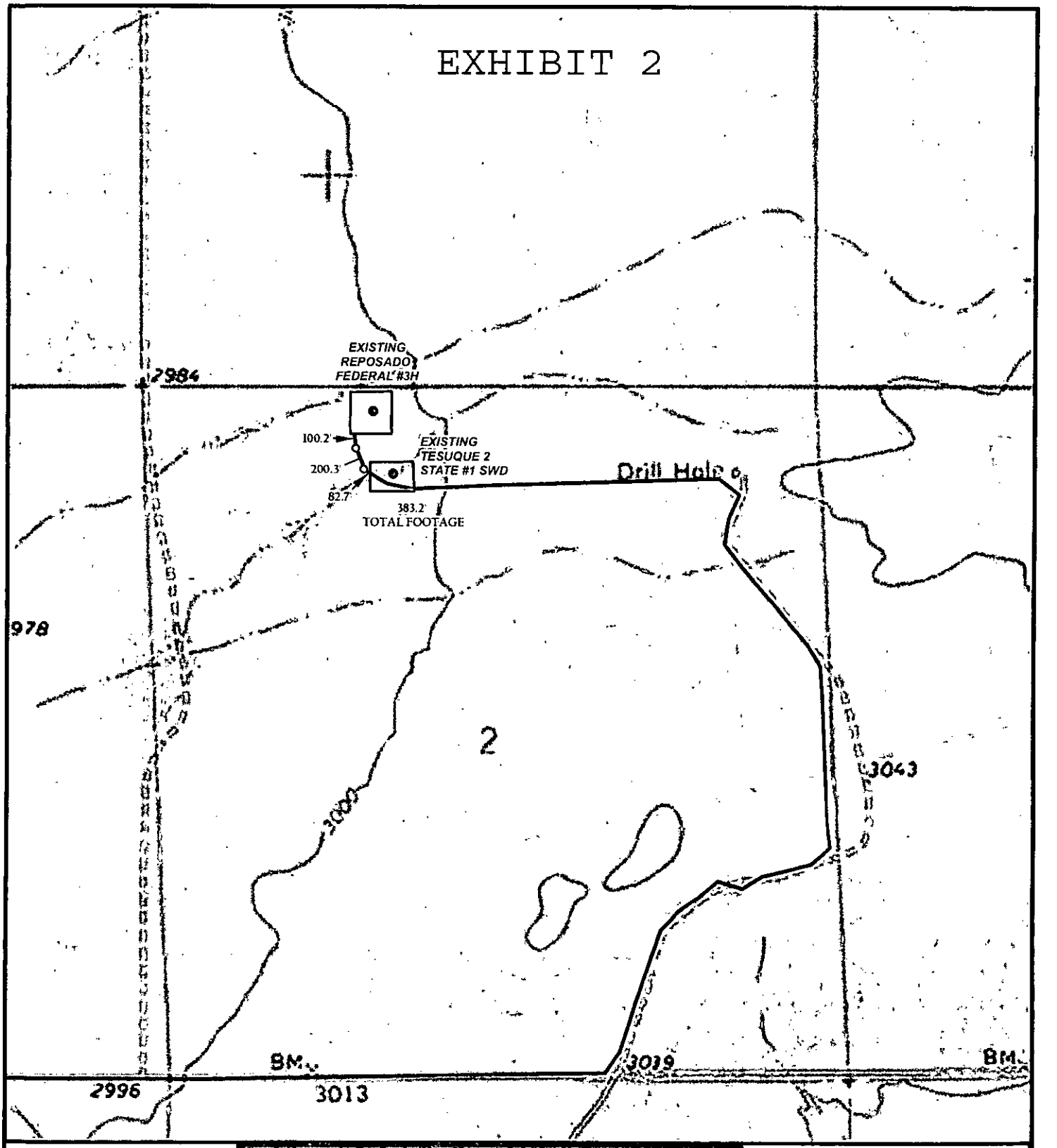
HARCROW SURVEYING, LLC
2314 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158 FAX: (575) 746-2158
c.harcrow@harcrowsurveying.com

COG PRODUCTION, LLC

REPOSADO FEDERAL #3H WELL
LOCATED 191 FEET FROM THE NORTH LINE
AND 1841 FEET FROM THE WEST LINE OF SECTION 2,
TOWNSHIP 26 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

SURVEY DATE: MAY 13, 2015		PAGE: 1 OF 1
DRAFTING DATE: MAY 18, 2015		
APPROVED BY: CH	DRAWN BY: AF	FILE: 15-618

EXHIBIT 2



LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXISTING ROAD

REPOSADO FEDERAL #3H			
SEC: 2	TWP:26 S.	RGE:29 E.	ELEVATION:3000.0'
STATE: NEW MEXICO	COUNTY: EDDY	191' FNL & 1841' FWL	
W.O. # 15-618	LEASE: REPOSADO FED	SURVEY: N.M.P.M	

0 2,500 FEET

0 0.05 0.1 0.2 Miles 1 IN = 1,000 FT

ROAD OVERVIEW TOPO ROAD ATT. B 05/18/2015 A.F

N

CONCHO

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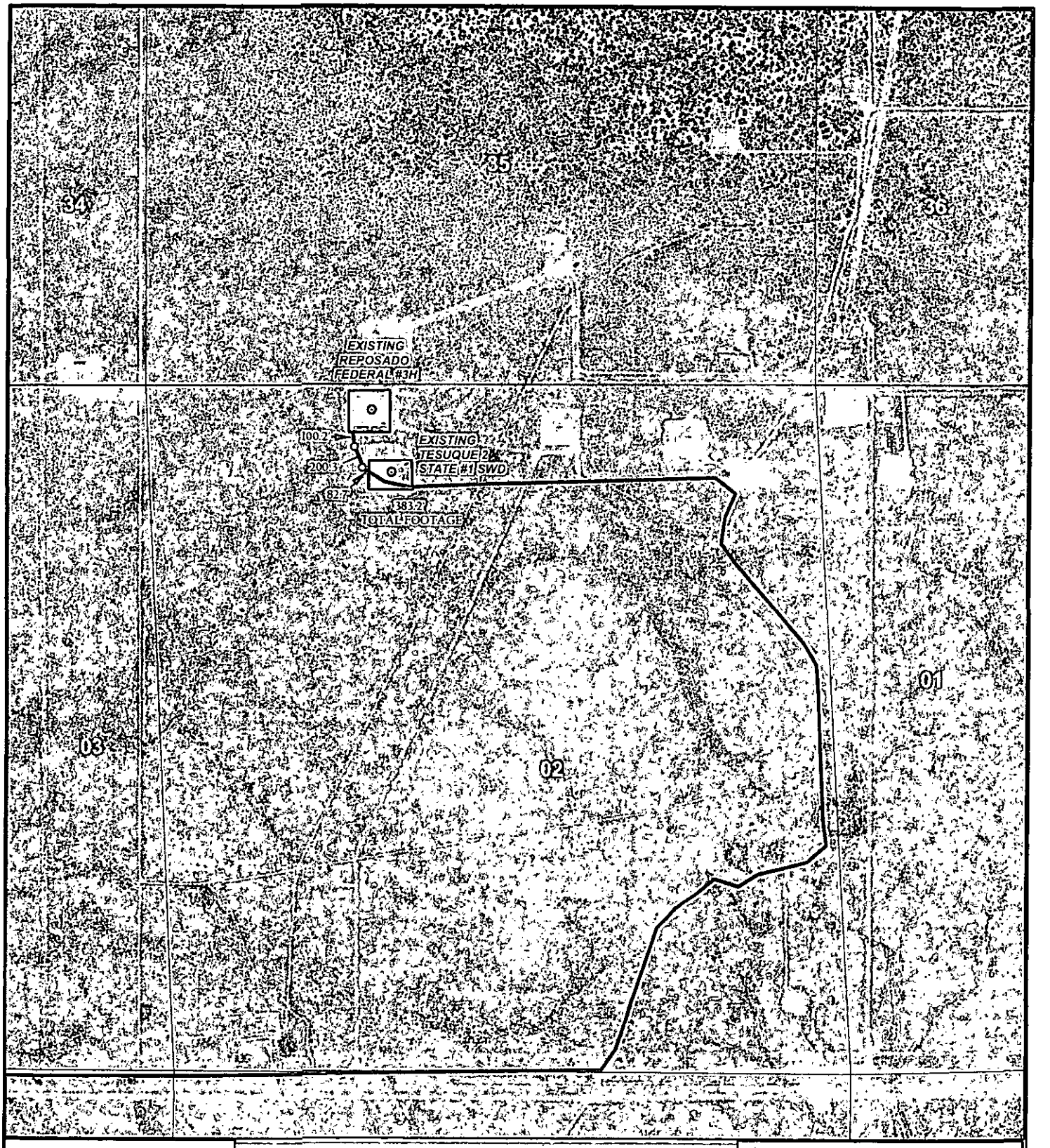

LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXISTING ROAD

REPOSADO FEDERAL #3H

SEC: 2 TWP:26 S. RGE:29 E. ELEVATION:3000.0'

STATE: NEW MEXICO COUNTY: EDDY 191' FNL & 1841' FWL

W.O. # 15-618 LEASE: REPOSADO FED SURVEY: N.M.P.M

0 2,500 FEET

0 0.05 0.1 0.2 Miles 1 IN = 1,000 FT

ROAD OVERVIEW IMAGERY ROAD ATT. B 05/18/2015 A.P

N

CONCHO

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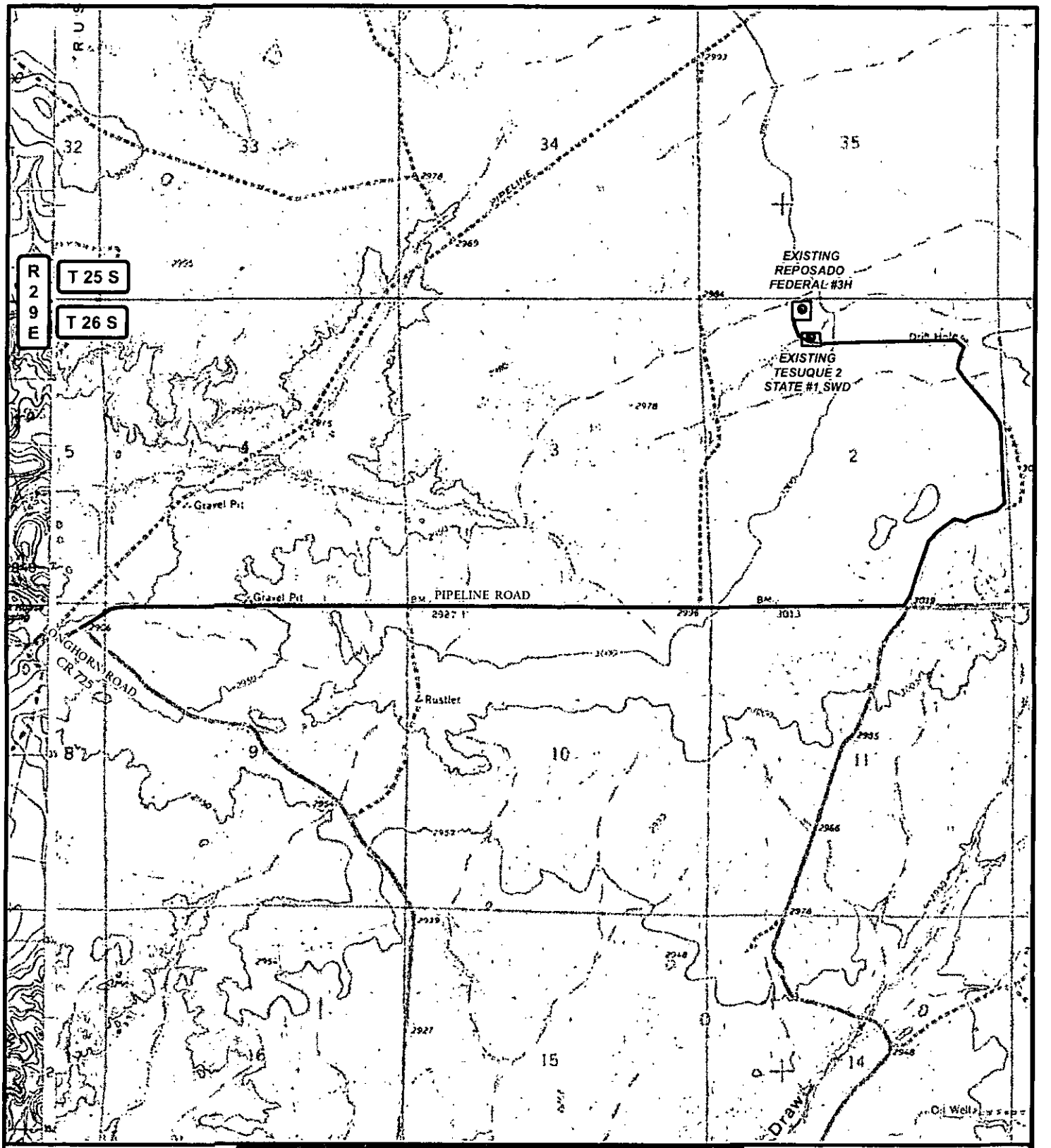

LEGEND

- WELL
- WELLPAD
- EXISTING ROAD

REPOSADO FEDERAL #3H			
SEC: 2	TWP:26 S.	RGE:29 E.	ELEVATION:3000.0'
STATE: NEW MEXICO	COUNTY: EDDY	191' FNL & 1841' FWL	
W.O. # 15-618	LEASE: REPOSADO FED	SURVEY: N.M.P.M	

