Received by WCD.Sv27/2023 12:04:56 PM		Sundry Print Report
U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		01/27/2023
Well Name: RODEO UNIT	Well Location: T23N / R9W / SEC 25 / SESW / 36.191179 / -107.744868	County or Parish/State: SAN JUAN / NM
Well Number: 512H	Type of Well: OIL WELL	Allottee or Tribe Name: EASTERN NAVAJO
Lease Number: N0G13121859	Unit or CA Name:	Unit or CA Number: NMNM136328A, NMNM136328X
<b>US Well Number:</b> 3004535874	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

## **Notice of Intent**

Sundry ID: 2712767

Type of Submission: Notice of Intent

Date Sundry Submitted: 01/26/2023

Date proposed operation will begin: 01/26/2023

Type of Action: APD Change Time Sundry Submitted: 03:45

**Procedure Description:** Enduring Resources requests to change the HSU of the Rodeo Unit 512H well per the attached updated C-102 plat. The dedicated acreage will change from 1121.69 acres to 799.96 acres. See the attached documents for details.

**NOI Attachments** 

### **Procedure Description**

Rodeo\_Unit\_\_512H\_Detailed\_As\_Drilled\_C\_102\_Plat\_\_\_signed\_KS\_20230126154420.pdf

Enduring\_Rodeo\_\_512H\_svys\_dec2022\_20230126105300.pdf

RODU\_512H\_WBD\_11082022\_20230126105254.pdf

RODU\_512H\_Drilling\_Package\_11082022\_20230126105256.pdf

Received by OCD: 1/27/2023 12:04:56 PM Well Name: RODEO UNIT	Well Location: T23N / R9W / SEC 25 / SESW / 36.191179 / -107.744868	County or Parish/State: SAN
Well Number: 512H	Type of Well: OIL WELL	Allottee or Tribe Name: EASTERN NAVAJO
Lease Number: N0G13121859	Unit or CA Name:	Unit or CA Number: NMNM136328A, NMNM136328X
<b>US Well Number:</b> 3004535874	Well Status: Approved Application for Permit to Drill	<b>Operator:</b> ENDURING RESOURCES LLC

## Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

**Operator Electronic Signature: KAYLA WHITE** 

Signed on: JAN 26, 2023 03:44 PM

Name: ENDURING RESOURCES LLC

Title: Staff Engineer

Street Address: 9446 CLERMONT ST

**City:** THORNTON

State: CO

State:

Phone: (720) 768-3575

Email address: KWHITE@CDHCONSULT.COM

Field

Representative Name: Street Address: City: Phone: Email address:

Zip:



М-9-М R-8-W

LOT 6

LAT: 36.172788 °N

Released to Imaging: 1777(2023 1333:13 PM

LAT: 36.172638 °N LONG: 107.723110 °W DATUM: NAD1983

DWARDS 15269



6

Released to Imaging: 1777(2023 1333:13 PM



6

Released to Imaging: 127(2025) 13 PM

(A) 2642' FNL 1447' FEL SEC 36, T23N, R9W LAT: 36.183372 °N LONG: 107.735788 °W DATUM: NAD1927

LAT: 36.183385 °N LONG: 107.736401 °W DATUM: NAD1983

(B) 1196' FSL 0' FEL SEC 36, T23N, R9W LAT: 36.179392 °N LONG: 107.730877 °W DATUM: NAD1927

LAT: 36.179406 °N LONG: 107.731490 °W DATUM: NAD1983 (C) 1196' FSL 0' FWL SEC 31, T23N, R8W LAT: 36.179392 °N LONG: 107.730877 °W DATUM: NAD1927

LAT: 36.179406 °N LONG: 107.731490 °W DATUM: NAD1983

(D) 0' FSL 1197' FWL SEC 31, T23N, R8W LAT: 36.176099 °N LONG: 107.726814 °W DATUM: NAD1927

LAT: 36.176113 °N LONG: 107.727427 °W DATUM: NAD1983 (E) O' FNL 1197' FWL SEC 6, T22N, R8W LAT: 36.176099 °N LONG: 107.726814 °W DATUM: NAD1927

LAT: 36.176113 °N LONG: 107.727427 °W DATUM: NAD1983



Released to Imaging: 1/27/2023 1:44:13 PM



Survey Report



Company: Project: Site: Well: Wellbore: Design:	Enduring Resourc San Juan County, Rodeo Unit 511 pa Rodeo Unit #512H Original Hole Surveys Original H	es LLC New Mexico N Id (511, 512 & I Hole	IAD83 NM W 513)	Local Co-ordi TVD Reference MD Reference North Referen Survey Calcul Database:	nate Reference: e: e: nce: lation Method:	Well Rodeo Unit #5 RKB=6798+13 @ 6 RKB=6798+13 @ 6 Grid Minimum Curvature DB_Decv0422v16	512H 5811.00ft (Ensign 145) 5811.00ft (Ensign 145)
Project	San Juan Co	unty, New Mex	ico NAD83 NM W				
Map System: Geo Datum: Map Zone:	US State Plane North Americar New Mexico W	e 1983 n Datum 1983 'estern Zone		System Date	um:	Mean Sea Level	
Site	Rodeo Unit 5	11 pad (511, 5	12 & 513)				1
Site Position: From: Position Uncertair	Lat/Long	0.00 ft	Northing: Easting: Slot Radius:	1,888,89 2,749,21 1:	98.347 usft Latitu 5.362 usft Longi 3-3/16 "	de: tude:	36.191179000 -107.744800000
Well	Rodeo Unit #	512H, Surf loc:	191 FSL 1345 FWL	Section 25-T23N-	R09W		
Well Position Position Uncertair Grid Convergence	+N/-S +E/-W nty	0.00 ft 0.00 ft 0.00 ft 0.05 °	Northing: Easting: Wellhead Ele	1 2 vation:	1,888,898.328 usft 2,749,195.297 usft ft	Latitude: Longitude: Ground Level:	36.191179000 -107.744868000 6,798.00 ft
Wellbore	Original Hole	)					1
Magnetics	Model Na	ame	Sample Date	Declinat (°)	tion	Dip Angle (°)	Field Strength (nT)
	IG	RF2020	11/18/2022		8.65	62.69	49,142.14064790
Design	Surveys Origi	inal Hole					
Audit Notes:							
Version:	1.0		Phase:	ACTUAL	Tie On De	epth:	0.00
Vertical Section:		Depth	From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Dire	ection (°)
			0.00	0.00	0.00		135.000
Survey Program From (ft)	To (ft)	Date 12/2 Survey (Welli	0/2022 Dore)	Тос	ol Name	Description	
412.0 2,697.0 13,793.0	2,632.00           13,728.00           13,793.00	MWD surf (Or MWD (Origina Projection (Or	iginal Hole) al Hole) iginal Hole)		/D /D /D	OWSG MWD - Sta OWSG MWD - Sta OWSG MWD - Sta	andard andard andard
Survey							

Vertical Vertical Build Measured Dogleg Turn Depth Inclination Azimuth Depth +N/-S +E/-W Section Rate Rate Rate (°/100ft) (ft) (ft) (ft) (°/100ft) (°/100ft) (ft) (ft) (°) (°) 0.00 0.00 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 412.00 0.42 208.180 412.00 -1.33 -0.71 0.44 0.10 0.10 0.00 MWD surveys 503.00 0.46 209.440 502.99 -1.94 -1.05 0.63 0.05 0.04 1.38 594.00 0.56 209.460 593.99 -2.65 0.85 0.11 0.11 0.02 -1.45 685.00 0.55 223.010 684.99 -3.36 -1.97 0.98 0.14 -0.01 14.89 776.00 0.52 775.98 -3.98 -2.54 1.02 0.04 -0.03 221.260 -1.92 866.00 0.58 229.750 865.98 -4.59 -3.15 1.01 0.11 0.07 9.43



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn	
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
957.00	0.61	226.260	956.97	-5.22	-3.85	0.97	0.05	0.03	-3.84	
1,051.00	0.64	231.020	1,050.97	-5.89	-4.62	0.90	0.06	0.03	5.06	
1,146.00	0.77	239.210	1,145,96	-6.56	-5.58	0.69	0.17	0.14	8.62	
1,240.00	0.82	240.770	1,239.95	-7.21	-6.71	0.35	0.06	0.05	1.66	
1,334.00	0.89	235.980	1,333.94	-7.94	-7.91	0.03	0.11	0.07	-5.10	
1,429.00	0.87	232.420	1,428.93	-8.80	-9.09	-0.21	0.06	-0.02	-3.75	
1,523.00	2.77	245.820	1,522.88	-10.16	-11.73	-1.11	2.06	2.02	14.26	
1,617.00	5.73	247.590	1,616.61	-12.88	-18.14	-3.72	3.15	3.15	1.88	
1 712 00	0.24	245 520	1 710 78	17.85	20 17	8 21	3 71	3 60	2 1 8	
1,712.00	12.68	246 380	1,710.70	-25.12	-45 79	-14.62	3.66	3.66	0.91	
1,000.00	13.66	246.830	1,000.00	-33.62	-45.75	-14.02	1.05	1.04	0.48	
1,900.00	13.00	246.030	1,094.00	-42.41	-05.45	-22.51	0.28	-0.21	0.40	
2 089 00	12.40	246.130	2,078,56	-42.41	104 00	-30.30	1 10	-0.21	-0.74	
2,005.00	12.50	243.000	2,070.50	-51.10	-104.55	-30.04	1.15	-1.10	-1.15	
2,183.00	12.35	245.500	2,170.38	-59.60	-123.25	-45.01	0.11	-0.01	0.53	
2,277.00	11.72	242.890	2,262.32	-68.12	-140.90	-51.46	0.89	-0.67	-2.78	
2,371.00	11.72	242.220	2,354.36	-76.92	-157.84	-57.22	0.14	0.00	-0.71	
2,466.00	11.46	242.490	2,447.42	-85.78	-174.75	-62.91	0.28	-0.27	0.28	
2,560.00	11.32	240.630	2,539.57	-94.62	-191.07	-68.20	0.42	-0.15	-1.98	
2,632.00	11.15	240.460	2,610.19	-101.51	-203.29	-71.96	0.24	-0.24	-0.24	
2,683.00	11.21	239.588	2,660.22	-106.46	-211.85	-74.53	0.35	0.12	-1.71	
9 5/8" Casin	g @ 2683 MD 26	60.22 TVD								
2,697.00	11.23	239.350	2,673.95	-107.84	-214.20	-75.21	0.35	0.13	-1.70	
2,791.00	10.02	234.740	2,766.34	-117.23	-228.75	-78.86	1.57	-1.29	-4.90	
2,886.00	6.61	232.470	2,860.33	-125.33	-239.84	-80.97	3.61	-3.59	-2.39	
2.981.00	3.43	234.620	2.954.95	-130.31	-246.49	-82.16	3.35	-3.35	2.26	
3.075.00	0.46	154.720	3.048.90	-132.28	-248.63	-82.27	3.60	-3.16	-85.00	
3,169.00	0.90	121,140	3.142.89	-133.00	-247.83	-81.20	0.61	0.47	-35.72	
3,263.00	0.57	111.650	3.236.88	-133.56	-246.77	-80.05	0.37	-0.35	-10.10	
3.357.00	0.65	160.050	3,330.88	-134.23	-246.15	-79.14	0.54	0.09	51.49	
3,451.00	0.58	169.810	3,424.87	-135.20	-245.88	-78.27	0.13	-0.07	10.38	
3,546.00	0.57	201.200	3,519.87	-136.11	-245.97	-77.68	0.33	-0.01	33.04	
3,640.00	0.56	214.990	3,613.86	-136.93	-246.40	-77.41	0.14	-0.01	14.67	
3,735.00	0.64	198.530	3,708.86	-137.81	-246.84	-77.09	0.20	0.08	-17.33	
3,829.00	0.68	210.290	3,802.85	-138.79	-247.29	-76.72	0.15	0.04	12.51	
3 924 00	0.58	222 580	3 897 84	-139.63	-247 89	-76 56	0.18	-0 11	12 94	
4 018 00	0.85	210 320	3 991 84	-140 58	-248 57	-76.36	0.33	0.29	-13.04	
4 049 00	0.74	210.820	4 022 83	-140.95	-248 79	-76.25	0.36	-0.35	1 61	
4,040.00	1 79	152 490	4 053 83	-141.55	-248.67	-75 74	4 96	3 39	-188 16	
4 111 00	4.81	139 150	4 084 77	-142 97	-247 59	-73.98	9.99	9 74	-43.03	
4,111.00	4.01	100.100	1,004.11	1 12.01	247.00	70.00	0.00	0.74	10.00	
4,143.00	8.25	134.470	4,116.56	-145.59	-245.08	-70.35	10.87	10.75	-14.63	
4,174.00	11.19	129.470	4,147.11	-149.06	-241.17	-65.13	9.86	9.48	-16.13	
4,205.00	14.05	126.790	4,177.36	-153.23	-235.83	-58.41	9.41	9.23	-8.65	
4,236.00	17.38	126.780	4,207.20	-158.25	-229.11	-50.10	10.74	10.74	-0.03	
4,268.00	20.24	127.610	4,237.49	-164.50	-220.89	-39.88	8.98	8.94	2.59	



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
4,299.00	22.96	128.460	4,266.31	-171.53	-211.91	-28.55	8.83	8.77	2.74
4,331.00	26.15	129.760	4,295.41	-179.92	-201.60	-15.32	10.11	9.97	4.06
4,362.00	29.23	130.840	4,322.86	-189.25	-190.62	-0.97	10.07	9.94	3.48
4,393.00	32.13	131.960	4,349.51	-199.71	-178.76	14.82	9.53	9.35	3.61
4,425.00	35.69	132.300	4,376.07	-211.68	-165.52	32.64	11.14	11.13	1.06
									- 1-
4,456.00	39.10	131.630	4,400.69	-224.27	-151.52	51.44	11.08	11.00	-2.16
4,488.00	42.34	130.870	4,424.94	-238.03	-135.83	12.27	10.24	10.13	-2.38
4,519.00	46.19	130.220	4,447.14	-252.09	-119.38	93.83	12.51	12.42	-2.10
4,551.00	49.80	129.610	4,468.55	-267.34	-101.15	117.52	11.37	11.28	-1.91
4,582.00	53.49	129.370	4,487.78	-282.79	-82.39	141./1	11.92	11.90	-0.77
4 614 00	56 45	129 200	4,506,15	-299.38	-62 11	167 78	9.26	9 25	-0.53
4 645 00	59 21	129 200	4 522 65	-315 97	-41 78	193.88	8.90	8 90	0.00
4 677 00	60.19	129 230	4 538 80	-333 43	-20.37	221.37	3.06	3.06	0.09
4,077.00	60.20	129.030	4 554 20	-350.41	0.50	248 13	0.56	0.03	-0.65
4 739 00	61 70	129.600	4 569 26	-367 58	21.46	275.09	5 10	4 84	1 84
4,705.00	01.70	123.000	4,000.20	-507.50	21.40	275.05	5.10	4.04	1.04
4,771.00	64.07	131.130	4,583.84	-386.03	43.16	303.48	8.54	7.41	4.78
4,802.00	67.10	132.720	4,596.65	-404.89	64.15	331.66	10.83	9.77	5.13
4,833.00	70.72	133.020	4,607.81	-424.56	85.35	360.56	11.71	11.68	0.97
4,845.00	71.90	133.221	4,611.65	-432.33	93.64	371.92	9.94	9.81	1.67
330 perp @	4845 MD 4611.6	5 TVD							
4,846.12	72.01	133.240	4,612.00	-433.06	94.42	372.99	9.94	9.81	1.66
FTP @ 4840	6.12 MD 4612.00	TVD							
4,865.00	73.86	133.550	4,617.54	-445.46	107.53	391.03	9.94	9.81	1.64
4,897.00	76.62	134.100	4,625.69	-466.89	129.86	421.96	8.78	8.63	1.72
4,928.00	79.62	134.710	4,632.07	-488.11	151.53	452.29	9.87	9.68	1.97
4,959.00	81.55	135.570	4,637.14	-509.79	173.10	482.87	6.80	6.23	2.77
4,991.00	83.36	135.960	4,641.35	-532.52	195.23	514.59	5.78	5.66	1.22
5,022.00	85.21	135.880	4,644.43	-554.68	216.68	545.43	5.97	5.97	-0.26
5,054.00	86.78	135.590	4,646.67	-577.54	238.96	577.35	4.99	4.91	-0.91
5,085.00	87.87	135.400	4,648.11	-599.62	260.67	608.32	3.57	3.52	-0.61
5,148.00	88.96	135.530	4,649.86	-644.51	304.84	671.29	1.74	1.73	0.21
5,243.00	91.08	136.280	4,649.82	-712.73	370.94	766.27	2.37	2.23	0.79
E 007 00	00.07	105 110	1 0 10 0 1	700 47	100.14	000.00	4 70	4 50	0.00
5,337.00	89.67	135.410	4,649.21	-780.17	436.41	860.26	1.76	-1.50	-0.93
5,431.00	90.92	135.390	4,648.72	-847.10	502.41	954.25	1.33	1.33	-0.02
5,525.00	89.75	135.610	4,648.18	-914.14	568.30	1,048.24	1.27	-1.24	0.23
5,619.00	90.99	135.300	4,647.57	-981.13	634.23	1,142.24	1.36	1.32	-0.33
5,714.00	89.34	135.780	4,647.29	-1,048.94	700.77	1,237.23	1.81	-1.74	0.51
5 808 00	91 03	135 660	4 646 99	-1 116 23	766 30	1 331 22	1.80	1 80	-0.13
5 003 00	80.03	135.000	4 646 62	-1,110.23	832.65	1 426 20	1 71	-1.60	0.24
5,903.00	88.09	136 440	4 649 67	-1,104.01	807 7/	1,420.20	1.71	-1.03	0.59
5,997.00 6.001.00	00.00	136 500	4 651 16	-1 320 22	062.14	1 614 10	0.95	0.95	0.05
6 196 00	20.00	136.990	4,001.10	-1,320.22	1 027 62	1 709 05	1.06	0.00	0.40
0,100.00	09.01	130.000	7,002.20	-1,009.04	1,027.02	1,703.00	1.00	0.50	0.40
6,280.00	90.58	137.230	4.651.93	-1.458.15	1,091.66	1.802.98	0.90	0.82	0.37
0,200,00	00.00		.,501100	.,	.,	.,	0.00	0.02	



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn	
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
6,374.00	89.38	135.160	4,651.96	-1,525.98	1,156.72	1,896.96	2.55	-1.28	-2.20	
6,469.00	89.56	135.280	4,652.84	-1,593.41	1,223.63	1,991.95	0.23	0.19	0.13	
6,563.00	90.00	135.350	4,653.20	-1,660.25	1,289.73	2,085.95	0.47	0.47	0.07	
6,657.00	90.09	134.900	4,653.13	-1,726.86	1,356.06	2,179.95	0.49	0.10	-0.48	
6,752.00	90.03	134.290	4,653.03	-1,793.56	1,423.70	2,274.95	0.65	-0.06	-0.64	
6,846.00	91.19	134.550	4,652.03	-1,859.34	1,490.84	2,368.94	1.26	1.23	0.28	
6,940.00	89.38	134.810	4,651.56	-1,925.44	1,557.67	2,462.93	1.95	-1.93	0.28	
7,035.00	89.49	134.620	4,652.50	-1,992.27	1,625.18	2,557.92	0.23	0.12	-0.20	
7,130.00	90.59	134.340	4,652.43	-2,058.83	1,692.96	2,652.92	1.19	1.16	-0.29	
7,224,00	92 44	134 670	4 649 94	-2 124 70	1,759,97	2,746,88	2.00	1.97	0.35	
7,318.00	90.00	134,340	4,647,94	-2,190.57	1,826,99	2,840,84	2.62	-2.60	-0.35	
7 413 00	90.50	134 320	4 647 53	-2 256 96	1 894 95	2 935 84	0.53	0.53	-0.02	
7,110.00	90.50	133 480	4 646 71	-2 322 13	1,962,67	3 029 82	0.89	0.00	-0.89	
7,602.00	91.52	133 720	4 645 03	-2 387 63	2 031 46	3 124 77	1 10	1.07	0.05	
7,002.00	51.52	100.720	4,040.00	-2,007.00	2,001.40	5,124.11	1.10	1.07	0.20	
7,696.00	90.02	134.880	4,643.77	-2,453.28	2,098.72	3,218.75	2.02	-1.60	1.23	
7,790.00	90.83	135.210	4,643.07	-2,519.79	2,165.14	3,312.75	0.93	0.86	0.35	
7,884.00	91.49	135.110	4,641.17	-2,586.43	2,231.41	3,406.73	0.71	0.70	-0.11	
7,979.00	88.90	134.510	4,640.85	-2,653.38	2,298.80	3,501.72	2.80	-2.73	-0.63	
8,073.00	89.03	133.790	4,642.55	-2,718.84	2,366.23	3,595.69	0.78	0.14	-0.77	
0.400.00	00.00	100.010	1 2 1 2 2 1	0 704 47	0.101.01	0 000 00	0.70		0.10	
8,168.00	89.69	133.610	4,643.61	-2,784.47	2,434.91	3,690.66	0.72	0.69	-0.19	
8,262.00	90.68	135.740	4,643.30	-2,850.56	2,501.75	3,784.65	2.50	1.05	2.27	
8,356.00	89.37	135.800	4,643.26	-2,917.91	2,567.32	3,878.64	1.40	-1.39	0.06	
8,450.00	89.29	135.040	4,644.36	-2,984.86	2,633.29	3,972.63	0.81	-0.09	-0.81	
8,545.00	90.22	133.780	4,044.77	-3,051.34	2,701.15	4,067.62	1.00	0.98	-1.33	
8,639.00	91.43	133.700	4,643.41	-3,116.32	2,769.06	4,161.59	1.29	1.29	-0.09	
8,733.00	88.74	134.840	4,643.27	-3,181.93	2,836.36	4,255.57	3.11	-2.86	1.21	
8,827.00	90.42	135.640	4,643.96	-3,248.67	2,902.54	4,349.56	1.98	1.79	0.85	
8,922.00	88.86	135.270	4,644.56	-3,316.37	2,969.18	4,444.56	1.69	-1.64	-0.39	
9,016.00	88.16	134.000	4,647.00	-3,382.39	3,036.04	4,538.52	1.54	-0.74	-1.35	
0 110 00	90.12	122 690	4 640 22	2 4 4 7 4 9	2 102 92	4 620 47	1.00	1.02	0.24	
9,110.00	09.13	135.060	4,049.23	-3,447.40	3,103.62	4,032.47	1.09	1.03	-0.34	
9,205.00	00.07	135.000	4,050.09	-3,514.37	3,171.23	4,727.43	2.31	-0.27	2.29	
9,299.00	09.40	135.790	4,052.24	-3,301.70	3,230.75	4,021.43	0.05	0.05	-0.07	
9,393.00	91.09	136.150	4,651.77	-3,649.36	3,302.08	4,915.41	1.76	1.71	0.38	
9,488.00	92.17	136.590	4,649.07	-3,718.10	3,367.60	5,010.35	1.23	1.14	0.46	
9,583.00	93.40	135.450	4,644.45	-3,786.37	3,433.49	5,105.22	1.76	1.29	-1.20	
9,677.00	91.21	135.080	4,640.67	-3,853.09	3,499.59	5,199.13	2.36	-2.33	-0.39	
9,772.00	89.23	133.050	4,640.31	-3,919.15	3,567.85	5,294.11	2.98	-2.08	-2.14	
9,866.00	88.83	133.450	4,641.90	-3,983.55	3,636.31	5,388.05	0.60	-0.43	0.43	
9,961.00	91.19	135.360	4,641.88	-4,050.02	3,704.17	5,483.04	3.20	2.48	2.01	
10.055.00	00.44	404.000	4 000 04	4 440 54	0 770 54	F F70 00		4.00	0.00	
10,055.00	92.44	134.800	4,038.91	-4,116.54	3,770.51	5,576.99	1.46	1.33	-0.60	
10,150.00	93.62	134.260	4,033.88	-4,183.07	3,838.13	5,6/1.85	1.37	1.24	-0.57	
10,243.00	91.46	134.960	4,029.70	-4,248.31	3,904.27	5,764.75	2.44	-2.32	0.75	
10,338.00	89.78	135.350	4,028.73	-4,315.66	3,9/1.26	5,859.74	1.82	-1.//	0.41	
10,433.00	90.50	135.820	4,028.50	-4,383.52	4,037.74	5,954.73	0.91	0.76	0.49	



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
10,527.00	90.01	136.050	4,628.08	-4,451.06	4,103.12	6,048.72	0.58	-0.52	0.24
10,622.00	90.58	135.900	4,627.60	-4,519.37	4,169.14	6,143.70	0.62	0.60	-0.16
10,716.00	89.64	134.950	4,627.41	-4,586.33	4,235.11	6,237.70	1.42	-1.00	-1.01
10,810.00	90.12	134.880	4,627.61	-4,652.70	4,301.68	6,331.70	0.52	0.51	-0.07
10,905.00	90.51	134.390	4,627.09	-4,719.44	4,369.28	6,426.69	0.66	0.41	-0.52
10,999.00	88.44	134.220	4,627.95	-4,785.09	4,436.54	6,520.68	2.21	-2.20	-0.18
11,094.00	89.03	134.210	4,630.05	-4,851.32	4,504.61	6,615.65	0.62	0.62	-0.01
11,188.00	91.66	135.660	4,629.48	-4,917.71	4,571.15	6,709.63	3.19	2.80	1.54
11,283,00	89.91	135,530	4,628,18	-4,985.57	4.637.61	6.804.62	1.85	-1.84	-0.14
11,377.00	90.72	136.730	4,627.66	-5,053.33	4,702.75	6,898.59	1.54	0.86	1.28
11.471.00	90.03	136.110	4,627.05	-5.121.42	4,767,55	6.992.56	0.99	-0.73	-0.66
11,566.00	90.94	136,410	4.626.24	-5,190.06	4.833.23	7.087.53	1.01	0.96	0.32
11 660 00	90.84	135,970	4 624 78	-5 257 88	4 898 30	7 181 50	0.48	-0.11	-0.47
11 755 00	89.32	135 790	4 624 65	-5 326 08	4 964 43	7 276 49	1.61	-1.60	-0.19
11,849.00	89.55	135.610	4,625.58	-5,393.35	5,030.08	7,370.48	0.31	0.24	-0.19
11 944 00	90.62	135 610	4 625 44	-5 461 24	5 096 53	7 465 47	1 13	1 13	0.00
12 037 00	80.52	135,680	4,025,28	-5,401.24	5 161 55	7,558.46	1.13	1.13	0.00
12,037.00	00.57	136.000	4,025.20	-5,527.75	5,101.55	7,550.40	1.12	-1.12	0.08
12,132.00	90.57	136.140	4,025.15	-5,595.96	5,227.05	7,055.45	1.15	1.04	0.46
12,220.00	09.41	135.290	4,025.17	-5,003.20	5,293.20	7,747.44	1.55	-1.23	-0.90
12,321.00	89.96	134.960	4,020.09	-5,730.58	5,300.31	7,842.44	0.68	0.58	-0.35
12,415.00	88.37	134.620	4,627.06	-5,796.79	5,427.01	7,936.42	1.73	-1.69	-0.36
12,509.00	91.16	135.820	4,627.44	-5,863.50	5,493.21	8,030.41	3.23	2.97	1.28
12,604.00	89.19	135.150	4,627.15	-5,931.24	5,559.81	8,125.40	2.19	-2.07	-0.71
12,698.00	91.08	134.670	4,626.93	-5,997.60	5,626.38	8,219.40	2.07	2.01	-0.51
12,793.00	89.68	135.290	4,626.30	-6,064.75	5,693.58	8,314.39	1.61	-1.47	0.65
12,888.00	91.30	136.280	4,625.49	-6,132.83	5,759.82	8,409.37	2.00	1.71	1.04
12,982.00	89.00	134.210	4,625.24	-6,199.58	5,825.99	8,503.36	3.29	-2.45	-2.20
13,077.00	87.45	133.120	4,628.19	-6,265.13	5,894.68	8,598.29	1.99	-1.63	-1.15
13,171.00	89.62	133.070	4,630.59	-6,329.33	5,963.29	8,692.20	2.31	2.31	-0.05
13,265.00	90.12	132.450	4,630.80	-6,393.15	6,032.31	8,786.13	0.85	0.53	-0.66
13,360.00	90.54	131.880	4,630.26	-6,456.92	6,102.72	8,881.01	0.75	0.44	-0.60
13,454.00	90.60	130.540	4,629.32	-6,518.84	6,173.43	8,974.79	1.43	0.06	-1.43
13,548.00	90.06	132.030	4,628.78	-6,580.86	6,244.06	9,068.59	1.69	-0.57	1.59
13,643.00	90.64	131.840	4,628.20	-6,644.35	6,314.73	9,163.45	0.64	0.61	-0.20
13,709.40	91.07	131.012	4,627.21	-6,688.28	6.364.51	9,229.72	1.40	0.65	-1.25
LTP @ 1370	9.40 MD 4627.21	TVD	.,	0,000120	0,001101			0.000	1110
13 713 00	91 09	130 967	4 627 14	-6 690 64	6 367 23	9 233 31	1 40	0.65	-1 25
330 perp @	13713 MD 4627 4		1,021.14	0,000.04	5,567.20	0,200.01	1.40	0.00	1.20
13,728.00	91.19	130.780	4,626.84	-6,700.45	6,378.57	9,248.27	1.40	0.65	-1.25
Survey @ 13	3728.00 MD 4626	.84 TVD							
13,793.00	91.19	130.780	4,625.49	-6,742.90	6,427.78	9,313.08	0.00	0.00	0.00
Survey Proi	to 13793.00 MD	4625.49 TVD							



Survey Report



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

**Design Annotations** 

Measured	Vertical	Local Coo	rdinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
412.00	412.00	-1.33	-0.71	MWD surveys
2,683.00	2,660.22	-106.46	-211.85	9 5/8" Casing @ 2683 MD 2660.22 TVD
4,845.00	4,611.65	-432.33	93.64	330 perp @ 4845 MD 4611.65 TVD
4,846.12	4,612.00	-433.06	94.42	FTP @ 4846.12 MD 4612.00 TVD
13,709.40	4,627.21	-6,688.28	6,364.51	LTP @ 13709.40 MD 4627.21 TVD
13,713.00	4,627.14	-6,690.64	6,367.23	330 perp @ 13713 MD 4627.14 TVD
13,728.00	4,626.84	-6,700.45	6,378.57	Survey @ 13728.00 MD 4626.84 TVD
13,793.00	4,625.49	-6,742.90	6,427.78	Survey Proj. to 13793.00 MD 4625.49 TVD



### Survey Report - Geographic



Company: Project: Site: Well: Wellbore: Design:	Enduring Resource San Juan County, Rodeo Unit 511 pa Rodeo Unit #512H Original Hole Surveys Original H	es LLC New Mexico N d (511, 512 & 5 lole	AD83 NM W 513)	Local Co-ordina TVD Reference: MD Reference: North Reference Survey Calculati Database:	te Reference: : on Method:	Well Rodeo Unit #51: RKB=6798+13 @ 68 RKB=6798+13 @ 68 Grid Minimum Curvature DB_Decv0422v16	2H 11.00ft (Ensign 145) 11.00ft (Ensign 145)
Project Map System: Geo Datum: Map Zone:	US State Plane North Americar New Mexico W	unty, New Mexi e 1983 n Datum 1983 estern Zone	ICO NAD83 NM W	System Datum	:	Mean Sea Level	
Site	Rodeo Unit 5	11 pad (511, 51	2 & 513)				
Site Position: From: Position Uncertain	Lat/Long nty:	0.00 ft	Northing: Easting: Slot Radius:	1,888,898.3 2,749,215.3 13-3	347 usft Latitud 362 usft Longit /16 "Grid C	le: ude: onvergence:	36.191179000 -107.744800000 0.05 °
Well	Rodeo Unit #5	512H, Surf loc:	191 FSL 1345 FWL	. Section 25-T23N-R0	9W		
Well Position	+N/-S +E/-W	0.00 ft 0.00 ft	Northing: Easting:	1,88 2,74	38,898.328 usft 49,195.297 usft	Latitude: Longitude:	36.191179000 -107.744868000
Position Uncertain	nty	0.00 ft	Wellhead Ele	vation:	ft	Ground Level:	6,798.00 ft
Wellbore	Original Hole						
Magnetics	Model Na	ime	Sample Date	Declinatio (°)	n	Dip Angle (°)	Field Strength (nT)
	IG	RF2020	11/18/2022		8.65	62.69	49,142.14064790
Design	Surveys Origi	nal Hole					
Audit Notes:	ourreys ong	nul Holo					
Version:	1.0		Phase:	ACTUAL	Tie On De	oth:	0.00
Vertical Section:		Depth F	From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direc (°	tion )
			0.00	0.00	0.00		135.000
Survey Program From	То	Date 12/20	)/2022				
(ft)	(ft)	Survey (Wellb	ore)	Tool N	lame	Description	

412.002,632.00 MWD surf (Original Hole)MWDOWSG MWD - Standard2,697.0013,728.00 MWD (Original Hole)MWDOWSG MWD - Standard13,793.0013,793.00 Projection (Original Hole)MWDOWSG MWD - Standard

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	1,888,898.328	2,749,195.297	36.191179000	-107.744868000
412.00	0.42	208.180	412.00	-1.33	-0.71	1,888,896.997	2,749,194.584	36.191175345	-107.744870421
MWD su	rveys								
503.00	0.46	209.440	502.99	-1.94	-1.05	1,888,896.385	2,749,194.247	36.191173664	-107.744871565
594.00	0.56	209.460	593.99	-2.65	-1.45	1,888,895.680	2,749,193.848	36.191171727	-107.744872917
685.00	0.55	223.010	684.99	-3.36	-1.97	1,888,894.973	2,749,193.332	36.191169788	-107.744874670
776.00	0.52	221.260	775.98	-3.98	-2.54	1,888,894.343	2,749,192.762	36.191168059	-107.744876605
866.00	0.58	229.750	865.98	-4.59	-3.15	1,888,893.742	2,749,192.145	36.191166409	-107.744878698
957.00	0.61	226.260	956.97	-5.22	-3.85	1,888,893.110	2,749,191.443	36.191164673	-107.744881077
1,051.00	0.64	231.020	1,050.97	-5.89	-4.62	1,888,892.433	2,749,190.673	36.191162817	-107.744883687

