

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTOCD 4 CONSERVATION
NM OIL CONSERVATION
ARTESIA DISTRICT
APR 04 2016
RECEIVEDFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. NMNM114354	
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		6. If Indian, Allottee or Tribe Name	
2. Name of Operator COG OPERATING LLC		7. Unit or CA Agreement Name and No.	
Contact: STORMI DAVIS E-Mail: sdavis@concho.com		8. Lease Name and Well No. SOLUTION FEDERAL COM 3H	
3. Address 2208 W MAIN ST ARTESIA, NM 88210		9. API Well No. 30-015-43227	
3a. Phone No. (include area code) Ph: 575-748-6946		10. Field and Pool, or Exploratory PARKWAY; BONE SPRING	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* Sec 5 T20S R30E Mer NMP At surface NENW Lot 3 190FNL 2250FWL At top prod interval reported below Sec 8 T20S R30E Mer NMP At total depth SENW 2303FNL 1973FWL		11. Sec., T., R., M., or Block and Survey or Area Sec 5 T20S R30E Mer NMP	
14. Date Spudded 08/02/2015		15. Date T.D. Reached 08/22/2015	
16. Date Completed ☐ D & A ☒ Ready to Prod. 09/25/2015		17. Elevations (DF, KB, RT, GL)* 3252 GL	
18. Total Depth: MD 15567 TVD 8477		19. Plug Back T.D.: MD 15465 TVD 8476	
20. Depth Bridge Plug Set: MD 15465 TVD 8476		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) NONE	
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)			

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
26.000	20.000 J55	94.0	0	350		1200		0	
17.500	13.375 J55	54.5	0	1680		1575		0	
12.250	9.625 J55	40.0	0	3438	1903	1350		0	
8.750	7.000 P110	29.0	0	7699		2700		0	
8.750	5.500 P110	17.0	7700	15563				0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	8015							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING	8534	15440	8534 TO 15440	0.430	828	OPEN
B)			15490 TO 15500		60	UNDER CBP 1215465
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
8534 TO 15440	SEE IN REMARKS

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity
09/30/2015	10/04/2015	24	→	727.0	550.0	1506.0		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
	410	145.0	→	727	550	1506		POW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity
			→					
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

ACCEPTED FOR RECORD
ELECTRIC PUMP SUB-SURFACE
MAR 25 2016
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #318878 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Reclamation Due: 4/4/16

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
FLARED

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
DELAWARE	3589	6180		RUSTLER	124
BONE SPRING LM	6181	7445		CAPITAN	2002
1ST BONE SPRING	7446	8026		DELAWARE	3589
2ND BONE SPRING	8027	8477		BONE SPRING LM	6181
				1ST BONE SPRING	7446
				2ND BONE SPRING	8027

32. Additional remarks (include plugging procedure):

Perfs 7 1/2% Acid Sand(#) Fluid (Gal)
 15440 15338 15237 1512 451316 361830
 15135 15034 14932 2478 451901 414666
 14829 14729 14628 3024 451274 383631
 14526 14422 14323 3108 456735 385754
 14221 14120 14015 3066 452451 383033
 13917 13815 13713 3024 450099 379672
 13609 13510 13409 3024 450101 379417

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (I full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7 Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #318878 Verified by the BLM Well Information System.
 For COG OPERATING LLC, sent to the Carlsbad
 Committed to AFMSS for processing by DEBORAH HAM on 12/22/2015 ()

Name (please print) STORMI DAVIS

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 10/06/2015

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

Additional data for transaction #318878 that would not fit on the form

32. Additional remarks, continued

13307	13203	13104	3024	449826	378210
13003	12901	12797	3024	453424	384972
12698	12596	12495	3066	451776	377580
12390	12292	12190	3024	450741	377774
12089	11984	11885	3024	452107	375732
11784	11682	11577	3066	448439	375690
11479	11378	11276	3024	450937	375438
11172	11073	10971	3024	447735	372440
10870	10767	10667	3066	444252	372371
10565	10464	10360	3024	449487	372876
10260	10159	10057	3024	450178	371616
9955	9854	9753	3024	449540	370314
9651	9549	9448	3024	450146	371028
9346	9245	9142	3024	453734	372414
9042	8940	8839	3066	455000	373506
8736	8636	8534	3108	458267	370440
Totals	67872	10379466	8680402		