0 2,500 5,000 FEET

0 0.15 0.3 0.6 Miles

1 IN = 2,250 FT

LOCATION MAP | TOPO | 05/18/2015 | A.F

N

CONCHO

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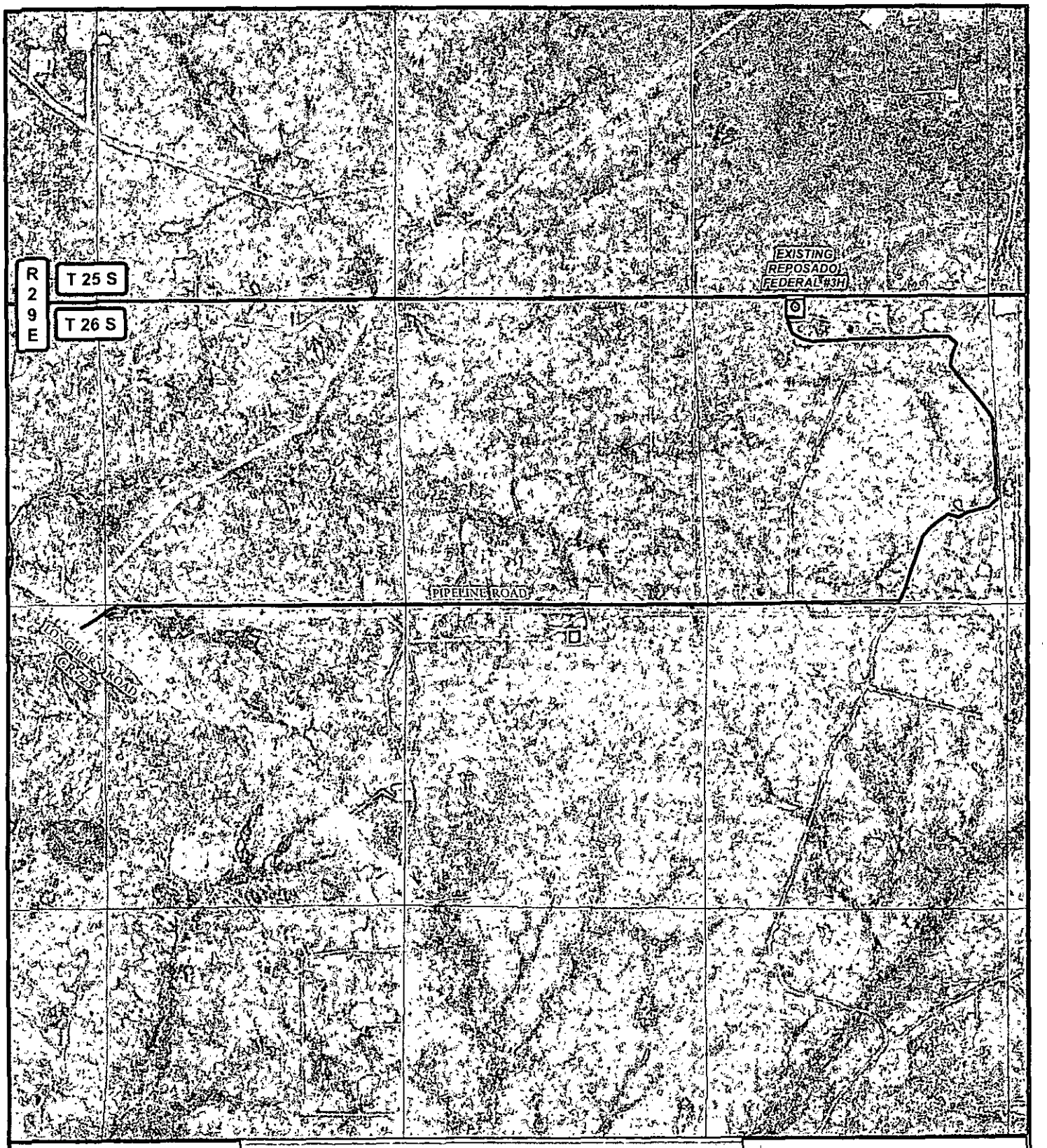

LEGEND

- WELL
- WELLPAD
- EXISTING ROAD

REPOSADO FEDERAL #3H

SEC: 2 TWP:26 S. RGE:29 E. ELEVATION:3000.0'

STATE: NEW MEXICO COUNTY: EDDY 191' FNL & 1841' FWL

W.O. # 15-618 LEASE: REPOSADO FED SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.15 0.3 0.6 Miles 1 IN = 2,250 FT

LOCATION MAP IMAGERY 05/18/2015 A.F

N

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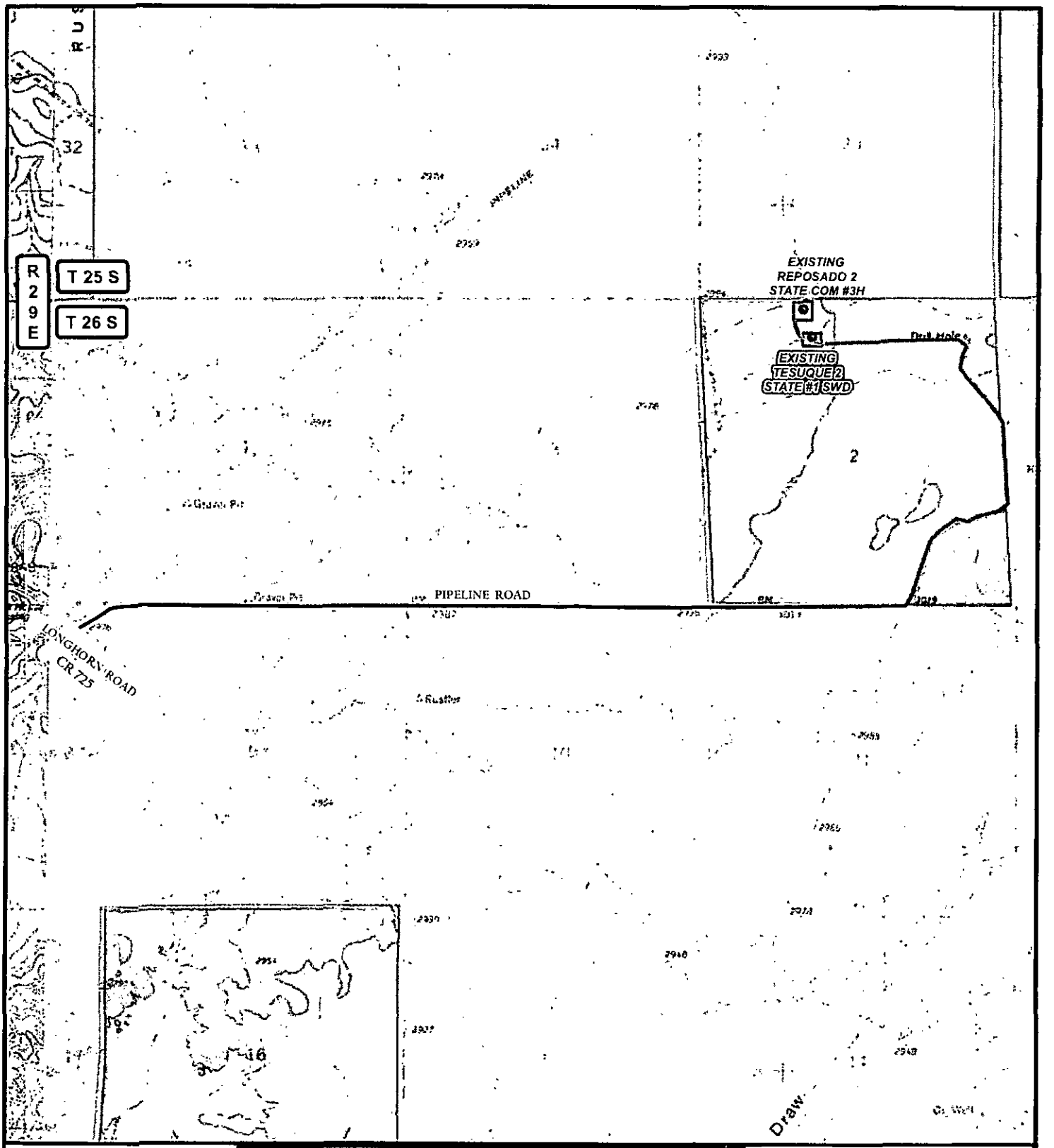

LEGEND

- WELL
- WELLPAD
- EXISTING ROAD
- PRIVATE
- STATE OF NM
- US BLM

REPOSADO FEDERAL #3H

SEC: 2 TWP:26 S. RGE:29 E. ELEVATION:3000.0'

STATE: NEW MEXICO COUNTY: EDDY 191' FNL & 1841' FWL

W.O. # 15-618 LEASE: REPOSADO FED SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.15 0.3 0.6 Miles 1 IN = 2,250 FT

LOCATION MAP LANDSTATUS 05/18/2015 A.F

N

CONCHO

COG PRODUCTION, LLC

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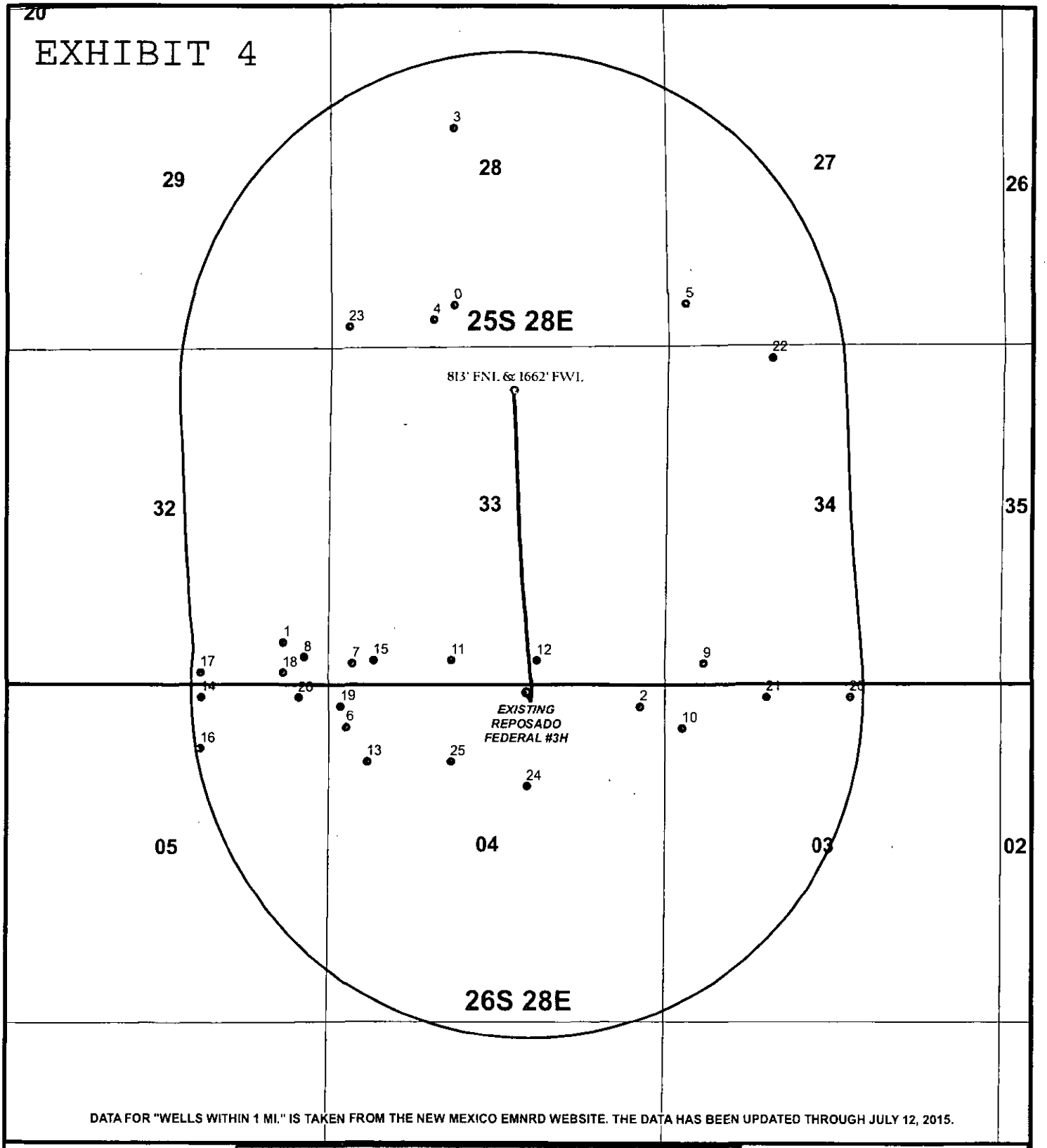
EXHIBIT 4



DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH JULY 12, 2015.

LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER

REPOSADO FEDERAL #3H AS DRILLED

SEC:35 TWP:26 S. RGE:28 E. ELEVATION:3000.0'

STATE: NEW MEXICO COUNTY: EDDY 191' FNL & 1841' FWL

W.O. # 15-889 LEASE: REPOSADO FED SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.125 0.25 0.5 Miles 1 IN = 2,000 FT

1 MILE MAP LAT 1 07/13/2015 A.F

CONCHO

COG OPERATING, LLC

N

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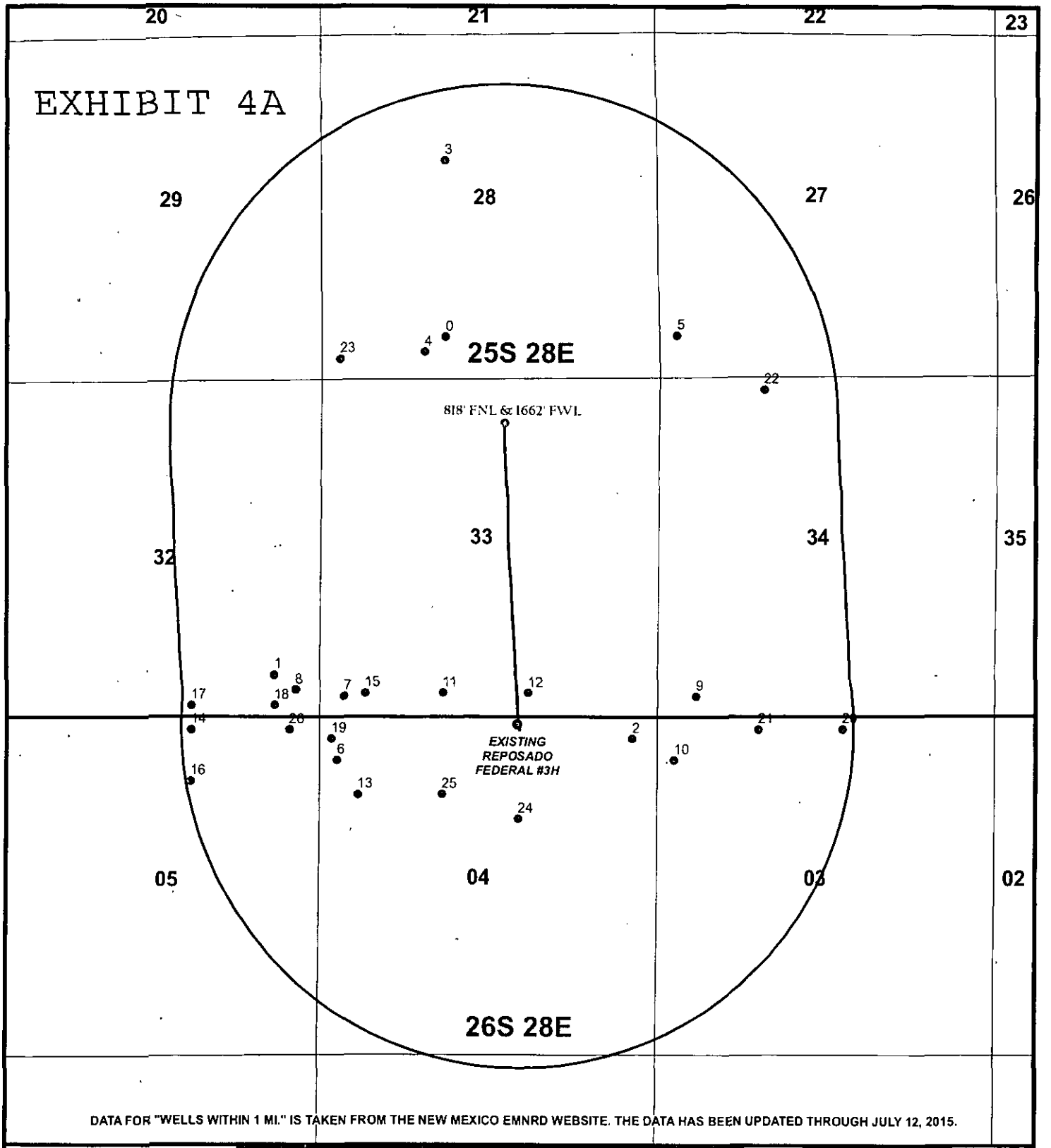
REPOSADO FEDERAL #3H LAT 1 MILE BUFFER