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## Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

the         (1) <th>Measured Depth</th> <th>Inclination</th> <th>Azimuth</th> <th>Vertical Depth</th> <th>+N/-S</th> <th>+E/-W</th> <th>Map Northing</th> <th>Map Easting</th> <th></th> <th></th>	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
1,440,00       0.77       233.210       1,445.96       -65.68       1.588,491.773       2,743,193.713       351.191150105       -107,74489076         1,340,00       0.82       235,690       1,333.94       -7.24       -7.51       1.888,490.334       2,743,197.391       351.191155795       -107,74489076         1,429,00       0.77       245.820       1,522.88       -10.16       -11.73       1.888,480.180       2,743,193.570       361.19115456       -107,74490776         1,677,00       2,682.00       1,107.8       -12.88       -14.14       1.888,480.470       2,749,105.529       361.191150031       -107,74409074         1,984.00       1,366       2,462.50       1,107.8       -2.51.2       -4.67       1.888,467.12       2,749,105.329       361.191160811       -107,74609012         1,984.00       1,366       2,463.00       1,975.56       1.888,467.12       2,749,105.339       36.191162027       -107,7450916       -107,74609017       -107,74509161       -107,74609017       -107,74509161       -107,74609017       -107,74509161       -107,74509161       -107,74509165       -107,74509165       -107,74509161       -107,74509166       -107,74509166       -107,74509166       -107,74509166       -107,74509166       -107,74509166       -107,74509166       -107,745091	(π)	(°)	(°)	(π)	(ft)	(ft)	(usπ)	(usπ)	Latitude	Longitude
1,240.00       0.82       240.770       1,239.95       -7.21       -6.71       1,888.091.121       2,749.188.583       36.191152217       -107.744890718         1,429.00       0.87       232.420       1,428.93       -8.08       -9.09       1,888.808.53       2,749.185.570       36.191154857       -107.744890818         1,712.00       5.73       247.560       1,616.61       -12.88       -10.11       1,888.804.62       2,749.196.203       36.191154357       -107.744890818         1,712.00       5.73       247.560       1,616.61       -12.88       -16.14       1,888.804.76       2,749.196.523       36.191153356       -107.74469722         1,886.60       1.26       24.63.50       1,889.45       -18.88.673.21       2,749.196.523       36.191163257       -107.7451548916         1,984.00       3.46       24.63.50       2,713.86       -51.18       -10.89       1,888.437.23       2,749.190.331       36.19105274       -107.74522383         2,170.00       11.72       22.260       2,26.42.2       -2.64.52       -11.74       -10.88.82.1400       2,749.072.440       38.19096081       -107.74522383         2,171.00       11.72       24.26.90       2,64.92       -11.74       -18.88.22.1400       2,749.072.440       38	1,146.00	0.77	239.210	1,145.96	-6.56	-5.58	1,888,891.773	2,749,189.713	36.191161005	-107.744886945
1.334.00       0.89       225.890       1.333.94       -7.94       -7.91       1.888.800.349       2.749.187.301       38.101157166       -107.74489880         1.422.00       0.87       224.22       1.428.80       -10.16       -11.73       1.888.881.582       2.749.188.270       38.19115112       -107.744897810         1.617.00       5.73       247.500       1.616.65       -12.88       -12.88       -14.1       1.888.881.482       2.749.175.18       38.191150031       -107.744920511         1.900.00       1.366       246.830       1.804.68       -35.22       -68.45       1.888.864.72       2.749.196.830       36.191068616       -107.745032927         1.990.00       1.366       246.830       1.894.68       -35.62       -27.43       1.888.807.20       2.749.196.830       S6.191068616       -107.74502327         2.183.00       1.25       245.000       2.078.66       -67.18       -104.89       1.888.807.20       2.749.09.31       S6.191068616       -107.7452258280         2.171.00       1.72       242.800       2.467.32       -888.12.500       2.749.09.31       S6.190068214       -107.7452258280         2.371.00       1.12       24.802       2.457.80       -107.745578248       S8.1900640374       S8.1900680	1,240.00	0.82	240.770	1,239.95	-7.21	-6.71	1,888,891.121	2,749,188.583	36.191159217	-107.744890776
1.422.00       0.87       223.20       1.428.03       -8.80       -0.09       1.888.886.56       2.749.188.270       36.191154857       -107.744697847         1.572.00       5.72       247.500       1.616.61       -12.88       -111.6       -117.3       1.888.885.486       2.749.177.158       36.191143356       -107.744697822         1.700.0       5.73       247.500       1.616.6       -12.88       -11.61.4       1.888.867.46       2.749.148.503       36.1911103001       -107.744697822         1.900.00       1.268       246.300       1.895.66       -12.42       -45.56       1.888.867.21       2.749.148.203       36.191105270       -107.74569916         1.990.00       1.364       246.500       2.078.500       -170.38       -55.60       -123.25       1.888.837.26       2.749.072.04       36.19105574       -107.74523956         2.277.00       1.72       24.280       2.847.42       -177.454.578.60       2.749.074.40       36.190068031       -107.745459764         2.446.00       1.162       2.404.60       2.410.90       1.888.402.712       2.748.004.27       36.190068036       -107.745459746         2.446.00       1.122       2.934.36       -101.57       1.888.402.712       2.748.802.4102       36.190068036	1,334.00	0.89	235.980	1,333.94	-7.94	-7.91	1,888,890.384	2,749,187.391	36.191157196	-107.744894818
1,523.00       2,77       245.820       1,522.88       -10.16       -11.73       1,888.881.66       2,749,183.570       30,191151112       -107.744927511         1,871.20       9.24       245.520       1,710.78       -12.88       -28.47       1,888.804.47       2,749,165.829       36,191130031       -107.744927511         1,900.00       13.66       24.68       -45.45       1,888.804.47       2,749,172.88       36,191106616       -107.745023272         1,900.00       13.66       24.68       -56.65       1,888.847.146       2,749,109.633       36,191066616       -107.745023272         2,183.00       12.35       245.000       2,078.56       -51.18       -10.498       1,888.471.46       2,749.09.313       68,191066616       -107.745259880         2,277.00       11.72       242.20       2,843.40       2,749.05.140       2,749.05.40       68,19006231       -107.745598284         2,371.00       11.22       24.60.20       2,595.00       11.24       24.62       2,633.00       -107.745598284       36,19006636       -107.745598284         2,635.00       11.42       24.04.20       2,743.00       -107.745598284       36,19006736       -107.745598284         2,637.10       10.22       2,745.35       -107.764	1,429.00	0.87	232.420	1,428.93	-8.80	-9.09	1,888,889.532	2,749,186.208	36.191154857	-107.744898830
1.617.00         5.73         247.590         1.616.61         -1.2.88         -181.4         1.888.880.476         2.749.175.529         36.191140205         1.1077.44967923172           1.900.00         12.68         246.380         1.802.306         -25.12         -45.79         1.888.873.42         2.749.149.529         36.19110120         -1077.4450923272           1.900.00         13.66         246.30         1.848.55         -41.41         -85.66         1.888.854.716         2.7449.128.84         36.191082707         -1077.451518430           2.089.00         12.35         245.00         2.717.38         -96.06         -122.35         1.868.330.277         2.749.072.400         36.19103674         -1077.45235760           2.777.00         11.72         242.280         2.283.53         -76.92         -177.45         1.888.302.077         2.749.072.449         36.190960861         -1077.454516326           2.466.02         11.62         240.630         2.539.57         -94.62         -191.07         1.888.879.164         2.749.020.249         36.190960586         1.077.45561522           2.683.00         11.52         240.632         2.660.22         -105.446         -218.87         1.888.791.162         2.448.992.012         36.190990585         1.077.45565242 <td>1,523.00</td> <td>2.77</td> <td>245.820</td> <td>1,522.88</td> <td>-10.16</td> <td>-11.73</td> <td>1,888,888.166</td> <td>2,749,183.570</td> <td>36.191151112</td> <td>-107.744907774</td>	1,523.00	2.77	245.820	1,522.88	-10.16	-11.73	1,888,888.166	2,749,183.570	36.191151112	-107.744907774
1.712.00       9.24       246.520       1,710.76       -17.76       -264.77       1.888.880.72       2,744.165.803       36.19110120       1-107.744967322         1.900.00       13.66       246.30       1,894.58       -33.62       -65.65       1.888.867.213       2,744.128.803       36.191082816       -107.745089916         1.994.00       13.66       246.30       1,894.56       -18.88.865.518       2,744.108.803       36.19108270       -107.745189430         2,183.00       12.35       245.00       2,075.56       -51.18       -104.99       1.888.803.72       2,7440.072.404       36.19101574       -107.745345708         2,277.00       11.72       242.20       2,353.6       -76.92       -167.74       1.888.803.712       2,740.057.465       36.19096061       -107.7454544068         2,267.00       11.62       2,447.42       -85.76       -174.75       1.888.803.712       2,740.057.465       36.19098058       -107.74555282         2,643.00       11.21       236.80       2.673.55       -107.44       -214.20       1.888.708.14       2,748.904.493       36.19098208       -107.745552842         2,643.00       1.21       236.80       2.670.55       -474.2       -107.855744       -107.74557044       -214.20       1	1,617.00	5.73	247.590	1,616.61	-12.88	-18.14	1,888,885.446	2,749,177.158	36.191143656	-107.744929511
1,900.00       12.86       244.380       1,901.00       -65.45       1.888,867.12       2,749,149.129.84       36,19110120       -107,7450923272         1,900.00       13.46       244.30       1,985.96       -42.41       -85.66       1,888,867.12       2,749,108.33       36,191082707       -107,745194430         2,089.00       12.35       245.00       2,777.38       -99.60       -123.25       1,888,832.072       2,744,005.410       36,191018574       -107,74529580         2,277.00       11.72       242.200       2,253.67       -94.62       -117.74       1,888,832.072       2,740,002.649       36,19098036       -107,74545470         2,465.00       11.15       240.40       2,471.00       -101.64       -211.85       1,888,706.142       2,440.021.464       36,19098036       -107,745545828         2,683.00       11.23       23.93       2,573.95       -107.46       -214.20       1,888,709.142       2,449.902.012       36,190983269       -107,745594248         2,697.10       11.23       23.93       2,687.20       -107.4554448       -214.20       1,888,709.149       36,19083269       -107,745594248         2,697.00       11.23       23.93       2,688,779.167       2,748,961.691       2,748,961.699       36,19083269 <td>1,712.00</td> <td>9.24</td> <td>245.520</td> <td>1,710.78</td> <td>-17.85</td> <td>-29.47</td> <td>1,888,880.476</td> <td>2,749,165.829</td> <td>36.191130031</td> <td>-107.744967922</td>	1,712.00	9.24	245.520	1,710.78	-17.85	-29.47	1,888,880.476	2,749,165.829	36.191130031	-107.744967922
1900.00       13.66       246.830       1.894.86       35.82       -65.45       1.888.867.12       2.749.109.638       36.19106270*       107.745158430         2.098.00       12.36       245.000       2.078.56       -51.18       -104.99       1.888.837.146       2.749.109.638       36.19101557*       107.74523580         2.717.00       11.72       242.20       2.55.43       -76.52       -157.84       1.888.832.106       2.740.072.440       36.19005802:14       107.74543750         2.371.00       11.72       242.20       2.55.43       -76.58       -177.75       1.888.832.106       2.749.037.456       36.19095805:107.74561528         2.665.00       11.46       242.490       2.447.42       -85.78       -177.745       1.888.701.63       2.749.004.227       36.1909500636       -107.74551528         2.683.00       11.21       230.59       2.673.95       -107.44       -214.20       1.888.701.64       2.749.903.445       36.190857535       -107.745564248         2.697.00       10.2       234.740       2.663.4       -117.23       -228.75       1.888.701.04       2.748.985.446       36.190857535       -107.745694248         2.791.00       10.02       234.740       2.663.4       -117.23       -228.75       1.888.	1,806.00	12.68	246.380	1,803.06	-25.12	-45.79	1,888,873.213	2,749,149.503	36.191110120	-107.745023272
1.994.00       12.36       246.130       1.985.96       -42.41       -85.66       1.888.957.146       2.749.093.31       38.19103860       107.745223953         2.183.00       12.35       245.500       2.078.00       -17.245223953       2.815.91038600       107.745223953         2.183.00       11.72       242.200       2.523       -68.12       -140.901       1.888.830.207       2.749.054.400       36.190982214       107.745454578         2.747.00       11.72       242.200       2.543.36       -76.92       -17.754       1.888.812.500       2.749.020.464       36.190980204       107.74540446         2.466.00       11.42       24.040       2.447.42       -85.76       -174.75       1.888.768.614       2.749.020.549       36.190980784       -107.745612482         2.683.00       11.52       2.40.630       2.593.57       -106.46       -211.85       1.888.701.673       2.748.983.445       36.190980784       -107.74554248         2.697.00       11.23       239.580       2.673.95       -107.745       -1888.701.673       2.748.984.464       36.19088733       -107.74564248         2.791.00       10.02       2.974.70       10.02       2.974.70       -107.74564248       -107.745674242         2.791.00	1,900.00	13.66	246.830	1,894.58	-33.62	-65.45	1,888,864.712	2,749,129.846	36.191086816	-107.745089916
2.089.00         12.36         245.000         2.078.56         -51.18         -10.499         1.888.837.26         2.749.072.046         36.191015574           2.178.00         11.72         242.890         2.262.32         -68.12         -140.900         1.888.832.207         2.749.037.466         36.1909680214         -107.745425888           2.377.10         11.72         242.220         2.543.40         76.8         1.888.837.20         2.749.037.466         36.1909680214         -107.745403161           2.466.00         11.42         240.630         2.597.50         -177.475         1.888.037.162         2.749.007.449         36.190909506         -107.74555282           2.683.00         11.21         240.460         2.610.19         -101.51         -203.29         1.888.796.614         2.748.983.445         36.1909857084         -107.74555282           2.697.00         11.23         239.50         2.673.95         -107.74         -214.20         1.888.701.101         2.748.983.445         36.190885287         -107.74555424           2.791.00         11.23         239.50         2.673.35         -107.746         -214.20         1.888.704.992         -2748.986.546         36.190852267         -107.74555424           2.791.00         11.22         2.660.22 <td>1,994.00</td> <td>13.46</td> <td>246.130</td> <td>1,985.96</td> <td>-42.41</td> <td>-85.66</td> <td>1,888,855.918</td> <td>2,749,109.638</td> <td>36.191062707</td> <td>-107.745158430</td>	1,994.00	13.46	246.130	1,985.96	-42.41	-85.66	1,888,855.918	2,749,109.638	36.191062707	-107.745158430
2,183.00         12,35         245.500         2,171.038         -59.60         -122.25         1,888,393.726         2,749,054.400         36.190962074         -107.745236708           2,277.100         11,72         242.200         2,252.22         -68.17         1,888,892.746         2,749,054.400         36.190968081         -107.745403768           2,476.00         11.46         242.400         2,474.2         -86.76         -174.75         1,888,803.712         2,749,002.57         36.190969566         -107.745460368           2,653.00         11.15         240.400         2,610.9         -101.51         -203.29         1,888.704.80         2,748,992.012         36.190969056         -107.745567245           2,685.00         11.22         239.580         2,673.95         -107.84         -214.20         1,888,704.40         2,748,985.445         36.190857269         -107.745634248           2,791.00         10.02         234.740         2,766.34         -107.84         -244.20         1,888,708.101         2,748,985.445         36.19085753         -107.745634248           2,780.00         6.61         220         245.53         -238.75         1,888,778.101         2,748,985.445         36.19085753         -107.745634248           2,860.00         6.61	2,089.00	12.36	245.000	2,078.56	-51.18	-104.99	1,888,847.146	2,749,090.311	36.191038660	-107.745223953
2,277.00         11.72         242.800         2,262.32         -68.12         -140.90         1,888,80.007         2,749,037.465         36.190968061         -107.7454603161           2,466.00         11.42         242.420         2,357.00         1,888,812.550         2,749,007.456         36.190968061         -107.7454603161           2,466.00         11.32         240.630         2,539.57         -46.62         -191.07         1,888,8796.814         2,748,983.445         36.1909680796         -107.7455562621           2,683.00         11.21         239.580         2,660.22         -106.46         -211.85         1,888,796.814         2,748,983.445         36.190887084         -107.745564248           2,7697.00         11.22         239.580         2,670.39         -107.74554248         -107.745564248         -107.745564248           2,7697.00         11.22         239.350         -107.745544248         -107.745564248         -107.745645486         36.190867255         -107.745645489           2,7697.00         0.42         24.64.03         1,888,766.050         2,748,981.4671         36.190867264         -107.74576444           2,748,981.446         0.447.420         -107.74576444         -107.745764763         -107.745764763         -107.745764763         -107.745764763         <	2,183.00	12.35	245.500	2,170.38	-59.60	-123.25	1,888,838.726	2,749,072.046	36.191015574	-107.745285880
2,371.00       11.72       242.220       2,354.36       -76.92       -157.84       1,888,821.406       2,749,020.54       36.190949054       -107.745460346         2,660.00       11.32       240.630       2,539.57       -94.62       -191.07       1,888,803.712       2,749,002.57       36.190949556       -107.74557245         2,683.00       11.15       240.406       2,610.19       -101.51       -200.29       1,888,791.40       2,748,992.012       36.190987084       -107.74559245         2,697.00       11.23       239.58       2,660.22       -106.46       -211.85       1,888,791.40       2,748,981.49       36.190887267       -107.745594248         2,791.00       10.02       234.740       2,766.34       -117.23       -228.75       1,888,781.10       2,748,985.458       36.190835267       -107.745694248         2,981.00       3.43       234.620       2,964.95       -130.31       -248.63       1,888,768.019       2,748,948.041       36.19081529       -107.745694248         3,075.00       0.46       154.70       3,048.90       -132.31       -248.63       1,888,764.09       2,748,948.013       36.19016424       -107.745704200         3,367.00       0.65       1160.050       3,30.88       -132.31       -248.61	2,277.00	11.72	242.890	2,262.32	-68.12	-140.90	1,888,830.207	2,749,054.400	36.190992214	-107.745345708
2,466.00         11.46         242.490         2,447.42         -85.76         -174.75         1,888,802.500         2,749,004.227         36.190943794         -107.745515285           2,852.00         11.15         240.460         2,610.19         -101.51         -203.29         1,888,708.671         2,749,004.2217         36.190900566         -107.7455552245           2,683.00         11.21         239.588         2,660.22         -106.46         -211.85         1,888,791.673         2,748,983.445         36.190887084         -107.74554286           2,997.00         11.02         239.350         2,673.95         -107.84         -214.20         1,888,791.671         2,748,981.463         36.190887084         -107.745545428           2,997.00         10.02         234.740         2,766.34         -112.2         -223.84         1,888,766.509         2,748,954.458         36.190835299         -107.745504563           3,075.00         0.46         154.722         3,446.20         3,450         -246.651         1,888,765.572         2,748,946.671         36.190812428         -107.745703763           3,169.00         9.057         11.165         3,236.88         -133.56         -246.77         1,888,761.672         2,748,944.43         36.1900812422         -107.745703775 <td>2,371.00</td> <td>11.72</td> <td>242.220</td> <td>2,354.36</td> <td>-76.92</td> <td>-157.84</td> <td>1,888,821.406</td> <td>2,749,037.456</td> <td>36.190968081</td> <td>-107.745403161</td>	2,371.00	11.72	242.220	2,354.36	-76.92	-157.84	1,888,821.406	2,749,037.456	36.190968081	-107.745403161
2,660.00         11.32         240.630         2,539.57         -94.62         -191.07         1,888,803.712         2,748,904.0227         36.190919556         -107.745515228           2,683.00         11.12         239.588         2,660.22         -106.46         -211.85         1,888,761.673         2,748,983.445         36.190887084         -107.74555248           2,697.00         11.23         239.588         2,678.95         -107.84         -214.20         1,888,761.673         2,748,981.099         36.1908872657         -107.7445594248           2,997.00         11.23         239.470         2,660.33         -122.33         -233.480,711.01         2,748,981.099         36.190882269         -107.7445594248           2,989.00         6.61         232.470         2,660.33         -122.32         -246.69         1,888,766.050         2,748,946.643         36.190832269         -107.745703765           3,075.00         0.46         167.72         3,748.06.050         2,748,947.643         36.19082724         -107.745703705           3,375.00         0.65         160.050         3,330.88         -132.20         -246.81         1,888,761.292         2,748.948.401         36.19080266         -107.745708712           3,451.00         0.56         160.050         3,3	2,466.00	11.46	242.490	2,447.42	-85.78	-174.75	1,888,812.550	2,749,020.549	36.190943794	-107.745460486
2,832.00         11.15         240.460         2,610.19         -101.51         -203.29         1,888,796.871         2,748,992.012         36,190807084         -107.745558245           9,68° Casing @ 2683 MD 2660.22         10.06         -211.85         1,888,791.873         2,748,993.445         36,190887084         -107.74558245           2,897.00         11.23         239.50         2,673.95         -107.84         -214.20         1,888,790.489         2,748,981.099         36,190887084         -107.745584248           2,897.00         0.02         234.740         2,766.34         -117.23         -228.75         1,888,712.997         2,748,981.098         36,19083729         -107.74558458           2,896.00         6.61         232.470         2,660.33         -2248.63         1,888,766.509         2,748,946.671         36,19083729         -107.745703763           3,160.00         9.09         12.140         3,142.89         -133.20         -247.83         1,888,766.502         2,748,944.831         36,19080206         -107.745703761           3,357.00         0.65         160.50         3,338         -133.2         -245.88         1,888,764.199         2,748,944.13         36,19080206         -107.74570377           3,451.00         0.58         169.810	2,560.00	11.32	240.630	2,539.57	-94.62	-191.07	1,888,803.712	2,749,004.227	36.190919556	-107.745515828
2,883.00         11:21         239.582         2,660.22         -106.46         -211.85         1,888,791.673         2,749,983.445         36.190887287         -107.745586281           9.587         2087.00         11.23         2234,740         2,766,34         -117.23         -228.75         1,888,781.101         2,748,965.468         36.190835287         -107.745642386           2,886.00         6.61         232.470         2,860.03         -125.33         -238.44         1,888,772.997         2,748,965.468         36.19085529         -107.74560137           2,886.00         6.61         154.720         3,048.90         -122.28         -246.81         1,888,766.050         2,748,946.671         36.190812722         -107.74570470           3,619.00         0.90         121.140         3,142.89         -133.56         -247.83         1,888,764.099         2,748,944.671         36.190812722         -107.74570470           3,357.00         0.65         160.050         3,30.88         -133.51         -245.88         1,888,764.099         2,748,944.863         36.19080266         -107.745702470           3,451.00         0.57         21.200         3,613.86         -136.53         -247.89         1,888,761.403         2,748,948.865         36.190805666         -107.7457024	2,632.00	11.15	240.460	2,610.19	-101.51	-203.29	1,888,796.814	2,748,992.012	36.190900636	-107.745557245
9 Sit <sup>a</sup> Casing @ 2683 MD 2660.22 TVO           2.697 Oo         11.23         239.350         2.673 95         -107.64         -214.20         1.888.790.489         2.748.981.099         36.190883287         -107.745564248           2.791.00         10.02         234.740         2.660.33         -125.33         -238.84         1.888.781.101         2.748.986.46         36.190883287         -107.745641396           2.881.00         6.61         522.470         2.660.33         -125.33         -238.84         1.888.766.050         2.748.948.04         36.190815236         -107.745703755           3.075.00         0.46         154.720         3.048.90         -132.28         -248.63         1.888.766.502         2.748.948.671         36.190815236         -107.745703755           3.630.00         0.57         111.650         3.236.88         -133.56         -246.77         1.888.764.792         2.748.949.147         36.190812722         -107.74570375           3.451.00         0.56         190.65         3.330.88         -143.23         -246.77         1.888.761.492         2.748.949.413         36.19080266         -107.745701713           3.450.00         0.56         211.200         3.518.87         -246.81         1.888.751292         2.748.948.293         36.19080266 <td>2,683.00</td> <td>11.21</td> <td>239.588</td> <td>2,660.22</td> <td>-106.46</td> <td>-211.85</td> <td>1,888,791.873</td> <td>2,748,983.445</td> <td>36.190887084</td> <td>-107.745586291</td>	2,683.00	11.21	239.588	2,660.22	-106.46	-211.85	1,888,791.873	2,748,983.445	36.190887084	-107.745586291
2,697.00         11.23         239.360         2,767.35         -107.84         -214.20         1,888,790.499         361.90857535         -107.7457643596           2,886.00         6.61         232.470         2,860.33         -125.33         -229.84         1,888,776.90         2,748,946.804         361.90857535         -107.745703765           2,981.00         3.43         234.620         2,954.95         -130.31         -246.63         1,888,768.019         2,748,946.871         361.9085729         -107.745703765           3,075.00         0.46         154.720         3,048.90         -132.26         -244.63         1,888,764.772         2,748,946.571         361.9081722         -107.745703765           3,057.00         0.65         160.050         3,330.88         -132.26         -246.88         1,888,764.72         2,748,949.147         361.9081020         -107.745704700           3,357.00         0.65         160.050         3,330.88         -134.23         -246.15         1,888,760.129         2,748,949.147         361.90805066         -107.74570470           3,450.00         0.57         201.200         3,51.86         -136.89         -246.89         1,888,760.22         2,748,949.494.13         361.90805066         -107.745704370           3,735.00	9 5/8" Ca	sing @ 2683	MD 2660.22	TVD						
2,791.00         10.02         234,740         2,766.34         -117.23         -228.75         1,888,772.997         2748,956.546         361.90857535         -107.745681197           2,981.00         3.43         234.620         2,954.95         -103.31         -2248,93         1,888,772.997         2748,946.671         36.190815299         -107.7457013957           3,169.00         0.90         0.46         154.720         3,008         -133.00         -247.83         1,888,765.327         2,748,947.464         36.190816236         -107.745703752           3,263.00         0.57         111.650         3,238.88         -133.20         -247.83         1,888,764.099         2,748,944.651         36.190816226         -107.745708122           3,451.00         0.58         160.810         3,42.87         -135.20         -245.88         1,888,761.403         2,748,944.813         36.19080206         -107.745702012           3,451.00         0.55         214.990         3,613.86         -136.63         -246.84         1,888,761.403         2,748,944.813         36.19080306         -107.745702475           3,750.00         0.64         198.530         3,708.86         -137.81         -246.84         1,888,759.540         2,748,944.603         36.190793645         -107.74570347	2,697.00	11.23	239.350	2,673.95	-107.84	-214.20	1,888,790.489	2,748,981.099	36.190883287	-107.745594248
2.886.00         6.61         224.70         2.896.03         -125.33         -239.84         1.888,766.019         2.748.945.848         36.109035299         -107.745681197           2.981.00         3.43         2.246.49         1.888,766.050         2.748.945.6461         36.109816236         -107.7457036312           3.109.00         0.90         121.140         3.1428.33         -246.77         1.888,766.172         2.748.947.444         36.109014248         -107.74570170312           3.263.00         0.56         160.050         3.330.88         -134.23         -246.77         1.888,761.129         2.748.949.147         36.190805666         -107.745702612           3.451.00         0.58         169.810         3.424.87         -135.20         -245.88         1.888,761.129         2.748,949.147         36.190805666         -107.745702612           3.454.60         0.57         201.200         3.519.87         -136.11         -245.97         1.888,762.215         2.748,949.923         36.190805666         -107.745703275           3.735.00         0.64         198.530         3.708.86         -138.93         -246.84         1.888,765.020         2.748,948.4012         36.19080566         -107.745704273           3.735.00         0.64         210.200         3.	2,791.00	10.02	234.740	2,766.34	-117.23	-228.75	1,888,781.101	2,748,966.546	36.190857535	-107.745643596
2.981.00       3.43       23.4220       2.984.95       -130.31       -246.49       1,883,766.050       2.748,946.671       36.190021642       -107,745709765         3.075.00       0.46       154.720       3.048.90       -132.28       -244.63       1,883,766.050       2.748,946.671       36.19001226       -107,745709312         3.263.00       0.57       111.650       3.236.88       -133.56       -246.17       1.888,764.727       2.748,949.147       36.19001272       -107,745702472         3.357.00       0.65       169.910       3.424.87       -135.20       -246.15       1.888,761.409       2.748,949.913       36.19000206       -107,745701713         3.546.00       0.56       214.990       3.613.86       -136.93       -246.40       1.888,761.403       2.748,949.813       36.190000466       -107,74570475         3.750.00       0.64       198.530       3.708.86       -137.81       -246.84       1.888,761.403       2.748,948.400       36.190790433       -107,745704922         3.829.00       0.68       210.220       3.891.84       -138.63       -247.29       1.888,757.774       2.748,946.631       36.19079043       -107,745704922         3.829.00       0.68       210.320       3.991.84       -138.63       -2	2,886.00	6.61	232.470	2,860.33	-125.33	-239.84	1,888,772.997	2,748,955.458	36.190835299	-107.745681197
3,075.00       0.46       154.720       3,048.90       -132.28       -248.63       1,888,766.502       2,748,944.66.71       36.190816236       -107,745708312         3,263.00       0.57       111.650       3,236.88       -133.05       -247.83       1,888,765.327       2,748,944.46.51       36.190814248       -107,745708312         3,357.00       0.65       160.650       3,30.88       -134.23       -246.15       1,888,761.499       2,748,949.147       36.190801807       -107,745701713         3,454.00       0.57       201.200       3,519.87       -135.60       -246.58       1,888,761.409       2,748,949.328       36.190803466       -107,745704713         3,763.00       0.64       198.530       3,708.86       -137.81       -246.84       1,888,761.403       2,748,944.810       36.190803466       -107,745704375         3,782.00       0.68       210.290       3,802.85       -133.79       -247.29       1,888,758,700       2,748,944.810       36.190803466       -107,745704372         3,829.00       0.68       210.320       3,991.84       -140.58       -248.57       1,888,757.747       2,748,944.612       36.190798428       -107,745716452         4,049.00       0.74       210.820       4,022.83       -140.55	2,981.00	3.43	234.620	2,954.95	-130.31	-246.49	1,888,768.019	2,748,948.804	36.190821642	-107.745703765
3,169.00       0.90       121,140       3,142.89       -133.56       -246.78       1,888,764.722       2,748,944.531       36.190814272       -107,745708102         3,257.00       0.65       160.050       3,330.88       -134.23       -246.15       1,888,764.099       2,748,949.413       36.190808206       -107,74570212         3,451.00       0.58       160.050       3,330.88       -134.23       -246.15       1,888,761.292       2,748,949.413       36.190805696       -107,745702107         3,640.00       0.56       214.990       3,613.86       -136.93       -246.40       1,888,761.403       2,748,944.895       36.190805696       -107,745702077         3,640.00       0.56       214.990       3,613.86       -137.81       -246.84       1,888,755.129       2,748,948.401       36.190801404       -107,74570473         3,824.00       0.58       210.280       3,897.84       -139.63       -247.29       1,888,757.377       2,748,944.740       36.19079643       -107,745706473         3,924.00       0.74       210.820       3,991.84       -140.56       -248.77       1,888,757.377       2,748,946.73       36.19079643       -107,745716571         4,043.00       .74       10.81.9107       9.461.77       142.97       -	3,075.00	0.46	154.720	3,048.90	-132.28	-248.63	1,888,766.050	2,748,946.671	36.190816236	-107.745710997
3.263.00       0.57       111.650       3.236.88       -133.26       -246.77       1.888,764.792       2,748,949.417       36.199012722       -107.745702612         3.451.00       0.58       169.810       3,424.87       -135.20       -245.88       1,888,763.129       2,748,949.413       36.1990808206       -107.745702612         3.454.00       0.57       201.200       3,519.87       -135.11       -245.97       1,888,763.129       2,748,949.413       36.1990805696       -107.745703475         3.735.00       0.64       198.530       3,708.86       -137.81       -246.84       1,888,756.200       2,748,948.460       36.19908051       -107.745706473         3.924.00       0.68       220.290       3,802.85       -138.617       -247.29       1,888,758.702       2,748,948.402       36.19079643       -107.745706473         3.924.00       0.68       220.280       3,991.84       -140.58       -248.77       1,888,757.477       2,748,946.610       36.190799342       -107.745706473         3.924.00       0.74       210.820       4,022.83       -140.55       -248.77       1,888,757.477       2,748,946.610       36.190793428       -107.745701652         4,043.00       1.79       152.490       4,053.83       -141.55	3,169.00	0.90	121.140	3,142.89	-133.00	-247.83	1,888,765.327	2,748,947.464	36.190814248	-107.745708312
3,357.00       0.65       160.050       3,330.88       -134.23       -246.15       1,888,760.499       2,748,949.413       36.190808206       -107,745702717         3,456.00       0.57       201.200       3,519.87       -136.01       -245.88       1,888,762.215       2,748,949.433       36.1908056666       -107,745702007         3,640.00       0.56       214.990       3,613.86       -136.93       -246.40       1,888,762.215       2,748,944.8460       36.190803466       -107,745704952         3,735.00       0.64       198,530       3,708.86       -137.81       -246.24       1,888,759.540       2,748,944.8460       36.190793426       -107,745704952         3,829.00       0.68       210.290       3,802.85       -138.79       -247.29       1,888,757.870       2,748,944.860       36.190793426       -107,745704952         4,018.00       0.85       210.320       3,991.44       -140.55       -248.79       1,888,757.377       2,748,946.6510       36.190793421       -107,745710829         4,049.00       0.74       210.820       4,022.83       -140.95       -248.79       1,888,756.776       2,748,946.631       36.190793421       -107,745710829         4,049.00       0.74       210.820       4,022.83       -140.95	3,263.00	0.57	111.650	3,236.88	-133.56	-246.77	1,888,764.772	2,748,948.531	36.190812722	-107.745704700
3,541.00       0.58       169.810       3,424.87       -135.20       -245.88       1,888,763.129       2,748,949.313       36:190806266       -107.7457(1717)         3,546.00       0.57       201.200       3,519.86       -137.81       -246.40       1,888,761.203       2,748,949.328       36.190805466       -107.745703475         3,755.00       0.64       198.530       3,708.86       -137.81       -246.84       1,888,765.20       2,748,948.401       36.190805140       -107.745704952         3,829.00       0.68       210.290       3,802.85       -138.79       -247.29       1,888,757.70       2,748,944.012       36.190796043       -107.74570473         3,924.00       0.58       222.560       3,897.84       -139.63       -247.89       1,888,757.77       2,748,946.729       36.19079043       -107.745710829         4,048.00       1.79       152.490       4,028.33       -141.55       -248.79       1,888,757.377       2,748,946.721       36.190796693       -107.7456710829         4,143.00       8.25       134.470       4,105.6       -142.97       -247.59       1,888,757.33       2,748,946.73       36.190796693       -107.7456717527         4,143.00       8.25       134.470       4,105.6       -142.57       -24	3,357.00	0.65	160.050	3,330.88	-134.23	-246.15	1,888,764.099	2,748,949.147	36.190810870	-107.745702612
3,546.00       0.57       201.200       3,519.87       -136.11       -245.97       1,888,762.215       2,748,949.328       36,19080596       -107.745703475         3,640.00       0.56       214.990       3,613.86       -136.81       -246.84       1,888,760.520       2,748,948.495       36,190803466       -107.745703475         3,735.00       0.64       198.530       3,708.86       -137.81       -246.84       1,888,756.540       2,748,948.4012       36,190708351       -107.745708542         3,924.00       0.68       222.580       3,897.84       -139.85       -247.89       1,888,758.700       2,748,947.402       36,190790643       -107.745708542         4,018.00       0.85       210.320       3,991.84       -140.56       -248.77       1,888,756.774       2,748,946.721       36,190790593428       -107.745716529         4,049.00       0.74       210.820       4,022.83       -140.95       -248.67       1,888,755.763       2,748,946.631       36,190790759       -107.74571163         4,111.00       4.81       139.150       4,068.477       -142.97       -247.59       1,888,755.363       2,748,946.631       36,190790663       -107.7456707527         4,143.00       8.25       138.470       4,116.56       -145.59	3,451.00	0.58	169.810	3,424.87	-135.20	-245.88	1,888,763.129	2,748,949.413	36.190808206	-107.745701713
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3,546.00	0.57	201.200	3,519.87	-136.11	-245.97	1,888,762.215	2,748,949.328	36.190805696	-107.745702007
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3,640.00	0.56	214.990	3,613.86	-136.93	-246.40	1,888,761.403	2,748,948.895	36.190803466	-107.745703475
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3,735.00	0.64	198.530	3,708.86	-137.81	-246.84	1,888,760.520	2,748,948.460	36.190801040	-107.745704952
3,924,00       0.58       222,580       3,897,84       -139,63       -247,89       1,888,757,777       2,748,947,402       36,190796443       -107,745716529         4,018.00       0.85       210,320       3,991,84       -140,58       -248,77       1,888,757,777       2,748,946,729       36,190793428       -107,745716529         4,080.00       1.79       152,490       4,053,83       -141,55       -248,67       1,888,756,776       2,748,947,705       36,190796475       -107,745711571         4,100       4.81       139,150       4,084,77       -142,97       -247,59       1,888,752,739       2,748,954,132       36,19077660       -107,745709206         4,174,00       1.19       129,470       4,147,11       -149,06       -241,17       1,888,745,101       2,748,954,132       36,19077666       -107,745667692         4,205,00       14,05       126,790       4,177,36       -153,23       -229,11       1,888,745,101       2,748,954,132       36,19074830       -107,745667692         4,268,00       20,24       127,60       4,207,20       -158,25       -229,11       1,888,718,400       2,748,964,192       36,19074830       -107,745644921         4,268,00       20,24       127,60       4,295,41       -179,92       -20	3,829.00	0.68	210.290	3,802.85	-138.79	-247.29	1,888,759.540	2,748,948.012	36.190798351	-107.745706473
4,018.00       0.85       210.320       3,991.84       -140.55       -248.57       1,888,75.747       2,748,946.510       36.190793428       -107.745711571         4,049.00       0.74       210.820       4,022.83       -140.95       -248.67       1,888,757.377       2,748,946.510       36.190792411       -107.745711571         4,080.00       1.79       152.490       4,053.83       -141.55       -248.67       1,888,755.762       2,748,946.631       36.19079660       -107.745711752         4,143.00       8.25       134.470       4,116.56       -145.59       -245.08       1,888,752.739       2,748,950.222       36.190778660       -107.74569906         4,174.00       11.19       129.470       4,147.11       -149.06       -241.17       1,888,740.268       2,748,954.132       36.190778665       -107.74567692         4,205.00       14.05       126.780       4,207.20       -158.25       -229.11       1,888,740.074       2,748,954.68       36.19078685       -107.74567492         4,268.00       20.24       127.610       4,237.49       -164.50       -220.89       1,888,73.3833       2,748,974.407       36.19078638       -107.745617101         4,299.00       22.96       128.460       4,266.31       -171.53       -	3,924.00	0.58	222.580	3,897.84	-139.63	-247.89	1,888,758.700	2,748,947.402	36.190796043	-107.745708542
4,049.00       0.74       210.820       4,022.83       -140.95       -248.67       1,888,757.377       2,748,946.631       36.190790759       -107.745711163         4,080.00       1.79       152.490       4,053.83       -141.55       -248.67       1,888,755.363       2,748,946.631       36.190790759       -107.745711163         4,111.00       4.81       139.150       4,084.77       -142.97       -247.59       1,888,755.363       2,748,947.705       36.190786875       -107.745707527         4,143.00       8.25       134.470       4,116.56       -145.59       -245.08       1,888,752.739       2,748,945.132       36.190779660       -107.745699006         4,174.00       11.19       129.470       4,147.11       -149.06       -241.17       1,888,745.01       2,748,954.132       36.190778665       -107.74566792         4,205.00       14.05       126.790       4,177.36       -153.23       -228.911       1,888,740.074       2,748,966.192       36.190748830       -107.74564921         4,268.00       20.24       127.610       4,297.49       -164.50       -220.89       1,888,738.33       2,748,964.391       36.19078818       -107.745644921         4,268.00       20.24       127.610       4,295.41       -179.92       <	4,018.00	0.85	210.320	3,991.84	-140.58	-248.57	1,888,757.747	2,748,946.729	36.190793428	-107.745710829
4,080.001.79152.4904,03.83-141.55-248.671,888,755.762,748,940.63130.190790759-107.7457111634,111.004.81139.1504,084.77-142.97-247.591,888,752.7392,748,940.63136.190786875-107.7457075274,143.008.25134.4704,116.56-145.59-245.081,888,752.7392,748,950.22236.190779660-107.7456890064,174.0011.19129.4704,147.11-149.06-241.171,888,749.2682,748,959.46836.190758656-107.7456857654,205.0014.05126.7904,177.36-153.23-235.831,888,740.0742,748,959.46836.190758656-107.745667924,236.0017.38126.7804,207.20-158.25-229.111,888,718.400.0742,748,996.19236.190744830-107.7456171014,268.0020.24127.6104,237.49-164.50-221.891,888,718.4042,748,993.39136.19078318-107.7456171014,299.0022.96128.4604,266.31-171.53-211.911,888,718.4042,748,993.39136.19078318-107.7455617564,362.0029.23130.8404,322.86-189.25-190.621,888,718.4042,748,990.3236.190659600-107.7455145754,383.0032.13131.9604,349.51-199.71-178.761,888,698.6202,749,016.54136.190563291-107.7452145754,486.0039.1013.6304,400.69-224.27-151.521,888,664.	4,049.00	0.74	210.820	4,022.83	-140.95	-248.79	1,888,757.377	2,748,946.510	36.190792411	-107.745711571
4,111.00       4.81       139.150       4,084.77       -142.97       -247.09       1,888,755.353       2,748,947.705       36.19076960       -107.745699006         4,143.00       8.25       134.470       4,116.56       -145.59       -245.08       1,888,752.739       2,748,954.132       36.190770116       -107.745685765         4,205.00       14.05       126.790       4,177.36       -153.23       -235.83       1,888,745.101       2,748,959.468       36.190770116       -107.745667692         4,236.00       17.38       126.780       4,207.20       -158.25       -220.11       1,888,738.333       2,748,954.407       36.190774655       -107.745644921         4,288.00       20.24       127.610       4,237.49       -164.50       -220.89       1,888,738.333       2,748,974.407       36.19072665       -107.745644921         4,299.00       22.96       128.460       4,266.31       -171.53       -211.91       1,888,738.333       2,748,983.391       36.190778318       -107.745586676         4,331.00       26.15       129.760       4,295.41       -179.92       -201.60       1,888,718.404       2,748,993.702       36.19068523       -107.745514557         4,362.00       29.23       130.840       4,322.86       -189.25	4,080.00	1.79	152.490	4,053.83	-141.55	-248.67	1,888,756.776	2,748,946.631	36.190790759	-107.745711163
4,143.00       6.25       134,470       4,116.56       -143.59       -243.06       1,686,752.739       2,748,950.1222       36.190779660       -107.745689006         4,174.00       11.19       129.470       4,147.11       -149.06       -241.17       1,888,749.268       2,748,954.132       36.190779660       -107.7456685765         4,205.00       14.05       126.790       4,177.36       -153.23       -235.83       1,888,745.101       2,748,959.468       36.190758656       -107.7456685765         4,236.00       17.38       126.780       4,207.20       -158.25       -229.11       1,888,740.074       2,748,966.192       36.19074830       -107.745664921         4,268.00       20.24       127.610       4,237.49       -164.50       -220.89       1,888,718.404       2,748,993.702       36.19078318       -107.74556676         4,331.00       26.15       129.760       4,295.41       -179.92       -201.60       1,888,718.404       2,748,993.702       36.190685233       -107.74558676         4,362.00       29.23       130.840       4,322.86       -189.25       -190.62       1,888,709.083       2,749,046.82       36.190630825       -107.74554755         4,393.00       32.13       131.960       4,349.51       -199.71	4,111.00	4.81	139.150	4,084.77	-142.97	-247.59	1,888,755.363	2,748,947.705	36.190786875	-107.745707527
4,174.00       11.19       129.470       4,147.11       -149.06       -241.17       1,886,749.286       2,749,954,132       36.19077016       -107.745667692         4,205.00       14.05       126.790       4,177.36       -153.23       -235.83       1,888,745.101       2,748,959.468       36.190758656       -107.745667692         4,236.00       17.38       126.780       4,207.20       -158.25       -229.11       1,888,740.074       2,748,959.468       36.190758656       -107.7456644921         4,268.00       20.24       127.610       4,237.49       -164.50       -220.89       1,888,738.33       2,748,993.91       36.190768318       -107.7455644921         4,268.00       22.96       128.460       4,266.31       -171.53       -211.91       1,888,726.799       2,748,993.702       36.190685233       -107.745551758         4,362.00       29.23       130.840       4,322.86       -189.25       -190.62       1,888,709.083       2,749,904.682       36.190659600       -107.745514575         4,393.00       32.13       131.960       4,349.51       -199.71       -178.76       1,888,698.602       2,749,016.541       36.190563291       -107.745514575         4,456.00       39.10       131.630       4,400.69       -224.27	4,143.00	8.25	134.470	4,116.56	-145.59	-245.08	1,888,752.739	2,748,950.222	36.190779660	-107.745699006
4,205.0014.05126.7904,177.36-153.23-233.631,868,745.1012,748,959.46836.190736556-107.745676924,236.0017.38126.7804,207.20-158.25-229.111,888,740.0742,748,966.19236.190744830-107.7456449214,268.0020.24127.6104,237.49-164.50-220.891,888,733.8332,748,974.40736.190727665-107.745676654,39.0022.96128.4604,266.31-171.53-211.911,888,718.4042,748,993.70236.190685233-107.7455866764,331.0026.15129.7604,295.41-179.92-201.601,888,718.4042,749,004.68236.190659600-107.7455517584,362.0029.23130.8404,322.86-189.25-190.621,888,709.0832,749,004.68236.190659600-107.7455145754,393.0032.13131.9604,349.51-199.71-178.761,888,698.6202,749,016.54136.190597894-107.7454744184,425.0035.69132.3004,376.07-211.68-165.521,888,666.4422,749,029.77736.190597894-107.745321954,488.0042.34130.8704,424.94-238.03-135.831,888,660.3022,749,043.77636.190563291-107.745273684,519.0046.19130.2204,447.14-252.09-119.381,888,660.3022,749,059.47136.190486792-107.745273684,551.0049.80129.6104,468.55-267.34-101.151,888,615.	4,174.00	11.19	129.470	4,147.11	-149.06	-241.17	1,888,749.268	2,748,954.132	36.190770116	-107.745685765
4,250.00       17.56       126.760       4,207.20       -150.25       -229.11       1,686,740.074       2,746,966,192       36.190744630       -107.745644921         4,268.00       20.24       127.610       4,237.49       -164.50       -220.89       1,888,733.833       2,748,974.407       36.190727665       -107.745617101         4,299.00       22.96       128.460       4,266.31       -171.53       -211.91       1,888,726.799       2,748,983.391       36.190708318       -107.74556676         4,331.00       26.15       129.760       4,295.41       -179.92       -201.60       1,888,718.404       2,748,993.702       36.190685233       -107.74551758         4,393.00       32.13       131.960       4,322.86       -189.25       -190.62       1,888,709.083       2,749,004.682       36.190659600       -107.745514575         4,393.00       32.13       131.960       4,349.51       -199.71       -178.76       1,888,698.620       2,749,004.682       36.190630825       -107.745474418         4,425.00       35.69       132.300       4,376.07       -211.68       -165.52       1,888,674.061       2,749,029.777       36.190597894       -107.74552158         4,456.00       39.10       131.630       4,400.69       -224.27	4,205.00	14.05	126.790	4,177.30	-103.23	-230.63	1,000,740,101	2,748,959.468	30.190736030	-107.745007092
4,288.00       20.24       127.010       4,237.49       -104.30       -220.89       1,888,726.799       2,748,983.391       36.190708318       -107.7456676         4,299.00       22.96       128.460       4,266.31       -171.53       -211.91       1,888,726.799       2,748,983.391       36.190708318       -107.74558676         4,331.00       26.15       129.760       4,295.41       -179.92       -201.60       1,888,718.404       2,748,993.702       36.190685233       -107.74558676         4,393.00       32.13       130.840       4,322.86       -189.25       -190.62       1,888,709.083       2,749,004.682       36.190659600       -107.74551755         4,393.00       32.13       131.960       4,349.51       -199.71       -178.76       1,888,686.644       2,749,004.652       36.1906597894       -107.745474418         4,425.00       35.69       132.300       4,376.07       -211.68       -165.52       1,888,666.644       2,749,016.541       36.190563291       -107.745429598         4,456.00       39.10       131.630       4,400.69       -224.27       -151.52       1,888,666.644       2,749,019.59.471       36.190563291       -107.745322195         4,458.00       42.34       130.870       4,424.94       -238.03	4,230.00	17.38	120.780	4,207.20	-108.20	-229.11	1,000,740.074	2,748,900.192	30.190744830	-107.745644921
4,29.0022.90120.4004,200.31-171.33-211.911,688,708.7992,749,939136.197708318-107.745300704,331.0026.15129.7604,295.41-179.92-201.601,888,718.4042,748,993.70236.190685233-107.745517584,362.0029.23130.8404,322.86-189.25-190.621,888,709.0832,749,004.68236.190659600-107.7455145754,393.0032.13131.9604,349.51-199.71-178.761,888,698.6022,749,016.54136.1906597894-107.7454744184,425.0035.69132.3004,376.07-211.68-165.521,888,666.6442,749,029.77736.190653291-107.7454295984,456.0039.10131.6304,400.69-224.27-151.521,888,666.03022,749,043.77636.190563291-107.7453221954,488.0042.34130.8704,424.94-238.03-135.831,888,666.3022,749,075.91336.190486792-107.7452733684,551.0049.80129.6104,468.55-267.34-101.151,888,630.9902,749,094.15036.190444847-107.7452116094,582.0053.49129.3704,487.78-282.79-82.391,888,615.5352,749,112.90836.190402342-107.7451480864,614.0056.45129.2004,562.15-299.38-62.111,888,582.3622,749,133.18836.190356720-107.7450794104,645.0059.21129.2004,522.65-315.97-41.781,888,582	4,268.00	20.24	127.010	4,237.49	-104.50	-220.89	1,000,733.033	2,748,974.407	30.190727003	-107.745017101
4,351.00       26.13       129.780       4,293.41       -179.92       -201.60       1,868,709.083       2,749,993.702       36.190685233       -107.745351756         4,362.00       29.23       130.840       4,322.86       -189.25       -190.62       1,888,709.083       2,749,004.682       36.190659600       -107.745514575         4,393.00       32.13       131.960       4,349.51       -199.71       -178.76       1,888,698.602       2,749,004.682       36.190659894       -107.745474418         4,425.00       35.69       132.300       4,376.07       -211.68       -165.52       1,888,686.644       2,749,029.777       36.1906503291       -107.745429598         4,456.00       39.10       131.630       4,400.69       -224.27       -151.52       1,888,660.302       2,749,043.776       36.190563291       -107.745382195         4,458.00       42.34       130.870       4,424.94       -238.03       -135.83       1,888,660.302       2,749,075.913       36.190486792       -107.745329044         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,664.243       2,749,075.913       36.190486792       -107.74527368         4,551.00       49.80       129.610       4,468.55       -267.34	4,299.00	22.90	128.460	4,200.31	-171.53	-211.91	1,000,720.799	2,748,983.391	30.190708318	-107.74000070
4,302.00       23.23       130.40       4,322.60       -169.23       -169.02       1,368,709.053       2,749,046.02       36.190639600       -107.745314373         4,393.00       32.13       131.960       4,349.51       -199.71       -178.76       1,888,698.620       2,749,016.541       36.190630825       -107.745474418         4,425.00       35.69       132.300       4,376.07       -211.68       -165.52       1,888,686.644       2,749,029.777       36.1906503291       -107.74547249598         4,456.00       39.10       131.630       4,400.69       -224.27       -151.52       1,888,666.644       2,749,043.776       36.190563291       -107.745382195         4,458.00       42.34       130.870       4,424.94       -238.03       -135.83       1,888,660.302       2,749,049.771       36.190466792       -107.745329044         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,664.243       2,749,075.913       36.190486792       -107.74527368         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,615.535       2,749,112.908       36.190402342       -107.745211609         4,582.00       53.49       129.370       4,487.78       -282.79	4,331.00	20.15	129.760	4,295.41	-179.92	-201.00	1,000,710.404	2,740,993.702	36.190065253	-107.745551756
4,353.00       32.13       131.800       4,343.31       -193.71       -176.70       1,368,096.020       2,749,010.341       36.190050623       -107.7434744418         4,425.00       35.69       132.300       4,376.07       -211.68       -165.52       1,888,686.644       2,749,029.777       36.190050623       -107.745424918         4,456.00       39.10       131.630       4,400.69       -224.27       -151.52       1,888,686.644       2,749,043.776       36.190563291       -107.745382195         4,488.00       42.34       130.870       4,424.94       -238.03       -135.83       1,888,660.302       2,749,059.471       36.1900563291       -107.745329044         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,664.243       2,749,075.913       36.190486792       -107.745273368         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,630.990       2,749,094.150       36.190444847       -107.745211609         4,582.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,112.908       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38 <td>4,362.00</td> <td>29.23</td> <td>130.640</td> <td>4,322.00</td> <td>-109.25</td> <td>-190.02</td> <td>1,000,709.003</td> <td>2,749,004.002</td> <td>36.190039000</td> <td>-107.745514575</td>	4,362.00	29.23	130.640	4,322.00	-109.25	-190.02	1,000,709.003	2,749,004.002	36.190039000	-107.745514575
4,423.00       35.05       132.00       4,576.07       -211.06       -105.32       1,388,060.044       2,749,053.777       36.190397.054       -107.74532395         4,456.00       39.10       131.630       4,400.69       -224.27       -151.52       1,888,674.061       2,749,043.776       36.190563291       -107.745382195         4,488.00       42.34       130.870       4,424.94       -238.03       -135.83       1,888,660.302       2,749,059.471       36.1905525455       -107.745382194         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,664.243       2,749,075.913       36.190486792       -107.745273368         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,630.990       2,749,094.150       36.190444847       -107.745211609         4,582.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,112.908       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38       -62.11       1,888,589.462       2,749,133.188       36.190356720       -107.745079410         4,645.00       59.21       129.200       4,522.65       -315.97	4,393.00	32.13	131.900	4,349.51	-199.71	-176.70	1,000,090.020	2,749,010.541	36.190630625	-107.745474416
4,450.00       53.10       131.030       4,400.05       -224.27       -131.52       1,500,074.001       2,749,053.770       50.13030231       -107.145302135         4,488.00       42.34       130.870       4,424.94       -238.03       -135.83       1,888,660.302       2,749,059.471       36.19030525455       -107.745329044         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,664.243       2,749,059.471       36.190466792       -107.745273368         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,630.990       2,749,094.150       36.190444847       -107.745211609         4,582.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,112.908       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38       -62.11       1,888,589.46       2,749,133.188       36.190356720       -107.745079410         4,645.00       59.21       129.200       4,522.65       -315.97       -41.78       1,888,582.362       2,749,153.521       36.190311113       -107.745010553         4,677.00       60.19       129.230       4,538.80       -333.43	4,425.00	39.10	131.630	4,370.07	-211.00	-151 52	1,888,674,061	2,749,029.777	36 100563201	-107.745429596
4,700.00       42.04       130.070       4,724.34       -230.03       -1,500.030       1,500,000.022       2,749,033.71       50.13025435       -107.745223368         4,519.00       46.19       130.220       4,447.14       -252.09       -119.38       1,888,646.243       2,749,075.913       36.190486792       -107.745273368         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,640.243       2,749,094.150       36.19044847       -107.74521609         4,582.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,112.908       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38       -62.11       1,888,598.946       2,749,133.188       36.190356720       -107.745079410         4,645.00       59.21       129.200       4,522.65       -315.97       -41.78       1,888,582.362       2,749,153.521       36.190311113       -107.745010553         4,677.00       60.19       129.230       4,538.80       -333.43       -20.37       1,888,564.895       2,749,174.927       36.190263074       -107.744938064	4,430.00	42.34	130.870	4,400.09	-224.27	-135.83	1,888,660,302	2,749,043.770	36 19050525155	-107.745302195
4,513.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,630.990       2,749,093.513       36.190460792       -107.745273669         4,551.00       49.80       129.610       4,468.55       -267.34       -101.15       1,888,630.990       2,749,094.150       36.1904408792       -107.745213669         4,552.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,112.908       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38       -62.11       1,888,598.946       2,749,133.188       36.190356720       -107.745079410         4,645.00       59.21       129.200       4,522.65       -315.97       -41.78       1,888,582.362       2,749,153.521       36.190311113       -107.745010553         4,677.00       60.19       129.230       4,538.80       -333.43       -20.37       1,888,564.895       2,749,174.927       36.190263074       -107.745010553	4,400.00	42.04	130.070	4,424.34 1 117 11	-250.05	-110 38	1 888 646 242	2,749,039.471	36 190/20400	-107.745525044
4,582.00       53.49       129.370       4,487.78       -282.79       -82.39       1,888,615.535       2,749,132.188       36.190402342       -107.745148086         4,614.00       56.45       129.200       4,506.15       -299.38       -62.11       1,888,598.946       2,749,133.188       36.190356720       -107.745079410         4,645.00       59.21       129.200       4,522.65       -315.97       -41.78       1,888,582.362       2,749,153.521       36.190311113       -107.745010553         4,677.00       60.19       129.230       4,538.80       -333.43       -20.37       1,888,564.895       2,749,174.927       36.190263074       -107.744938064	4 551 00	40.19	129 610	4 468 55	-267 34	-101 15	1 888 630 000	2 749 094 150	36 190444847	-107 745213500
4,614.00         56.45         129.200         4,506.15         -299.38         -62.11         1,888,598.946         2,749,133.188         36.190356720         -107.745079410           4,645.00         59.21         129.200         4,522.65         -315.97         -41.78         1,888,582.362         2,749,153.521         36.190311113         -107.745010553           4,677.00         60.19         129.230         4,538.80         -333.43         -20.37         1,888,564.895         2,749,174.927         36.190263074         -107.744938064	4 582 00	53 49	129 370	4 487 78	-282 79	-82 39	1 888 615 535	2 749 112 908	36 190402342	-107 745148086
4,645.00         59.21         129.200         4,522.65         -315.97         -41.78         1,888,582.362         2,749,153.521         36.190311113         -107.745010553           4,677.00         60.19         129.230         4,538.80         -333.43         -20.37         1,888,564.895         2,749,174.927         36.190263074         -107.744938064	4 614 00	56 45	129.200	4 506 15	-299 38	-62 11	1 888 598 946	2 749 133 188	36 190356720	-107 745079410
4,677.00 60.19 129.230 4,538.80 -333.43 -20.37 1,888,564.895 2,749,174,927 36.190263074 -107.744938064	4,645.00	59 21	129 200	4,522,65	-315.97	-41 78	1.888.582.362	2,749,153,521	36,190311113	-107.745010553
	4,677.00	60.19	129.230	4,538.80	-333.43	-20.37	1,888,564.895	2,749,174.927	36.190263074	-107.744938064