Surveys Attached



McVAY DRILLING COMPANY
P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

RECEIVED

SEP 09 15

COG
ARTESIA WEST

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 04 2016

RECEIVED

Well Name and Num: Solution Federal #3H
Location: Sec 5, T20S, R30E
Operator: COG
Drilling Contractor: McVay Drilling Company

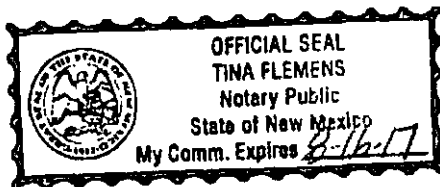
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
1.52	1.52	0.60	4949	89.00	11428		
1.00	296	0.30	5326	91.50	12561		
1.40	500	1.00	5704	87.60	12844		
0.40	875	0.40	6177	89.00	13533		
1.00	1158	0.40	6366	88.80	13386		
0.40	1442	1.10	6649	89.40	13760		
0.40	1606	0.30	6932	89.30	14047		
0.40	1725	0.60	7216	89.60	14235		
0.40	2039	0.40	7405	89.90	14610		
0.40	2332	90.50	8691	89.10	15085		
0.30	2606	88.60	8911	89.90	14610		
0.30	2934	87.90	9351	89.10	15085		
0.40	3278	89.50	9634				
0.40	3532	88.90	9918				
0.50	3721	89.00	10012				
1.20	4004	89.30	10484				
1.10	4572	89.50	10956				

By: Marc A. Bann

Subscribed and sworn to before me this 4th day of September, 2015

Tina Flemens
Notary Public, Lea County, New Mexico





August 19, 2015

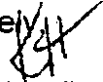
NM OIL CONSERVATION
ARTESIA DISTRICT
APR 04 2016
RECEIVED

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: Solution Federal Com No 003H

Please find enclosed a copy of the survey from 0' to 7667' ran on the above referenced well.

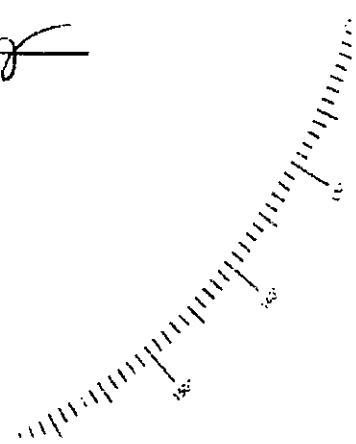
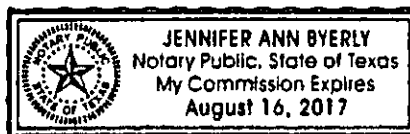
Sincerely,

Keith Havelka
Operations

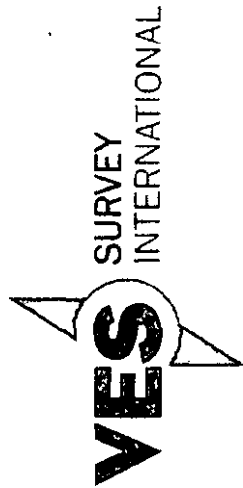
STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 19 day of August, A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com





Company: Concho Oil & Gas
Well: Solution Federal Com No 003H

Rig Name: McVay 6
State/County: New Mexico/Eddy
VS-Azi: 181.98 Degrees
Latitude: 32.60902, Longitude: -103.99495
Grid North = True North -0.18 degs (NAD 27)
Grid Correction Applied = -0.18 degs

Depth Reference : RKB = 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: survey-de_01.ut
Minimum Curvature Method
Report Date/Time: 8/19/2015 / 16:36

