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District IV
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NM OIL CONSERVATION
ARTESIA DISTRICT Form C-102
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 09 2019 Revised August 1, 2011
Submit one copy to appropriate District Office

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45372	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP
⁴ Property Code 320546	⁵ Property Name FOREHAND RANCH NORTH 22-21 STATE COM	
⁷ OGRID No. 299049	⁸ Operator Name CAZA OPERATING, LLC	⁶ Well Number 4H ⁹ Elevation 3140'

" Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	22	T23S	R27E		1440	NORTH	250	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
D	21	T23S	R27E		1014	NORTH	1251	WEST	EDDY

¹² Dedicated Acres 640.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

16	SEC. 8	SECTION 9	SECTION 9	SECTION 10	SECTION 10	SEC. 11	" OPERATOR CERTIFICATION <i>I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> 10/8/2019 Signature _____ Date _____ Steve Morris Printed Name _____ steve.morris@morcoreengineering.com Email Address _____
SEC. 17	SECTION 16	SECTION 16	SECTION 15	SECTION 15	SEC. 14		
LAST TAKE POINT 18,225' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 582771.59 / Y: 471015.69 LAT:32.29482454N / LON:104.19923903W NAD 27, SPCS NM EAST X: 541589.38 / Y: 470956.95 LAT:32.29470549N / LON:104.19873953W BOTTOM HOLE LOCATION 18,309' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 582688.60 / Y: 471005.01 LAT:32.29479547N / LON:104.19950765W NAD 27, SPCS NM EAST X: 541589.38 / Y: 470956.95 LAT:32.29470549N / LON:104.19873953W FIRST TAKE POINT 9,517' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 591469.55 / Y: 471218.75 LAT:32.29534969N / LON:104.17108867W NAD 27, SPCS NM EAST X: 550287.21 / Y: 471159.90 LAT:32.29523023N / LON:104.17059024W KICK OFF POINT 8,597' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X: 591960.47 / Y: 471216.23 LAT:32.29534071N / LON:104.16949990W NAD 27, SPCS NM EAST X: 550778.12 / Y: 471157.37 LAT:32.29522123N / LON:104.16900153W							
SEC. 17	SECTION 16	SECTION 16	SECTION 15	SECTION 15	SEC. 14		
SEC. 20	SECTION 21	SECTION 21	SECTION 22	SECTION 22	SEC. 23	" SURVEYOR CERTIFICATION <i>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.</i> Date of Survey _____ Signature and Seal of Professional Surveyor: _____ Certificate Number _____	
CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 581435.11' / Y: 472006.12' B - X: 586719.80' / Y: 472059.61' C - X: 591969.04' / Y: 472181.55' D - X: 591973.32' / Y: 469517.56' E - X: 586712.56' / Y: 469392.09' F - X: 581441.96' / Y: 469353.24' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 540252.94' / Y: 471947.38' B - X: 545537.55' / Y: 472003.80' C - X: 550786.71' / Y: 472122.67' D - X: 550790.93' / Y: 469458.75' E - X: 545530.25' / Y: 469333.35' F - X: 540259.74' / Y: 469294.57'							
SEC. 20	SECTION 21	SECTION 21	SECTION 22	SECTION 22	SEC. 23		
SEC. 29	SECTION 28	SECTION 28	SECTION 27	SECTION 27	SEC. 26		

DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.999811998
CONVERGENCE: 0.08710945'; NOTE: ALL DIMENSIONS IN U.S. FEET

Caza Forehand Ranch North 22-21 4H MWD Off to 18309ft MD Survey

Geodetic Report
(Def Survey)NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 09 2019

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Report Date: August 26, 2019 - 02:53 PM
 Client: Caza Operatin LLC
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Caza Forehand Ranch North 22-21 4H / New Slot
 Well: Forehand Ranch North 22-21 4H
 Borehole: Forehand Ranch North 22-21 4H
 UWI / API#: Unknown / Unknown
 Survey Name: Caza Forehand Ranch North 22-21 4H MWD Off to 18309ft MD
 Survey Date: May 31, 2019
 Tort / AHD / DDI / ERD Ratio: 238.204' / 9845.468 ft / 6.668' / 1.067
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 17' 38.47791", W 104° 10' 13.03429"
 Location Grid N/E Y/X: N 470736.000 NUS, E 591717.900 NUS
 CRS Grid Convergence Angle: 0.0871°
 Grid Scale Factor: 0.999912
 Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 271.770° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3162.000 ft above MSL
 Seabed / Ground Elevation: 3140.000 ft above MSL
 Magnetic Declination: 7.196°
 Total Gravity Field Strength: 998.4654mg (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47867.406 nT
 Magnetic Dip Angle: 9.76°
 Declination Date: July 26, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.0871°
 Total Corr Mag North->Grid North: 7.1087°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azimuth (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Closure (ft)	Closure Azimuth (°)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface Location	0.00	0.00	271.75	0.00	0.00	0.00	0.00	N/A	0.00	0.00	470736.00	591717.90	N 32 17 38.48	W 104 10 13.03
Last Survey 13-3/8" Casing First SLB Survey	98.01	0.40	323.47	98.01	0.21	0.27	-0.20	0.41	0.34	323.47	470736.27	591717.70	N 32 17 38.48	W 104 10 13.04
	190.34	0.87	317.49	190.33	0.90	1.05	-0.87	0.51	1.36	320.40	470737.05	591717.03	N 32 17 38.49	W 104 10 13.04
	282.67	0.91	281.87	282.65	2.11	1.72	-2.06	0.59	2.68	309.83	470737.72	591715.84	N 32 17 38.49	W 104 10 13.06
	375.00	0.98	284.48	374.97	3.60	2.07	-3.54	0.09	4.10	300.26	470738.07	591714.36	N 32 17 38.50	W 104 10 13.08
	406.00	1.11	286.67	405.97	4.15	2.22	-4.09	0.44	4.65	298.50	470738.22	591713.81	N 32 17 38.50	W 104 10 13.08
	450.00	1.13	277.95	449.95	5.00	2.40	-4.92	0.39	5.48	296.00	470738.40	591712.98	N 32 17 38.50	W 104 10 13.09
	495.00	1.17	269.50	494.95	5.89	2.46	-5.82	0.39	6.32	292.89	470738.46	591712.08	N 32 17 38.50	W 104 10 13.10
	556.00	1.47	272.16	555.93	7.30	2.48	-7.23	0.50	7.84	288.96	470738.48	591710.67	N 32 17 38.50	W 104 10 13.12
	650.00	1.19	297.02	649.91	9.39	2.97	-9.30	0.67	9.76	287.72	470738.57	591708.60	N 32 17 38.51	W 104 10 13.14
	745.00	1.10	313.21	744.89	10.96	4.04	-10.84	0.35	11.57	290.45	470740.04	591707.06	N 32 17 38.52	W 104 10 13.16
