

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45532	Pool Code 16800	Pool Name Delaware River; Bone Spring
Property Code 322993	Property Name SRO 5 STATE COM	Well Number 505H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3007.5'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	5	26-S	28-E		314	NORTH	925	EAST	EDDY

Bottom Hole Location If Different From Surface

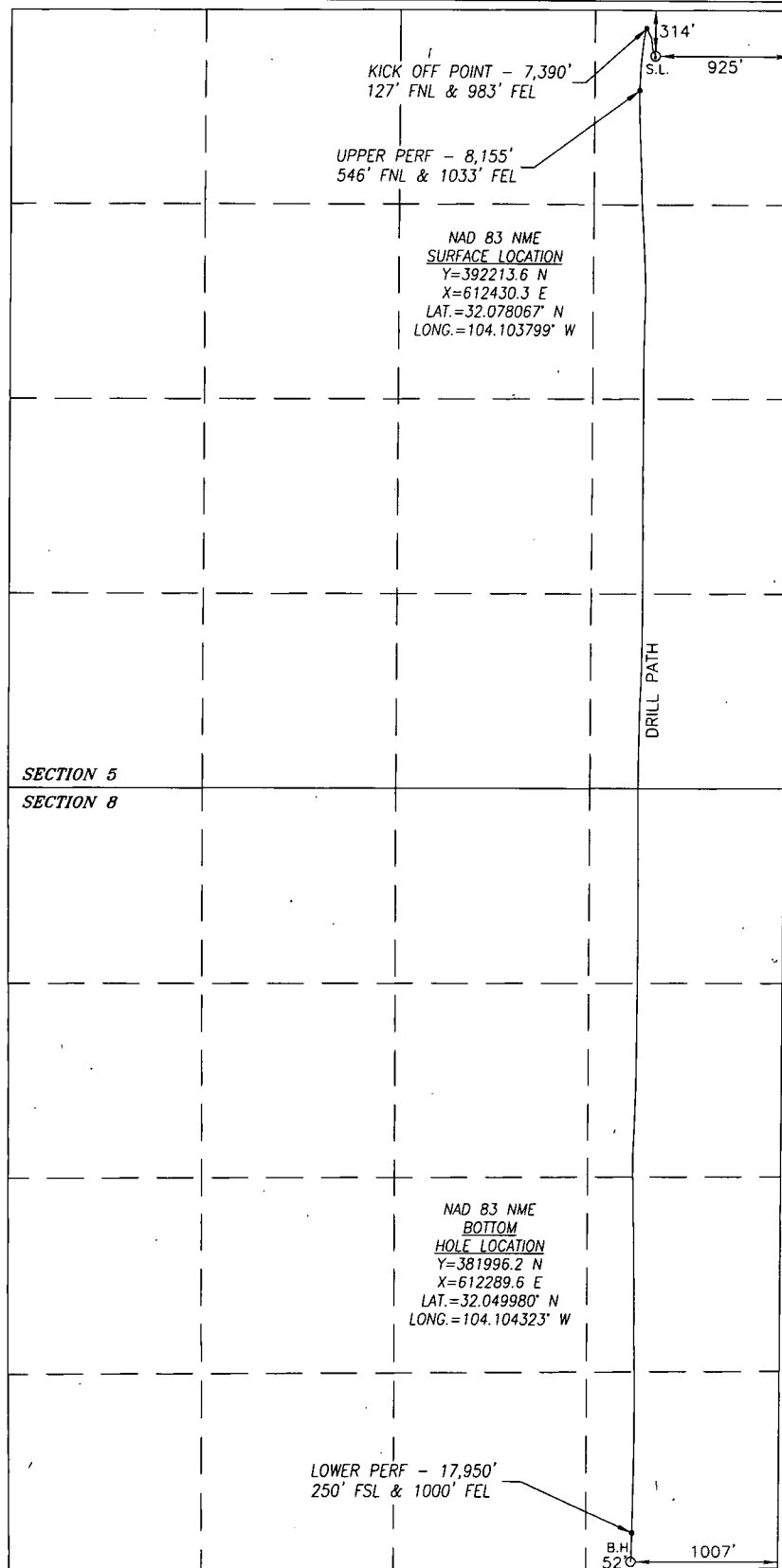
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	26-S	28-E		52	SOUTH	1007	EAST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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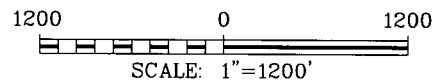
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SEE PAGE 2

Property Code 322993	Property Name SRO 5 STATE COM	Well Number 505H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3007.5'



BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING, LLC FOR THE SRO 5 STATE COM #505H SUPPLIED TO HARCROW SURVEYING, LLC ON SEPTEMBER 25, 2019.



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Amanda Avery 11/4/19
Signature Date

Amanda Avery

Printed Name

aavery@concho.com

E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JAN. 14, 2018/MAY 29, 2019

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 10/21/19
Certificate No. CHAD HARCROW 17777

RECEIVED

NOV 19 2019

Intent ☐ As Drilled ☒

DISTRICT 7-ARTESIA O.C.D.

API # 30-015-45532			
Operator Name: COG OPERATING, LLC		Property Name: SRO 5 STATE COM	Well Number 505H

Kick Off Point (KOP)

UL A	Section 5	Township 26S	Range 28E	Lot	Feet 127	From N/S NORTH	Feet 983	From E/W EAST	County EDDY
Latitude 32.078582					Longitude -104.103991			NAD 83	

First Take Point (FTP)

UL A	Section 5	Township 26S	Range 28E	Lot	Feet 546	From N/S NORTH	Feet 1033	From E/W EAST	County EDDY
Latitude 32.077429					Longitude -104.104139			NAD 83	

Last Take Point (LTP)

UL P	Section 8	Township 26S	Range 28E	Lot	Feet 250	From N/S SOUTH	Feet 1000	From E/W EAST	County EDDY
Latitude 32.050524					Longitude -104.104296			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☐ No

Is this well an infill well?

☐ Yes

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-025-45534			
Operator Name: COG Operating LLC		Property Name: SRO State Com	Well Number 507H

KZ 06/29/2018

COG

SURVEY REPORT

SRO 5 STATE COM #505H

ENSIGN #777

5/15/2019

This survey is correct to the best of my knowledge and is supported by actual field data.