VES Survey International
Midland, Texas
432-563-5444

Surveyor: Geof Davis

Solution Federal Com No 003H / API 30-015-43227

NM OIL CONSERVATION ARTESIA DISTRICT

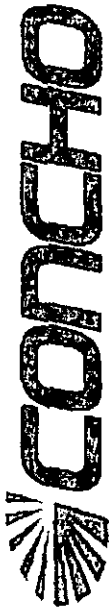
APR 04 2016

RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.30	263.80	100.00	-0.03	-0.26	0.04	0.26	263.80	0.30
200.00	0.85	254.81	200.00	-0.21	-1.07	0.24	1.08	259.14	0.35
300.00	0.63	237.62	298.99	-0.65	-2.08	0.72	2.18	252.68	0.19
400.00	0.83	230.13	399.98	-1.41	-3.11	1.52	3.41	245.57	0.22
500.00	0.80	230.29	499.97	-2.32	-4.20	2.46	4.80	241.07	0.04
600.00	0.43	216.91	599.97	-3.08	-4.96	3.23	5.83	238.28	0.39
700.00	0.20	194.86	699.96	-3.54	-5.23	3.71	6.31	235.93	0.25
800.00	0.36	109.67	799.96	-3.81	-4.98	3.98	6.27	232.54	0.40
900.00	0.72	123.96	899.96	-4.27	-4.18	4.41	5.96	224.23	0.38
1000.00	0.64	103.85	999.95	-4.76	-3.09	4.86	5.67	213.03	0.25
1100.00	0.60	93.48	1099.95	-4.92	-2.03	4.99	5.32	202.38	0.12
1200.00	0.56	88.93	1199.94	-4.95	-1.01	4.98	5.05	191.57	0.06
1300.00	0.21	359.61	1299.94	-4.76	-0.52	4.77	4.79	186.26	0.60
1400.00	0.52	4.92	1399.94	-4.13	-0.48	4.14	4.16	186.69	0.31
1500.00	0.38	3.28	1499.93	-3.36	-0.43	3.36	3.38	187.26	0.14
1600.00	0.49	354.67	1599.93	-2.59	-0.45	2.60	2.62	189.82	0.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	0.30	344.44	1699.93	-1.90	-0.56	1.92	1.98	196.39	0.20
1800.00	0.47	337.69	1799.93	-1.27	-0.79	1.29	1.49	211.81	0.17
1900.00	0.27	293.02	1899.92	-0.79	-1.16	0.83	1.41	235.60	0.34
2000.00	0.73	288.08	1999.92	-0.50	-1.98	0.57	2.05	255.73	0.46
2100.00	0.23	0.17	2099.92	-0.11	-2.59	0.20	2.59	267.60	0.69
2200.00	0.04	328.72	2199.92	0.12	-2.80	-0.03	2.60	272.61	0.20
2300.00	0.16	298.38	2299.92	0.21	-2.74	-0.11	2.75	274.35	0.13
2400.00	0.64	344.62	2399.91	0.81	-3.02	-0.70	3.13	285.01	0.55
2500.00	0.15	4.33	2499.91	1.48	-3.16	-1.37	3.49	295.12	0.50
2600.00	0.35	348.70	2599.91	1.92	-3.21	-1.81	3.74	300.93	0.22
2700.00	0.08	320.13	2699.91	2.29	-3.32	-2.17	4.03	304.58	0.30
2800.00	0.34	300.95	2799.91	2.49	-3.61	-2.36	4.39	304.59	0.26
2900.00	0.40	328.66	2899.91	2.94	-4.05	-2.80	5.00	306.00	0.19
3000.00	0.16	287.36	2999.91	3.28	-4.36	-3.13	5.46	308.93	0.30
3100.00	0.14	212.40	3099.90	3.22	-4.56	-3.06	5.58	305.23	0.18
3200.00	0.14	263.18	3199.90	3.11	-4.75	-2.94	5.67	303.21	0.12
3300.00	0.40	296.87	3299.90	3.25	-5.18	-3.07	6.12	302.10	0.29
3400.00	0.15	316.03	3399.90	3.50	-5.59	-3.31	6.59	302.10	0.26
3500.00	0.30	325.66	3499.90	3.82	-5.83	-3.52	6.97	303.24	0.16
3600.00	0.39	315.39	3599.90	4.28	-6.22	-4.07	7.55	304.55	0.11
3700.00	0.59	266.81	3699.90	4.50	-6.98	-4.25	8.30	302.81	0.45
3800.00	1.13	348.72	3799.89	5.44	-7.67	-5.17	9.41	305.38	1.21
3900.00	1.51	14.58	3899.86	7.70	-7.51	-7.43	10.76	315.68	0.68
4000.00	0.90	34.11	3999.84	9.63	-6.74	-9.39	11.75	325.00	0.73
4100.00	1.00	48.15	4099.83	10.86	-5.65	-10.66	12.24	332.63	0.25
4200.00	1.37	45.32	4199.80	12.28	-4.15	-12.13	12.97	341.34	0.37
4300.00	1.47	33.28	4299.77	14.20	-2.60	-14.10	14.43	349.64	0.32
4400.00	1.23	36.28	4398.75	16.14	-1.25	-16.09	16.19	355.55	0.25
4500.00	1.24	61.82	4499.72	17.52	0.33	-17.52	17.52	1.09	0.55
4600.00	1.15	67.36	4599.70	18.41	2.21	-18.48	18.55	6.86	0.14
4700.00	0.57	194.19	4699.69	18.32	3.02	-18.41	18.58	9.36	1.55
4800.00	0.46	164.80	4799.69	17.43	2.86	-17.52	17.66	9.33	0.14
4900.00	0.42	236.62	4899.69	16.82	2.52	-16.89	17.00	8.54	0.36
5000.00	0.55	279.76	4999.68	16.69	1.75	-16.74	16.78	5.99	0.38
5100.00	0.47	256.71	5099.68	16.67	0.89	-16.69	16.70	3.04	0.22
5200.00	0.21	165.39	5199.68	16.41	0.53	-16.41	16.41	1.87	0.52
5300.00	0.18	99.33	5299.68	16.20	0.74	-16.22	16.22	2.81	0.21
5400.00	0.42	104.17	5399.68	16.09	1.25	-16.12	16.14	4.44	0.23
5500.00	0.72	95.26	5499.67	15.94	2.23	-16.01	18.10	7.95	0.32