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## Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
4,708.00	60.20	129.030	4,554.20	-350.41	0.50	1,888,547.919	2,749,195.793	36.190216388	-107.744867401
4,739.00	61.70	129.600	4,569.26	-367.58	21.46	1,888,530.749	2,749,216.758	36.190169167	-107.744796404
4,771.00	64.07	131.130	4,583.84	-386.03	43.16	1,888,512.301	2,749,238.455	36.190118434	-107.744722931
4,802.00	67.10	132.720	4,596.65	-404.89	64.15	1,888,493.440	2,749,259.451	36.190066568	-107.744651836
4,833.00	70.72	133.020	4,607.81	-424.56	85.35	1,888,473.765	2,749,280.645	36.190012465	-107.744580072
4,845.00	71.90	133.221	4,611.65	-432.33	93.64	1,888,465.995	2,749,288.942	36.189991100	-107.744551979
330 perp	@ 4845 MD 4	611.65 TVD							
4,846.12	72.01	133.240	4,612.00	-433.06	94.42	1,888,465.265	2,749,289.718	36.189989094	-107.744549350
FTP @ 4	846.12 MD 46	12.00 TVD							
4,865.00	73.86	133.550	4,617.54	-445.46	107.53	1,888,452.866	2,749,302.831	36.189954999	-107.744504947
4,897.00	76.62	134.100	4,625.69	-466.89	129.86	1,888,431.440	2,749,325.153	36.189896084	-107.744429366
4,928.00	79.62	134.710	4,632.07	-488.11	151.53	1,888,410.215	2,749,346.823	36.189837722	-107.744355996
4,959.00	81.55	135.570	4,637.14	-509.79	173.10	1,888,388.538	2,749,368.393	36.189778119	-107.744282963
4,991.00	83.36	135.960	4,641.35	-532.52	195.23	1,888,365.810	2,749,390.522	36.189715626	-107.744208040
5,022.00	85.21	135.880	4,644.43	-554.68	216.68	1,888,343.653	2,749,411.979	36.189654702	-107.744135392
5,054.00	86.78	135.590	4,646.67	-577.54	238.96	1,888,320.794	2,749,434.259	36.189591850	-107.744059957
5,085.00	87.87	135.400	4,648.11	-599.62	260.67	1,888,298.709	2,749,455.965	36.189531127	-107.743986466
5,148.00	88.96	135.530	4,649.86	-644.51	304.84	1,888,253.819	2,749,500.132	36.189407698	-107.743836927
5,243.00	91.08	136.280	4,649.82	-712.73	370.94	1,888,185.596	2,749,566.234	36.189220114	-107.743613128
5,337.00	89.67	135.410	4,649.21	-780.17	436.41	1,888,118.159	2,749,631.710	36.189034692	-107.743391445
5,431.00	90.92	135.390	4,648.72	-847.10	502.41	1,888,051.231	2,749,697.711	36.188850665	-107.743167987
5,525.00	89.75	135.610	4,648.18	-914.14	568.30	1,887,984.188	2,749,763.594	36.188666322	-107.742944928
5,619.00	90.99	135.300	4,647.57	-981.13	634.23	1,887,917.197	2,749,829.529	36.188482123	-107.742721692
5,714.00	89.34	135.780	4,647.29	-1,048.94	700.77	1,887,849.395	2,749,896.065	36.188295692	-107.742496424
5,808.00	91.03	135.660	4,646.99	-1,116.23	766.39	1,887,782.100	2,749,961.690	36.188110656	-107.742274244
5,903.00	89.42	135.890	4,646.62	-1,184.31	832.65	1,887,714.025	2,750,027.947	36.187923477	-107.742049923
5,997.00	88.08	136.440	4,648.67	-1,252.09	897.74	1,887,646.237	2,750,093.033	36.187737089	-107.741829573
6,091.00	88.88	136.500	4,651.16	-1,320.22	962.46	1,887,578.111	2,750,157.750	36.187549770	-107.741610473
6,186.00	89.81	136.880	4,652.25	-1,389.34	1,027.62	1,887,508.989	2,750,222.910	36.187359716	-107.741389880
6,280.00	90.58	137.230	4,651.93	-1,458.15	1,091.66	1,887,440.182	2,750,286.951	36.187170528	-107.741173077
6,374.00	89.38	135.160	4,651.96	-1,525.98	1,156.72	1,887,372.347	2,750,352.013	36.186984009	-107.740952811
6,469.00	89.56	135.280	4,652.84	-1,593.41	1,223.63	1,887,304.917	2,750,418.927	36.186798597	-107.740726270
6,563.00	90.00	135.350	4,653.20	-1,660.25	1,289.73	1,887,238.086	2,750,485.028	36.186614830	-107.740502484
6,657.00	90.09	134.900	4,653.13	-1,726.86	1,356.06	1,887,171.473	2,750,551.350	36.186431664	-107.740277946
6,752.00	90.03	134.290	4,653.03	-1,793.56	1,423.70	1,887,104.775	2,750,618.998	36.186248259	-107.740048919
6,846.00	91.19	134.550	4,652.03	-1,859.34	1,490.84	1,887,038.988	2,750,686.130	36.186067358	-107.739821636
6,940.00	89.38	134.810	4,651.56	-1,925.44	1,557.67	1,886,972.896	2,750,752.965	36.185885619	-107.739595365
7,035.00	89.49	134.620	4,652.50	-1,992.27	1,625.18	1,886,906.060	2,750,820.470	36.185701832	-107.739366825
7,130.00	90.59	134.340	4,652.43	-2,058.83	1,692.96	1,886,839.498	2,750,888.250	36.185518800	-107.739137351
7,224.00	92.44	134.670	4,649.94	-2,124.70	1,759.97	1,886,773.633	2,750,955.264	36.185337683	-107.738910477
7,318.00	90.00	134.340	4,647.94	-2,190.57	1,826.99	1,880,707.762	2,751,022.283	30.185150549	-107.738083582
7,413.00	90.50	134.320	4,647.53	-2,256.96	1,894.95	1,880,041.378	2,751,090.238	36.184974002	-107.738453520
7,507.00	90.50	133.460	4,040.71	-2,322.13	1,902.07	1,000,070.201	2,751,157.907	30.104794773	-107.730224223
7,602.00	91.52	133.720	4,045.03	-2,307.03	2,031.40	1,000,010.099	2,751,220.751	30.104014043	107.737991349
7,090.00	90.02	134.000	4,043.77	-2,455.20	2,096.72	1,000,445.057	2,751,294.017	36 19435137	107 727529701
7,790.00	90.83	135.210	4,043.07	-2,519.79	2,105.14	1,000,370.339	2,751,300.430	26 194067092	107 727214451
7 070 00	91.49 88 00	134 510	4,041.17	-2,000.43	2,231.41	1 886 244 054	2,751,420.090	36 183883802	-107.737314431
8 073 00	80.90	133 700	4,040.00	-2,033.30	2,230.00	1 886 170 /01	2,751,494.009	36 183703873	-107.736858013
8 168 00	80.60	133.790	4,042.00	-2,7 10.04	2,000.20	1 886 112 862	2,751,301.324	36 182522205	-107.736625510
8 262 00	09.09	135.010	4,043.01	-2,104.47	2,434.31	1 886 047 777	2,751,030.201	36 1833/1670	-107.73630023310
8 356 00	20.00 20 27	135.800	4 643 26	-2,000.00	2,501.75	1 885 980 422	2,751,037.040	36 183156/62	-107 736177282
8 450 00	80.20	135.000	4 644 36	-2,017.01	2,007.02	1 885 913 475	2,751,828,581	36 182072366	-107 735053047
8 545 00	90.23	133 780	4 644 77	-3 051 34	2 701 15	1 885 846 998	2 751 896 442	36 182789559	-107 735724218
8,639.00	91.43	133.700	4,643.41	-3,116.32	2,769.06	1,885,782.016	2,751,964.347	36.182610858	-107.735494334