839.00	0.79	9.36	838.88	11.55	5.30	-11.40	0.99	12.57	294.95	470741.30	591706.51	N 32 17 38.53	W 104 10 13.17	
933.00	1.18	67.31	932.87	10.59	6.31	-10.40	1.08	12.16	301.27	470742.31	591707.50	N 32 17 38.54	W 104 10 13.16	
1028.00	0.80	52.32	1027.85	9.18	7.10	-8.97	0.48	11.44	308.35	470743.10	591708.93	N 32 17 38.55	W 104 10 13.14	
1122.00	1.01	38.33	1121.84	8.18	8.15	-7.94	0.32	11.37	315.75	470744.15	591709.96	N 32 17 38.56	W 104 10 13.13	
1216.00	1.19	36.76	1215.82	7.13	9.58	-6.84	0.19	11.77	324.48	470745.58	591711.06	N 32 17 38.57	W 104 10 13.11	
1311.00	1.39	49.26	1310.80	5.72	11.12	-5.38	0.36	12.35	334.20	470747.12	591712.52	N 32 17 38.59	W 104 10 13.10	
1405.00	2.15	72.15	1404.75	3.22	12.41	-2.83	1.09	12.73	347.14	470748.40	591715.07	N 32 17 38.60	W 104 10 13.07	
1499.00	3.02	79.47	1498.66	-0.87	13.40	1.28	0.99	13.46	5.46	470749.40	591719.18	N 32 17 38.61	W 104 10 13.02	
1594.00	2.80	48.77	1593.54	-5.01	15.39	5.49	1.64	16.33	19.62	470751.38	591723.38	N 32 17 38.63	W 104 10 12.97	
1689.00	3.04	58.92	1688.42	-8.82	18.22	9.39	0.60	20.49	27.27	470754.21	591727.29	N 32 17 38.66	W 104 10 12.92	
1783.00	3.46	68.79	1782.27	-13.55	20.48	14.18	0.79	24.91	34.70	470756.48	591732.08	N 32 17 38.68	W 104 10 12.87	
1878.00	3.14	60.56	1877.11	-18.43	22.75	19.14	0.65	29.73	40.07	470758.75	591737.04	N 32 17 38.70	W 104 10 12.81	
1972.00	3.21	64.57	1970.97	-22.97	25.15	23.76	0.25	34.60	43.38	470761.14	591741.66	N 32 17 38.73	W 104 10 12.76	
2067.00	1.73	26.75	2065.88	-25.94	27.57	26.81	2.24	38.45	44.20	470763.57	591744.71	N 32 17 38.75	W 104 10 12.72	
2161.00	1.63	34.06	2159.84	-27.26	29.84	28.19	0.25	41.13	43.28	470765.94	591746.09	N 32 17 38.77	W 104 10 12.71	
2256.00	1.29	27.74	2254.81	-28.45	32.01	29.45	0.40	43.50	42.61	470768.01	591747.35	N 32 17 38.79	W 104 10 12.69	
2350.00	1.24	20.12	2348.79	-29.23	33.90	30.29	0.19	45.46	41.78	470769.90	591748.19	N 32 17 38.81	W 104 10 12.68	
2445.00	1.41	22.17	2443.76	-29.96	35.95	31.09	0.19	47.53	40.85	470771.95	591748.98	N 32 17 38.83	W 104 10 12.67	
2539.00	1.29	18.88	2537.74	-30.68	38.02	31.87	0.15	49.61	39.97	470774.02	591749.76	N 32 17 38.85	W 104 10 12.66	
2633.00	1.18	24.86	2631.71	-31.37	39.90	32.61	0.18	51.53	39.26	470775.90	591750.51	N 32 17 38.87	W 104 10 12.65	
2727.00	1.24	21.12	2725.69	-32.08	41.73	33.39	0.11	53.44	38.66	470777.72	591751.28	N 32 17 38.89	W 104 10 12.64	
2822.00	1.14	15.91	2820.67	-32.65	43.60	34.02	0.15	55.30	37.96	470779.59	591751.91	N 32 17 38.91	W 104 10 12.64	
2916.00	1.09	12.87	2914.65	-33.06	45.37	34.47	0.08	56.98	37.23	470781.36	591752.37	N 32 17 38.93	W 104 10 12.63	
3010.00	1.10	10.25	3008.64	-33.36	47.13	34.83	0.05	58.60	36.47	470783.12	591752.73	N 32 17 38.94	W 104 10 12.63	
3104.00	1.04	11.36	3102.62	-33.64	48.85	35.16	0.07	60.19	35.75	470784.85	591753.06	N 32 17 38.96	W 104 10 12.62	
3198.00	1.07	15.09	3196.60	-33.98	50.53	35.56	0.08	61.79	35.13	470786.53	591753.45	N 32 17 38.98	W 104 10 12.62	
3293.00	0.96	16.27	3291.59	-34.38	52.15	36.01	0.12	63.38	34.62	470788.15	591753.91	N 32 17 38.99	W 104 10 12.61	
