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Sud

PMAM 1713256483

**NEW MEXICO OIL CONSERVATION DIVISION**

- Geological & Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: COG Operating LLC**OGRID Number:** 229137**Well Name:** Ronco Federal SWD #1**API:****Pool:** SWD; Cisco-Canyon**Pool Code:** 96186

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION
INDICATED BELOW**

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

NSL NSP (PROJECT AREA) NSP (PRORATION UNIT) SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

DHC CTC PLC PC OLS OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

WFX PMX SWD IPI EOR PPR

2) NOTIFICATION REQUIRED TO: Check those which apply.

- A. Offset operators or lease holders
- B. Royalty, overriding royalty owners, revenue owners
- C. Application requires published notice
- D. Notification and/or concurrent approval by SLO
- E. Notification and/or concurrent approval by BLM
- F. Surface owner
- G. For all of the above, proof of notification or publication is attached, and/or,
- H. No notice required

FOR OCD ONLY

- | | |
|--------------------------|------------------------------|
| <input type="checkbox"/> | Notice Complete |
| <input type="checkbox"/> | Application Content Complete |

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

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

Kanicia Castillo

Print or Type Name

Signature

Date

5/10/17

432.685.4332

Phone Number

kcastillo@concho.com

e-mail Address

COG Operating, LLC

Lease & Well

3001520417

Spud date 4-11-71

Completion date 4-24-71

Elevation - 3638

Burch Keely Unit 23

Sec 18 K T 17S R 30E, 1980 FSL & 1894 FWL

EDDY CO., NM

Calculated TOC @ 216'

12 1/4" hole

8 5/8" 20# @ 456, mt w/100 sx.

Calculated TOC @ 1,887'.

Casing cementing calculations

8 5/8" 20# 12.25" Surface hole

Cement volume. = 100 X 1.32 CF/SK = 132 cu. Ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99.0 CF

99 CF X ann. Vol. of 2.4229 FT/CF = 240'

456 - 240 =216' estimated (calculated) top of cement.

4.5" 9.5 # 7 7/8" hole

Cement volume = 350 X 1.32 CF/SK = 462 cu.ft. slurry.

462 - 30% slurry loss for shoe joint & hole loss =324 CF

324 CF X ann. Vol. of 4.3899 FT/CF =1422'

3309- 1422 = 1,887' estimated (calculated) top of cement.

2 3/8" tbg, SN @ 3255'

2452 - 3130', acidized w/7000 gal 20%, frac w/120,000# Sd..
6/28/1971

3233 - 3264', frac w/60,000 gw, 60,000# sd.
P 60 BO, 75 MCF, & 100 BW 5-3-71

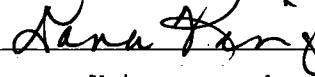
PBTD - 3304'

Cmt. w/350 sx C
4 1/2" 9.5# csg @ 3309'.

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No
- II. OPERATOR: COG Operating LLC
ADDRESS: One Concho Center, 600 W Illinois Ave, Midland, TX 79701
CONTACT PARTY: Dana King PHONE: 432-818-2267
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes No
If yes, give the Division order number authorizing the project:
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Dana King TITLE: Permitting Technician

SIGNATURE:  DATE: 5/10/2017

E-MAIL ADDRESS: dking@concho.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal:

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

III.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: COG Operating LLC

WELL NAME & NUMBER: Ronco Federal SWD #1

WELL LOCATION: 600' FNL & 1,650' FWL C 19 17S 30E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

See attached Schematic

Hole Size: 17 1/2" Casing Size: 13 .375"

Cemented with: 400 sx. or _____ ft³

Top of Cement: Surface Method Determined: Circulate

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 .625"

Cemented with: 450 sx. or _____ ft³

Top of Cement: Surface Method Determined: Circulate

Production Casing

Hole Size: 8 3/4" Casing Size: 7"

Cemented with: 1200 sx. or _____ ft³

Top of Cement: Surface Method Determined: Circulate

Total Depth: 9 ,650

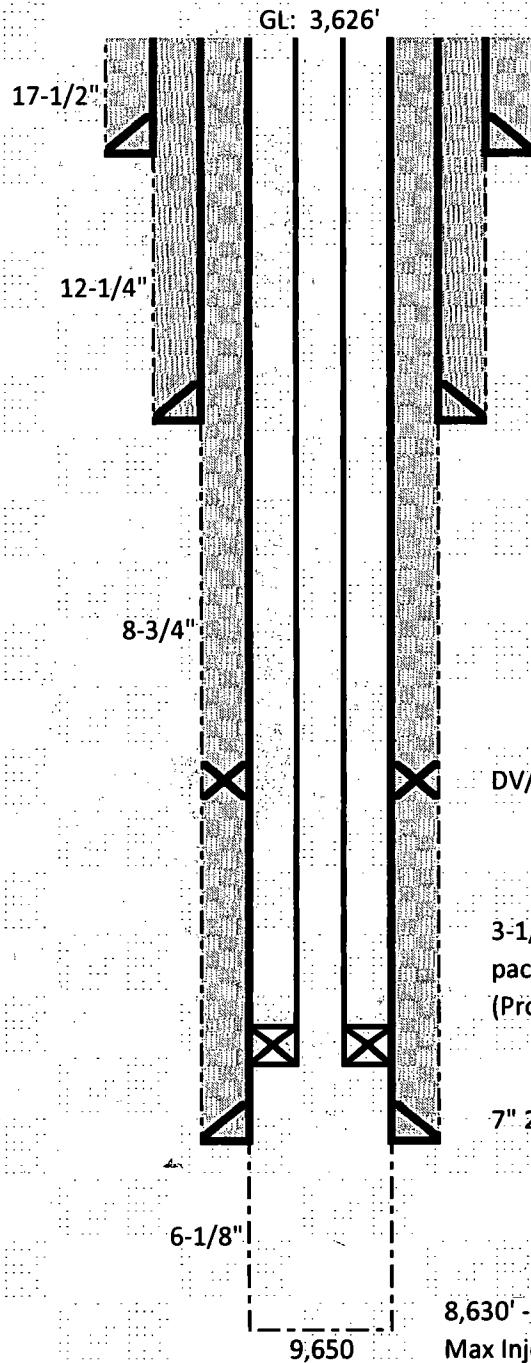
Injection Interval

Open Hole: 8 ,630 feet to 9 ,650

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 3 1/2" EUE Lining Material: Internally plastic coatedType of Packer: Double grip type, set in neutralPacker Setting Depth: no more than 100' above top perfOther Type of Tubing/Casing Seal (if applicable): N/AAdditional Data1. Is this a new well drilled for injection? X Yes _____ No _____If no, for what purpose was the well originally drilled? _____
_____2. Name of the Injection Formation: Cisco Canyon3. Name of Field or Pool (if applicable): SWD; Cisco-Canyon 961864. Has the well ever been perforated in any other zone(s)? List all such perforated
intervals and give plugging detail, i.e. sacks of cement or plug(s) used.
No5. Give the name and depths of any oil or gas zones underlying or overlying the proposed
injection zone in this area:
San Andres @ 2,713', Paddock @ 4,183', Wolfcamp @ 7,463',Strawn @ 10,182'

(Proposed WBD)



Ronco Federal SWD #1
600' FNL; 1,650' FWL
C, 19, T17S, R30E, Eddy Co., NM
API#
SWD Permit #

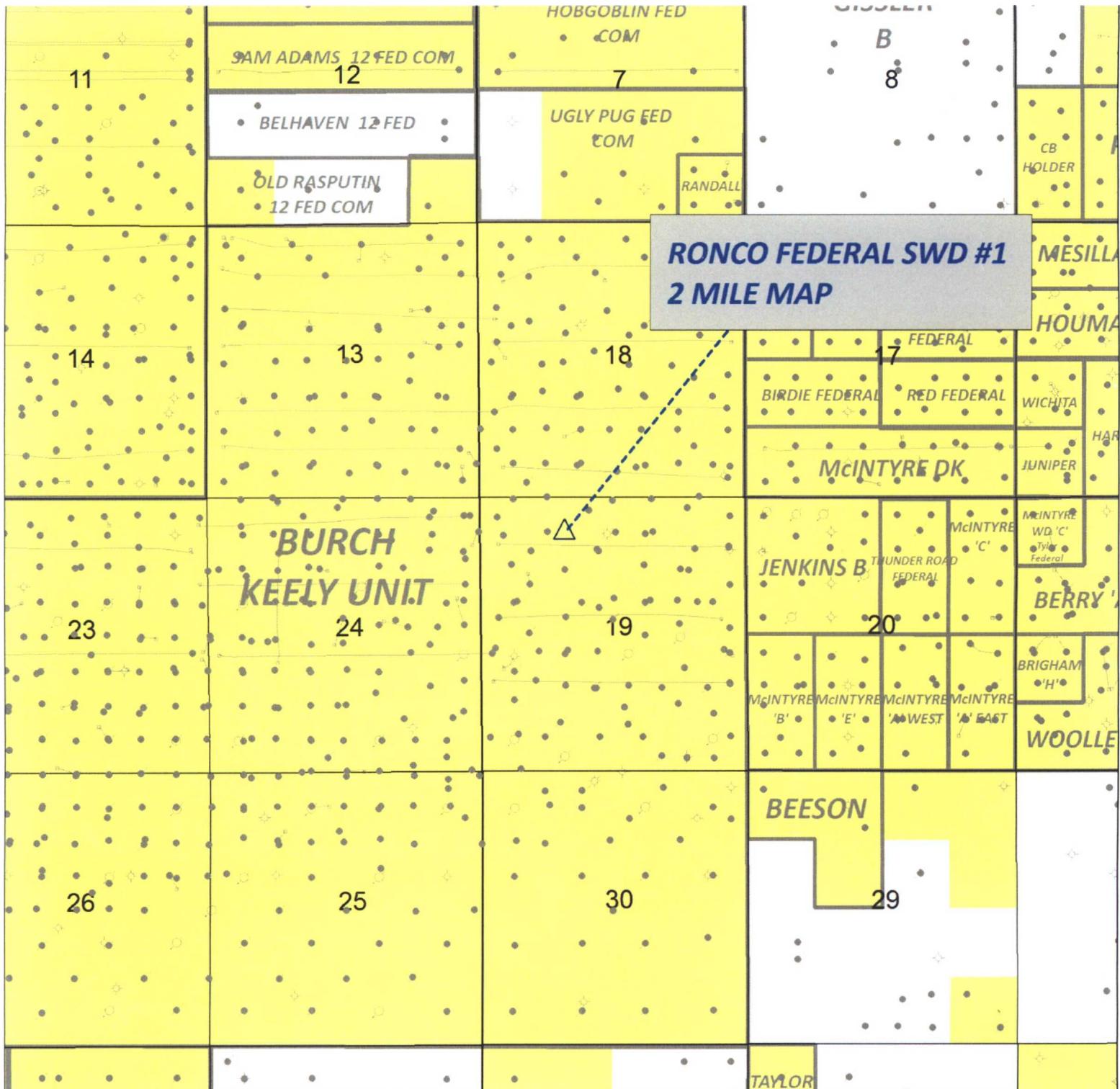
13-3/8" 54.5# J-55 ST&C @ 300'

Lead: 400sx "C" @ 14.8 ppg, 1.32 yield

9-5/8" 40# J-55 ST&C @ 1,100'

Lead: 250sx 50:50:10 "C" PozGel @ 11.8 ppg, 2.45 yield

Tail: 200sx "C" @ 14.8 ppg, 1.32 yield



CONCHO

**SENM
Ronco Federal SWD #1
Sec. 19, T17S - R30E
TWO MILE MAP**

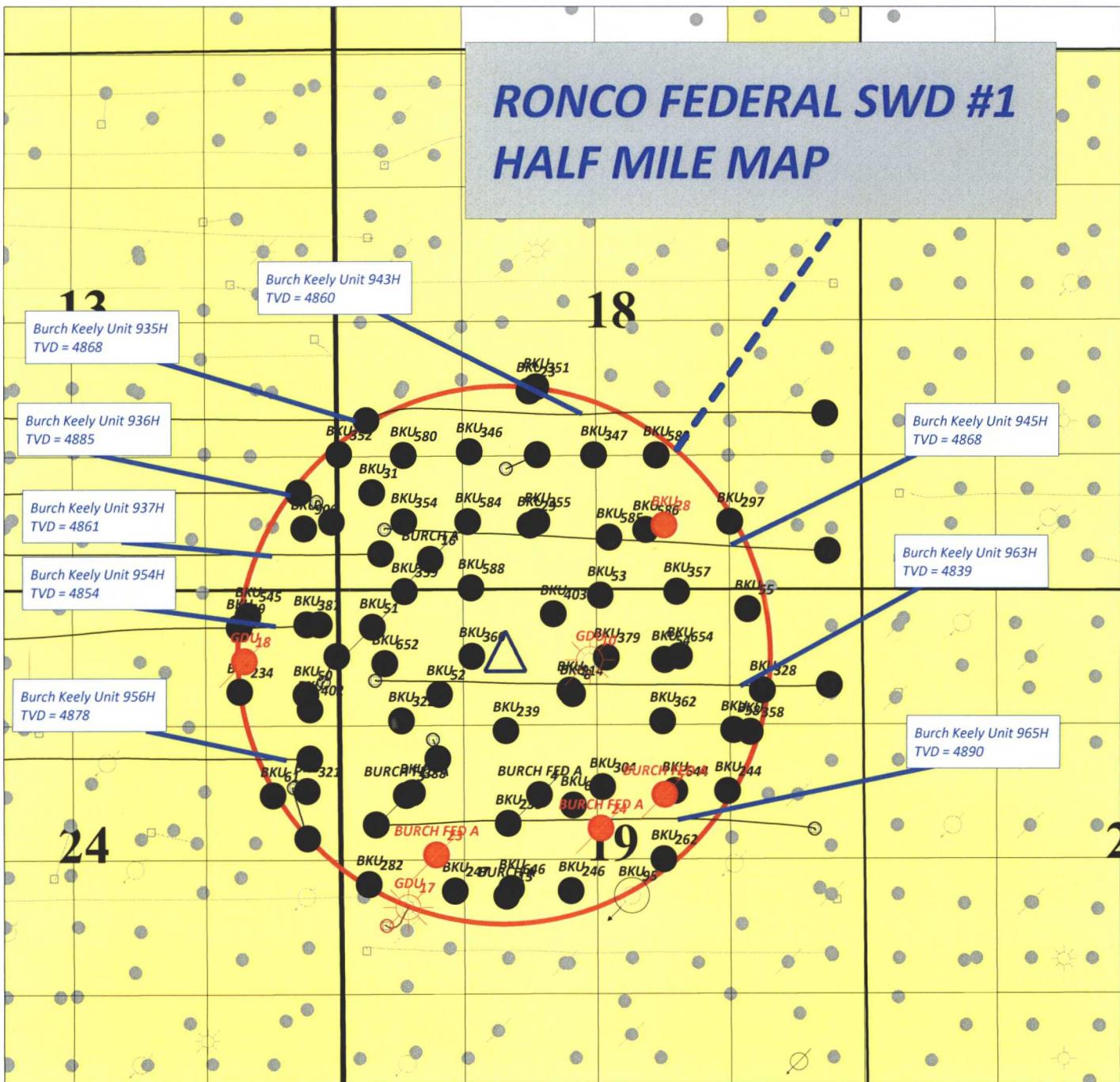
Author:
L Marley

SENM : BLM APD FRAC MAPS/lm _RoncoFed-SWD#1_2_mile_M

Date:
11 September, 2015

Scale:
1:200,000

RONCO FEDERAL SWD #1 HALF MILE MAP



Legend

Well Name
Well No.



Other Operators



Half Mile Radius



Horizontal Well



Ronco Federal SWD #1



Concho Acreage

CONCHO

SENM
Ronco Federal SWD #1
Sec. 19, T17S - R30E
HALF MILE MAP

Author:
L.Marley

SENM: RA_SHELF/ra_RoncoFed-SWD1_halfmileMap.gmp

Date:
30 January, 2017

Scale:
1:2000

VI. Tabulation of Data within the AOR

Well Name	#	Well ID	Operator	Hole Direction	TD	TVD	Status	Surface Location	Unit Let	Surface Hole Footage	BH Location	BH Footage
BURCH KEELY UNIT	963H	300153957600	COG OPERATING LLC	HORIZONTAL	9103	4839	OIL	TWP: 17 S - Range: 30 E - Sec. 19	D-A	893 FNL 358 FWL	TWP: 17 S - Range: 30 E - Sec. 18	1650 FSL 330 FEL
BURCH KEELY UNIT	965H	300154097300	COG OPERATING LLC	HORIZONTAL	9046	4890	OIL	TWP: 17 S - Range: 30 E - Sec. 19	H-E	2350 FNL 493 FEL		
BURCH KEELY UNIT	935H	300154274800	COG OPERATING LLC	HORIZONTAL	10123	4868	OIL	TWP: 17 S - Range: 29 E - Sec. 13	L-I	1650 FSL 200 FWL		
BURCH KEELY UNIT	937H	300154275900	COG OPERATING LLC	HORIZONTAL	10380	4861	OIL	TWP: 17 S - Range: 29 E - Sec. 13	M-M	330 FSL 200 FWL		
BURCH KEELY UNIT	943H	300153957500	COG OPERATING LLC	HORIZONTAL	9130	4860	OIL	TWP: 17 S - Range: 30 E - Sec. 18	I-L	1650 FSL 330 FWL		
BURCH KEELY UNIT	28	300150418800	GEN AMER OIL CO	VERTICAL	4243		OIL	TWP: 17 S - Range: 30 E - Sec. 18	O	660 FSL/1980 FEL		
PLUGGED WELLS HIGHLIGHTED IN YELLOW												
GRAYBURG DEEP UNIT	18	300153490500	CIMAREX ENERGY CO OF COLORADO	VERTICAL	11230		ABD-O	TWP: 17 S - Range: 29 E - Sec. 24	A	950 FEL/690 FNL		
GRAYBURG DEEP UNIT	17	300153421400	CONOCOPHILLIPS CO	DIRECTIONAL	11300	9539.83	GAS	TWP: 17 S - Range: 30 E - Sec. 19	L	1990 FSL 445 FWL		
GRAYBURG DEEP UNIT	10	300152579600	CONOCOPHILLIPS COMPANY	VERTICAL	11240		ABD-G	TWP: 17 S - Range: 30 E - Sec. 19	C	2480 FWL/660 FNL		
BURCH-FEDERAL A	5	300150419700	PRE-ONGARD	VERTICAL	3154		ABD-O	TWP: 17 S - Range: 30 E - Sec. 19	G	1980 FEL/1980 FNL		
BURCH-FEDERAL A	23	300150420700	PRE-ONGARD	VERTICAL	3149		ABD-O	TWP: 17 S - Range: 30 E - Sec. 19	E	955 FWL/2565 FNL		
BURCH-FEDERAL A	24	300150420800	PRE-ONGARD	VERTICAL	3142		ABD-O	TWP: 17 S - Range: 30 E - Sec. 19	G	2615 FEL/2310 FNL		
BURCH KEELY UNIT	93	300150420500	MARBOB ENERGY CORPORATION	VERTICAL	3162		OIL	TWP: 17 S - Range: 30 E - Sec. 19	K	2310 FSL/1650 FWL		
BURCH KEELY UNIT	30	300150419100	MARBOB ENERGY CORPORATION	VERTICAL	3316		ABD-O	TWP: 17 S - Range: 30 E - Sec. 18	M	905 FWL/330 FSL		
BURCH KEELY UNIT	60	300150419500	MARBOB ENERGY CORPORATION	VERTICAL	3101		ABD-O	TWP: 17 S - Range: 30 E - Sec. 19	E	660 FWL/1980 FNL		
BURCH KEELY UNIT	59	300150419600	MARBOB ENERGY CORPORATION	VERTICAL	3331		ABD-O	TWP: 17 S - Range: 30 E - Sec. 19	F	1980 FWL/1980 FNL		
BURCH-FEDERAL A	8	300150420000	PRE-ONGARD	VERTICAL	3225		OIL	TWP: 17 S - Range: 30 E - Sec. 19	C	990 FNL/2310 FWL		

COG Operating LLC

Lease & Well

3001504190

SPUD - 1-9-48

Completion - 3-12-48

Elevation - 3640' GR

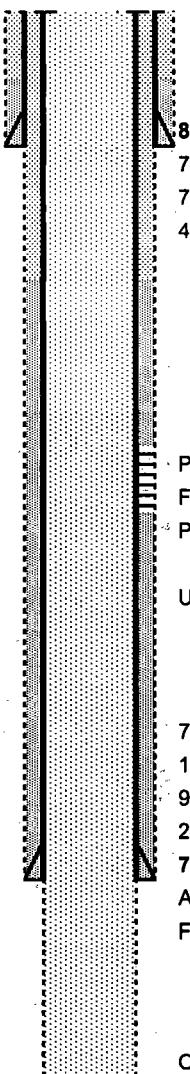
Calc TOC @ 294'

Burch Keely Unit 29

Eddy Co., NM

Sec 18 N T17S R30E 660 FSL & 1895 FWL

7" Calc TOC @ 1,688'



COG Operating, LLC

Lease & Well

3001520793

Spud date 3-28-73

Completion date 4-17-73

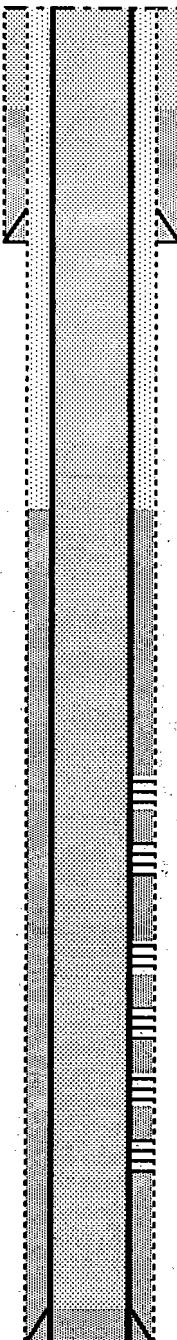
Elevation - 3632

Burch Keely Unit 31

Sec 18 M T 17S R 30E, 990 FSL & 330 FWL

EDDY CO., NM

Calculated TOC @ 220'



12 1/4" hole
8 5/8" 20# @ 460, cmt w/100 sx.

Calculated TOC @ 2001'.

Casing cementing calculations

8 5/8" 20# 12.25" Surface hole

Cement volume. = 100 X 1.32 CF/SK = 132 cu. Ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99.0 CF

99 CF X ann. Vol. of 2.4229 FT/CF = 240'

460 - 240 =220' estimated (calculated) top of cement.

4.5" 9.5 # 7 7/8" hole

Cement volume = 320 X 1.32 CF/SK = 422 cu.ft. slurry.

422 - 30% slurry loss for shoe joint & hole loss =296 CF

296 CF X ann. Vol. of 4.3899 FT/CF =1299'

3300- 1299 = 2001' estimated (calculated) top of cement.

2443-2451 Frac'd w/ 20,000 gals GBW & 20,000# sd 4-73

2509-2557 Frac'd w/ 30,000 gals GBW & 30,000# sd 4-73

2625-2630 A/2,000 gals 4-73

2780-2788 Frac'd w/ 30,000 gals GBW & 30,000# sd 4-73

2986-3024 A/3,000 gals 4-73

3070-3078 Frac'd w/ 30,000 gals GBW & 30,000# sd 4-73

P 80 BO, 96 MCF, & 75 BW 4-19-73

4 1/2" 9.5# csg @ 3300' w/ 320 sxs.

PBTD - 3294'

COG Operating, LLC

Lease & Well

3001521265

Spud date 10-20-75

Completion date 11-4-75

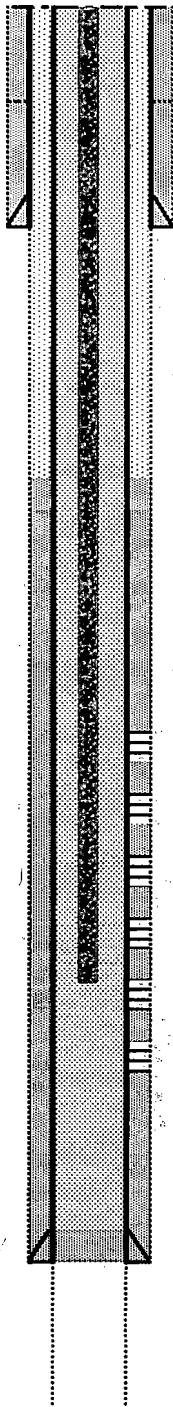
Elevation - 3611

Burch Keely Unit 49

Sec 24 A T 17S R 29E, 330 FNL & 990 FEL

EDDY CO., NM

Calculated TOC @ 200'



8/29/1989, Pumped 200 sx dn bradenhead.

Calculated TOC @ 1,782'.

Casing cementing calculations

8 5/8" 20# 12.25" Surface hole
Cement volume = 350 X 1.32 CF/SK = .462 cu.ft. slurry
462 - 30% slurry loss for shoe joint & hole loss =323 CF
323 CF X ann. Vol. of 4.3899 FT/CF =1418'
3200- 1418 = 1782' estimated (calculated) top of cement.

2 3/8" tbg, SN @ 3100

2523 - 2543', 12 holes, Frac 20,000 gal, 20,000# sd

2618 - 2621', 6 holes, acidized W/2,500 gal 15%

2764 - 2770', 12 holes, Frac 20,000 gal 20,000# sd

2940 - 2943', 6 holes, acidized w/1,5000 gal 15%

3012 - 3015', 6 holes, acidized W/3,000 gal 15%

3071 - 3076', 10 holes, acidized w/4,000 gal 15%

IP P 65 BOD, 130 MCF, & 40 BLW 11-10-75

PBTD - 3194'

4 1/2" 9.5 # csg @ 3200' w/ 350 sxs..

TD @ 3550'

COG Operating, LLC

Lease & Well

3001503078

Spud date 4-21-37

Completion date 7-2-37

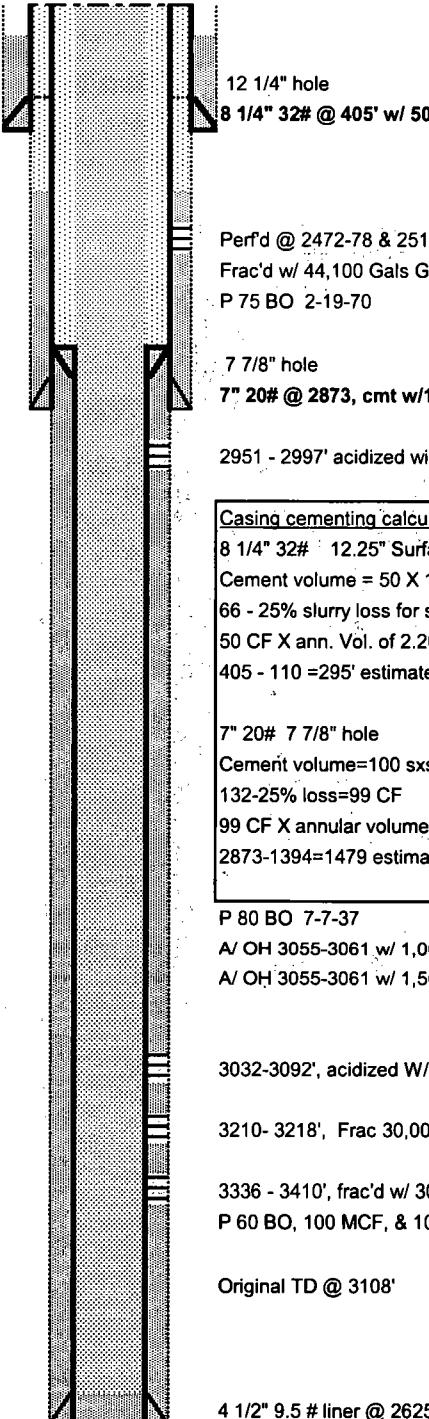
Elevation - 3611

Burch Keely Unit 50

Sec 24 A T 17S R 29E, 990 FNL & 330 FEL

EDDY CO., NM

Calculated TOC @ 295'



Casing cementing calculations

8 1/4" 32# 12.25" Surface hole

Cement volume = 50 X 1.32 CF/SK = 66 cu. Ft. slurry

66 - 25% slurry loss for shoe joint & hole loss =50 CF

50 CF X ann. Vol. of 2.209 FT/CF = 110'

405 - 110 =295' estimated (calculated) top of cement.