FID	Shape *	OPERATOR	WELL_NAME	LATITUDE	LONGITUD	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	TVD_DEPTH	COMPL_STAT
0	Point	ALDRIDGE & STROUD	SIGNAL ST 002	32.09515	-104.0942	3E+09	28	25.0S	28E	660	S	1980	W	0	Plugged
1	Point	ALDRIDGE & STROUD	SIGNAL ST 004	32.08074	-104.103	3E+09	32	25.0S	28E	660	S	660	E	0	Plugged
2	Point	VANDERLAAN T	HUMBLE STATE 001	32.078	-104.0847	3E+09	4	26.0S	28E	330	N	330	E	0	Plugged
3	Point	COG OPERATING LLC	MYOX 28 STATE COM 001	32.10272	-104.0943	3E+09	28	25.0S	28E	1980	N	1980	W	14410	Active
4	Point	COG OPERATING LLC	MYOX 28 STATE COM 006H	32.09452	-104.0953	3E+09	28	25.0S	28E	430	S	1650	W	10190	New (Not drilled or compl)
5	Point	YATES PETROLEUM CORPORATION	BONBON BNN STATE COM 001H	32.09523	-104.0825	3E+09	27	25.0S	28E	660	S	330	W	9	New (Not drilled or compl)
6	Point	COG OPERATING LLC	SRO STATE COM 001H	32.07711	-104.0998	3E+09	4	26.0S	28E	660	N	330	W	11450	New (Not drilled or compl)
7	Point	COG OPERATING LLC	SRO STATE COM 009H	32.07983	-104.0994	3E+09	33	25.0S	28E	330	S	430	W	6732	New (Not drilled or compl)
8	Point	COG OPERATING LLC	SRO STATE COM 002H	32.08011	-104.1019	3E+09	32	25.0S	28E	430	S	330	E	10961	New (Not drilled or compl)
9	Point	COG OPERATING LLC	SRO STATE COM 011H	32.07982	-104.0815	3E+09	34	25.0S	28E	330	S	660	W	8073	New (Not drilled or compl)
10	Point	COG OPERATING LLC	SRO STATE COM 010H	32.0771	-104.0826	3E+09	3	26.0S	28E	660	N	330	W	8077	New (Not drilled or compl)
11	Point	COG OPERATING LLC	SRO STATE COM 036H	32.07996	-104.0944	3E+09	33	25.0S	28E	380	S	1980	W	0	New (Not drilled or compl)
12	Point	COG OPERATING LLC	SRO STATE COM 037H	32.07996	-104.0901	3E+09	33	25.0S	28E	380	S	1980	E	0	New (Not drilled or compl)
13	Point	COG OPERATING LLC	SRO STATE COM 033H	32.07562	-104.0987	3E+09	4	26.0S	28E	1200	N	660	W	0	Active
14	Point	COG OPERATING LLC	MYOX 5 STATE 002H	32.07841	-104.1073	3E+09	5	26.0S	28E	190	N	1980	E	0	New (Not drilled or compl)
15	Point	COG OPERATING LLC	SRO STATE COM 035H	32.07997	-104.0984	3E+09	33	25.0S	28E	380	S	760	W	0	New (Not drilled or compl)
16	Point	COG OPERATING LLC	APPLE 5 STATE SWD 001	32.07621	-104.1073	3E+09	5	26.0S	28E	990	N	1980	E	9	New (Not drilled or compl)
17	Point	COG OPERATING LLC	MYOX 32 STATE 001H	32.07945	-104.1073	3E+09	32	25.0S	28E	190	S	1980	E	8029	New (Not drilled or compl)
18	Point	COG OPERATING LLC	SRO STATE COM 012H	32.07945	-104.103	3E+09	32	25.0S	28E	190	S	660	E	8045	New (Not drilled or compl)
19	Point	COG OPERATING LLC	SRO STATE COM 019H	32.07802	-104.1001	3E+09	4	26.0S	28E	330	N	240	W	0	New (Not drilled or compl)
20	Point	COG OPERATING LLC	SRO STATE COM 041H	32.07841	-104.074	3E+09	3	26.0S	28E	190	N	2310	E	0	New (Not drilled or compl)
21	Point	COG OPERATING LLC	SRO STATE COM 029H	32.0784	-104.0783	3E+09	3	26.0S	28E	190	N	1650	W	0	New (Not drilled or compl)
22	Point	COG OPERATING LLC	SRO STATE COM 039H	32.09292	-104.078	3E+09	34	25.0S	28E	190	N	1700	W	0	New (Not drilled or compl)
23	Point	COG OPERATING LLC	MYOX 28 STATE 002H	32.09422	-104.0996	3E+09	28	25.0S	28E	330	S	330	W	8037	New (Not drilled or compl)
24	Point	COG OPERATING LLC	SRO STATE COM 031H	32.07457	-104.0906	3E+09	4	26.0S	28E	1580	N	2120	E	8100	New (Not drilled or compl)
25	Point	COG OPERATING LLC	SRO STATE COM 032H	32.07562	-104.0944	3E+09	4	26.0S	28E	1200	N	1980	W	0	New (Not drilled or compl)
26	Point	COG OPERATING LLC	MYOX 5 STATE 001H	32.0784	-104.1022	3E+09	5	26.0S	28E	190	N	420	E	0	New (Not drilled or compl)



LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER

REPOSADO FEDERAL #3H AS DRILLED

SEC:35 TWP:26 S. RGE:28 E. ELEVATION:3000.0'

STATE: NEW MEXICO COUNTY: EDDY 191' FNL & 1841' FWL

W.O. # 15-889 LEASE: REPOSADO FED SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.125 0.25 0.5 Miles 1 IN = 2,000 FT

1 MILE MAP LAT 2 07/13/2015 A.F

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2314 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158 FAX: (575) 746-2158
c.harcrow@harcrowsurveying.com

REPOSADO FEDERAL #3H

FID	Shape *	OPERATOR	WELL_NAME	LATITUDE	LONGITUD	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	TVD_DEPTH	COMPL_STAT
0	Point	ALDRIDGE & STROUD	SIGNAL ST 002	32.09515	-104.0942	3E+09	28	25.0S	28E	660	S	1980	W	0	Plugged
1	Point	ALDRIDGE & STROUD	SIGNAL ST 004	32.08074	-104.103	3E+09	32	25.0S	28E	660	S	660	E	0	Plugged
2	Point	VANDERLAAN T	HUMBLE STATE 001	32.078	-104.0847	3E+09	4	26.0S	28E	330	N	330	E	0	Plugged
3	Point	COG OPERATING LLC	MYOX 28 STATE COM 001	32.10272	-104.0943	3E+09	28	25.0S	28E	1980	N	1980	W	14410	Active
4	Point	COG OPERATING LLC	MYOX 28 STATE COM 006H	32.09452	-104.0953	3E+09	28	25.0S	28E	430	S	1650	W	10190	New (Not drilled or compl)
5	Point	YATES PETROLEUM CORPORATION	BONBON BNN STATE COM 001H	32.09523	-104.0825	3E+09	27	25.0S	28E	660	S	330	W	9	New (Not drilled or compl)
6	Point	COG OPERATING LLC	SRO STATE COM 001H	32.07711	-104.0998	3E+09	4	26.0S	28E	660	N	330	W	11450	New (Not drilled or compl)
7	Point	COG OPERATING LLC	SRO STATE COM 009H	32.07983	-104.0994	3E+09	33	25.0S	28E	330	S	430	W	6732	New (Not drilled or compl)
8	Point	COG OPERATING LLC	SRO STATE COM 002H	32.08011	-104.1019	3E+09	32	25.0S	28E	430	S	330	E	10961	New (Not drilled or compl)
9	Point	COG OPERATING LLC	SRO STATE COM 011H	32.07982	-104.0815	3E+09	34	25.0S	28E	330	S	660	W	8073	New (Not drilled or compl)
10	Point	COG OPERATING LLC	SRO STATE COM 010H	32.0771	-104.0826	3E+09	3	26.0S	28E	660	N	330	W	8077	New (Not drilled or compl)
11	Point	COG OPERATING LLC	SRO STATE COM 036H	32.07996	-104.0944	3E+09	33	25.0S	28E	380	S	1980	W	0	New (Not drilled or compl)
12	Point	COG OPERATING LLC	SRO STATE COM 037H	32.07996	-104.0901	3E+09	33	25.0S	28E	380	S	1980	E	0	New (Not drilled or compl)
13	Point	COG OPERATING LLC	SRO STATE COM 033H	32.07562	-104.0987	3E+09	4	26.0S	28E	1200	N	660	W	0	Active
14	Point	COG OPERATING LLC	MYOX 5 STATE 002H	32.07841	-104.1073	3E+09	5	26.0S	28E	190	N	1980	E	0	New (Not drilled or compl)
15	Point	COG OPERATING LLC	SRO STATE COM 035H	32.07997	-104.0984	3E+09	33	25.0S	28E	380	S	760	W	0	New (Not drilled or compl)
16	Point	COG OPERATING LLC	APPLE 5 STATE SWD 001	32.07621	-104.1073	3E+09	5	26.0S	28E	990	N	1980	E	9	New (Not drilled or compl)
17	Point	COG OPERATING LLC	MYOX 32 STATE 001H	32.07945	-104.1073	3E+09	32	25.0S	28E	190	S	1980	E	8029	New (Not drilled or compl)
18	Point	COG OPERATING LLC	SRO STATE COM 012H	32.07945	-104.103	3E+09	32	25.0S	28E	190	S	660	E	8045	New (Not drilled or compl)
19	Point	COG OPERATING LLC	SRO STATE COM 019H	32.07802	-104.1001	3E+09	4	26.0S	28E	330	N	240	W	0	New (Not drilled or compl)
20	Point	COG OPERATING LLC	SRO STATE COM 041H	32.07841	-104.074	3E+09	3	26.0S	28E	190	N	2310	E	0	New (Not drilled or compl)
21	Point	COG OPERATING LLC	SRO STATE COM 029H	32.0784	-104.0783	3E+09	3	26.0S	28E	190	N	1650	W	0	New (Not drilled or compl)
22	Point	COG OPERATING LLC	SRO STATE COM 039H	32.09292	-104.078	3E+09	34	25.0S	28E	190	N	1700	W	0	New (Not drilled or compl)
23	Point	COG OPERATING LLC	MYOX 28 STATE 002H	32.09422	-104.0996	3E+09	28	25.0S	28E	330	S	330	W	8037	New (Not drilled or compl)
24	Point	COG OPERATING LLC	SRO STATE COM 031H	32.07457	-104.0906	3E+09	4	26.0S	28E	1580	N	2120	E	8100	New (Not drilled or compl)
25	Point	COG OPERATING LLC	SRO STATE COM 032H	32.07562	-104.0944	3E+09	4	26.0S	28E	1200	N	1980	W	0	New (Not drilled or compl)
26	Point	COG OPERATING LLC	MYOX 5 STATE 001H	32.0784	-104.1022	3E+09	5	26.0S	28E	190	N	420	E	0	New (Not drilled or compl)

COG Operating LLC – Reposado Federal #3H

1. Geologic Formations

TVD of target	8,822' Lat 1 7,645' Lat 2	Pilot hole depth	9600'
MD at TD:	13,400' Lat 1 12,279' Lat 2	Deepest expected fresh water:	360'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	525	Water	
Top of Salt	678	Salt	
Fletcher Anhydrite	3020	Salt	
Lamar	3085	Barren	
Delaware Group	3138	Barren	
Bone Spring	6895	Oil/Gas	
Lower Avalon Shale	7413	Target Zone	
1st Bone Spring	7811	Oil/Gas	
2nd Bone Spring	8158	Target Zone	
3rd Bone Spring	8941	Oil/Gas	
Wolfcamp	9330	Oil/Gas	

2. Casing Program

Hole Size	Casing Interval From	To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	670'	13 375"	48	H40	STC	2.46	1.33	10.01
12.25"	0	3088'	9.625"	36	J55	LTC	1.26	1.16	5.07
8.75"	0	8100'	7.0"	29#	P110	LTC	2.22	3.08	3.97
6.125"	7785'	~~13394'~~	4.5"	11.6#	P110	LTC	1.83	2.6	4.28
6.125"	~~7187'~~	12279'	4.5"	11.6#	P110	LTC	1.82	2.6	4.28
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
Intermediate and Production Burst based on Pore Pressure (9.1 ppge) at Lateral TVD minus Gas Gradient (0.1 psi/ft).
Intermediate casing will always be kept 1/3 full while running as additional collapse protection.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y

Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ Gal	Yld ft3/ Sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	415	13.5	1.75	9.2	14	Lead: 1Class C + 4% Gel + 2% CaCl2
	335	14.8	1.34	6.39	7	Tail: Class C + 2% CaCl2
Inter.	890	13.5	1.73	9.16	12	Lead: Class C + 4% Gel + 1% CaCl2
	190	14.8	1.34	6.36	5	Tail: Class C + 1% CaCl
Prod 1st Stage	200	12.7	1.98	10.38	23	1st stage Lead: Econocem HLC 65:35:6 + 5# Salt
	100	16.2	1.07	4.5	7	1st stage Tail: HNeat
Prod 2nd Stage	530	12.7	1.98	10.34	12	2nd stage Lead: Econocem HLC 65:35:6 + 5# Salt (DV @ ~5,530')
	100	14.8	1.33	6.34	8	2nd stage Tail: Class C Neat
Lat 1 Liner	530	14.4	1.24	5.54	27	50:50:2 Poz:H:Gel w/1% Salt, 0.4% GasStop, 0.3% CFR-3
Lat 2 Liner	200	15.0	2.60	11.37	18	Acid Soluble Cement
PH Plug	340	17.2	0.98	3.73	4.5	Class H + .75% CFR-3 + .15% HR-601

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results
Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	85%
Production	46'	30%
Liner – Lateral 1	7785'	25%
Liner – Lateral 2	7189'	9%

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
17-1/2"	20"	2M	Annular	x	2000 psi
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	2M	Annular	x	2000 psi
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram	x	3M
			Pipe Ram	x	
			Double Ram		
			Other *		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
N	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
N	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe (670')	FW Gel	8.6-8.8	28-34	N/C
Surf csg	Int shoe (3088')	Saturated Brine	10.0-10.2	28-34	N/C
Int shoe	Prod Shoe (8100')	Cut Brine	8.4-9.2	28-34	N/C
KOP Lat 1	Lat 1 TD (13394')	Cut Brine	8.6 – 9.4	28-34	N/C
KOP Lat 2	Lat 2 TD (12279')	Cut Brine	8.6 – 9.4	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
N	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain
N	Coring? If yes, explain

Additional logs planned		Interval
N	Resistivity	
N	Density	
N	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4306 psi at 9600' PH TD
Abnormal Temperature	NO

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times. Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? NO If yes, describe.
Will be pre-setting casing? NO If yes, describe.