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COMPASS 5000.16 Build 96



## Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Depth         Inclination         Azimuth         Depth         +N/S         +E/W         Northing         Easing           B733.00         88.74         134.840         448.127         -3,161.93         2,885.36         1,885.716.407         2,722.031.849         35.1522.4000         -107.7352642453           8.827.00         90.42         135.670         444.55         -3,346.67         2,202.41         8.85.61.968         2,772.164.469         35.1522.4000         -107.73566025           9.101.00         98.16         134.000         4.467.00         3,314.37         117.127         18.85.369.892         2,772.294.54.408         36.161701911         -107.734560529           9.210.00         98.94         135.700         4.652.24         -3,581.47         3,226.75         1,885.461.8553         2,772.495.424         -107.73564065         -107.73564065         -107.73564065         -107.73564065         -107.73564065         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73526407         -107.73516467         -107.73526407 <t< th=""><th>Measured</th><th></th><th></th><th>Vertical</th><th></th><th></th><th>Мар</th><th>Мар</th><th></th><th></th></t<>	Measured			Vertical			Мар	Мар		
U         (1) <th(1)< th=""> <th(1)< th=""> <th(1)< th=""></th(1)<></th(1)<></th(1)<>	Depth (ff)	Inclination	Azimuth	Depth (ft)	+N/-S	+E/-W	Northing (usft)	Easting	I attanda	1
8,73.00         88,74         134,840         4,443.27         3,161.93         2,833.36         1,855,716.407         2,722,031.448         381,182240438         -107,73564425           8,822.00         88.66         135,270         4,444.66         3,316.37         2,006.18         1,855,516.062         2,722,194.4403         331,1812000737         -107,735604245           8,016.00         88.61         133,680         4,446.23         3,342.34         3,006.14         88.65,1585         2,722,299.115         331,181700191         -107,73460029           9,205.00         88.46         135,750         4,622,24         3,351,73         3,225,75         1,885,346,555         2,722,492,141         301,10130077         -107,73300179           9,383.00         33,46         4,461,47         3,744,330         1,885,3479         2,772,429,717         301,1014444         -107,73300179           9,127,120         9,33,13         4,641,47         3,745,348         1,884,771,184         2,772,782,784         341,184,177,173         1,117,7322,117         1,117,7322,117,733,1139         1,107,7320,1395         -107,73201395         -107,73201395         -107,73201395         -107,73201395         -107,73201395         -107,73201395         -107,732014827         -107,732148274         -107,732014827         -107,732014827 <th>(11)</th> <th>()</th> <th>()</th> <th>(11)</th> <th>(π)</th> <th>(11)</th> <th>(usit)</th> <th>(usit)</th> <th>Latitude</th> <th>Longitude</th>	(11)	()	()	(11)	(π)	(11)	(usit)	(usit)	Latitude	Longitude
8.827.00         90.42         135.640         4.643.66         -3.246.77         2.902.541         1,865.648.669         2.722.097.833         38.1822.46909         -107.73804283           9.016.00         88.66         134.000         4.647.00         -3.342.33         3.030.04         1,885.615.844         2.722.213.34         38.18187188         -107.73461085           9.016.00         88.61         134.000         4.647.00         -3.342.74         3.030.04         1,885.615.844         2.722.266.544         38.18187188         -107.734480107           9.208.00         88.67         135.860         4.680.68         -3.347.47         3.117.25         1,885.343.804         2.722.666.244         38.1181607         -107.73410217           8.488.00         9.10         138.156         4.681.17         -3.645.30         3.402.68         1.885.2448.973         2.722.694.844         38.118160941         -107.735486179           9.477.00         9.12         135.000         4.640.37         -3.716.76         1.885.7144.971         3.816.80014         -107.73201343           9.666.00         88.83         13.440.44         4.414.00         -4.838.91         4.844.84         2.762.2481.595         38.160044625         -107.732013454           9.672.03         9.424.444.400.77.7	8,733.0	0 88.74	134.840	4,643.27	-3,181.93	2,836.36	1,885,716.407	2,752,031.649	36.182430438	-107.735266497
8.922.00         88.86         135.270         4.644.56         -3.342.39         3.008.04         1.865.651.694         2.722.243.134         38.182000/37         -107.734680529           9.110.00         89.13         133.880         4.642.33         -3.447.44         3.103.82         1.865.450.856         2.752.2291.115         38.187701918         -107.734680529           9.205.00         89.48         135.790         4.682.24         -3.361.78         3.230.75         1.885.416.533         2.752.432.041         38.1103.0407         -107.733819106           9.383.00         9.848.40         9.21.71         1.866.540.2497         2.752.462.681         38.11004604         -107.73346197           9.384.00         9.24.71         1.36.61.640.40         -107.73346197         3.314.37         1.865.71         1.864.797.1164         2.752.462.683         38.100640425         -107.733246153           8.677.00         9.12.1         1.366.80         4.64.067         -3.765.75         1.84.471.164         2.72.2467.81         38.10064425         -107.733246153           8.772.00         9.12.1         1.366.80         4.64.63.81         -4.1654.37         2.762.4864.30         5.11644797         -107.732164326           9.119         1.55.80         4.44.51.77         3.218.177.1118 <td>8,827.0</td> <td>0 90.42</td> <td>135.640</td> <td>4,643.96</td> <td>-3,248.67</td> <td>2,902.54</td> <td>1,885,649.666</td> <td>2,752,097.833</td> <td>36.182246909</td> <td>-107.735042453</td>	8,827.0	0 90.42	135.640	4,643.96	-3,248.67	2,902.54	1,885,649.666	2,752,097.833	36.182246909	-107.735042453
9.016.00         88 16         144.00         -4.342.38         3.036.04         1,885.015.944         2,762.241.354         36.1816/9188         -107.73480075           9.216.00         88 71         135.860         4,680.68         -3.347.43         3.171.25         1,885.383.864         2,762.266.544         36.1815.0246         -107.734132017           9.283.00         9.10         185.16         4,681.77         -3.347.48         3.302.05         1,885.246.873         2,772.266.544         36.1815.0246         -107.734132017           9.383.00         9.10         185.16         4,681.77         -3.347.69         1.885.2448.973         2,772.247.371         35.1816.266.01         -107.733480175           9.466.00         81.23         1.356.00         4.401.67         -3.357.00         3.409.59         1.185.148.247         2,772.264.843         38.180544625         -107.73201343           9.666.00         88.33         13.345.00         4.401.67         -3.357.55         5.867.11         8.404.830         2,762.281.595         38.1802.448.302         7.262.848.463         38.102.020146         -107.73201343           9.666.00         88.83         13.344.44.104.71.267         2,752.848.454         38.1089.447.773.71730772         -107.731675406           10.150.00         9.	8,922.0	0 88.86	135.270	4,644.56	-3,316.37	2,969.18	1,885,581.963	2,752,164.469	36.182060737	-107.734816883
9,100,00       89,13       13,880       4,892,30       -3,44,49       3,103,82       2,752,249,115       30,1817(01)91       -107,7348(01)4         9,280,00       89,47       135,800       4,680,269       -3,814,73       1,725       1,885,3084       2,722,432,041       30,1817,00191       -107,7334112314         9,383,00       9,010       136,150       4,851,77       3,494,30       3,202,07       1,885,516,833       2,722,462,041       30,1817,00191       -107,733416314         9,488,00       92,17       136,600       4,494,07       -3,718,101       3,307,60       1,885,180,240       2,722,462,691       30,180,0660,41       -107,7334(130)         9,481,00       92,21       135,080       4,494,07       -3,718,50       1,885,491,1193       2,722,462,781       30,180,0660,41       -107,7332(135)         9,816,00       86,81       13,340       4,416,41       -3,915,15       1,844,91,178       2,722,813,95       30,180,020,25       -107,732(286)7         10,450,00       2,44       14,832,91       4,416,41       -3,917,11       1,844,413,71       2,722,885,74       30,1196,022       -107,732(286)7         10,450,00       9,42       14,832,91       4,416,41       3,911,61       1,894,417,184       2,722,485,74       30,1196,91	9,016.0	0 88.16	134.000	4,647.00	-3,382.39	3,036.04	1,885,515.944	2,752,231.334	36.181879188	-107.734590529
32,05,00       86,86       135,860       4,660,29       -3,611,73       3,171,20       1,855,336,844       2,72,342,244       36,1171,844       -107,733411407         33,330,00       91,00       133,150       4,661,77       -3,649,36       3,302,00       1,855,248,973       2,752,427,33       36,181146043       -107,7334849906         34,880,00       93,40       133,450       4,464,45       -3,768,37       3,433,49       1,865,1119,83       2,752,628,183       36,18096642       -107,733245153         36,177,200       88,23       133,000       4,464,03       -3,913,55       1,865,149,477       2,752,628,184       36,180946256       -107,732247033         3,986,00       91,21       133,000       4,464,03       -3,913,55       1,864,917,164       2,752,763,135       36,18044256       -107,732243847         1,005,00       91,21       133,300       4,418,40       -4,000,02       3,704,17       1,844,471,705       7,752,303,442       36,179407493       -107,73242497         1,005,00       92,41       14,40       4,300,72       -4,284,313       1,844,471,705       7,753,303,442       36,17940749       -107,7314744748       100,773404157       1,444,446002       4,778,310,845,14817       2,753,304,427       2,753,304,427       36,733,304,427	9,110.0	0 89.13	133.680	4,649.23	-3,447.48	3,103.82	1,885,450.855	2,752,299.115	36.181700191	-107.734361075
9.9900       894.9       135.190       4,052.24       -3,061.76       3.280.70       1,055.34.272.2407.371       35.11346047       -107.73349480179         9.488.00       92.17       136.590       4,046.07       -3,718.10       3.387.60       1,855.489.73       2,725.262.87.81       35.10976204       -107.73349480179         9.683.00       93.40       135.40       4,464.07       -3,785.30       3,499.99       1,855.445.24       2,725.262.87.81       35.10976220       -107.732042135         9.677.00       91.21       135.000       4,464.07       -3,983.55       3,657.85       1,884.971.146       2,725.267.81       35.109048205       -107.7320249353         9.961.00       88.83       133.450       4,464.07       -3,983.55       3,658.31       1,884.497.146       2,752.851.954       36.10024064       -107.732034825         10.955.00       92.44       134.800       4,628.76       -4,248.31       3,904.27       1,884.658.074       2,753.093.424       36.17967737       -107.732148754         10,433.00       95.62       134.200       4,833.02       4,771.44       4,844.715.247       2,753.106.547       36.179947749       -107.7314744748         10,433.00       95.61       135.800       4,627.64       -4,431.04       4,347.1526	9,205.0	0 88.87	135.860	4,650.89	-3,514.37	3,171.25	1,885,383.964	2,752,366.544	36.181516246	-107.734132814
3.33.00       91.00       106.150       4,951./1       -3.718.10       3.302.00       106.248.913       2.122.481.93       36.16118304       -107.133068195         3.468.00       93.21       135.60       4,944.44       -3.768.07       3.435.49       1,865,111.83       2.722.228.91       36.161786290       -107.1733248153         3.87772.00       88.23       133.000       4,444.3       -3.663.03       3.465.49       1.7272.228.91       36.16044255       -107.7323248153         3.8161.00       91.21       135.000       4,444.80       -3.983.50       1.864.973.144       2.722.723.155       36.16044255       -107.732328867         10.055.00       92.44       14.40       4.363.88       -4.183.07       3.380.13       1.884.716.276       2.733.03.261       36.179977370       -107.731474405         10.243.00       93.65       4.282.71       4.315.66       3.971.26       1.884.450.024       2.753.233.02       36.179914773       -107.7314197440         10.243.00       93.65       4.262.67       4.333.52       4.262.67       4.333.52       1.6733248194       -107.733248174         10.433.00       93.50       4.262.60       4.431.56       3.971.26       1.884.452.674       2.753.233.022       36.179944400       -107.739159764	9,299.0	0 89.48	135.790	4,652.24	-3,581.78	3,230.75	1,885,316.553	2,752,432.041	36.181330877	-107.733911107
3,983.00         92,10         135.080         -0,085.00         1,025.102.400         2,725.268.781         30.180768205         30.180768205         107.73247133           9,075.00         91.20         135.000         4,600.77         3,433.49         1,885,111.963         2,725.268.781         30.180768205         107.73302135           9,077.00         91.21         135.000         4,601.90         3,389.15         3,667.85         1,864,479.144         2,726.283.138         30.180042625         107.733021357           9,061.00         82.3         133.340         4,614.90         3,389.15         3,863.31         1,864,471.795         2,726.299.466         30.1802022044         107.733223887           10,055.00         92.44         134.600         4,638.91         4,116.54         3,770.51         1,884,471.795         2,753.033.424         36.17997477         10,73147746           10,433.00         90.67         135.820         4,628.76         -4,315.68         4,371.61         2,753.033.32         36.179124734         107.73144748           10,433.00         90.61         135.620         4,628.761         -4,193.74         1,884,472.47         2,753.344.472         36.179124734         107.730073567           10,435.00         90.61         135.490	9,393.0	0 91.09	136.150	4,001.77	-3,049.30	3,302.08	1,000,240.973	2,752,497.371	30.101143043	-107.733009900
3.0300       30.4       10.7       10.4       10.7       10.4       10.7       10.4       10.7       10.4       10.7       10.4       10.7       10.4       10.7       10.4       10.7       10.7       10.7       10.4       10.7	9,400.0	0 92.17	136.590	4,049.07	-3,710.10	3,307.00	1,000,100.240	2,752,502.095	36.100930041	107 733245153
3)7730         312         103060         4,64031         3.39135         3.367.85         1,762,762,763,133         3.0104425         1.07,73270343           9,966.00         88.83         133,460         4,64130         3.398355         3.368.31         1,884,491.748         2,752,853,135         3.0104425         1.07,73256801           10,055.00         92.44         134.800         4,638.91         4,116.54         3,770,151         1,884,471.718         2,752,959,766         36,179677370         107,731675406           10,055.00         93.62         134,260         4,633.84         1418.30,774         1,884,450.247         2,753,166.547         36,17991737         107,731675406           10,338.00         90.67         135.520         4,622.50         4,333.52         4,037.74         1,884,450.247         2,753,166.547         36,17991737         1,73149748           10,433.00         90.650         135.820         4,627.06         4,103.12         1,884,472.74         2,753,308.30         36,17991737         1,773,473,734,733,783         36,178940400         1,77,731097457           10,716.00         89.64         134,990         4,627.60         4,103.12         1,753,309,303         36,178940400         1,77,73007566           10,716.00         89.64	9,565.0	0 93.40	135.080	4,044.45	-3,760.37	3,433.49	1 885 045 247	2,752,020.701	36 180584825	-107.733021305
9.866.0         88.83         133.45         4.441.90         -3.28.15         3.03.03         1.884.91.78         2.752.831.55         3.61004326         -107.732558661           9.861.00         91.19         155.300         4.441.88         -4.050.02         3.704.17         1.844.843.20         2.752.831.55         3.610043265         -107.732558661           10.055.00         92.44         144.800         4.633.88         1.814.715.267         2.753.098.561         3.6179640794         -107.731675405           10.243.00         91.46         144.960         4.628.76         -4.248.31         3.904.27         2.753.098.561         3.6179240794         -107.731457458           10.243.00         90.550         135.500         4.627.60         -4.5106         4.103.12         1.844.472.74         2.753.364.427         36.179840400         -107.730575005           10.716.00         90.544         134.850         4.627.04         4.301.33         4.184.147         2.753.364.427         36.179564303         -107.730575005           10.716.00         90.544         144.850         4.627.04         4.471.44         4.880.267         2.753.364.827         36.1772569471         -107.7325786431           10.810.00         90.51         144.800         4.627.09         4	9,077.0	0 91.21	133.050	4,040.07	-3,053.09	3,499.39	1,005,045.247	2,752,094.004	36 180403150	-107.733021393
9,981.00 91.19 135.360 4.417.88 4.050.02 3,704.17 1,884.84.322 2,752.899.463 36.18004325 107.732328867 10,055.00 92.44 134.800 4.639.91 4,116.54 3,770.51 1,884.761.79 2,752.899.463 76 36.17960322 107.732328867 10,243.00 91.46 134.900 4.629.76 4.248.31 3,904.27 1,884.650.02 2,753.905.51 36.179467949 - 107.731675405 10,243.00 91.46 134.900 4.629.76 4.248.31 3,904.27 1,884.650.02 2,753.906.547 36.179457194 - 107.731424788 10,433.00 90.50 135.820 4.628.50 4.383.52 4.037.74 1,884.451.841 7,2753.230.22 36.179126137 - 107.73142788 10,527.00 90.58 135.900 4.627.80 4.4519.37 4.169.14 1,884.4378.967 2,753.364.427 36.178752562 - 107.730551703 10,716.00 90.51 134.800 4.627.61 4.458.27 0 4.4519.37 4.169.14 1,884.4378.967 2,753.348.427 36.178752562 - 107.730551703 10,010 0.90.51 134.800 4.627.61 4.458.27 0 4.4519.37 4.169.14 1,884.4378.967 2,753.346.396 436.178752562 - 107.73030531703 10,010 0.90.51 134.800 4.627.61 4.458.27 0 4.43168 1,884.478.969 2,733.564.956 36.178205263 - 107.73030531703 10,910 0.90.51 134.800 4.627.09 4.7194 4.3369.24 1.844.17.849.62.733.564.956 36.178203263 - 107.73030531703 10,990 00 88.41 134.200 4.627.09 4.7194 4.3369.24 1.844.17.849 2,753.364.956 36.178203263 - 107.723037586 10.9990 00 88.41 134.200 4.627.05 - 4.785.09 4.435.54 1.884.173.845 2,753.364.856 36.178202363 - 107.723047868 11.994.00 89.90 31 34.210 4.630.05 - 4.851.32 4.504.61 1,884.047.013 2,753.669.899 36.177839671 - 107.7239442888 11.994.00 89.50 31.36.100 4.622.48 - 4.917.71 4.571.15 1,883.945.003 2,753.766.434 36.177639671 - 107.723942888 11.943.00 89.51 135.500 4.622.44 - 5.917.72 4.553.81 4,883.756.98.99 36.177733671 - 107.723945288 11.985.00 89.94 135.500 4.622.44 - 5.917.71 4.871.55 1,883.376.601 2,753.988.99 36.1777396711 - 107.723942888 11.944.00 89.55 135.610 4.625.58 - 5.227.58 1,883.300.603 2,753.766.434 36.177629151 - 107.72284820 11.471.00 90.03 136.110 4.627.05 - 5.933.35 5,030.08 1,883.504.88 2,754.228.383 36.1677349113 - 107.72284820 11.946.00 90.94 135.500 4.625.44 - 5.425.60 4.9484.44 5.946.52 7.442.9585 - 36.176721	9,772.0	0 88.83	133,450	4,040.31	-3 983 55	3,636,31	1 884 914 786	2,752,703.150	36 180226048	-107.732558601
10.055.00       92.44       134.800       4.838.91       -4.116.54       3.770.51       1.884.781795       2.752.885.786       36.178680322       -107.732104327         10.150.00       93.62       134.200       4.633.88       -1.8107       3.383.13       1.844.7175.267       2.753.099.561       36.179807370       -107.731675405         10.338.00       89.78       135.300       4.628.73       -4.315.66       3.971.26       1.844.692.674       2.753.099.561       36.179814794       -107.731424788         10.433.00       99.55       135.500       4.627.60       -4.519.3       4.184.37       2.753.384.27       2.61792140400       -107.7309754015         10.627.00       90.01       136.550       4.627.61       -4.652.47       4.814.312.010       2.753.364.27       36.17856430       -107.730073421         10.905.00       90.51       134.880       4.627.61       +4.652.70       4.301.68       1.884.275.65       36.17868430       -107.73007368         10.995.00       86.44       144.220       4.627.95       +4.785.09       4.436.54       1.884.178.896       2.753.564.555       36.178202363       -107.73007368         10.995.00       86.44       144.220       4.627.95       +4.771.4       1.884.77.15       1.884.3480	9 961 0	0 91 19	135,360	4 641 88	-4 050 02	3 704 17	1 884 848 320	2,752,899,456	36 180043265	-107.732328887
10,150,00       93,62       134,260       4,633,88       4,183,07       3,838,13       1,847,15,267       2,753,033,424       36,179677370       -107,731675466         10,243,00       91,46       134,860       4,629,76       4,248,31       3,040,27       1,844,650,224       2,753,166,547       36,179877370       -107,731675466         10,333,00       90,50       135,820       4,628,50       -4,383,52       4,037,74       1,844,4714       2,753,208,403       36,179122137       -107,7319765005         10,827,00       90,58       135,600       4,627,60       -4,161,37       1,184,4174       2,753,304,427       36,17852562       -107,730575005         10,716,00       90,51       134,850       4,627,61       -4,652,70       4,301,68       1,844,245,640       2,753,461,867       36,17852562       -107,730307560         10,910,00       90,12       134,880       4,627,61       -4,651,32       4,504,61       1,844,476,309       2,753,661,865       36,178202363       -107,730307566         10,994,00       90,31       134,210       4,620,05       -4,851,32       4,504,61       1,844,947,013       2,753,661,463       36,177620891       -107,72939478         11,883,00       89,91       135,560       4,622,46       -1,171	10 055 0	0 92.44	134 800	4 638 91	-4 116 54	3 770 51	1 884 781 795	2,752,055.400	36 179860322	-107 732104327
10.243.00       91.46       134.660       4.629.76       -4.248.31       3.904.27       1.884.650.024       2.753.099.651       36.17947939       -107.731424788         10.333.00       99.78       135.360       4.628.73       -4.315.66       3.971.26       1.884.582.67       2.753.298.406       38.17912137       -107.731424788         10.433.00       90.50       135.000       4.627.40       -4.519.37       4.169.14       1.884.542.67       2.753.238.420       36.178940400       -107.730797471         10.622.00       90.58       134.850       4.627.41       -4.568.33       4.235.11       1.884.454.264       2.753.498.496       36.17856430       -107.730357103         10.710.00       90.51       134.880       4.627.61       -4.501.60       4.364.540       2.753.496.465       36.17856433       -107.730357103         10.990.00       90.51       134.890       4.627.69       -4.719.44       4.369.28       1.884.178.666       2.753.564.465       36.178202817       -107.729361986         10.990.00       80.41       134.220       4.627.64       -4.917.71       4.571.45       1.883.906.302       2.753.584.665       36.17782047184       -107.72941984       -107.72941984       -107.72941984       -107.72941984       -107.72941984       -107.7294198	10,000.0	0 93.62	134 260	4 633 88	-4 183 07	3 838 13	1 884 715 267	2 753 033 424	36 179677370	-107 731875406
10,338.00 89.78 135.350 4,628.73 4,315.66 3,971.26 1,884,582.674 2,753,166.547 36,179126137 -107,731424768 0,052.00 90.01 136.620 4,628.60 4,383.52 4,037.74 1,884,514.817 2,753,238.032 36,179126137 -107,731424768 0,052.00 90.05 136.620 4,628.60 4,451.06 4,103.12 1,884,447.274 2,753,984.60 6,178940400 -107,73097441 1,0622.00 90.58 135.900 4,627.64 -4,519.37 4,169,14 1,884,378.967 2,753,364.427 36,178752622 -107,7305501703 10,810.00 90.12 134.80 4,627.61 -4,652.70 4,301.68 1,884,245.640 2,753,466.964 36,178385914 -107,730307566 10,995.00 90.51 134,390 4,627.95 -4,785.09 4,436.54 1,884,245.640 2,753,465.655 36,178021871 -107,729494888 11,094.00 89.03 134.210 4,620.05 -4,851.32 4,504.61 1,884,917.01 2,753,430.98 0,6177805617 -107,729494888 11,094.00 89.03 134.210 4,620.64 -4,651.32 4,564.61 1,884,917.01 2,753,430.89 0,61778591671 -107,729494283 11,283.00 89.91 135.560 4,627.86 -4,651.33 4,701 2,753,180.630 2,753,664 34 36,1778591671 -107,729494283 11,283.00 89.91 135.560 4,627.65 -5,5121.42 4,767.55 1,883,776.914 2,753,832.899 36,177284154 -107,72894820 11,471.00 90.03 136.110 4,627.06 -5,121.42 4,767.55 1,883,776.914 2,753,852.890 40 6,1772841650 -107,728507212 11,660.00 90.84 135.970 4,624.78 -5,257.88 4,898.30 1,883,640.56 2,754,093.582 36,176721651 -107,728948820 11,555.00 89.92 135.510 4,625.44 -5,401.06 4,433 1,883,512.22 2,754,028.517 36,176908169 -107,728507241 1,1660.00 90.84 135.970 4,624.78 -5,257.88 4,898.30 1,883,640.456 2,754,93.582 36,176721651 -107,728494820 11,556.00 4,625.44 -5,401.06 4,433 1,883,512.22 2,754,028.517 36,176908169 -107,728507241 1,1660.00 90.84 135.970 4,624.78 -5,257.88 4,898.30 1,883,640.456 2,754,93.582 36,176721651 -107,728494820 11,566 40,565 4,533.55,000 6,4353.25 1,754,555 11 36,176594131 -107,727404970 11,944.00 90.62 135.610 4,625.46 -5,530.50 6,327.65 9,882,2754,555.81 36,17659486 -107,728507212 1,1660.00 90.84 135.290 4,625.17 5,663.26 5,595.96 5,300.61 1,883,600.57 2,754,555.81 36,17659486 -107,728494820 107,72739598 1,2230.00 89,86 135.290 4,625.17 5,663.26 5,595.96 5,	10,700.0	0 91.46	134 960	4 629 76	-4 248 31	3 904 27	1 884 650 024	2 753 099 561	36 179497949	-107 731651532
10.433.00       90.50       135.820       4.628.50       -4.383.52       4.037.74       1884.514.817       2.753.233.032       36.179126137       -117.73119744         10.622.00       90.05       135.600       4.628.08       -4.451.06       4.103.12       1.884.447.274       2.753.343.427       36.17892662       -107.730755005         10.716.00       89.64       134.890       4.627.64       -4.556.33       4.235.11       1.884.312.010       2.753.464.690       36.178564840       -107.73007366         10.910.00       90.12       134.800       4.627.09       -4.719.44       4.366.27       4.301.68       1.884.478.806       2.753.644.695       36.1780201817       -107.73007366         10.990.00       88.44       134.200       4.627.99       -4.719.44       4.365.41       1.884.171.245       2.753.664.565       36.178021817       -107.729619470         11.188.00       91.66       135.660       4.627.48       -4.916.57       4.837.157       1.883.980.630       2.753.664.328       36.177691617       -107.729619470         11.88.00       91.66       135.500       4.627.65       -5.167.16       1.883.912.770       2.753.888.04       36.17769164       -107.729619470         11.870.00       90.72       136.700       4.627.65	10.338.0	0 89.78	135.350	4.628.73	-4.315.66	3.971.26	1.884.582.674	2,753,166,547	36.179312738	-107.731424788
10.527.00       90.01       136.050       4.628.08       -4.651.08       4.103.12       1.884.472.274       2.753.364.427       36.1789404000       -107.730775071         10.022.00       90.58       135.900       4.627.46       -4.566.33       4.233.11       1.884.378.967       2.753.364.427       36.178568430       -107.7303631703         10.910.00       90.12       134.890       4.627.14       -4.656.27       4.301.68       1.884.245.640       2.755.364.565       36.178202363       -107.73007566         10.995.00       88.44       134.20       4.627.95       -4.785.09       4.436.54       1.884.470.214       2.753.564.565       36.178020236       -107.73007566         10.999.00       88.44       134.20       4.627.95       -4.785.09       4.436.54       1.884.407.013       2.753.808.99       36.177803671       -107.729164270         11.88.00       91.66       135.660       4.627.65       -5.53.33       4.707.75       1.883.486.07       2.753.808.09       36.177246154       -107.728164290         11.471.00       90.03       136.110       4.627.66       -5.53.33       4.702.51       1.883.460.07       2.753.982.89       36.176724154       -107.72849820         11.460.0       90.44       135.670       4.627.46	10,433.0	0 90.50	135.820	4.628.50	-4.383.52	4.037.74	1.884.514.817	2.753.233.032	36.179126137	-107.731199746
10.622.00       90.58       135.900       4.627.00       -4.519.37       4.169.14       1.884.375.967       2.753.364.427       36.178752562       -107.730375005         10.716.00       89.64       134.950       4.627.41       -4.586.33       4.235.11       1.884.312.010       2.753.496.964       36.178356414       -107.73037303636         10.950.00       90.51       134.830       4.627.99       -4.7755.94       4.366.54       1.884.178.866       2.753.466.565       36.178236511       -107.730375063         10.995.00       88.44       134.220       4.627.95       -4.655.54       1.884.178.846       2.753.364.855       36.17839671       -107.729814988         11.984.00       89.03       134.210       4.630.05       -4.851.32       4.504.61       1.883.912.770       2.753.898.949       36.1776396711       -107.729814988         11.880.0       91.66       135.560       4.627.05       5.121.42       4.767.55       1.883.776.914       2.753.968.289       36.17765906169       -107.728728506         11.471.00       90.03       136.110       4.627.05       5.121.42       4.767.55       1.883.776.914       2.753.962.893       36.1776590695       -107.728728506         11.471.00       90.94       136.110       4.627.65       5.32	10,527.0	0 90.01	136.050	4,628.08	-4,451.06	4,103.12	1,884,447,274	2,753,298,406	36.178940400	-107.730978471
10,716.00       98.64       134.950       4.627.61       4.652.70       4.301.68       1.884.912.010       2.753.490.398       36.175656430       -107.730031703         10,810.00       90.51       134.880       4.627.01       4.719.44       4.306.28       1.884.178.866       2.753.664.565       36.178202363       -107.730077566         10.995.00       88.44       134.220       4.627.95       4.775.90       4.436.54       1.884.178.866       2.753.664.565       36.178202363       -107.730077566         11,984.00       91.66       135.660       4.629.48       4.917.71       4.571.15       1.883.900.630       2.753.766.434       36.177657113       -107.7293194263         11,880.0       91.66       135.660       4.629.48       4.917.71       4.571.15       1.883.900.630       2.753.766.434       36.177657113       -107.728163220         11,710.0       90.02       136.710       4.627.66       -5.053.33       4.702.75       1.883.769.04       2.754.908.517       36.176920160       -107.728249820         11,450.00       90.44       135.410       4.626.24       -5.121.42       4.767.55       1.883.706.922       2.754.093.512       36.170721661       -107.728049720         11,660.00       90.44       135.470       4.626.24	10,622.0	0 90.58	135.900	4,627.60	-4,519.37	4,169.14	1,884,378.967	2,753,364.427	36.178752562	-107.730755005
10.810.00       90.12       134.880       4.627.61       4.652.70       4.301.68       1,884.245.640       2.753.466.964       36.17838914       -107.730036386         10.995.00       90.51       134.290       4.627.99       4.719.44       4.369.28       1,884.178.896       2.753.564.565       36.178202363       -107.73007756         10.999.00       88.44       134.220       4.627.95       4.785.99       4.511.424       2.753.69.899       36.1778021817       -107.72994988         11.980.00       99.01       135.500       4.628.48       4.917.71       4.511.51       1.883.980.630       2.753.3766.434       6.17787113       -107.728949882         11.781.00       90.72       136.730       4.627.66       -5.053.33       4.702.75       1.883.945.070       2.753.898.040       36.177264154       -107.728729505         11.471.00       90.03       136.110       4.627.05       -5.121.42       4.767.55       1.883.769.142       2.754.083.817       36.176909169       -107.72872950721         11.660.00       90.84       135.610       4.627.65       -5.326.08       4.964.43       1.883.702.92       2.764.093.582       36.1763.94113       -107.728769074         11.944.00       90.62       135.610       4.627.46       -5.427.80	10,716.0	0 89.64	134.950	4,627.41	-4,586.33	4,235.11	1,884,312.010	2,753,430.398	36.178568430	-107.730531703
10.905.00       90.51       134.390       4.627.99       -4,719.44       4.369.28       1,884,178.246       2,753,564.565       36.1780/2363       -107.720077566         10.99.00       88.44       134.220       4.627.95       -4,765.09       4,436.54       1,884,173.245       2,753,699.399       36.177803671       -107.729019470         11,188.00       91.66       135.660       4.629.48       -4,917.71       4,571.15       1,883,902.770       2,753,823.299       36.177674798       -107.729919470         11,283.00       90.72       136.610       4.627.66       -5,053.33       4,702.75       1,883,945.007       2,753,964.34       36.177244154       -107.728944820         11,471.00       90.03       136.110       4,627.66       -5,121.42       4,767.55       1,883,769.282       2,754,028.517       36.176909169       -107.72829506         11,560.00       90.84       135.970       4,624.78       -5,257.88       4,898.30       1,883,700.822       2,754,028.517       36.176709169       -107.72826926         11,564.00       89.82       135.570       4,624.56       -5,360.88       4,964.43       1,883,450.07       2,754,291.818       36.176721651       -107.72826926         11,564.00       89.82       135.610       4,625.58	10,810.0	0 90.12	134.880	4,627.61	-4,652.70	4,301.68	1,884,245.640	2,753,496.964	36.178385914	-107.730306386
10.999.00       88.44       134.220       4,630.05       -4,851.32       4,504.61       1,884,047.013       2,753,699.899       36,1776309171       -107,729619470         11,188.00       91.66       135,660       4,629.48       -4,917.71       4,571.15       1,883,990.630       2,753,766.434       36,177657113       -107,72994283         11,283.00       89.91       135,530       4,627.66       -5,053.33       4,702.75       1,883,780.07       2,753,980.40       36,177267113       -107,728948820         11,471.00       90.03       136,110       4,627.65       -5,121.42       4,767.55       1,883,776.914       2,753,980.40       36,177094159       -107,728792506         11,471.00       90.03       136,110       4,627.65       -5,121.42       4,767.55       1,883,760.282       2,754,028.517       36,177094159       -107,728507212         11,660.00       90.44       135,970       4,624.65       -5,326.08       4,989.30       1,883,470.428       2,754,028.517       36,176534113       -107,7278405905         11,849.00       89.55       135,610       4,625.45       -5,326.08       4,984.30       1,883,470.102       2,754,291.813       36,176534113       -107,7278405905         11,849.00       89.55       135,610       4,625.45	10,905.0	0 90.51	134.390	4,627.09	-4,719.44	4,369.28	1,884,178.896	2,753,564.565	36.178202363	-107.730077566
11.094.00       89.03       134.210       4,630.05       -4,851.32       4,504.61       1,884.047.013       2,753,693.899       36,177857113       -107.729519470         11,188.00       91.66       135.600       4,622.18       -4,995.77       4,571.15       1,883,980.630       2,753,766.434       36,177467498       -107.729394263         11,283.00       90.72       136.730       4,627.66       -5,053.33       4,702.75       1,883,912.770       2,753,382.899       36,17746498       -107.728549820         11,471.00       90.03       136.110       4,627.05       -5,121.42       4,767.55       1,883,708.914       2,753,928.217       36,176908169       -107.728507212         11,660.00       90.84       135.570       4,624.78       5,257.88       4,964.43       1,883,572.259       2,754,159.716       36,176349113       -107.728670916         11,564.00       90.82       135.610       4,625.44       5,461.24       5,090.65       1,883,370.07       2,754,159.716       36,176349113       -107.727616047         11,944.00       90.62       135.610       4,625.44       5,461.24       5,090.65       1,883,307.067       2,754,291.818       36,175991919       -107.727172869814         12,320.0       90.57       136.140       4,625.17 </td <td>10,999.0</td> <td>0 88.44</td> <td>134.220</td> <td>4,627.95</td> <td>-4,785.09</td> <td>4,436.54</td> <td>1,884,113.245</td> <td>2,753,631.827</td> <td>36.178021817</td> <td>-107.729849888</td>	10,999.0	0 88.44	134.220	4,627.95	-4,785.09	4,436.54	1,884,113.245	2,753,631.827	36.178021817	-107.729849888
11,188.00       91.66       135.660       4,629.48       -4,917.71       4,571.15       1,883,906.370       2,753,766.434       36.17767113       -107.729394283         11,283.00       90.91       135.500       4,627.66       -5,053.33       4,702.75       1,883,912.770       2,753,982.899       36.177740498       -107.729494290         11,471.00       90.03       136.110       4,627.05       5,121.42       4,767.55       1,883,706.914       2,753,962.839       36.1776908169       -107.728729506         11,566.00       90.94       136.410       4,624.78       5,257.88       4,898.30       1,883,640.456       2,754,093.582       36.176520161       -107.7282085161         11,555.00       89.32       135.570       4,624.65       5,326.08       4,964.43       1,883,572.259       2,754,159.716       36.176349113       -107.728063161         11,849.00       89.55       135.610       4,625.88       -5,593.03       1,883,307.007       2,754,358.834       36.175979159       -107.727696992         11,940.00       90.62       135.610       4,625.17       -5,663.26       5,293.28       1,883,307.007       2,754,358.834       36.175979159       -107.72769598         12,226.00       89.41       135.290       4,625.17       -5,663.26<	11,094.0	0 89.03	134.210	4,630.05	-4,851.32	4,504.61	1,884,047.013	2,753,699.899	36.177839671	-107.729619470
11,283.00       89.91       135.530       4,628.18       -4,985.57       4,637.61       1,837.01       2,753,832.899       36.177470488       -107.728169299         11,377.00       90.72       136.70       4,627.66       -5,053.33       4,702.75       1,883,845.007       2,753,898.040       36.177284154       -107.72849820         11,471.00       90.03       136.110       4,627.05       -5,121.42       4,767.55       1,883,770.842       2,753,898.289       36.177090905       -107.7282607212         11,660.00       90.84       135.970       4,624.65       -5,527.86       4,898.30       1,883,570.282       2,754,093.582       36.17671651       -107.72860955         11,755.00       89.32       135.610       4,625.85       -5,393.35       5,030.08       1,883,504.988       2,754,225.83       36.176649113       -107.727610970         12,037.00       89.58       135.680       4,625.48       -5,597.59       5,227.65       1,883,302.374       2,754,421.932       36.17509959       -107.727172286         12,037.00       89.58       135.680       4,625.17       -5,595.96       5,227.65       1,883,302.374       2,754,422.932       36.17509959       -107.726720595         12,226.00       89.41       135.290       4,627.46	11,188.0	0 91.66	135.660	4,629.48	-4,917.71	4,571.15	1,883,980.630	2,753,766.434	36.177657113	-107.729394263
11,377.00       90.72       136.730       4,627.66       -5,053.33       4,702.75       1,883,876.07       2,753,989.640       36.177284154       -107.728494820         11,471.00       90.03       136.110       4,627.05       -5,121.42       4,767.55       1,883,776.914       2,753,962.839       36.177096905       -107.728507212         11,660.00       90.84       135.970       4,624.78       -5,257.88       4,898.30       1,883,702.29       2,754,199.716       36.176721651       -107.728286995         11,755.00       89.32       135.790       4,624.65       -5,326.08       4,984.43       1,883,702.29       2,754,159.716       36.1766534111       -107.72840970         11,844.00       90.62       135.610       4,625.46       -5,326.08       1,883,301.067       2,754,368.43       36.175162426       -107.727616047         12,037.00       89.58       135.660       4,625.17       -5,659.66       5,227.65       1,883,302.374       2,754,428.564       36.175697959       -107.726490704         12,226.00       89.41       135.20       4,627.17       -5,653.26       5,293.28       1,883,302.374       2,754,422.932       36.17505188       -107.726490704         12,226.00       89.41       135.680       4,627.69       -5,790.58 <td>11,283.0</td> <td>0 89.91</td> <td>135.530</td> <td>4,628.18</td> <td>-4,985.57</td> <td>4,637.61</td> <td>1,883,912.770</td> <td>2,753,832.899</td> <td>36.177470498</td> <td>-107.729169299</td>	11,283.0	0 89.91	135.530	4,628.18	-4,985.57	4,637.61	1,883,912.770	2,753,832.899	36.177470498	-107.729169299
11,471.00       90.03       136.110       4,627.05       -5,121.42       4,767.55       1,883,776.914       2,753,962.839       36,177096905       -107.728729506         11,566.00       90.94       136.410       4,626.24       -5,190.06       4,833.23       1,883,708.282       2,754,093.582       36,176908169       -107.728260721         11,660.00       90.84       135.790       4,624.78       -5,527.88       4,898.30       1,883,670.289       2,754,195.716       36,176908169       -107.728266995         11,755.00       89.32       135.610       4,625.54       -5,393.35       5,030.08       1,883,504.988       2,754,291.818       36,176399113       -107.727640970         11,944.00       90.62       135.610       4,625.28       -5,527.73       5,161.55       1,883,307.072       2,754,356.834       36,175979559       -107.727172264         12,027.00       89.58       135.680       4,625.47       -5,595.96       5,227.65       1,883,302.374       2,754,488.564       36,175066688       -107.7269050154         12,220.00       89.41       135.290       4,625.74       -5,663.50       5,427.01       1,883,307.642       2,754,488.564       36,175056158       -107.726497505         12,226.00       89.41       135.290       4,627.	11,377.0	0 90.72	136.730	4,627.66	-5,053.33	4,702.75	1,883,845.007	2,753,898.040	36.177284154	-107.728948820
11,566.00       90.94       136.410       4,622.24       -5,190.06       4,833.23       1,883,708.282       2,754,028.517       36.176908169       -107.7282607212         11,560.00       90.84       135.970       4,624.65       5,5257.88       4,898.30       1,883,640.456       2,754,093.582       36.176534111       -107.728266995         11,755.00       89.55       135.610       4,625.58       -5,393.35       5,030.08       1,883,504.988       2,754,225.363       36.176349113       -107.727840970         11,944.00       90.62       135.610       4,625.15       -5,527.73       5,161.55       1,883,370.607       2,754,291.818       36.176162426       -107.727395998         12,037.00       89.58       135.660       4,625.15       -5,596.96       5,227.65       1,883,302.374       2,754,422.332       36.175791919       -107.727172286         12,226.00       89.41       135.280       4,627.06       5,796.79       5,427.01       1,883,101.549       2,754,622.33       6.175296518       -107.726723955         12,210.0       89.96       134.960       4,627.06       5,796.79       5,427.01       1,883,101.549       2,754,622.33       6.175239630       -107.72647355         12,604.00       89.19       135.150       4,627.15	11,471.0	0 90.03	136.110	4,627.05	-5,121.42	4,767.55	1,883,776.914	2,753,962.839	36.177096905	-107.728729506
11,660.00       90.84       135.970       4,624.78       -5,257.88       4,998.30       1,883,640.456       2,754,093.582       36.176721651       -107.722866995         11,755.00       89.32       135.790       4,624.65       -5,326.08       4,964.43       1,883,572.259       2,754,159.716       36.176534111       -107.7228669161         11,944.00       90.62       135.610       4,625.54       -5,393.35       5,030.08       1,883,040.4988       2,754,225.363       36.176349113       -107.727616047         12,037.00       89.58       135.680       4,625.14       -5,595.96       5,227.65       1,883,370.607       2,754,291.818       36.1756162426       -107.727172266         12,226.00       89.41       135.290       4,625.15       -5,595.966       5,227.65       1,883,203.02374       2,754,4292.33       36.175606868       -107.726950154         12,226.00       89.41       135.290       4,627.66       -5,790.58       5,300.31       1,883,2167.764       2,754,429.23       36.175239630       -107.72693055         12,450.00       89.19       135.150       4,627.44       -5,863.50       5,493.21       1,883,014.83       2,754,482.463       36.175056158       -107.726049058         12,690.00       91.16       135.820       4,6	11,566.0	0 90.94	136.410	4,626.24	-5,190.06	4,833.23	1,883,708.282	2,754,028.517	36.176908169	-107.728507212
11,755.00       89.32       135.790       4,624.65       -5,326.08       4,964.43       1,883,572.259       2,754,159.716       36.176534111       -107.7228063161         11,849.00       89.55       135.610       4,625.58       -5,393,35       5,030.08       1,883,504.988       2,754,225.363       36.176349113       -107.727640970         11,944.00       90.62       135.610       4,625.48       -5,461.24       5,096.53       1,883,370.607       2,754,422.932       36.175791919       -107.727195998         12,132.00       90.57       136.140       4,625.15       -5,595.96       5,227.65       1,883,305.048       2,754,428.543       36.175606868       -107.727616047         12,226.00       89.41       135.290       4,625.17       -5,663.26       5,293.28       1,883,305.044       2,754,428.5591       36.175506688       -107.72673295         12,2415.00       88.37       134.620       4,627.06       -5,796.79       5,447.01       1,883,101.549       2,754,682.293       36.1750506158       -107.726273465         12,690.00       91.16       135.820       4,627.44       -5,683.50       5,493.21       1,883,004.835       2,754,682.496       36.1750506158       -107.726273465         12,698.00       91.08       134.670       4,6	11,660.0	0 90.84	135.970	4,624.78	-5,257.88	4,898.30	1,883,640.456	2,754,093.582	36.176721651	-107.728286995
11,849.00       89.55       135.610       4,625.58       -5,393.35       5,030.68       1,883,504.988       2,754,225.363       36.176349113       -107.7274840970         11,944.00       90.62       135.610       4,625.44       -5,461.24       5,096.53       1,883,470.007       2,754,291.818       36.176349113       -107.727616047         12,037.00       89.85       135.680       4,625.28       -5,597.96       5,227.65       1,883,370.007       2,754,422.932       36.1759791919       -107.727172286         12,226.00       89.41       135.290       4,625.17       -5,663.26       5,293.28       1,883,235.084       2,754,422.932       36.175509165       -107.726723495         12,245.00       89.96       134.600       4,627.06       -5,796.79       5,427.01       1,883,101.549       2,754,622.293       36.175056158       -107.726497535         12,415.00       89.19       135.150       4,627.15       -5,931.24       5,559.81       1,882,967.098       2,754,622.933       36.174687374       -107.7256273465         12,604.00       89.19       135.150       4,627.44       -5,693.55       5,795.82       1,882,967.098       2,754,821.665       36.174687374       -107.725282752         12,698.00       91.08       134.670       4,62	11,755.0	0 89.32	135.790	4,624.65	-5,326.08	4,964.43	1,883,572.259	2,754,159.716	36.176534111	-107.728063161
11,944.00       90.62       135.610       4,625.44       -5,461.24       5,096.53       1,883,437.102       2,754,291.818       36.176162426       -107.727160647         12,037.00       89.58       135.680       4,625.15       -5,597.95       1,883,370.607       2,754,422.932       36.175791919       -107.727395998         12,226.00       89.41       135.290       4,625.15       -5,595.86       5,227.65       1,883,302.374       2,754,488.564       36.175791919       -107.72673295         12,226.00       89.41       135.290       4,625.17       -5,663.26       5,293.28       1,883,0235.084       2,754,488.564       36.175421730       -107.726950154         12,321.00       89.96       134.620       4,627.06       -5,796.79       5,427.01       1,883,101.549       2,754,622.293       36.175506185       -107.726473655         12,604.00       89.19       135.150       4,627.44       -5,863.50       5,493.21       1,883,007.28       2,754,622.293       36.174608737       -107.726473655         12,604.00       89.19       135.150       4,626.93       -5,997.60       5,626.38       1,882,900.738       2,754,821.665       36.174607374       -107.72597135         12,698.00       91.08       134.270       4,625.49       -6,132.83	11,849.0	0 89.55	135.610	4,625.58	-5,393.35	5,030.08	1,883,504.988	2,754,225.363	36.176349113	-107.727840970
12,037.00       89.58       135.680       4,625.28       -5,527.73       5,161.55       1,883,370.607       2,754,356.834       36.7759/9559       -107.727395998         12,132.00       90.57       136.140       4,625.15       -5,595.96       5,227.65       1,883,302.374       2,754,422.932       36.17579/91919       -107.727172286         12,226.00       89.41       135.290       4,625.17       -5,663.26       5,293.28       1,883,302.374       2,754,438.644       36.175091919       -107.726723295         12,226.00       89.41       135.290       4,627.06       -5,796.79       5,427.01       1,883,101.549       2,754,622.293       36.175036158       -107.726723265         12,690.00       91.16       135.820       4,627.44       -5,683.50       5,493.21       1,883,048.35       2,754,628.496       36.175056158       -107.726273465         12,698.00       91.08       134.670       4,626.33       -5,997.60       5,626.38       1,882,900.738       2,754,821.665       36.17469875       -107.72659329         12,783.00       89.68       135.290       4,625.49       -6,132.83       5,759.82       1,882,900.738       2,754,821.665       36.174867374       -107.725971135         12,982.00       89.00       134.210       4,625.49	11,944.0	0 90.62	135.610	4,625.44	-5,461.24	5,096.53	1,883,437.102	2,754,291.818	36.176162426	-107.727616047
12,132.00       90.57       136.140       4,625.15       -5,595.96       5,227.65       1,883,302.374       2,754,422.932       36.175791919       -107.7267205154         12,226.00       89.41       135.290       4,625.17       -5,663.26       5,293.28       1,883,235.084       2,754,488.564       36.175606868       -107.726723295         12,415.00       88.37       134.620       4,627.06       -5,796.79       5,427.01       1,883,101.549       2,754,622.293       36.175239630       -107.726473255         12,509.00       91.16       135.820       4,627.15       -5,931.24       5,559.81       1,883,034.835       2,754,688.496       36.175056158       -107.726473655         12,604.00       89.19       135.150       4,627.15       -5,931.24       5,559.81       1,882,907.38       2,754,821.665       36.174687374       -107.725044858         12,698.00       91.08       134.670       4,626.30       -6,064.75       5,693.58       1,882,803.590       2,754,888.860       36.174502706       -107.72595329         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,693.2.06       2,754,955.103       36.174315471       -107.725973135         12,982.00       89.00       134.210       4,625.2	12,037.0	0 89.58	135.680	4,625.28	-5,527.73	5,161.55	1,883,370.607	2,754,356.834	36.175979559	-107.727395998
12,226.00       89.41       135,290       4,625.17       -5,063.26       5,293.28       1,883,235.084       2,754,488.564       36.175006868       -107.726973154         12,321.00       89.96       134.960       4,625.69       -5,730.58       5,60.31       1,883,167.764       2,754,555.591       36.175421730       -107.726472325         12,415.00       88.37       134.620       4,627.44       -5,663.50       5,493.21       1,883,048.35       2,754,688.496       36.175056158       -107.726473555         12,604.00       89.19       135.150       4,627.15       -5,931.24       5,559.81       1,882,967.098       2,754,755.096       36.174687374       -107.72642852572         12,698.00       91.08       134.670       4,626.93       -5,997.60       5,626.38       1,882,900.738       2,754,881.660       36.174502706       -107.72595329         12,698.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,698.763       2,754,955.103       36.174502706       -107.72547135         12,982.00       89.00       134.210       4,625.44       -6,199.58       5,825.99       1,882,698.763       2,755,021.278       36.174131918       -107.724914692         13,070       87.45       133.100       4,630.59 <td>12,132.0</td> <td>0 90.57</td> <td>136.140</td> <td>4,625.15</td> <td>-5,595.96</td> <td>5,227.65</td> <td>1,883,302.374</td> <td>2,754,422.932</td> <td>36.175791919</td> <td>-107.727172286</td>	12,132.0	0 90.57	136.140	4,625.15	-5,595.96	5,227.65	1,883,302.374	2,754,422.932	36.175791919	-107.727172286
12,321.00       89.96       134.960       4,625.69       -5,730.58       5,300.31       1,883,167.764       2,754,632.591       36.175421730       -107.726723295         12,415.00       88.37       134.620       4,627.06       -5,796.79       5,427.01       1,883,101.549       2,754,632.293       36.175239630       -107.72647535         12,609.00       91.16       135.820       4,627.44       -5,831.24       5,559.81       1,882,967.098       2,754,688.496       36.174689875       -107.726048058         12,604.00       89.19       135.150       4,627.44       -5,931.24       5,559.81       1,882,907.098       2,754,821.665       36.174689875       -107.72697365         12,698.00       91.08       134.670       4,626.93       -5,997.60       5,626.38       1,882,907.38       2,754,881.860       36.174687374       -107.72595329         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,698.763       2,754,955.103       36.174315471       -107.7259737135         12,982.00       89.00       134.210       4,628.19       -6,265.13       5,894.68       1,882,603.206       2,755,089.963       36.173951614       -107.724914692         13,171.00       89.62       133.070       4,630.59 </td <td>12,226.0</td> <td>0 89.41</td> <td>135.290</td> <td>4,625.17</td> <td>-5,663.26</td> <td>5,293.28</td> <td>1,883,235.084</td> <td>2,754,488.564</td> <td>36.175606868</td> <td>-107.726950154</td>	12,226.0	0 89.41	135.290	4,625.17	-5,663.26	5,293.28	1,883,235.084	2,754,488.564	36.175606868	-107.726950154
12,415.00       86.37       134.620       4,627.06       -5,786.79       5,427.01       1,863,101.549       2,754,622.293       36.175259530       -107.726947535         12,509.00       91.16       135.820       4,627.44       -5,863.50       5,493.21       1,883,034.835       2,754,688.496       36.175056158       -107.726074865         12,604.00       89.19       135.150       4,627.15       -5,931.24       5,559.81       1,882,907.098       2,754,755.096       36.174869875       -107.7260748658         12,698.00       91.08       134.670       4,626.93       -5,997.60       5,626.38       1,882,907.738       2,754,821.665       36.174502706       -107.725892752         12,793.00       89.68       135.290       4,626.49       -6,132.83       5,759.82       1,882,605.766       2,754,955.103       36.174315471       -107.725897329         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,608.763       2,755,021.278       36.174315471       -107.72591135         12,982.00       89.00       134.210       4,628.19       -6,265.13       5,894.68       1,882,603.206       2,755,021.278       36.174315471       -107.724914692         13,077.00       87.45       133.120       4,628.1	12,321.0	0 89.96	134.960	4,625.69	-5,730.58	5,360.31	1,883,167.764	2,754,555.591	36.175421730	-107.726723295
12,509.00       91.16       135.820       4,627.44       -5,663.30       5,493.21       1,633,034.835       2,754,686.496       36.173056156       -107.726213465         12,604.00       89.19       135.150       4,627.15       -5,997.60       5,626.38       1,882,967.098       2,754,755.096       36.174869875       -107.725822752         12,698.00       91.08       134.670       4,626.93       -5,997.60       5,626.38       1,882,900.738       2,754,821.665       36.174687374       -107.725822752         12,793.00       89.68       135.290       4,626.30       -6,064.75       5,693.58       1,882,833.590       2,754,858.860       36.174502706       -107.725595329         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,698.763       2,755,021.278       36.174131918       -107.72517135         12,982.00       89.00       134.210       4,628.19       -6,265.13       5,894.68       1,882,693.206       2,755,021.278       36.174131918       -107.724642453         13,077.00       87.45       133.120       4,630.59       -6,393.15       6,032.21       1,882,695.190       2,755,158.578       36.173075048       -107.724485453         13,265.00       90.12       132.450       4,630.80	12,415.0	0 88.37	134.620	4,627.06	-5,796.79	5,427.01	1,883,101.549	2,754,622.293	36.175239630	-107.726497535
12,004.00       69.19       133.130       4,027.13       -0,931.24       5,393.61       1,622,907.098       2,754,733.090       36.174609973       -107.728040305         12,698.00       91.08       134.670       4,626.93       -5,997.60       5,626.38       1,882,900.738       2,754,821.665       36.174609373       -107.725822752         12,793.00       89.68       135.290       4,626.30       -6,064.75       5,693.58       1,882,933.590       2,754,888.860       36.174502706       -107.72537135         12,982.00       89.00       134.210       4,625.24       -6,199.58       5,825.99       1,882,698.763       2,755,021.278       36.174315471       -107.725147169         13,077.00       87.45       133.120       4,628.19       -6,265.13       5,894.68       1,882,698.763       2,755,021.278       36.173951614       -107.724914692         13,077.00       87.45       133.120       4,630.59       -6,329.33       5,963.29       1,882,509.009       2,755,089.963       36.173951614       -107.724682453         13,265.00       90.12       132.450       4,630.80       -6,339.315       6,032.31       1,882,505.190       2,755,227.592       36.17399519       -107.72448858         13,360.00       90.54       131.880       4,630.26<	12,509.0	0 91.16	135.620	4,027.44	-5,003.50	5,493.21	1,003,034.033	2,754,000.490	30.173030130	-107.726273463
12,050.00       51.00       134.070       4,020.33       -0,557.00       5,020.33       1,822,007.33       2,754,821.003       30.174607374       -107.72559522         12,793.00       89.68       135.290       4,626.30       -6,064.75       5,693.58       1,882,833.590       2,754,888.860       36.174502706       -107.72559532         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,698.763       2,754,955.103       36.1744502706       -107.725371135         12,982.00       89.00       134.210       4,625.24       -6,199.58       5,825.99       1,882,698.763       2,755,021.278       36.1744315471       -107.725147169         13,077.00       87.45       133.120       4,628.19       -6,265.13       5,894.68       1,882,633.206       2,755,089.963       36.173951614       -107.724914692         13,171.00       89.62       133.070       4,630.59       -6,339.315       6,032.31       1,882,505.190       2,755,227.592       36.173599519       -107.724488258         13,360.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,414.421       2,755,368.717       36.173253789       -107.72448858         13,360.00       90.60       130.540       4,628.20	12,004.0	0 01.09	133.150	4,027.13	-5,931.24	5,559.61	1,002,907.090	2,754,755.090	30.174009073	-107.720040030
12,753.00       35.05       135.250       4,020.30       -0,041.30       5,053.55       1,852,053.550       2,754,856.000       36.174302700       -107.12353335         12,888.00       91.30       136.280       4,625.49       -6,132.83       5,759.82       1,882,655.006       2,754,955.103       36.174315471       -107.72537135         12,982.00       89.00       134.210       4,625.24       -6,199.58       5,825.99       1,882,633.206       2,755,021.278       36.174315471       -107.724914692         13,077.00       87.45       133.120       4,628.19       -6,265.13       5,894.68       1,882,633.206       2,755,089.963       36.173951614       -107.724914692         13,171.00       89.62       133.070       4,630.59       -6,329.33       5,963.29       1,882,650.190       2,755,158.578       36.17375048       -107.724682453         13,265.00       90.12       132.450       4,630.80       -6,393.15       6,032.31       1,882,505.190       2,755,227.592       36.173929519       -107.724488258         13,360.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,414.421       2,755,368.717       36.173253789       -107.72372095         13,454.00       90.60       130.540       4,628.78 <td>12,090.0</td> <td>0 91.00</td> <td>134.070</td> <td>4,020.93</td> <td>-5,997.00</td> <td>5,020.30</td> <td>1,002,900.730</td> <td>2,754,621.005</td> <td>30.174007374</td> <td>-107.725605220</td>	12,090.0	0 91.00	134.070	4,020.93	-5,997.00	5,020.30	1,002,900.730	2,754,621.005	30.174007374	-107.725605220
12,080.00       91.00       130.200       4,023.49       -0,192.03       5,09.02       1,092.000       2,75,95.01.03       30.174513471       -107.72317159         12,982.00       89.00       134.210       4,625.24       -6,199.58       5,825.99       1,882,698.763       2,755,021.278       36.174513471       -107.725147169         13,077.00       87.45       133.120       4,628.19       -6,265.13       5,894.68       1,882,698.763       2,755,089.963       36.173951614       -107.724914692         13,171.00       89.62       133.070       4,630.59       -6,329.33       5,963.29       1,882,698.009       2,755,158.578       36.17375048       -107.724682453         13,265.00       90.12       132.450       4,630.80       -6,393.15       6,032.31       1,882,505.190       2,755,227.592       36.173424121       -107.72448858         13,360.00       90.54       131.880       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,368.717       36.173424121       -107.7237217162         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.72372095         13,643.00       90.06       132.030       4,628.20	12,793.0	0 01.20	136.290	4,020.30	-0,004.75	5,053.50	1,002,055.590	2,754,000.000	36 174302700	107 725271125
13,077.00       87.45       133.120       4,628.19       -6,265.13       5,894.68       1,882,633.206       2,755,089.963       36.173951614       -107.724914692         13,171.00       89.62       133.070       4,630.59       -6,329.33       5,963.29       1,882,569.009       2,755,158.578       36.17375048       -107.724682453         13,265.00       90.12       132.450       4,630.80       -6,393.15       6,032.31       1,882,505.190       2,755,227.592       36.17359519       -107.724682453         13,360.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,441.421       2,755,289.006       36.173424121       -107.72448858         13,360.00       90.60       130.540       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,368.717       36.173253789       -107.723721052         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.72372095         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,210.064       2,755,59.798       36.172787746       -107.723324396         13,709.40       91.07       131.012       4,627.21 <td>12,000.0</td> <td>0 89.00</td> <td>134 210</td> <td>4,025.45</td> <td>-6 199 58</td> <td>5,755.02</td> <td>1 882 698 763</td> <td>2,755,021,278</td> <td>36 174131918</td> <td>-107 725147169</td>	12,000.0	0 89.00	134 210	4,025.45	-6 199 58	5,755.02	1 882 698 763	2,755,021,278	36 174131918	-107 725147169
13,171.00       89.62       133.070       4,630.59       -6,329.33       5,963.29       1,882,569.009       2,755,158.578       36.173775048       -107.724682453         13,265.00       90.12       132.450       4,630.80       -6,393.15       6,032.31       1,882,505.190       2,755,227.592       36.173775048       -107.724682453         13,265.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,441.421       2,755,227.592       36.1737424121       -107.72448858         13,360.00       90.54       131.880       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,586.717       36.173253789       -107.723971174         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,549.348       36.173083199       -107.72372095         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,210.064       2,755,559.798       36.17287746       -107.723324396         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396	13 077 0	0 87.45	133 120	4 628 19	-6 265 13	5 894 68	1 882 633 206	2,755,089,963	36 173951614	-107 724914692
13,265.00       90.12       132.450       4,630.80       -6,393.15       6,032.31       1,882,505.190       2,755,227.592       36.173599519       -107.724448858         13,360.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,441.421       2,755,298.006       36.173424121       -107.724448858         13,360.00       90.60       130.540       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,368.717       36.173253789       -107.72372071174         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.7234248286         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,210.064       2,755,559.798       36.172908577       -107.723324396         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396         LTP @ 13709.40 MD 4627.21 TVD       50.500.70       36.172787746       -107.723324396	13 171 0	0 89.62	133 070	4 630 59	-6 329 33	5 963 29	1 882 569 009	2 755 158 578	36 173775048	-107 724682453
13,360.00       90.54       131.880       4,630.26       -6,456.92       6,102.72       1,882,441.421       2,755,298.006       36.173424121       -107.724210522         13,360.00       90.60       130.540       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,368.717       36.173253789       -107.723971174         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.723732095         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,253.993       2,755,510.017       36.172908577       -107.7233243986         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396         LTP @ 13709.40 MD 4627.21 TVD	13 265 0	0 90.12	132 450	4,630.80	-6.393 15	6.032.31	1.882,505,190	2,755,227 592	36,173599519	-107.724448858
13,454.00       90.60       130.540       4,629.32       -6,518.84       6,173.43       1,882,379.497       2,755,368.717       36.173253789       -107.723971174         13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.723732095         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,253.993       2,755,510.017       36.17208577       -107.723492896         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396         LTP @ 13709.40 MD 4627.21 TVD	13.360.0	0 90.54	131.880	4,630.26	-6,456.92	6,102.72	1.882.441.421	2,755,298,006	36,173424121	-107,724210522
13,548.00       90.06       132.030       4,628.78       -6,580.86       6,244.06       1,882,317.478       2,755,439.348       36.173083199       -107.723732095         13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,253.993       2,755,510.017       36.17208577       -107.72372492896         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396         LTP @ 13709.40 MD 4627.21 TVD       LTP @ 13709.40 MD 4627.21 TVD       -107.723324396       -107.723324396       -107.723324396	13,454.0	0 90.60	130.540	4,629.32	-6.518.84	6,173,43	1.882.379.497	2,755,368,717	36,173253789	-107,723971174
13,643.00       90.64       131.840       4,628.20       -6,644.35       6,314.73       1,882,253.993       2,755,510.017       36.172908577       -107.723492896         13,709.40       91.07       131.012       4,627.21       -6,688.28       6,364.51       1,882,210.064       2,755,559.798       36.172787746       -107.723324396         LTP @ 13709.40 MD 4627.21 TVD	13.548.0	0 90.06	132.030	4,628.78	-6,580.86	6,244.06	1.882,317.478	2,755,439.348	36.173083199	-107,723732095
13,709.40 91.07 131.012 4,627.21 -6,688.28 6,364.51 1,882,210.064 2,755,559.798 36.172787746 -107.723324396 LTP @ 13709.40 MD 4627.21 TVD	13.643.0	0 90.64	131.840	4,628.20	-6,644.35	6,314.73	1,882,253.993	2,755,510.017	36.172908577	-107.723492896
LTP @ 13709.40 MD 4627.21 TVD	13,709.4	0 91.07	131.012	4,627.21	-6,688.28	6,364.51	1,882,210.064	2,755,559.798	36.172787746	-107.723324396
	LTP @	13709.40 MD 4	627.21 TVD			24	46 HS	0.45 (ACA		