7" 20# 7 7/8" hole

Cement volume=100 sxs X 1.32 CF/SK=132 CF

132-25% loss=99 CF

99 CF X annular volume of 14.0845 FT/CF=1394'

2873-1394=1479 estimated TOC

P 80 BO 7-7-37

A/ OH 3055-3061 w/ 1,000 gals 7-10-37

A/ OH 3055-3061 w/ 1,500 gals 7-26-37

3032-3092', acidized W/2,500 gal 15% 6-72

3210- 3218', Frac 30,000 gal GBW & 17,000# sd 6-72

3336 - 3410', frac'd w/ 30,000 gals GBW & 30,000# sd 6-72

P 60 BO, 100 MCF, & 108 BW 6-14-72

Original TD @ 3108'

4 1/2" 9.5 # liner @ 2625-3555' w/ 150 sxs. Circ 50 sxs. 6-72

TD @ 3556' 6-72

COG Operating, LLC

Lease & Well

3001521268

Spud date 7-25-74

Completion date 8-20-74

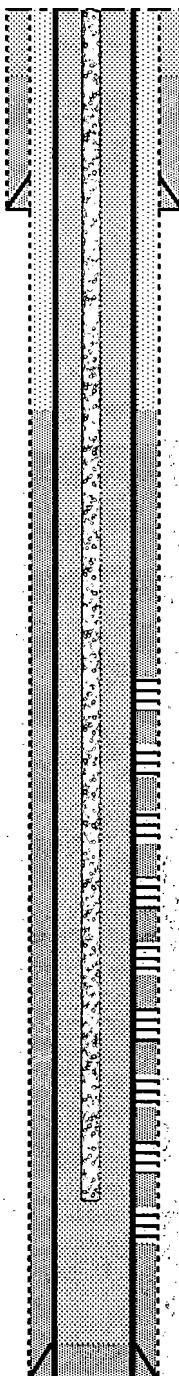
Elevation - 3620

Burch Keely Unit 51

Sec 19 D T 17S R 30E, 330 FNL & 330 FWL

EDDY CO., NM

Calculated TOC @ 197'



12 1/4" hole

8 5/8" 20# @ 437, mt w/100 sx.

Casing cementing calculations

8 5/8" 20# 12.25" Surface hole

Cement volume. = 100 X 1.32 CF/SK = 132 cu. Ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99.0 CF

99 CF X ann. Vol. of 2.4229 FT/CF = 240'

437 - 240 = 197' estimated (calculated) top of cement.

4.5" 9.5# 7 7/8" hole

Cement volume = 300 X 1.32 CF/SK = 396 cu.ft. slurry.

Cement volume = 300 X 1.18 CF/SK = 354 cu.ft. slurry.

750 - 30% slurry loss for shoe joint & hole loss = 535 CF

525 CF X ann. Vol. of 4.3899 FT/CF = 2304'

3300 - 2304 = 996' estimated (calculated) top of cement.

1548-1550 14 holes frac w/20,000 GW, 20,000# sd... **recompletion**

2434 - 2438', 16 holes, frac w/10,000 GW, 10,000# sd

2506 - 2548', 16 holes, frac w/20,000 GW, 30,000# sd

2619 - 2624', 10 holes, acidized w/2,000 gal 15%

2780 - 2788', 16 holes, Frac w/20,000 GW, 20,000 # sd

2950 - 2954', 8 holes, acidized w/2,000 gal 15%

3021 - 3026', 10 holes, acidized w/3,000 gal 15%

3079 - 3107', 12 holes, acidized w/4,000 gal 15%

3232 - 3246', 16 holes, frac w/20,000 GW, 20,000# sd

IP 75 BO, 75 MCF, & 100 BLW 8-20-74

4 1/2" 9.5 # csg @ 3300' w/600 sxs.

TD @ 3300'

COG Operating, LLC

Lease & Well

3001504201

Spud date 9-21-37

Completion date 12-6-37

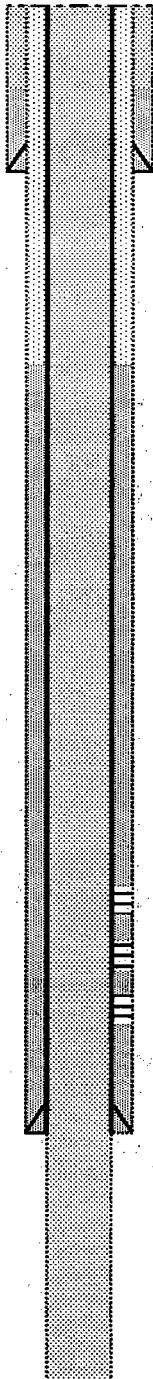
Elevation - 3621

Burch Keely Unit 52--Old WIW

Sec 19 D T 17S R 30E, 990 FNL & 990 FWL

EDDY CO., NM

Calculated TOC @ 309'



12 1/4" hole

8 1/4" 30# @ 430, Cmt w/50 sx.

Casing cementing calculations

8 1/4" 30# 12.25" Surface hole **

Cement volume. = 50 X 1.32 CF/SK = 66 cu. Ft. slurry

66 - 25% slurry loss for shoe joint & hole loss = 50.0 CF

50 CF X ann. Vol. of 2.4229 FT/CF = 121'

430 - 121 = 309' estimated (calculated) top of cement.

7" 24# @2784' 7 7/8" hole

Cement volume = 100 X 1.32 CF/SK = 132 cu.ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99 CF

99 CF X ann. Vol. of 14.0845 FT/CF = 1,394'

2784 -1394 = 1390' estimated (calculated) top of cement.

Calculated TOC @ 1394'.

**Original surface: 10" csg to 325', pulled.

Assumed 8 5/8" csg & 12 1/4" average hole to est fill.

No records of hole size, cable tool!

Grayburg

2424 - 2438, frac w/20,000 GW, 20,000 # sd 1-74

2500 - 2580', frac w/30,000 GW, 30,000 # sd 1-74

2656 - 2663', frac w/20,000 GW, 20,000# sd 1-74

IP 120 BO, 100 MCF, & 50 BLW 1/16/1974

7" 24 # csg @ 2784' w/ 100 sxs.

Acidized OH 3000'-3030' w/ 1000 gals 11-29-37

Acidized OH 3000'-3157' w/ 2000 gals 12-8-37

F 25 BO 12-10-37 San Andres

Converted to WIW 10-2-57. 600 BWPD @ 200 PSIG

SI WIW 2-2-61

Original TD @ 3157'

COG Operating, LLC

Lease & Well

3001522091

Spud date 6-18-77

Completion date 8-30-77

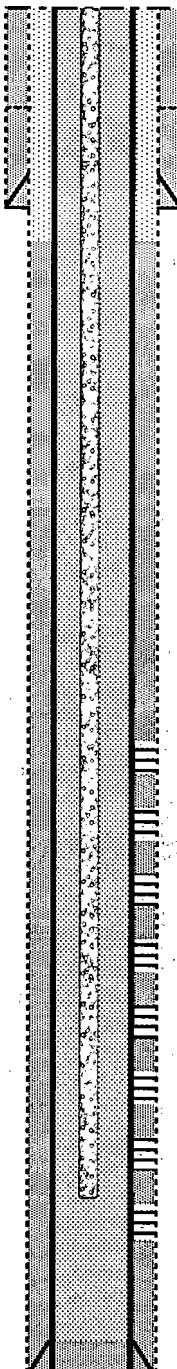
Elevation - 3633

Burch Keely Unit 53

Sec 19 B T 17S R 30E, 25 FNL & 2615 FEL

EDDY CO., NM

Calculated TOC @ 255'



Dumped 5 yds redi-mix dn annulus.

255' to surface = 4 yd.

Calculated TOC @ 752'.

12 1/4" hole

8 5/8" 20# @ 495, Cmt w/100 sx.

Casing cementing calculations

8 5/8" 20# 12.25" Surface hole

Cement volume. = 100 X 1.32 CF/SK = 132 cu. Ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99.0 CF

99 CF X ann. Vol. of 2.4229 FT/CF = 240'

495 - 240 = 255' estimated (calculated) top of cement.

5.5" 15.5# 7 7/8" hole

Cement volume = 600 X 1.18 CF/SK = 708 cu.ft. slurry.

708 - 30% slurry loss for shoe joint & hole loss = 496 CF

496 CF X ann. Vol. of 5.7719 FT/CF = 2863'

3615 - 2863 = 752' estimated (calculated) top of cement.

2526 - 2577', 18 holes, frac w/20,000 GW, 20,000# sd

2655 - 2658', 6 holes, acidized w/1,500 gal

2806 - 2816', 20 holes, frac w/30,000 GW, 30,000# sd

3013 - 3062', 12 holes, acidized w/2,000 gal

3106 - 3124', 15 holes, acidized w/4,000 gal 15%

3262 - 3293', 14 holes, frac w/30,000 GW 20,000 #sd

3382 - 3422', 18 holes, frac w/30,000 GW 30,000 # sd

3536 - 3547', 14 holes, frac w/20,000 GW, 20,000# sd

IP 36 BO, 0 MCF, & 12 BLW 9-3-77

Cmt w/600 sx H w/ add

5 1/2" 15.5 # csg @ 3615'.

TD @ 3615

2 3/8" 4.7# J-55 IPC @ 3549+-

PBTD - 3609'

COG Operating, LLC

Lease & Well #

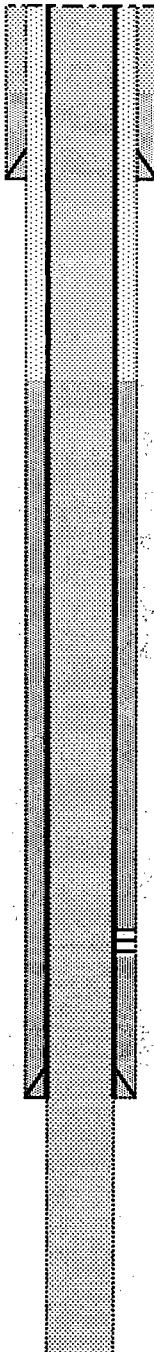
3001504199

Spud date 6-18-36**Completion date** 8-24-36**Elevation** - 3638**Burch Keely Unit 54**

Sec 19 B T 17S R 30E, 660 FNL & 1980 FEL

EDDY CO., NM

Calculated TOC @ 354'

**12 1/4" hole****8 1/4" 32# @ 475, Cmt w/50 sx.****Casing cementing calculations****8 1/4" 32# 12.25" Surface hole ****Cement volume. = $50 \times 1.32 \text{ CF/SK} = 66 \text{ cu. Ft. slurry}$

66 - 25% slurry loss for shoe joint & hole loss = 50.0 CF

50 CF X ann. Vol. of 2.4229 FT/CF = 121'

475 - 121 = 354' estimated (calculated) top of cement.

7" 24# @2715' 7 7/8" holeCement volume = $100 \times 1.32 \text{ CF/SK} = 132 \text{ cu.ft. slurry}$

132 - 25% slurry loss for shoe joint & hole loss = 99 CF

99 CF X ann. Vol. of 14.0845 FT/CF = 1394'

2715 - 1394 = 1321' estimated (calculated) top of cement.

Calculated TOC @ 1321'.

Grayburg

2538 - 2620, Frac w/40,000 GW, 40,000 # sd 2-7-73

IP P 26 BO, 30 MCF, & 11 BW 2-16-73

7" 24 # csg @ 2715' w/ 100 sxs.

Acidized OH w/ 1000 gals 8-31-36

F 440 BO 8-31-36 San Andres

Acidized OH w/ 2000 gals 6-20-37

Acidized OH w/ 1000 gals 12-10-41

Frac'd OH w/1680 gals condensate, 3024 gals LO,
9366 gals RO, 6342 gals LO & 20,000# sd. 5-2-55**F 13 BO 5-15-55**

Original TD @ 3157'

COG Operating, LLC

Lease & Well

3001521657

Spud date 1-30-76

Completion date 3-19-76

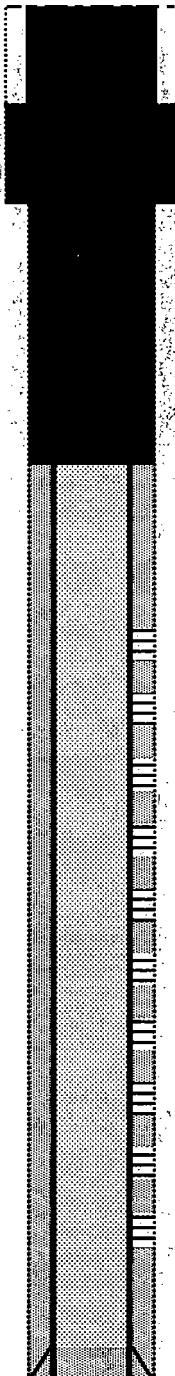
Elevation - 3642

Burch Keely Unit 55

Sec 19 A T 17S R 30E, 165 FNL & 1155 FEL

EDDY CO., NM

Calculated TOC @ 256'



Calculated TOC @ 641'.

12 1/4" hole

8 5/8" 24# @ 496, Cmt w/100 sx.

Casing cementing calculations

8 5/8" 24# 12.25" Surface hole

Cement volume = 100 X 1.32 CF/SK = 132 cu. Ft. slurry

132 - 25% slurry loss for shoe joint & hole loss = 99.0 CF

99 CF X ann. Vol. of 2.4229 FT/CF = 240'

496 - 240 = 256' estimated (calculated) top of cement.

5.5" 15.5# 7 7/8" hole

Cement volume = 625 X 1.18 CF/SK = 738 cu.ft. slurry.

738 - 30% slurry loss for shoe joint & hole loss = 517 CF

517 CF X ann. Vol. of 5.7719 FT/CF = 2984'

3625 - 2984 = 641' estimated (calculated) top of cement.

1613-1618', 15 holes, frac w/20,000 GW, 20,000# sd

2483 - 2491', 16 holes, frac w/20,000 GW, 20,000# sd

2555 - 2606', 16holes, frac w/30,000 GW, 30,000# sd

2682 - 2686', 8 holes, acidized w/2000 gal

2772 - 2774', 4 holes, acidized w/ 15000 gals

3067 - 3071', 8 holes, acidized w/2,500 gal

3142 - 3146', 8 holes, acidized w/3500 gal 15%

3314 - 3322', 16 holes, frac w/20,000 GW 20,000 #sd

3411 - 3419', 16 holes, frac w/20,000 GW 20,000 # sd

3572 - 3582', 20 holes, frac w/20,000 GW, 20,000# sd

IP 55 BO, 200 MCF, & 74 BLW 3-24-76

Cmt w/625 sx H w/ add

5 1/2" 15.5 # csg @ 3625'.

TD @ 3625

PBTD - 3619'

COG Operating, LLC

Lease & Well

3001504192

Spud date 12-9-1949

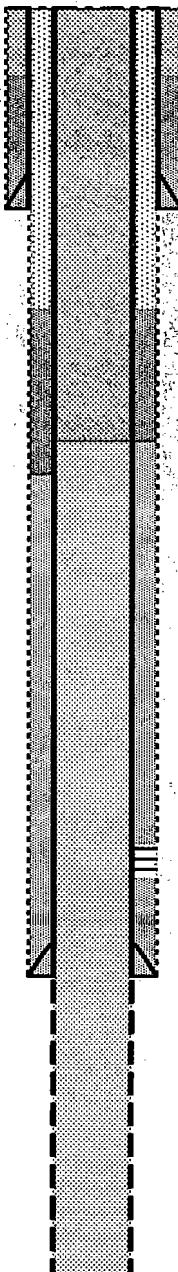
Completion date 02-8-1950

Elevation - 3637

Burch Keely Unit 58

Sec 19 A T 17S R 30E, 1345 FNL & 1295 FEL
EDDY CO., NM

Calculated TOC @ 298'



Calculated TOC @ 1660'

11" hole
8 5/8" 24# @ 493, Cmt.w/50 sx.

Casing cementing calculations

8 5/8" 24# casing 11" Surface hole

Cement volume = 50 X 1.32 CF/SK = 66 cu. Ft. slurry

66 - 25% slurry loss for shoe joint & hole loss = 49.5 CF

49.5 CF X ann. Vol. of 3.9337 FT/CF = 195'

493 - 195 =298' estimated (calculated) top of cement.

7" 20# casing 8 1/4" hole

Cement volume = 100 X 1.32 CF/SK = 132 cu.ft. slurry.

132 - 20% slurry loss for shoe joint & hole loss = 105.6 CF

105.6 CF X ann. Vol. of 9.6182 FT/CF =1,016"

2676 -1016 = 1660' estimated (calculated) top of cement.

TA'd in 1992, back on production 7/23/1996

GB/SA 7/16/1985

2348 - 2650' Acidized w/2125 gal 7 1/2%; frac w/40K gal & .51K# sd

IP 10.4 BOD 11.68 MCFGD 14.95 BWD, GOR 1123, 34.8 deg API oil

7" 20 # csg @ 2676'.

Cmt w/100 sx

Original completion: Acidized

IP 31 BOD, 0 MCF reported, 0 BW reported.

Recompletion 11/1/1955: frac w/LO & 23,500# sd.

TD 3223'

COG Operating, LLC

Lease & Well #

3001505911

Spud date 8/28/1929

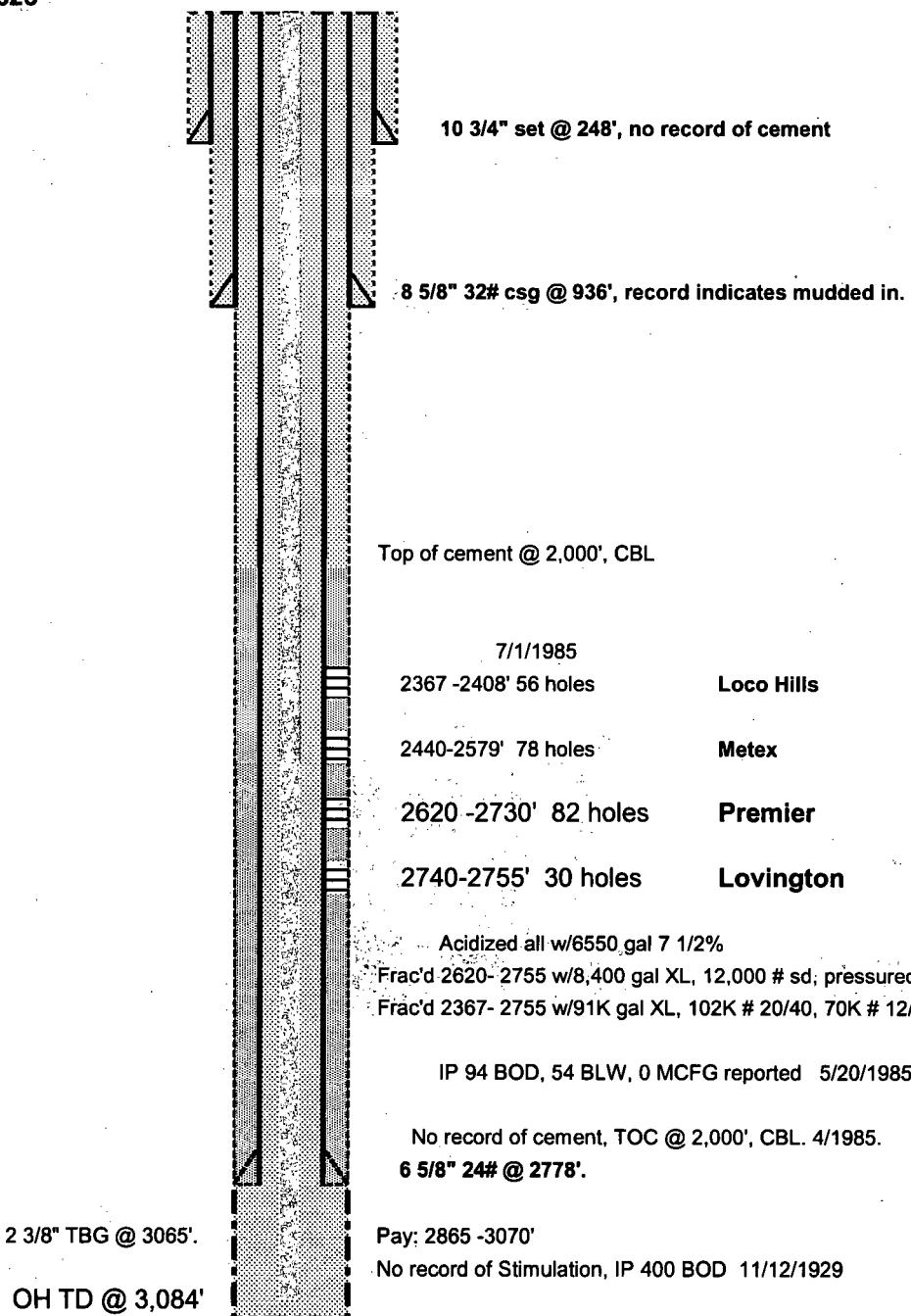
Completion Date 5/14/1985

Elevation - 3625

Burch Keely Unit 61

Sec 24 T 17S R 29E, 1980 FNL & 660 FEL

EDDY CO., NM



COG Operating, LLC

Lease & Well

3001504204

Spud date 4/5/1939

Completion Date 4/2/1973 (recompletion)

Elevation - 3619

Burch Keely Unit 95

Sec 19 T 17S R 30E, 3210 FSL & 2310 FEL

EDDY CO., NM

Calculated TOC @ 292' FS.

Pumped 50 sx CL C dn 7"8 5/8" annulus, circ to surface after 50 sx.
Volume calculates to 145' of fill. 1/31/1985

Calculated TOC @ 1855' fs

8 5/8" set @ 487', 50 sx cmt. Files indicate 11" hole.

Casing cementing calculations

8 5/8" 24# 11" Hole

Cement volume = 50 X 1.32 CF/SK = 66 cu. Ft. slurry

66 - 25% slurry loss for shoe joint & hole loss = 49.5.5CF

49.5 CF X ann. Vol. of 3.9337 FT/CF = 195"

487 - 195 =292' estimated (calculated) top of cement.

7" 20# 8 1/4" hole 100 sx

Cement volume = 100 X 1.18 CF/SK = 118 cu.ft. slurry.

118 - 25% slurry loss for shoe joint & hole loss = 88.5 cf

88.5 CF X ann. Vol. of 9.6182 FT/CF =851'

2706 - 851 = 1855' estimated (calculated) top of cement.

4 1/2 " 9.5# csg 6 1/4" hole Circulated 75 sx

85 jts 2 3/8" IPC tbg.
Hall. R-4 PC pkr @ 2665'

2489 - 2496', frac w/30,000 gal GW, 30,000 #sd

Squeezed w 160 sx 10/23/1998

2604 - 2637' frac w/30,000 gal GW, 30,000 # sd

Top of liner @ 2682'.

7" 20# csg @ 2706', 100 sx cmt. 8 1/4" hole TD @ 3612'.

2956 - 2960' acidized w/2,500 gal

3300 - 3307' frac w/30,000 gal GW, 30,000 # sd

3491 - 3452' frac w/30,000 gal GW, 30,000 # sd

3538 - 3542'

IP 40 bod, 35 mcfgd, 65 BLW 4/9/1973

6 1/4" HOLE

4 1/2" 9.5# @ 3610'. Top @ 2682'. 220 sx cmt. Circ. 75 sx.

PBTD 3606'

COG Operating, LLC

Lease & Well

3001527652

Spud date 5-28-94

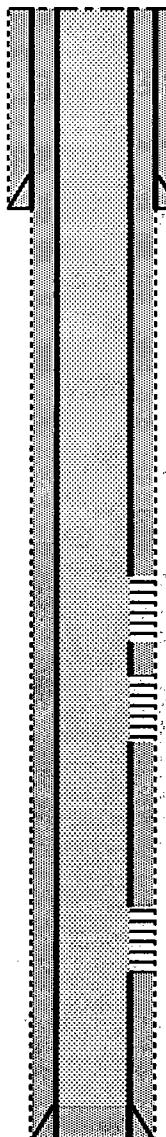
Completion date 6-23-94

Elevation - 3605

Burch Keely Unit 234

Sec 24 T17S R29E, Unit A 960 FNL & 990 FEL

EDDY CO., NM



12 1/4 hole

8 5/8" 24# @ 421 Cmt w/350 sx. Circulated 125 sx

2340 - 2622 holes acidized w/2,000 gal 15% HCL

Frac w/40,000 gal LG, 107,000 # sd

2861 - 3794 acidized w/4,000 gal 15% HCL

Frac w/118,300 #sd, ?? GW

DV tool @ 3258'.

4139 - 4479` acidized w/7,000 15% HCL

Hot acid job: 35,000 gal 20% HCL, 54,000 gal GW

IP 74 BO 130 MCFG, 465 BW 7/17/94

Cmt 1st stage w/300 sx C w/add, circ 90 sx.