Attachments

- Directional Surveys
- BOP & Choke Schematics
- C102 and supporting maps
- Rig plat
- H2S schematic
- H2S contingency plan

SURVEY CALCULATION PROGRAM

v1.00.02

OPERATOR:	COG	Supervisors:	
WELL:	Reposado 2 State Com	Joe Beal	
LOCATION:	Eddy Co.,NM	Derek Sawyer	
JOB NUMBER:	WT-12792	Andy Richards/David Martinez	
COMMENTS:		#REF!	

MAG DEC.(-/+)	7.59
GRID CORR.(-/+)	-0.20
TOTAL CORR.(-/+)	7.39

DATE: 10/09/15 TIME: 7:35 AM

TARGET DETAILS

TARGET N-S	Directional	0.00
TARGET E-W		0.00
TARGET RADIUS		0.00
TARGET DISPLACEMENT		0.00
TARGET CLOSURE		0.00
TARGET TVD	Horizontal	7683.37
DIP AZ		356.60
DIP DEG UP+/DN-		0.40
TARGET INCLINATION		90.40

MINIMUM CURVATURE CALCULATIONS(SPE-3362) PROPOSED DIRECTION 357.30

SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TARGET TRACKING TO CENTER ABOVE(+) BELOW(-)	TARGET TRACKING TO CENTER RIGHT(+) LEFT(-)	CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'
TIE-IN	7100	3.31	134.00	7097.10	-105.80	-103.70	46.60		587.01	41.67	155.80	113.69		
1	7233	4.30	348.40	7229.98	-103.65	-101.48	48.36	5.47	454.12	43.53	154.52	112.41	0.74	5.47
2	7264	9.00	344.00	7260.76	-100.14	-98.01	47.46	15.24	423.31	42.79	154.16	108.89	15.16	-1.64
3	7296	13.00	344.90	7292.17	-94.18	-92.13	45.83	12.51	391.86	41.44	153.55	102.90	12.50	0.54
4	7327	16.90	346.10	7322.11	-86.35	-84.38	43.84	12.62	361.86	39.82	152.55	95.09	12.58	1.00
5	7359	18.90	346.30	7352.56	-76.70	-74.83	41.49	6.25	331.35	37.92	150.99	85.57	6.25	0.19
6	7391	21.20	347.50	7382.62	-65.91	-64.15	39.01	7.30	301.21	35.95	148.69	75.08	7.19	4.59
7	7422	24.80	348.20	7411.15	-53.96	-52.31	36.47	11.65	272.60	33.97	145.11	63.76	11.61	3.15
8	7454	28.70	348.20	7439.72	-39.75	-38.21	33.53	12.19	243.93	31.69	138.74	50.83	12.19	0.00
9	7486	32.40	348.00	7467.28	-23.69	-22.30	30.17	11.57	216.26	29.09	126.46	37.52	-11.56	-1.14
10	7517	35.40	348.60	7493.00	-6.62	-5.37	26.67	9.74	190.41	26.39	101.38	27.20	9.68	3.86
11	7546	37.90	349.60	7516.27	10.52	11.63	23.40	8.86	167.03	23.92	63.57	26.13	8.62	7.35
12	7577	40.40	353.50	7540.31	29.98	30.98	20.54	11.32	142.85	21.98	33.55	37.17	8.06	28.38
13	7609	44.80	356.00	7563.86	51.61	52.55	18.58	14.73	119.15	21.04	19.48	55.73	13.75	18.89
14	7640	49.90	356.30	7584.86	74.40	75.29	17.05	16.47	97.99	20.58	12.76	77.19	16.45	2.54
15	7672	53.10	356.30	7604.78	99.44	100.27	15.44	10.00	77.90	20.14	8.75	101.46	10.00	0.00
16	7703	57.30	356.80	7622.46	124.88	125.68	13.91	13.61	60.04	19.81	6.32	126.45	13.55	4.73
17	7735	60.60	357.20	7638.97	152.29	153.05	12.48	10.37	43.34	19.67	4.66	153.56	10.31	3.83
18	7766	64.80	357.50	7653.18	179.84	180.56	11.20	13.58	28.93	19.70	3.55	180.91	13.55	3.07
19	7798	69.80	358.10	7665.53	209.35	210.05	10.07	15.72	16.38	19.96	2.75	210.30	15.62	6.18
20	7830	75.40	357.70	7675.09	239.87	240.56	8.95	17.54	6.60	20.28	2.13	240.72	17.50	-4.26
21	7861	82.40	356.50	7681.06	270.27	270.92	7.41	22.90	0.43	20.17	1.57	271.02	22.58	-13.57
22	7956	93.60	357.50	7684.37	365.06	365.58	2.45	11.84	-3.54	19.67	0.38	365.59	11.79	3.76
23	8019	93.50	357.00	7680.47	427.94	428.38	-0.56	0.81	-0.08	19.62	359.92	428.39	-0.16	-2.83
24	8051	91.60	357.40	7679.04	459.90	460.31	-2.12	6.07	1.12	19.56	359.74	460.32	-5.94	4.46
25	8114	90.00	357.00	7678.16	522.89	523.23	-5.20	2.62	1.56	19.45	359.43	523.26	-2.54	-2.27
26	8178	89.80	357.20	7678.28	586.89	587.15	-8.44	0.44	1.00	19.23	359.18	587.21	-0.31	1.12

SURVEY CALCULATION PROGRAM

v1.00.02

OPERATOR:	COG	Supervisors:	
WELL:	Reposado 2 State Com	Joe Beal	
LOCATION:	Eddy Co.,NM	Derek Sawyer	
JOB NUMBER:	WT-12792	Andy Richards/David Martinez	
COMMENTS:		#REF!	
		MAG DEC.(-/+)	7.59
		GRID CORR.(-/+)	-0.20
		TOTAL CORR.(-/+)	7.39

DATE: 10/09/15 TIME: 7:35 AM

TARGET DETAILS

TARGET N-S	Directional	0.00
TARGET E-W		0.00
TARGET RADIUS		0.00
TARGET DISPLACEMENT		0.00
TARGET CLOSURE		0.00
TARGET TVD	Horizontal	7683.37
DIP AZ		356.60
DIP DEG UP+/DN-		0.40
TARGET INCLINATION		90.40

MINIMUM CURVATURE CALCULATIONS(SPE-3362) PROPOSED DIRECTION 357.30

SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TARGET TRACKING TO CENTER ABOVE(+) BELOW(-)	TARGET TRACKING TO CENTER RIGHT(+) LEFT(-)	CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'
27	8239	89.50	357.40	7678.65	647.89	648.08	-11.31	0.59	0.20	19.23	359.00	648.18	-0.49	1.17
28	8302	89.90	357.20	7678.98	710.89	711.01	-14.28	0.71	-0.57	19.23	358.85	711.15	0.63	-1.13
29	8365	89.60	356.70	7679.25	773.89	773.92	-17.63	0.93	-1.28	18.84	358.69	774.12	-0.48	-2.84
30	8460	89.40	357.50	7680.08	868.88	868.79	-22.44	0.87	-2.78	18.51	358.52	869.08	-0.21	3.01
31	8555	90.50	357.90	7680.16	963.88	963.71	-26.25	1.23	-3.52	19.18	358.44	964.07	1.16	1.50
32	8650	90.20	357.00	7679.58	1058.88	1058.62	-30.48	1.00	-3.60	19.42	358.35	1059.06	-0.32	-3.38
33	8745	90.30	355.60	7679.17	1153.86	1153.42	-36.61	1.48	-3.85	17.77	358.18	1154.00	0.11	-5.27
34	8840	90.80	355.60	7678.26	1248.81	1248.13	-43.90	0.53	-3.60	14.95	357.99	1248.90	0.53	0.00
35	8934	90.70	356.30	7677.03	1342.78	1341.89	-50.53	0.75	-3.03	12.73	357.84	1342.84	-0.11	2.66
36	9028	90.50	356.30	7676.04	1436.76	1435.69	-56.60	0.21	-2.70	11.09	357.74	1436.80	-0.21	0.00
37	9122	90.40	356.70	7675.30	1530.75	1529.51	-62.34	0.44	-2.62	9.78	357.67	1530.78	-0.11	1.52
38	9216	90.80	356.70	7674.32	1624.74	1623.35	-67.75	0.43	-2.29	8.80	357.61	1624.76	0.43	0.00
39	9310	91.40	356.50	7672.52	1718.71	1717.16	-73.32	0.67	-1.14	7.65	357.55	1718.73	0.64	-0.76
40	9373	91.70	357.20	7670.81	1781.69	1780.04	-76.78	1.21	0.12	7.15	357.53	1781.70	0.48	3.97
41	9467	91.30	357.90	7668.35	1875.65	1873.93	-80.80	0.86	1.93	7.56	357.53	1875.67	-0.43	2.66
42	9562	90.60	356.70	7666.78	1970.64	1968.80	-85.27	1.46	2.84	7.56	357.52	1970.65	-0.74	-4.51
43	9656	89.80	357.40	7666.45	2064.63	2062.68	-90.11	1.13	2.51	7.15	357.50	2064.65	-0.85	2.66
44	9750	91.00	356.50	7665.79	2158.63	2156.54	-95.11	1.60	2.51	6.58	357.47	2158.64	1.28	-3.42
45	9845	91.40	355.30	7663.80	2253.58	2251.27	-101.90	1.33	3.84	4.26	357.41	2253.58	0.42	-4.51
46	9939	89.90	354.90	7662.74	2347.50	2344.92	-109.93	1.65	4.25	0.65	357.32	2347.50	-1.60	-1.52
47	10034	90.20	355.60	7662.65	2442.44	2439.59	-117.80	0.80	3.67	-2.75	357.24	2442.44	0.32	2.63
48	10128	91.70	355.30	7661.09	2536.37	2533.28	-125.25	1.63	4.57	-5.78	357.17	2536.38	1.60	-1.14
49	10222	90.10	355.30	7659.62	2630.30	2626.95	-132.96	1.70	5.39	-9.06	357.10	2630.31	-1.70	0.00
50	10316	91.40	356.50	7658.39	2724.26	2720.70	-139.68	1.88	5.96	-11.36	357.06	2724.28	1.38	4.56
51	10411	92.80	359.00	7654.91	2819.18	2815.55	-143.40	3.01	8.78	-10.61	357.08	2819.20	1.47	9.40
52	10474	91.60	359.50	7652.49	2882.10	2878.50	-144.23	2.06	10.76	-8.47	357.13	2882.11	-1.90	2.83
53	10537	90.60	359.70	7651.28	2945.04	2941.49	-144.67	1.62	11.53	-5.94	357.18	2945.04	-1.59	1.13

SURVEY CALCULATION PROGRAM

v1.00.02

OPERATOR:	COG	Supervisors:	
WELL:	Reposado 2 State Com	Joe Beal	
LOCATION:	Eddy Co.,NM	Derek Sawyer	
JOB NUMBER:	WT-12792	Andy Richards/David Martinez	
COMMENTS:		#REF!	