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## Survey Report - Geographic



Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Rodeo Unit #512H
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Site:	Rodeo Unit 511 pad (511, 512 & 513)	MD Reference:	RKB=6798+13 @ 6811.00ft (Ensign 145)
Well:	Rodeo Unit #512H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Surveys Original Hole	Database:	DB_Decv0422v16

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,713.00	91.09	130.967	4,627.14	-6,690.64	6,367.23	1,882,207.704	2,755,562.515	36.172781252	-107.723315199
330 per	@ 13713 MD	4627.14 TVD							
13,728.00	91.19	130.780	4,626.84	-6,700.45	6,378.57	1,882,197.890	2,755,573.855	36.172754257	-107.723276815
Survey	@ 13728.00 MI	D 4626.84 TVI	0						
13,793.00	91.19	130.780	4,625.49	-6,742.90	6,427.78	1,882 <mark>,1</mark> 55.444	2,755,623.064	36.172637500	-107.723110248
Survey	Proj. to 13793.	00 MD 4625.4	9 TVD						

Measured	Vertical	Local Coo	rdinates		
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
412.0	00 412.00	-1.33	-0.71	MWD surveys	
2,683.0	2,660.22	-106.46	-211.85	9 5/8" Casing @ 2683 MD 2660.22 TVD	
4,845.0	4,611.65	-432.33	93.64	330 perp @ 4845 MD 4611.65 TVD	
4,846.	4,612.00	-433.06	94.42	FTP @ 4846.12 MD 4612.00 TVD	
13,709.4	4,627.21	-6,688.28	6,364.51	LTP @ 13709.40 MD 4627.21 TVD	
13,713.0	4,627.14	-6,690.64	6,367.23	330 perp @ 13713 MD 4627.14 TVD	
13,728.0	4,626.84	-6,700.45	6,378.57	Survey @ 13728.00 MD 4626.84 TVD	
13,793.0	4,625.49	-6,742.90	6,427.78	Survey Proj. to 13793.00 MD 4625.49 TVD	

Checked By:

Approved By:

Date:

### WELL NAME: RODEO UNIT 512H

OBJECTIVE:	Drill, comple	te, and equip s	ingle latera	l in the Manc	os-I formatio	n
API Number:	30-045-35874					
State:	New Mexico					
County:	San Juan					
Surface Elev.:	6,798	ft ASL (GL)	6,811	ft ASL (KB)		
Surface Location:	25-23N-09W	Sec-Twn- Rng	191	ft FSL	1,345	ft FWL
BH Location:	6-22N-08W	Sec-Twn- Rng	1226	ft FNL	2398	ft FWL

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM:

South on US Hwy 550 for 37.8 miles to MM 113.4; Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on CR #7890 for 1.3 miles to 4-way intersectionl; Left (Southeast) remaining on CR #7890 for 0.6 miles to fork; Right (Southwest) on CR #7890 for 1.5 miles to access road; Left on access road for 0.5 mile to Rodeo Unit 511H Pad (three wells planned to be drilled: 511H, 512H, 513H).