Cmt 2nd stage w/650 sx P+, 300 sx 50/50 poz, circ 102 sx

5 1/2" 17# csg @ 4633'

7 7/8" hole

PBTD - 4630

COG Operating, LLC

Lease & Well

3001528331

Spud date 6-30-96

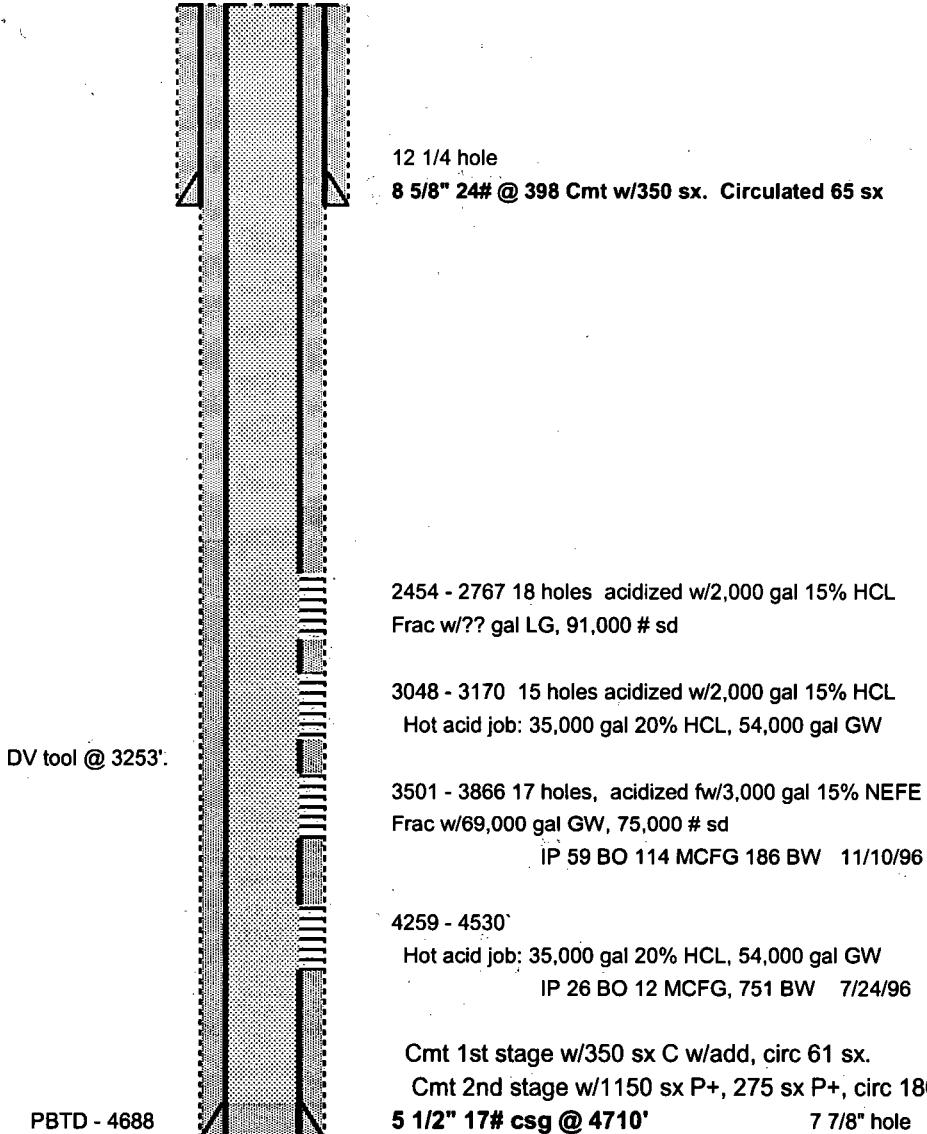
Completion date 11/8-96 (recompletion)

Elevation - 3624

Burch Keely Unit 238

Sec 19 T17S R30E, 2310 FNL & 1650 FWL

EDDY CO., NM



COG Operating, LLC

Lease & Well

3001528018

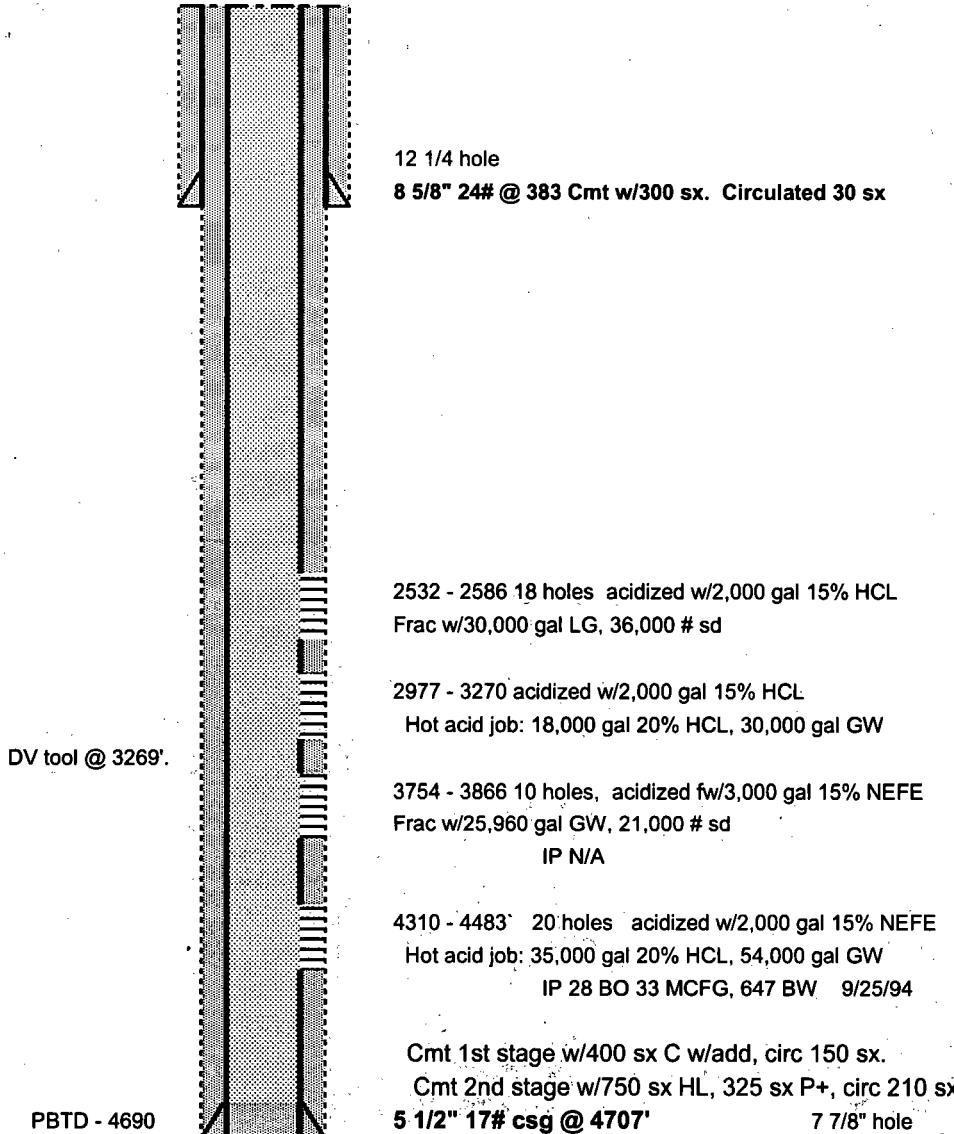
Spud date 8-18-94

Completion date 9/16/94 (initial completion)

Elevation - 3631

Burch Keely Unit 239

Sec 19 T17S R30E, 1390 FNL & 1650 FWL
EDDY CO., NM



COG Operating, LLC

Lease & Well

3001528089

Spud date 9-26-94

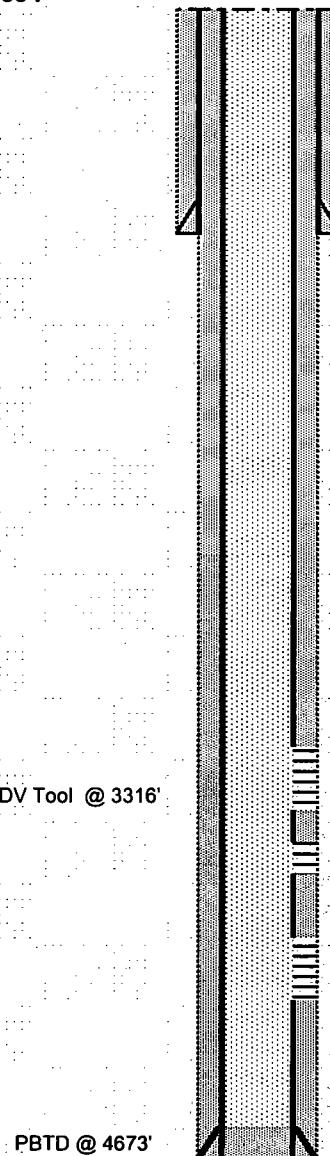
Completion date 11/1/94

Elevation - 3634

Burch Keely Unit 244

Sec 19 T17S R30E, 1980 FNL & 1345 FEL

EDDY CO., NM



2581 - 2751; 18 holes acidized w/2,000 gal 15% HCL

Frac w/60,780 gal LG, 101,000 #sd

3102- 3356' 25 holes acidized w/3,000 gal 15% HCL

Frac w/159,000 gal LG, 240,000 # sd.

4404 - 4618', 20 holes acidized w/2,000 gal 15% NEFE

Hot acid job, 35,000 gal 20% HCL, 54,000 gal htd GW

IP 74 BO .88 mcfg 545 BW 11/17/94

Cmt 1st stage w/400 sx 50-50 poz w/add, circ 150 sx.

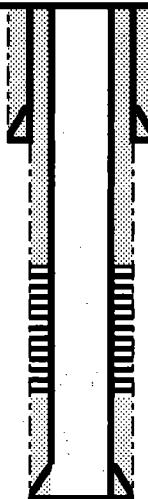
Cmt 2nd stage w/650 sx HL+, 400 sx 50-50 poz, circ 140 sx

5 1/2" 17# J-55 csg @ 4,736' 7 7/8" hole

Well: Burch Keely Unit #246

API#: 30-015-28330

Formation: Paddock



Surface

8-5/8" 24# J55 csg set @ **412** ft

Circulated **5** sks

Perfs :

2,462-2,782 acidized w/ 2k gal HCL

3,004-3,172 acidized w/ 2k gal HCL

3,440-3,879 acidized w/ 3k gal HCL

4,210-4,581 acidized w/ 2k gal HCL

Production

5-1/2" 17# J55 csg set @ **4,712** ft

ID: **4.892**

Drift ID: **4.767**

PBTD @ **4,708** ft

Cemented with: 1,500 sx

Circulated **250** sks
TOC @ **0** ft

COG Operating, LLC

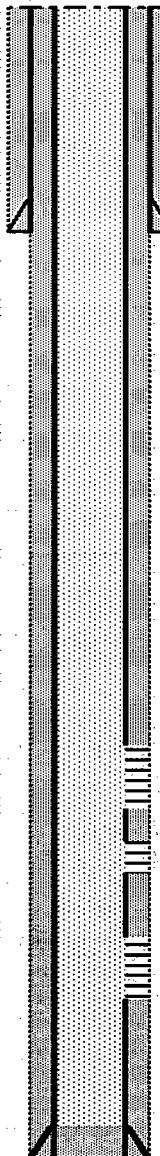
Lease & Well #

3001528335

Spud date 9-9-95**Completion date** 10/11/95**Elevation - 3626****Burch Keely Unit 247**

Sec 19 T17S R30E, 2310 FSL & 1130 FWL

EDDY CO., NM



COG Operating, LLC

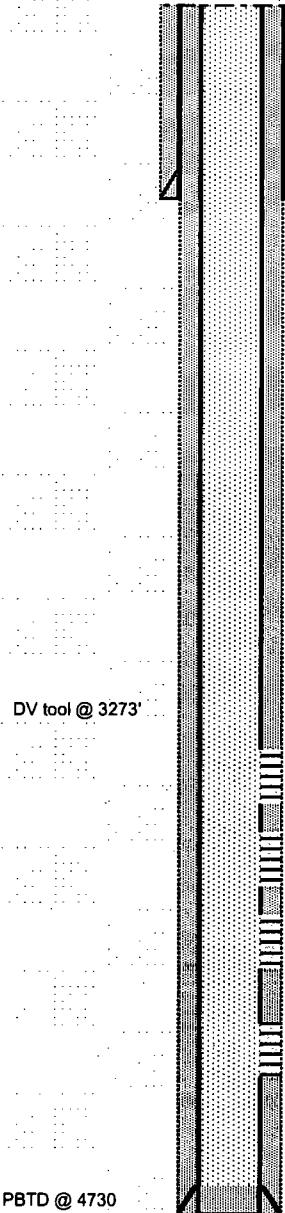
Lease & Well #

3001528333

Spud date 12-5-96**Completion date** 2/17/97**Elevation - 3630****Burch Keely Unit 262**

Sec 19. T17S R30E, 2615 FSL & 1980 FEL

EDDY CO., NM



COG Operating, LLC

Lease & Well

3001529722

Spud date 1-15-98

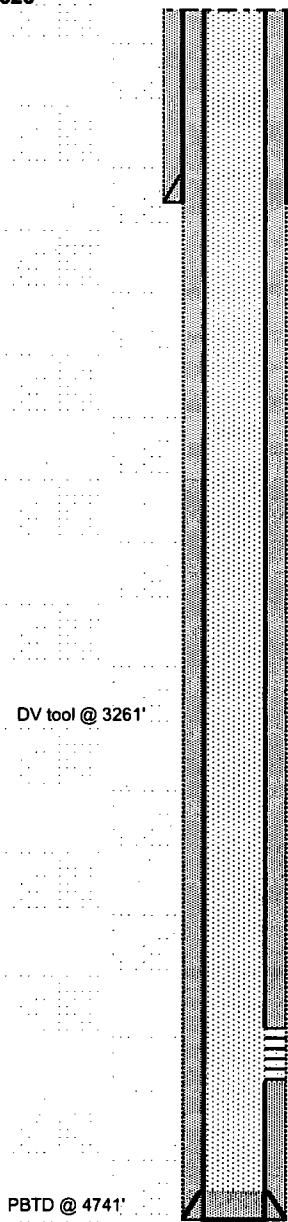
Completion date 2-4-98

Elevation - 3625

Burch Keely Unit 282

Sec 194 T17S R30E, 2378 FSL & 290 FWL

EDDY CO., NM



COG Operating, LLC

Lease & Well

3001530731

Spud date 9-14-99

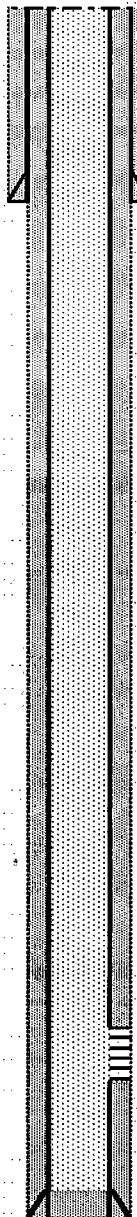
Completion date 10-14-99

Elevation - 3643

Burch Keely Unit 297

Sec 18 T17S R30E, 660 FSL & 11295 FEL

EDDY CO., NM



12 1/4" hole

8 5/8" 24# @ 433' Cmt w/300 sx. Circ 65 sx

4239- 4551' 20 holes acidized w/2,000 gal 15% NEFE

Hot acid job, 35,000 gal 20% HCL htd, 54,000 gal Gel

IP 25 BO 58 mcfg 587 BW - 10/19/99

Cmt 1st Stage: 350 sx Super H, circ 60 sx

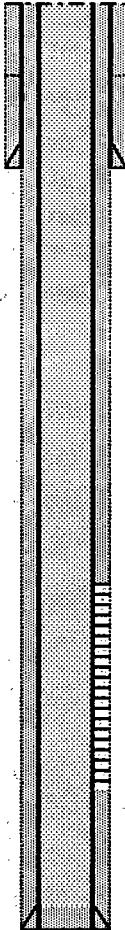
Cmt 2nd Stage: 750 sx HL, 200 sx Super H, circ 120 sx.

05 1/2" 17# J-55 csg @ 4,730'

7 7/8" hole

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 304
API# 3001530633**



8-5/8" SET @ 435

CMT W/ 300 SX PP, CIRC TO SURF

PERF INTERVAL: 4,216-4,542'

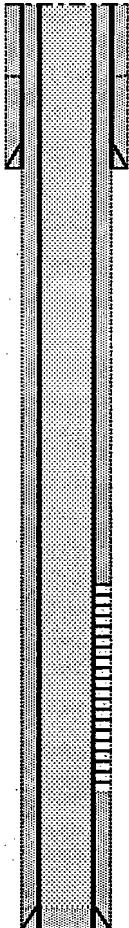
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

5-1/2" SET @ 4,758

CMT W/ 1,450' SX, CIRC. 250 SX

COG OPERATING LIMITED LIABILITY CORP

Lease & Well # BURCH KEELY UNIT 321
API# 3001532098



12-1/4" HOLE
8-5/8" 24# J55 SET @ 408

CMT W/ 400 SX, CIRC. 90 SX

PERF INTERVAL: 4,152-4,458'

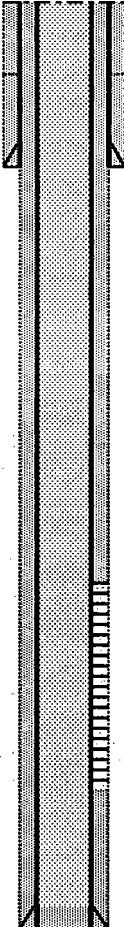
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,666

CMT STAGE 1: 300 SX / STAGE 2: LEAD 700 SX, TAIL 200 SX, CIRC. 125 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 322
API# 3001532108**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 402**

CMT W/ 300 SX, CIRC. 45 SX

PERF INTERVAL: 4,164-4,498'

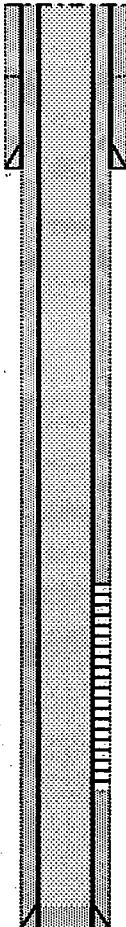
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,737**

CMT STAGE 1: 300 SX / STAGE 2: LEAD 700 SX, TAIL 200 SX, CIRC. 125 SX

COG OPERATING LIMITED LIABILITY CORP

Lease & Well # BURCH KEELY UNIT 328
API# 3001532425



PERF INTERVAL: 4,226-4,523'

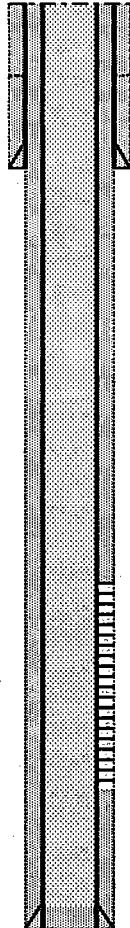
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,817

CMT STAGE 1: 300 SX H / STAGE 2: LEAD 700 SX H/L, TAIL 200 SX H, CIRC. 90 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 346
API# 3001532782**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 357**

CMT W/ 300 SX, CIRC. 64 SX

PERF INTERVAL: 4,173-4,430'

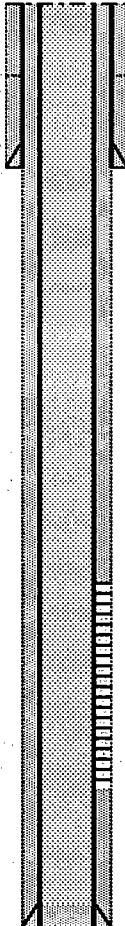
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,713**

CMT STAGE 1: 350 SX H / STAGE 2: LEAD 500 SX H/L, TAIL 625 SX H, CIRC. 129 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 347
API# 3001528090**



PERF INTERVAL: 4,209-4,468'

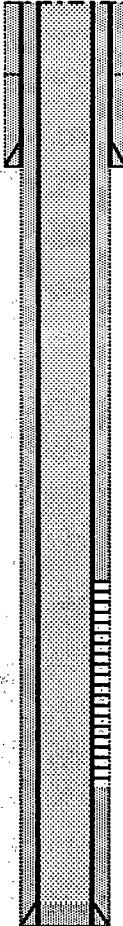
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HCL, 54K GAL HEATED GEL, 5K GAL COLD ACID

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,705**

STAGE 1: CMT 325 SX H / STAGE 2: LEAD W/ 300 SX P, TAIL W/ 550 SX H, CIRC 150 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 351
API# 3001532785**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 360**

CMT W/ 300 SX P, CIRC. 83 SX

PERF INTERVAL: 4,185-4,491'

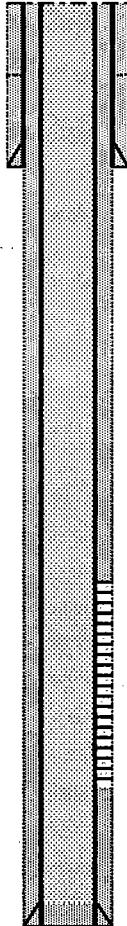
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,700**

CMT STAGE 1: 325 SX P / STAGE 2: LEAD 1000 SX H/L, TAIL 500 SX H, CIRC. 215 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 352
API# 3001532786**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 353**

CMT W/ 300 SX P, DID NOT CIRC.

PERF INTERVAL: 4,176-4,426'

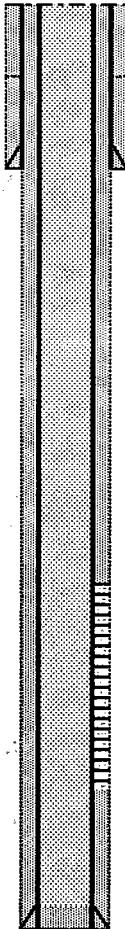
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,651**

CMT STAGE 1: 300 SX H / STAGE 2: LEAD 250 SX H/L, TAIL 450 SX H, CIRC. 114 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 354
API# 3001532788**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 357
CMT W/ 300 SX P, CIRC. 83 SX**

PERF INTERVAL: 4,148-4,461'

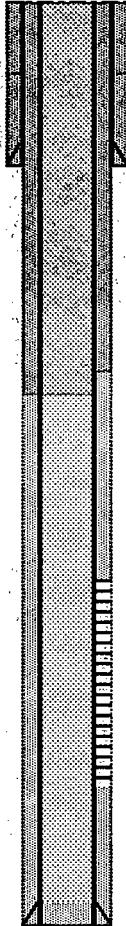
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,718**

CMT STAGE 1: 325 SX H / STAGE 2: LEAD 400 SX H/L, TAIL 500 SX H, CIRC. 250 SX

COG OPERATING LIMITED LIABILITY CORP

Lease & Well # BURCH KEELY UNIT 355
API# 3001532789



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 357**

CMT W/ 300 SX P, DID NOT CIRC.

PERF INTERVAL: 4,181-4,465"

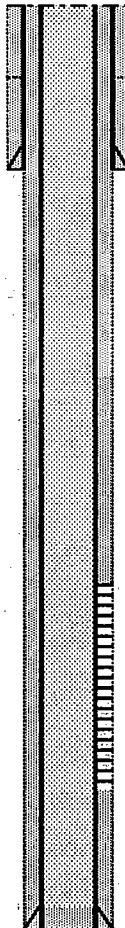
COMPLETION METHOD: 3,500 GAL 20% HCL HOT, 5400 GAL HOT GEL, 5000 GAL 15% ACID COLD.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,733**

CMT STAGE 1: 375 SX H / STAGE 2: LEAD 425 SX H/L, TAIL 640 SX H, CIRC. 210 SX.

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 357
API# 3001532915**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 361**

CMT W/ 300 SX P, CIRC. 84 SX

PERF INTERVAL: 4,233-4,518'

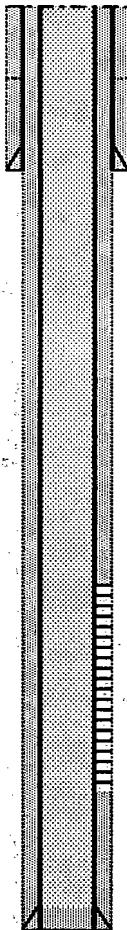
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,699'**

CMT STAGE 1: 310 SX H / STAGE 2: LEAD 500 SX H/L, TAIL 500 SX H, CIRC. 56 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 358
API# 3001532916**



PERF INTERVAL: 4,237-4,587'

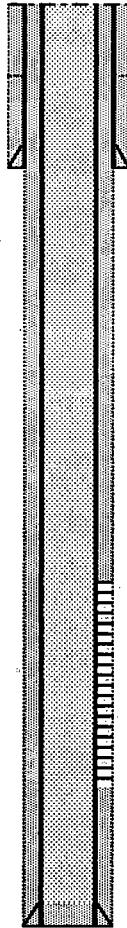
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,818**

CMT STAGE 1: 325 SX H / STAGE 2: LEAD 350 SX H/L, TAIL 560 SX H/L, CIRC. 157 SX.

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 359
API# 3001532969**



PERF INTERVAL: 4,183-4,484'

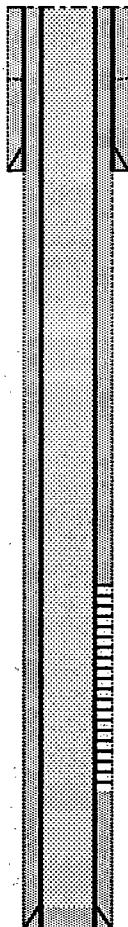
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,728**

CMT STAGE 1: 350 SX H / STAGE 2: LEAD 500 SX H/L, TAIL 600 SX H, CIRC. 215 SX.

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 360
API# 3001532970**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 405**

CMT W/ 300 SX P, DID NOT CIRC.

PERF INTERVAL: 4,249-4,479'

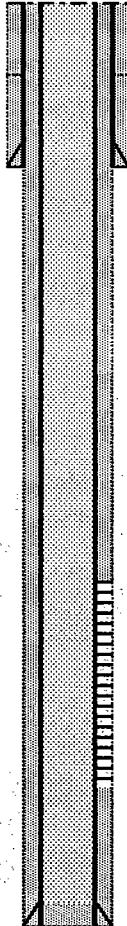
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,729**

CMT STAGE 1: CMT 325 SX H / STAGE 2: LEAD W/ 350 SX H/L, TAIL W/ 500 SX H, CIRC 211 SX

COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 362
API# 3001532971**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 404'
CMT W/ 100 SX THIXO, 300 SX P, DID NOT CIRC.**

PERF INTERVAL: 4,286-4,570'

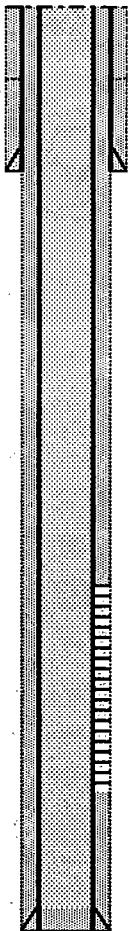
COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,836'**

CMT STAGE 1: 325 SX H / STAGE 2: DVT DID NOT OPEN

COG OPERATING LIMITED LIABILITY CORP

Lease & Well # BURCH KEELY UNIT 379
API# 3001533816



12-1/4" HOLE
8-5/8" 24# J55 SET @ 393

CMT W/ 300 SX P, CIRC. 63 SX

PERF INTERVAL: 4,193-4,515'

COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

7-7/8" HOLE
5-1/2" 17# JE SET @ 4,716

CMT STAGE 1: 430 SX H / STAGE 2: LEAD 580 SX H, CIRC. 100 SX.

COG Operating, LLC

Lease & Well

3001533812

Spud date 11-19-05

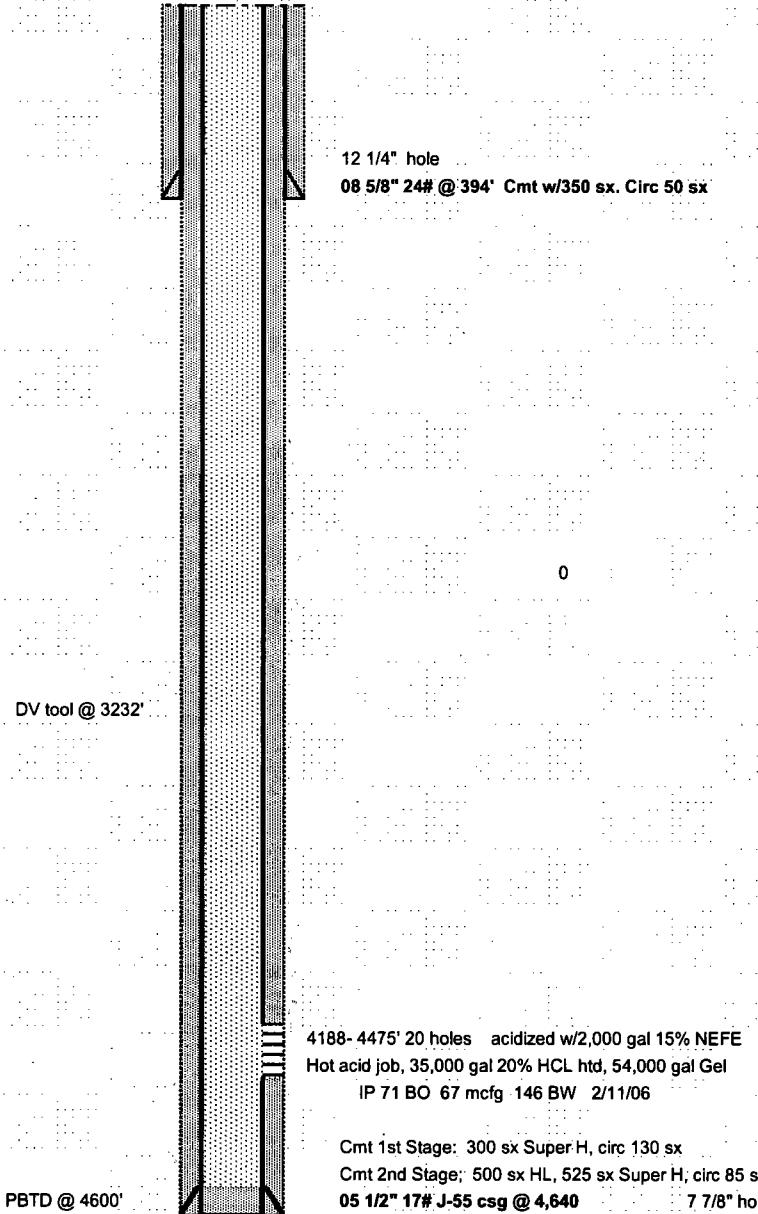
Completion date 11/27/05

Elevation - 3618'

Burch Keely Unit 387

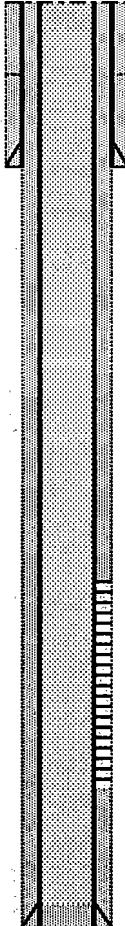
Sec 24 T17S R29E, 330 FNL & 330 FEL Unit A

EDDY CO., NM



COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 388
API# 3001533815**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 393'**

CMT W/ 300 SX P, DID NOT CIRC.