MAG DEC.(-/+)	7.59
GRID CORR.(-/+)	-0.20
TOTAL CORR.(-/+)	7.39

DATE: 10/09/15 TIME: 7:35 AM

TARGET DETAILS

TARGET N-S	Directional	0.00
TARGET E-W		0.00
TARGET RADIUS		0.00
TARGET DISPLACEMENT		0.00
TARGET CLOSURE		0.00
TARGET TVD	Horizontal	7683.37
DIP AZ		356.60
DIP DEG UP+/DN-		0.40
TARGET INCLINATION		90.40

MINIMUM CURVATURE CALCULATIONS(SPE-3362) PROPOSED DIRECTION 357.30

SVY NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TARGET TRACKING TO CENTER ABOVE(+) BELOW(-)	TARGET TRACKING TO CENTER RIGHT(+) LEFT(-)	CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ °/100'	WALK RATE/ °/100'
54	10600	89.10	359.50	7651.44	3007.98	3004.48	-145.11	2.40	10.93	-3.42	357.23	3007.98	-2.38	-1.13
55	10663	89.00	359.80	7652.49	3070.92	3067.47	-145.49	0.50	9.44	-0.83	357.28	3070.92	-0.16	1.70
56	10726	88.50	358.40	7653.86	3133.87	3130.45	-146.48	2.36	7.63	1.15	357.32	3133.87	-0.79	-7.94
57	10820	89.20	359.10	7655.75	3227.82	3224.41	-148.53	1.05	5.09	3.52	357.36	3227.82	0.74	2.66
58	10914	87.90	358.80	7658.13	3321.75	3318.36	-150.25	1.42	2.05	6.23	357.41	3321.76	-1.38	-1.14
59	10977	88.60	358.40	7660.05	3384.71	3381.31	-151.79	1.28	-0.31	7.66	357.43	3384.71	1.11	-2.27
60	11039	89.50	358.60	7661.08	3446.68	3443.28	-153.41	1.49	-1.77	8.96	357.45	3446.69	1.45	1.15
61	11101	89.60	357.40	7661.57	3508.68	3505.24	-155.58	1.94	-2.69	9.71	357.46	3508.69	0.16	-6.92
62	11196	90.50	357.20	7661.48	3603.67	3600.13	-160.05	0.97	-3.27	9.71	357.45	3603.69	0.95	-0.75
63	11290	88.30	356.70	7662.47	3697.66	3693.99	-165.05	2.40	-4.91	9.14	357.44	3697.67	-2.34	-1.90
64	11353	88.30	356.10	7664.34	3760.63	3756.83	-169.01	0.95	-7.22	8.15	357.42	3760.63	0.00	-3.40
65	11415	89.10	356.00	7665.74	3822.59	3818.67	-173.28	1.30	-9.06	6.80	357.40	3822.60	1.29	-0.58
66	11478	90.60	357.00	7665.91	3885.59	3881.55	-177.12	2.86	-9.66	5.92	357.39	3885.59	2.38	5.67
67	11540	91.20	357.00	7664.93	3947.58	3943.46	-180.37	0.97	-9.12	5.59	357.38	3947.58	0.97	0.00
68	11634	91.40	357.40	7662.80	4041.55	4037.32	-184.96	0.48	-7.64	5.43	357.38	4041.56	0.21	1.52
69	11729	91.20	357.00	7660.65	4136.53	4132.18	-189.60	0.47	-6.15	5.26	357.37	4136.53	-0.21	-1.50
70	11823	92.50	357.20	7657.61	4230.48	4226.01	-194.35	1.40	-3.77	4.94	357.37	4230.48	1.38	0.76
71	11886	92.20	357.50	7655.03	4293.42	4288.89	-197.26	0.67	-1.63	4.99	357.37	4293.42	-0.48	1.70
72	11948	92.50	357.70	7652.49	4355.37	4350.78	-199.86	0.58	0.48	5.32	357.37	4355.37	0.48	1.15
73	12011	90.60	358.80	7650.78	4418.33	4413.73	-201.78	3.48	1.74	6.36	357.38	4418.34	-3.02	6.24
74	12105	90.30	0.00	7650.04	4512.27	4507.72	-202.76	1.32	1.83	9.80	357.42	4512.28	-0.32	-4.56
75	12227	92.40	0.00	7647.17	4634.09	4629.68	-202.76	1.72	3.85	15.55	357.49	4634.12	1.72	0.00
BIT	12279	92.40	0.00	7644.99	4685.99	4681.63	-202.76	0.00	5.67	18.00	357.52	4686.02	0.00	0.00

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 2 **Township:** 26S **Range:** 29E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 35 **Township:** 25S **Range:** 29E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01337	C		ED		2	1	30	25S	29E	591926	3552642*	180	30	150
C 01880	C		ED	3	3	2	06	25S	29E	592161	3558605*	85	40	45
C 02371	C		ED		2	3	15	25S	29E	596741	3555106*	200	60	140
C 02459	C		ED	4	4	1	02	25S	29E	598422	3558663*	150		
C 02518	C		ED		3	4	08	25S	29E	593895	3556300*	462		
C 02680	C		ED		2	3	15	25S	29E	596741	3555106*	200		
RA 07162 EXP2			ED	1	3	1	10	25S	29E	596214	3557222*	55	40	15

Average Depth to Water: **42 feet**

Minimum Depth: **30 feet**

Maximum Depth: **60 feet**

Record Count: 7

PLSS Search:

Township: 25S **Range:** 29E

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01354 X-3	C		ED	2	1	3	23	26S	29E	598323	3543837	170		
C 02038	C		ED	3	2	4	26	26S	29E	599204	3541992*	200		
C 03507 POD1	C		ED	1	3	3	05	26S	29E	593064	3548313	140	78	62
C 03508 POD1	C		ED	1	3	3	05	26S	29E	593063	3548361	140	75	65
C 03605 POD1	CUB		ED	4	2	3	27	26S	29E	596990	3541983	45	0	45

Average Depth to Water: **51 feet**

Minimum Depth: **0 feet**

Maximum Depth: **78 feet**

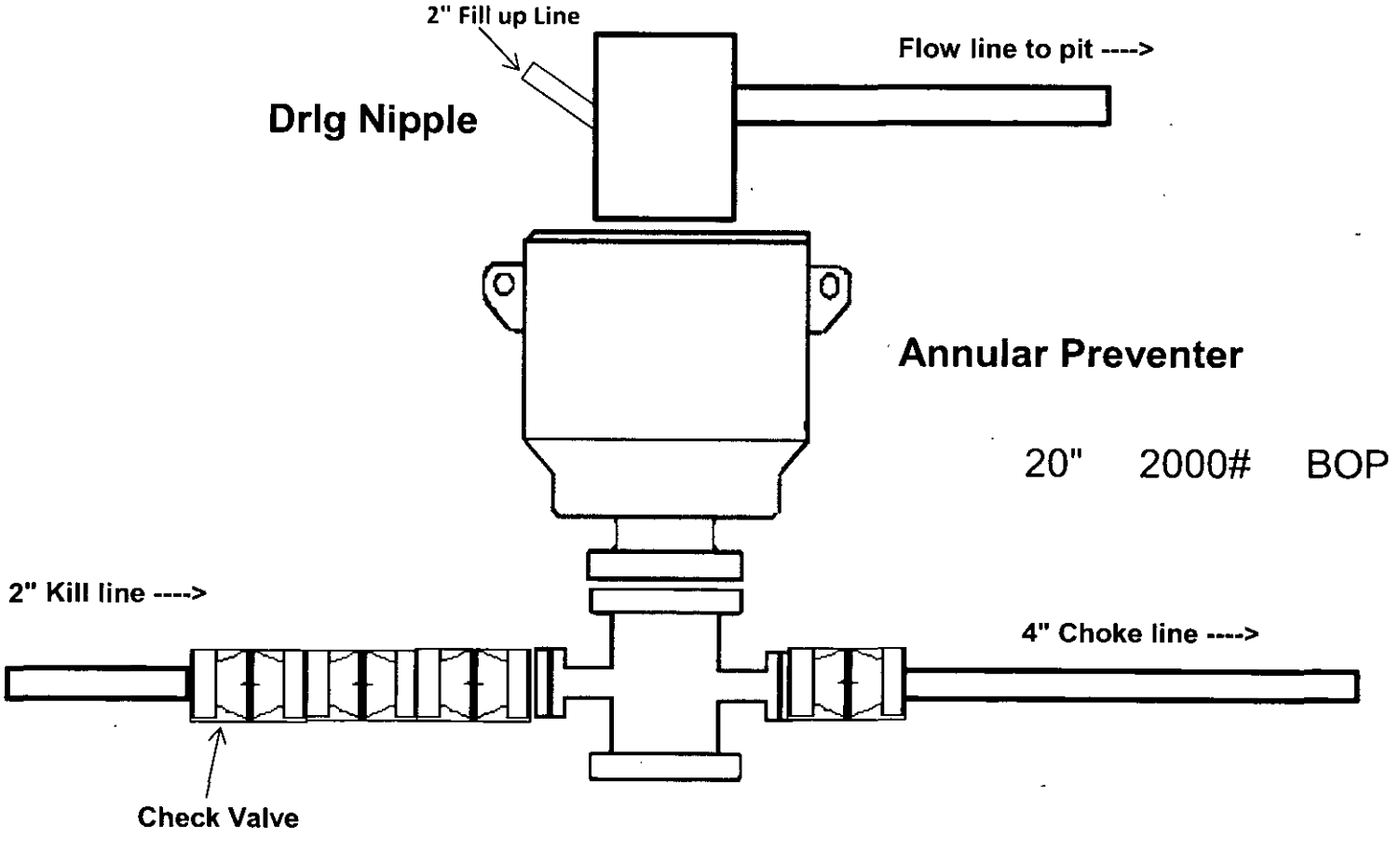
Record Count: 5

PLSS Search:

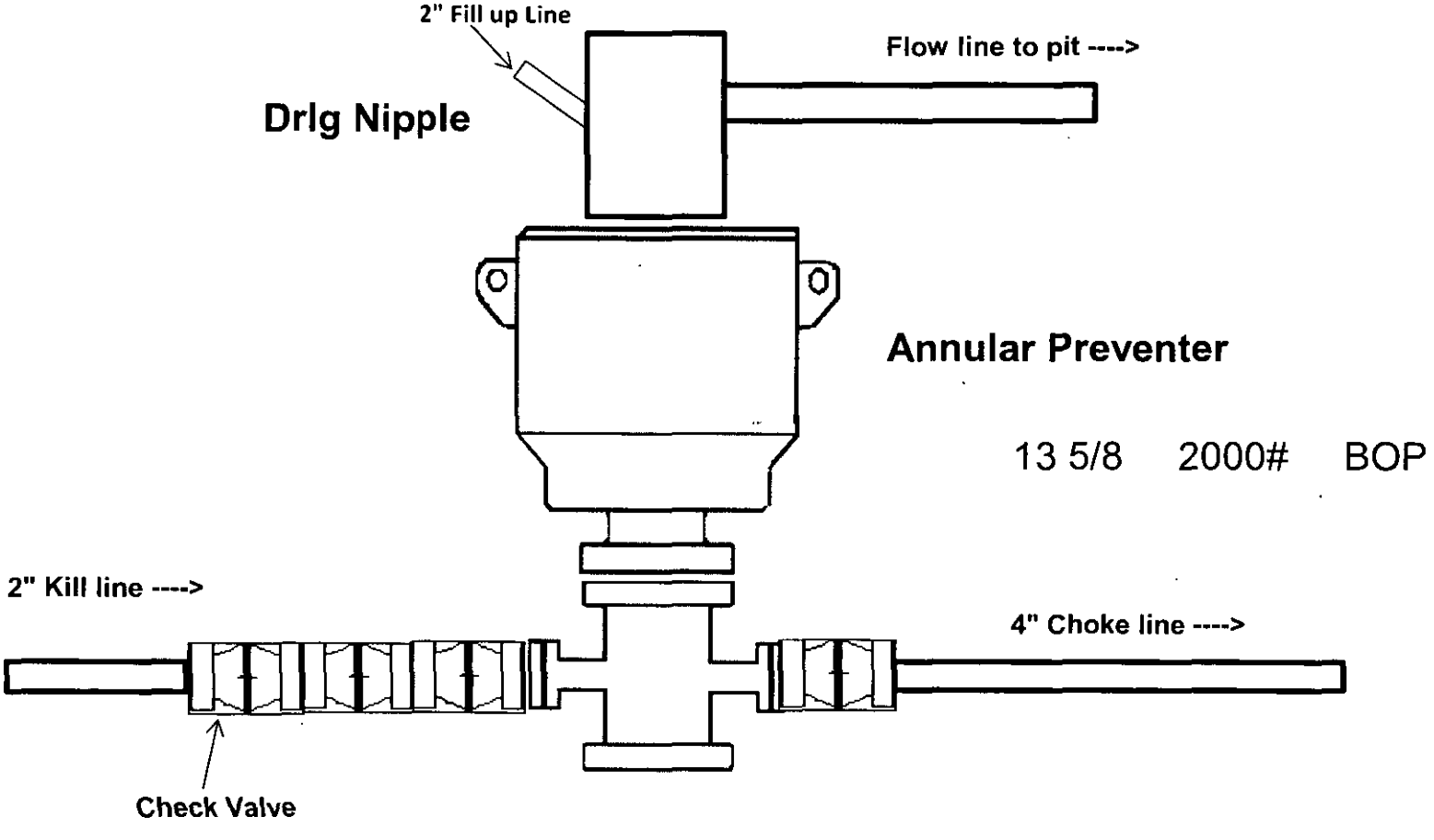
Township: 26S **Range:** 29E

***UTM location was derived from PLSS - see Help**

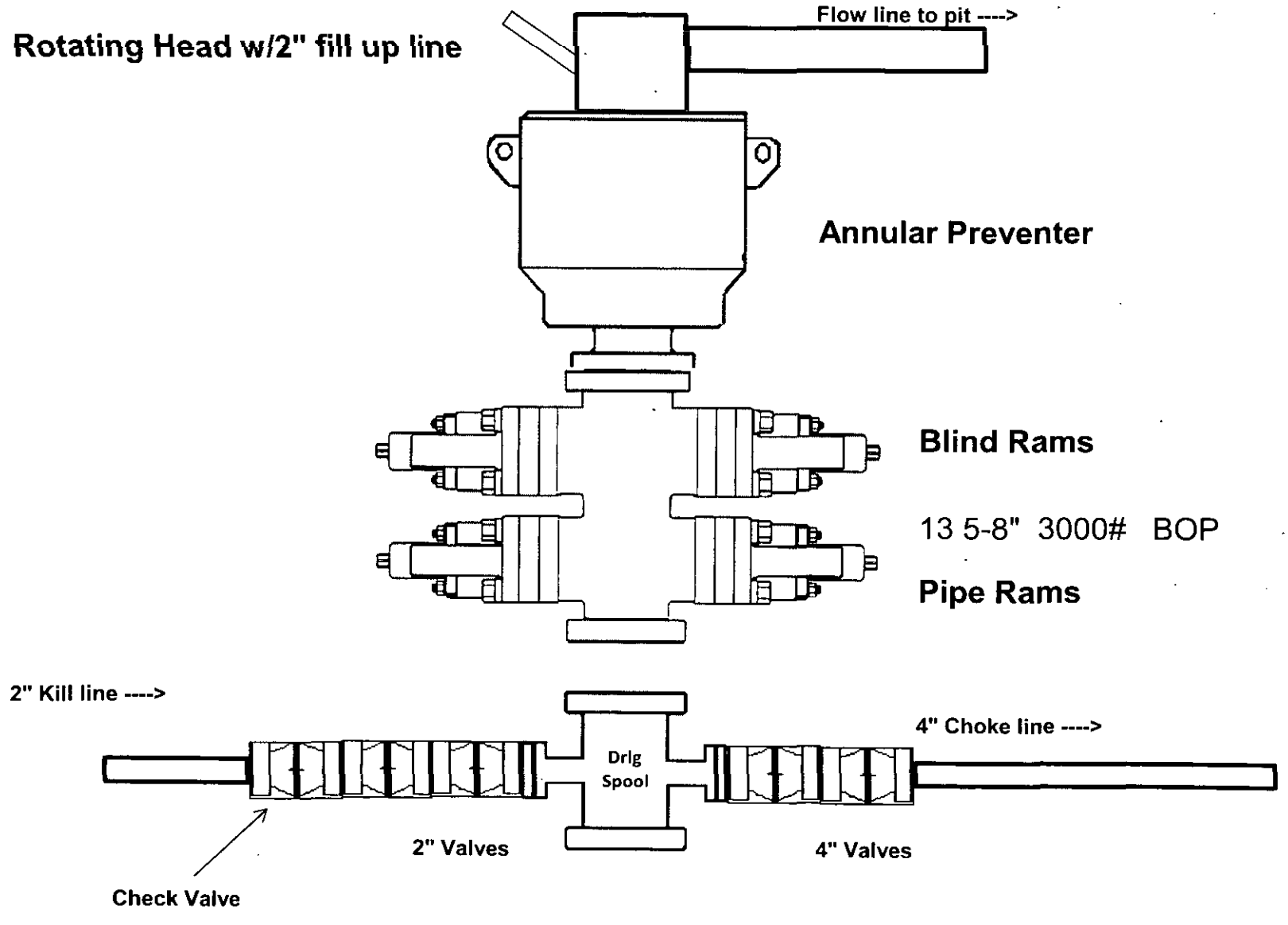
2,000 psi BOP Schematic



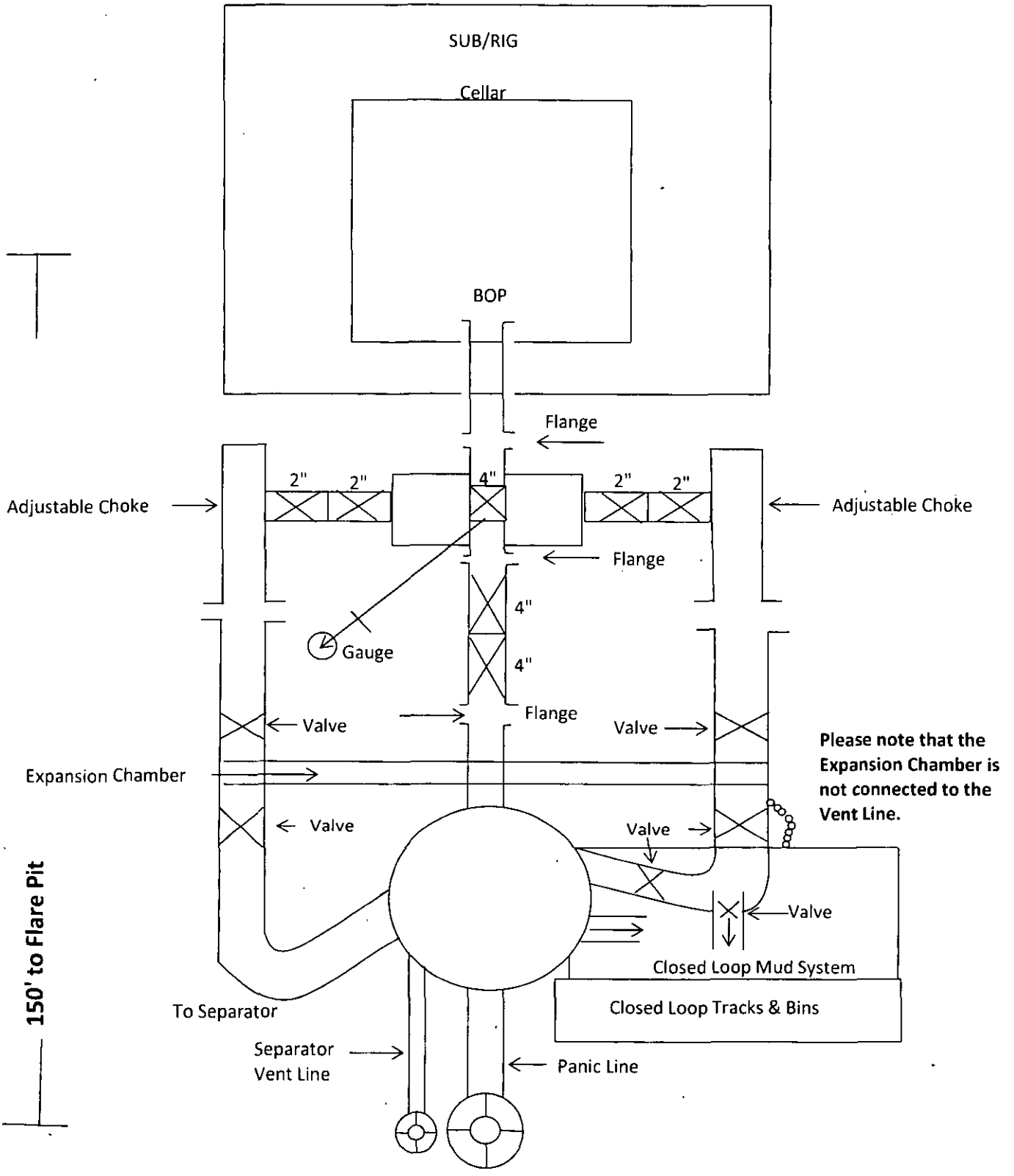
2,000 psi BOP Schematic



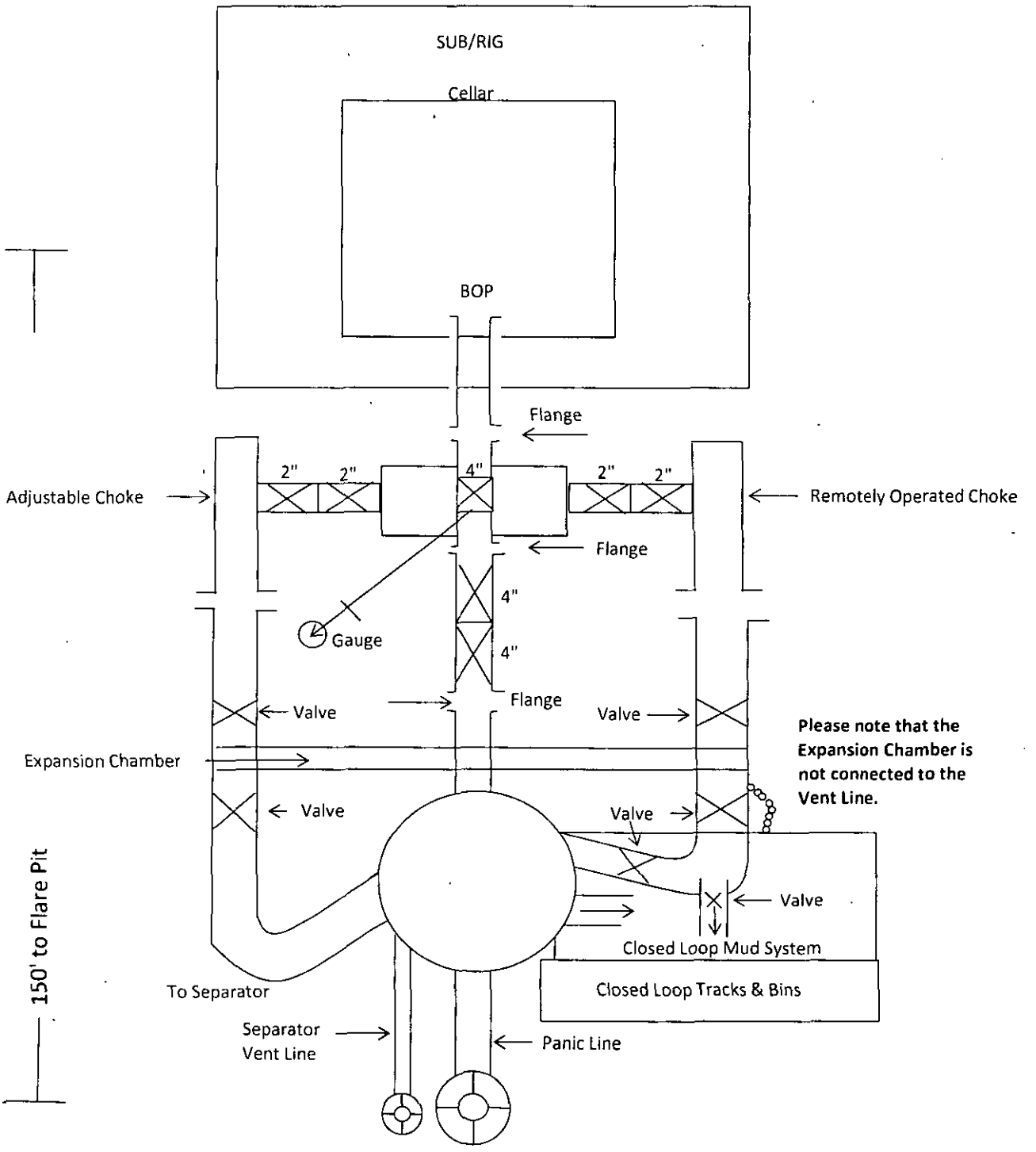
3,000 psi BOP Schematic



2M Choke Manifold Equipment



3M Choke Manifold Equipment

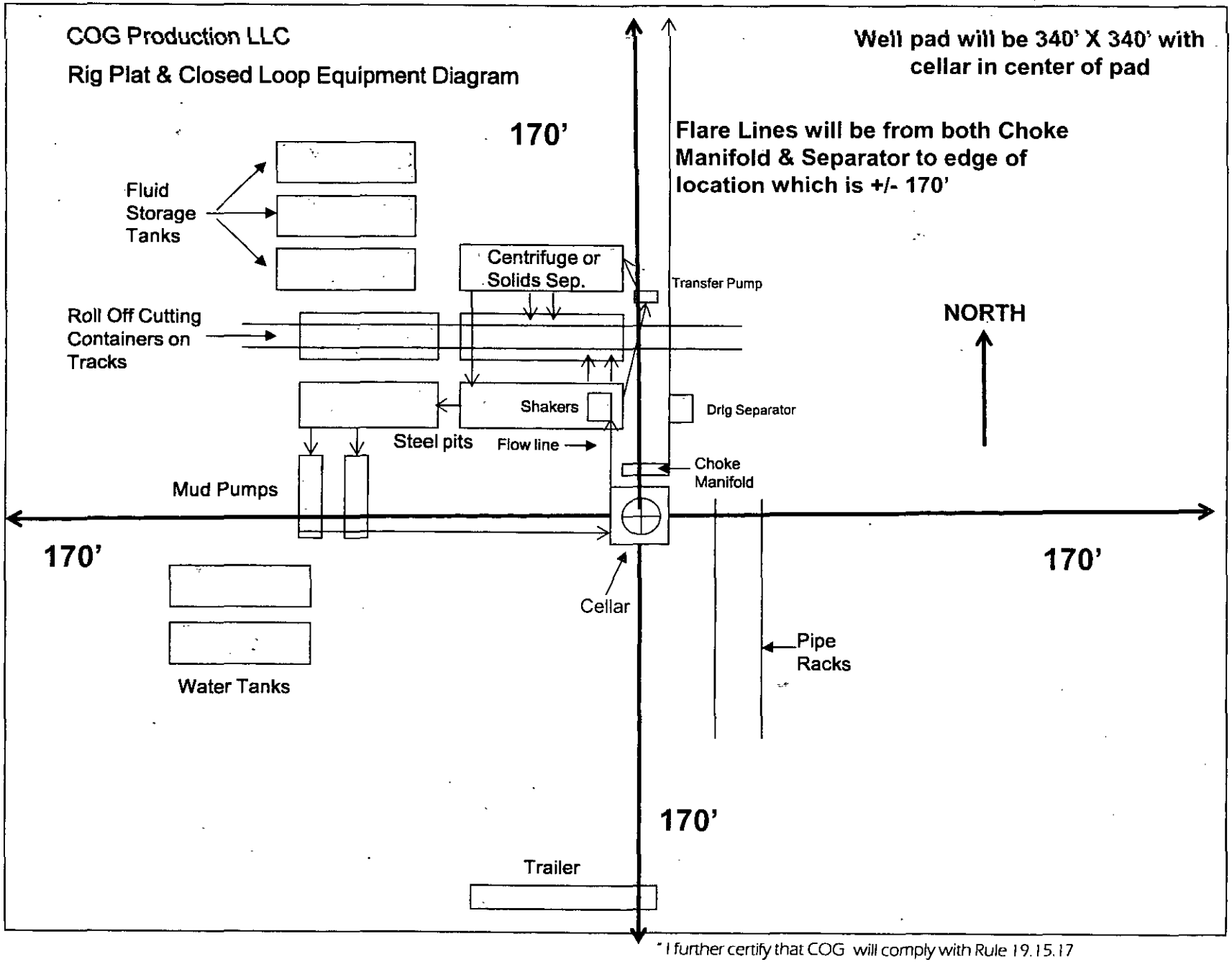


COG Production LLC

Rig Plat & Closed Loop Equipment Diagram

Well pad will be 340' X 340' with cellar in center of pad

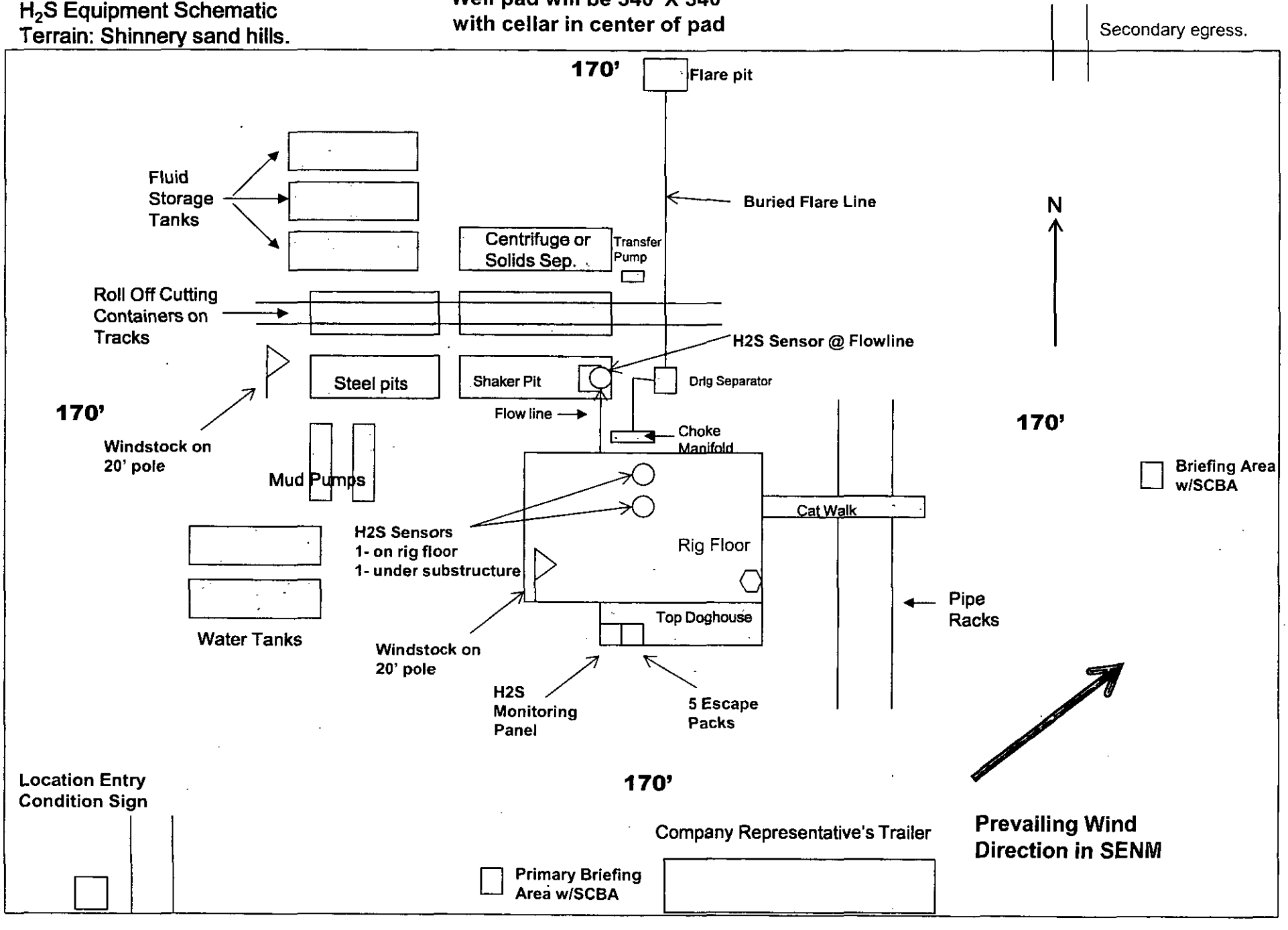
Flare Lines will be from both Choke Manifold & Separator to edge of location which is +/- 170'