	QUIC	CK REFERENCI	E
	Sur TD (MD)	360	ft
	Int TD (MD)	2,693	ft
	KOP (MD)	4,092	ft
	KOP (TVD)	4,084	ft
	Target (TVD)	4,626	ft
	Curve BUR	10	°/100 ft
	POE (MD)	4,823	ft
to	TD (MD)	13,793	ft
	Lat Len (ft)	8,761	ft

#### WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	360	13.375	54.5	J-55	BTC	0	360
Intermediate	12.250	2,693	9.625	36.0	J-55	LTC	0	2,693
Production	8.500	13.793	5.500	17.0	P-110	LTC	0	13.793

#### CEMENT PROPERTIES SUMMARY:

					Hole Cap.		TOC	
	Туре	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	(cuft/ft)	% Excess	(ft MD)	Total (sx)
Surface	TYPE III	14.6	1.39	6.686	0.6946	100%	0	350
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	0.3627	70%	0	502
Inter. (Tail)	Type III	14.6	1.37	6.63	0.3132	20%	2,130	137
Prod. (Lead)	Type I / II	12.4	2.360	13.40	0.2691	65%	0	575
Prod. (Tail)	G:POZ blend	13.3	1.560	7.70	0.2291	10%	3,587	1,615

### **COMPLETION / PRODUCTION SUMMARY:**

Frac: 40 plug-and-perf stages with 360,000 bbls slickwater fluid and 15,000,000 lbs of proppant (estimated)Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assitance)Production: Produce through production tubing via gas-lift into permanent production and storage facilities

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	356	356
Kirtland	441	441
Fruitland	671	671
Pictured Cliffs	1,021	1,021
Lewis	1,146	1,146
Chacra	1,406	1,406
Cliff House	2,431	2,434
Menefee	2,466	2,470
Point Lookout	3,431	3,437
Mancos	3,581	3,587
Gallup (MNCS_A)	3,916	3,921
MNCS_B	4,021	4,027
MNCS_C	4,106	4,112
MNCS_Cms	4,146	4,152
MNCS_D	4,271	4,282
MNCS_E	4,421	4,457
MNCS_F	4,476	4,532
MNCS_G	4,546	4,648
MNCS_H	4,593	4,742
MNCS_I	4,649	4,909
FTP (LP) TARGET	4,626	4,823
LTP (TD) TARGET	4,586	13,584



### **ENDURING RESOURCES IV, LLC** 6300 S SYRACUSE WAY, SUITE 525 **CENTENNIAL, COLORADO 80211**

### DRILLING PLAN:

Drill, complete, and equip single lateral in the Mancos-I formation

WELL INFORMATION:				
Name:	RODEO UNIT 512H			
API Number:	30-045-35874			
AFE Number:	DV03088			
ER Well Number:	NM08212.01			
State:	New Mexico			
County:	San Juan			
Surface Elevation:	6,798 ft ASL (GL)	6,811 ft ASL (KB)		
Surface Location:	25-23N-09W Sec-Twn-Rng	191 ft FSL	1,345 ft FWL	
	36.191179 ° N latitude	107.744868 ° W longitude	(NAD 83)	
BH Location (LTP):	6-22N-08W Sec-Twn-Rng	1,226 ft FNL	2,398 ft FWL	
	36.172739 $^{\circ}$ N latitude	107.723377 ° W longitude	(NAD 83)	
Driving Directions:	FROM THE INTERSECTION O	F US HWY 550 & US HWY 64 IN B	BLOOMFIELD, NM:	
	South on US Hwy 550 for 37.	8 miles to MM 113.4; Right (Sout	hwest) on CR #7890 for 0.8 mile	es to fork; Left (South)
	remaining on CR #7890 for 1	3 miles to 4-way intersectionl; Le	eft (Southeast) remaining on CR	#7890 for 0.6 miles to
			1.1.0	

CR #7890 for 0.6 miles to fork; Right (Southwest) on CR #7890 for 1.5 miles to access road; Left on access road for 0.5 mile to Rodeo Unit 511H Pad (three wells planned to be drilled: 511H, 512H, 513H).

### GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	0/G/W	Pressure
	Ojo Alamo	6,455	356	356	W	normal
	Kirtland	6,370	441	441	W	normal
	Fruitland	6,140	671	671	G, W	sub
	Pictured Cliffs	5,790	1,021	1,021	G, W	sub
	Lewis	5,665	1,146	1,146	G, W	normal
	Chacra	5,405	1,406	1,406	G, W	normal
	Cliff House	4,380	2,431	2,434	G, W	sub
	Menefee	4,345	2,466	2,470	G, W	normal
	Point Lookout	3,380	3,431	3,437	G, W	normal
	Mancos	3,230	3,581	3,587	0,G	sub (~0.38)
	Gallup (MNCS_A)	2,895	3,916	3,921	0,G	sub (~0.38)
	MNCS_B	2,790	4,021	4,027	0,G	sub (~0.38)
	MNCS_C	2,705	4,106	4,112	0,G	sub (~0.38)
	MNCS_Cms	2,665	4,146	4,152	0,G	sub (~0.38)
	MNCS_D	2,540	4,271	4,282	0,G	sub (~0.38)
	MNCS_E	2,390	4,421	4,457	0,G	sub (~0.38)
	MNCS_F	2,335	4,476	4,532	0,G	sub (~0.38)
	MNCS_G	2,265	4,546	4,648	0,G	sub (~0.38)
	MNCS_H	2,218	4,593	4,742	0,G	sub (~0.38)
	MNCS_I	2,162	4,649	4,909	0,G	sub (~0.38)
	FTP (LP) TARGET	2,185	4,626	4,823	0,G	sub (~0.38)
	LTP (TD) TARGET	2,225	4,586	13,584	O,G	sub (~0.38)

Surface: Nacimiento

Oil & Gas Zones: Several gas bearing zones will be encountered; target formation is the Gallup

Pressure:	Normal (0.43 psi/ft) or sub-no	rmal pressu	ire gradients	anticipated in all formations			
	Max. pressure gradient:	0.43	psi/ft	Evacuated hole gradient:	0.22	psi/ft	
	Maximum anticipated BH pre	ssure, assu	ming maxim	um pressure gradient:	1,990	psi	
	Maximum anticipated surface	980	psi				
emnerature.	Maximum anticipated BHT is	$125^{\circ}$ E or le	ec.				

### Temperature: Maximum anticipated BHT is 125° F or less

### H<sub>2</sub>S INFORMATION:

H<sub>2</sub>S Zones: Encountering hydrogen-sulfide bearing zones is NOT anticipated.

Safety: Sensors and alarms will be placed in the substructure, on the rig floor, above the pits, and at the shakers.

### LOGGING, CORING, AND TESTING:

Mud Logs: None planned; gas detection from drill out of 13-3/8" casing to TD; remote geo-steering from drill out of 9-5/8" casing to TD.

MWD / LWD: MWD surveys with inclination and azimuth in 100' stations (minimum) from drill out of 13-3/8" casing to TD; Gamma Ray from drill out of 9-5/8" casing to TD; Gamma Ray optional in 12-1/4" intermediate hole Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 5-1/2" casing from deepest free-fall depth to surface

### DRILLING RIG INFORMATION:

Contractor:	Ensign
Rig No.:	145
Draw Works:	Lewco LDS 1500K (1,000 hp)
Mast:	ADR 1000 Cantilever Triple (134 ft, 500,000 lbs)
Top Drive:	Tesco 350-EXI-600 (250 ton)
Prime Movers:	2 - CAT 3512 (1,350 hp), 1 -CAT C32 (1,100 hp)
Pumps:	2 - Mudder MD11 (5,000 psi)
BOPE 1:	T3 Annular & Shaffer double gate ram (13-5/8", 5,000 psi)
Int Hole BOPE 2:	T3 annular(13-5/8", 5,000 psi)
Prod Hole BOPE 2:	T3 annular/ Townsend Double gate(11", 5,000 psi)
Choke	3", 5,000 psi
KB-GL (ft):	13
Note:	Actual drilling rig may vary depending on availability at time the well is scheduled to be drilled.
Note:	BOPE 2 are alternate stacks to be used only if problems with rig height and BOP 1 height are encountered.
	Intermediate hole BOPE 2 is designed for 2,000 psi permit requirements.
BOPE REQUIREMENT	S:
	See attached diagram for details regarding BOPE specifications and configuration.
1)	Rig will be equipped with upper and lower kelly cocks with handles available.
2)	Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the

- well.
- 3) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 4) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 5) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's 6) closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when the there is no power to the accumulator.

### FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:	Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded
	daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the
	readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts
	will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).

- Closed-Loop System: A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads, All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimimize the amount of fluids and solids that require disposal.
  - Fluid Disposal : Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).
  - Solids Disposal : Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech. Inc.).
  - Fluid Program: See "Detailed Drilling Plan" section for specifics and fluid program from Newpark. Sufficient weighting agent will be on location to weight up mud system to balance the maximum expected pressure gradient.

#### DETAILED DRILLING PLAN:

SURFACE:	Drill verticall	y to casin	g setting	depth	(plus necessar	y rathole), r	un casing	, cement casing	g to surf	face.
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0 ft (MD)	to	350 ft (MD)	Hole Section Length:	350 ft
0 ft (TVD)	to	350 ft (TVD)	Casing Required:	350 ft
Note: Surface hole may be dri	illed cased a	nd cemented with a smaller r	in in advance of the drilling rig	

Note: Surface hole may be drilled, cased, and cemented with a smaller rig in advance of the drilling rig.

First         Type         WW (pg)         (Mu/30 min)         PV (c)         (b/100 sqt)         pti         Comments           Bit Mater         Min				FL		YP				
Irred. Water8.4N/C2 - 129.0Spud mudNote Size:7.12/2"BI / Motor:Mill Tooth or PDC, no motorW/D / Survey:NoWD, deviation survey:Logging:NoneProcedure:PDI to JU. DE 12/4" bit and open to 17-3/2" if unable to drill with 17-1/2" bit. Run inclination survey in 100 stations from 10 to surface. Condition hole and fluid for casing running as required. TOOH. Run casing. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface. Install cellar a wellhead.Casing Specie13.37554.5J-5597C1.3302.730953.000999.000Janding13.37554.5J-5597C1.3302.731115.654JandingInternational to the surface install with 8.4 ppg fluid with 10.000 fbx our-pult7.337.311.731JandingInternational to the surface install with 8.4 ppg fluid with 10.000 fbx our-pult7.337.311.731JandingInternational to be off 8.4 ppg fluid with 10.000 fbx our-pultTernation: bacyet weight in 8.4 ppg fluid with 10.000 fbx our-pultTernation: bacyet weight in 8.4 ppg fluid with 10.000 fbx our-pultJange EfftilsInternational to burdleValid (walid)WalerNearingN/AMole-up as per API Buttress Connection running procedure.N/AN/AMole-up as per API Buttress Connection running procedure.N/AN/AMole-up as per API Buttress Connection running procedure.N/AN/AMole-up as per Jistop-banded 10 from each cellar an bottom 3Jrb.1 centralizer per Jist	Fluid:	Туре	MW (ppg)	(mL/30 min)	PV (cp)	(lb/100 sqft)	рН	Comn	nents	
Index set:         17-1/2*           Bif / Mater:         Mill Cohl or PDC, no mator           WD / Survey:         No MWD, deviation survey:           Logging:         None           Procedure:         Drill to TD. Use 12/4* bit and open to 17-1/2* if in nable to drill with 17-1/2* bit. Run inclination survey:           Logging:         None           Procedure:         Drill to TD. Use 12/4* bit and open to 17-1/2* if in nable to drill with 17-1/2* bit. Run inclination survey:           cering Spece:         Drive:         Control Collapse (pii)         Purst (pii)           Spece:         13.3         5/1         116.64           Min. S.F.         Assumptions:         Collapse (pii)         Purst (pii)         Purst (pii)           Minum:         N/A         Spece         13.3         5/1         116.64           Mode op as per API Butters:         Collapse (pii)         Purst (pii)		Fresh Water	8.4	N/C	2 - 8	2 - 12	9.0	Spud	mud	
<ul> <li>b) / more in the Number Dec, itel interface in the second seco</li></ul>	Hole Size:	17-1/2" Mill Teeth or I	DDC no motor							
Logging:       None:         Proceed:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 17-1/2" bit. Bun inclination survey in 100          Sector:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 17-1/2" bit. Bun inclination survey in 100          Casing Spect:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 17-1/2" bit. Bun inclination survey in 100          Casing Spect:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 17-1/2" bit. Bun inclination survey in 100          Casing Spect:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 12-1/2" bit. Bun inclination survey in 100          Spect:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 12-1/2" bit. Bun inclination survey in 100          Casing Spect:       Fill to To. Use 12 /4" bit and open to 17-3/2" if unable to drill with 12-1/2" bit. Bun inclination survey in 100          Min S.T.       Spect Site 100       Fill to To. Use 12 /4" bit and 0.5/5" bit 100          Proceeding:       Conn.       Collapse (public bit and 0.5/5" bit 1000          Proceeding:       Connation:       N/A       Moster public bit 10000 bit to ever public and 1000 bit to ever public and 1000 bit to ever public and 1000 bit to eveces and ed in table	MWD / Survey	No MWD dev	viation survey							
Procedure:       Drill to TD. Use 12-/4° bit and open to 17-12° if unable to drill with 12-12° bit. But inclination survey in 100° stations from TD to surface. Condition hole and fluid for casing running are required. TOOH. Hum casing. Pump centent as detailed below. Monitor returns during cement job and note cement volume to surface. Install cellar is wellhead.         Casing Spects       13.375       54.5       j>5       ntr       1.130       2.730       853.000       909.000         Loading       Mith. S.F.       Area       7.31       7.79         Assumptions:       Collapse: fully evacuated casing with 8.4 pag equivalent external pressure gradent       Burst: maximum anticipated surface pressure with 9.5 png fluid inside casing while drilling intermediate hole and 8.4 pag equivalent external pressure gradent         Tension: buoyed weight in 8.4 ppg fluid with 100.000 bits over pull       Maximum:       N/A         Order       Tension: buoyed weight in 8.4 ppg fluid with 100.000 bits over pull       maximum:       N/A         Minurum:       N/A       Optime to Surface to Total Cn       Control Inc       Total Cn         Centrolizers:       2 centralizers per if stop banded 10° from each collor on battom 3 jls, 1 centralizer per 2 jls to surface       Control         Centrolizers:       2 centralizers per if stop banded 10° from each collor on battom 3 jls, 1 centralizer per 2 jls to surface       Controlizers         Centrolizers:       2 centralizers per if stop banded 10° from each collor	Logaina:	None	lation survey							
stations from TD to surface. Condition hole and fluid for casing running as required. TOOH. Run casing. Pump content as detailed below. Monitor returns during cement job and note cement volume to surface. Install cells revellbead.	Procedure:	Drill to TD. Us	se 12-/4" bit an	d open to 17-1	/2" if unable t	o drill with 17-1	/2" bit. Run in	clination survey	y in 100'	
centrent as detailed below. Monitor returns during cement job and note cement volume to surface. Install cellar : wellkead.         casing Specs         Specs         Specs         13.375       54.5       15.0       Collapse (pi)) Burst (pi)       Burst (mi)       (hb)         Specs       13.375       54.5       15.0       Collapse (pi)) Burst (pi)       Monitor (hb)         Specs       Colspan="2">Colspan="2">Collapse: fully evacuated casing with 8.4 pp quivalent external pressure gradient         Burst: maximum anticipated surface perssure with 9.5 pp fluid inside casing while drilling intermediate hole and 8.4 pp quivalent external pressure gradient         Data dott colspan="2">Monitor mumiting procedure.         Special         Special         Monitor mumiting procedure.         Special         Monitor mumiting procedure.         Special         Special         Monitor mumiting procedure.         Special         Special         Special         Specindia <td colsp<="" td=""><td></td><td>stations from</td><td>TD to surface.</td><td>Condition hole</td><td>and fluid for o</td><td>asing running a</td><td>s required. TO</td><td>OH. Run casing</td><td>. Pump</td></td>	<td></td> <td>stations from</td> <td>TD to surface.</td> <td>Condition hole</td> <td>and fluid for o</td> <td>asing running a</td> <td>s required. TO</td> <td>OH. Run casing</td> <td>. Pump</td>		stations from	TD to surface.	Condition hole	and fluid for o	asing running a	s required. TO	OH. Run casing	. Pump
weilhead.         Cosing Specs:         Specs         13.375       54.5       J-55       BTC       11.30       27.70       853,000       909,000         Mint. S.F.         Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient         Busine maximum anticipated surface pressure gradient         Decimation of the second surface pressure gradient         Termination on the second surface pressure gradient         Termination on the second surface         Contrainers of the second surface         Centrainers oper Listop-banded 10 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface         Centrainers oper Listop-banded 20 from each cols on bottom 3 [ts, 1 centrainer per 2 [ts to surface		cement as det	ailed below. M	lonitor returns	during cemen	it job and note c	ement volum	e to surface. Ins	stall cellar an	
Caring Spects         with (lb/th)         Grade         Conn.         Collapse (ps)         Burst (ps)         Tens. Body         Tens. Collapse           Spects         13.375         54.5         J-55         BTC         1.130         2.730         83.000         9000           Lodding         1.733         571         116,634         116,654         116,654           Sumptions:         Collapse: fully evacuated cosing with 8.4 ppg equivalent external pressure gradient         Burst maximum anticipated surface texternal pressure gradient           Burst maximum anticipated surface         Tension: buoged weight in 8.4 ppg fuld with 100.000 its over-pull           orque (ft lbs):         Minumum:         N/A         Maximum:         N/A           Make-up as per API Buttress Connection running procedure.         Bits 1: centralizers per 1; is to surface         Centralizers           Centralizers         2 centralizers per 1; is top-banded 10' from each collar on botton 3 its, 1 centralizer per 2; its to surface         Centralizers           Centralizers         2 centralizers of activated cernent volumes assume grauge hole and the excess noted in table         Cation Collarizer           Tail Breed         Acceleration         6.686         0.6964         1.0000           Tail Breed         Acceleration         2.625 ft (MDO)         Collarizer           <		wellhead.	T	r		· · · · ·		-		
Casing Specs         Vert (b)/h         Grade         Conn.         Collapse (psi)         Burst (psi)         Lefts. 500 y         Lefts. 500 y <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
Caning Jeets:       IV (Un) 1       Under Contr.       Contrent.	Casina Spore		\A/+ (Ib /f+)	Grada	Conn	Collance (nci)	Burct (pci)	lens. Body	Tens. Conr	
Loding	Snecs	13,375	54.5	1-55	BTC	1,130	2,730	853.000	909.000	
Min. S.F.       7.39       4.78       7.31       7.79         Assumptions: Collapse: fully executed casing with 8.4 pg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 pg fluid inside casing while drilling intermediate hole and 8.4 pg equivalent external pressure gradient Tension: burged weight in 8.4 pg fluid with 10.00.0016 sover-pull         orque [ft ibs]:       Minumum:       N/A       Optimum:       N/A         Make-up as per APB attress Connection running procedure.       Statistic control for from each collar on bottom 315, 1 centralizer per 2 jts to surface         Centralizers       2 centralizers per it stop-banded 10 from each collar on bottom 315, 1 centralizer per 2 jts to surface         Centralizers       Type       Weight (pg)       (cut/sk)       (gal/sk)       (cut/sk)       (gal/sk)         TYPE III       1.6.6       1.3.9       6.6.60       0.6944       1000 (sx)       (sx)         Total Contention       Contention for 2.3 WotC       Diperevent/retime       Total Contention       Contention for 2.3 WotC       Notify NNOCD & BLM If cement is not circulated to surface.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.       Sot f (ND)       L2.80 (KI)       L2.80 (KI)         Sot f (ND)       to       2.626 ff (ND)       Hole Section Length: 2.28 (Sot ff (ND)       L3.90 (Sot ff (ND)       Contente: 1.2.28	Loading	101070	0 110		510	153	571	116,634	116,634	
Assumptions:       Collapse: fully evocuted cosing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated suffice pressure with 9.5 ppg full and with 20,000 Bis over-pull pressure gradient Tension: buryed weight in 8.4 ppg full and 100,000 Bis over-pull orque (ft lbs):         Make-up as per API Buttress Connection running procedure.         Basing Details:       Floatshoe. 1 It cosing, float collar, cosing to sufface         Centralizers:       2 centralizers per it stop-banded 10 <sup>r</sup> from each collar on bottom 3 [ts, 1 centralizer per 2 ]ts to sufface         Cernent:       Type       Weight (ppg)       (cutf/sk)       (gal/sk)       (cutf/ft)       x Excess       Planned TOC       Total Cn         Drake Energy Service:       Calculated center thoulones assume gauge hole and the excess noted in table       0       350         Drake Energy Service:       Calculated center thourses assume gauge hole and the excess noted in table       calculate	Min. S.F.					7.39	4.78	7.31	7.79	
Burst: maximum anticipated surface pressure with 9.5 ppg fluid unkide casing while drilling intermediate hole and 8.4 ppg quivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull arque (ft lbs): Minumum:: N/A Optimum:: N/A Maximum: N/A Make-up as per AP Buttress Connection running procedure. Saing Details: Float shoe. 1 jt casing, float collar, casing to surface Centralizers: 2 centralizers per Jt stop-banded 10 from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface Centralizers: 2 centralizers per Jt stop-banded 10 from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface Centralizers: 2 centralizers per Jt stop-banded 10 from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface Centralizers: 2 calculated centent volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Calculated Centement volumes assume gauge hole and the excess noted in table Centement for the second plan to casing setting depth, run casing, centent casing to surface. TarReGET CGS SHOE DEPTH is 150' TVD BELOW MENEFEE TOP Full to TP of CHC (b) to 2,2626 ft (TVD) Casing Required: 2,630 *TARGET CGS SHOE DEPTH is 150' TVD BELOW MENEFEE TOP Full to TD following directional plan cutters, target TFA 0.65 + 10 max); 6 - 14s = 0.902 sq-in TFA WO / Survey: MVD surveys with inclination and azimuth in 100' stations (minimum), GR optional Lognin		Assumptions:	Collapse: fully	evacuated cas	ing with 8.4 p	og equivalent ex	ternal pressur	e gradient		
Intermediate hole and 8.4 ppg equivalent external pressure gradient         Tensio: buoyed weight in 8.4 ppg full with 10.0000 lbs over-pull         orque (ft lbs): Minumum: N/A Optimum: N/A Maximum: N/A         Maximum: N/A Optimum: N/A Maximum: N/A         Maximum: N/A Optimum: N/A Maximum: N/A         Maximum: N/A Optimum: N/A Maximum: N/A         Maximum mit N/A Maximum: N/A Maximum: N/A         Maximum mit N/A Maximum Maximum: N/A Maximum mit N/A Maximum mit N/A Maximum         Maximum mit N/A Maximum mit N/A Maximum maximum mit N/A Maximum man			Burst: maximu	im anticipated	surface pressu	ire with 9.5 ppg	fluid inside ca	sing while drilli	ng	
Tensori: Dubyee weight in 8.4 ppg fluid with 100,000 its over-puil         orque (ft lbs):         Mike-up as per API Buttress Connection running procedure.         asing Detoits:       Nota shoe, 11, casing, float collar, casing to surface.         Centralizers:       2 centralizers per jt stop-banded 10' from each collar on bottom 3 [ts, 1 centralizer per 2 jts to surface.         Centralizers:       2 centralizers per jt stop-banded 10' from each collar on bottom 3 [ts, 1 centralizer per 2 jts to surface.         Centralizers:       2 centralizers per jt stop-banded 10' from each collar on bottom 3 [ts, 1 centralizer per 2 jts to surface.         Centralizers:       Calculated centent volumes assume gauge hole and the excess noted in table         Calculated centent volumes assume gauge hole and the excess noted in table       Calculated centent volumes assume gauge hole and the excess noted in table         Calculated centent volumes assume gauge hole and the excess noted in table       Calculated centent volumes assume gauge hole and the excess noted in table         Calculated centent volumes assume gauge hole and the excess noted in table       Calculated centent volumes assume gauge hole and the excess noted in table         Calculated centent volumes assume gauge hole and the excess noted in table       Calculated centent volumes assume gauge hole and the excess noted in table         Calculated centent volumes assume gauge hole and the excess noted in table       Calculated centent volumes assume gauge hole and the excess noted in table         Calcul			intermediate l	hole and 8.4 pp	g equivalent e	external pressure	e gradient			
Mode-up os per API Buttress Connection running procedure.       Modifium. 19/A         sing Details:       Float shee, 1 jt casing, float collar, casing to surface         Centralizers:       2 centralizers per jt stop-banded DI from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface         Cernent:       Type Weight (ppg)       (cuft/sk)       (gal/sk)       (cuft/sk)       50 stop         Drake Energy Services:       Colculated cement volumes assume gauge hole and the excess noted in table       Calumchonic b CO2 3% BWOC         ASTM Type III       14.6       1.33       6.666       0.590         ATM Type III       14.6       0.23 XB BWOC       Deparamit/riction         Tail Blend       Accelerator       reduer       Notify NMCOB & BLMI f cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         330 ft (MD)       to       2,626 ft (YD)       Casing Required: 2,63         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP       Type       WW (ppg)       mud.190' stations (minimum), GR optional         LIND (KCU & 88-9.5       20       8-14       8-14       9.0-9.5       No OBM         Hole Size:       12-1/4''       Bit / Motor:       MOTOR: NOV 087400 - 7/8, 4.0, stage, 0.16 re	Torave (ft lbc).	Minumum	τεπειοή: buoy N/Δ	eu weight in 8.4 Ontimum:	+ ppg זועומ wit או/א	.11 100,000 IDS ON Maximum	ver-puli N/Δ			
sing Details: Float shoe, 1] casing, float collar, casing to surface Centralizers: 2 centralizers per 1 is top-banded 10 from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface Type Weight (ppg) (cutfysk) (gal/sk) (cutfytk) (sc) (sc) (ft MD) (ss) TyPE III 14.6 1.39 6.686 0.6946 100% 0 350 Droke Energy Services: Colculated centent volumes assume gauge hole and the excess noted in table Calum Chiefer DC0.2 as BWCC Services: Colculated centent volumes assume gauge hole and the excess noted in table Calum Chiefer DC0.2 as BWCC ASTM Type III 58 BWCC Dogenary firstion AstM Type III 58 BWC Dogenary firstion AstM Type III 58 BWC Dogenary firstion Calum Chiefer DC0.2 as BWCC AstM Type III 58 BWC Dogenary firstion AstM Type III 58 BWC Dogenary firstion FIL 58 BWC DOGEN BWC PH IS 150' TVD BELOW MENETER TOP File III 58 Firstion SWC DASTM PH IS 150' TVD BELOW MENETER TOP Hole Ster: 12-1/4" Bit / Motor: POC W/mud motor tor (Petal) MWC (ppg) (mL/30 min 19 PV (cp) (bl/100 sqft) pH Comments Bit Seor 6-BLADE PDC W/16 mm or 19 mm cutters, target TFA 0.65 -1.0 max), 6-1.45 = 0.902 sq-in TFA BWD / Survey: MWD Surveys with inclination and azimuth in 100' stations (minimu), 6 ptional Loggin; None Pressure Test: NU BOPE and test (as noted above); pressure test 13-3/8" casing to  1,500 psi for 30 minutes. Procedue: Drill to To folowing directional plan (20' ratholes (asing	, orque (jt ibs).	Make-up as n	er API Buttress	Connection rur	ning procedu	re.	11/1			
Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Calum Chande Centralizer based         Centralizers per it stop-banded 10' from each collar on bottom 3 its, 1 centralizer per 2 its to surface         Calum Chande DCD 22 X BWOC         Centralizer per it stop to to 2 centralizer per 2 its to surface         Toll Base per directional plan to casing setting depth, run casing, cement casing to surface         Stop from to to asing setting depth, run casing, cement casing to surface         Stop from to to 2 ce30 ft (MDD)       Casing Required: 2,63         TAGET CSC SHOE DEPTH IS 150' TVD BLOW MENERER TOP         Fluid:       Type MW (ppg)	Casing Details:	Float shoe, 1 i	t casing, float c	collar, casing to	surface					
Cement:         Type         Weight (ppg)         (cuft/sk)         (gal/sk)         (cuft/ft)         % Excess (ft MD)         Planned TOC (st)           Drake Energy Services:         Calciunted cement volumes assume gauge hole and the excess noted in table         100%         350           Drake Energy Services:         Calciunted cement volumes assume gauge hole and the excess noted in table         100%         350           AstM Type III         Accelerator         reducer         100%         0         350           Tail Bend         Accelerator         reducer         100%         0         350           Notify MMCDD & BLMI f cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.         350 ft (MD)         10         2,630 ft (MD)         Hole Scain 1,820           ERMEDIATE:         Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         2,63         350 ft (TVD)         2,620 ft (TVD)         Casing Required:         2,63           *TARGET CGS SHOE DEPTH IS 150' TVD BELOW MENERE TOP         FL         Yppe         MW (ppg)         FL         Yppe         Comments           LSND (KCI)         8.8-9.5         20         8-14         8-14         9.0-9.5         No OBM           Hole Size:         12:1/4"         Bit / Motor:         <	Centralizers:	2 centralizers	per jt stop-ban	ded 10' from e	ach collar on l	pottom <u>3 jts, 1</u> c	entralizer per	2 jts to surface		
Cement:         Type         Weight (ppg)         (cuft/sk)         (gal/sk)         (cuft/sk)         % Excess         (ft MD)         (sx)           Drake Energy Services:         Calculated cement volumes assume gauge hole and the excess noted in table         0         350           Drake Energy Services:         Calcum Characte D-CDJ 28 NVOC         0         350           ASTM Type III         Calcum Characte D-CDJ 28 NVOC         0         350           Services:         Calcum Characte D-CDJ 28 NVOC         0         350           ASTM Type III         Calcum Characte D-CDJ 28 NVOC         0         350           MINOCD & BLM If cement is not circulated to surface.         Cement must achieve 500 psi compressive strength before drilling out.           ERMEDIATE:         Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         2,63           350 ft (ND)         to         2,630 ft (ND)         Casing Required:         2,63           *TARGET CSG SHOE DEPTH IS 150' TVD BLOW MENFEE TOP         *         *         No OBM           Fluid:         Type         MW (ppg)         (mL/30 min)         PV (cp)         (b/100 sqft)         pH         Comments           LSND (KCI)         8.8-9.5         20         8-14         8-14         9.0-9.5         No OBM <td></td> <td></td> <td></td> <td>Yield</td> <td>Water</td> <td>Hole Cap.</td> <td></td> <td>Planned TOC</td> <td>Total Cmt</td>				Yield	Water	Hole Cap.		Planned TOC	Total Cmt	
ITTPL III         14.b         1.39         6.68b         0.6946         100%         0         350           Drake Energy Services:         Calcun Chlonde         D-C2 2K BWCC         Stark Typell         SK BWCC         Disperant/Friction           ASTM Typell         SK BWCC         Disperant/Friction         SK BWCC         Disperant/Friction           Bind         Accelerator         reducer         Notify NMOCD & BLM if cement is not circulated to surface. Cement casing to surface.           ERMEDIATE:         Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         2,630 ft (ND)         Hole Section Length:         2,283           350 ft (TVD)         to         2,630 ft (ND)         Casing Required:         2,633         7           Fluid:         Type MW (ppg)         FL         YP         YP         Comments           LSND (KCI)         8.8 - 9.5         20         8 - 14         9.0 - 9.5         No OBM           Hole Size:         12-1/4"         Bit / Motor:         POC (w/md motor         100 (Stations (Inimum), GR optional         Loggins;           Vor (Detail):         NOTOR: NOV 08740 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BIT: 5 - or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA           WD / S	Cement:	Туре	Weight (ppg)	(cuft/sk)	(gal/sk)	(cuft/ft)	% Excess	(ft MD)	(sx)	
Drake Energy Services:       Calculan Chloride       D-CD2 2H BWOC         ASTM Type III       SM BWOC       Dispersant/Priction         Tail       Biend       Accelerator       reducer         Notify NNOCD       BLDM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         350 ft (MD)       to       2,630 ft (MD)       Hole Section Length:       2,280 ft (MD)         *TARGET CGS SHOE DEPTH IS 150° TVD BELOW MENEFEE TOP       **       **       Type in Ying (mL/30 min) PV (cp) (ib/100 sqft) pH       Comments         Ising Naccurrent       Ising Naccurrent       FL       YP       VP       Comments         Hole Size:       12:1/4*       Bit / Motor       Bit / Motor       POC (ph 13)       Bit / So or 6-BLADE POC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 148 = 0.902 sq-in TFA         WD / Survey:       WD Surveys with inclination and azimuth in 100' stations (minimum), GR optional       Logging: None       1,500       psi for 30 minutes.         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well       notain mota as needing to maxing carcuired.         Logging:       None       A deg/100' and keep side length + 10', when p		TYPE III	14.6	1.39	6.686	0.6946	100%	0	350	
Calcume Choice No. CO2.22:89 WOCC         Toil Bend Accelerator reducer         Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.         ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         File         350 ft (WD) to 2,630 ft (WD) Casing Required: 2,630         File         File <td>Drake Er</td> <td>ergy Services:</td> <td>Calculated cer</td> <td>nent volumes a</td> <td>issume gauge</td> <td>hole and the exc</td> <td>cess noted in t</td> <td>able</td> <td></td>	Drake Er	ergy Services:	Calculated cer	nent volumes a	issume gauge	hole and the exc	cess noted in t	able		
ADM type III       SNE WICC       Dependent Produce         Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.       Image: Compressive strength before drilling out.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.       350 ft (MD)       to       2,630 ft (MD)       Hole Section Length:       2,228         350 ft (TVD)       to       2,636 ft (TVD)       Casing Required:       2,635         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP       Type       MW (ppg)       FL       YP       PH       Comments         ISND (KCI)       88.9.9.5       20       8-14       8-14       9.0-9.5       No OBM         Hole Size:       12-1/4"       Bit / Motor:       POC w/mud motor       Notor:       NO OR840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA       WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional       Logging: None         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu			Calcium Chloride	D-CD2 .2% BWOC						
Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         350 ft (MD)       to 2,630 ft (MD)       Hole Section Length: 2,28         350 ft (TVD)       to 2,626 ft (TVD)       Casing Required: 2,63         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP         Fluid:         Type       MW (ppg)         mL/30 min       PV (cp)         Ibi/ Motor:       POC w/mud motor         Start 12-1/4"         Bit / Motor:         BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA AG5 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         W// Survey:         W/ DSEPT and test (as noted above); pressure test 13-3/8" casing setting depth). Steer as needed to keep well on plan. Keep DES < 3 deg/100' and keep Side length < 10', when possible. Take surveys every stand, at a minimum Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At 1 condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE: Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	Tail	ASTM Type III Blend	.5% BWOC Accelerator	Dispersant/Friction reducer						
before drilling out.         ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         State of the problem of the proble		Notify NMOC	D & BLM if cem	nent is not circ	ulated to surfa	ace. Cement mu	st achieve 50	0 psi compressi	ve strength	
ERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         350 ft (MD)       to       2,630 ft (MD)       Hole Section Length:       2,28         350 ft (TVD)       to       2,630 ft (MD)       Casing Required:       2,63         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP         Fluid:       Type MW (ppg) (ml/30 min) PV (cp) (lb/100 sqft) pH       Comments         LSND (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"         Bit / Motor:         PDC w/mud motor         totor (Detail):         MOD RN: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey: MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional         Logging: None         Procedure:         Prill to Tb following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). M		before drilling	g out.							
ERMEDIATE:       Drill as per directional plan to casing setting depth, run casing, cement casing to surface.         350 ft (MD)       to       2,630 ft (MD)       Casing Required: 2,28         350 ft (TVD)       to       2,626 ft (TVD)       Casing Required: 2,63         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP         Fluid:       Type       MW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH       Comments         LISND (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"         Bit / Motor         POC w/mud motor         totr (DER: NOV 0878400 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 145 e 0.902 sq-in TFA         WD / Survey: With inclination and azimuth in 100' stations (minimum), GR optional         Logging: None       Ters:         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DIS < 3 deg/100' and keep silde length < 10', when possible. Take surveys every stand, at a minimu										
350 ft (MD)       to       2,630 ft (MD)       Hole Section Length:       2,28         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP       *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP       YP       Casing Required:       2,63         *Iuid:       Type       MW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH       Comments         LSND (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"       Bit / Motor:       PDC w/mud motor       otor (Detail):       MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG BIT: S - or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MVD Surveys with inclination and azimuth in 100' stations (minimum), GR optional Logging: None       None         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS - 3 deg/100' and keep sild ength < 10', when possible: Take surveys every stand, at a minimum Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At 1 condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.										
350 It (1/V0)       Casing Required: 2,65         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP         *TARGET CSG SHOE DEPTH IS 150' TVD BELOW MENEFEE TOP         Fluid:         Type       MW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH         Fluid:       Type       MW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH       Comments         LSND (XCI)       8.8 - 9.5       20       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"         Bit / Motor:       PDC w/mud motor         tor OFBLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey: WWD survey: WHO Survey: WHO Survey: WWD survey: Multiculation and azimuth in 100' stations (minimum), GR optional       Logging:         Procedure:       Dill to D following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep wel       on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu <t< td=""><td>ITERMEDIATE:</td><td>Drill as per di</td><td>rectional plan t</td><td>to casing settin</td><td>ng depth, run</td><td>casing, cement</td><td>casing to surfe</td><td>ace.</td><td></td></t<>	ITERMEDIATE:	Drill as per di	rectional plan t	to casing settin	ng depth, run	casing, cement	casing to surfe	ace.		
Fluid:       Type       NWW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH       Comments         Hole Size:       12-1/4"       Bit / Motor:       PDC w/mud motor       No OBM       No OBM         Iotor (Detail):       MOTOR:       NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG       Bit / Motor:       PDC w/mud motor         Iotor (Detail):       MOTOR:       NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG       Bit : 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MWD survey:       MWD burveys with inclination and azimuth in 100' stations (minimum), GR optional       Logging:       None         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	ITERMEDIATE:	Drill as per di 350	rectional plan t ft (MD)	to casing settin to	ng depth, run 2,630	casing, cement ( ) ft (MD)	casing to surfe Hole S	ace. Section Length:	2,280	
Fluid:       Type       MW (ppg)       FL       YP       PV (cp)       (lb/100 sqft)       pH       Comments         LSDD (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"       8       8 - 14       9.0 - 9.5       No OBM         Bit / Motor:       PDC w/mud motor	ITERMEDIATE:	Drill as per di 350 350	rectional plan t ft (MD) ft (TVD)	to casing settin to to S 150' TVD BEL	ng depth, run 2,630 2,626 OW MENEEE	casing, cement o ft (MD) ft (TVD) TOP	<i>casing to surfe</i> Hole S Ca	ace. Section Length: sing Required:	2,280 2,630	
Fluid:       Type       MW (ppg)       (mL/30 min)       PV (cp)       (lb/100 sqft)       pH       Comments         LSND (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"       Bit / Motor:       PDC w/mud motor       Identify       Identify       No OBM       No OBM         Bit / Motor:       PDC w/mud motor       Identify       IdentifyIdentifyIdentify	NTERMEDIATE:	Drill as per dia 350 350 *TARGET CSG	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I.	to casing settin to to S 150' TVD BEL	ng depth, run 2,630 2,620 OW MENEFEE	casing, cement ( ) ft (MD) 5 ft (TVD) 5 TOP	casing to surfe Hole S Ca	ace. Section Length: sing Required:	2,280 2,630	
LSND (KCI)       8.8 - 9.5       20       8 - 14       8 - 14       9.0 - 9.5       No OBM         Hole Size:       12-1/4"       Bit / Motor       PDC w/mud motor       No OBTR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG BIT: 5 or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional Logging: None       None         Pressure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing to 1,500 psi for 30 minutes.       Procedure:         Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep side length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	NTERMEDIATE:	Drill as per dia 350 350 *TARGET CSG	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I.	to casing settin to to S 150' TVD BEL FL	ng depth, run 2,630 2,626 OW MENEFEE	casing, cement of t (MD) t (TVD) TOP YP	casing to surfo Hole S Ca	ace. Section Length: sing Required:	2,280 2,630	
Hole Size:       12-1/4"         Bit / Motor:       PDC w/mud motor         Iotor (Detail):       MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         Bit : 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional         Logging:       None         Preseure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing to       1,500       psi for 30 minutes.         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well       on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.         Casing Specs:       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Min. S.F.       Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling 	<u>NTERMEDIATE:</u> Fluid:	Drill as per di. 350 350 *TARGET CSG Type	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg)	to casing settin to 5 150' TVD BEL FL (mL/30 min)	ng depth, run 2,630 2,626 OW MENEFEE PV (cp)	casing, cement of t (MD) t (TVD) TOP YP (lb/100 sqft)	casing to surfo Hole S Ca pH	ace. Sing Required:	2,280 2,630 nents	
Bit / Motor:       PDC w/mud motor         Iotor (Detail):       MOTOR:: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional         Logging:       None         Pressure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing solution (Deving directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface.	NTERMEDIATE: Fluid:	Drill as per di. 350 *TARGET CSG Type LSND (KCI)	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5	to casing settin to S 150' TVD BEL FL (mL/30 min) 20	ng depth, run 2,630 2,626 OW MENEFEE PV (cp) 8 - 14	casing, cement of t (MD) t (TVD) TOP YP (lb/100 sqft) 8 - 14	pH 9.0 - 9.5	cee. sing Required: Comn	2,280 2,630 nents DBM	
lotor (Detail):       MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG         BT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA         WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional Logging: None         Pressure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing to 1,500 psi for 30 minutes.         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep wel on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	I <u>TERMEDIATE:</u> Fluid: Hole Size:	Drill as per dii 350 *TARGET CSG Type LSND (KCI) 12-1/4"	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20	ng depth, run 2,630 2,626 OW MENEFEE PV (cp) 8 - 14	casing, cement of t (MD) t (TVD) TOP YP (lb/100 sqft) 8 - 14	casing to surfu Hole S Ca pH 9.0 - 9.5	ection Length: sing Required: Comn No C	2,280 2,630 nents DBM	
WD / Survey:       MWD surveys with inclination and azimuth in 100' stations (minimum), GR optional Logging: None         Pressure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing to       1,500       psi for 30 minutes.         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep wel on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	Fluid: Hole Size: Bit / Motor:	Drill as per dii 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud n	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20	ng depth, run 2,630 2,620 OW MENEFEE PV (cp) 8 - 14	casing, cement ( b ft (MD) c ft (TVD) C TOP YP (lb/100 sqft) 8 - 14	pH 9.0 - 9.5	ace. sing Required: Comn No C	2,280 2,630 nents DBM	
Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       (lbs)       (lbs)         Casing Specs:       Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Min. S.F.       Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient       Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg fluid with 100,000 lbs over-pull         orgue (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         production hole and 1.4 casing, float collar, casing to surface       Spece       9.625       1.76       3.11       3.09       2.48	I <u>TERMEDIATE:</u> Fluid: Hole Size: Bit / Motor: Motor (Detail):	Drill as per dii 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud m MOTOR: NOV	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/15	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20	ng depth, run ( 2,630 2,626 OW MENEFEE PV (cp) 8 - 14	Casing, cement ( ) ft (MD) 5 ft (TVD) TOP (Ib/100 sqft) 8 - 14 DEG, 900 GPM,	pH 9.0 - 9.5	ace. sing Required: Comn No C	2,280 2,630 nents DBM	
Pressure Test:       NU BOPE and test (as noted above); pressure test 13-3/8" casing to       1,500       psi for 30 minutes.         Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At 1 condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Sumary	Drill as per dii 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BI	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm	ng depth, run ( 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe	casing, cement (         0 ft (MD)         5 ft (TVD)         7 TOP         YP         (lb/100 sqft)         8 - 14	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = 8 optional	ace. sing Required: Comn No C 0.902 sq-in TF/	2,280 2,630 nents DBM	
Procedure:       Drill to TD following directional plan (20' rat-hole (MAX) past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At 1 condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	ITERMEDIATE: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging:	Drill as per dii 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud m MOTOR: NOV BIT: 5- or 6-BL MWD surveys None	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth	ng depth, run ( 2,630 2,626 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station	casing, cement (         0 ft (MD)         5 ft (TVD)         7 TOP         YP         (lb/100 sqft)         8 - 14         DEG, 900 GPM,         t TFA 0.65 - 1.0         is (minimum), G	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional	ace. sing Required: Comn No C 0.902 sq-in TF/	2,280 2,630 nents DBM	
on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible. Take surveys every stand, at a minimu Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At T condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 0007 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted i	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressui	ng depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8'	Casing, cement (           0 ft (MD)           5 ft (TVD)           7 TOP           YP           (lb/100 sqft)           8 - 14           DEG, 900 GPM,           t TFA 0.65 - 1.0           is (minimum), G           ' casing to	pH           9.0 - 9.5           950 DIFF PSIG           max); 6 - 14s =           R optional           1,500	ace. sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu	2,280 2,630 ments DBM	
Target flow-rates of 750 GPM (higher if able to control return rates). Minimum desired flow-rate is 650 GPM. At 1 condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.         Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       (lbs)       (lbs)         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Min. S.F.       Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull         orque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface       5,200       Maximum: 6,500       Maximum: 6,500	TERMEDIATE: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 00507 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction	to casing settin to to S 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra	eg depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX)	casing, cement ( ) ft (MD) i ft (TVD) TOP YP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 Is (minimum), G ' casing to past casing setti	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste	ace. sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu- psi for 30 minu-	2,280 2,630 ments DBM A A utes. o keep well	
condition hole and fluid for casing running. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detaile below. Monitor returns during cement job and note cement volume to surface.         Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       (lbs)       (lbs)         Specs:       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading Min. S.F.       1,147       1,130       182,566       182,566         Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull         orque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 it casing, float collar, casing to surface       S200       Maximum:       6,500	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Motor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli	pg depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10	casing, cement ( ) ft (MD) i ft (TVD) TOP YP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 is (minimum), G ' casing to past casing setti )', when possible	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey	ace. sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu- ser as needed to s every stand, a	2,280 2,630 nents DBM A utes. o keep well t a minimun	
Land casing. ND BOPE. Walk rig to next well and perform off-line cement job, if possible. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface.         Casing Specs:         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading       1,147       1,130       182,566       182,566       182,566         Min. S.F.       Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull preque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         gummary: Float shoe, 1 jt casing, float collar, casing to surface	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 MOTOR 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPM	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 4 (higher if able	PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re	Casing, cement of t (MD) t (TVD) TOP YP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 is (minimum), G ' casing to past casing setti y, when possible turn rates). Mini	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste e. Take survey mum desired	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 650	2,280 2,630 nents DBM A utes. o keep well it a minimum D GPM. At TE	
Delow. Monitor returns during cement job and note cement volume to surface.         Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       (lbs)       (lbs)       (lbs)         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading       1,147       1,130       182,566       182,566         Min. S.F.       Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient         Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient         Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull       prque (ft lbs):         Minumum:       3,900       Optimum:       5,200         Maximum:       6,500       ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 tes of 750 GPM and fluid for c	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 4 (higher if able asing running.	PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca	Casing, cement of t (MD) is ft (TVD) TOP YP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 is (minimum), G ' casing to past casing setting ', when possible turn rates). Mini- ising using a CRT	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Stee c. Take survey mum desired and washing	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 65C / circulating as	2,280 2,630 nents DBM A utes. o keep well t a minimum ) GPM. At TE required.	
Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       Tens. Body (lbs)       Tens. Collapse         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading Min. S.F.       1,147       1,130       182,566       182,566         Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull         orque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface       Surface       Surface       Surface	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): /WD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 tes of 750 GPM and fluid for c ID BOPE. Walk	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 4 (higher if able asing running. rig to next well	PV (cp) 8 - 14 PV (cp) 8 - 14 Frev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform	casing, cement of 0 ft (MD)         is ft (TVD)         : TOP         YP         (Ib/100 sqft)         8 - 14         DEG, 900 GPM, 14 TFA 0.65 - 1.0 ns (minimum), G         ' casing to past casing setting ', when possible turn rates). Mini- ising using a CRT off-line cement	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste e. Take survey mum desired and washing job, if possible	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 65C / circulating as e. Pump cemen	2,280 2,630 nents DBM A utes. o keep well t a minimum ) GPM. At TE required. t as detailed	
Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       Tens. Body (lbs)       Tens. Con (lbs)         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading Min. S.F.       1,147       1,130       182,566       182,566         Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull       Source pressure gradient (ft lbs):         Optimum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface       Maximum:       6,500	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): VWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monit	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 tes of 750 GPM and fluid for c ID BOPE. Walk or returns durin	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 4 (higher if able asing running. rig to next well ng cement job a	PV (cp) 8 - 14 PV (cp) 8 - 14 Frev/gal, 1.83 cutters, target in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note cemu	casing, cement of 0 ft (MD)         is ft (TVD)         : TOP         YP         (Ib/100 sqft)         8 - 14         DEG, 900 GPM, 14 TFA 0.65 - 1.0 ns (minimum), G         ' casing to past casing setti b', when possible turn rates). Mini using using a CRT off-line cement ent volume to su	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible urface.	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 65C / circulating as e. Pump cemen	2,280 2,630 nents DBM A utes. o keep well t a minimun ) GPM. At TE required. t as detailed	
Casing Specs:       Wt (lb/ft)       Grade       Conn.       Collapse (psi)       Burst (psi)       Itens. Goly       Itens. Col         Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading Min. S.F.       1,147       1,130       182,566       182,566         Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull       Value         orque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface       Surface       Surface       Surface	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monitu	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPM and fluid for c ID BOPE. Walk pr returns durin	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 4 (higher if able asing running, rig to next well ng cement job a	PV (cp) 8 - 14 PV (cp) 8 - 14 Frev/gal, 1.83 cutters, target in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note ceme	casing, cement of 0 ft (MD)         is ft (TVD)         : TOP         YP         (Ib/100 sqft)         8 - 14         DEG, 900 GPM, 14 TFA 0.65 - 1.0 ns (minimum), G         ' casing to past casing setti ', when possible turn rates). Mini using using a CRT off-line cement ent volume to su	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible urface.	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 65C / circulating as e. Pump cement	2,280 2,630 nents DBM A utes. o keep well t a minimum ) GPM. At TE required. t as detailed	
Specs       9.625       36.0       J-55       LTC       2,020       3,520       564,000       453,000         Loading Min. S.F.       1,147       1,130       182,566       182,566         Assumptions:       Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull         orque (ft lbs):       Minumum:       3,900       Optimum:       5,200       Maximum:       6,500         ng Summary:       Float shoe, 1 jt casing, float collar, casing to surface       Surface       Surface       Surface	Fluid: Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure:	Drill as per dia 350 350 *TARGET CSG LSND (KCl) 12-1/4" PDC w/mud n MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monity	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPM and fluid for c ID BOPE. Walk prireturns durin	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra 00' and keep sli 1 (higher if able asing running. rig to next well ng cement job a	PV (cp) 8 - 14 PV (cp) 8 - 14 Frev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note ceme	casing, cement of 0 ft (MD)         is ft (TVD)         : TOP         YP         (Ib/100 sqft)         8 - 14         DEG, 900 GPM, 18 - 14         DEG, 900 GPM, 16 TFA 0.65 - 1.0 10 s (minimum), G         ' casing to past casing setti 0', when possible turn rates). Mini- using using a CRT off-line cement ent volume to success	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible urface.	cection Length: sing Required: Comm No C 0.902 sq-in TF/ psi for 30 minu eer as needed to s every stand, a flow-rate is 65C / circulating as e. Pump cement	2,280 2,630 nents DBM A utes. o keep well t a minimum D GPM. At TE required. t as detailed	
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orque (ft Ibs): Minumum: 3,900 Optimum: 5,200 Maximum: 6,500 ng Summary: Float shoe, 1 jt casing, float collar, casing to surface	Fluid: Hole Size: Bit / Motor: Motor (Detail): MWD / Survey: Logging: Pressure Test: Procedure: Specs Loading Min. S.F.	Drill as per dia 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud m MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monitu	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPM and fluid for c ID BOPE. Walk or returns durin Wt (Ib/ft) 36.0 Callapse: fully Burst: maximu production ho	to casing settin to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra bo' and keep sli 1 (higher if able asing running, rig to next well bg cement job a Grade J-55 evacuated cass im anticipated le and 8.4 ppg	eg depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note cemu Conn. LTC ing with 8.4 pp surface presso	casing, cement of t (MD) t (MD) t (TVD) TOP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 as (minimum), G ' casing to past casing setti b', when possible turn rates). Mini using using a CRT off-line cement ent volume to su Collapse (psi) 2,020 1,147 1.76 og equivalent ex ure with 9.5 ppg ternal pressure g	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible rface. Burst (psi) 3,520 1,130 3.11 ternal pressur fluid inside ca rradient	ce. cection Length: sing Required: Comm No C comm No C comm Comm No C comm Comm No C comm Comm Comm Comm Comm No C comm Com	2,280 2,630 DBM A utes. o keep well t a minimun D GPM. At TE required. t as detailed Tens. Com (lbs) 453,000 182,566 2.48 ng	
ing Summary: Float shoe, 1 jt casing, float collar, casing to surface	Fluid: Hole Size: Bit / Motor: Motor (Detail): WWD / Survey: Logging: Pressure Test: Procedure: Specs Loading Min. S.F.	Drill as per dia 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud m MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monitu	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPW e and fluid for c ID BOPE. Walk or returns durin Wt (Ib/ft) 36.0 Collapse: fully Burst: maximu production ho Tension: buoyo	to casing settin to to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra b)' and keep sli 1 (higher if able asing running, rig to next well hg cement job a Grade J-55 evacuated cass im anticipated le and 8.4 ppg ed weight in 8	eg depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note cemu Conn. LTC ing with 8.4 pj surface pressi equivalent ext	Collapse (psi) 2,020 2,020 2,020 2,020 2,020 2,020 2,020 2,020 2,020 2,020 1,147 1.76 2,020 2,020 1,147 1.76 2,020 2,020 2,020 1,147 1.76 2,020	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible irface. Burst (psi) 3,520 1,130 3.11 ternal pressur fluid inside ca uradient ver-pull	ce. cection Length: sing Required: Comm No C comm No C comm Comm No C comm Comm No C comm Comm No C comm Comm Comm Comm No C comm Com	2,280 2,630 DBM A utes. o keep well t a minimun D GPM. At TE required. t as detailed Tens. Coni (lbs) 453,000 182,566 2.48 ng	
	Fluid: Fluid: Hole Size: Bit / Motor: MVD / Survey: Logging: Pressure Test: Procedure: Specs Loading Min. S.F.	Drill as per dia 350 350 *TARGET CSG Type LSND (KCl) 12-1/4" PDC w/mud m MOTOR: NOV BIT: 5- or 6-BL MWD surveys None NU BOPE and Drill to TD foll on plan. Keep Target flow-ra condition hole Land casing. N below. Monitu 9.625 Assumptions: Minumum:	rectional plan t ft (MD) ft (TVD) SHOE DEPTH I. MW (ppg) 8.8 - 9.5 Notor 087840 - 7/8, ADE PDC w/16 with inclinatio test (as noted a owing direction DLS < 3 deg/10 test of 750 GPW and fluid for c ID BOPE. Walk or returns durin Wt (Ib/ft) 36.0 Collapse: fully Burst: maximu production ho Tension: buoyo 3,900	to casing settin to to to 5 150' TVD BEL FL (mL/30 min) 20 4.0, stage, 0.16 mm or 19 mm n and azimuth above); pressu nal plan (20' ra b)' and keep sli 1 (higher if able asing running, rig to next well hg cement job a Grade J-55 evacuated cass im anticipated le and 8.4 ppg ed weight in 8 Optimum:	eg depth, run 4 2,630 2,620 OW MENEFEE PV (cp) 8 - 14 5 rev/gal, 1.83 cutters, targe in 100' station re test 13-3/8' t-hole (MAX) de length < 10 e to control re TOOH. Run ca and perform and note cemu Conn. LTC ing with 8.4 pj surface press equivalent ext 4 ppg fluid wit 5,200	casing, cement of t (MD) t (MD) t (TVD) TOP (Ib/100 sqft) 8 - 14 DEG, 900 GPM, t TFA 0.65 - 1.0 as (minimum), G casing to past casing setti b', when possible turn rates). Mini asing using a CRT off-line cement ent volume to su Collapse (psi) 2,020 1,147 1.76 cog equivalent ex turn are with 9.5 ppg ternal pressure g th 100,000 lbs ou Maximum:	pH 9.0 - 9.5 950 DIFF PSIG max); 6 - 14s = R optional 1,500 ng depth). Ste 2. Take survey mum desired and washing job, if possible irface. Burst (psi) 3,520 1,130 3.11 ternal pressur fluid inside ca irradient rer-pull 6,500	ce. cection Length: sing Required: Comm No C comm No C comm Comm No C comm No C comm Comm No C comm Comm Comm No C comm Comm Comm Comm No C comm Com	2,280 2,630 DBM A utes. o keep well t a minimun D GPM. At TE required. t as detailed Tens. Conr (lbs) 453,000 182,566 2.48 ng	