PERF INTERVAL: 4,183-4,520'

COMPLETION METHOD: ACIDIZE W/ 35K GAL 20% HOT HCL, 5K GAL 15% COLD ACID.

**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,691'**

CMT STAGE 1: 375 SX H / STAGE 2: LEAD 550 SX H/L, TAIL 575 SX H, CIRC. 165 SX.

COG Operating, LLC

Lease & Well

3001535440

Spud date 7-13-07

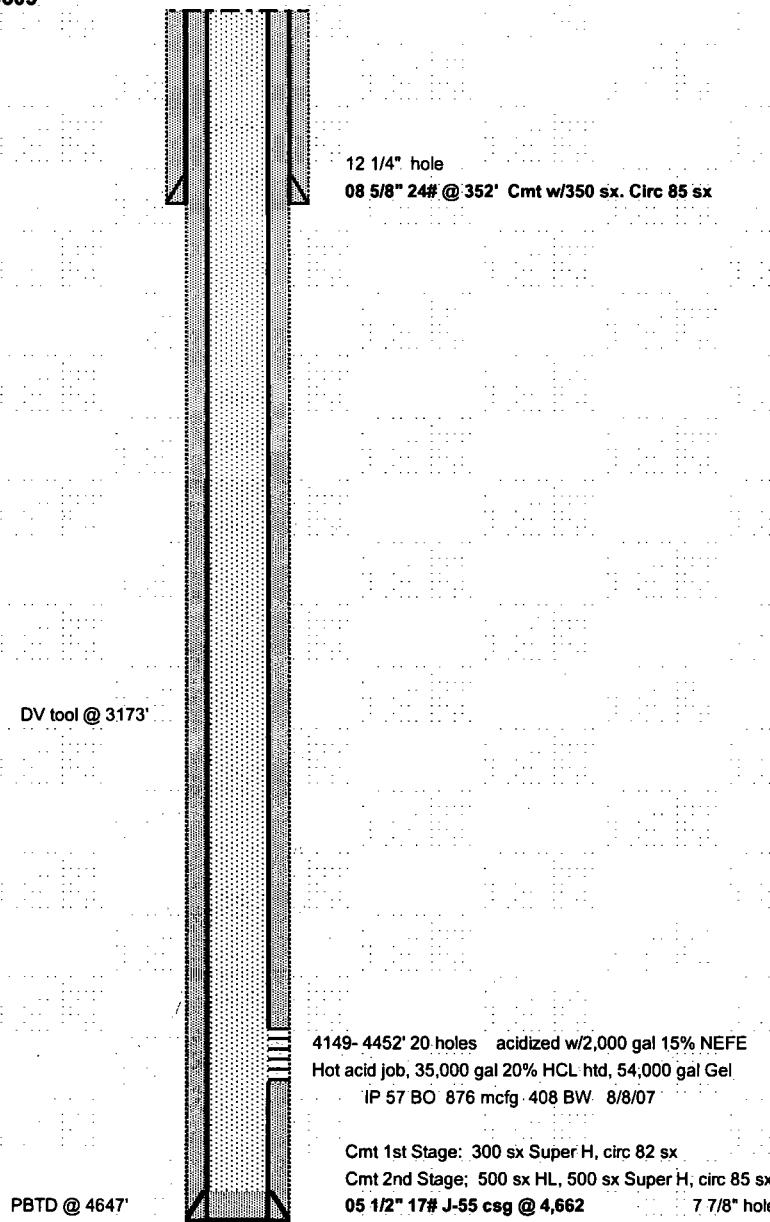
Completion date 8/2/07

Elevation - 3609

Burch Keely Unit 402

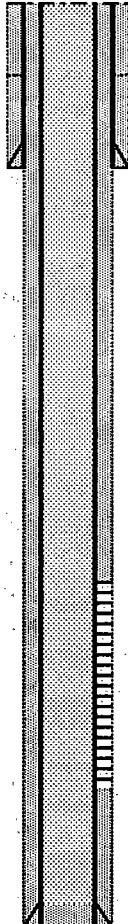
Sec 24 T17S R29E, 1170 FNL & 290 FEL Unit A

EDDY CO., NM



COG OPERATING LIMITED LIABILITY CORP

**Lease & Well # BURCH KEELY UNIT 403
API# 3001535441**



**12-1/4" HOLE
8-5/8" 24# J55 SET @ 354
CMT W/ 300 SX P, CIRC. 83 SX**

PERF INTERVAL: 4,217-4,526'

**COMPLETION METHOD: ACIDIZE W/ 54K GAL 20% HOT HCL, 54K GAL WF 40# GEL, 5K GAL 15%
COLD ACID.**

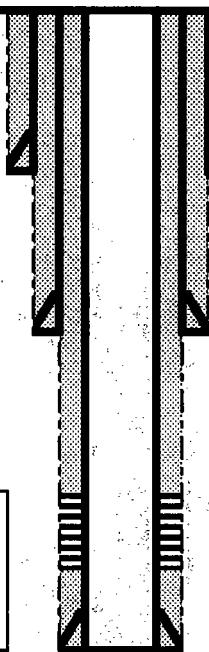
**7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,687**

CMT STAGE 1: 300 SX H / STAGE 2: LEAD 400 SX H/L, TAIL 450 SX H, CIRC. 141 SX.

Well: Burch Keely Unit #542

API#: 30-015-39521

Formation: Paddock



Surface
13-3/8" H40 48# csg set @ **315** ft
Circulated **25** sks
TOC @ **0**

Intermediate
8-5/8" J55 24# csg set @ **1,072** ft
Circulated **197** sks
TOC @ **0**

Completed with:
Frac w/ 104k gals X-linked, 117k# 16/30
Brown, 19k# SLC

Perfs:
4,180 - 4,500'

Production

5-1/2" J55 17# csg set @ **4,663** ft
ID: **4.892**
Drift ID: **4.767**

Cemented with: Lead: 500 sx Class C / Tail: 400 sx Class C

Circulated **197** sks
TOC @ **0** ft

Field

Empire

	Location:
Footage:	
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

History			
	no deviation greater than 1.5%		
	Proposed		
Joints	Tubing Detail (top to bottom)	Footage	Depth
	Description		
	KB	12	12
122	2-7/8" J-55, 6.5# tbg	3,965.00	3,977.00
1	2-7/8" Marker Joints	2	3,979.00
2	2-7/8" J-55, 6.5# tbg	65	4,044.00
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,046.80
13	2-7/8" J-55, 6.5# tbg	422.50	4,469.30
1	2-7/8" SN	1.1	4,470.40
1	2-7/8" Cavins Desander D2711-G	19.30	4,489.70
2	2-7/8" J-55 tbg Mud Anchor w/ mule shoe	65.50	4,555.20
			4,555.20

Pumping Unit	Rod Detail (top to bottom)		
	Weatherford 320-305-120		
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
2	7/8" Norris 90 steel pony rods	18.00	44
166	7/8" Norris 90 steel rods	4,150.00	4,194
12	1" Sinker Bars	300	4,494
1	1" X 1" Lift Sub	1	4,495
1	2-1/2" X 1-1/2" X 20' RHBC-HVR Pump (GYS)	20	4,515
		1	4,516
			4,516

Joints	Tubing Detail (top to bottom)	Footage	Depth

Pumping Unit	Rod Detail (top to bottom)		
	Weatherford 320-305-120		
Rods	Description	Footage	Depth

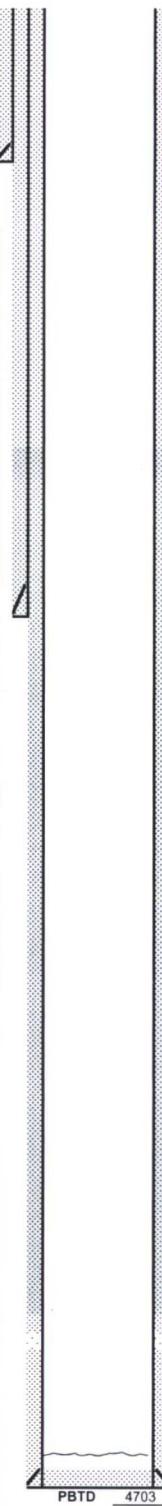
Burch Keely Unit #545

Reservoir: Paddock

Well ID Info:	
API No:	30-015-40322
Spud Date:	8/14/2012

Surf Csg:	13-3/8" H-40, 48#, STC, 8RD
Set @	263
Cement w/	400 sxs CI C 2% CaCl
circ.	201 sxs

Inter Csg:	8-5/8" J-55, 24#, 8RD STC
Set @	1066
Cement w/	300 sxs CI C 50:50:10 + CI C 25 CaCl
circ.	116 sxs



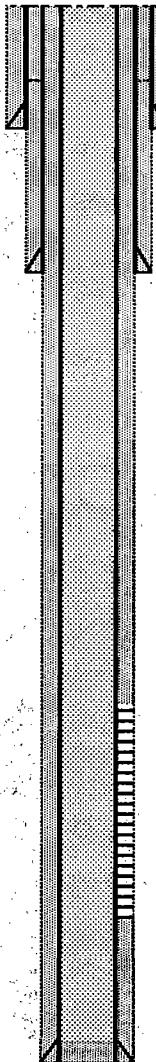
Paddock 4170 - 4420', 180 degr ph, 1 JSPF, .41 dia.

Prod Csg:	5-1/2", 17#, J-55, 8RD LT&C
Set @	4749
Cement w/	500 sxs CI C 5% salt + 400 sxs CI C 1% FL25
circ.	225 sxs

PBTD 4703
TD 4751

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 580
API# 3001540270



17-1/2" HOLE
13-3/8" 48# H40 SET @ 351
CMT W/ 400 SX C, CIRC. 20 SX

11 HOLE
8-5/8" 24# J55 SET @ 945
CMT W/ 500 SX C LEAD, 200 SX C TAIL, CIRC. 41 SX

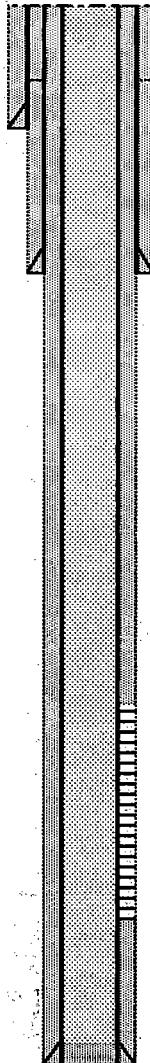
PERF INTERVAL: 4,180-4,430'

COMPLETION METHOD: FRAC W/ 104,226 GAL GEL, 115,999# 16/30 BROWN, 14,994# 16/30 CRC

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,669
CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 170 SX

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 581
API# 3001540271



PERF INTERVAL: 4,270-4,470'

COMPLETION METHOD: FRAC W/ 100,143 GAL GEL, 103,127# 16/30 BROWN, 16,718# 16/30 SLC

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,672

CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 112 SX.

Field

Empire

Location:	
Footage:	
Section:	
Block:	
Survey:	
County: Eddy County, NM	
Elevations:	
GL:	
KB: 12	
KB Calc: 12	

History	
<i>No Deviation greater than 2 degrees</i>	

Proposed

Tubing Detail (top to bottom)

Joints	Description	Footage	Depth
	KB	12	12
125	2-7/8" J-55, 6.5# tbq	4,062.50	4,074.50
1	2-7/8" Marker Joints	2	4,076.50
2	2-7/8" J-55, 6.5# tbq	65	4,141.50
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,144.30
12	2-7/8" J-55, 6.5# tbq	390.00	4,534.30
1	2-7/8" SN	1.1	4,535.40
1	2-7/8" Cavins Desander D-2707G	19.30	4,554.70
1	2-7/8" J-55 tbq w/ BP	33.00	4,587.70
			4,587.70

Pumping Unit	Rod Detail (top to bottom)	Weatherford 320-305-120
	Rods	Description
1	1-1/2" X 26'	Spray Metal Polish Rod
169	7/8" Norris 90 steel rods	4,225.00
12	1-1/2" Sinker Bars	300
1	1" X 1' Lift Sub	1
1	2-1/2" X 1-1/2" X 20' RHBC-HVR Pump (GYS)	20
	TRASH	
		4,572

Joints	Tubing Detail (top to bottom)	Footage	Depth

Pumping Unit	Rod Detail (top to bottom)	Weatherford 320-305-120
	Rods	Description
		Footage
		Depth

Burch Keely Unit #582

Reservoir: Yeso

Well ID Info:	
API No:	30-015-40272
Spud Date:	6/14/2012

Surf Csg:	13-3/8" H-40, 48#, STC, 8RD
Set @	335
Cement w/	50 sxs Cl C 2% CaCl + 300 Cl H 8% A-10 + 250 sxs Cl C 4% Bentonite+ 400 sxs Cl C 2% CaCl
circ.	688 sxs

Inter Csg:	8-5/8" J-55, 24#, 8RD STC
Set @	1070
Cement w/	300 sxs Cl C 5% Salt + 200 sxs Cl C 2%CaCl
circ.	195 sxs

Paddock 4244 - 4536', 1 SPF, .34 dia., 180 ph

Prod Csg:	5-1/2", 17#, J-55, 8RD LT&C
Set @	4657
Cement w/	500 sxs Cl C .5% SMS + 400 sxs Cl C 1% FL-25
circ.	300 sxs

PBTD 4612
TD 4659

Field

Empire**Burch Keely Unit #584**

Reservoir: Yeso

Footage:	Location:
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

History	
	No Deviation greater than 2 degrees

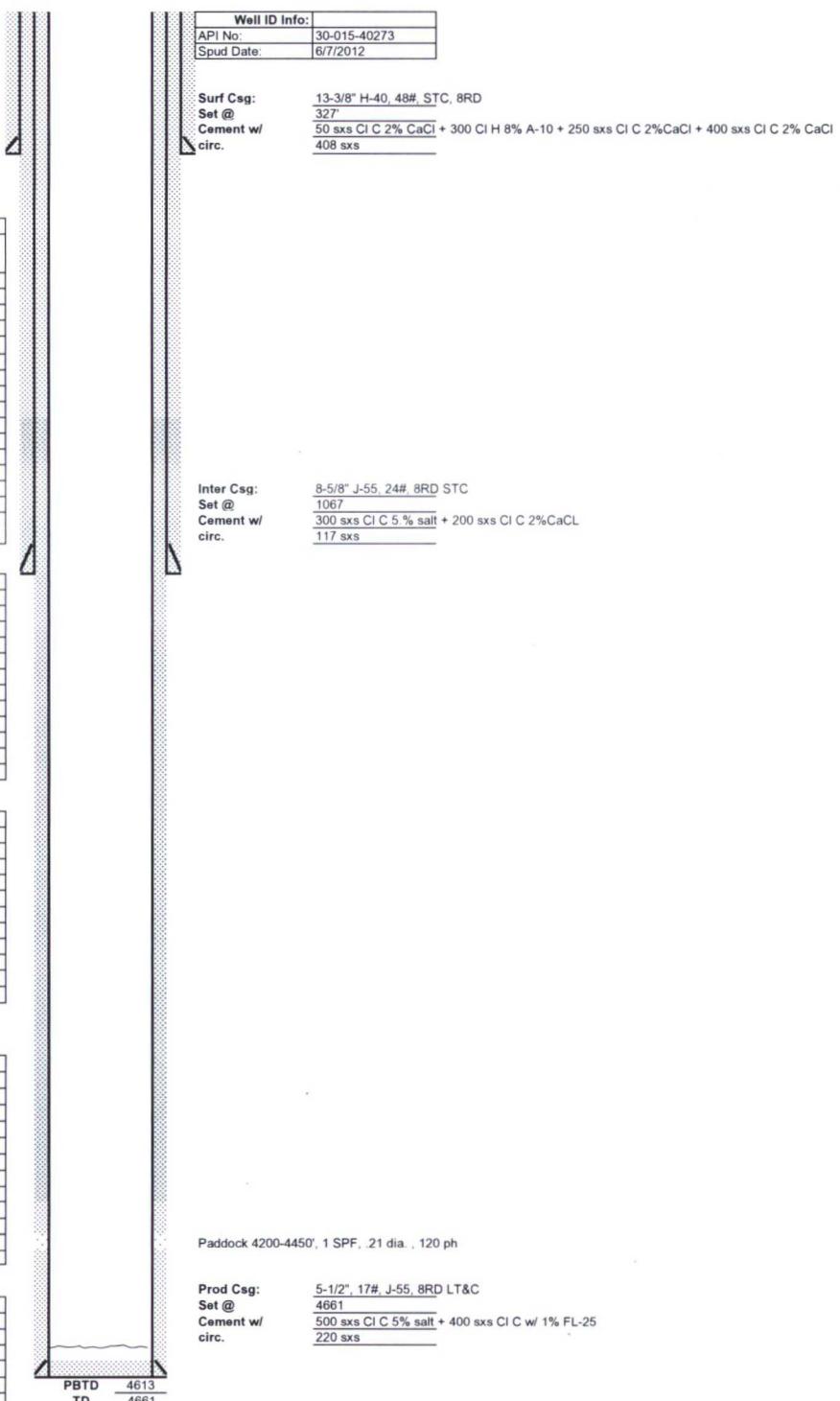
Proposed

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12
125	2-7/8" J-55, 6 5# tbq	4,062.50	4,074.50
1	2-7/8" Marker Joints	2	4,076.50
2	2-7/8" J-55, 6 5# tbq	65	4,141.50
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,144.30
10	2-7/8" J-55, 6 5# tbq	325.00	4,469.30
1	2-7/8" SN	1.1	4,470.40
1	2-7/8" Cavins Desander D-2707G	19.30	4,489.70
2	2-7/8" J-55 tbq w/ BP	65.50	4,555.20
			4,555.20

Rod Detail (top to bottom)			
Pumping Unit	Weatherford 320-305-120		
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
169	7/8" Norris 90 steel rods	4,225.00	4,251
12	1-1/2" Sinker Bars	300	4,551
1	1" X 1' Lift Sub	1	4,552
1	2-1/2" X 1-1/2" X 20' RHBC-HVR Pump (GYS)	20	4,572
	TRASH		

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth

Rod Detail (top to bottom)			
Pumping Unit	Weatherford 320-305-120		
Rods	Description	Footage	Depth



Field

Empire**Burch Keely Unit #585**

Reservoir: Yeso

	Location:
Footage:	
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

History	
No Deviation greater than 2 degrees	

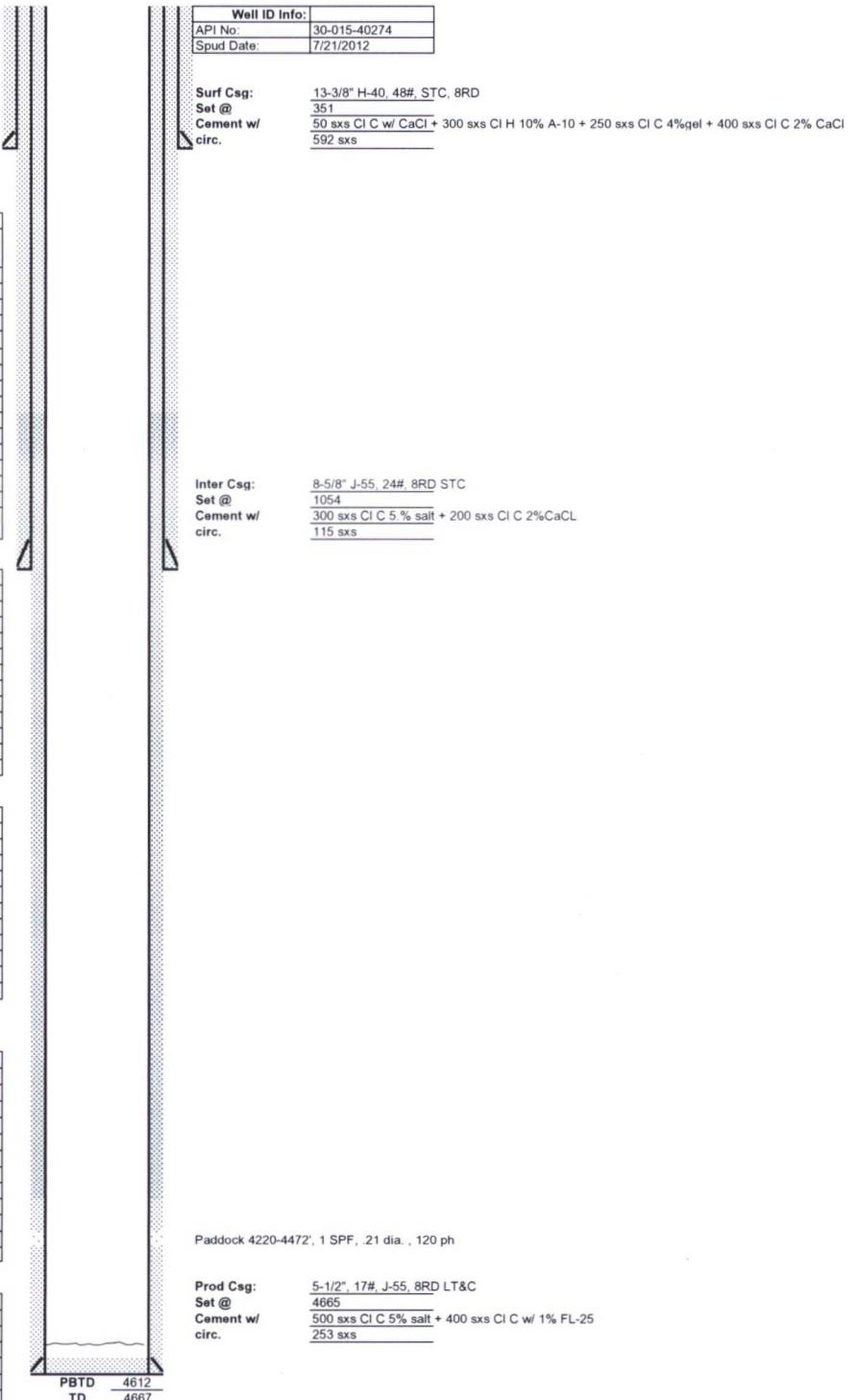
Proposed

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12
124	2-7/8" J-55, 6.5# tbq	4,030.00	4,042.00
1	2-7/8" Marker Joints	2	4,044.00
2	2-7/8" J-55, 6.5# tbq	65	4,109.00
1	2-7/8 X 5-1/2" Tubing Anchor	2.80	4,111.80
12	2-7/8" J-55, 6.5# tbq	390.00	4,501.80
1	2-7/8" SN	1.1	4,502.90
1	2-7/8" Cavins Desander D-2711G	19.30	4,522.20
1	2-7/8" J-55 tbq w/ BP	33.00	4,555.20
			4,555.20

Rod Detail (top to bottom)			
Pumping Unit	Weatherford 320-305-120		
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
168	7/8" Norris 90 steel rods	4,200.00	4,226
12	1-1/2" Sinker Bars	300	4,526
1	1" X 1' Lift Sub	1	4,527
1	2-1/2" X 1-1/2" X 20' RHBC-HVR Pump (GYS)	20	4,547
	TRASH		

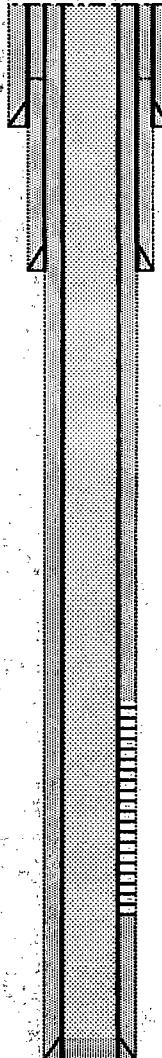
Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth

Rod Detail (top to bottom)			
Pumping Unit	Weatherford 320-305-120		
Rods	Description	Footage	Depth



COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 586
API# 3001539908



17-1/2" HOLE
13-3/8" 48# H40 SET @ 307
CMT W/ 400 SX C, CIRC. 134 SX

11 HOLE
8-5/8" 24# J55 SET @ 1096
CMT W/ 300 SX C LEAD, 200 SX C TAIL, CIRC. 165 SX

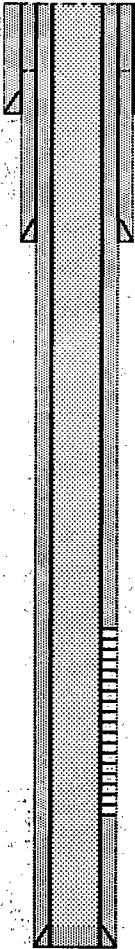
PERF INTERVAL: 4,110-4,360'

COMPLETION METHOD: FRAC W/ 103,674 GAL GEL, 114,215# 16/30 BROWN, 16,763# 16/30
SIBERPROP

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,653
CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 228 SX

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 588
API# 3001540702



17-1/2" HOLE
13-3/8" 48# H40 SET @ 304'

CMT STAGE 1: 50 SX C LEAD, 300 SX C TAIL / STAGE 2: 250 SX C LEAD, 350 SX C TAIL, CIRC. 444 SX.

11" HOLE
8-5/8" 24# J55 SET @ 1064

CMT W/ 300 SX C LEAD, 200 SX C TAIL, CIRC. 195 SX.

PERF INTERVAL: 4,204-4,454'

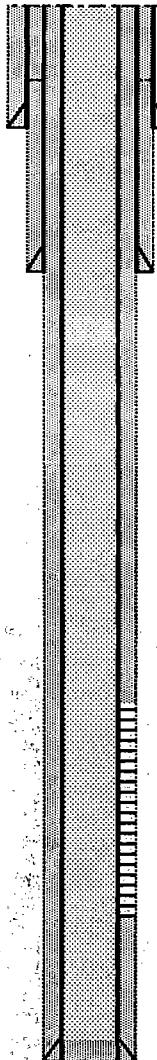
COMPLETION METHOD: FRAC W/ 103K GAL GEL, 113K # 16/30 BROWN, 17K # SP.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,674.

CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 283 SX

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 626
API# 3001540276



17-1/2" HOLE
13-3/8" 54.5# J55 SET @ 269
CMT W/ 400 SX C, CIRC. 146 SX

11" HOLE
8-5/8" 32# J55 SET @ 1049
CMT W/ 300 SX C LEAD, 200 SX C TAIL, CIRC. 137 SX.

PERF INTERVAL: 4,173-4,523'

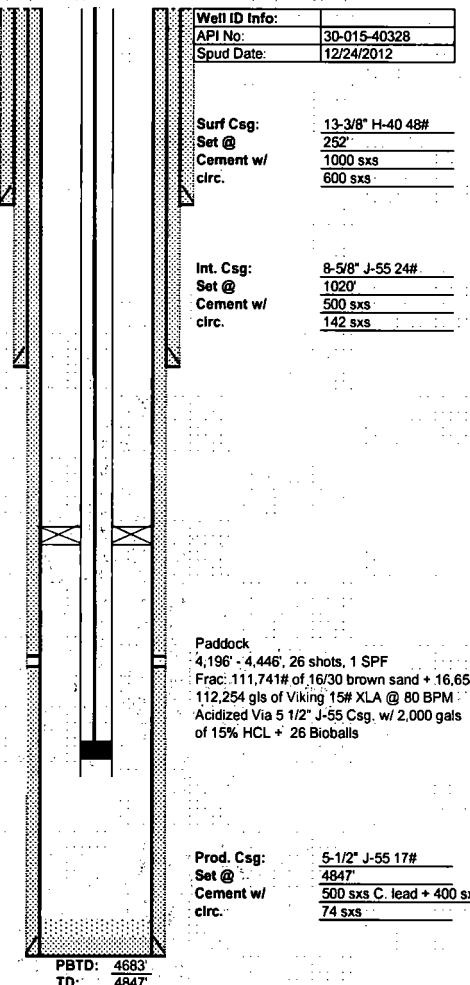
COMPLETION METHOD: FRACED W/ 4,850 BBLS GEL, 224,125# 16/30 BRADY, 26,420# 16/30 SLC.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,774
CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 212 SX.