JAKE ELGER

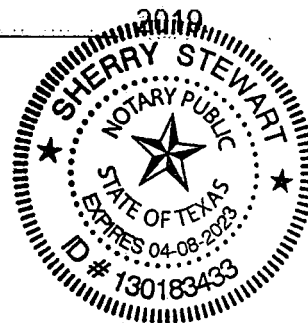
Notarized this date 07 of JUNE

Sherry Stewart

Notary Signature

County of Midland

State of Texas



The Ultimate Partner In Wellbore Placement

SURVEY REPORT

SRO 5 STATE COM #505H

DEFINITIVE KEEPER GYRO SURVEY

CUSTOMER
PROJECT
FIELD

COG
SRO 5 State Com #505H
SRO 5 State Com #505H

SDI JOB NO. OP:018618
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name SRO 5 State Com #505H
Lat/Long 32.0210925° N, 104.0958572° W
Northing 371,480.8 ft
Easting 573,599.6 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.13 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001



WELL INFORMATION

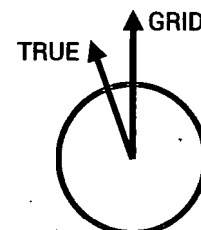
Lat/Long 32.0779439° N, 104.1033094° W
Northing 392,156.1 ft
Easting 571,245.9 ft
UWI 30-015-45532

DEPTH AND ELEVATION REFERENCE

Ground Level 3007.5 ft above Mean Sea
Level
Reference Datum KB
Reference Height 30 ft above G.L.
Reference Elevation 3037.5 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 180.69°
Calculation Method Minimum Curvature



LOCAL GRAVITY REFERENCE INFORMATION

Local Gravity 998.526 mG [computed]
True to Grid subtract 0.13°

WELL NOTES

Keeper Gyro Survey to 7,193'

OPERATORS

C. Booher

SDI Operator Name (Printed)

SIGNATURE

DATE



MD	INC	AZIM	TVD	VS	TWS	HEAW	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.07	331.96	100.00	-0.05	0.05	-0.03	0.07	0.06	331.96
125.00	0.11	292.54	125.00	-0.08	0.08	-0.06	0.29	0.10	322.71
150.00	0.13	291.82	150.00	-0.10	0.10	-0.11	0.06	0.14	312.07
175.00	0.20	263.85	175.00	-0.10	0.10	-0.18	0.42	0.20	300.15
200.00	0.12	285.65	200.00	-0.10	0.10	-0.24	0.40	0.27	293.21
225.00	0.22	255.97	225.00	-0.10	0.10	-0.32	0.54	0.33	287.53
250.00	0.19	213.78	250.00	-0.05	0.05	-0.39	0.61	0.39	277.84
275.00	0.20	239.75	275.00	0.01	0.00	-0.45	0.36	0.45	269.51
300.00	0.15	258.93	300.00	0.04	-0.03	-0.52	0.32	0.52	266.43
325.00	0.25	248.35	325.00	0.07	-0.06	-0.60	0.45	0.60	264.40
350.00	0.35	237.72	350.00	0.13	-0.12	-0.72	0.46	0.73	260.45
375.00	0.42	244.08	375.00	0.21	-0.20	-0.86	0.32	0.89	256.84
400.00	0.49	247.85	400.00	0.30	-0.28	-1.05	0.29	1.08	254.88
425.00	0.68	248.82	425.00	0.39	-0.38	-1.28	0.79	1.34	253.65
450.00	0.54	250.19	449.99	0.49	-0.47	-1.53	0.57	1.61	252.94
475.00	0.66	239.46	474.99	0.61	-0.58	-1.77	0.65	1.86	251.73
500.00	0.71	232.23	499.99	0.78	-0.75	-2.02	0.39	2.15	249.55
525.00	0.80	225.13	524.99	1.00	-0.97	-2.26	0.52	2.46	246.80
550.00	0.87	220.87	549.99	1.27	-1.24	-2.51	0.39	2.80	243.78
575.00	0.94	211.39	574.98	1.59	-1.56	-2.74	0.65	3.15	240.43
600.00	0.92	209.67	599.98	1.94	-1.90	-2.95	0.13	3.51	237.14
625.00	0.95	197.94	624.98	2.31	-2.27	-3.11	0.77	3.85	233.82
650.00	1.10	200.44	649.97	2.73	-2.70	-3.26	0.62	4.23	230.39
675.00	1.35	191.60	674.97	3.25	-3.21	-3.40	1.26	4.67	226.66
700.00	1.47	187.87	699.96	3.86	-3.81	-3.50	0.61	5.18	222.56
725.00	1.64	188.58	724.95	4.53	-4.49	-3.60	0.69	5.75	218.75
750.00	1.77	190.07	749.94	5.27	-5.22	-3.72	0.53	6.41	215.48
775.00	1.94	191.37	774.93	6.06	-6.02	-3.87	0.69	7.15	212.77
800.00	1.89	193.85	799.91	6.88	-6.83	-4.05	0.39	7.94	210.70
825.00	1.91	190.19	824.90	7.69	-7.64	-4.23	0.50	8.73	208.96
850.00	1.84	191.27	849.89	8.49	-8.44	-4.38	0.33	9.51	207.41