3387.00	1.00	16.26	3385.58	-34.79	53.70	36.48	0.04	64.91	34.18	470789.69	591754.36	N 32 17 39.01	W 104 10 12.61	
3481.00	0.97	12.39	3479.56	-35.14	55.26	36.86	0.08	66.43	33.70	470791.26	591754.76	N 32 17 39.02	W 104 10 12.60	
3575.00	1.01	11.42	3573.55	-35.43	56.90	37.21	0.11	67.98	33.18	470792.89	591755.10	N 32 17 39.04	W 104 10 12.60	
3670.00	1.00	13.93	3668.53	-35.75	58.57	37.59	0.09	69.59	32.68	470794.57	591755.48	N 32 17 39.06	W 104 10 12.60	
3765.00	0.91	13.11	3763.52	-36.08	60.11	37.95	0.10	71.09	32.27	470796.11	591755.85	N 32 17 39.07	W 104 10 12.59	
3859.00	1.63	10.87	3857.49	-36.44	62.15	38.37	0.77	73.05	31.69	470798.15	591756.27	N 32 17 39.09	W 104 10 12.59	
3953.00	1.81	8.61	3951.45	-36.82	64.93	38.85	0.20	75.67	30.89	470800.93	591756.74	N 32 17 39.12	W 104 10 12.58	
4048.00	3.01	13.68	4046.37	-37.52	68.84	39.66	1.28	79.45	29.95	470804.83	591757.56	N 32 17 39.16	W 104 10 12.57	
4142.00	3.60	20.55	4140.20	-39.03	74.16	41.34	0.94	84.90	29.14	470810.15	591759.24	N 32 17 39.21	W 104 10 12.55	
4236.00	5.32	23.93	4233.90	-41.68	82.30	44.20	1.64	92.32	28.60	470817.05	591762.10	N 32 17 39.28	W 104 10 12.52	
4330.00	6.58	28.56	4327.39	-45.75	89.77	48.54	1.43	102.05	28.40	470825.76	591766.44	N 32 17 39.37	W 104 10 12.47	
4424.00	6.59	29.59	4420.77	-50.69	99.19	53.78	1.13	112.83	28.47	470835.18	591771.68	N 32 17 39.46	W 104 10 12.41	
4518.00	5.92	29.90	4514.21	-55.50	108.08	58.86	0.71	123.07	28.57	470844.07	591776.76	N 32 17 39.55	W 104 10 12.35	
4613.00	5.82	27.76	4608.71	-59.92	116.59	63.55	0.25	132.79	28.59	470852.58	591781.44	N 32 17 39.63	W 104 10 12.29	
4707.00	5.43	27.28	4702.26	-63.92	124.76	67.81	0.42	142.00	28.52	470860.75	591785.70	N 32 17 39.71	W 104 10 12.24	
4801.00	5.36	29.12	4795.85	-67.85	132.55	71.98	0.20	150.84	28.50	470868.54	591789.87	N 32 17 39.79	W 104 10 12.19	
4896.00	5.89	28.84	4890.39	-72.11	140.70	76.49	0.56	160.15	28.53	470876.69	591794.38	N 32 17 39.87	W 104 10 12.14	
4990.00	5.90	28.54	4983.89	-76.48	149.17	81.13	0.03	169.80	28.54	470885.15	591799.02	N 32 17 39.95	W 104 10 12.09	
5084.00	6.55	29.63	5077.34	-81.16	158.07	86.09	0.70	179.99	28.57	470894.06	591803.98	N 32 17 40.04	W 104 10 12.03	
5179.00	6.22	30.59	5171.75	-86.17	167.21	91.38	0.37	190.55	28.66	470903.20	591809.27	N 32 17 40.13	W 104 10 11.97	
5273.00	5.98	29.87	5265.21	-90.92	175.85	96.40	0.28	200.54	28.73	470911.83	591814.29	N 32 17 40.22	W 104 10 11.91	
5367.00	5.77	31.15	5358.72	-95.53	184.15	101.27	0.18	210.93	28.81	470920.13	591819.16	N 32 17 40.30	W 104 10 11.85	
5461.00	5.21	33.34	5452.29	-100.08	191.76	106.06	0.64	219.13	28.95	470927.74	591823.95	N 32 17 40.37	W 104 10 11.80	
5555.00	5.91	30.69	5545.85	-104.66	199.48	110.87	0.79	228.23	29.06	470935.47	591828.76	N 32 17 40.45	W 104 10 11.74	
5650.00	5.57	29.78	5640.37	-109.19	207.69	115.66	0.37	237.72	29.11	470943.67	591833.55	N 32 17 40.53	W 104 10 11.68	
5744.00	5.33	31.05	5733.94	-113.47	215.39	120.18	0.29	246.65	29.16	470951.37	591838.06	N 32 17 40.61	W 104 10 11.63	
5838.00	5.													