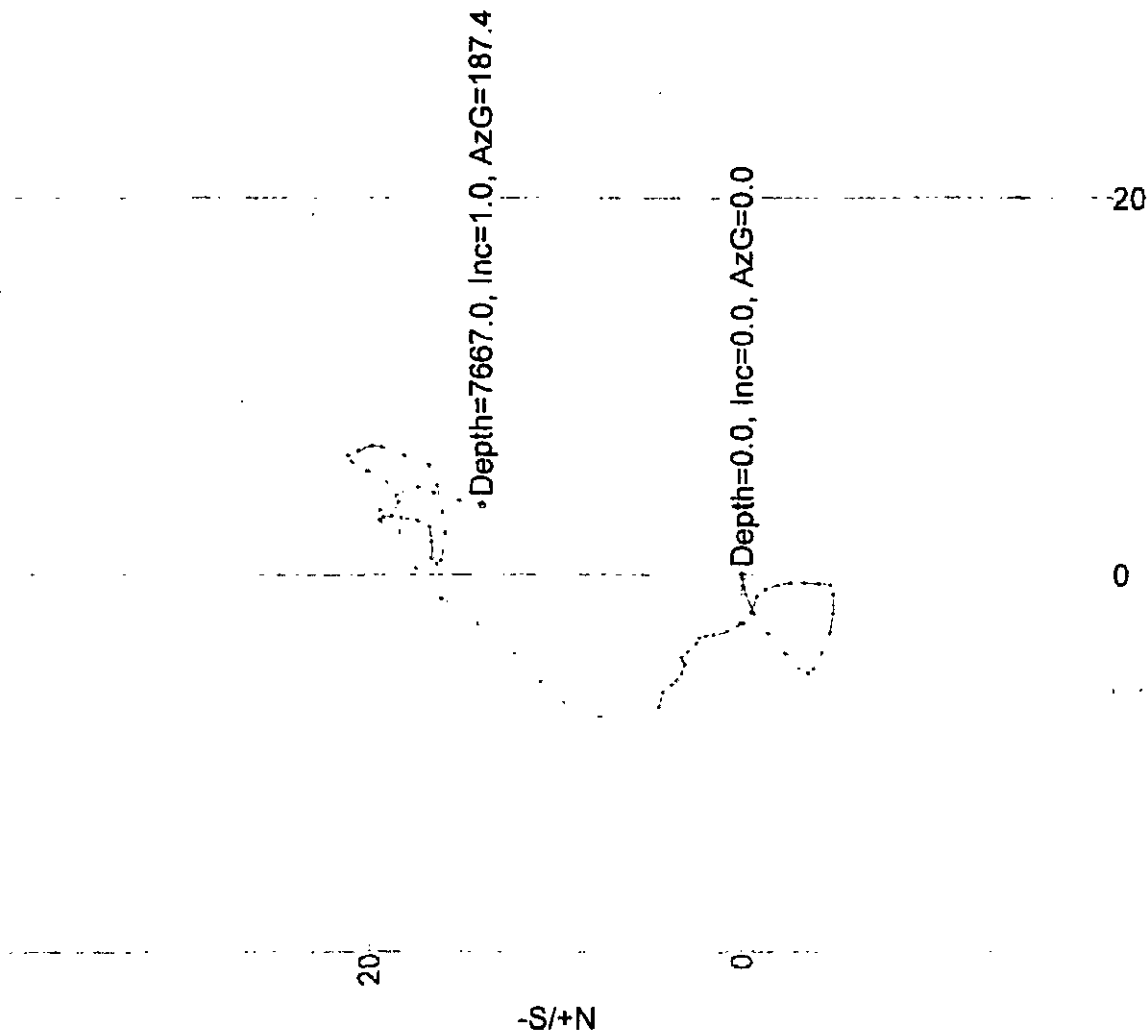
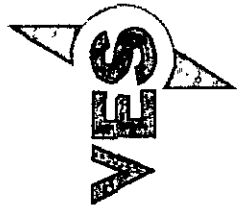
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5500.00	0.59	65.89	5599.67	16.09	3.32	-16.20	16.43	11.66	0.36
5700.00	1.10	84.04	5699.66	16.40	4.74	-16.56	17.07	16.12	0.57
5800.00	0.42	17.60	5799.65	16.86	6.80	-17.04	17.82	18.00	1.01
5900.00	1.15	22.47	5899.64	18.13	6.30	-18.34	19.19	19.16	0.73
6000.00	0.34	18.59	5999.63	19.35	6.78	-19.57	20.50	19.31	0.81
6100.00	0.26	344.49	6099.63	19.85	6.81	-20.07	20.99	18.95	0.19
6200.00	0.61	343.21	6199.62	20.58	8.60	-20.79	21.61	17.79	0.35
6300.00	0.14	309.66	6299.62	21.16	6.35	-21.37	22.10	16.70	0.49
6400.00	0.43	221.92	6399.62	20.86	6.00	-21.16	21.81	15.97	0.45
6500.00	0.68	206.10	6499.62	20.15	5.49	-20.33	20.88	15.24	0.28
6600.00	0.73	209.35	6599.61	19.07	4.92	-19.23	19.70	14.46	0.06
6700.00	0.88	265.89	6699.60	18.46	3.86	-18.58	18.86	11.77	0.77
6800.00	0.49	1.84	6799.60	18.83	3.10	-18.93	19.09	9.35	1.05
6900.00	0.09	305.56	6899.59	19.31	3.05	-19.40	19.54	8.97	0.44
7000.00	0.20	282.58	6999.59	19.39	2.81	-19.48	19.59	8.25	0.12
7100.00	0.30	72.10	7099.59	19.51	2.89	-19.80	19.72	8.42	0.48
7200.00	0.36	113.95	7199.59	19.46	3.42	-19.67	19.76	9.97	0.24
7300.00	1.05	146.61	7299.58	18.57	4.21	-18.70	19.04	12.78	0.77
7400.00	0.43	187.20	7399.58	17.44	4.67	-17.59	18.05	14.99	0.78
7500.00	0.64	208.72	7499.57	16.58	4.35	-16.72	17.14	14.72	0.29
7600.00	1.04	189.79	7599.56	15.19	3.93	-15.32	15.69	14.51	0.48
7667.00	0.99	187.36	7666.55	14.02	3.75	-14.14	14.51	14.99	0.10