MD	INC	AZIM	TVD	VS	IN/S	FE/W	DLS	CLOSURE	CLOSURE
ft	deg	deg	ft	ft	ft	ft	/100ft	DIST	DIR
875.00	1.91	190.92	874.87	9.30	-9.24	-4.54	0.32	10.30	206.13
900.00	1.92	192.12	899.86	10.12	-10.06	-4.70	0.16	11.11	205.05
925.00	1.91	192.41	924.84	10.94	-10.88	-4.88	0.06	11.92	204.16
950.00	1.37	205.77	949.83	11.61	-11.55	-5.10	2.63	12.63	203.81
975.00	1.28	215.49	974.83	12.11	-12.05	-5.39	0.96	13.20	204.10
1000.00	0.90	231.63	999.82	12.47	-12.40	-5.71	1.92	13.65	204.72
1025.00	1.08	234.53	1024.82	12.73	-12.66	-6.05	0.73	14.03	205.56
1050.00	1.03	232.97	1049.81	13.00	-12.93	-6.42	0.24	14.44	206.42
1075.00	1.03	231.50	1074.81	13.28	-13.20	-6.78	0.11	14.84	207.18
1100.00	1.10	231.89	1099.81	13.58	-13.49	-7.14	0.26	15.27	207.90
1125.00	1.00	231.84	1124.80	13.86	-13.77	-7.50	0.40	15.69	208.58
1150.00	0.92	222.98	1149.80	14.15	-14.06	-7.81	0.66	16.08	209.06
1175.00	0.99	234.08	1174.80	14.43	-14.33	-8.12	0.78	16.47	209.55
1200.00	1.02	226.53	1199.79	14.71	-14.61	-8.46	0.55	16.88	210.07
1225.00	0.93	233.95	1224.79	14.99	-14.88	-8.79	0.64	17.28	210.56
1250.00	0.97	236.06	1249.78	15.23	-15.12	-9.13	0.24	17.66	211.11
1275.00	0.98	234.63	1274.78	15.48	-15.36	-9.48	0.10	18.05	211.67
1300.00	0.64	229.84	1299.78	15.69	-15.58	-9.76	1.38	18.38	212.06
1325.00	0.39	216.49	1324.78	15.85	-15.74	-9.92	1.09	18.60	212.21
1350.00	0.17	104.20	1349.78	15.93	-15.81	-9.93	1.93	18.67	212.13
1375.00	0.29	73.33	1374.78	15.92	-15.80	-9.84	0.67	18.62	211.90
1400.00	0.41	69.46	1399.78	15.87	-15.76	-9.69	0.50	18.50	211.60
1425.00	0.45	66.26	1424.78	15.80	-15.68	-9.52	0.20	18.35	211.26
1450.00	0.48	70.69	1449.77	15.72	-15.61	-9.33	0.20	18.19	210.87
1475.00	0.50	74.57	1474.77	15.65	-15.55	-9.12	0.16	18.03	210.41
1500.00	0.53	64.64	1499.77	15.57	-15.47	-8.91	0.37	17.85	209.96
1525.00	0.37	82.82	1524.77	15.51	-15.41	-8.73	0.84	17.71	209.53
1550.00	0.44	76.76	1549.77	15.48	-15.37	-8.55	0.33	17.59	209.09
1575.00	0.34	86.66	1574.77	15.45	-15.35	-8.39	0.50	17.49	208.65
1600.00	0.40	69.37	1599.77	15.41	-15.31	-8.23	0.50	17.39	208.26
1625.00	0.52	82.31	1624.77	15.36	-15.27	-8.04	0.64	17.25	207.76
1650.00	0.83	91.69	1649.77	15.35	-15.26	-7.74	1.31	17.11	206.91

MD	INC	AZIM	TVD	VS	INVS	TE/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
1675.00	0.83	86.15	1674.77	15.34	-15.25	-7.38	0.32	16.94	205.83
1700.00	0.89	86.64	1699.76	15.31	-15.23	-7.01	0.27	16.76	204.72
1725.00	1.23	85.00	1724.76	15.27	-15.19	-6.55	0.35	16.54	203.31
1750.00	1.35	88.84	1749.75	15.23	-15.16	-5.99	0.59	16.30	201.55
1775.00	1.37	91.83	1774.74	15.23	-15.17	-5.39	0.30	16.10	199.58
1800.00	1.49	89.59	1799.74	15.23	-15.17	-4.77	0.52	15.91	197.46
1825.00	1.48	94.54	1824.73	15.25	-15.20	-4.13	0.51	15.75	195.19
1850.00	1.60	93.41	1849.72	15.28	-15.24	-3.45	0.47	15.63	192.77
1875.00	1.53	99.19	1874.71	15.35	-15.32	-2.78	0.68	15.57	190.27
1900.00	1.58	102.93	1899.70	15.47	-15.45	-2.11	0.44	15.59	187.78
1925.00	1.69	103.14	1924.69	15.63	-15.61	-1.42	0.47	15.67	185.19
1950.00	1.76	107.02	1949.68	15.81	-15.81	-0.69	0.53	15.82	182.50
1975.00	1.75	108.14	1974.67	16.03	-16.04	0.04	0.14	16.04	179.87
2000.00	1.78	104.88	1999.66	16.24	-16.25	0.77	0.42	16.27	177.28
2025.00	1.72	104.98	2024.64	16.43	-16.45	1.51	0.21	16.52	174.75
2050.00	1.57	104.08	2049.63	16.60	-16.63	2.21	0.63	16.78	172.44
2075.00	1.01	91.04	2074.63	16.68	-16.72	2.76	2.52	16.94	170.63
2100.00	0.93	72.80	2099.62	16.62	-16.66	3.17	1.26	16.96	169.22
2125.00	0.82	38.16	2124.62	16.42	-16.46	3.47	2.12	16.83	168.08
2150.00	1.11	13.04	2149.62	16.04	-16.09	3.64	2.02	16.49	167.26
2175.00	1.35	351.74	2174.61	15.52	-15.56	3.65	2.06	15.98	166.80
2200.00	1.37	350.04	2199.61	14.93	-14.97	3.56	0.18	15.39	166.64
2225.00	1.55	350.52	2224.60	14.30	-14.35	3.45	0.71	14.76	166.48
2250.00	1.55	354.93	2249.59	13.64	-13.68	3.36	0.48	14.08	166.18
2275.00	1.66	0.70	2274.58	12.94	-12.98	3.34	0.80	13.40	165.57
2300.00	1.63	356.91	2299.57	12.22	-12.26	3.32	0.46	12.70	164.83
2325.00	1.52	351.60	2324.56	11.54	-11.58	3.26	0.73	12.03	164.29
2350.00	1.64	355.33	2349.55	10.86	-10.90	3.18	0.64	11.35	163.74
2375.00	1.58	354.00	2374.54	10.16	-10.20	3.11	0.28	10.66	163.02
2400.00	1.73	351.21	2399.53	9.44	-9.48	3.02	0.66	9.95	162.33
2425.00	1.56	351.23	2424.52	8.74	-8.77	2.91	0.64	9.24	161.64
2450.00	1.58	351.84	2449.51	8.06	-8.09	2.81	0.09	8.57	160.86