COG Operating LLC

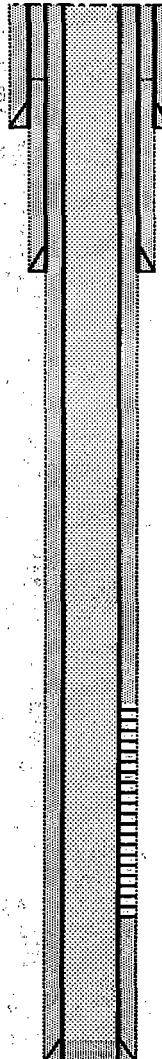
Field	Empire
Footage:	909' FNL 149' FEL
Section:	Sec 24 - T17S - R29E
Block:	Unit A
NM Lease:	NMMNM-88525X
Completed:	1/15/2013
Reservoir:	Paddock
County:	Eddy County, NM
GL:	3613'
KB:	3640'
KB Calc:	17'
Updated:	G Martin 01/15/2013
History	

Burch Keely Unit #640



COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 643
API# 3001539570



17-1/2" HOLE
13-3/8" 48# H40 SET @ 321
CMT W/ 50 SX C, 300 SX H, 250 SX C, 400 SX C, CIRC. 400 SX

11" HOLE
8-5/8" 24# J55 SET @ 1220
CMT W/ LEAD: 300 SX C, TAIL: 200 SX C, CIRC. 180 SX

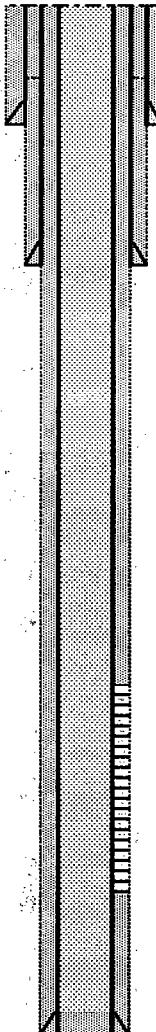
PERF INTERVAL: 4,230-4,480'

COMPLETION METHOD: FRAC W/ 107,793 GALS GEL, 107,698# 16/30 BROWN, 13,585# 16/30
SIBERPROP

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,660
CMT W/ LEAD: 500 SX C / TAIL 400 SX C, CIRC. 151 SX

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 644
API# 3001539571



17-1/2" HOLE
13-3/8" 48# H40 SET @ 326

CMT STAGE 1: 300 SX H LEAD, 250 SX CLASS C TAIL / STAGE 2: 400 SX CLASS C, CIRC. 551 SX

11 HOLE
8-5/8" 24# J55 SET @ 1218

CMT W/ 300 SX C LEAD, 200 SX C TAIL, CIRC. 139 SX

PERF INTERVAL: 4260-4568'

COMPLETION METHOD: FRAC W/ 184,675 GALS GEL, 199,552# 16/30 BRADY, 27,123# 16/30 SIBERPROP.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,815

CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 255 SX.

Field

Empire**Burch Keely Unit #646**

Reservoir: Yeso

Location:	
Footage:	
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

Well ID Info:
API No: 30-015-40277
Spud Date: 7/20/2012

Surf Csg:	13-3/8" H-40, 48#, STC, 8RD
Set @	307
Cement w/	400 sxs CI C 2%CaCl
circ.	121 sxs

History	
	No Deviation greater than 1.5 degrees

Proposed

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12
125	2-7/8" J-55, 6.5# tbq	4,062.50	4,074.50
1	2-7/8" Marker Joints	2	4,076.50
2	2-7/8" J-55, 6.5# tbq	65	4,141.50
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,144.30
10	2-7/8" J-55, 6.5# tbq	325.00	4,469.30
1	2-7/8" SN	1.1	4,470.40
1	2-7/8" Cavins Desander/Gas Sep D2711-G	19.3	4,489.70
2	2-7/8" Mud Anchor	65.00	4,554.70
			4,554.70

Inter Csg:	8-5/8" J-55, 24#, 8RD STC
Set @	1098
Cement w/	300 sxs CI C gel + 5% salt + 200 sxs CI C 2% CaCl
circ.	153 sxs

Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
1	7/8" Norris 90 steel pony rods	12	38
167	7/8" Norris 90 steel rods	4175	4213
12	1-1/2" Sinker Bars	300	4513
1	1" X 1' Lift Sub	1	4514
1	2-1/2" X 1-1/2" X 20' Trash Pump	20	4534
			4534

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12

Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth

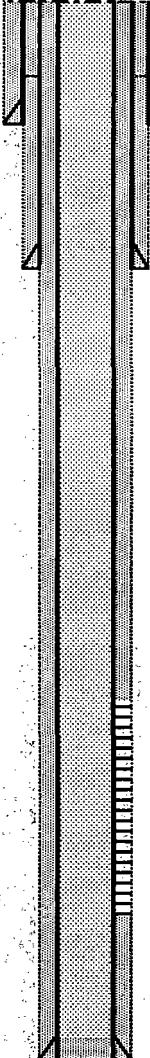


Prod Csg:	5-1/2", 17#, J-55, 8RD LT&C
Set @	4668
Cement w/	500 sxs 35.65.6C + 400sxs 50.50.2C
circ.	151 sxs

PBTD 4614
TD 4668

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 651
API# 3001540278



PERF INTERVAL: 4,189-4,464'

COMPLETION METHOD: FRAC W/ 107K GAL GEL, 114K # 16/30 BROWN, 9.5K # SP.

Field

Empire**Burch Keely Unit #652**

Reservoir: Yeso

	Location:
Footage:	
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

History	
	No Deviation greater than 1.5 degrees

Proposed

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12
123	2-7/8" J-55, 6.5# tbq	3,997.50	4,009.50
1	2-7/8" Marker Joints	2	4,011.50
2	2-7/8" J-55, 6.5# tbq	65	4,076.50
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,079.30
12	2-7/8" J-55, 6.5# tbq	390.00	4,469.30
1	2-7/8" SN	1.1	4,470.40
1	2-7/8" Cavins Desander D2707-G	19.68	4,490.08
2	2-7/8" Mud Anchor	65.00	4,555.08
			4,555.08

Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
1	7/8" Norris 90 steel pony rods	12	38
166	7/8" Norris 90 steel rods	4150	4188
12	1-1/2" Sinker Bars	300	4488
1	1" X 1' Lift Sub	1	4489
1	2-1/2" X 1-1/2" X 20' Trash Pump	20	4509
			4509

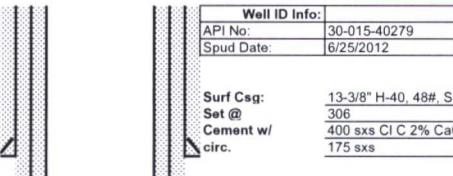
Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12	12

Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth

Updated: P. Porter 7/18/12

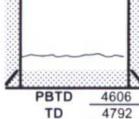
Burch Keely Unit #652

Reservoir: Yeso



Surf Csg: 13-3/8" H-40, 48#, STC, 8RD
Set @ 306
Cement w/
circ. 400 sxs Cl C 2% CaCl
175 sxs

Inter Csg: 8-5/8" J-55, 24#, 8RD STC
Set @ 1030
Cement w/
circ. 300 sxs 50:50:10.5% SALT + 200 sxs Cl C 2% CaCl
197 sxs



Prod Csg: 5-1/2", 17#, J-55, 8RD LT&C
Set @ 4790
Cement w/
circ. 500 sxs 35:65:2% SMS + 400 sxs 50:50:2 1% FL-25
225 sxs

Field Empire

Location:	
Footage:	
Section:	
Block:	
Survey:	
County:	Eddy County, NM
Elevations:	
GL:	
KB:	12
KB Calc:	12

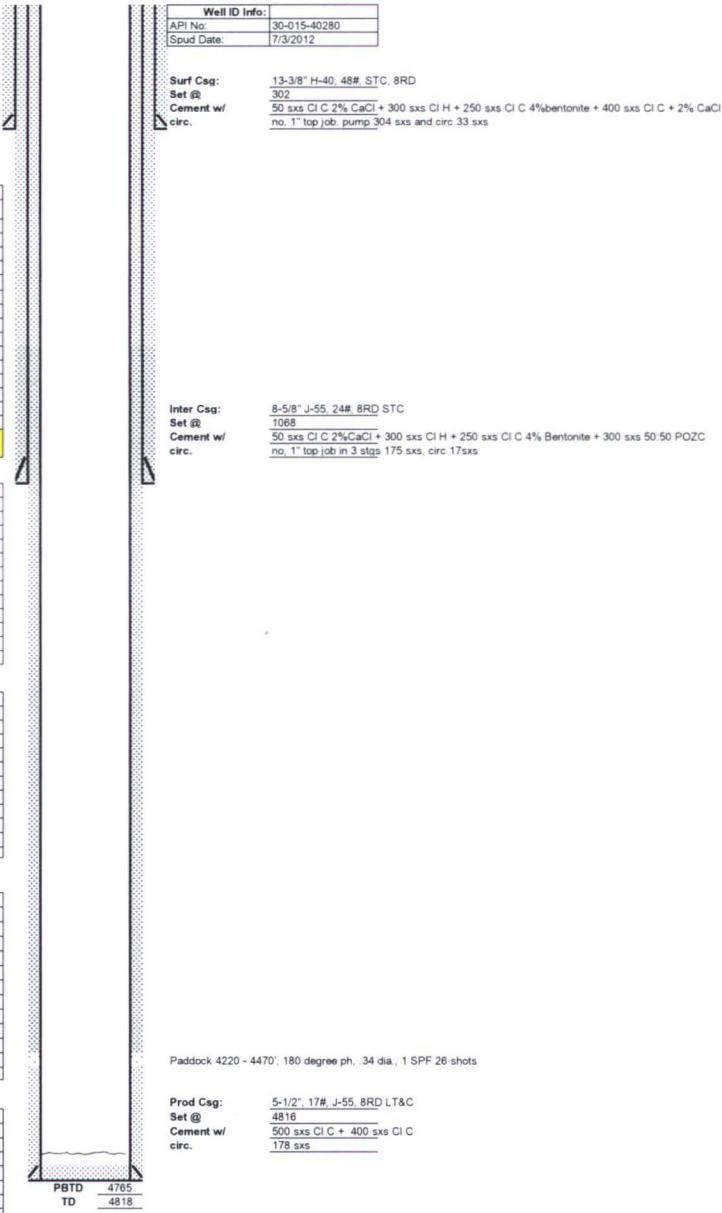
History			
No Deviation greater than 1.5 degrees			
Proposed			
Joints	Description	Footage	Depth
KB		12	12
125	2-7/8" J-55 6 5# tbq	4,062.50	4,074.50
1	2-7/8" Marker Joints	2	4,076.50
2	2-7/8" J-55 6 5# tbq	65	4,141.50
1	2-7/8" X 5-1/2" Tubing Anchor	2.80	4,144.30
11	2-7/8" J-55 6 5# tbq	357.50	4,501.80
1	2-7/8" SN	1.1	4,502.90
1	2-7/8" Cavins Desander D2707-G	19.68	4,522.58
2	2-7/8" Mud Anchor	65.00	4,587.58

Pumping Unit	Rod Detail (top to bottom)		
Weatherford 320-305-120			
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
1	7/8" Norms 90 steel pony rods	12	38
168	7/8" Norms 90 steel rods	4200	4238
12	1-1/2" Sinker Bars	300	4538
1	1" X 1" Lift Sub	1	4539
1	2-1/2" X 1-1/2" X 20' Trash Pump	20	4559
			4559

Joints	Description	Footage	Depth
KB		12	12

Pumping Unit	Rod Detail (top to bottom)		
Weatherford 320-305-120			
Rods	Description	Footage	Depth

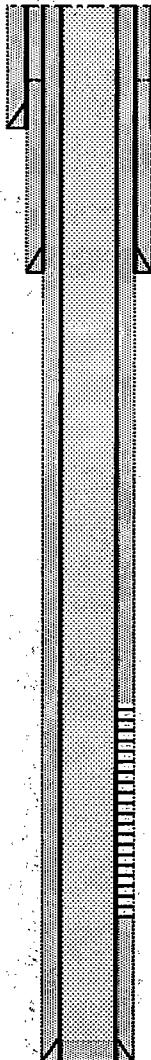
Burch Keely Unit #654 Reservoir: Yeso



Updated: P. Porter 7/26/12

COG OPERATING LLC

Lease & Well # BURCH KEELY UNIT 906
API# 3001540887



17-1/2" HOLE
13-3/8" 54# J55 SET @ 264

CMT W/ 400 SX C, CIRC. 125 SX

11" HOLE
8-5/8" 24# J55 SET @ 1041

CMT W/ 300 SX C LEAD, 200 SX C TAIL, CIRC. 235 SX.

PERF INTERVAL: 4,200-4,500'

COMPLETION METHOD: FRAC W/ 4806 BBL GEL, 213K # 16/30 BRADY, 29K # SIL.

7-7/8" HOLE
5-1/2" 17# J55 SET @ 4,749

CMT W/ 500 SX C LEAD, 400 SX C TAIL, CIRC. 135 SX

Field

Empire

Location	
Footage:	995 FNL & 2289 FWL
Section:	Sec 19 T17S R30E
Block:	
Survey:	
County:	Eddy County, NM
Elevations	
GL:	3629
KB:	12
KB Calc:	3641

History			
9/1/12	First production		
12/28/12	Parted rod coupling. Samples sent in to lab and Weatherford		
No Deviation greater than 1.5 degree			
Actual			
Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth
	KB	12.0	12.0
127	2-7/8" J-55, 6.5# tbg	4,020.2	4,032.2
1	2-7/8" Marker Joints	2.0	4,034.2
2	2-7/8" J-55, 6.5# tbg	63.3	4,097.4
1	2-7/8" X 5-1/2" Tubing Anchor	2.8	4,100.2
13	2-7/8" J-55, 6.5# tbg	410.9	4,511.0
1	2-7/8" SN	1.1	4,512.1
1	2-7/8" slotted sub	4.1	4,516.2
1	2-7/8" mule shop	19.6	4,535.8

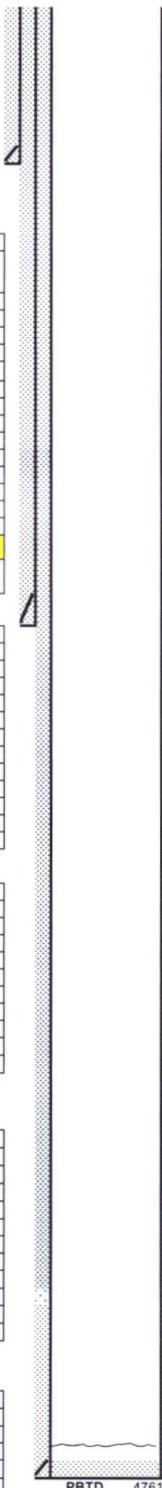
Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth
1	1-1/2" X 26' Spray Metal Polish Rod	26	26
3	7/8" Norris 90/KD steel pony rods	18	44
165	7/8" Norris 90/KD steel rods	4,125	4,169
12	1-1/2" Sinker Bars	300	4,469
1	1" X 1' Lift Sub	1	4,470
1	2.5 x 1.5 x 20' RHBC-HVR-TS Pump (GYS)	20	4,490

Tubing Detail (top to bottom)			
Joints	Description	Footage	Depth

Rod Detail (top to bottom)			
Weatherford 320-305-120			
Rods	Description	Footage	Depth

Burch Keely Unit #914

Reservoir: Yeso



Well ID Info:	
API No:	30-015-40300
Spud Date:	7/29/2012

Surf Csg: 13-3/8" H-40, 48#, STC, 8RD
Set @: 303
Cement w/ circ. 400 sxs CI C 2% CaCl
166 sxs

Inter Csg: 8-5/8" J-55, 24#, 8RD STC
Set @: 1071
Cement w/ circ. 300 sxs 50:50:10 + 5% salt 5# LCM + 200 sxs CI C 2% CaCl
150 sxs

Paddock 4200 - 4450', 26 shots, 1 SPF,

Prod Csg: 5-1/2", 17#, J-55, 8RD LT&
Set @: 4804
Cement w/ circ. 500 sxs CI C 5% salt 5# LCM + 400 sxs CI C 1% FL25
160 sxs

PBTD 4761
TD 4806

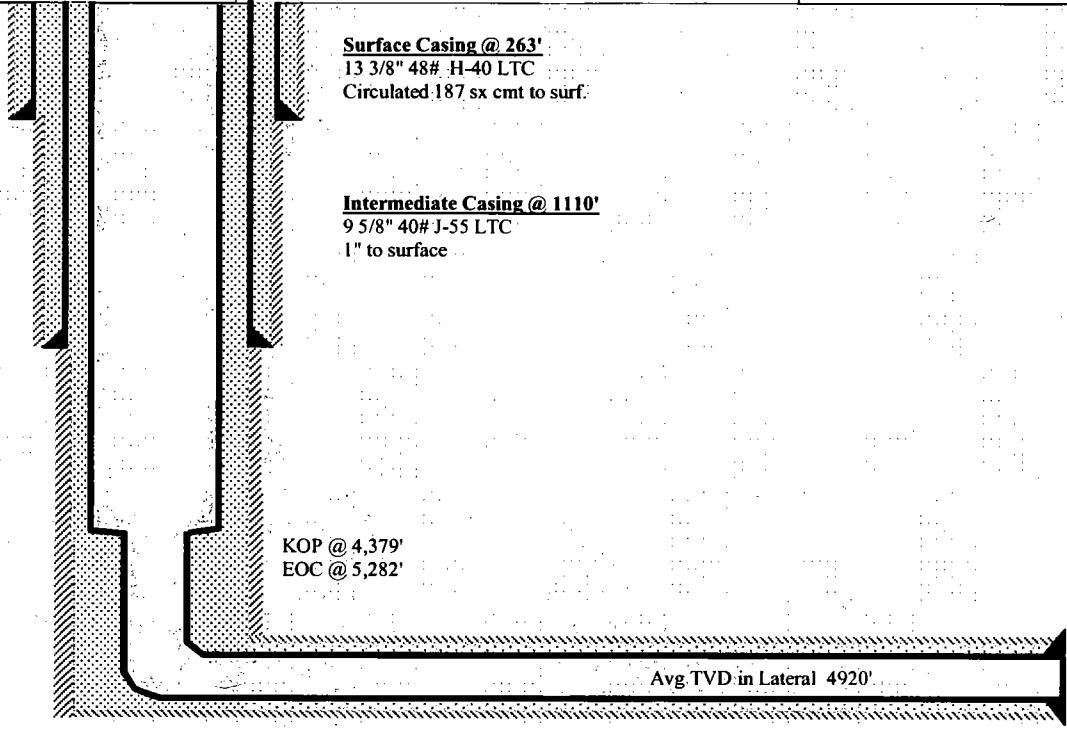


Wellbore at Rig Release

API: 30-015-4088
SPUD: 6/2/13
FRR: 6/16/13
RIG: United 40

Burch Keely Unit #936H
Empire East
Burch Keely-Glorieta-Upper Yeso Field
Eddy County, NM

Sec 13, T-17S, R-29E
SHL: 990' FSL & 330' FWL
BHL: 970' FSL & 350' FEL (est)
GL: 3,614'
KB: 3,628'



	HOLE SIZE	MW (ppg)	BLST (°F)	EVALUATION
	12-1/4"	8-3/4" x 7-7/8"	115 F	
	17-1/2"			

Updated by	S.Brumley
Date:	6/23/2013

COG Operating LLC
Well: Burch Keely Unit #945H
API#: 30-015-39578

X-over @ 4,288
KOP @ 4,413
45 degree @ 4,851 MD
4,801 VD

13-3/8" 48# J55 csg set @ 290 ft
Circulated 550 sx

9-5/8" 40# J55 csg set @ 1,195 ft
Circulated 181 sx

Completed formation: Upper Blinberry
Style: Plug and Perf
Completed with: 1,930,000 Lbs proppant
1,647,324 TLTR (gal)
Top Perf: 5,216 ft
Bottom Perf: 8,846 ft
Treated Lateral: 3,630 ft
Stages: 17
Lbs/ft: 532
Gals/ft: 454

Ports	
1	8846
2	8600
3	8332
4	8112
5	7854
6	7636
7	7375
8	7154
9	7030
10	6902
11	6652
12	6438
13	6177
14	5929
15	5717
16	5467
17	5216

EOC @ 5,283
PBTD @ 9,033

5-1/2" 17# LB0 x 7" 26# LB0 csg set @ 9,035 ft

5-1/2" ID: 4.892

5-1/2" Drift ID: 4.767

7" ID: 6.276

7" Drift ID: 6.151

Cemented w/:

Lead: 500 sx Class C (13.0 ppg / 1.83 yld), Tail: 400 sx Class C (14.2 ppg / 1.32 yld)

Circulated 107 sx
TOC @ 0 ft

Wellbore at Rig Release

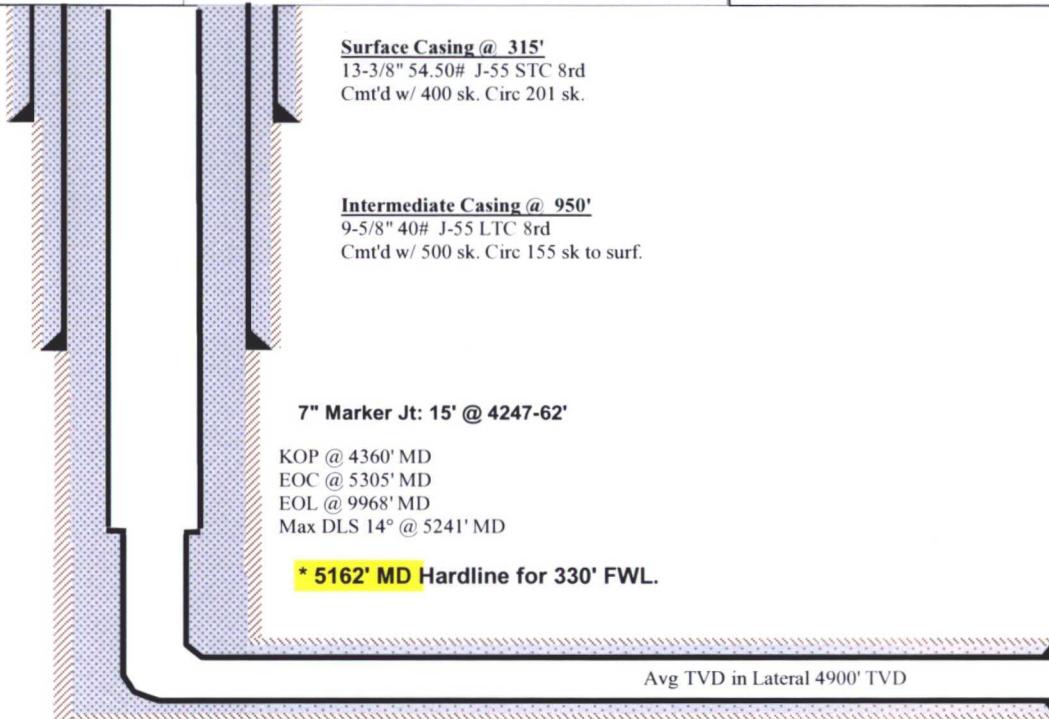
API: 30-015-42240
 SPUD: 9-3-14
 RR: 9-16-14
 RIG: United Drilling #43

Burch Keely Unit #954H
Empire Field
Glorietta-Yeso Field
Eddy County, NM
Upper Blinebry Formation

Surface Loc: Sec 23 ,T17S, R29E
 SHL: 507' FNL & 172' FEL

 Bottom Loc: Sec 24 T17S, R29E
 BHL: 332' FNL & 151' FEL
 GL: 3603'
 KB: 3617'

		HOLE SIZE	MW (ppg)	BHST (°F)	EVALUATION
		12-1/4"	8-3/4" x 7-7/8"	120 F	
		17-1/2"			



7" X 5-1/2" Production Tapered Casing @ 9946'

7" 29# L80 LTC 8rd Surface - 4353'
 5-1/2" 17# L80 LTC 8rd @ 4353 - 9946'
 Cmt'd w/1600 sk. Circ 199 sk.

FC @ 9899'
 7" Marker Joint 15' @ 4247-62'

Updated by	P Figel
Date:	9/17/2014

Note: Fluid in wellbore is 8.4# Fresh Water.

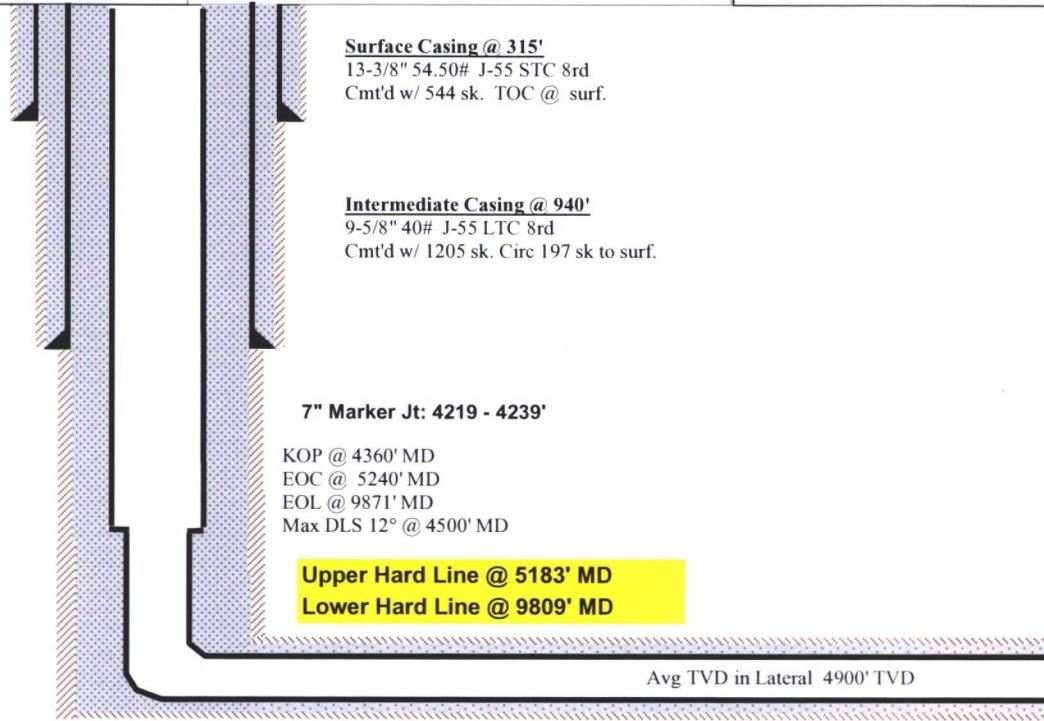
API: 30-015-42241
SPUD: 4-25-14
RR: 5-7-14
RIG: United Drilling #43

Burch Kelly Unit #956H
Empire
Glorietta-Yeso Field
Eddy County, NM

Surface Loc: Sec 23 ,T17S, R29E
SHL: 1650' FNL & 165' FEL

Bottom Loc: Sec 24, T17S, R29E
BHL: 1648' FNL & 290' FEL
GL: 3592'
KB: 3606'

HOLE SIZE	MW (ppg)	BHST (°F)	EVALUATION
12-1/4"	17-1/2"		
8-3/4" x 7-7/8"	105 F		



Updated by	P Figel
Date:	5/20/2014

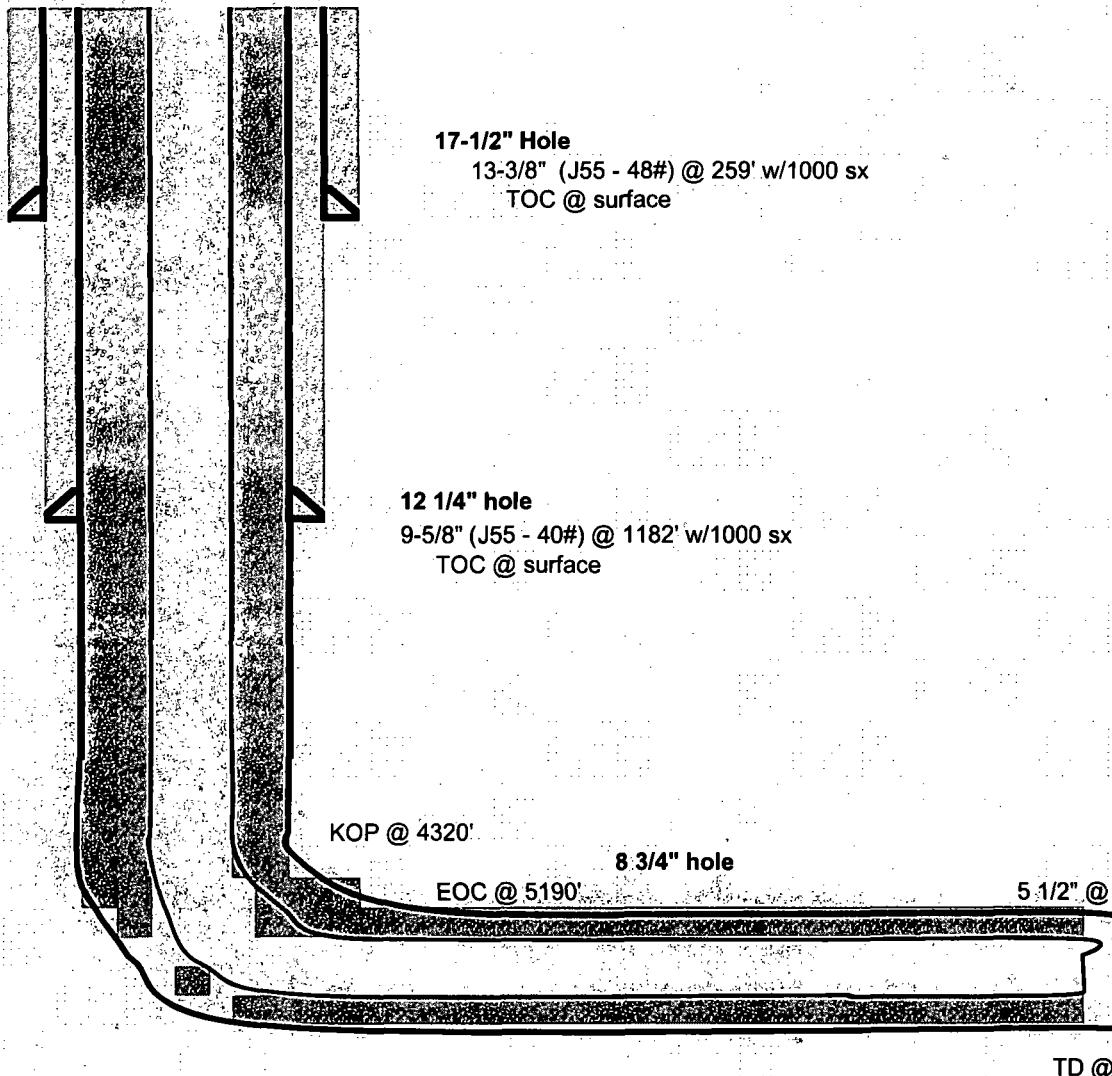
Note: Fluid in wellbore is 8.4# Fresh Water.