VES Survey International
Midland, Texas
432-563-5444

Surveyor: Geof Davis

Solution Federal Com No 003H / API 30-015-43227



0

-W/+E

VES Survey Date: 8/13/2015



9/8/15

State of New Mexico
County of Eddy

I, Donald D. Mason, certify that: I am employed by Terra Directional Services LLC; that I did on the day(s) of 08/04/2015 through 08/22/2015 conduct or supervise the taking of a MWD survey from a depth of 7758 feet to a depth of 15587 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Terra Directional Services LLC; that I am authorized and qualified to make this report; that this survey was conducted at the request of COG Operating, LLC for the Solution Federal Ccm #3H Well API 30-015-43227 in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Terra Directional Services LLC.

Donald D. Mason
President

State of Texas
County of Burnet

Before me, a notary public, on this day personally appeared Donald D. Mason, known to me to be the person whose name is subscribed to the foregoing document and, being by me first duly sworn, declared that the statements therein contained are true and correct.



Notary Public's Signature



Customer Name: COG Operating, LLC
Well Name: Solution Federal Corn #3H
API Number: 30-015-43227
County / Parish: Eddy County, NM

M.W.D. Operator: Jeremy Tepe
Directional Driller: Irby Lejeune
Total Magnetic Correction: 7.2
Job #: NM-558

Vertical Section: 181.98

Tie In Survey(s) Provided By:

	Meas. Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist.	Angle	DLS
Tie - In										
0	7667.00	0.99	187.36	7666.55	-14.14	14.02	3.75	14.51	14.99	0.10
1	7758.00	1.60	146.00	7757.53	-12.33	12.19	4.36	12.94	19.68	1.18
2	7836.00	2.50	137.00	7835.48	-10.25	10.04	6.13	11.76	31.40	1.22
3	7863.00	3.10	157.90	7862.45	-9.16	8.93	6.81	11.23	37.30	4.35
4	7900.00	3.80	171.70	7899.38	-7.04	6.79	7.36	10.01	47.29	2.92
5	7931.00	6.60	181.90	7930.25	-4.25	4.00	7.45	8.45	61.79	9.48
6	7962.00	10.40	186.00	7960.90	0.32	-0.57	7.10	7.12	94.59	12.41
7	7994.00	14.10	188.10	7992.17	7.08	-7.30	6.24	9.61	139.47	11.64
8	8025.00	17.50	188.50	8021.99	15.47	-15.65	5.02	16.44	162.21	10.97
9	8057.00	20.40	187.30	8052.26	25.81	-25.95	3.60	26.20	172.09	9.14
10	8088.00	23.10	184.70	8081.05	37.26	-37.37	2.42	37.45	176.30	9.25
11	8120.00	26.20	182.60	8110.13	50.60	-50.69	1.58	50.71	178.21	10.07
12	8151.00	30.30	181.70	8137.43	65.27	-65.35	1.04	65.35	179.09	13.30