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Centralizers: 1 centralizers jt stop-banded 10' from float shoe on bottom 1 jt & 1 centralizer floating on bottom joint, 1 centralizer per 3 jts to surface

			Yield	Water		Planned TOC	Total Cmt
Cement:	Туре	Weight (ppg)	(cuft/sk)	(gal/sk)	% Excess	(ft MD)	(sx)
Lead	III:POZ Blend	12.5	2.140	12.05	70%	0	502
Tail	Type III	14.6	1.370	137			
Annular Capacity	0.3627	cuft/ft	9-5/8" casing x 13-3/8" casing annulus				
	0.3132	cuft/ft	9-5/8" casing x 12-1/4" hole annulus				

0.3132

Drake Energy Services: Calculated cement volumes assume gauge hole and the excess noted in table

Spacer	D-Mud Breaker	SAPP	D MDA 1 49/					
		D-CSE 1 5.0%	BWOC Fluid Loss &					
	ASTM Type III	BWOC Strength	Gas Migration	D-SA 1 1.4% BWOC	D-CD 2 .4% BWOC	Cello Flace LCM .25	D-FP 1 .5% BWOC	
Leaa	90/10 Poz	Ennancer	D-MPA-1 .4%	Na Metasilicate	Dispersant	ID/SX	Defoamer	D-R1 .5% Retarder
			BWOC Fluid Loss &					
Tail	ASTM Type III Blend		Gas Migration Control	Cello Flace LCM .25 lb/sx				
	Drake Interme	diate Cementi	na Proaram					
	Notify NMOC	0 & BLM if cen	nent is not circ	ulated to surfa	ce. Cement m	ust achieve 500	) psi compressi	ive strength
	before drilling	out.						
PRODUCTION:	Drill to TD foll	owing direction	onal plan, run d	casing, cement	casing to surf	ace.		
	2,630	ft (MD)	to	13,584	ft (MD)	Hole S	ection Length:	10,954 ft
	2,626	ft (TVD)	to	4,586	ft (TVD)	Cas	sing Required:	13,584 ft
		F	timated KOP	4 092	ft (MD)	4 084		1
	Fst	imated Landin	a Point (FTP):	4,032	ft (MD)	4,626	ft (TVD)	-
		Estimated L	ateral Lenath:	8.761	ft (MD)	.,020		1
	J		j					
					YP			
Fluid:	Туре	MW (ppg)	FL (mL/30')	PV (cp)	(lb/100 sqft)	ES	OWR	
	OBM	8.7 - 9.0	10 - 15	10 - 20	6 - 10	500+	80:20	
Fluids / Solids Notes:	Newpark Optil	Drill OBM syste	em. Ensure tha	t drying shaker	s are rigged up	after the rig (2	Ind set) of shal	kers. Solids
	control WII bu	in program on	cuttings sample	es one per tour	to check % RU	C. Add diesel a	nd products as	required to
	to be added to	the OBM syst	ecs. Reference	ges to the muc	l systems are t	o he discussed	with engineer	ing prior to
	application.		,	0	,			
Hole Size:	8-1/2"							
Bit / Motor:	PDC w/mud m	otor						
Bit / Motor (Detail):	MOTOR: NOV	077857 - 7/8,	5.7, stage, 0.2	3 rev/gal, 1.83	- 2.12 DEG, 750	) GPM, 1,580 D	IFF PSIG (or sin	nilar); on
	demand frictio	on breaking de	vice(s) as requ	ired, bottom to	ol spaced ~3,0	00' behind the	bit.	
	BIT: 5-BLADE F	PDC w/16 mm	- 19 mm cutter	s, matrix body,	target TFA = 1	0 - 1.5 sq-in		
MWD / Survey:	MWD surveys	with inclinatio	n and azimuth	in 100' station	s (minimum) b	efore KOP, eve	ry joint from K	OP to POE,
	every 100' (mi	nimum) from I	POE to TD; Gan	nma Ray from o	drill out of 9-5/	8" shoe to TD		
Logging:	MWD Gamma	Ray for entire	section, no mi	ud-log or cuttin	gs sampling, n	o OH WL logs		1
Pressure Test:	NU BOPE and	test (as noted	above); pressu	re test 9-5/8" c	asing to	1,500	psi for 30 min	utes.
Flocedule.	1 000 nsig Tar	get ROP 500 -	600 ft/hr Stee	r as needed to	keen well on r	lan Keen DIS	c 3 deg/100' ar	e is 700 - nd keen slide
	length $< 10'$ ur	ntil KOP, when	feasible. Take	surveys every s	stand, at a min	imum. Confirm	landing target	, planned BUR
	for curve, and	KOP with Geo	logy and Engin	eering. Drill cu	ve following d	irectional plan	and updated la	anding target.
	Take survey ev	very joint durir	ng curve. Land	curve. Continue	e drilling in late	eral section, ste	ering as neede	d to keep
	well on plan a	nd in the targe	et window. Kee	p DLS < 2 deg/	100' and keep s	slide length < 2	0', when feasib	ole. Take
	surveys every	stand, at a mir	nimum. Target	rotating paran	neters / perfor	mance: flow-ra	te is 650 - 700	GPM,
	differential is	pressure is 70	0 - 1,000 psig,	ROP 500 - 600	ft/hr, torque 3	8K ft-lbs (MAX	drill pipe MUT	<b>F).</b> After
	reaching ID, p	erform clean-i	up cycle to con	dition hole for	casing running	. Spot lube as r	equired and 10	JOH (ROOH, If
	only if necessa	ing NOT be req	T he required a	with OBM) Mor	ify make up to	rque when run	ning casing So	
	getting the top	e sleeve as clos	se to LTP as no	ssible. Land cas	ing and test na	ick-off. Onen fl	ning casing. Sp patation sub_fi	ill casing and
	circulate as rec	quired. Nipple	down BOPE. w	alk rig to next	well, and perfo	orm off-line cen	nent job (unles	s on final well
	on the pad). P	ump cement a	s detailed belo	w. Note cemer	nt volume circu	lated to surfac	e.	
							<b>TP</b> . !	Turn

							Tens. Body	Tens. Conn
Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	(lbs)	(lbs)
Specs	5.500	20.0	HCP-110	TCBC-HT	12,200	12,360	641,000	667,000
Loading					2,265	8,929	384,435	384,435
Min. S.F.					5.39	1.38	1.67	1.74

Assumptions: Collapse: fully evacuated casing with 9.5 ppg fluid in the annulus (floating casing during running)

Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 9.0 ppg fluid with 150,000 lbs over-pull MU Toraue (ft lbs): 10.000 Optimum: 13.500 18.500 Minumum: Maximum: Casing Summary: Float shoe, 1 float collar, 1 jt casing, float collar, 20' marker joint, toe-intitiation sleeve , casing to KOP with 20' marker joints spaced evenly in lateral every ~2,000', floatation sub at KOP (+/-), casing to surface. The toe-initiation sleeve shall be placed no closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the the azimuth of the well. Note: the LTP is the maximum depth of the toe sleeve and is noted on the Well Plan. Drill past the LTP as required for necessary rat-hole and shoe-track length to place the toe sleeve as close to (but not past) the planned LTP as possible. Centralizers: Centralizer count and placement may be adjusted based on well conditions and as-drilled surveys (ARSENAL Lateral and Curve: 1 centralizer per 3 joints Top of curve to 9-5/8" shoe: 1 centralizer per 5 joints 9-5/8" shoe to surface: 1 centralizer per 5 joints Planned TOC Total Cmt Yield Water Cement: Weight (ppg) (cuft/sk) (gal/sk) % Excess (ft MD) (sx) Туре IntegraGuard 30.7 gpb 60 bbls Spacer EZ II LCM 11 Lead Type I / II 12.4 2.360 13.40 65% 0 575 Tail G:POZ blend 13.3 1.560 7.70 10% 3,587 1,615 Annular Capacity 0.2691 cuft/ft 5-1/2" casing x 9-5/8" casing annulus cuft/ft 5-1/2" casing x 8-1/2" hole annulus 0.2291 Calculated cement volumes assume gauge hole and the excess noted in table IntegraGuard Star Avis 616 viscosifier FP24 Defoamer .5 Plus 3K LCM 15 SS201 Surfactant 1 Cmt. Flv Ash Spacer 170.903 lbs/bbl 11.6 lb/bbl lb/bbl lb/bbl gal/bb

			Bentonite		IntegraGuard			FP24 Defoamer
		BA90 Bonding	Viscosifier 8%	FL24 Fluid Loss .5%	GW86 Viscosifier	IntegraSeal Poli	R7C Retarder .2%	0.3% BWOB, Anti-
Lea	d ASTM Type I/II	Agent 5.0 lb/sx	BWOB	BWOB	.1% BWOB	LCM .25 lb/sx	BWOB	Static .01 lb/sx
								R3 Retarder .5%
				Bentonite		IntegraGuard		BWOB FP24
		Pozzolan Fly Ash	BA90 Bonding	Viscosifier 4%	FL24 Fluid Loss .4%	GW86 Viscosifier	IntegraSeal Poli	Defoamer .3%
Τα	il Type G 50%	Extender 50%	Agent 3.0 lb/sx	BWOB	BWOB	.1% BWOB	LCM .25 lb/sx	BWOB

American Cementing Liner & Production Blend

Notify NMOCD & BLM if cement is not circulated to surface.

*Note:* This well will not be considered an unorthodox well location as definted by NMAC19.15.16.15.C.5. As defined in NMAC 19.15.16.15.C.1.a and 19.15.16.15.C.1.b, no point in the completed interval shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth well. The boundaries of the completed interval, as defined by NMAC 19.15.16.7.B, are the last take point and first take point, as defined by NMAC 19.15.16.7.E and NMAC 19.15.16.7.J, respectively. In the case of this well, the last take point will be the bottom toe-initiation sleeve, and the first take point will be the top perforation. Neither the toe-initiation sleeve nor the top perforation shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth of the well.

FINISH WELL: ND BOP. RDMO Drilling Rig.

Procedure: ND BOP. Walk rig to next well. Cement off-line. Cap well.

#### COMPLETION AND PRODUCTION PLAN:

Frac: 40 plug-and-perf stages with 360,000 bbls slickwater fluid and 15,000,000 lbs of proppant (estimated)Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assitance)Production: Produce through production tubing via gas-lift into permanent production and storage facilities

#### **ESTIMATED START DATES:**

Prepared by:

Updated by:

5/2022
9/2022

 Alec Bridge
 2/7/2020

 Alec Bridge
 3/31/2022
 - updated drilling prog & directional plans for new development plan & current program

 Greg Olson
 10/17/2022
 - updated drilling prog & directional plans for new development plan & current program

### WELL NAME: RODEO UNIT 512H

OBJECTIVE:	Drill, comple	Fill, complete, and equip single lateral in the Mancos-I formation						
API Number:	30-045-35874	0-045-35874						
State:	New Mexico	lew Mexico						
County:	San Juan							
Surface Elev.:	6,798	ft ASL (GL)	6,811	ft ASL (KB)				
Surface Location:	25-23N-09W	Sec-Twn- Rng	191	ft FSL	1,345	ft FWL		
BH Location:	6-22N-08W	Sec-Twn- Rng	1226	ft FNL	2398	ft FWL		

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM:

South on US Hwy 550 for 37.8 miles to MM 113.4; Right (Southwest) on CR #7890 for 0.8 miles to fork; Left (South) remaining on CR #7890 for 1.3 miles to 4-way intersection); Left (Southeast) remaining on CR #7890 for 0.6 miles to fork; Right (Southwest) on CR #7890 for 1.5 miles to access road; Left on access road for 0.5 mile to Rodeo Unit 511H Pad (three wells planned to be drilled: 511H, 512H, 513H).