CONCHO

Author:	Dehnad
Well Name:	BKU
Field:	BKU
County:	Eddy
State:	NM
Date:	3/1/2012
GL:	3613'
KB:	3631'

Well No.: **963H**
 API #: 30-015-39576
 Prop #: _____
 Zone: Paddock

Description	O.D.	Grade	Weight	Depth	Cmt Sx	TOC
Surface Csg	13 3/8	J55	48	259	1000	Surface
Inter Csg	9 5/8	J55	36	1,182	1000	Surface
Prod Csg	5 1/2	L80	17	9,103	1,450	Surface



Sleeve depths - TMD

1 pump out plug	8,970
1 CMT sleeve	8,883
1 CMT sleeve	8,712
1 CMT sleeve	8,544

Perf depths - TMD

2	7960' - 8350'
3	7375' - 7765'
4	6790' - 7180'
5	6205' - 6595'
6	5620' - 6010'
7	5035' - 5425'

5.5" Composite Plug Depths - TMD

1	8448
2	7863
3	7863
4	7278
5	6693
6	6108
7	5523

COG Operating LLC

Lease & Well # **BKU #965H WBD**

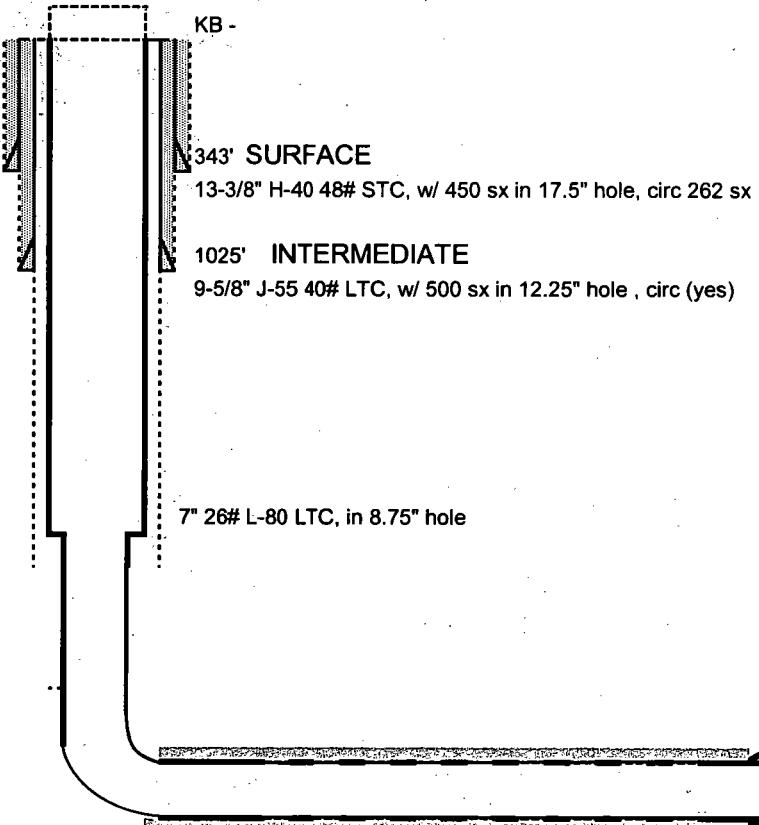
Spud - 02/08/2013

AFE# 000769

API # 30-015-40973

Elevation - 3622'

Unit H S19 T17S R30E, 2350 FNL, 493 FEL
Eddy, CO



Landed Curve

MD 5419' TVD 4947'

PRODUCTION

MD 8940' TVD 4,893' TOC calculated @ 7376'

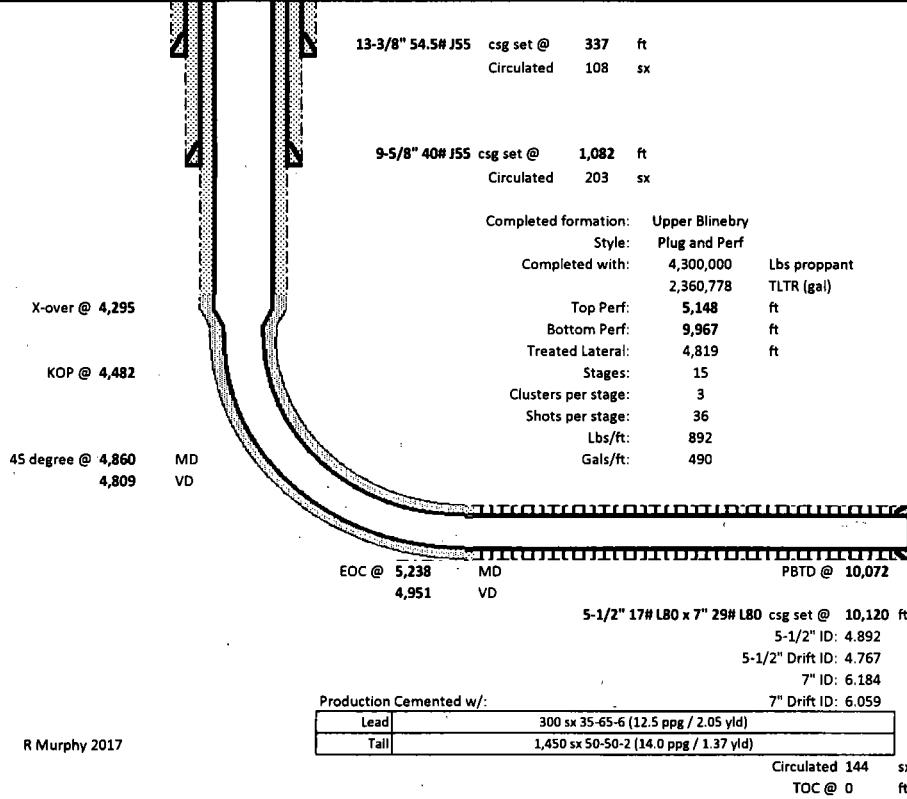
5-1/2" 17# L-80 LTC Hole: 7-7/8"

w/ 500sx Econocem 2.15Y, 400sx Versacem 1.32Y

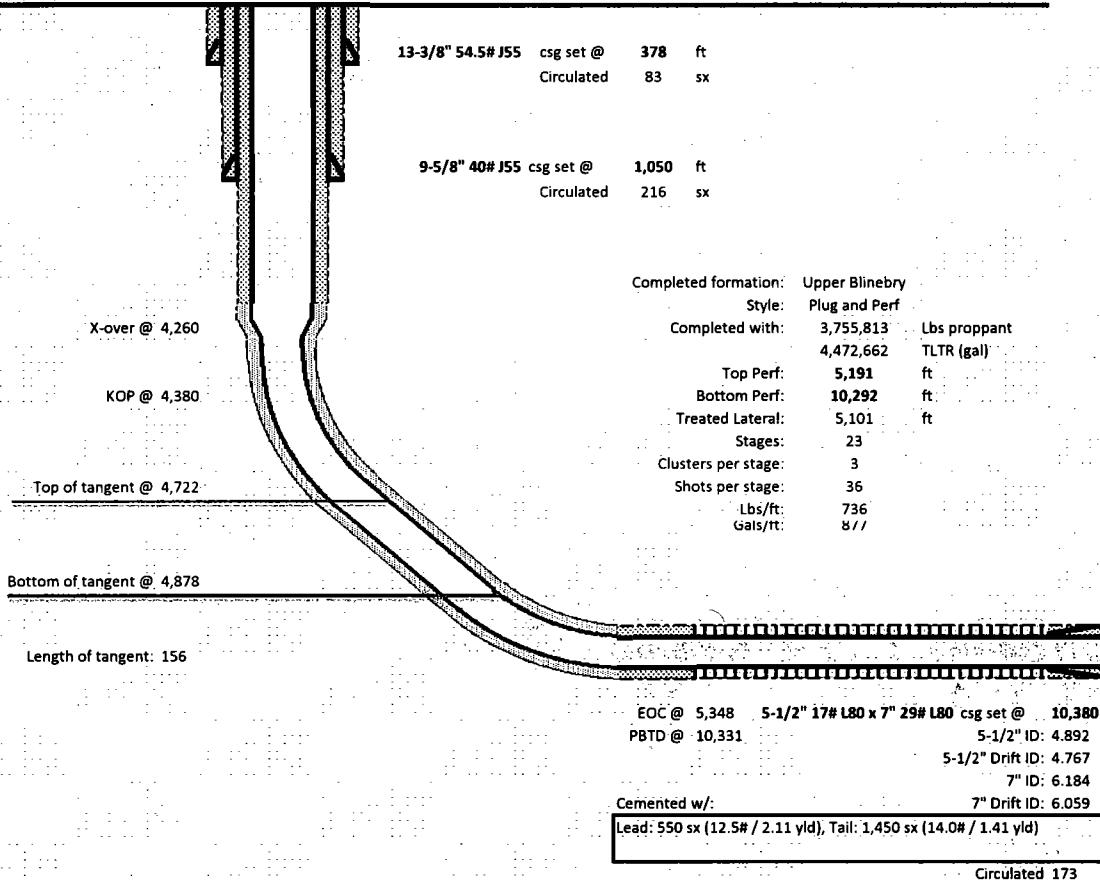
450 sx Solucem 2.43Y

circ 193sx to surface

COG Operating LLC
Well: Burch Keely Unit #935H
API#: 30-015-42748



COG Operating LLC
Well: Burch Keely Unit #937H
API#: 30-015-42759

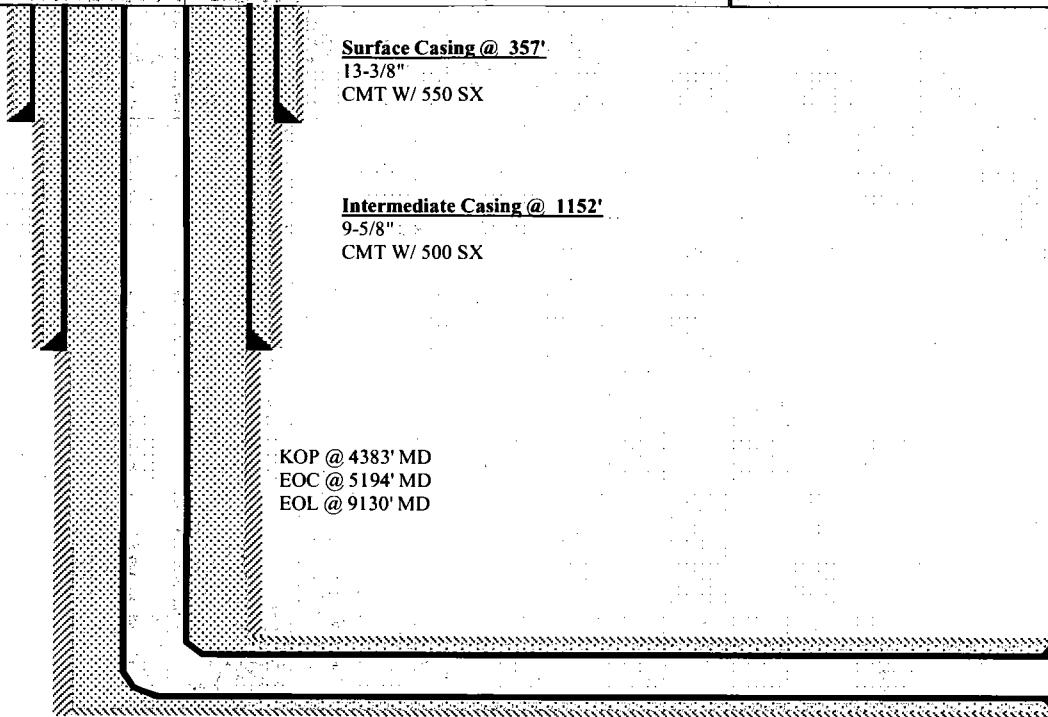




Wellbore at Rig Release

API: 3001539575

Burch Keely Unit #943H



5-1/2" Production Casing @ 9130'

CMT W/ 1700 SX

HOLE SIZE	MW (ppg)	BHST (°F)	EVALUATION

Updated by:
Date:

COG Operating LLC

Lease & Well

3001504188

Burch Keely Unit 28

SPUD - 9-14-43

Completion - 11-30-43

Elevation - 3650' DF

Eddy Co., NM

Sec 18 O T17S R30E 660 FSL & 1980 FEL

Calc TOC @ 386'

8 5/8" 28 # @ 509', 50 sx C
 $50 \times 1.32 = 66$ cu ft. $66 - 25\% = 49.5$
 $49.5 \times 2,4889 = 123'$ fill

7" Calc TOC @ 1,771'

2470 - 3298', 62 holes
 Gas injector well between 2-28-51 and 12-31-51
 $100 \times 1.32 = 132$ cu ft. $132 - 30\% = 92.4$
 $92.4 \times 12.2231 = 1,129'$ fill
 7" 20# @ 2900', cmt w/100 sx
 Shot pay 3121 - 3152 w/200 qts Nitro
 Original TD @ 3185'
 Flowed 15 BOPD 12-2-43

2470 - 3298', 62 holes
 Frac'd w/100 K gals GBW & 106 K # sd
 P 45 BOPD 10-3-73

DBP @ 3820' w/3 sxs cmt. 9-23-73

132 X 33% = 43.9. $43.9 \times 25.2348 = 1108'$ fill
 5 1/2" 14# @ 4,203'. Cmt w/100 sx
 9/3/1957

Drill OH to 4243' acidized w/2,000 gal, frac w/42K gal, 60K# sd
 9/19/1957
 Flowed 38 BO & 308 BW 1-31-58

Well: Grayburg Deep Unit #18

API#: 30-015-34905

Formation: Morrow/Atoka/Abo/Wolfcamp

Spot 25 sx 63-3'

Spot 65 sx 410-268'

Spot 75 sx @ 1,040'

**Spot 100 sx 2,910-2,604'
Cut 5-1/2" csg @ 2,830'**

Spot 25 sx 4,830-4,719'

Spot 25 sx 6,326-6,126'

Spot 25 sx 7,103-6,903'

**CIBP w/ 35 sx cmt @ 7,500'
Abo 7,546-7,670'**

**CIBP w/ 35 sx cmt @ 9,070'
Wolfcamp 9,120-9,154'**

**CIBP w/ 35 sx cmt @ 10,500'
Atoka 10,568-10,574'**

Morrow 10,678-10,686'

Morrow 10,750-10,758'

**CIBP w/ 35 sx cmt @ 10,900'
Morrow 10,928-10,944'**

**CIBP w/ 35 sx cmt @ 11,020'
Morrow 11,042-11,056'**

PBTD@ 10,465

Surface

**13-3/8" 48# H40 csg set @ 350 ft
Circulated 34 sks**

Intermediate

**9-5/8" 40# J55 csg set @ 4,725 ft
Circulated 256 sks**

Production

**5-1/2" 17# P110 csg set @ 11,230 ft
ID: 4.892
Drift ID: 4.767**

Cemented with: Stage 1: 675-sx (11.9 ppg / 2.47 yld),
Stage 2 Lead: 450 sx (11.9 ppg / 2.38 yld),
Stage 2 Tail: 300 sx (15.6 ppg / 1.18 yld)

**Circulated 0 sks
TOC @ 7937 ft**

CIMAREX

Cimarex Energy Co. of Colorado

Grayburg Deep Unit #17

API 30-015-34214

SL = 1990' FSL & 445' FWL Sec 19 T-17-S R-30-E

BHL = 2300' FSL & 660' FWL Sec 19 T-17-S R-30-E

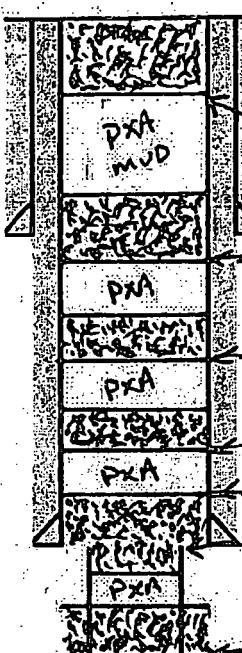
Eddy County, NM

GL 2' KB 29

J.P.Wetz

6/9/2015

13 3/8" 48# H-40 CSG @ 541'
Cmt w/ 220 sx 65/35 Poz "C"
Tail w/ 205 sx "C", Circulated



CIRC, 25 sxs. @ 63'-3'

Pump 65 sxs. @ 591'-450' - TAG

Pump 50 sxs. @ 1140'-1030' - TAG

Pump 50 sxs. @ 2750'-2630'

Pump 50 sxs. @ 4875'-4735' - TAG

CUT X PULL 5 1/2" CSG. @ 4805'

PERF X SPZ 65 sxs. @ 6110'-5950'

9 5/8" 40# K-55 & L-80 csg @ 4805'
2331 sx 35:65 Poz "C"
Tail w/ 300 sx "H"
Circulated

TOC = 7000'

DV TOOL @ 7954'

THRUSTLER - 500'
T/ YADES ~ 1085'
T/S.A. ~ 2690'
T/YE30 ~ 4200'
T/A80 ~ 6030'
T/LX ~ 7680'
T/SRUN ~ 10220'
T/MRWJ ~ 10635'



Pump 55 sxs. @ 8004'-7630' - TAG

Pump 45 sxs. @ 10900'-10585'

SET 5 1/2" CBBP @ 10,900'

MORROW PERFS:

10,981' - 10,993' 72 holes (1/25/2008)

11,005' - 11,020' 96 holes (10/15/2005)

5 1/2" N-80 17.0 PPF - LT&C @ 11,300'

DV TOOL @ 7954'

Cmt 1st Stage w/ Lead :560 sx 35:65 POZ "H"

Tail : 500 sx TXI Lite

Cmt 2nd stage w/ 500 sxs 35:65 POZ "H" sx.

Tail : 500 sx "H"

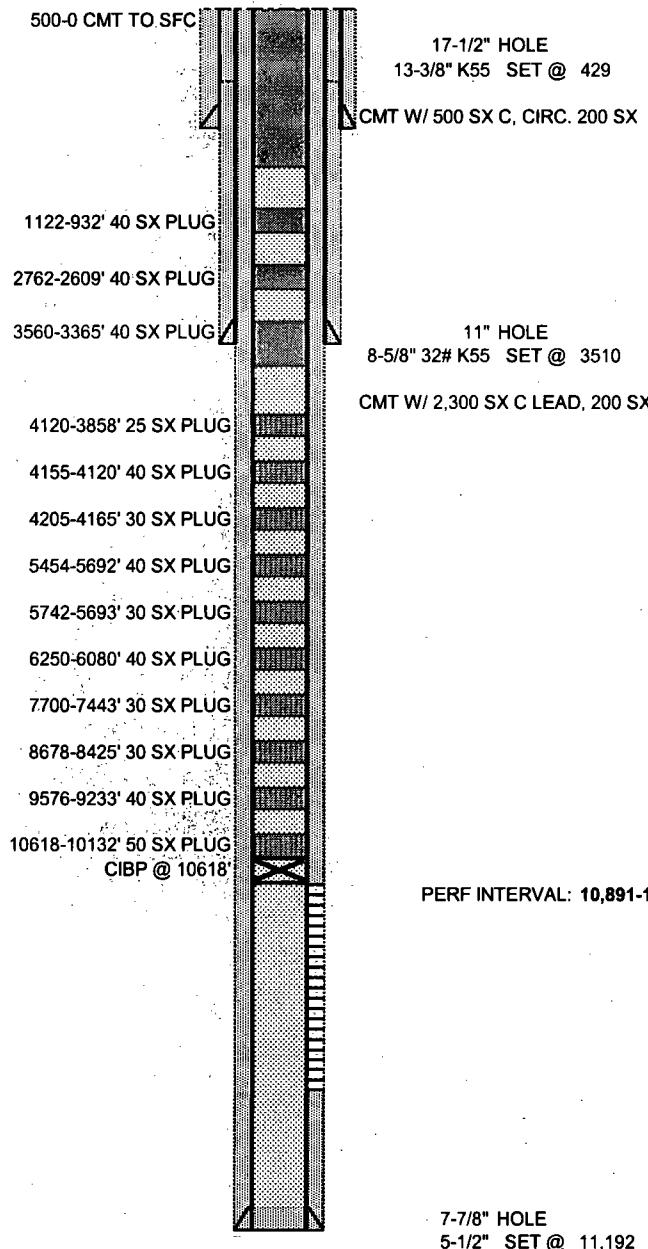
8 3/4" hole TD @ 11,300'

PBT.D: 11,180'
TD: 11,300'

DAE 06/10/15

CONOCOPHILLIPS COMPANY

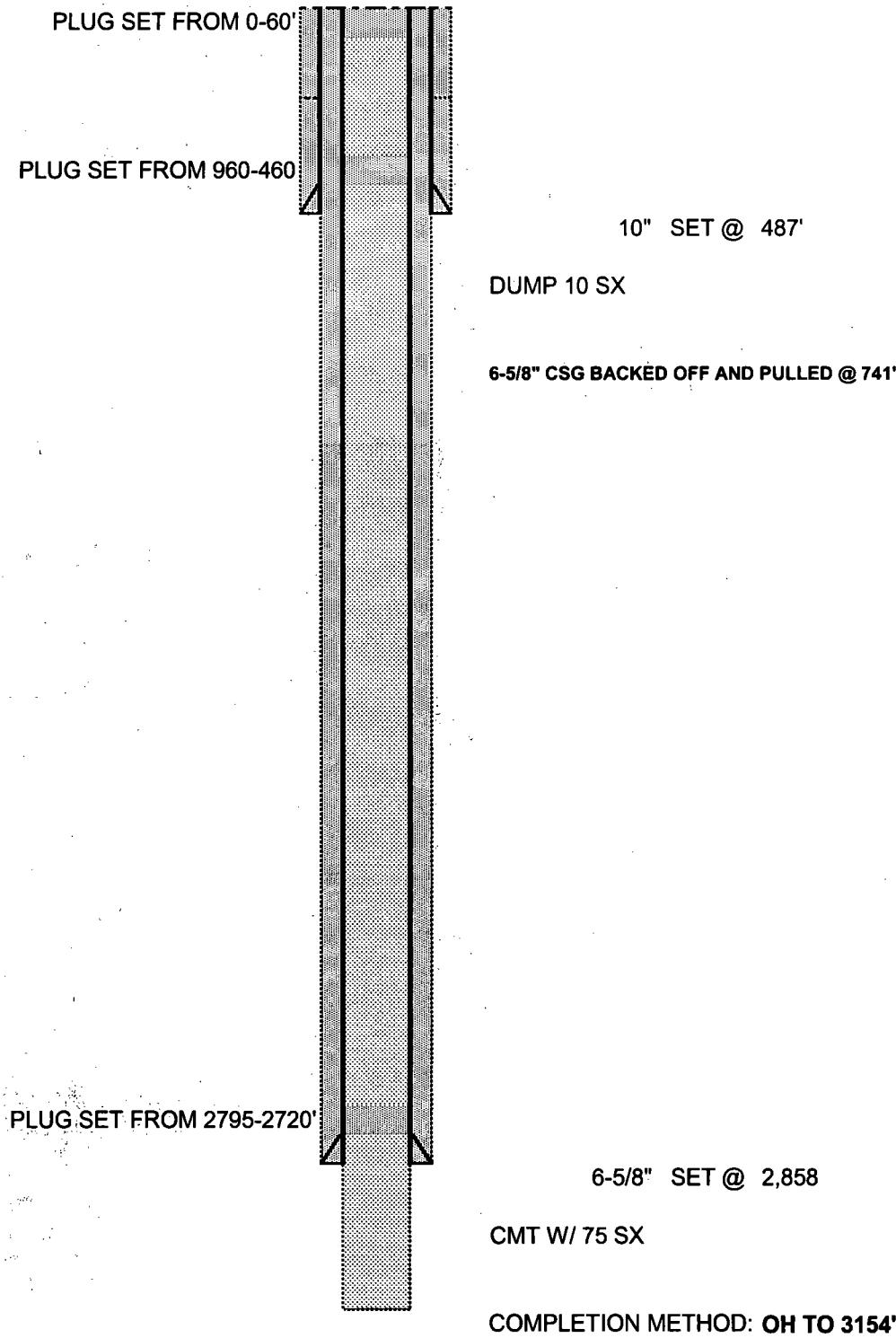
Lease & Well # GRAYBURG DEEP UNIT 10
API# 3001525796



CMT STAGE 1: 450 SX LEAD / STAGE 2: 500 SX H LEAD, 100 SX C TAIL, DVT @ 9526, TOC @ 9526.

GENERAL AMERICAN OIL COMPANY

Lease & Well # BURCH-FEDERAL A 5
API# 3001504197



Well: Burch Federal A #23

API#: 30-015-04207

Formation: GB/SA

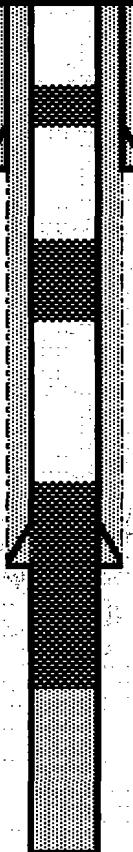
Perfed at 293'. Sqzd 175 sx.

Circulated cmt to surface through 8-5/8" csg

Perfed at 865'. Sqzd 55 sx.