Comments	MD (ft)	Incl (°)	Azin (°)	Grid (ft)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure (ft)	Closure Azimuth (°)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Hardline Crossing [330° FNL/330° FEL]	8928.00	20.53	273.94	8897.44	-182.96	484.73	198.03	10.92	523.62	22.22	471220.68	591915.91	N 32 17 43.27	W 104 10 10.72	
	8975.00	26.34	272.64	8940.54	-164.29	485.78	179.37	12.41	517.84	20.27	471221.73	591897.26	N 32 17 43.28	W 104 10 10.94	
	9022.00	31.42	268.23	8981.69	-141.61	485.88	156.70	11.71	510.52	17.87	471221.83	591874.58	N 32 17 43.28	W 104 10 11.20	
	9069.00	36.73	264.58	9020.61	-115.42	484.17	130.44	12.10	501.43	15.08	471220.13	591848.33	N 32 17 43.27	W 104 10 11.51	
	9117.00	40.24	263.57	9058.18	-85.83	481.08	100.73	7.43	491.51	11.83	471217.03	591818.63	N 32 17 43.24	W 104 10 11.85	
	9164.00	44.25	264.65	9092.96	-54.52	477.85	69.31	8.67	482.85	8.25	471213.80	591787.20	N 32 17 43.21	W 104 10 12.22	
	9230.00	52.46	270.37	9136.80	-5.40	473.86	20.11	14.02	476.29	2.42	471211.82	591738.01	N 32 17 43.19	W 104 10 12.79	
	9282.00	58.84	272.80	9165.75	37.75	477.11	-23.02	14.73	477.67	357.24	471213.07	591694.88	N 32 17 43.20	W 104 10 13.29	
	9329.00	68.04	273.37	9186.38	79.92	479.41	-65.15	17.48	483.81	352.26	471215.36	591652.76	N 32 17 43.22	W 104 10 13.78	
	9344.00	70.38	273.17	9191.71	93.94	480.21	-79.15	15.66	486.68	350.64	471216.16	591638.76	N 32 17 43.23	W 104 10 13.95	
9376.00	75.38	272.77	9201.12	124.51	481.79	-109.68	15.66	494.11	347.18	471217.75	591608.23	N 32 17 43.25	W 104 10 14.30		
9423.00	77.50	270.91	9212.14	170.19	483.25	-155.34	5.93	507.60	342.18	471219.21	591562.57	N 32 17 43.26	W 104 10 14.84		
9470.00	81.50	268.99	9220.71	216.37	483.21	-201.54	9.41	523.55	337.36	471219.16	591516.38	N 32 17 43.26	W 104 10 15.37		
9517.00	88.88	269.90	9224.65	263.13	482.76	-248.34	15.82	542.89	332.78	471218.71	591469.58	N 32 17 43.26	W 104 10 15.92		
9564.00	90.28	270.34	9224.99	310.11	482.85	-295.34	3.12	566.01	328.55	471218.81	591422.59	N 32 17 43.26	W 104 10 16.47		
9597.00	90.28	269.17	9224.54	403.05	482.46	-388.33	1.26	619.33	321.17	471218.41	591329.60	N 32 17 43.26	W 104 10 17.55		
9752.00	90.06	266.30	9224.25	497.80	478.70	-483.25	3.03	680.21	314.73	471214.66	591234.69	N 32 17 43.22	W 104 10 18.66		
9846.00	91.91	265.48	9222.64	591.29	471.97	-576.99	2.15	745.43	309.28	471207.92	591140.96	N 32 17 43.16	W 104 10 19.75		
9940.00	91.85	265.75	9219.55	684.70	464.78	-670.66	1.82	815.97	304.32	471200.74	591047.30	N 32 17 43.09	W 104 10 20.84		
10034.00	91.51	265.52	9216.80	778.12	457.63	-764.35	0.44	890.87	300.91	471193.59	590953.62	N 32 17 43.02	W 104 10 21.93		
10128.00	91.35	265.09	9214.45	871.49	449.94	-858.00	0.49	968.82	297.67	471185.90	590859.97	N 32 17 42.94	W 104 10 23.02		
10223.00	90.84	264.82	9212.64	965.80	441.59	-952.82	0.61	1049.99	294.87	471177.55	590765.37	N 32 17 42.86	W 104 10 24.12		
10317.00	91.07	266.89	9211.07	1059.29	434.79	-1046.35	2.22	1133.10	292.56	471170.76	590671.64	N 32 17 42.80	W 104 10 25.22		