	QUICK REFERENCE							
	Sur TD (MD)	350	ft					
	Int TD (MD)	2,630	ft					
	KOP (MD)	4,092	ft					
	KOP (TVD)	4,084	ft					
	Target (TVD)	4,626	ft					
	Curve BUR	10	°/100 ft					
	POE (MD)	4,823	ft					
to	TD (MD)	13,584	ft					
	Lat Len (ft)	8,761	ft					

#### WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	2,630	9.625	36.0	J-55	LTC	0	2,630
Production	8.500	13.584	5.500	20.0	HCP-110	TCBC-HT	0	13.584

#### CEMENT PROPERTIES SUMMARY:

					Hole Cap.		TOC	
	Туре	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	(cuft/ft)	% Excess	(ft MD)	Total (sx)
Surface	TYPE III	14.6	1.39	6.686	0.6946	100%	0	350
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	0.3627	70%	0	502
Inter. (Tail)	Type III	14.6	1.37	6.63	0.3132	20%	2,130	137
Prod. (Lead)	Type I / II	12.4	2.360	13.40	0.2691	65%	0	575
Prod. (Tail)	G:POZ blend	13.3	1.560	7.70	0.2291	10%	3,587	1,615

### **COMPLETION / PRODUCTION SUMMARY:**

Frac: 40 plug-and-perf stages with 360,000 bbls slickwater fluid and 15,000,000 lbs of proppant (estimated)Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assitance)Production: Produce through production tubing via gas-lift into permanent production and storage facilities

	<b>_</b>		
	lops	IVD (ft KB)	MD (ft KB)
	Uju Alamo	300	300
	Kirtiand	441	441
	Fruitiand	6/1	6/1
	Pictured Cliffs	1,021	1,021
	Lewis	1,146	1,146
	Chacra	1,406	1,406
	Cliff House	2,431	2,434
	Menefee	2,466	2,470
	Point Lookout	3,431	3,437
	Mancos	3,581	3,587
	Gallup (MNCS_A)	3,916	3,921
	MNCS_B	4,021	4,027
	MNCS_C	4,106	4,112
	MNCS_Cms	4,146	4,152
	MNCS_D	4,271	4,282
	MNCS_E	4,421	4,457
	MNCS_F	4,476	4,532
	MNCS_G	4,546	4,648
	MNCS_H	4,593	4,742
	MNCS_I	4,649	4,909
)	FTP (LP) TARGET	4,626	4,823
	LTP (TD) TARGET	4,586	13,584

### **BOPE & CHOKE MANIFOLD DIAGRAMS**

NOTE: EXACT BOPE AND CHOKE CONFIRGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM.



### ALTERNATE, INTERMEDIATE HOLE ONLY, BOPE & CHOKE MANIFOLD DIAGRAMS

NOTE: EXACT BOPE AND CHOKE CONFIRGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 2,000 PSI MINIMUM. THIS BOPE SETUP IS AN ALTERNATE ONLY, DESIGNED FOR ANY POSSIBLE FUTURE DRILLING RIG WITH SUBSTRUCTURE HEIGHT THAT IS TOO SHORT TO ACCOMADATE A FULL 13-5/8" 3,000 PSI BOP STACK

BOPE

**CHOKE MANIFOLD** 



### ALTERNATE, PRODUCTION HOLE ONLY, BOPE & CHOKE MANIFOLD DIAGRAMS

NOTE: EXACT BOPE AND CHOKE CONFIRGURATION AND COMPONENTS MAY DIFFER FROM WHAT IS DEPICTED IN THE DIGRAMS BELOW DEPENDING ON THE RIG AND ITS ASSOCIATED EQUIPMENT. RAM PREVENTERS, ANNULAR PREVENTERS, AND CHOKE MANIFOLD AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM. THIS BOPE SETUP IS AN ALTERNATE ONLY, DESIGNED FOR ANY POSSIBLE FUTURE DRILLING RIG WITH SUBSTRUCTURE HEIGHT THAT IS TOO SHORT TO ACCOMADATE A FULL 13-5/8" 3,000 PSI MON PSI AND COMPONENTS WILL BE RATED TO 3,000 PSI MINIMUM. THIS BOPE SETUP IS AN ALTERNATE ONLY, DESIGNED FOR ANY POSSIBLE FUTURE DRILLING RIG WITH SUBSTRUCTURE HEIGHT THAT IS TOO SHORT TO ACCOMADATE A FULL 13-5/8" 3,000 PSI BOP STACK





### CHOKE MANIFOLD

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WELL NAME:	RODEO UNIT 512H
API NUMBER:	30-045-35874
AFE NUMBER:	DV03088
ER WELL NUMBER:	NM08212.01
WELL LOCATION:	191 ft FSL & 1345 ft FWL 25-23N-09W
AFE SUMMARY:	Drill, complete, and equip single lateral in the Mancos-I formation
TD (FT MD):	13,584
LAT LEN (FT MD):	8,761

			Sec.	Cum. Drlg.	Ttl. Dep.	Sec. Ftg.	Avg. ROP
	DRILLING SUMMARY		Days	Days	(ft MD)	(ft MD)	(ft/day)
	Drill Surface: <i>Mo-Te will pre-drill surface hole</i>	Drill Surface:	0.50	0.50	350	350	700
	Prep hole for casing, run 13-3/8" casing, cement casing: Mo-Te will pre-set surface casing	Surface Casing:	0.50	1.00	350	N/A	N/A
	MIRU Drilling Rig to pad (mob rate)	MIRU:	0.00	0.00	300	N/A	N/A
	Walk Rig, NU BOPE, TIH w/BHA (operating rate)	Test & PU BHA:	0.75	0.00	350	N/A	N/A
	Drill Intmerediate to casing point (into Menefee)	Drill Intermediate:	0.75	0.75	2,630	2280	3040
	Prep hole for casing, run 9-5/8" casing, cement casing, walk rig for production section, NU BOPE, PU BHA & TIH	Inter. Casing:	1.50	2.25	2,630	N/A	N/A
	Drill to KOP	Drill Veritcal:	0.50	2.75	4,092	1462	2924
	Drill Curve to landing point	Drill Curve:	0.75	3.50	4,823	731	975
	Drill lateral to TD	Drill Lateral:	1.75	5.25	13,584	8761	5006
	Prep hole for casing, run 5-1/2" casing, cement casing	Prod Casing:	1.50	6.75	13,584	N/A	N/A
		DO SURF TO RR:		6.75			
WELLS:	5	TOTAL BIG RIG DAYS:		7.50	(Total Operation	ating Rate Da	ays)
WELLS:	0	TOTAL BIG RIG DAYS:		7.50	(Total Days	Operating +	Mobilization)

NEW WELLS: 5 EXISTING WELLS: 0 STAGE LENGTH: 235

	STAGES	38	795H is fir	st well on pa	d					
CODF 1	CODF 2		Pate	R	ATE & QUA	NTITY DETA	ILS Count	desc		CODE
830	10	IDC - PERMITS & SURVEYS	nute	units	count	4636.	count		JUDIUIAL	\$58,500
		Permits w/BLM & NMOCD	\$10,000	\$/ea	1	еа			\$10,000	
		Air Quality Management Services	\$4,000	\$/ea	1	еа			\$4,000	
		NEPA Services	\$3,000	\$/ea	1	еа			\$3,000	
		Archaelogy Survey & Mapping	\$1,500	\$/ea \$/ea	1	ea			\$1,500	
		ROW & SUA	\$20,000	\$/ea	1	ea			\$20,000	
830	15	IDC - CONDUCTOR/RAT/MOUSE HOLE	+==,===	<i>+)</i> ==					120,000	\$9,000
		install cellar w/Adobe (8' diameter x 8' deep & backfilled to no more than 6' deep after WH is installed)	\$5,000	\$/ea	1	еа			\$5,000	
		Drill Mousehole w/MOTE	\$4,000	\$/ea	1	еа			\$4,000	
830	20	IDC - DRILLING TITLE OPINION	_							\$0
920	20		_						ŞU	\$45,000
050	50	Build pad & access road (\$150.000 pad total, split evenly between CTB & D&C AFEs)	\$75.000	\$/pad	3	wells			\$25.000	<b>43</b> ,000
		Interim reclamation	\$60,000	\$/pad	3	wells			\$20,000	
830	50	IDC - RIG MOBILIZATION								\$98,400
		mobilize rig from W Lybrook Unit 726H Pad	\$200,000	\$/mob	1	mob	3	wells	\$66,667	
000	60	mobilize other rig equipment (camps, solids control, drill pipe, etc.)	\$95,000	\$/mob	1	mob	3	wells	\$31,667	6220 600
830	60	IDC - DAYRATE DRILLING Ensign 145 (mobilization rate - 95% on rate)	\$17,850	¢/day	2.0	days			\$25 700	\$228,600
		Ensign 145 (notifization rate - 65% op rate) Ensign 145 (operating - \$18.600/day + \$2400/day 6th man)	\$21,000	\$/day	7.50	days			\$157,500	
		Ensign 145 (crew per diem - \$35/day + tax)	\$35	\$/day/man	7.50	days	13	men	\$3,413	
		Ensign Edge drilling software (\$600/day - used + tax)	\$600	\$/day	7.50	days			\$4,500	
		Forklift + Manlift (\$380/day + tax)	\$380	\$/day	7.50	days			\$2,850	
		Ensign 145 (OBM pay) = \$400/day + \$35/day/man, 8.5 section only	\$35	\$/day/man	4.50	days	13	men	\$4,005	
		drill pipe credit	\$0	\$/day	7.50	days			\$0	
020	65	Boiler (winter only)	\$750	Ş/day	7.50	days			\$5,625	ćo.
830	65								Śŋ	\$0
830	70	IDC - FOOTAGE DRILLING							γŪ	\$28,000
		Mo-Te to drill surface hole & set surface casing	\$28,000	\$/ea	1	еа			\$28,000	
830	75	IDC - DIRECTIONAL SERVICES								\$122,500
		MWD & DD operating charges: including motor rentals	\$11,000	\$/day	7.50	days			\$82,500	
		MWD & DD operating charges: standby	\$5,000	\$/day	1.0	day			\$5,000	
020	00	Other charges: trucking, inspections, battery disposal, motor inspections / relines, well planning, etc	\$35,000	Ş/ea	1	еа			\$35,000	¢35.000
830	90	12-1//" hit rental	\$12 500	\$/ea	1	ea			\$12 500	\$25,000
		8-1/2" bit rental	\$12,500	\$/ea	1	ea			\$12,500	
830	92	IDC - MOTORS/AGITATORS	<i><i>Q</i>12,500</i>	φ/ cu	-	cu			<i>Q</i> 12,000	\$20,000
		third party motor rentals	\$15,000	\$/run	0	runs			\$0	
		motor re-lines & inspections	\$6,000	\$/ea	0	еа			\$0	
		agitator rentals & inspection	\$20,000	\$/ea	1	еа			\$20,000	
830	95	IDC - BRINE MUD, CHEM & TRUCK	¢ 40.00	ć /h.h.l	250	hhla			¢14.000	\$14,000
830	100	20% KCI base fluid + trucking	Ş4U.UU	ş/ddi	350	DDIS			\$14,000	\$28 200
050	100	engineer	\$5.000	\$/dav	3.00	davs			\$15,000	<i>728,200</i>
		mud products	\$5	\$/ft	2630	days			\$13,150	
830	105	IDC - OILBASE MUD, CHEM & TRUCKING								\$129,100
		mud products (not including lubricant) & mud engineer	\$8,000	\$/day	4.25	days			\$34,000	
		add'l chem usage	\$6.00	\$/ft	3,792	ft			\$22,752	
000	400	diesel make up for OBM	1.50	gal/ lat ft	8761	ft	\$5.50	gal	\$72,278	¢45,400
830	106	IDC - MOD HANDLING EQUIP RENTAL	\$4 200	¢/day	7 50	days			\$21 500	\$45,400
		mud storane tanks & cuttinas hins	\$4,200	\$/day	7.50	davs			\$11,250	
		solids control loader	\$350	\$/day	7.50	days			\$2,625	
830	110	IDC - FUEL & POWER								\$165,000
		Rig Diesel (operating)	\$5.50	\$/gal	3,500	gal/day	7.50	days	\$144,375	
		Boiler diesel	\$5.50	Ş/day \$/aal	500	gal/day	7.50	days	\$20,625	
830	120	IDC - RIG WATER	\$5.50	ş/yui	1,000	gai	0.0	uays	30	\$34,000
000		Water for cement jobs & rig (including trucking)	\$5.00	\$/bbl	0.50	bbls/ft	13584.0	ft	\$33,960	ço ijece
830	121	IDC - WATER FOR DRILLING FLUIDS								\$0
		all charged to 830.120							\$0	
830	130	IDC - CEMENT & CEMENT SERVICES	44	A. 0					444.000	\$207,600
		13-3/8" casing cement job	\$36,000	\$/job					\$36,000	
		ש-שואס בעוויות בפוויות ושט 5-1/2" casing cement iob	\$50,000 \$40.000	\$/JOD \$/ioh	\$6.00	\$/f+	13 584	ft	\$50,000 \$121 504	
830	135	IDC - CASING CREW/SERVICES	Ş40,000	<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>	-90.00	<i>√/</i> ]t	13,304		¥121,304	\$56.800
		Run 13-3/8" casing	\$4,500	\$/job	1	job			\$4,500	,,
		Rack, clean, drift 9-5/8" casing	\$1.50	\$/ft	2,630	ft			\$3,945	
		Run 9-5/8" casing + CRT rental	\$2.50	\$/ft	2,630	ft			\$6,575	
		9-5/8" CRT	\$6,000	\$/job	1	job			\$6,000	
		Kack, clean, drift 5-1/2" casing	\$0.50	\$/ft	13,584	ft			\$6,792	
		кип 5-1/2 сизинд 5-1/2" СВТ & Тогане Тига	\$1.25	\$/jt ¢/ich	13,584 1	jt iob			\$16,980	
830	140	IDC - OPEN HOLE LOGS	\$12,000	مان رې	1	,00			\$12,000	\$0
	2.0	N/A							\$0	ŶŬ
830	160	IDC - CORING								\$0
		N/A							\$0	
830	165	IDC - WELDING								\$0
030	100								\$0	600 F00
830	180	miss surface rentals (nine racks, light towers, flore stack, etc.)	¢1 E00	¢ /davi	7 50	dave			¢11 350	\$28,500
		inise surjuce remais (pipe rucks, nym ruwers, jiure stack, etc.) Loader	\$1,500 \$1,500	ş∕uay \$/dav	7.50	davs			\$11,250	
		воре	\$900	\$/dav	7.50	davs			\$6.750	
		Pason PVT equipment	\$1,100	\$/day	7.50	days			\$8,250	
830	181	IDC - DRILL STRING RENTAL								\$31,100
		5" HWDP Drill-pipe (intermediate section only)	\$350	\$/day	3.0	days			\$1,050	
		5" Drill-Pipe rental	\$2,000	\$/day	7 50	davs			\$15,000	

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		Inspection / repair /recut (DP rental included in rig's day rate)	\$15,000	\$/well	1	well			\$15,000	
830	183	IDC - BOPE RENTALS								\$3,800
		Rotating Head Rental + rubbers	\$150	\$/day	7.50	days	\$1,500	\$/well	\$2,625	
		Choke & flare	\$150	\$/day	7.50	days			\$1,125	
830	<b>190</b>	IDC - TRANSPORTATION								\$10,000
		misc. transporation & hot shot							\$5,000	
		transport rig camp, drill pipe, mud handling equipment							\$5,000	
830	200	IDC - COMMUNICATIONS								\$2,400
		internet for rig	\$150	\$/day	7.5	days			\$1,125	
		hand-held radios, phones, printer/scanner/fax	\$170	\$/day	7.5	days			\$1,275	
830	210	IDC - CONTRACT LABOR								\$41,700
		drilling consultant	\$1,850	\$/ea/day	7.50	days	2	ea.	\$27,750	
		drilling superintendent	\$1,850	\$/ea/day	7.50	days	1	ea.	\$13,875	
830	215	IDC - CREW QUARTERS								\$9,400
		trailer houses (includes servicing) for on-site personnel	\$1,250	\$/day/ea	7.50	days			\$9,375	
830	220	IDC - CONSULTING ENGINEER								\$0
		Moblize Drilling Analytics	\$0	\$/day/ea	7.50	days			\$0	
830	230	IDC - CONSULTING GEOLOGIST								\$1,800
		TD Geo Steering	\$600	\$/day/ea	3.00	days			\$1,800	
830	260	IDC - MISCELLANEOUS								\$20,000
		pit cleaning, other misc services							\$20,000	
830	270	IDC - PLUGGING & ABANDOMENT								\$0
		N/A							\$0	
830	280	IDC - SURFACE DAMAGES								\$0
		N/A							\$0	
830	310	IDC - LAYDOWN MACHINE								\$0
		N/A							\$0	
830	320	IDC - NU/ND/BOP TEST/WH SERV.								\$20,000
		BOP test	\$5,000	\$/test	2	tests			\$10,000	
		Service tech to land 9-5/8" and 5-1/2" casings	\$5,000	\$/job	2	jobs			\$10,000	
830	330	IDC - GYRO								\$0

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830	480	N/A IDC - CUTTINGS DISPOSAL	_	_			_		ŞO	\$68.100
		dispose of cuttings (including dillution of high chlorides & OBM Charges)	\$20.00	\$/yd	650	yds			\$13,009	,
820	AQ1	trucking & truck clean outs	\$1,250	\$/load	44	loads			\$55,000	\$16 300
030	401	dispose of fluids (including dillution of high chlorides)	\$20.00	\$/bbl	500	bbls			\$10,000	\$10,500
		trucking & truck clean outs	\$1,250	\$/load	5	loads			\$6,250	
830	482	IDC - OTHER DISPOSAL dispose of cement returns	\$14.00	\$/hhl	250	hhls			\$3.500	\$12,300
		uspose of cement returns	\$1,250	\$/load	3	loads			\$3,750	
		Other misc disposal (trash, etc.)							\$5,000	
830	290	IDC - CONTINGENCIES							\$0	Ş0
		***			8	30 INTANO	SIBLE DI		STS TOTAL	\$1,580,500
850	10	TDC - CONDUCTOR PIPE							ŚO	\$0
850	20	TDC - SURFACE CASING							ŲÇ	\$30,900
		13-3/8", 54.5#, J55, STC casing	\$82.00	\$/ft	350	ft			\$28,700	A
850	25	9-5/8", 36.0#, J-55. LTC casina	\$53.00	\$/ft	2.630	ft			\$139.390	\$149,900
850	30	TDC - LINERS			,					\$0
		N/A							\$0	
850	40	TDC - PRODUCTION CASING	\$43.00	¢/ft	13 584	ft			\$584 112	\$633,500
		marker jts	\$780.00	\$/ea	6.0	ea			\$5,101	
850	50	TDC - CASING HEADS & SPOOLS	400.000	41						\$65,000
850	60	13-3/8" x 9-5/8" x 5-1/2" (Antelope Uni-Head assembly) TDC - LINERS & HANGERS	\$65,000	\$/ea	1	еа	_		\$65,000	\$0
		N/A							\$0	
850	90	TDC - MISCELLANEOUS EQUIPMENT	_						ćo	\$0
850	100	N/A TDC - FLOAT EQUIPMENT	_		_	_			ŞU	\$50,700
		13-3/8" float equipment	\$3,000	\$/ea	1	еа			\$3,000	
		13-3/8" centralizers (average 1 per jt)	\$65 \$1.500	\$/ea	8	ea			\$520	
		9-5/8 Juai equipment 9-5/8" centralizers (average 1 per jt)	\$1,500 \$50	\$/ea	60	ea ea			\$1,500 \$3,000	
		5-1/2" centralizers (average 1 per jt)	\$40	\$/ea	310	еа			\$12,400	
		5-1/2" toe-initiation sleeve	\$10,000	\$/ea	1	ea			\$10,000 \$5,200	
		5-1/2" casing floatation sub	\$10,000	\$/ea	1	ea			\$10,000	
		service tech for toe sleeves & floatation sub	\$5,000	\$/ea	1	еа			\$5,000	
850	13	TDC - CONTINGENCIES							\$0	Ş0
						850 TANO	SIBLE DI		STS TOTAL	\$930,000
840	30	ICC - LOCATION & ROADS Traffic control duirag frag operations + 3 days	\$1.000	\$/day	7	days			\$7,000	\$7,000
840	50	ICC - RIG MOBILIZATION	\$1,000	Ş∕ uuy	,	uuys			\$7,000	\$16,000
		mob running production	\$4,000	\$/mob	1	mob			\$4,000	
840	55	AD 980 mobilization	\$60,000	Ş/day	1	mob	5	wells	<b>\$12,000</b>	\$133,500
0.10		Run production (well Service Rig)	\$4,500	\$/day	1	days			\$4,500	<i>\</i> 100,000
		Drill out plugs (AD 980) 15 plugs / day + 2 days (\$14K/day + ancillary charges)	\$18,000	\$/day	5	days			\$90,000	
840	70	Drill out (AD 980), mob time (3 days first/last well, 1 day middle wells)	\$13,000	\$/day	3	days	_		\$39,000	ŚŊ
0.0		none							\$0	ψ.
840	90	ICC - TANK RENTAL			_				4	\$31,900
1 1		mob and de-mob frac tanks AST truckina, install, rental (rental per tank per pad)	\$25,000 \$60,000	\$/pad \$/tank	5	wells tanks	5	wells	\$5,000 \$24.000	
0.5		tank rental during pre frac, frac, drill-out (7 days between frac & drill-out)	\$500	\$/day	29.0	days	5	wells	\$2,900	
840	100	ICC - WIRELINE SERVICES	41.000	41.						\$159,600
1 840	110	ICC - FUEL & POWER	\$4,200	\$/stage	38	stages	_		\$159,600	\$239.200
		Diesel fuel for AD 980	\$3.50	\$/gal	2,000	gal/day	8	days	\$56,000	
1		Diesel fuel for frac spread (8,000 gal/day)	\$3.50	\$/gal \$/aal	8,000	gal/day	4	days	\$112,000	
1		frac shack fuel distribution	\$3.50	\$/gai \$/day	300	days	52	uays	\$54,600 \$16,600	
840	120	ICC - WATER/HAULING								\$1,044,000
1		Water for frac (frac pond) Water transfer nre-frac (equipment, numps, line)	\$2.52 \$15.000	\$/bbl \$/day	9,000 10	bbl/stage days/pad	38	stages wells/pad	\$861,840 \$30,000	
1		Vac truck rental on pad (during frac)	\$2,650	\$/day	4	days/pad days/pad	5	wens/pau	\$10,600	
1		Water transfer during frac (equipment, pumps, line)	\$23,000	\$/day	10	stg/day	4	days*	\$92,000	
1		Water transfer during flowback (equipment, pumps, line)	\$15,000	\$/day ¢/bbl	14	days	5	wells/pad	\$42,000	
1		Fresh water for testing lay-flat (includes trucking)	\$5.00	\$/bbl	5,000	bbls	5	wells/pad	\$2,520 \$5,000	
840	150	ICC - DIRT WORK								\$0
840	160		_	_			_		<b>ŞO</b>	ŚŊ
040	100	none							\$0	ŲÇ
840	170	ICC - FIELD SUPERVISOR	A	A.1.	-	_	-		A	\$87,000
1		wen site supervisor (pre-jrac) well site supervisor (frac)	\$1,850 \$1,850	\$/day \$/day	2 4	ea.	3 4	days days	\$11,100 \$29.600	
-		well-site supervisor consultant & superintendent (drill-out)	\$1,850	\$/day	3	ea.	8	days	\$44,400	
		well-site supervisor (run production)	\$1,850	\$/day	1	ea.	1	days	\$1,850	
840	180	ICC - RENTAL EQUIPMENT Motors hits tools personnel for cleanout BHA (daily rental)	\$2.500	\$/day	5	days			\$12 500	\$161,400
		Motors, bits, tools, personnel for cleanout BHA (repair, redress, mileage, other one-time charges)	\$15,000	\$/well	1	well			\$15,000	
		Agitator Rental	\$18,000	\$/ea	0	ea			\$0	
		HZT pipe rental solids control equipment, tanks, & transfer numos durina drillout	\$3,500 \$3,000	\$/day \$/day	5	days days			\$17,500 \$24.000	
		Other misc rentals for drill-out ops (light plants, BOPE, containment, loader, Pason EDR, valves, etc.)	\$5,500	\$/day	8	days			\$44,000	
1	101	Other rentals for frac, water transfer, flowback ops (light towers, forklift, porta-potty, etc.)	\$5,500	\$/day	44	days	5	wells/pad	\$48,400	604 000
1	181	Frac head, valve, zipper manifold, greasing (frac + 3 days)	\$16,500	\$/day	4	days			\$66,000	\$81,000
1		Frac head, valve, zipper manifold - Repairs & damages	\$15,000	\$/well	1	well			\$15,000	
840	191	ICC - FOAM/NITROGEN UNITS	_						ćn	\$0
	104	None							ŞΟ	ŚŊ
840	184	None ICC - RENTAL PUMP EQUIPMENT	_							20
840	185	None ICC - RENTAL PUMP EQUIPMENT None							\$0	ŲŲ
840 840	184 185 190	None           ICC - RENTAL PUMP EQUIPMENT           None           ICC - TRANSPORTATION           None - use 840.420							\$0 ¢n	\$0
840 840 840	184 185 190 200	None ICC- RENTAL PUMP EQUIPMENT None ICC- TRANSPORTATION None - use 840.420 ICC - COMMUNICATION							\$0 \$0	\$0 \$0 \$2,100
840 840 840 0.33	184 185 190 200	None ICC - RENTAL PUMP EQUIPMENT None ICC - TRANSPORTATION None - use 840.420 ICC - COMMUNICATION Internet and communications Internet and communications	\$200	\$/day	52	days	5	wells/pad	\$0 \$0 \$2,080	\$0 \$0 \$2,100
840 840 0.33 840 1	184 185 190 200 210	None           ICC - RENTAL PUMP EQUIPMENT           None           ICC - TRANSPORTATION           None - use 840.420           ICC - COMMUNICATION           Internet and communications           ICC - CONTRACT LABOR           Operate Transfer Pumps & Monitor I av-Elat (nre-frag & frag & nost frag)	\$200	\$/day	52	days days	5	wells/pad	\$0 \$0 \$2,080	\$0 \$2,100 \$26,300
840 840 0.33 840 1	184 185 190 200 210	None         ICC - RENTAL PUMP EQUIPMENT         None         ICC - TRANSPORTATION         None - use 840.420         ICC - COMMUNICATION         Internet and communications         ICC - CONTRACT LABOR         Operate Transfer Pumps & Monitor Lay-Flat (pre-frac & frac & post frac)         WH Techs for landing tbg hangers	\$200 \$2,000 \$1,200	\$/day \$/day \$/day \$/job	52 44 1	days days job	5	wells/pad	\$0 \$0 \$2,080 \$17,600 \$1,200	\$0 \$2,100 \$26,300
840 840 0.33 840 1	184 185 190 200 210	None         ICC - RENTAL PUMP EQUIPMENT         None         ICC - TRANSPORTATION         None - use 840.420         ICC - COMMUNICATION         Internet and communications         ICC - CONTRACT LABOR         Operate Transfer Pumps & Monitor Lay-Flat (pre-frac & frac & post frac)         WH Techs for landing tbg hangers         Misc. labor for wellhead hook-ups, etc         ICC - COMPAREMENT	\$200 \$2,000 \$1,200 \$7,500	\$/day \$/day \$/job \$/job	52 44 1 1	days days job job	5	wells/pad wells/pad	\$0 \$0 \$2,080 \$17,600 \$1,200 \$7,500	\$0 \$2,100 \$26,300
840 840 0.33 840 1 840 0.33	185 185 190 200 210 215	None         ICC - RENTAL PUMP EQUIPMENT         None         ICC - TRANSPORTATION         None - use 840.420         ICC - COMMUNICATION         Internet and communications         ICC - CONTRACT LABOR         Operate Transfer Pumps & Monitor Lay-Flat (pre-frac & frac & post frac)         WH Techs for landing tbg hangers         Misc. labor for wellhead hook-ups, etc         ICC - CREW QUARTERS         Housing & Offices	\$200 \$2,000 \$1,200 \$7,500	\$/day \$/day \$/job \$/job	52 44 1 1 52	days days job job	5	wells/pad wells/pad	\$0 \$0 \$2,080 \$17,600 \$1,200 \$7,500 \$7,800	\$0 \$0 \$2,100 \$26,300 \$7,800
840 840 0.33 840 1 1 840 0.33 840	184 185 190 200 210 210 215 260	None         ICC - RENTAL PUMP EQUIPMENT         None         ICC - TRANSPORTATION         None - use 840.420         ICC - COMMUNICATION         Internet and communications         ICC - CONTRACT LABOR         Operate Transfer Pumps & Monitor Lay-Flat (pre-frac & frac & post frac)         WH Techs for landing tbg hangers         Misc. labor for wellhead hook-ups, etc         ICC - CREW QUARTERS         Housing & Offices         ICC - MISCELLANEOUS	\$200 \$2,000 \$1,200 \$7,500 \$750	\$/day \$/day \$/job \$/job \$/job	52 44 1 1 52	days job job days	5	wells/pad wells/pad	\$0 \$0 \$2,080 \$17,600 \$1,200 \$7,500 \$7,800	\$0 \$0 \$2,100 \$26,300 \$7,800 \$0
840 840 0.33 840 1 840 0.33 840	185 185 190 200 210 210 215 260	None         ICC - RENTAL PUMP EQUIPMENT         None         ICC - TRANSPORTATION         None - use 840.420         ICC - COMMUNICATION         Internet and communications         ICC - CONTRACT LABOR         Operate Transfer Pumps & Monitor Lay-Flat (pre-frac & frac & post frac)         WH Techs for landing tbg hangers         Misc. labor for wellhead hook-ups, etc         ICC - CREW QUARTERS         Housing & Offices         ICC - MISCELLANEOUS         None	\$200 \$2,000 \$1,200 \$7,500 \$750	\$/day \$/day \$/job \$/job \$/day	52 44 1 1 52	days job job days	5	wells/pad wells/pad wells/pad	\$0 \$0 \$2,080 \$17,600 \$1,200 \$7,500 \$7,800 \$7,800 \$0	\$0 \$0 \$2,100 \$26,300 \$7,800 \$0

840 320 ICC - CASING CREWS & SERVICES None \$0

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\$0

840	330	ICC - PERFORATING							\$0
040	550							\$0	ŶŬ
840	340							ŶŬ	\$0
040	340	none						\$0	ŶŬ
840	345	ICC - CHEMICAL TREATING						ţ.	\$80,000
0.0	0.0	Horizon Anhron system drill-out (including all treatment chemicals)	\$15,000	\$/day	5	davs		\$75,000	<i>\$00,000</i>
		H2S scavenger (production)	\$5,000	\$/well	1	lat ft		\$5,000	
840	350	ICC - ERACTURING	\$5,000	<i>y</i> /wen		iut jt		<i>Ş</i> 3,000	\$1 539 000
1	550	slickwater	\$40 500	\$/staae	38	staaes		\$1,539,000	<i>41,333,000</i>
840	360		\$ 10,500	<i>y</i> /stuge	50	stages		<i>\$1,565,666</i>	\$0
0.0		none						\$0	<b>**</b>
840	370	ICC - TUBULAR INSPECTION						ţ.	\$13,600
0.0	0.0	H7T inspection & renairs	\$1.00	\$/ft	13 584	ft		\$13,584	<i>\</i> 20,000
840	380	ICC - PRODUCTION TESTING	<b>\$1.00</b>	Ψ	10,001	<u>j</u> e		<i><b></b></i>	\$73,000
1		flowback: eaunment & personnel	\$10,000	\$/day	14	davs	5 wells	\$28,000	<i></i>
-		flowback: equipment & personnel (during drill-out operations)	\$5,000	\$/day	8	davs	5 1101	\$40,000	
		flowback icon replacement (from drill-out ons)	\$5,000	\$/well	1	well		\$5,000	
840	400		\$5,000	<i>y</i> /wen		wen		<i>Ş</i> 3,000	\$2 500
0.5	400	misc services						\$2,500	<i>\$2,300</i>
840	410							<i><b></b></i>	\$6,500
1	120	Pump down services during toe pren	\$6.500	\$/day	1	davs		\$6,500	<i><b></b></i>
840	420	ICC - TRUCKING	\$0,500	<i>Şı</i> uuy		uuys		<i>\$0,500</i>	\$34,000
1	420	trucking for rental law flat	\$40.000	\$/nad	5	wells		\$8,000	<i>\$</i> 34,000
0.5		misc hat shat services	Ş40,000	ο, μαα	5	wens		\$15,000	
0.5		trucking for flowback equipment	\$15,000	\$/nad	5	wells		\$3,000	
0.5		trucking for housing & other equipment	\$15,000	\$/pad	5	wells		\$3,000	
1		trucking for housing & other equipment	\$15,000	\$/puu \$/pad	5	welle		\$5,000	
940	120	ICC - TANK PENTAL & TRANSPORT	\$25,000	γ) puu	5	wens		<i>Ş</i> 3,000	ŚŊ
040	430	None - use 840 090						ŚO	ŲÇ
840	470							ŶŬ	\$6,800
040	470	CPL on 5-1/2"						\$6.900	<i><b>Q</b></i> <b>0,000</b>
940	190							<b>Ş0,800</b>	\$18 200
040	400	solide disposal (0.7 lateral casing volume)	\$10.50	¢hid	20	vd		\$211	\$10,200
		solids disposal (trucking 14 vds/logd)	\$10.50	\$/load	2	loads		\$2.550	
		liquids trucking & disposal (0.5 bbls/lateral ft to disposal, process rest 1.0 bbl/ft through CTP)	\$2.50	\$/1000 \$/hhl	/ 291	bblc		\$2,550	
940	100		Ş3.30	וטטיק	4,301	DDIS		31 <b>3,3</b> 32	\$21 700
1	450	fras nivas (composite)	\$800	¢/aa	29	00		\$20,400	Ş31,700
1		kill alua	\$1 250	\$/ea	1	60		\$1 250	
840	500		Ş1,2J0	şγεu	1	EU		Ş1,230	ŚO
0.0	500							\$0	<b>**</b>
840	510	ICC - SUCKER ROD REPAIR						ţ.	\$0
040	510							ŚO	ŶŬ
840	520	ICC - ROD PLIMP & REPAIR						ŶŬ	\$0
040	520							Śn	ŶŬ
840	13	ICC - CONTINGENCIES						÷u	ŚŊ
0.0		0%						0	ψŪ
		•••			840 1	TANGIR		STS TOTAL	\$3,802,100
					040 11	ANGID		SISTOTAL	<del>9</del> 3,002,100
960	25								ćn
1	23	TCC+ ELECTRICAL DIST, STSTEWS						én	ŞU
960	70							ΰĘ	É4 500
000	70	TCC - OTHER WELLHEAD EQUIPMENT							<b>Ş4,500</b>

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) 476-3470 Fax: (505) 476-3462

# **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator: (	OGRID:
ENDURING RESOURCES, LLC	372286
6300 S Syracuse Way, Suite 525	Action Number:
Centennial, CO 80111	180355
	Action Type:
	[C-103] NOI Change of Plans (C-103A)
CONDITIONS	

	Created By	Condition	Condition Date						
	kpickford	Adhere to previous NMOCD Conditions of Approval	1/27/2023						

CONDITIONS

Action 180355

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