13	8183.00	34.70	181.70	8164.41	82.46	-82.53	0.53	82.53	179.63	13.75
14	8215.00	38.40	183.60	8190.12	101.51	-101.56	-0.36	101.56	180.21	12.09
15	8246.00	41.80	185.50	8213.83	121.45	-121.46	-1.96	121.47	180.92	11.66
16	8278.00	44.90	186.10	8237.09	143.37	-143.31	-4.18	143.37	181.67	9.77
17	8309.00	49.40	185.40	8258.17	166.04	-165.91	-6.45	166.04	182.23	14.61
18	8340.00	54.40	183.90	8277.29	190.40	-190.22	-8.42	190.41	182.53	16.57
19	8372.00	58.30	183.40	8295.02	217.02	-216.80	-10.11	217.04	182.67	12.26
20	8403.00	61.70	182.80	8310.52	243.86	-243.60	-11.56	243.88	182.72	11.10
21	8435.00	64.70	183.20	8324.95	272.41	-272.12	-13.06	272.44	182.75	9.44
22	8466.00	67.80	183.60	8337.43	300.77	-300.44	-14.74	300.81	182.81	10.07
23	8498.00	71.30	183.90	8348.61	330.74	-330.36	-16.70	330.78	182.89	10.97
24	8534.00	74.70	183.20	8359.13	365.15	-364.72	-18.83	365.20	182.96	9.63
25	8565.00	77.40	181.90	8366.60	395.23	-394.77	-20.17	395.28	182.92	9.61
26	8596.00	80.30	180.00	8372.60	425.63	-425.17	-20.67	425.68	182.78	11.12
27	8628.00	83.20	178.30	8377.19	457.26	-456.83	-20.20	457.28	182.53	10.48
28	8659.00	87.20	178.10	8379.78	488.08	-487.70	-19.23	488.08	182.26	12.92
29	8691.00	90.50	179.70	8380.43	520.02	-519.69	-18.61	520.02	182.05	11.46
30	8754.00	91.80	181.10	8379.16	582.98	-582.67	-19.05	582.98	181.87	3.03
31	8785.00	90.20	181.60	8378.62	613.97	-613.65	-19.78	613.97	181.85	5.41
32	8848.00	87.60	183.20	8379.83	676.95	-676.58	-22.42	676.95	181.90	4.85
33	8911.00	88.60	183.20	8381.92	739.90	-739.45	-25.94	739.90	182.01	1.59
34	8942.00	89.40	183.20	8382.46	770.89	-770.39	-27.67	770.89	182.06	2.58
35	9005.00	89.10	183.90	8383.28	833.86	-833.27	-31.57	833.86	182.17	1.21
36	9068.00	88.90	183.10	8384.38	896.83	-896.14	-35.41	896.84	182.26	1.31
37	9131.00	89.40	182.40	8385.32	959.81	-959.06	-38.43	959.83	182.29	1.37
38	9194.00	89.40	182.40	8385.98	1022.81	-1022.00	-41.07	1022.83	182.30	0.00
39	9257.00	89.50	182.00	8386.58	1085.81	-1084.95	-43.49	1085.82	182.30	0.65
40	9351.00	87.90	181.20	8388.72	1179.78	-1178.89	-46.12	1179.79	182.24	1.90
41	9446.00	88.40	181.80	8391.78	1274.72	-1273.80	-48.60	1274.73	182.19	0.82
42	9540.00	88.90	182.00	8394.00	1368.70	-1367.73	-51.72	1368.70	182.17	0.57
43	9634.00	89.50	182.50	8395.31	1462.68	-1461.64	-55.41	1462.69	182.17	0.83
44	9729.00	90.00	182.60	8395.72	1557.68	-1556.55	-59.63	1557.69	182.19	0.54