MD	INC	AZIM	TVD	VS	N/S	E/W	DIS	CLOSURE	CLOSURE
ft	deg	deg	ft	ft	ft	ft	%/100ft	DIST	DIA
2475.00	1.55	347.82	2474.50	7.39	-7.42	2.69	0.46	7.90	160.08
2500.00	1.61	346.49	2499.49	6.72	-6.75	2.54	0.28	7.21	159.41
2525.00	1.61	346.67	2524.48	6.04	-6.07	2.37	0.02	6.52	158.64
2550.00	1.60	343.29	2549.47	5.37	-5.39	2.19	0.38	5.82	157.88
2575.00	1.71	349.51	2574.46	4.67	-4.69	2.02	0.86	5.11	156.66
2600.00	1.67	349.13	2599.45	3.94	-3.97	1.89	0.19	4.39	154.55
2625.00	1.74	347.79	2624.44	3.22	-3.24	1.74	0.33	3.68	151.77
2650.00	1.67	345.34	2649.43	2.50	-2.52	1.57	0.42	2.96	148.10
2675.00	1.70	344.17	2674.42	1.79	-1.81	1.37	0.19	2.27	142.79
2700.00	1.67	345.83	2699.41	1.08	-1.10	1.18	0.22	1.62	132.89
2725.00	1.66	345.10	2724.40	0.38	-0.40	1.00	0.10	1.08	131.60
2750.00	1.72	344.16	2749.38	0.32	-0.31	0.81	0.26	0.86	68.75
2775.00	1.69	345.25	2774.37	1.04	-1.03	0.61	0.18	1.20	30.65
2800.00	1.67	344.73	2799.36	1.74	-1.74	0.42	0.08	1.79	13.60
2825.00	1.65	344.55	2824.35	-2.44	2.44	0.23	0.10	2.45	5.36
2850.00	1.68	346.38	2849.34	-3.14	3.14	0.05	0.25	3.14	0.85
2875.00	1.58	344.68	2874.33	-3.82	3.83	-0.13	0.46	3.83	358.04
2900.00	1.63	344.48	2899.32	-4.50	4.50	-0.32	0.23	4.51	355.97
2925.00	1.68	346.58	2924.31	-5.20	5.20	-0.50	0.32	5.23	354.54
2950.00	1.65	341.03	2949.30	-5.89	5.90	-0.70	0.66	5.94	353.24
2975.00	1.59	343.49	2974.29	-6.56	6.57	-0.92	0.37	6.63	352.07
3000.00	1.70	343.66	2999.28	-7.25	7.26	-1.12	0.46	7.35	351.25
3025.00	1.62	345.31	3024.27	-7.94	7.96	-1.31	0.38	8.07	350.64
3050.00	1.63	344.21	3049.26	-8.62	8.64	-1.50	0.13	8.77	350.16
3075.00	1.69	342.78	3074.25	-9.32	9.34	-1.70	0.30	9.49	349.65
3100.00	1.70	344.66	3099.24	-10.02	10.05	-1.91	0.22	10.23	349.23
3125.00	2.10	331.84	3124.22	-10.78	10.81	-2.23	2.32	11.03	348.36
3150.00	1.71	344.12	3149.21	-11.54	11.57	-2.54	2.24	11.85	347.60
3175.00	1.79	342.99	3174.20	-12.27	12.30	-2.76	0.33	12.61	347.35
3200.00	1.67	344.61	3199.19	-12.99	13.03	-2.97	0.51	13.36	347.15
3225.00	1.62	346.19	3224.18	-13.68	13.72	-3.15	0.26	14.08	347.06
3250.00	1.79	345.48	3249.17	-14.40	14.44	-3.33	0.68	14.82	347.00

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
3275.00	1.75	343.17	3274.15	-15.14	15.19	-3.54	0.32	15.59	346.87
3300.00	1.78	339.11	3299.14	-15.87	15.92	-3.79	0.51	16.36	346.60
3325.00	1.62	337.45	3324.13	-16.55	16.60	-4.07	0.66	17.09	346.24
3350.00	1.70	332.13	3349.12	-17.20	17.26	-4.37	0.69	17.80	345.78
3375.00	1.61	335.77	3374.11	-17.85	17.90	-4.69	0.56	18.51	345.32
3400.00	1.57	317.23	3399.10	-18.41	18.48	-5.07	2.05	19.16	344.66
3425.00	1.76	338.64	3424.09	-19.02	19.08	-5.44	2.58	19.84	344.09
3450.00	1.68	322.42	3449.08	-19.66	19.73	-5.80	1.96	20.57	343.61
3475.00	1.69	336.33	3474.07	-20.29	20.36	-6.18	1.63	21.28	343.13
3500.00	1.78	338.41	3499.06	-20.98	21.06	-6.47	0.44	22.03	342.93
3525.00	1.78	334.67	3524.05	-21.69	21.77	-6.78	0.46	22.80	342.71
3550.00	1.73	332.59	3549.03	-22.37	22.46	-7.12	0.32	23.56	342.42
3575.00	1.75	334.38	3574.02	-23.04	23.14	-7.45	0.23	24.31	342.14
3600.00	1.74	336.42	3599.01	-23.73	23.83	-7.77	0.25	25.06	341.94
3625.00	1.88	334.03	3624.00	-24.45	24.54	-8.10	0.65	25.85	341.73
3650.00	1.74	333.56	3648.99	-25.15	25.25	-8.45	0.57	26.63	341.50
3675.00	1.75	334.87	3673.97	-25.83	25.94	-8.78	0.17	27.39	341.29
3700.00	1.77	337.97	3698.96	-26.53	26.64	-9.09	0.39	28.15	341.16
3725.00	1.80	338.52	3723.95	-27.25	27.37	-9.38	0.13	28.93	341.08
3750.00	1.82	338.42	3748.94	-27.98	28.10	-9.67	0.09	29.72	341.01
3775.00	1.82	336.95	3773.93	-28.71	28.84	-9.97	0.19	30.51	340.93
3800.00	1.87	335.50	3798.91	-29.44	29.57	-10.29	0.29	31.31	340.81
3825.00	1.77	336.41	3823.90	-30.16	30.29	-10.62	0.44	32.10	340.69
3850.00	1.99	340.43	3848.89	-30.92	31.06	-10.92	1.04	32.92	340.63
3875.00	1.82	333.76	3873.87	-31.68	31.82	-11.24	1.11	33.75	340.55
3900.00	1.85	334.64	3898.86	-32.40	32.54	-11.59	0.16	34.54	340.40
3925.00	1.79	331.73	3923.85	-33.11	33.25	-11.94	0.46	35.33	340.24
3950.00	1.76	330.55	3948.83	-33.78	33.93	-12.32	0.18	36.10	340.05
3975.00	1.77	332.20	3973.82	-34.45	34.60	-12.69	0.21	36.86	339.87
4000.00	1.69	327.76	3998.81	-35.10	35.26	-13.06	0.63	37.60	339.67
4025.00	1.62	323.92	4023.80	-35.69	35.85	-13.47	0.52	38.30	339.41
4050.00	1.59	320.69	4048.79	-36.24	36.41	-13.89	0.38	38.97	339.11