10410.00	90.56	269.38	9209.75	1152.03	430.96	-1139.26	1.69	1218.05	290.72	471166.92	590578.74	N 32 17 42.76	W 104 10 26.30		
10505.00	90.11	268.65	9209.19	1246.88	428.50	-1234.23	0.55	1306.50	289.15	471164.46	590483.76	N 32 17 42.74	W 104 10 27.41		
10598.00	91.29	269.86	9208.06	1339.78	427.29	-1327.21	1.82	1394.30	287.85	471163.25	590390.81	N 32 17 42.72	W 104 10 28.49		
10692.00	91.18	269.56	9206.03	1433.69	426.81	-1421.19	0.34	1483.89	286.72	471162.77	590296.84	N 32 17 42.72	W 104 10 29.58		
10786.00	91.35	269.66	9203.95	1527.60	426.17	-1515.16	0.21	1573.96	285.71	471162.13	590202.87	N 32 17 42.72	W 104 10 30.68		
10881.00	91.23	270.02	9201.82	1622.53	425.91	-1610.14	0.40	1665.52	284.82	471161.87	590107.91	N 32 17 42.72	W 104 10 31.78		
10975.00	89.33	268.55	9201.35	1717.43	424.73	-1705.12	2.52	1757.22	283.99	471160.69	590012.93	N 32 17 42.71	W 104 10 32.89		
11070.00	88.88	268.61	9202.82	1811.27	422.41	-1799.08	0.48	1848.01	283.21	471158.37	589918.98	N 32 17 42.68	W 104 10 33.99		
11164.00	90.45	267.70	9203.37	1905.08	419.38	-1893.03	1.93	1938.93	282.49	471155.34	589825.04	N 32 17 42.66	W 104 10 35.08		
11258.00	90.90	267.06	9202.26	1998.80	415.08	-1986.92	0.83	2029.82	281.80	471151.05	589731.16	N 32 17 42.61	W 104 10 36.17		
11353.00	90.34	266.69	9201.23	2093.44	409.91	-2081.78	0.71	2121.75	281.14	471145.87	589636.31	N 32 17 42.56	W 104 10 37.28		
11446.00	91.18	266.03	9200.00	2186.16	405.62	-2174.67	1.70	2212.17	280.57	471141.59	589543.43	N 32 17 42.52	W 104 10 38.36		
11540.00	91.74	265.84	9197.60	2279.96	402.89	-2268.59	0.88	2304.09	280.07	471138.86	589449.51	N 32 17 42.50	W 104 10 39.46		
11633.00	91.01	265.37	9195.37	2372.75	400.07	-2361.52	1.13	2395.17	279.62	471136.03	589356.59	N 32 17 42.47	W 104 10 40.54		
11727.00	91.07	267.48	9193.67	2466.50	396.27	-2455.43	0.43	2487.20	279.17	471132.20	589262.64	N 32 17 42.42	W 104 10 41.63		
11821.00	90.90	268.22	9192.05	2560.26	392.74	-2549.35	0.81	2579.42	278.76	471128.70	589168.78	N 32 17 42.40	W 104 10 42.73		
11915.00	91.80	268.50	9189.84	2654.07	390.05	-2643.28	1.00	2671.91	278.39	471126.01	589074.05	N 32 17 42.38	W 104 10 43.82		
12009.00	91.57	268.11	9187.07	2747.86	387.27	-2737.20	0.48	2764.46	278.05	471123.24	588980.94	N 32 17 42.35	W 104 10 44.92		
12103.00	91.57	268.11	9184.50	2841.63	384.17	-2831.12	0.00	2857.06	277.73	471120.14	588887.04	N 32 17 42.32	W 104 10 46.01		
12197.00	91.02	267.95	9181.96	2935.43	381.47	-2925.06	0.52	2949.81	277.43	471117.44	588793.12	N 32 17 42.30	W 104 10 47.10		
12292.00	91.46	271.34	9179.49	3030.34	381.42	-3019.00	0.80	3043.99	277.30	471114.33	588699.19	N 32 17 42.30	W 104 10 48.21		
12386.00	91.74	270.83	9176.67	3124.30	384.02	-3113.93	0.60	3137.52	277.03	471111.99	588605.25	N 32 17 42.32	W 104 10 49.30		
12480.00	89.89	270.85	9175.53	3218.29	386.22	-3207.89	2.23	3231.05	276.87	471122.19	588510.30	N 32 17 42.35	W 104 10 50.40		