"I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

COG Production LLC
H_2S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 340' X 340'
with cellar in center of pad



COG PRODUCTION LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

a. The hazards and characteristics of hydrogen sulfide (H_2S).
b. The proper use and maintenance of personal protective equipment and life support systems.
c. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
c. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut in and install H2S equipment.

a. Well Control Equipment:
   Flare line.
   Choke manifold with remotely operated choke.
   Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
   Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.

f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

g. Communication:
Company vehicles equipped with cellular telephone.

COG PRODUCTION LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH COG OPERATING LLC FOREMAN AT MAIN OFFICE***

COG PRODUCTION LLC

1-575-748-6940

EMERGENCY CALL LIST

	OFFICE	MOBILE
COG PRODUCTION LLC OFFICE	575-748-6940	
SHERYL BAKER	575-748-6940	432-934-1873
SETH WILD	432-683-7443	432-528-3633
WALTER ROYE	575-748-6940	432-934-1886

EMERGENCY RESPONSE NUMBERS

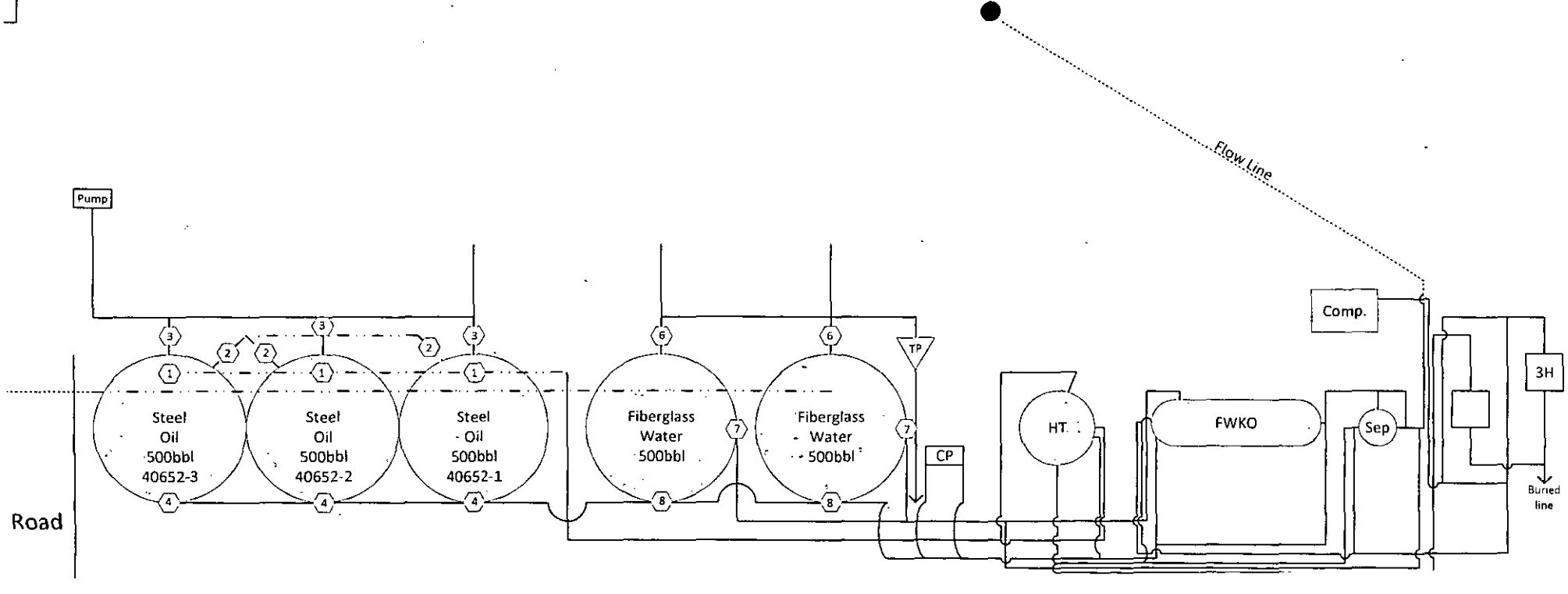
	OFFICE
STATE POLICE	575-748-9718
EDDY COUNTY SHERIFF	575-746-2701
EMERGENCY MEDICAL SERVICES (AMBULANCE)	911 or 575-746-2701
EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS)	575-887-9511
STATE EMERGENCY RESPONSE CENTER (SERC)	575-476-9620
CARLSBAD POLICE DEPARTMENT	575-885-2111
CARLSBAD FIRE DEPARTMENT	575-885-3125
NEW MEXICO OIL CONSERVATION DIVISION	575-748-1283
INDIAN FIRE & SAFETY	800-530-8693
HALLIBURTON SERVICES	800-844-8451

CONCHO

COG Production LLC.
2208 W Main St.
Artesia, NM 88210

Reposado Fed #3H
30-015-40652
NM-54290
2/26S/29E
Eddy County

Exhibit 3



Surface Use & Operating Plan

Reposado Federal #3H

- Surface Owner: State of NM
- New Road: 383.2'
- Flow Line: On well pad
- Facilities: Has been constructed on well pad – see Exhibit 3

- **Well Site Information**
  V Door: East
  Topsoil: N/A
  Interim Reclamation: N/A

Notes

Onsite: No onsite was needed at that time. State surface.

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

A. The well site survey and elevation plat for the well is attached with this application. It was staked by Harcrow Surveying, Artesia, NM.

B. All roads to the location are shown on the Location Verification Map Exhibit 2. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. The road route to the well site is depicted in Exhibit #2. The road shown in Exhibit #2 will be used to access the well.

C. Directions to location: See 600 x 600 plat

D. Based on current road maintenance performed on other roads serving existing wells, we anticipate maintaining the lease roads leading to the proposed well pad at least once a year on dry conditions and twice a year in wetter conditions.

2. Proposed Access Road:

The Exhibit 2 shows that 383.2 of new access road was required for this location. The road was constructed as follows:

The maximum width of the running surface is 15'. The road has been crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches are at 3:1 slope and 4 feet wide. Water was diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

A. The average grade was less than 1%.

B. No turnouts were planned.

C. No cattleguard, culvert, gates, low water crossings or fence cuts were necessary.

D. Surfacing material will consist of native caliche

3. Location of Existing Well:

The One-Mile Radius Map Exhibit 4 shows existing wells within a one-mile radius of the proposed wellbore.

4. Location of Existing and/or Proposed Facilities:

A. Facilities are as follows:

1. A tank battery and facilities were constructed as shown on Exhibit 3.

2. The tank battery and facilities including all flow lines and piping were installed according to API specifications.

3. 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 has been drilled with combination brine and fresh water mud system as outlined in the drilling program.

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

Obtaining caliche: One primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche was obtained from the actual well site. The procedure below has been approved by BLM personnel:

A. An approximate 160' X 160' area is used within the proposed well site to remove caliche.

B. When caliche was found, material was stock piled within the pad site to build the location and road.

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

D. Neither caliche, nor subsoil was stock piled outside of the well pad.

Methods of Handling Water Disposal:

A. The well was drilled utilizing a closed loop mud system. Drill cuttings were held in roll-off style mud boxes and taken to R360's disposal site.

B. Drilling fluids were contained in steel mud pits.

C. Water produced from the well during completion was 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 was collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals were produced by this operation.

E. Human waste and grey water will need to was 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. When the rig was moved out and the well was completed, all waste materials were cleaned up within 30 days.

7. Ancillary Facilities:

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

8. Well Site Layout:

A. The drill pad layout, with elevations staked by Harcrow Surveying, is shown in the Elevation Plat. Dimensions of the pad and pits are shown on the Rig Layout. V door direction is East. Because the pad is almost level no major cuts were required.

B. The Rig Layout Closed-Loop exhibit shows the 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.

9. 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 and re-seeded with an approved BLM seed mix and put back to its original state as much as possible. 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. When required by BLM, the well pad site will be restored to match pre-construction grades.

10. Surface Ownership:

A. The surface is owned by the State of New Mexico. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas. The surface owner was notified before staking this well. A SLO business lease is being applied for by COG Production LLC.

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

11. Other Information:

A. The area around the well site is grassland and the topsoil is gypsum loam. The vegetation is moderately sparse with native prairie grasses, some catclaw and various mid grasses. 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.

12. Bond Coverage:

Bond Coverage is Statewide Bonds # NMB000860 and NMB000845

13. Lessee's and Operator's Representative:

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

Sheryl Baker
Drilling Superintendent
COG Production LLC
2208 West Main Street
Artesia, NM 88210
Phone (575) 748-6940 (office)
(432) 934-1873 (cell)

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

OPERATOR CERTIFICATION

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 Production 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 26th day of August, 2015.

Signed: Melanie J Wilson

Printed Name: Melanie J. Wilson
Position: Regulatory Coordinator
Address: 2208 W. Main Street, Artesia, NM 88210
Telephone: (575) 748-6940
Field Representative (if not above signatory): Rand French
E-mail: mwilson@concho.com

DEPARTMENT OF THE INTERIOR
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Run Date: 07/13/2015

01 02-25-1920;041STAT0437;30USC181ETSEQ | **Total Acres** 480.000 | **Serial Number** NMNM-- - 054290

Case Type 311211: O&G LSE SIMO PUBLIC LAND
Commodity 459: OIL & GAS
Case Disposition: AUTHORIZED

Serial Number: NMNM-- - 054290

Name & Address			Int Rel	% Interest
CHEVRON MIDCONTINENT LP	1400 SMITH ST	HOUSTON TX 770027327	OPERATING RIGHTS	0.000000000
COGGIN BILL E	PO BOX 11390	MIDLAND TX 79702	OPERATING RIGHTS	0.000000000
DINGMAN OIL & GAS HOLDINGS	1 LIBERTY LN	HAMPTON NH 03842	OPERATING RIGHTS	0.000000000
EXXONMOBIL OIL CORP	PO BOX 4358	HOUSTON TX 772104358	LESSEE	100.000000000
HOLTON CORP	3000 1 SHELL PLZ	HOUSTON TX 77002	OPERATING RIGHTS	0.000000000
I P PETROLEUM CO INC	PO BOX 4258	HOUSTON TX 77210	OPERATING RIGHTS	0.000000000
MASTERSON RICHARD E	PO BOX 11390	MIDLAND TX 79702	OPERATING RIGHTS	0.000000000
SOUTHWEST DEV DRLG	PO BOX 11390	MIDLAND TX 797028390	OPERATING RIGHTS	0.000000000
SOUTHWEST ROYALTIES INC	#6 DESTA DR #2100	MIDLAND TX 79705	OPERATING RIGHTS	0.000000000
SW DEV DRLG FUND 92A	PO BOX 11390	MIDLAND TX 797028390	OPERATING RIGHTS	0.000000000
SW ESPERO INC	PO BOX 11390	MIDLAND TX 79702	OPERATING RIGHTS	0.000000000
TATE JON P	PO BOX 11390	MIDLAND TX 79702	OPERATING RIGHTS	0.000000000
WOMMACK H H III	PO BOX 11390	MIDLAND TX 79702	OPERATING RIGHTS	0.000000000

Serial Number: NMNM-- - 054290

Mer Twp Rng Sec	STyp	SNr Suff	Subdivision	District/Field Office	County	Mgmt Agency
23 0250S 0290E 035	ALIQ		E2,E2W2;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT

Relinquished/Withdrawn Lands — **Serial Number: NMNM-- - 054290**

23 0250S 0290E 718	FF	LOTS 3,4,E2SW,ASGN;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT
23 0250S 0290E 719	FF	LOTS 3,4,NE,E2SW,ASGN;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT
23 0250S 0290E 721	FF	NW,ASGN;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT
23 0250S 0290E 728	FF	N2,SW,ASGN;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 054290

Act Date	Code	Action	Action Remark	Pending Office
08/17/1982	387	CASE ESTABLISHED	SPAR195;	
08/18/1982	888	DRAWING HELD		
01/27/1983	237	LEASE ISSUED		
02/01/1983	496	FUND CODE	05;145003	
02/01/1983	530	RLTY RATE - 12 1/2%		
02/01/1983	868	EFFECTIVE DATE		
03/07/1983	140	ASGN FILED	S SMITH/S SMITH	
05/02/1983	139	ASGN APPROVED	EFF 04/01/83;	
12/11/1984	111	RENTAL RECEIVED	$0;85-86	
12/17/1985	111	RENTAL RECEIVED	$0;86-87	
01/21/1986	140	ASGN FILED	S SMITH/EXXON CORP	
02/21/1986	139	ASGN APPROVED	EFF 02/01/86;	
03/11/1986	963	CASE MICROFILMED/SCANNED	CNUM 555,729 EPR	
01/20/1987	111	RENTAL RECEIVED	$1599.00;1YR/87-88	
01/25/1988	111	RENTAL RECEIVED	$1599.00;1YR/88-89	
02/09/1988	974	AUTOMATED RECORD VERIF	EB/EB	
01/17/1989	111	RENTAL RECEIVED	$1599.00;1YR/89-90	
01/18/1990	111	RENTAL RECEIVED	$1599.00;21/133218	
01/15/1991	111	RENTAL RECEIVED	$1599.00;21/149661	
02/22/1991	899	TRF OF ORR FILED		
11/07/1991	909	BOND ACCEPTED	EFF 10/28/91;NM1936	