45	9823.00	88.80	181.10	8396.71	1651.67	-1650.49	-62.67	1651.68	182.17	2.04
46	9918.00	88.90	181.50	8398.62	1746.64	-1745.45	-64.82	1746.65	182.13	0.43
47	10012.00	89.00	181.90	8400.34	1840.63	-1839.39	-67.61	1840.63	182.11	0.44
48	10106.00	88.80	182.30	8402.14	1934.61	-1933.31	-71.05	1934.61	182.10	0.48
49	10170.00	88.70	182.90	8403.54	1998.59	-1997.23	-73.96	1998.59	182.12	0.95
50	10233.00	88.50	182.30	8405.08	2061.57	-2060.14	-76.81	2061.57	182.14	1.00
51	10295.00	88.60	181.50	8406.65	2123.55	-2122.09	-78.87	2123.55	182.13	1.30
52	10389.00	89.50	180.50	8408.21	2217.52	-2216.06	-80.51	2217.52	182.08	1.43
53	10484.00	89.30	180.70	8409.20	2312.48	-2311.05	-81.50	2312.48	182.02	0.30
54	10578.00	88.90	180.70	8410.68	2406.45	-2405.03	-82.65	2406.45	181.97	0.43
55	10673.00	88.80	180.80	8412.58	2501.41	-2500.00	-83.90	2501.41	181.92	0.15
56	10767.00	88.40	180.60	8414.88	2595.36	-2593.97	-85.04	2595.36	181.88	0.48
57	10861.00	89.70	182.00	8416.44	2689.33	-2687.92	-87.18	2689.34	181.86	2.03
58	10956.00	89.50	182.10	8417.10	2784.33	-2782.86	-90.57	2784.34	181.86	0.24
59	11050.00	89.30	182.10	8418.09	2878.32	-2876.79	-94.02	2878.33	181.87	0.21
60	11145.00	89.50	182.30	8419.08	2973.32	-2971.72	-97.67	2973.32	181.88	0.30
61	11239.00	89.50	182.50	8419.90	3067.31	-3065.63	-101.60	3067.31	181.90	0.21
62	11334.00	89.30	182.60	8420.90	3162.30	-3160.53	-105.83	3162.30	181.92	0.24
63	11428.00	89.00	182.80	8422.29	3256.28	-3254.42	-110.26	3256.28	181.94	0.38
64	11522.00	88.80	183.10	8424.09	3350.25	-3348.28	-115.09	3350.25	181.97	0.38
65	11586.00	86.90	181.60	8426.50	3414.20	-3412.17	-117.71	3414.20	181.98	3.78
66	11617.00	86.50	181.50	8428.28	3445.15	-3443.11	-118.55	3445.15	181.97	1.33
67	11711.00	86.10	181.60	8434.35	3538.95	-3536.88	-121.09	3538.95	181.96	0.44
68	11806.00	88.00	181.30	8439.24	3633.82	-3631.72	-123.49	3633.82	181.95	2.02
69	11900.00	91.90	182.50	8439.32	3727.80	-3725.65	-126.61	3727.80	181.95	4.34
70	11994.00	90.00	182.10	8437.76	3821.78	-3819.55	-130.38	3821.78	181.95	2.07
71	12089.00	90.40	182.10	8437.43	3916.78	-3914.49	-133.86	3916.78	181.96	0.42
72	12183.00	88.90	182.10	8438.00	4010.77	-4008.42	-137.30	4010.77	181.96	1.60
73	12277.00	88.80	182.10	8439.89	4104.75	-4102.34	-140.75	4104.75	181.96	0.11
74	12371.00	88.60	182.50	8442.02	4198.73	-4196.24	-144.52	4198.73	181.97	0.48
75	12466.00	90.40	182.20	8442.85	4293.72	-4291.15	-148.41	4293.72	181.98	1.92
76	12561.00	91.50	182.20	8441.27	4388.70	-4386.07	-152.06	4388.70	181.99	1.16
77	12655.00	90.20	181.30	8439.88	4482.69	-4480.01	-154.93	4482.69	181.98	1.68