MD	INC	AZIM	TVD	VS	IN/S	EA/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
4075.00	1.61	324.15	4073.78	-36.79	36.96	-14.32	0.39	39.64	338.82
4100.00	1.66	325.46	4098.77	-37.36	37.54	-14.73	0.25	40.33	338.58
4125.00	1.57	324.13	4123.76	-37.93	38.12	-15.13	0.37	41.01	338.34
4150.00	1.60	326.33	4148.75	-38.50	38.68	-15.53	0.26	41.69	338.13
4175.00	1.63	325.23	4173.74	-39.07	39.27	-15.93	0.18	42.37	337.92
4200.00	1.56	325.03	4198.73	-39.64	39.84	-16.32	0.29	43.05	337.72
4225.00	1.54	325.47	4223.72	-40.19	40.39	-16.71	0.08	43.71	337.53
4250.00	1.44	317.28	4248.72	-40.69	40.90	-17.11	0.95	44.34	337.30
4275.00	1.50	329.06	4273.71	-41.20	41.41	-17.49	1.23	44.95	337.10
4300.00	1.43	325.09	4298.70	-41.73	41.95	-17.84	0.49	45.58	336.96
4325.00	1.56	330.96	4323.69	-42.28	42.50	-18.18	0.81	46.23	336.84
4350.00	1.59	334.24	4348.68	-42.88	43.11	-18.50	0.37	46.91	336.78
4375.00	1.89	343.14	4373.67	-43.58	43.81	-18.77	1.62	47.66	336.81
4400.00	2.05	347.52	4398.65	-44.41	44.64	-18.98	0.88	48.51	336.97
4425.00	2.21	348.53	4423.64	-45.32	45.55	-19.17	0.66	49.42	337.17
4450.00	2.06	352.75	4448.62	-46.23	46.47	-19.33	0.85	50.33	337.42
4475.00	2.21	352.17	4473.60	-47.16	47.39	-19.45	0.59	51.23	337.69
4500.00	2.22	353.20	4498.58	-48.11	48.35	-19.57	0.17	52.16	337.96
4525.00	2.32	356.00	4523.56	-49.10	49.34	-19.67	0.60	53.11	338.27
4550.00	2.19	353.40	4548.55	-50.08	50.32	-19.76	0.68	54.06	338.56
4575.00	2.23	354.02	4573.53	-51.03	51.28	-19.86	0.21	54.99	338.83
4600.00	2.29	353.86	4598.51	-52.01	52.26	-19.97	0.24	55.94	339.09
4625.00	2.75	357.31	4623.48	-53.11	53.35	-20.05	1.91	56.99	339.41
4650.00	3.35	355.68	4648.45	-54.43	54.68	-20.13	2.43	58.27	339.79
4675.00	3.39	357.75	4673.40	-55.90	56.14	-20.21	0.52	59.67	340.20
4700.00	3.57	356.22	4698.36	-57.41	57.66	-20.29	0.80	61.13	340.61
4725.00	3.37	358.73	4723.31	-58.92	59.17	-20.36	0.98	62.58	341.01
4750.00	3.36	357.69	4748.27	-60.39	60.64	-20.41	0.25	63.98	341.40
4775.00	3.35	358.65	4773.23	-61.85	62.10	-20.45	0.23	65.38	341.77
4800.00	3.53	354.48	4798.18	-63.35	63.60	-20.55	1.23	66.84	342.10
4825.00	3.45	359.13	4823.13	-64.86	65.12	-20.63	1.18	68.31	342.42
4850.00	3.38	359.13	4848.09	-66.35	66.61	-20.65	0.27	69.74	342.77

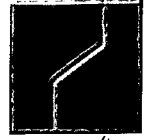
MD	INC	AZIM	TVD	VS	N/S	HE/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%100ft	ft	deg
4875.00	3.33	359.87	4873.05	-67.82	68.07	-20.67	0.28	71.14	343.11
4900.00	3.23	359.14	4898.01	-69.24	69.50	-20.68	0.44	72.51	343.43
4925.00	3.76	357.61	4922.96	-70.77	71.02	-20.72	2.17	73.98	343.73
4950.00	3.21	0.21	4947.91	-72.28	72.54	-20.75	2.29	75.45	344.03
4975.00	3.12	2.42	4972.88	-73.66	73.92	-20.72	0.60	76.77	344.34
5000.00	3.03	1.90	4997.84	-75.01	75.26	-20.67	0.41	78.05	344.64
5025.00	3.00	3.95	5022.81	-76.32	76.57	-20.61	0.45	79.30	344.94
5050.00	2.98	2.34	5047.77	-77.62	77.87	-20.53	0.34	80.54	345.23
5075.00	3.05	1.70	5072.74	-78.94	79.19	-20.49	0.31	81.80	345.49
5100.00	3.00	0.43	5097.70	-80.26	80.51	-20.46	0.33	83.07	345.74
5125.00	3.01	2.58	5122.67	-81.57	81.82	-20.43	0.45	84.33	345.98
5150.00	2.88	357.16	5147.63	-82.85	83.10	-20.43	1.23	85.58	346.19
5175.00	3.43	348.19	5172.60	-84.21	84.46	-20.61	2.96	86.94	346.28
5200.00	3.55	345.09	5197.55	-85.68	85.94	-20.97	0.89	88.46	346.29
5225.00	3.71	347.77	5222.50	-87.22	87.48	-21.34	0.93	90.04	346.29
5250.00	3.73	344.38	5247.45	-88.78	89.05	-21.73	0.89	91.66	346.29
5275.00	3.67	344.53	5272.40	-90.33	90.60	-22.16	0.25	93.28	346.26
5300.00	3.66	346.87	5297.34	-91.87	92.15	-22.55	0.60	94.87	346.25
5325.00	3.83	342.20	5322.29	-93.44	93.73	-22.99	1.40	96.51	346.22
5350.00	3.62	347.57	5347.24	-95.01	95.29	-23.42	1.63	98.13	346.19
5375.00	3.66	348.20	5372.19	-96.55	96.85	-23.75	0.22	99.72	346.22
5400.00	3.51	349.00	5397.14	-98.08	98.38	-24.06	0.65	101.28	346.26
5425.00	3.54	350.14	5422.09	-99.59	99.89	-24.34	0.30	102.81	346.31
5450.00	3.48	351.31	5447.04	-101.09	101.40	-24.58	0.37	104.34	346.37
5475.00	3.58	350.65	5472.00	-102.61	102.92	-24.82	0.45	105.87	346.44
5500.00	3.51	351.17	5496.95	-104.14	104.45	-25.07	0.33	107.41	346.50
5525.00	3.38	351.84	5521.90	-105.62	105.93	-25.29	0.55	108.91	346.57
5550.00	3.33	347.90	5546.86	-107.06	107.37	-25.55	0.95	110.37	346.62
5575.00	3.46	350.92	5571.82	-108.51	108.83	-25.82	0.90	111.85	346.65
5600.00	3.56	348.86	5596.77	-110.01	110.33	-26.09	0.64	113.38	346.70
5625.00	3.36	351.86	5621.72	-111.49	111.82	-26.34	1.09	114.88	346.74
5650.00	3.35	350.84	5646.68	-112.94	113.26	-26.56	0.24	116.34	346.80