Tagged plug @ 825'

Spot 125 sx cmt. Tagged @ 2,447'



Surface

8-5/8" 24# csg set @ 455 ft

Circulated To surface

Production

7" 20# csg set @ 2,497 ft

Cemented with: 100 sx

Circulated To Surface

TOC @ 0 ft

OH to 3,150

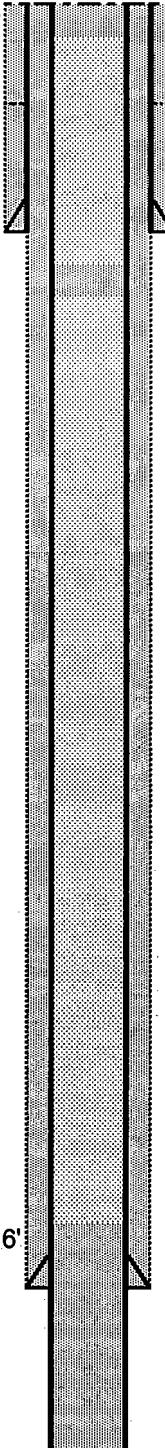
GENERAL AMERICAN OIL COMPANY

Lease & Well # BURCH-FEDERAL A 24
API# 3001504208

PUMPED 150 SX INTO FORMATION

905-864' SQUEEZED 55 SX

PLUG SET FROM 3183-2216'



8-5/8" 24# SET @ 482

CMT W/ 75 SX

7" 20# SET @ 2514'

CMT W/ 100 SX

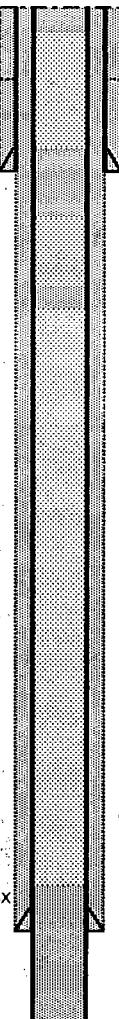
COMPLETION METHOD: OH TO 3183'

MARBOB ENERGY CORPORATION

Lease & Well # BURCH KEELY UNIT 93
API# 3001504205

FORMERLY NAMED BURCH A 13

0-60' CIRCULATE 70 SX CMT

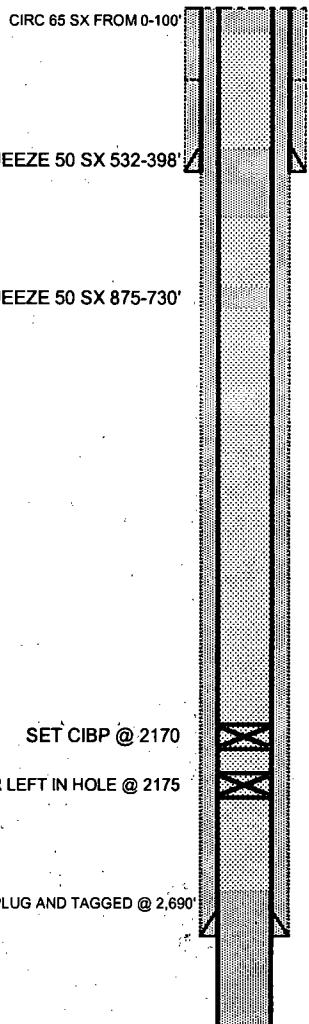


7" SET @ 2660'
CMT W/ 100 SX

MARBOB ENERGY CORPORATION

Lease & Well # BURCH KEELY UNIT 30
API# 3001504191

Formerly Named BURCH A 16



MARBOB ENERGY CORPORATION

Lease & Well # BURCH KEELY UNIT 60
API# 3001504195

FORMERLY NAMED BURCH-FEDERAL A 3

CIRCULATED CMT FROM 0-60'

425-306' SQUEEZED 170 SX

10" SET @ 372

875-810' SQUEEZED 50 SX

35 SX PLUG SET FROM 2858-2690'

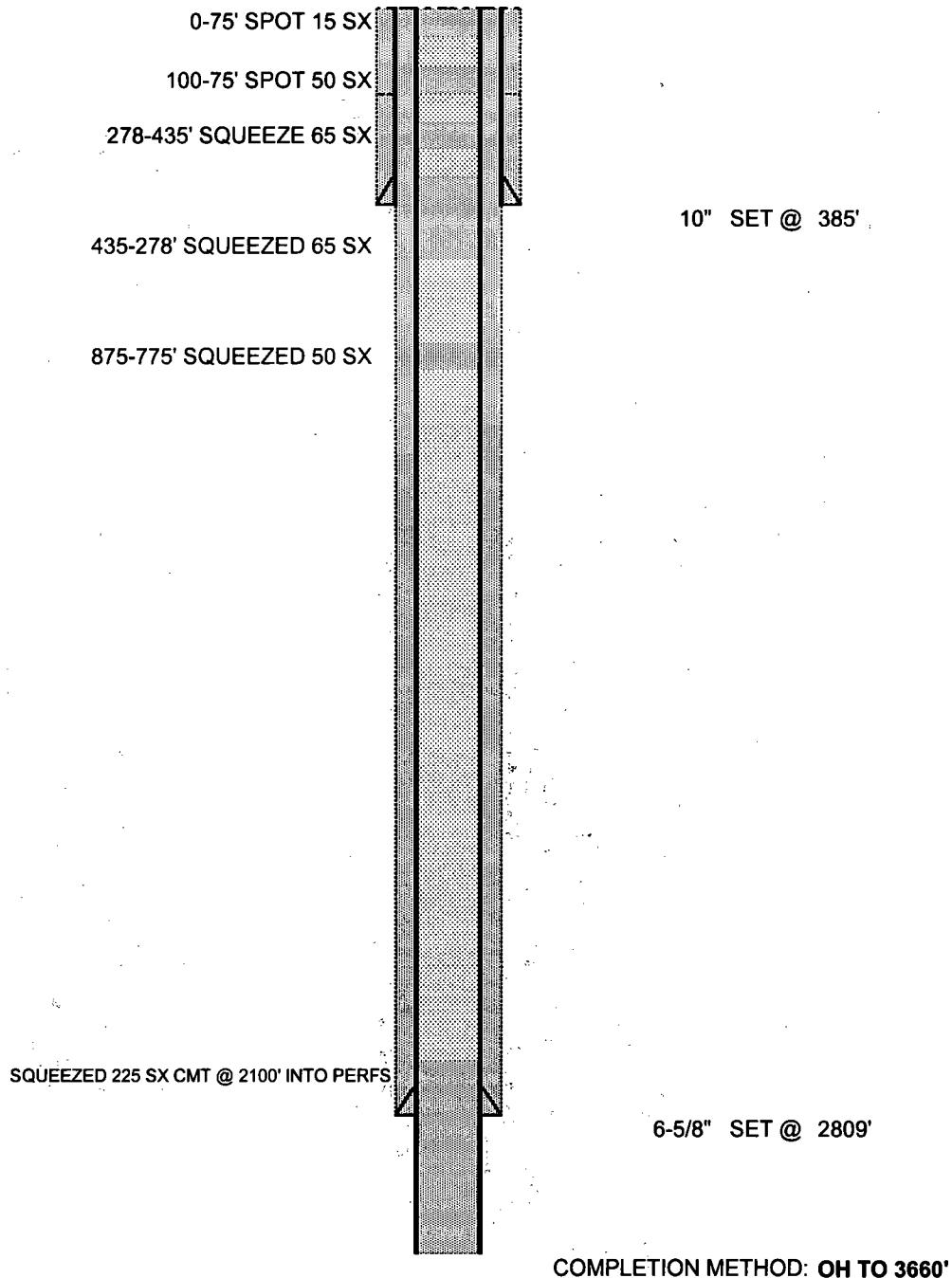
6-5/8" SET @ 2,783

COMPLETION METHOD: OH TO 3100'

MARBOB ENERGY CORPORATION

Lease & Well # BURCH KEELY UNIT 59
API# 3001504196

FORMERLY NAMED BURCH-FEDERAL A 4



PHILLIPS PETROLEUM COMPANY

Lease & Well # BURCH-FEDERAL A 8
API# 3001504200

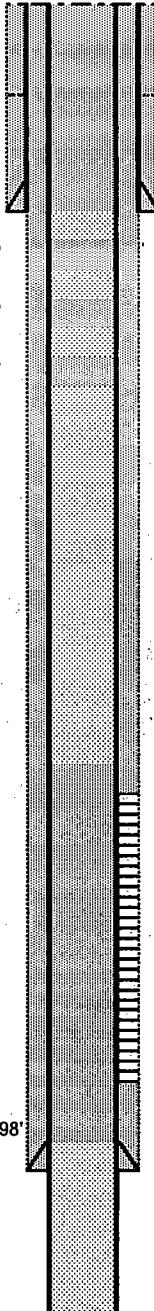
SQUEEZE 175 SX & CIRC. 155 SX AT 495'

SPOT 25 SX PLUG AT 800'

SQUEEZE 45 SX FROM 1075-975'

SPOT 25 SX PLUG FROM 1300-1200'

SPOT & TAG 120 SX CMT FROM 2790-2198'



8-1/4" 32# SET @ 445'
CMT W/ 50 SX

7" 20# SET @ 2825'
CMT W/ 100 SX

COMPLETION METHOD: OH TO 3225, PERF

VII.

COG Operating, LLC
Ronco Federal SWD #1
Lease # New Drill
API# New Drill
Sec 19, T17S, R30E, Unit C
600' FNL & 1,650' FWL
Eddy County, NM

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
 - **Average daily rate/volume 10,000 to 15,000 BWPD, Maximum daily rate/volume 20,000 BWPD**
2. Whether the system is open or closed;
 - **Closed System**
3. Proposed average and maximum injection pressure;
 - **Average injection pressure - Vacuum, Maximum injection pressure 1726 psig**
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water; and,
 - **Produced water from the Yeso formation.**
 - **We do not anticipate incompatibility issues because we currently have similar SWD wells in the area that dispose of Yeso produced water in the Cisco/Canyon.**
 - **Existing Cisco/Canyon SWD wells: Empire State SWD 15 #1 30-015-39771, Saber Federal #001 30-015-27882**
 - **Please see attached Yeso produced water analysis. (BKU 724, BKU 392)**
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
 - **Chemical Analysis for the disposal zone formation water is attached**



Catalyst Oilfield Services
 11999 E Hwy 158
 Gardendale, TX 79758
 (432) 563-0727
 Fax: (432) 224-1038

Water Analysis Report

Customer:	COG Operating LLC - NM	Sample #:	46992
Area:	Artesia	Analysis ID #:	45126
Lease:	Empire Fed.		
Location:	SWD #3	0	
Sample Point:	WIPD		

		Anions	mg/l	meq/l	Cations	mg/l	meq/l
Sampling Date:	5/10/2017	Chloride:	116388.4	3282.89	Sodium:	54910.0	2388.45
Analysis Date:	5/20/2017	Bicarbonate:	219.0	3.59	Magnesium:	2161.0	177.77
Analyst:	Catalyst	Carbonate:			Calcium:	14390.0	718.06
TDS (mg/l or g/m3):	190968.6	Sulfate:	1380.0	28.73	Potassium:	1037.0	26.52
Density (g/cm3):	1.132	Borate*:	178.7	1.13	Strontium:	304.5	6.95
Hydrogen Sulfide:	51	Phosphate*			Barium:	0.0	0.
Carbon Dioxide:	230	*Calculated based on measured elemental boron and phosphorus.				Iron:	0.0
Comments:		pH at time of sampling:	6.2		Manganese:	0.000	0.
		pH at time of analysis:					
		pH used in Calculation:	6.2				
		Temperature @ lab conditions (F):	75		Conductivity (micro-ohms/cm):	209000	
					Resistivity (ohm meter):	.0478	

Temp	Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl											
	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		Bromide KBr	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.36	11.95	0.15	222.90	0.17	193.18	0.15	49.53	0.00	0.00		
100	0.44	14.86	0.09	138.11	0.17	194.64	0.13	44.00	0.00	0.00		
120	0.52	17.48	0.04	60.02	0.20	219.70	0.13	42.25	0.00	0.00		
140	0.60	20.40	0.00	0.00	0.25	261.36	0.13	43.71	0.00	0.00		
160	0.70	23.31	-0.04	0.00	0.32	311.48	0.14	47.20	0.00	0.00		
180	0.79	26.52	-0.06	0.00	0.41	363.64	0.16	52.45	0.00	0.00		
200	0.89	29.43	-0.08	0.00	0.51	412.88	0.18	58.57	0.00	0.00		
220	1.00	32.63	-0.10	0.00	0.62	455.71	0.21	64.98	0.00	0.00		



CATALYST
Oilfield Services

Burch-Keely Unit
30-015-048
Catalyst Oilfield Services
11999 E Hwy 158
Garnerdale, TX 77558
(432) 563-0727
Fax: (432) 224-1038

Water Analysis Report

Customer:	COG Operating LLC - NM	Sample #:	33368
Area:	Shelf - New	Analysis ID #:	31765
Lease:	Burch-Keely Unit	BOPD:	5
Location:	724	BWPD:	5
Sample Point:	Wellhead		

Sampling date:	2/22/2016	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis date:	2/25/2016	Chloride	112081.1	3150.69	Sodium	59460.0	2588.38
Analysis:	Catalyst	Bicarbonate	268.4	4.40	Magnesium	1525.0	125.45
TDS (mg/l or g/m3):	164908	Carbonate		0.00	Calcium	9072.0	452.69
Density (g/cm3):	1.127	Sulfate	1200.0	24.86	Potassium	832.2	23.64
Hydrogen Sulfide:	0	Borate	181.3	1.02	Strontrium	207.8	4.74
Carbon Dioxide:	330	Phosphorus		0.00	Barium	0.0	0.00
Comments:		pH at time of sampling:		5.91	Iron	0.0	0.00
		pH at time of analysis:			Manganese	0.0	0.00
		pH used in Calculation:		5.91	Conductivity (micro-ohm/cm):	212000	
		Temperature @ lab conditions (F):		75	Resistivity (ohm meter):	0.0473	

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl											
Temp.	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		
	°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.01	0.29	-0.16	0.00	-0.04	0.00	-0.02	0.00	0.00	0.00	0.00
100	0.09	4.83	-0.13	0.00	-0.04	0.00	-0.04	0.00	0.00	0.00	0.00
120	0.18	9.67	-0.19	0.10	-0.02	0.00	-0.06	0.00	0.00	0.00	0.00
140	0.28	14.65	-0.23	0.10	0.02	26.03	-0.06	0.00	0.00	0.00	0.00
160	0.38	19.63	-0.27	0.00	0.09	92.59	-0.05	0.00	0.00	0.00	0.00
180	0.49	24.61	-0.30	0.00	0.17	163.79	-0.04	0.00	0.00	0.00	0.00
200	0.60	29.59	-0.33	0.00	0.26	232.64	-0.02	0.00	0.00	0.00	0.00
220	0.72	34.58	-0.35	0.00	0.36	294.46	0.00	0.00	0.00	0.00	0.00



Burnett
W-36-05 3804
Catalyst
Oilfield Services
Catalyst Oilfield Services
11999 E Hwy 158
Gardendale, TX 75158
(432) 563-0727
Fax: (432) 224-1038

Water Analysis Report

Customer:	COG Operating LLC - NM	Sample #:	30594
Area:	Shelf - New	Analysis ID #:	20037
Lease:	Burch-Keely Unit	BCPD:	4
Location:	392	BWPD:	2
Sample Point:	Wellhead		

Sampling date:	9/15/2015	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis date:	9/24/2015	Chloride:	120241.4	3320.81	Sodium:	71820.0	3127.04
Analysis:	Catalyst	Bicarbonate:	378.2	6.20	Magnesium:	725.6	59.69
TDS (mg/l or g/m3):	199827	Carbonate:	0.00		Calcium:	4242.0	211.68
Density (g/cm3):	1.136	Sulfate:	1200.0	24.00	Potassium:	928.4	23.69
Hydrogen Sulfide:	34	Borate:	117.1	0.74	Steridium:	108.4	243
Carbon Dioxide:	325	Phosphorus:	0.00		Barium:	0.0	0.00
Comments:		pH at time of sampling:	7.13		Manganese:	0.0	0.00
		pH at time of analysis:			Iron:	0.0	0.00
		pH used in Calculation:	7.13		Conductivity (micro-ohms/cm):	212000	
		Temperture @ lab conditions (F):	75		Resistivity (ohm-meter):	0.0457	

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl															
Temp.	Calcite CaCO ₃			Gypsum CaSO ₄ ·2H ₂ O			Anhydrite CaSO ₄			Celestite SrSO ₄			Barite BaSO ₄		
	°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount		
80	1.12	35.24	-0.34	0.00	-0.31	0.00	-0.29	0.00	0.00	0.00	0.00	0.00			
100	1.11	38.71	-0.42	0.00	-0.33	0.00	-0.32	0.00	0.00	0.00	0.00	0.00			
120	1.11	42.17	-0.49	0.00	-0.32	0.00	-0.34	0.00	0.00	0.00	0.00	0.00			
140	1.10	45.03	-0.55	0.00	-0.28	0.00	-0.35	0.00	0.00	0.00	0.00	0.00			
160	1.11	49.68	-0.60	0.00	-0.23	0.00	-0.35	0.00	0.00	0.00	0.00	0.00			
180	1.12	54.02	-0.65	0.00	-0.17	0.00	-0.35	0.00	0.00	0.00	0.00	0.00			
200	1.14	58.06	-0.69	0.00	-0.09	0.00	-0.34	0.00	0.00	0.00	0.00	0.00			
220	1.17	62.39	-0.72	0.00	0.00	4.33	-0.33	0.00	0.00	0.00	0.00	0.00			

Exhibit VIII
Geological Review
Ground Water Sources
Empire and Empire East
Eddy County, New Mexico

The interval under consideration for disposal operations includes the Cisco and Canyon. The Cisco interval is part of the Virgil Series of the Upper Pennsylvanian Age and the Canyon interval is part of the Missourian Series, located on the Northwest Shelf of the Delaware Basin in the western part of the Permian Basin.

The injection interval is the following:

Ronco Federal SWD #1 (SWD; Cisco/Canyon)

- Cisco/Canyon: 8,630.0' - 9,650.0' MD (8,630.0'- 9,650.0' TVD)

The Ronco Federal SWD #1 will be a vertical well that will be drilled to a true vertical depth (TVD) of 9,650.0' and casing will be set at approximately 8,630.0' at the top portion of the Cisco Reef to allow for an open hole completion into the Cisco/Canyon formations.

Produced water from Lower Permian Age and Upper Pennsylvanian Age rocks are too mineralized to be potable or useable for live stock.

Ground water in Eddy County is obtained from porous and permeable aquifers in consolidated rocks of the Upper Permian and Triassic age and in relatively unconsolidated sediments of Tertiary and Quaternary age.

The area east of the Pecos River is a large area and includes half of Eddy County, generally from T 16S R 27E to T 26S R 31E, extending from the Chaves County line south to the Texas State line and east to the Lea County line.

The Triassic System overlies the Rustler formation in Eddy County and is composed of red beds and sandstones of the Dockum group. The lower part of these beds is considered Permian and correlated with Dewey Lake red beds by some geologists. The total thickness of the Dockum group east of Artesia is about 1,000'. Formations of the Dockum group exposed in Eddy County are the Pierce Canyon red beds, the Santa Rosa sandstone and red beds possibly from the Chinle formation.

In the Empire, Empire East, Loco Hills, and Fren Fields, the sandstone beds in the Triassic Dockum group and possibly in the Dewey Lake red beds are the chief sources of ground water. The depth to water in this area is generally less than 300'. Most of the wells in the outcrop area of the Dockum group yield water of better quality than the wells to the west that produce from the Rustler formation. Analyses were made of 21 samples of water from wells probably taking all or part of their water from the Triassic red beds. The hardness of calcium carbonate in the 21 samples ranged from 201 to 3,590 ppm and was more than 1,000 ppm in 14 of the 21 samples. The chloride content ranged from 17 to 785 ppm and was more than 200 ppm in 10 of the samples. Probably about half the wells in the Triassic red beds produce water that is considered usable for domestic purposes. None of the wells in the Triassic red beds produce water too highly mineralized for stock.

A review of all geologic map data and well as visual searches by field personnel did not indicate the presence of any windmills in the areas of review for the proposed conversions.

In summary, ground water in the Empire, Empire East, Loco Hills, and Fren areas for stock and domestic use can be obtained from wells in the Triassic red beds at depths up to 300'. Water is generally of fair quality but locally impotable. The injection intervals for the proposed conversions are in the Yeso group in the lower Permian age rocks at about 8,350' TVD to 9,450' TVD. No contamination of the known shallow potable ground waters is expected from the proposed deeper secondary operations due to over 8,000' of vertical separation between them. There was no indication of any use of ground water aquifers in the areas of reviews for the proposed conversions.

From Geology and Ground-Water Resources of Eddy County, New Mexico by G. E. Hendrickson and R. S. Jones. Ground-Water Report 3, New Mexico Bureau of Mines and Mineral Resources, 1952

IX.

COG Operating, LLC
Ronco Federal SWD #1
Lease # New Drill
API# New Drill
Sec 19, T17S, R30E, Unit C
600' FNL & 1,650' FWL
Eddy County, NM

IX. Stimulation program: Large conventional acid job.

X.

COG Operating, LLC
Ronco Federal SWD #1
Lease # New Drill
API# New Drill
Sec 19, T17S, R30E, Unit C
600' FNL & 1,650' FWL
Eddy County, NM

X. Logging and test data: New Drill; no test or log data.

XI.

COG Operating, LLC
Ronco Federal SWD #1
Lease # New Drill
API# New Drill
Sec 19, T17S, R30E, Unit C
600' FNL & 1,650' FWL
Eddy County, NM

XI. Chemical Analysis from two or more Fresh Water Wells within One Mile of Injection:

There are no Fresh Water Wells within a One Mile Radius.



New Mexico Office of the State Engineer
Wells with Well Log Information

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

(R-POD has
been replaced.
Overplanned.
Code file is
closed)

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

(NAGINUTIN IN PLANE)

GREATER THAN 1 MILE

POD Number	Code	Subbasin	County	Source	ED	X	Y	Distance	Start Date	Print Date	Log File Date	Depth Well	Depth Water	Driller	License Number	
						Reg	24 2	20	175	30E	03/19/2013	04/09/2013	131	16	TAYLOR, CLINTON E.	1343
RA 111514 POD1					ED Shallow	592262.85	3632387.31									
RA 111507 POD1					ED Shallow	1 2 3 22 175 30E	587360	3631503	4948	11/23/2012	11/26/2012	03/26/2013				

Record Count: 2

Batch/County Search:

County: Eddy

UTMNA Dkt Radius Search (in meters):

Northing (N): 592262.85

Northing (N): 3632387.31

Radius: 8050

GREATER THAN 2 MILE

1 MILE = 1609 METERS

The data is furnished by the NMUSE/SC and is accepted by the recipient with the expressed understanding that the NMUSE/SC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, stability, or suitability for any particular purpose of the data.

11/5/15 12:22 PM

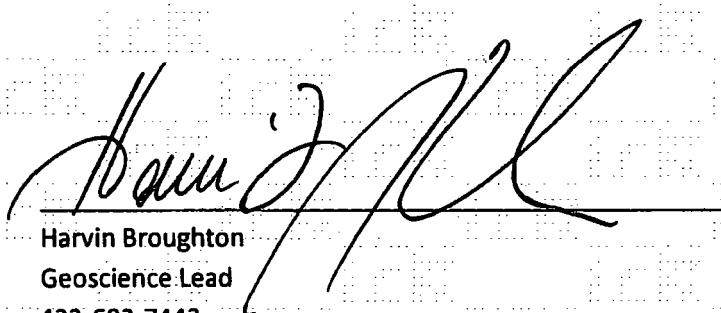
WELLS WITH WELL LOG INFORMATION

FOR: TRONCO FED SWD 1

Exhibit XII.

Geological Statement

Concho Resources has examined available geological, seismic, and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.



**Harvin Broughton
Geoscience Lead
432-683-7443**

XIII. Proof of Notice

4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to EOG Resources, Inc. 1111 Bagby, Lobby 2 Houston, TX 77002 GC #: 91-7199-9991-7036-0763-5841
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Davoil Oil & Gas, Inc. 6300 Ridglea Place, Suite 1208 Fort Worth, TX 76116 GC #: 91-7199-9991-7036-0763-5872
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Great Western Drilling 700 W. Louisiana Ave Midland, TX 79701 GC #: 91-7199-9991-7036-0763-5858
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to ConocoPhillips Co 600 N. Dairy Ashford Houston, TX 77079-1175 GC #: 91-7199-9991-7036-0763-5834
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Magnum Hunter Production, Inc. 600 N. Marienfeld, Suite 600 Midland, TX 79701 GC #: 91-7199-9991-7036-0763-5827
5/11/2017	DK	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Bureau of Land Management 620 E. Greene Street Carlsbad, NM 88220-6292 GC #: 91-7199-9991-7033-2435-9525

XIII. Proof of Notice

Name	Address	City/State/Zip
Magnum Hunter Production, Inc.	600 N. Marienfeld, Suite 600	Midland, TX 79701
Conoco Phillips Company	600 North Dairy Ashford	Houston, TX 77079-1175
EOG Resources, Inc.	1111 Bagby, Sky Lobby 2	Houston, TX 77002
Great Western Drilling Ltd.	700 W. Louisiana Ave.	Midland, TX 79701
Davoil Oil & Gas, Inc.	6300 Ridglea Place, Suite 1208	Fort Worth, TX 76116
Bureau of Land Management	620 E. Greene Street	Carlsbad, NM 88220

Affidavit of Publication

No.

24276

State of New Mexico

County of Eddy

Danny Scott

being duly sworn say: that she is the Publisher of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

I consecutive weeks/day on the same day as follows:

First Publication

April 21, 2017

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

24th day of April 2017



OFFICIAL SEAL

Latisha Romine

NOTARY PUBLIC STATE OF NEW MEXICO

My commission expires:

5/12/2019

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

COG Operating LLC is applying for an SWD permit for the Ronco Federal SWD #1. The well is located at 600' PNL & 1,650' FWL, Sec. 19, T 17S, R30E, Unit C, Eddy County, NM. The well will dispose of produced water from oil and gas wells into the Cisco-Canyon zone at the depth 8,630' to 9,650' at a maximum daily rate of 20,000 barrels of water per day and at a maximum injection pressure of 1,726 psi. Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505, within 15 days. Additional information can be obtained by contacting Dana King, COG Operating LLC, One Concho Center, 600 W Illinois Ave, Midland, TX 79701; phone number is 432-818-2267.

Published in the Artesia Daily Press, Artesia, N.M., April 21, 2017 Legal No. 24276.



A Division of MBF Inspection Services, Inc.

PO Box 2428
805 N. Richardson
Roswell, NM 88202
Telephone (575) 625-0599
Fax (575) 625-0687

OWNERSHIP REPORT

**PROSPECT: Loco Hills
TRACT:**

Township 17 South, Range 30 East, N.M.P.M.
Section 19: E/2 & NW/4
Containing: 474.86 Acres, more or less
Eddy County, New Mexico

RECORD DATE: November 28, 2016
REPORT DATE: December 1, 2016

LANDMAN: Matt Pizer

The conclusions reported herein are based upon the Landman's review of the instruments recorded in the county as indexed by the abstractor used.