78	12749.00	90.30	180.70	8439.47	4576.67	-4573.99	-156.57	4576.67	181.96	0.65
79	12844.00	87.60	181.00	8441.21	4671.63	-4668.96	-157.98	4671.63	181.94	2.86
80	12913.00	87.90	181.20	8443.92	4740.57	-4737.89	-159.30	4740.57	181.93	0.52
81	12977.00	88.20	181.40	8446.10	4804.53	-4801.84	-160.75	4804.53	181.92	0.56
82	13039.00	89.00	181.70	8447.61	4866.51	-4863.80	-162.43	4866.51	181.91	1.38
83	13102.00	89.00	182.20	8448.71	4929.50	-4926.75	-164.57	4929.50	181.91	0.79
84	13197.00	89.50	182.60	8449.96	5024.48	-5021.66	-168.55	5024.49	181.92	0.67
85	13291.00	88.10	181.90	8451.92	5118.46	-5115.56	-172.24	5118.46	181.93	1.67
86	13386.00	88.80	182.30	8454.49	5213.42	-5210.46	-175.72	5213.43	181.93	0.85
87	13480.00	89.20	182.60	8456.13	5307.41	-5304.36	-179.74	5307.41	181.94	0.53
88	13575.00	89.70	183.00	8457.05	5402.39	-5399.24	-184.38	5402.39	181.96	0.67
89	13669.00	90.00	182.60	8457.29	5496.38	-5493.13	-188.97	5496.38	181.97	0.53
90	13763.00	89.40	181.00	8457.78	5590.38	-5587.08	-191.92	5590.38	181.97	1.82
91	13858.00	89.90	181.70	8458.36	5685.37	-5682.05	-194.16	5685.37	181.96	0.91
92	13952.00	89.80	181.40	8458.61	5779.36	-5776.02	-196.70	5779.37	181.95	0.34
93	14047.00	89.30	181.20	8459.36	5874.35	-5870.99	-198.86	5874.36	181.94	0.57
94	14141.00	89.70	181.60	8460.18	5968.35	-5964.96	-201.16	5968.35	181.93	0.60
95	14235.00	89.60	181.90	8460.75	6062.34	-6058.91	-204.03	6062.35	181.93	0.34
96	14330.00	89.60	182.20	8461.41	6157.34	-6153.85	-207.42	6157.34	181.93	0.32
97	14424.00	89.60	182.60	8462.07	6251.34	-6247.76	-211.36	6251.34	181.94	0.43
98	14519.00	89.70	182.20	8462.65	6346.33	-6342.68	-215.34	6346.33	181.94	0.43
99	14613.00	89.80	182.70	8463.06	6440.33	-6436.59	-219.36	6440.33	181.95	0.54
100	14707.00	89.80	181.80	8463.39	6534.32	-6530.52	-223.05	6534.32	181.96	0.96
101	14802.00	89.10	181.40	8464.30	6629.32	-6625.47	-225.70	6629.32	181.95	0.85
102	14897.00	89.00	181.80	8465.88	6724.30	-6720.42	-228.35	6724.30	181.95	0.43

103	14991.00	89.10	182.00	8467.43	6818.29	-6814.36	-231.47	6818.29	181.95	0.24
104	15085.00	89.10	182.60	8468.91	6912.28	-6908.27	-235.24	6912.28	181.95	0.64
105	15148.00	89.00	182.60	8469.96	6975.26	-6971.20	-238.10	6975.26	181.96	0.16
106	15274.00	88.90	183.10	8472.26	7101.23	-7097.02	-244.36	7101.23	181.97	0.40
107	15369.00	89.00	183.40	8474.01	7196.19	-7191.85	-249.75	7196.19	181.99	0.33
108	15463.00	89.00	183.50	8475.65	7290.14	-7285.67	-255.40	7290.14	182.01	0.11
109	15514.00	89.00	183.80	8476.54	7341.11	-7336.56	-258.65	7341.11	182.02	0.59
PTB	15567.00	89.00	183.80	8477.46	7394.08	-7389.43	-262.16	7394.08	182.03	0.00