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
5675.00	3.37	351.24	5671.64	-114.38	114.71	-26.79	0.15	117.80	346.85
5700.00	3.38	352.08	5696.60	-115.84	116.17	-27.00	0.20	119.27	346.91
5725.00	3.26	353.30	5721.55	-117.27	117.61	-27.19	0.58	120.71	346.98
5750.00	3.25	352.56	5746.51	-118.67	119.01	-27.36	0.17	122.12	347.05
5775.00	3.20	351.86	5771.47	-120.06	120.40	-27.55	0.25	123.52	347.11
5800.00	3.13	350.62	5796.44	-121.42	121.77	-27.76	0.40	124.89	347.16
5825.00	2.99	352.57	5821.40	-122.74	123.09	-27.96	0.67	126.22	347.20
5850.00	3.01	350.26	5846.37	-124.03	124.38	-28.15	0.49	127.53	347.25
5875.00	3.17	346.40	5871.33	-125.35	125.70	-28.43	1.07	128.87	347.26
5900.00	3.07	335.29	5896.29	-126.62	126.98	-28.87	2.45	130.22	347.19
5925.00	3.16	333.41	5921.26	-127.84	128.21	-29.46	0.54	131.55	347.06
5950.00	3.09	331.96	5946.22	-129.05	129.42	-30.08	0.44	132.87	346.91
5975.00	3.10	332.07	5971.18	-130.23	130.61	-30.72	0.07	134.17	346.77
6000.00	3.10	329.97	5996.15	-131.41	131.79	-31.37	0.46	135.48	346.61
6025.00	3.23	331.24	6021.11	-132.60	133.00	-32.05	0.58	136.81	346.45
6050.00	3.05	329.63	6046.07	-133.78	134.19	-32.73	0.82	138.12	346.29
6075.00	3.01	329.18	6071.03	-134.91	135.33	-33.40	0.17	139.39	346.14
6100.00	3.10	326.53	6096.00	-136.03	136.45	-34.11	0.67	140.65	345.97
6125.00	2.85	322.59	6120.97	-137.08	137.51	-34.86	1.29	141.86	345.78
6150.00	2.79	328.07	6145.94	-138.08	138.52	-35.56	1.10	143.01	345.60
6175.00	2.76	326.29	6170.91	-139.09	139.54	-36.21	0.36	144.16	345.45
6200.00	2.46	325.42	6195.88	-140.03	140.48	-36.85	1.23	145.24	345.30
6225.00	2.35	327.49	6220.86	-140.89	141.36	-37.43	0.57	146.23	345.17
6250.00	2.22	319.83	6245.84	-141.69	142.16	-38.02	1.32	147.15	345.03
6275.00	2.27	328.47	6270.82	-142.47	142.95	-38.59	1.37	148.07	344.89
6300.00	2.23	321.19	6295.80	-143.27	143.75	-39.15	1.16	148.99	344.76
6325.00	2.47	331.70	6320.78	-144.11	144.60	-39.71	1.97	149.95	344.64
6350.00	2.66	331.97	6345.75	-145.09	145.59	-40.24	0.78	151.05	344.55
6375.00	2.94	332.75	6370.72	-146.17	146.67	-40.81	1.14	152.24	344.45
6400.00	3.12	330.33	6395.69	-147.32	147.83	-41.44	0.88	153.53	344.34
6425.00	3.55	338.03	6420.65	-148.62	149.14	-42.06	2.46	154.96	344.25
6450.00	3.71	339.31	6445.60	-150.09	150.61	-42.64	0.74	156.53	344.19

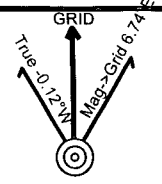
MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE	CLOSURE
ft	deg	deg	ft	ft	ft	ft	%/100ft	DIST	DIR
								ft	deg
6475.00	3.75	340.19	6470.54	-151.61	152.14	-43.20	0.28	158.16	344.15
6500.00	3.69	339.31	6495.49	-153.13	153.66	-43.76	0.33	159.77	344.10
6525.00	3.55	338.50	6520.44	-154.59	155.14	-44.33	0.59	161.35	344.05
6550.00	3.41	338.54	6545.39	-156.00	156.55	-44.89	0.58	162.86	344.00
6575.00	3.45	341.49	6570.35	-157.40	157.96	-45.40	0.73	164.35	343.96
6600.00	3.34	337.57	6595.31	-158.78	159.34	-45.92	1.04	165.83	343.93
6625.00	3.23	335.51	6620.27	-160.08	160.66	-46.49	0.64	167.25	343.86
6650.00	3.09	332.95	6645.23	-161.32	161.90	-47.08	0.80	168.60	343.78
6675.00	2.86	335.23	6670.19	-162.48	163.06	-47.65	1.02	169.88	343.71
6700.00	2.79	336.29	6695.16	-163.60	164.19	-48.16	0.36	171.11	343.65
6725.00	3.08	334.72	6720.13	-164.76	165.35	-48.69	1.19	172.37	343.59
6750.00	2.98	333.66	6745.10	-165.94	166.54	-49.27	0.46	173.68	343.52
6775.00	3.12	334.75	6770.06	-167.13	167.74	-49.84	0.63	174.99	343.45
6800.00	2.88	330.52	6795.03	-168.28	168.90	-50.44	1.33	176.28	343.37
6825.00	2.73	328.85	6820.00	-169.33	169.96	-51.06	0.66	177.46	343.28
6850.00	2.75	328.75	6844.97	-170.35	170.98	-51.68	0.08	178.62	343.18
6875.00	2.72	327.76	6869.94	-171.36	172.00	-52.31	0.23	179.78	343.08
6900.00	2.75	329.98	6894.91	-172.37	173.02	-52.92	0.44	180.93	342.99
6925.00	2.69	334.50	6919.88	-173.41	174.07	-53.48	0.89	182.10	342.92
6950.00	2.55	330.03	6944.86	-174.41	175.08	-54.01	0.99	183.22	342.86
6975.00	2.27	334.38	6969.83	-175.34	176.00	-54.50	1.32	184.25	342.80
7000.00	1.99	334.48	6994.82	-176.17	176.84	-54.90	1.12	185.17	342.75
7025.00	1.91	336.32	7019.80	-176.94	177.62	-55.25	0.40	186.01	342.72
7050.00	1.69	341.76	7044.79	-177.67	178.35	-55.54	1.12	186.80	342.70
7075.00	1.64	344.71	7069.78	-178.36	179.05	-55.75	0.39	187.52	342.71
7100.00	1.70	346.86	7094.77	-179.07	179.75	-55.93	0.32	188.25	342.72
7125.00	1.48	350.60	7119.76	-179.74	180.43	-56.06	0.94	188.94	342.74
7150.00	1.46	352.14	7144.75	-180.38	181.07	-56.16	0.18	189.58	342.77
7175.00	1.71	348.83	7169.74	-181.06	181.75	-56.28	1.05	190.26	342.80
7193.00	1.77	342.76	7187.73	-181.58	182.28	-56.41	1.08	190.81	342.80

Job Number:
Company:
Lease/Well:
Location:

Elev. GL: 3007.50 ft RKB: 30.00 ft
System: US State Plane 1927 (Exact solution)
Group: New Mexico East 3001
Datum: CLARKE 1866
Mag. Decl.: 6.86° (C:\HawkEye\IGRF2005.mif)
Grid Conv.: 0.12217 E
Date: Wednesday, May 29, 2019



Calculated by HawkEye Software
Minimum Curvature Method
Vertical Section Plane 180.69°
Northing (US ft): 392156.10 Easting (US ft): 571245.90
Latitude: 32°04'40.5982" N Longitude: -104°06'11.9138" W
Direction Reference: Grid North



Measured Depth (Ft)	INC Deg	AZM Deg	TVD (Ft)	NS (Ft)	EW (Ft)	VS (Ft)	DLS %/100 Ft	Build Rate %/100 Ft	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.07	331.96	100.00	0.05	-0.03	-0.05	0.07	0.07	
3 125.00	0.11	292.54	125.00	0.08	-0.06	-0.08	0.29	0.16	
4 150.00	0.13	291.82	150.00	0.10	-0.11	-0.10	0.08	0.08	
5 175.00	0.20	263.85	175.00	0.10	-0.18	-0.10	0.42	0.28	
6 200.00	0.12	285.65	200.00	0.10	-0.24	-0.10	0.40	-0.32	
7 225.00	0.22	255.97	225.00	0.10	-0.32	-0.10	0.52	0.40	
8 250.00	0.19	213.78	250.00	0.05	-0.39	-0.05	0.60	-0.12	
9 275.00	0.20	239.75	275.00	0.00	-0.45	0.01	0.35	0.04	
10 300.00	0.15	258.93	300.00	-0.03	-0.52	0.04	0.31	-0.20	
11 325.00	0.25	248.35	325.00	-0.06	-0.60	0.06	0.42	0.40	
12 350.00	0.35	237.72	350.00	-0.12	-0.71	0.13	0.46	0.40	
13 375.00	0.42	244.08	375.00	-0.20	-0.86	0.21	0.33	0.28	
14 400.00	0.49	247.85	400.00	-0.28	-1.04	0.29	0.30	0.28	
15 425.00	0.68	248.82	425.00	-0.37	-1.28	0.39	0.76	0.76	
16 450.00	0.54	250.19	449.99	-0.47	-1.53	0.49	0.56	-0.56	
17 475.00	0.66	239.46	474.99	-0.58	-1.76	0.60	0.66	0.48	
18 500.00	0.71	232.23	499.99	-0.75	-2.01	0.77	0.40	0.20	
19 525.00	0.80	225.13	524.99	-0.97	-2.26	0.99	0.52	0.36	
20 550.00	0.87	220.87	549.99	-1.23	-2.51	1.26	0.37	0.28	
21 575.00	0.94	211.39	574.98	-1.55	-2.74	1.58	0.66	0.2	
22 600.00	0.92	209.67	599.98	-1.90	-2.94	1.94	0.14		
23 625.00	0.95	197.94	624.98	-2.27	-3.11	2.31	0.77		
24 650.00	1.10	200.44	649.97	-2.69	-3.25	2.73	0.63		
25 675.00	1.35	191.60	674.97	-3.21	-3.40	3.25	1.25		
26 700.00	1.47	187.87	699.96	-3.81	-3.50	3.86			
27 725.00	1.64	188.58	724.95	-4.48	-3.60	4.53			
28 750.00	1.77	190.07	749.94	-5.22	-3.72	5			
29 775.00	1.94	191.37	774.93	-6.01	-3.87				
30 800.00	1.89	193.85	799.91	-6.83	-4.05				
31 825.00	1.91	190.19	824.90	-7.64	-4.22				
32 850.00	1.84	191.27	849.89	-8.44	-4.3				
33 875.00	1.91	190.92	874.87	-9.25					
34 900.00	1.92	192.12	899.86	-10.06					
35 925.00	1.91	192.41	924.84	-10.88					
36 950.00	1.37	205.77	949.83	-11.56					
37 975.00	1.28	215.49	974.83	-12					
38 1000.00	0.90	231.63	999.82	-12.9					
39 1025.00	1.08	234.53	1024.82	-12.9					
40 1050.00	1.03	232.97	1049.81	-12.93					
41 1075.00	1.03	231.50	1074.81	-13.21					
42 1100.00	1.10	231.89	1099.81	-13.50					
43 1125.00	1.00	231.84	1124.80	-13.78					
44 1150.00	0.92	222.98	1149.80	-14.06	-7.81				
45 1175.00	0.99	234.08	1174.79	-14.33	-8.12				



#	Measured Depth (Ft)	INC Deg	AZM Deg	TVD (Ft)	NS (Ft)	EW (Ft)	VS (Ft)	DLS *100 Ft	Build Rate *100 Ft
46	1200.00	1.02	226.53	1199.79	-14.61	-8.46	14.71	0.54	0.12
47	1225.00	0.93	233.95	1224.79	-14.89	-8.78	14.99	0.62	-0.36
48	1250.00	0.97	236.06	1249.78	-15.12	-9.12	15.23	0.21	0.16
49	1275.00	0.98	234.63	1274.78	-15.37	-9.47	15.48	0.11	0.04
50	1300.00	0.64	229.84	1299.78	-15.58	-9.75	15.70	1.39	-1.36
51	1325.00	0.39	216.49	1324.78	-15.74	-9.91	15.86	1.10	-1.00
52	1350.00	0.17	104.20	1349.78	-15.82	-9.93	15.93	1.92	-0.88
53	1375.00	0.29	73.33	1374.78	-15.81	-9.83	15.92	0.67	0.48
54	1400.00	0.41	69.46	1399.78	-15.76	-9.69	15.87	0.49	0.48
55	1425.00	0.45	66.26	1424.78	-15.69	-9.51	15.80	0.19	0.16
56	1450.00	0.48	70.69	1449.77	-15.61	-9.32	15.72	0.19	0.12
57	1475.00	0.50	74.57	1474.77	-15.55	-9.12	15.66	0.15	0.08
58	1500.00	0.53	64.64	1499.77	-15.47	-8.91	15.58	0.38	0.12
59	1525.00	0.37	82.82	1524.77	-15.41	-8.72	15.51	0.85	-0.64
60	1550.00	0.44	76.76	1549.77	-15.38	-8.55	15.48	0.33	0.28
61	1575.00	0.34	86.66	1574.77	-15.35	-8.38	15.45	0.48	-0.40
62	1600.00	0.40	69.37	1599.77	-15.32	-8.23	15.41	0.50	0.24
63	1625.00	0.52	82.31	1624.77	-15.27	-8.03	15.37	0.63	0.48
64	1650.00	0.83	91.69	1649.76	-15.26	-7.74	15.35	1.31	1.24
65	1675.00	0.83	86.15	1674.76	-15.25	-7.38	15.34	0.32	0.00
66	1700.00	0.89	86.64	1699.76	-15.23	-7.00	15.31	0.24	0.24
67	1725.00	1.23	85.00	1724.76	-15.20	-6.54	15.27	1.37	1.36
68	1750.00	1.35	88.84	1749.75	-15.17	-5.98	15.24	0.59	0.48
69	1775.00	1.37	91.83	1774.74	-15.17	-5.39	15.23	0.29	0.08
70	1800.00	1.49	89.59	1799.74	-15.18	-4.76	15.23	0.53	0.48
71	1825.00	1.48	94.54	1824.73	-15.20	-4.12	15.25	0.51	-0.04
72	1850.00	1.53	93.41	1849.72	-15.25	-3.45	15.29	0.50	0.48
73	1875.00	1.58	99.19	1874.71	-15.32	-2.77	15.35	0.69	-0.28
74	1900.00	1.69	102.93	1899.70	-15.45	-2.10	15.48	0.45	0.20
75	1925.00	1.76	103.14	1924.69	-15.61	-1.41	15.63	0.44	0.44
76	1950.00	1.75	107.02	1949.68	-16.04	-0.68	15.82	0.54	-0.04
77	1975.00	1.78	108.14	1974.67	-16.26	0.05	16.04	0.14	0.28
78	2000.00	1.72	104.88	1999.66	-16.45	0.78	16.25	0.42	-0.12
79	2025.00	1.57	104.08	2024.64	-16.64	1.52	16.44	0.24	-0.24
80	2050.00	1.01	91.04	2049.63	-16.72	2.22	16.61	0.61	-0.60
81	2075.00	0.93	72.80	2074.63	-16.67	2.77	16.69	0.54	-0.04
82	2100.00	0.82	38.16	2099.62	-16.47	3.18	16.63	0.14	0.12
83	2125.00	1.11	13.04	2124.62	-16.09	3.49	16.42	0.42	0.28
84	2150.00	1.35	351.74	2149.62	-15.56	3.65	16.04	0.24	-0.24
85	2175.00	1.37	350.04	2174.61	-14.98	3.67	15.52	0.61	-0.60
86	2200.00	1.55	350.52	2199.60	-14.35	3.57	14.93	0.18	-0.32
87	2225.00	1.66	354.93	2224.60	-13.68	3.46	14.31	0.72	-0.44
88	2250.00	1.63	356.91	2249.59	-12.98	3.38	13.64	0.48	1.16
89	2275.00	1.52	351.60	2274.58	-11.58	3.35	12.94	0.78	0.96
90	2300.00	1.64	354.00	2299.57	-10.89	3.34	12.22	0.45	0.73
91	2325.00	1.58	351.21	2324.56	-10.20	3.27	11.54	0.63	0.28
92	2350.00	1.73	351.23	2349.55	-9.48	3.19	10.86	0.6	0.6
93	2375.00	1.56	347.82	2374.54	-8.77	3.13	10.16	0.78	0.73
94	2400.00	1.58	346.49	2399.53	-8.09	3.03	9.44	0.6	0.6
95	2425.00	1.61	343.29	2424.52	-7.42	2.92	8.73	0.6	0.6
96	2450.00	1.61	346.67	2449.51	-6.75	2.82	8.06	0.6	0.6
97	2475.00	1.60	349.51	2474.50	-6.07	2.70	7.3	0.6	0.6
98	2500.00	1.71	349.51	2499.49	-5.39	2.55	6.6	0.6	0.6
99	2525.00			2524.48		2.39	6.0	0.6	0.6
100	2550.00			2549.47		2.21	5.36	0.6	0.6
101	2575.00			2574.46		2.04	4.6	0.6	0.6
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