12574.00	89.72	271.37	9175.85	3312.28	388.04	-3301.87	0.58	3324.59	276.70	471124.01	588416.33	N 32 17 42.37	W 104 10 51.49		
12668.00	92.13	270.40	9174.37	3404.25	389.46	-3393.84	2.82	3416.11	276.55	471125.43	588324.47	N 32 17 42.38	W 104 10 52.56		
12761.00	92.19	270.26	9170.78	3499.15	390.01	-3488.77	0.16	3510.50	276.38	471125.97	588229.44	N 32 17 42.38	W 104 10 53.67		
12855.00	90.84	268.63	9168.30	3593.04	389.10	-3582.72	0.89	3603.79	276.42	471125.06	588135.06	N 32 17 42.36	W 104 10 54.76		
12949.00	90.95	268.33	9166.83	3686.87	386.61	-3676.68	0.34	3696.95	276.00	471122.57	588041.55	N 32 17 42.36	W 104 10 55.86		
13044.00	90.34	268.08	9165.76	3781.68	383.63	-3771.63	0.69	3791.09	275.81	471119.60	587946.61	N 32 17 42.33	W 104 10 56.97		
13139.00	89.89	267.21	9165.57	3876.43	379.73	-3866.55	1.03	3885.15	275.61	471115.69	587851.70	N 32 17 42.29	W 104 10 58.07		
13233.00	89.61	266.45	9165.98	3970.08	374.53	-3960.40	0.86	3978.07	275.40	471110.50	587757.85	N 32 17 42.24	W 104 10 59.17		
13327.00	89.55	266.19	9166.67	4063.57	367.68	-4054.15	1.34	4070.79	275.18	471103.64	587664.12	N 32 17 42.17	W 104 11 0.26		
13421.00	89.21	264.43	9167.69	4156.87	359.18	-4147.79	0.89	4163.28	274.95	471109.14	587570.52	N 32 17 42.09	W 104 11 0.35		
13514.00	90.67	265.71	9167.78	4249.23	351.18	-4240.41	2.09	4254.93	274.73	471107.17	587477.87	N 32 17 42.01	W 104 11 0.43		
13609.00	90.34	266.42	9166.95	4343.76	344.66	-4335.18	0.82	4348.86	274.55	471108.63	587383.11	N 32 17 41.95	W 104 11 0.53		
13703.00	88.49	264.72	9167.91	4437.19	337.40	-4428.89	2.67	4441.72	274.36	471107.37	587289.41	N 32 17 41.88	W 104 11 0.62		
13798.00	88.60	264.92	9169.20	4487.80	332.80	-4479.66	0.45	4492.01	274.25	471108.77	587234.66	N 32 17 41.84	W 104 11 0.71		
13848.00	90.61	266.06	9170.67	4581.23	325.41	-4573.36	1.62	4584.92	274.07	471106.18	587144.96	N 32 17 41.76	W 104 11 0.81		
13943.00	90.56	267.50	9170.45	4675.44	320.85	-4668.52	2.70	4678.25	273.80	471105.82	587050.08	N 32 17 41.72	W 104 11 0.91		
14037.00	92.02	271.11	9168.41	4769.83	320.48	-4762.20	0.74	4772.97	273.83	471105.45	586956.13	N 32 17 41.71	W 104 11 0.95		
14131.00	92.69	271.22	9164.55	4863.74	322.39	-4856.10	0.72	4866.79	273.80	471105.36	586862.23	N 32 17 41.74	W 104 11 1.00		
14225.00	91.07	272.42	9161.47	4957.69	325.38	-4950.00	2.14	4960.68	273.76	471106.13	586768.34	N 32 17 41.77	W 104 11 10.69		
14318.00	91.18	272.73	9159.64	5050.66	329.56	-5042.89	0.35	5053.65	273.74	471106.53	586675.46	N 32 17 41.81	W 104 11 11.78		
14412.00	90.84	270.96	9157.98	5144.64	332.58	-5136.82	0.12								

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Closure (ft)	Closure Azimuth (°)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° '")	Longitude (E/W ° ° '")
		1	7483.000	18309.000	Act Sins	8.500	5.500	NAL_MWD_1.0_DEG						
Forehand Ranch North 22-21 4H/ Caza Forehand Ranch North 22-21														

this survey is true and accurate to the best of my knowledge.

Steve Morris