SURFACE OWNERSHIP

NAME OF MINERAL OWNERS	INTEREST	NET ACRES	LEASEHOLD STATUS
------------------------	----------	-----------	------------------

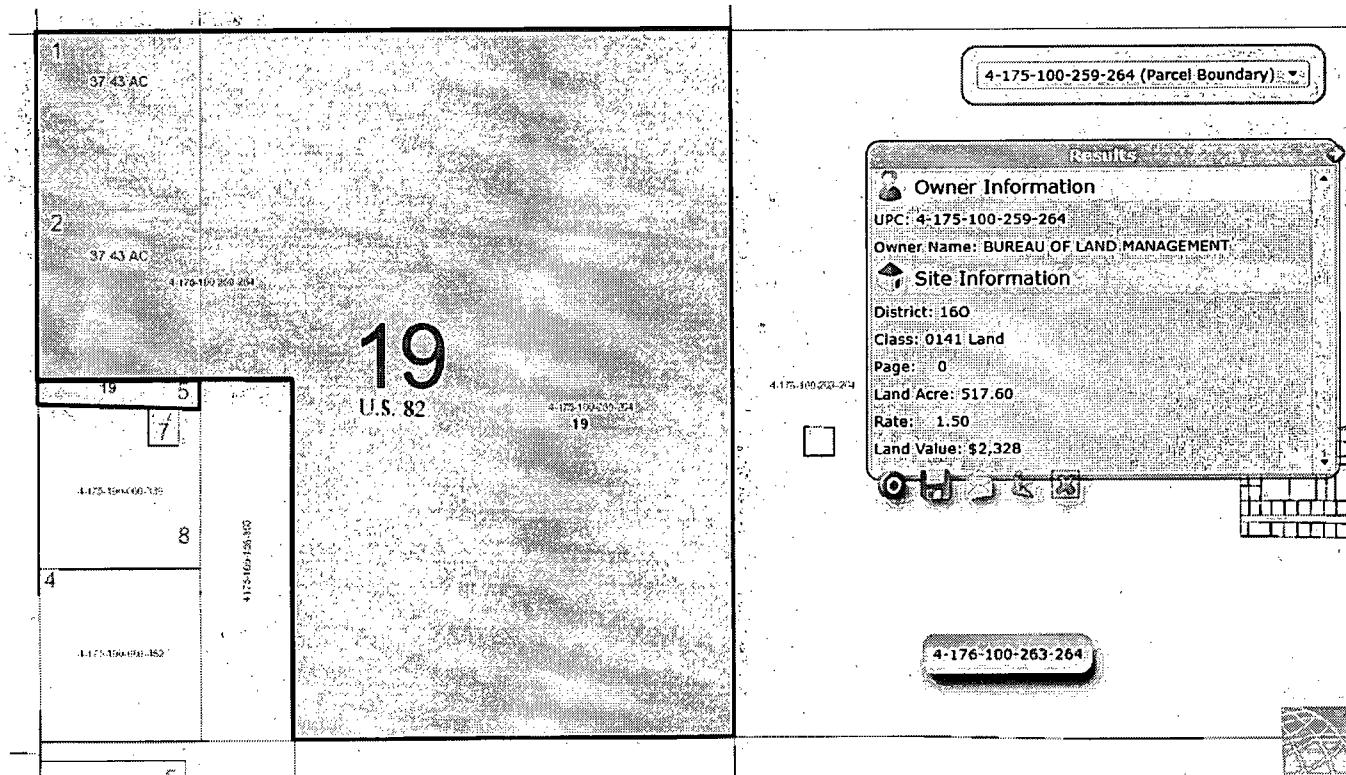
United States Of America Bureau of Land Management 1474 Rodeo Rd. Santa Fe, NM 87505	100.000000%	474.860000	COVERED LANDS: <u>T17S-R30E:</u> Sec. 19: E/2, E/2NW/4, Lot 1 (NW/4NW/4 = 37.43 ac.) & Lot 2 (SW/4NW/4 = 37.43 ac.)
---	-------------	------------	---

TOTAL MINERAL OWNERSHIP	100.000000%	474.860000
------------------------------------	--------------------	-------------------

TITLE NOTES

- 1. There appeared to be some fee/Non-Federal Land in the S/2SE/4NW/4 according to a GIS map from the BLM office in Carlsbad, NM. Upon further investigation, it appears that this is a mistake in the GIS map.**

The Master Title Plat for T17-R30, Section 19 does not show that there is Fee Land in the NW/4. The Eddy County Tax Assessor's Office, and their website map, also does not show Fee Land in the NW/4. The Tax Assessor's Map is below.



- 2. According to the BLM Office in Carlsbad, there are two grazing leases on the property:**

**1.) #7075 - South Turkey Track: covering the N/2 Section 19. The permittee is:
Key Livestock, LLC
1012 E. 2nd St.
Rowell, NM 88201**

**2.) #7007 - Sand Hill, covering the S/2 Section 19. The permittee is:
Steve Haines
11032 #2, Lovington Hwy.
Artesia, NM 88210**

missed
return
rec'd

XIII. Proof of Notice

4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to EOG Resources, Inc.(1111 Bagby, Lobby 2)Houston, TX 77002 GC #: 91-7199-9991-7036-0763-5841 ✓
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Davoil Oil & Gas, Inc.(6300 Ridglea Place, Suite 1208)Fort Worth, TX 76116 GC #: 91-7199-9991-7036-0763-5872 ✓
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Great Western Drilling(700 W. Louisiana Ave)Midland, TX 79701 GC #: 91-7199-9991-7036-0763-5858 ✓
4/19/2017	KF	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to ConocoPhillips Co(600 N. Dairy Ashford)Houston, TX 77079-1175 GC #: 91-7199-9991-7036-0763-5834 ✓
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5/1/2017	DK	SWD Application Notice	Ronco Federal #1 SWD	Sent Certified Mail to Bureau of Land Management(620 E. Greene Street)Carlsbad, NM 88220-6292 GC #: 91-7199-9991-7033-2435-9525 ✓

COPY



Dana King

April 19, 2017

EOG Resources, Inc.
1111 Bagby, Lobby 2
Houston, TX 77002

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD; Cisco/Canyon (96186)
Eddy County, New Mexico

To Whom It May Concern:

This letter will serve as notice under Rule 19.15.26.8B that COG Operating LLC has applied for a permit from the Oil Conservation Division in Santa Fe, NM for a new SWD well. We will be injecting, for the purpose of disposal, into the Cisco Canyon Formation. Injection interval will be 8,630' – 9,050'.

Should your company have any objection, it must be filed in writing within fifteen (15) days from the date of this notice. If the Oil Conservation Division determines the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505, the telephone number is 505-476-3440.

Sincerely,

Dana King

Dana King
COG Operating LLC
Permitting Tech

COPY



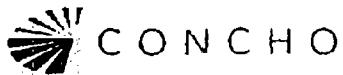
ONE CONCHO CENTER
600 W. ILLINOIS AVENUE
MIDLAND, TX 79701

SENDER: COMPLETE THIS SECTION	
<ul style="list-style-type: none">■ Complete Items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	
EOG Resources, Inc. 1111 Bagby, Lobby 2 Houston, TX 77002 Re Ronco Fed SWD #1	
9590 9402 2244 6193 1701 04	
2. Article Number (Transfer from service label) 91 7199 9991 7036 0763 5841	
PS Form 3811, July 2015 PSN 7830-02-000-9053	
COMPLETION SECTION OF MAILPIECE	
A. Signature	<input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee
X	
B. Received by (Printed Name)	C. Date of Delivery
D. Is delivery address different from Item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Ground Mail <input type="checkbox"/> Ground Mail Restricted Delivery <input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery	
Domestic Return Receipt	

SENDER: COMPLETE THIS SECTION	
<ul style="list-style-type: none">■ Complete Items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	
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A. Signature	<input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee
X	
B. Received by (Printed Name)	C. Date of Delivery
D. Is delivery address different from Item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input type="checkbox"/> No	
PR 27 2017 Sd/ N TX 77002	
3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Certified Mail <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Ground Mail <input type="checkbox"/> Ground Mail Restricted Delivery <input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Registered Mail <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Signature Confirmation Restricted Delivery	
Domestic Return Receipt	

EOG Resources, Inc.
1111 Bagby, Lobby 2
Houston, TX 77002

COPY



Dana King

April 19, 2017

Davoil Oil & Gas, Inc.
6300 Ridglea Place, Suite 1208
Fort Worth, TX 76116

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD; Cisco/Canyon (96186)
Eddy County, New Mexico

To Whom It May Concern:

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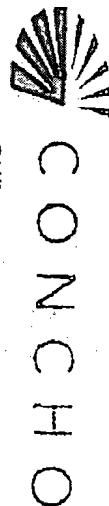
Should your company have any objection, it must be filed in writing within fifteen (15) days from the date of this notice. If the Oil Conservation Division determines the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505, the telephone number is 505-476-3440.

Sincerely,

Dana King

Dana King
COG Operating LLC
Permitting Tech

COPY



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

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

Davoll Oil & Gas, Inc.
6300 Ridglea Place, Suite 1208
Fort Worth, TX 76116
Re: Ronco Fed #1 SWD

9590 9402 2244 6193 1701 11

9 Article Number (Transfer from service label)

91 7199 9991 7036 0763 5872

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Agent
 Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from Item 1? Yes
If YES, enter delivery address below: No

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery

- Priority Mail Express®
- Registered Mail®
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

Davoll Oil & Gas, Inc.
6300 Ridglea Place, Suite 1208
Fort Worth, TX 76116
Re: Ronco Fed #1 SWD

9590 9402 2244 6193 1701 11

9 Article Number (Transfer from service label)

91 7199 9991 7036 0763 5872

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Tricia Shotzler*

Agent

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from Item 1? Yes
If YES, enter delivery address below: No

APR 24 2017

BY:

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery

- Priority Mail Express®
- Registered Mail®
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

Davoll Oil & Gas, Inc.
6300 Ridglea Place, Suite 1208
Fort Worth, TX 76116

COPY



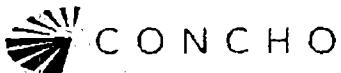
ONE CONCHO CENTER
600 W. ILLINOIS AVENUE
MIDLAND, TX 79701

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none">■ Complete Items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.		<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>X</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery</p> <p>D. Is delivery address different from Item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Restricted Delivery</p> <p>Domestic Return Receipt</p>	
1. A. Great Western Drilling Ltd 700 W. Louisiana Ave Midland, TX 79701 Re Ronco Fed #1 SWD 9590 9402 2244 6193 1701 28 Article Number (Transfer from service label) 91 7199 9991 7036 0763 5858			
PS Form 3811, July 2016 P&N 7630-02-000-9053			

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none">■ Complete Items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.		<p>A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p><i>John L. Davis</i></p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery</p> <p><i>A. L. Davis</i> APR 24 2017</p> <p>D. Is delivery address different from Item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>APR 24 2017</p> <p>BY:</p> <p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Restricted Delivery</p> <p>Domestic Return Receipt</p>	
1. A. Great Western Drilling Ltd 700 W. Louisiana Ave Midland, TX 79701 Re Ronco Fed #1 SWD 9590 9402 2244 6193 1701 28 Article Number (Transfer from service label) 91 7199 9991 7036 0763 5858			
PS Form 3811, July 2015 P&N 7630-02-000-9053			

Great Western Drilling Ltd
700 W. Louisiana Ave
Midland, TX 79701

COPY



Dana King

April 19, 2017

ConocoPhillips Company
600 N. Dairy Ashford
Houston, TX 77079-1175

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD; Cisco/Canyon (96186)
Eddy County, New Mexico

To Whom It May Concern:

This letter will serve as notice under Rule 19.15.26.8B that COG Operating LLC has applied for a permit from the Oil Conservation Division in Santa Fe, NM for a new SWD well. We will be injecting, for the purpose of disposal, into the Cisco Canyon Formation. Injection interval will be 8,630' – 9,650'.

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Sincerely,

Dana King

Dana King
COG Operating LLC
Permitting Tech

COPY

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

ConocoPhillips Company
600 N. Dairy Ashford
Houston, TX 77079
Re Ronco Fed #1 SWD

9590 9402 2244 6193 1701 35

2 Article Number (Transfer from service label)

91 7199 9991 7036 0763 5834

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLAINANT SECTION OR DELIVERY**A Signature**

X

B Received by (Printed Name)**C Date of Delivery**

- Agent
 Addressee

D Is delivery address different from Item 1? Yes

If YES, enter delivery address below: No

3 Service Type

- Adult Signature
 Adult Signature Restricted Delivery
 Certified Mail®
 Certified Mail Restricted Delivery
 Collect on Delivery
 Collect on Delivery Restricted Delivery
 Restricted Delivery
- Priority Mail Express
 Registered Mail®
 Registered Mail Restricted Delivery
 Return Receipt for Merchandise
 Signature Confirmation™
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

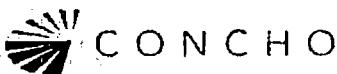


ONE CONCHO CENTER
600 W ILLINOIS AVENUE
MIDLAND, TX 79701

91 7199 9991 7036 0763 5834

ConocoPhillips Company
600 N. Dairy Ashford
Houston, TX 77079

COPY



Dana King

April 19, 2017

Magnum Hunter Production, Inc.
600 N. Marienfeld, Suite 600
Midland, TX 79701

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD: Cisco/Canyon (96186)
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Sincerely,

Dana King

Dana King
COG Operating LLC
Permitting Tech

COPY

USPS Tracking® Results

FAQs > (<http://faq.usps.com/?articleId=220900>)

Track Another Package +

Remove X

Tracking Number: 9171999991703607635834



In Transit, Delayed

Product & Tracking Information

[See Available Actions](#)

Postal Product:
First-Class Mail®

Features:
Certified Mail™

DATE & TIME

STATUS OF ITEM

LOCATION

April 23, 2017, 9:26 am

In Transit to Destination



The package is delayed and will not be delivered by the expected delivery date. An updated delivery date will be provided when available. The item is currently in transit to the destination as of April 23, 2017 at 9:26 am.

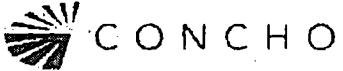
April 22, 2017, 2:26 am

Departed USPS Destination Facility

NORTH
HOUSTON, TX 77315

April 21, 2017, 6:25 pm

In Transit to Destination



Dana King

COG Operating LLC

RECEIVED
SANTA FE CITY CLERK
APR 20 2017

April 19, 2017

Great Western Drilling Ltd.
700 W. Louisiana Ave.
Midland, TX 79701

Re: SWD Application

Ronco Federal-SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD; Cisco/Canyon (95186)
Eddy County, New Mexico

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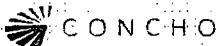
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Sincerely,

Dana King

Dana King,
COG Operating LLC
Permitting Tech

COPY



May 23, 2017

ConocoPhillips Company
600 North Dairy Ashford
Houston, TX 77079-1175

Second (2nd) Attempt

Re: SWD Application

Ronco Federal SVD #1
API# Pending
C-19-17S-30E
600 FNL & 1.650 FWL
SWD:Cisco-Cisco Canyon (96186)
Eddy County, New Mexico

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Sincerely,

Dana King
COG Operating LLC
Permitting Technician

Encl (Copy of First Notice Letter/4/19/2017)

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | F 432.683.7441

Track your package or shipment with FedEx Tracking.

FedEx Shipping | Tracking | Manage | Learn | FedEx Office®

FedEx® Tracking

779211823936

Ship date

Tue 5/23/2017

MIDLAND TX US

Delivered

Shipped by, T TREVINO

Actual delivery

Wed 5/24/2017 9:47 am

HOUSTON TX US

Travel History

Date/Time	Activity
5/24/2017 - Wednesday	Arrived at FedEx location
6:42 am	Delivered
6:55 am	On FedEx vehicle for delivery
7:11 am	At local FedEx office
6:00 pm	At customer's and facility
4:00 am	Delivered to FedEx location
5/23/2017 - Tuesday	Arrived at FedEx location
10:51 am	Left FedEx drop facility
4:00 pm	Picked up
3:57 pm	Shipment canceled by shipper

Shipment Facts

Tracking number	779211823936	Service	FedEx Priority Overnight
Weight	0.5 lbs / 0.23 kgs	Shipping/Receiving	
Total pieces	1	Delivered To	Total shipment weight 0.5 lbs / 0.23 kgs
Terms	Shipper	Packaging	FedEx Envelope
Special handling section	Deliver Weekday	Standard transit	5/24/2017 by 10:30 am

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Small Business Center

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Customer Support

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United States - English

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<https://www.fedex.com/apps/fedextrack/?tracknumbers=779211823936>

5/26/2017

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

Magnum Hunter Production, Inc
600 N. Marienfeld, Suite 600
Midland, TX 79701
Re Ronco Fed SWD #1

9590 9402 2244 6193 1701 42

2. Article Number (Transfer from service label)

91 7199 9991 7036 0763 5827

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY**A. Signature**

X

Agent
 Addressee

B. Received by (Printed Name)**C. Date of Delivery**

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input checked="" type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Mail | |
| <input type="checkbox"/> Mail Restricted Delivery | |
| <input type="checkbox"/> OO | |

Domestic Return Receipt**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
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PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY**A. Signature**

X *John - N. Marienfeld*

Agent
 Addressee

B. Received by (Printed Name)**C. Date of Delivery**

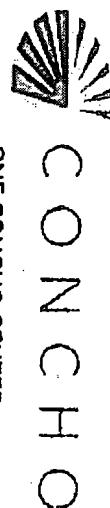
D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

APR 4 2017

BY:

3. Service Type

- | | |
|--|---|
| <input checked="" type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Mail | |
| <input type="checkbox"/> Mail Restricted Delivery | |
| <input type="checkbox"/> OO | |

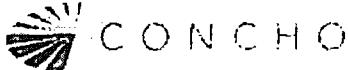
Domestic Return Receipt

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

91 7199 9991 7036 0763 5827

COPY

Magnum Hunter Production, Inc
600 N. Marienfeld, Suite 600
Midland, TX 79701



Dana King

May 10, 2017

Bureau of Land Management
620 E. Greene Street
Carlsbad, New Mexico 88220-6292

Certified Mail Article Number: 91 7199 9991 7033 2435 9525

Re: SWD Application:

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD Cisco/Canyon (96186)
Eddy County, New Mexico

To Whom It May Concern:

This letter will serve as notice under Rule 19.15.26.8B that COG Operating LLC has applied for a permit from the Oil Conservation Division in Santa Fe, NM for a new SWD well. We will be injecting, for the purpose of disposal, into the Cisco Canyon Formation. Injection interval will be 8,630' - 9,650'.

Should your company have any objection, it must be filed in writing within fifteen (15) days from the date of this notice. If the Oil Conservation Division determines the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505, the telephone number is 505-476-3440.

Sincerely,

A handwritten signature in black ink, appearing to read "Dana King".

Dana King
COG Operating LLC
Permitting Tech

Enclosure (Completed OCD Application)

COPY



One Concho Center
600 West Illinois Avenue
Midland, Texas 79701

91 7199 9991 7033 2435 9525

BUREAU OF LAND MANAGEMENT
620 E. GREENE STREET
CARLSBAD, NM 88220-6292

SENDER: COMPLETE THIS SECTION:

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1: Article Addressed To:

BUREAU OF LAND MANAGEMENT
620 E. GREENE STREET
CARLSBAD, NM 88220-6292

COMPLETE THIS SECTION ON DELIVERY:

A. Signature

X

Agent

Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes

If YES, enter delivery address below: No

3. Service Type

- Certified Mail Priority Mail Express
- Registered Return Receipt for Merchandise
- Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes

**2. Article Number
(Transfer from service label)**

91 7199 9991 7033 2435 9525

USPS Tracking® Results

FAQs > (<http://faq.usps.com/?articleId=220900>)

Track Another Package +

Remove X

Tracking Number: 9171999991703324359525



Delivered

On Time

Updated Delivery Day: Wednesday, May 17, 2017

Product & Tracking Information

See Available Actions

Postal Product:
Priority Mail™

Features:
Certified Mail™

DATE & TIME

STATUS OF ITEM

LOCATION

May 17, 2017, 11:53 am

**Delivered, Front
Desk/Reception**

CARLSBAD, NM 88220



Your item was delivered to the front desk or reception area at 11:53 am on May 17, 2017 in CARLSBAD, NM 88220.

May 17, 2017, 6:59 am

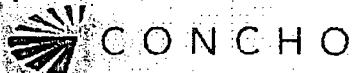
Out for Delivery

CARLSBAD, NM 88220

May 17, 2017, 6:49 am

Sorting Complete

CARLSBAD, NM 88220



Dana King
Permitting Tech

May 10, 2017

Bureau of Land Management
620 E. Greene Street
Carlsbad, New Mexico 88220-6292

Certified Mail Article Number: 91 7199 9991 7033 2435 9525

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600' FNL & 1,650' FWL
SWD: Cisco/Canyon (96186)
Eddy County, New Mexico

To Whom It May Concern:

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Sincerely,

A handwritten signature in black ink, appearing to read "Dana King".

Dana King
COG Operating LLC
Permitting Tech

COPY

Enclosure (Completed OCD Application)



One Concho Center
600 West Illinois Avenue
Midland, Texas 79701

91 7199 9991 7033 2435 9525

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

BUREAU OF LAND MANAGEMENT
620 E. GREENE STREET
CARLSBAD, NM 88220-6292

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Agent
 Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below:

RECEIVED
MAY 22 2017

3. Service Type

- Certified Mail Priority Mail Express
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes

2. Article Number

(Transfer from service label)

91 7199 9991 7033 2435 9525

BUREAU OF LAND MANAGEMENT

620 E. GREENE STREET
CARLSBAD, NM 88220-6292

PS Form 3811, July 2013

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

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BUREAU OF LAND MANAGEMENT
620 E. GREENE STREET
CARLSBAD, NM 88220-6292

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Agent
 Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below:

3. Service Type

- Certified Mail Priority Mail Express
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes

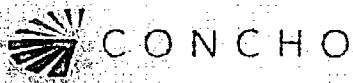
2. Article Number

(Transfer from service label)

91 7199 9991 7033 2435 9525

PS Form 3811, July 2013

Domestic Return Receipt



May 23, 2017

ConocoPhillips Company
600 North Dairy Ashford
Houston, TX 77079-1175

Second (2nd) Attempt

Re: SWD Application

Ronco Federal SWD #1
API# Pending
C-19-17S-30E
600 FNL & 1,650 FWL
SWD-Cisco-Cisco Canyon (96186)
Eddy County, New Mexico

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Sincerely,

Dana King
COG Operating LLC
Permitting Technician

Encl (Copy of First Notice Letter/4/19/2017)



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Search or tracking number | Submit

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FedEx® Tracking

779211823936

Ship date:

Tue 5/23/2017

MIDLAND TX US

Actual delivery

Wed 5/24/2017 9:47 am

Delivered

Signed for by: T TREVINO

HOUSTON TX US

Travel History

Date/Time	Activity	Location
- 5/24/2017 - Wednesday		
9:47 am	Delivered	HOUSTON TX
9:55 am	On FedEx vehicle for delivery	HOUSTON TX
7:15 am	At local FedEx facility	HOUSTON TX
5:00 am	At destination sort facility	HOUSTON TX
4:00 am	Deposited FedEx location	HOUSTON TX
- 5/23/2017 - Tuesday		
8:53 am	Arrived at FedEx location	POST OFFICE TX
8:02 pm	Left FedEx origin facility	MIDLAND TX
4:44 pm	Picked up	MIDLAND TX
3:57 pm	Shipment cancelled by sender	MIDLAND TX

Shipment Facts

Tracking number	779211823936	Service	FedEx Priority Overnight
Weight	0.5 lbs / 0.23 kgs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Terms	Shipper	Packaging	FedEx Envelope
Special handling section	Deliver Weeklyday	Standard transit	9/24/2017 by 10:30 am



Search or tracking number | Submit

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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
RA 11914 POD1

POD Sub- Code	basin	County	Q Q Q			X	Y	Depth	Depth	Water				
			64	16	4			Sec	Tws	Rng	Well	WaterColumn		
			ED	2	4	2	20	17S	30E	594801	3632002	85	80	5

Average Depth to Water: 80 feet

Minimum Depth: 80 feet

Maximum Depth: 80 feet

Record Count: 1

PLSS Search:

Section(s): 17-20

Township: 17S Range: 30E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/31/17 8:58 AM

**WATER COLUMN/ AVERAGE
DEPTH TO WATER**

McMillan, Michael, EMNRD

From: Dana King <DKing@concho.com>
Sent: Friday, June 2, 2017 9:54 AM
To: McMillan, Michael, EMNRD
Cc: Kanicia Castillo
Subject: RE: Ronco Federal SWD Well No. 1 Suspended application Eddy Co

Hello Michael,

As requested, please find the projected tops for the following:

San Andres	2,713'
Yeso (Paddock)	4,183'
Wolfcamp	7,463'
Cisco-Canyon	8,522'

Thank you,

Dana King

Permitting Technician
NM Shelf Team
COG Operating LLC
600 W. Illinois Ave
Midland, Tx 79701
(432) 818-2267



From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Wednesday, May 31, 2017 9:56 AM
To: Dana King
Subject: [External] RE: Ronco Federal SWD Well No. 1 Suspended application Eddy Co

Provide the projected tops for the San Andres, Yeso, Wolfcamp, and Cisco-Canyon
Mike

From: McMillan, Michael, EMNRD
Sent: Wednesday, May 31, 2017 8:54 AM
To: 'Dana King' <DKing@concho.com>
Subject: RE: Ronco Federal SWD Well No. 1 Suspended application Eddy Co

I need a water sample of the Cisco-Canyon.
Mike

From: McMillan, Michael, EMNRD
Sent: Wednesday, May 31, 2017 8:44 AM
To: 'Dana King' <DKing@concho.com>
Subject: RE: Ronco Federal SWD Well No. 1 Suspended application Eddy Co

Start 15-day closure
S-24-UT #

C-108 Review Checklist: Received 5/11/2017 Add. Request: _____ Reply Date: _____ Suspended: _____ [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Ronco Federal SWD

API: 30-0 15-Pendul Spud Date: TBD New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 660 ft 1650 ft Lot _____ or Unit C Sec 9 Tsp 17S Rge 30E County Eddy

General Location: 3 1/2 miles SW/Marybank Pool: _____ Pool No.: _____

BLM 100K Map: Antesia Operator: COR OPERATING LLC OGRID: 225137 Contact: Derrickings Permitting technician

COMPLIANCE RULE 5.9: Total Wells: 3968 Inactive: ✓ Fincl Assur: OK Compl. Order? NA IS 5.9 OK? X Date: 6/2/2017

WELL FILE REVIEWED Current Status: Proposed

WELL DIAGRAMS: NEW: Proposed or RE-ENTER: Before Conv. After Conv. Logs in Imaging: _____

Planned Rehab Work to Well:

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned	or Existing	<u>Surface</u>	<u>17 1/2 / 13 3/8</u>	<u>300'</u>	<u>40°</u>
Planned	or Existing	<u>Interim/Prod</u>	<u>12 1/4 / 9 5/8</u>	<u>1100'</u>	<u>450°</u>
Planned	or Existing	<u>Interim/Prod</u>	<u>8 3/4 / 7</u>	<u>863'</u>	<u>1300 / 1200 Surface Visual</u>
Planned	or Existing	<u>Prod/Liner</u>			
Planned	or Existing	<u>Liner</u>	<u>9 5/8</u>		
Planned	or Existing	<u>OH PERF</u>	<u>8630 / 4500</u>	<u>Inj Length</u> <u>1250'</u>	

Completion/Operation Details:

Drilled TD _____ PBTD _____
 NEW TD 9650' NEW PBTD _____
 NEW Open Hole or NEW Perfs
 Tubing Size 3 1/2 in. Inter Coated?
 Proposed Packer Depth _____ ft
 Min. Packer Depth _____ (100-ft limit)
 Proposed Max. Surface Press. 1726 psi
 Admin. Inj. Press. 1726 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P Noticed? BLM Sec Ord WIPP Noticed? Salt/Salado T: 50 B: 100 NW: Cliff House fm _____

FRESH WATER: Aquifer Clayey Max Depth 80' HYDRO AFFIRM STATEMENT By Qualified Person

NMOSE Basin: Basin II - Antesia CAPITAN REEF: thru adj NA No. Wells within 1-Mile Radius? _____ FW Analysis

Disposal Fluid: Formation Source(s) yes Analysis? Y On Lease Operator Only or Commercial

Disposal Int: Inject Rate (Avg/Max BWPD): 10K / 15K Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? NA Formerly Producing? _____ Method: Logs/DST/P&A/Other Regional 2-Mile Radius Pool Map

AOR Wells: 1/2-M Radius Map? Y Well List? _____ Total No. Wells Penetrating Interval: 3 Horizontals? 6

Penetrating Wells: No. Active Wells 3 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 1 Num Repairs? _____ on which well(s)? _____ Diagrams? X

NOTICE: Newspaper Date 5/11/2017 Mineral Owner BLM Surface Owner BLM N. Date 5/11/2017

RULE 26.7(A): Identified Tracts? _____ Affected Persons: EOG, DA Oil (Grande), Conoco N. Date 4/20/2017 5/11/2017 5/21/2017 5-24-2017

Order Conditions: Issues: Permit Pending