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01/21/1992	111	RENTAL RECEIVED	$1599.00;21/163898
12/01/1992	677	SUS OPS OR PROD/PMT REQD	APD PROCESSING DELAY
12/29/1992	575	APD FILED	SO WEST ROYALTIES; BM
12/31/1992	673	SUS OPS/PROD APLN FILED	
01/15/1993	111	RENTAL RECEIVED	$1599.00;21/178124
02/01/1993	678	SUSP LIFTED	APD PROCESSING DELAY
02/02/1993	576	APD APPROVED	BRUSHY DRAW 35 #1; BM
03/25/1993	650	HELD BY PROD - ACTUAL	
04/26/1993	899	TRF OF ORR FILED	(1)
04/26/1993	899	TRF OF ORR FILED	(2)
05/05/1993	974	AUTOMATED RECORD VERIF	AR/MV
06/01/1993	575	APD FILED	SOUTHWEST ROYALTY
06/07/1993	932	TRF OPER RGTS FILED	EXXON/SOUTHWEST RLTY
06/09/1993	932	TRF OPER RGTS FILED	SW RLTY/SW DEV DRLG
06/25/1993	576	APD APPROVED	#3 N BRUSHY DRAW A 35
07/06/1993	576	APD APPROVED	#5 N BRUSHY DRAW A 35
07/13/1993	140	ASGN FILED	EXXON/M CHENEY
07/15/1993	932	TRF OPER RGTS FILED	SW ROYALTIES/IP PETRO
07/23/1993	899	TRF OF ORR FILED	
08/25/1993	575	APD FILED	SOUTHWEST ROYALTIES
09/22/1993	933	TRF OPER RGTS APPROVED	(1)EFF 07/01/93;
09/22/1993	933	TRF OPER RGTS APPROVED	(2)EFF 07/01/93;
09/22/1993	974	AUTOMATED RECORD VERIF	JLV/KRP
09/27/1993	932	TRF OPER RGTS FILED	EXXON/SW ROYALTIES
09/27/1993	974	AUTOMATED RECORD VERIF	AR/MV
09/28/1993	576	APD APPROVED	7 N BRUSHY DRAW A 35
10/12/1993	899	TRF OF ORR FILED	(1)
10/12/1993	899	TRF OF ORR FILED	(2)
10/22/1993	932	TRF OPER RGTS FILED	SW RLTY/COGGIN ETAL
12/01/1993	933	TRF OPER RGTS APPROVED	EFF 10/01/93;
12/01/1993	974	AUTOMATED RECORD VERIF	ST/KRP
12/14/1993	933	TRF OPER RGTS APPROVED	EFF 11/01/93;
12/14/1993	974	AUTOMATED RECORD VERIF	ANN
01/03/1994	575	APD FILED	SOUTHWEST ROYALTIES
01/21/1994	576	APD APPROVED	4 N BRUSHY DRAW A 35
02/10/1994	393	DEC ISSUED	SUSPENSION LIFTED
02/10/1994	974	AUTOMATED RECORD VERIF	ST/KRP
02/17/1994	576	APD APPROVED	6 N BRUSHY DRAW A 35
02/22/1994	576	APD APPROVED	8 N BRUSHY DRAW A 35
03/01/1994	139	ASGN APPROVED	EFF 08/01/93;
03/01/1994	570	CASE SEGREGATED BY ASGN	INTO NMNM92954;
03/01/1994	933	TRF OPER RGTS APPROVED	EFF 08/01/93;
03/01/1994	974	AUTOMATED RECORD VERIF	ST/KRP
05/17/1994	600	RECORDS NOTED	
05/18/1994	932	TRF OPER RGTS FILED	EXXON/SW ROYALTIES
08/24/1994	933	TRF OPER RGTS APPROVED	EFF 06/01/94;
08/24/1994	974	AUTOMATED RECORD VERIF	JDS
09/16/1994	932	TRF OPER RGTS FILED	EXXON/SW RLTY
09/23/1994	932	TRF OPER RGTS FILED	SW RLTY/COGGIN ET AL
01/18/1995	933	TRF OPER RGTS APPROVED	EFF 10/01/94;
01/18/1995	974	AUTOMATED RECORD VERIF	JLV
03/01/1995	933	TRF OPER RGTS APPROVED	EFF 10/01/94;
03/01/1995	974	AUTOMATED RECORD VERIF	LR
05/01/1995	899	TRF OF ORR FILED	
05/08/1995	932	TRF OPER RGTS FILED	(1)EXXON/SOUTHWEST

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05/08/1995	932	TRF OPER RGTS FILED	(2)EXXON/SOUTHWEST
05/08/1995	932	TRF OPER RGTS FILED	(3)EXXON/SOUTHWEST
07/21/1995	933	TRF OPER RGTS APPROVED	(1)EFF 06/01/95;
07/21/1995	933	TRF OPER RGTS APPROVED	(2)EFF 06/01/95;
07/21/1995	933	TRF OPER RGTS APPROVED	(3)EFF 06/01/95;
07/21/1995	974	AUTOMATED RECORD VERIF	JLV
08/04/1995	932	TRF OPER RGTS FILED	DINGMAN/SW ROYALTIES
08/08/1995	932	TRF OPER RGTS FILED	MASTERSON/SW ROYALTIE
08/08/1995	932	TRF OPER RGTS FILED	SW ROYALTIES/COGGIN
08/24/1995	932	TRF OPER RGTS FILED	(1)SW RLTY/SW ESPERO
08/24/1995	932	TRF OPER RGTS FILED	(2)SW RLTY/SW ESPERO
08/24/1995	932	TRF OPER RGTS FILED	(3)SW RLTY/SW ESPERO
08/24/1995	932	TRF OPER RGTS FILED	(4)SW RLTY/SW ESPERO
08/24/1995	932	TRF OPER RGTS FILED	(5)SW RLTY/SW ESPERP
08/24/1995	932	TRF OPER RGTS FILED	(6)SW RLTY/SW ESPERO
08/29/1995	899	TRF OF ORR FILED	(1)
08/29/1995	899	TRF OF ORR FILED	(2)
09/27/1995	933	TRF OPER RGTS APPROVED	(1)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(2)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(3)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(4)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(5)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(6)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(7)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(8)EFF 09/01/95;
09/27/1995	933	TRF OPER RGTS APPROVED	(9)EFF 09/01/95;
09/27/1995	974	AUTOMATED RECORD VERIF	JLV
01/23/1998	899	TRF OF ORR FILED	
05/19/2000	940	NAME CHANGE RECOGNIZED	EXXON/EXXON MOBIL;
02/22/2001	932	TRF OPER RGTS FILED	IP PETRO/PURE PARTNER
03/16/2001	933	TRF OPER RGTS APPROVED	EFF 03/01/01;
03/16/2001	974	AUTOMATED RECORD VERIF	JLV
06/30/2003	932	TRF OPER RGTS FILED	PURE/SOUTHWEST ROYALT
07/17/2003	899	TRF OF ORR FILED	FARMER, EDDIE G & T;1
07/17/2003	899	TRF OF ORR FILED	SHELTON, LEE & BARB;1
07/17/2003	933	TRF OPER RGTS APPROVED	EFF 07/01/03;
07/17/2003	974	AUTOMATED RECORD VERIF	ANN
03/31/2006	940	NAME CHANGE RECOGNIZED	PURE/CHEVRON MIDCONT
05/20/2015	899	TRF OF ORR FILED	1
05/20/2015	899	TRF OF ORR FILED	2

Serial Number: NMNM-- - 054290

Line Nr	Remarks
0002	12/01/1992 - SUSPENSION OF OPERATIONS
0003	03/16/2001 - BONDED OPERATOR
0004	SOUTHWEST ROYALTIES INC. - NM1936 - S/W;
0005	TRANSFEREE BONDED
0006	SOUTHWEST ROYALTIES INC - NM1936 - S/W;

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**COG Production, LLC.**
LEASE NO.:	**NMNM-54290**
WELL NAME & NO.:	**Reposado Federal 3H**
SURFACE HOLE FOOTAGE:	**0191' FNL & 1841' FWL**
BOTTOM HOLE FOOTAGE	**0813' FNL & 1662' FWL Sec.35, T. 25 S., R 29 E.**
LOCATION:	**Section 02, T. 26 S., R 29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

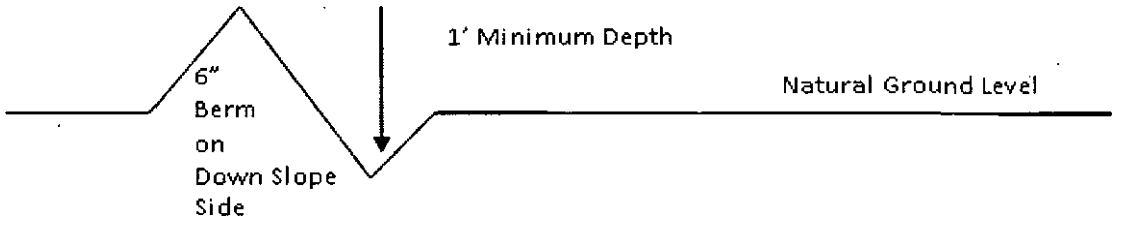
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguards that are in place and are utilized during lease operations.

Fence Requirement

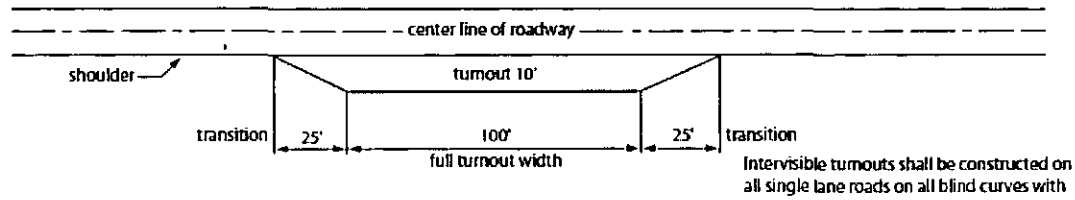
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

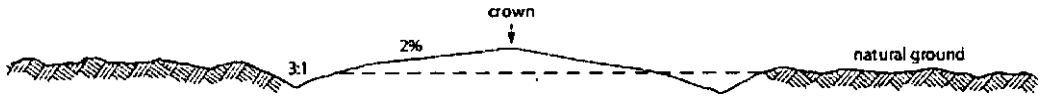
Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

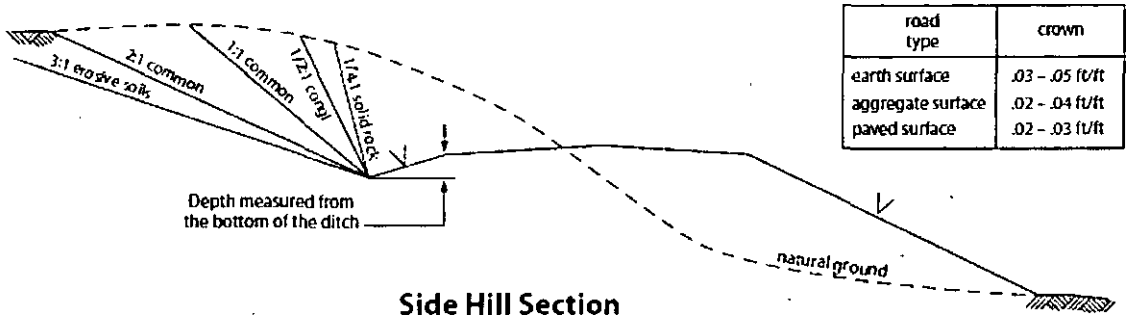


Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan

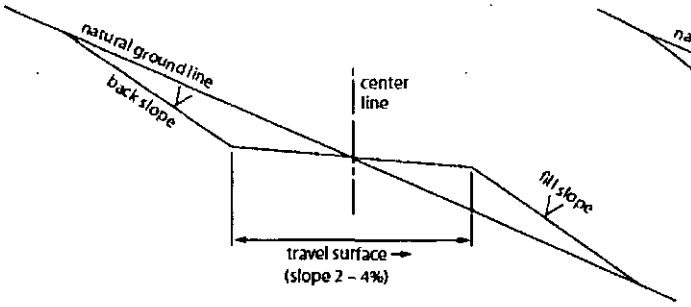


Level Ground Section

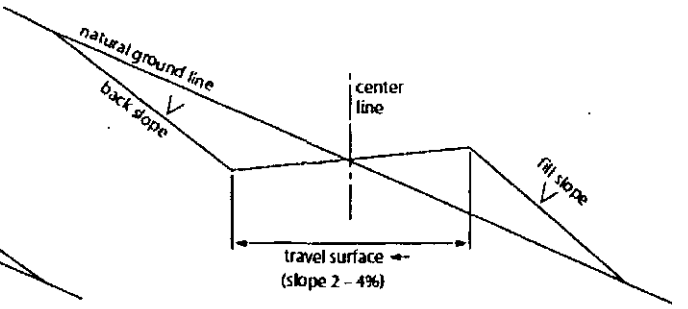


road type	crown
earth surface	.03 - .05 ft/ft
aggregate surface	.02 - .04 ft/ft
paved surface	.02 - .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. DRILLING – WELL HAS ALREADY BEEN DRILLED.

Operator to ensure they have followed all requirements

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. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, 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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) 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) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. 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. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Salado, Rustler, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **670** 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 **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

Centralizers required through the curve and a minimum of one every other joint.

3. The minimum required fill of cement behind the **7** inch production casing is:

Operator has proposed DV tool at depth of 5530', 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 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.

The pilot hole plugging procedure is approved as written. Note plug top on Subsequent Report sundry of drilling activities.

4. The minimum required fill of cement behind the **4-1/2** inch production Liner is:

☒ Cement as proposed by operator. Operator shall provide method of verification.

5. 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 53.

2. 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M)** 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**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    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.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by

drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:
Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed