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

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

☒ AMENDED REPORT
AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45876	² Pool Code 98220	³ Pool Name PURPLE SAGE ; WOLFCAMP
⁴ Property Code 325385	⁵ Property Name ASTEROID 20-29 FED COM WCA	⁶ Well Number 1H
⁷ OGRID No. 372137	⁸ Operator Name CHISHOLM ENERGY OPERATING, LLC	⁹ Elevation 3387

¹⁰ Surface Location

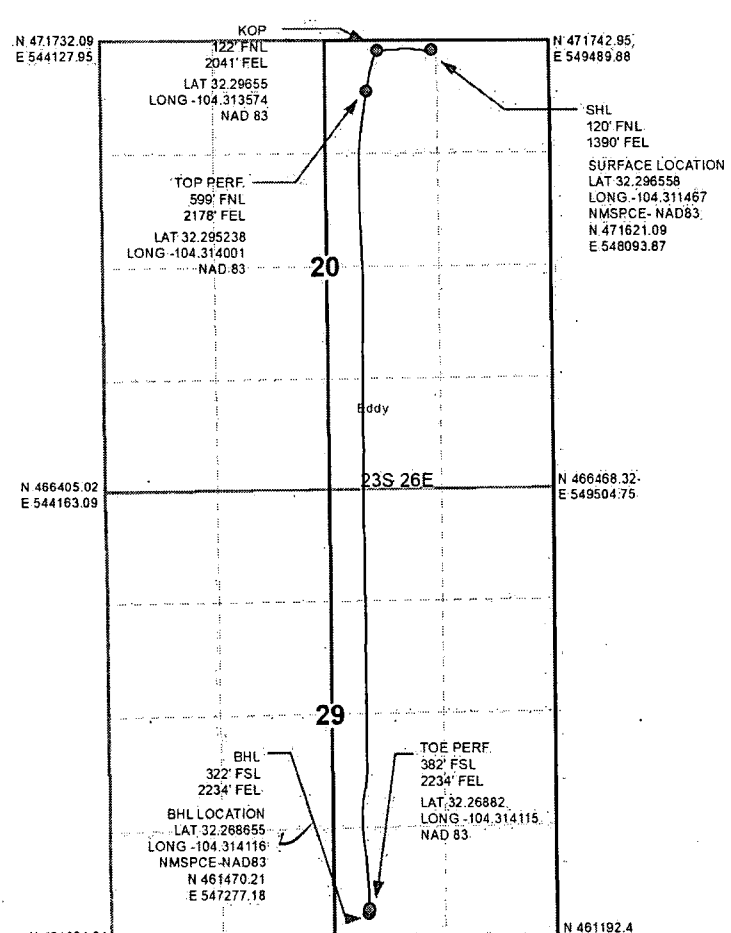
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	23S	26E		120	NORTH	1390	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	29	23S	26E		322	SOUTH	2234	EAST	EDDY

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Jennifer Elrod</i> 02/06/2020 Signature Date JENNIFER ELROD Printed Name JELROD@CHISHOLMENERGY.COM E-mail Address ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number
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RW 4-8-20

Intent ☐ As Drilled ☒

API # 30-015-45876		
Operator Name: CHISHOLM ENERGY OPERATING, LLC	Property Name: ASTEROID 20-29 FED COM WCA	Well Number 1H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	20	23S	26E	122	120	NORTH	2041	EAST	EDDY
Latitude 32.29655					Longitude -104.313574				NAD 83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	20	23S	26E		599	NORTH	2178	EAST	EDDY
Latitude 32.295238					Longitude -104.314001				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	29	23S	26E		322	SOUTH	2234	EAST	EDDY
Latitude 32.268655					Longitude -104.314116				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐ NO

Is this well an infill well? ☐ YES

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

API # 30-015-45877		
Operator Name: CHISHOLM ENERGY OPERATING, LLC	Property Name: ASTEROID 20-29 FED COM WCA	Well Number 2H

KZ 06/29/2018

Schlumberger



Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys Off to 18580ft MD Survey Geodetic Report (Def Survey)

Report Date: January 07, 2020 - 01:37 PM
Client: Chisholm
Field: NM Eddy County (NAD 83)
Structure / Slot: Chisholm Asteroid 20-29 WC A 1H / New Slot
Well: Asteroid 20-29 Fed Com WC A 1H
Borehole: Asteroid 20-29 Fed Com WC A 1H
UWI / API#: Unknown / Unknown
Survey Name: Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys Off to 18580R MD
Survey Date: December 12, 2019
Tort / AHD / DDI / ERD Ratio: 265.143° / 10886.810 ft / 8.790 / 1.251
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 17' 47.80890", W 104° 18' 41.28149"
Location Grid N/E Y/X: N 471621.090 RUS, E 548093.870 RUS
CRS Grid Convergence Angle: 0.0117°
Grid Scale Factor: 0.99990914
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.840° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3417.900 ft above MSL
Seabed / Ground Elevation: 3388.900 ft above MSL
Magnetic Declination: 7.238°
Total Gravity Field Strength: 986.4804mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47792.056 nT
Magnetic Dip Angle: 59.912°
Declination Date: December 12, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.0117°
Total Corr Mag North->Grid
North: 7.2242°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	471621.09	548093.87	N 32 17 47.61	W 104 18 41.28
First SLB MWD Survey	159.00	1.63	302.45	158.98	-1.22	1.21	-1.91	1.03	471622.30	548091.96	N 32 17 47.62	W 104 18 41.30
	254.00	1.39	293.95	253.95	-2.42	2.41	-4.10	0.34	471623.50	548089.77	N 32 17 47.63	W 104 18 41.33
	348.00	1.47	291.31	347.92	-3.32	3.31	-8.27	0.11	471624.40	548087.60	N 32 17 47.64	W 104 18 41.35
	404.00	1.42	298.09	403.90	-3.89	3.87	-7.56	0.23	471624.98	548086.31	N 32 17 47.65	W 104 18 41.37
	559.00	1.90	319.20	558.83	-8.69	8.66	-10.96	0.53	471627.75	548082.91	N 32 17 47.67	W 104 18 41.41
	623.00	1.86	318.89	622.80	-8.18	8.14	-12.29	0.39	471629.23	548081.58	N 32 17 47.69	W 104 18 41.42
	710.00	1.80	319.01	709.77	-10.02	9.98	-13.95	0.10	471631.07	548079.92	N 32 17 47.71	W 104 18 41.44
	805.00	1.43	318.71	804.74	-11.92	11.87	-15.60	0.18	471632.98	548078.27	N 32 17 47.73	W 104 18 41.48
	899.00	1.11	326.19	898.71	-13.56	13.51	-18.88	0.38	471634.60	548076.99	N 32 17 47.74	W 104 18 41.48
	994.00	1.02	320.84	993.70	-14.98	14.93	-17.93	0.14	471636.02	548075.95	N 32 17 47.76	W 104 18 41.49
	1089.00	0.73	8.05	1088.69	-16.24	16.18	-18.38	0.79	471637.27	548075.50	N 32 17 47.77	W 104 18 41.50
	1183.00	1.35	83.95	1182.67	-17.31	17.26	-17.30	1.19	471638.35	548076.57	N 32 17 47.78	W 104 18 41.48
	1278.00	1.58	70.32	1277.64	-18.24	18.20	-15.06	0.30	471639.28	548078.81	N 32 17 47.79	W 104 18 41.48
	1373.00	0.28	132.87	1372.63	-18.52	18.48	-13.65	1.55	471639.57	548080.22	N 32 17 47.79	W 104 18 41.44
	1467.00	1.81	226.65	1466.61	-17.35	17.31	-14.57	1.97	471638.39	548079.31	N 32 17 47.78	W 104 18 41.45
	1563.00	2.99	233.04	1562.53	-14.81	14.76	-17.67	1.26	471635.85	548076.20	N 32 17 47.75	W 104 18 41.49
	1657.00	4.09	234.07	1656.35	-11.38	11.32	-22.34	1.17	471632.41	548071.53	N 32 17 47.72	W 104 18 41.54
	1753.00	4.95	235.38	1752.05	-7.04	6.98	-28.52	0.90	471628.04	548065.35	N 32 17 47.68	W 104 18 41.81
	1848.00	5.31	237.43	1846.67	-2.36	2.28	-35.60	0.43	471623.35	548058.27	N 32 17 47.63	W 104 18 41.70
	2016.00	5.88	235.22	2013.86	6.70	-6.83	-49.22	0.38	471614.28	548044.66	N 32 17 47.54	W 104 18 41.85
	2110.00	5.43	253.64	2107.41	10.67	-10.83	-57.44	1.98	471610.26	548036.43	N 32 17 47.50	W 104 18 41.95
	2205.00	6.27	279.14	2201.93	11.09	-11.27	-66.88	2.85	471609.82	548027.00	N 32 17 47.50	W 104 18 42.06
	2300.00	6.31	284.11	2296.36	8.98	-9.18	-77.08	0.57	471611.91	548016.81	N 32 17 47.52	W 104 18 42.18
	2395.00	5.96	284.44	2390.82	6.43	-6.68	-88.90	0.37	471614.42	548006.97	N 32 17 47.54	W 104 18 42.29
	2490.00	5.98	284.38	2485.30	3.95	-4.22	-98.47	0.02	471616.87	547997.01	N 32 17 47.57	W 104 18 42.41
	2584.00	5.71	284.09	2578.82	1.57	-1.86	-105.75	0.29	471619.23	547988.13	N 32 17 47.59	W 104 18 42.51
	2679.00	5.58	284.74	2673.36	-0.78	0.46	-114.79	0.17	471621.55	547979.09	N 32 17 47.61	W 104 18 42.62
	2773.00	5.89	285.58	2768.90	-3.21	2.87	-123.68	0.16	471623.98	547970.20	N 32 17 47.64	W 104 18 42.72
	2868.00	5.11	288.87	2861.48	-5.73	5.36	-132.28	0.82	471626.45	547961.62	N 32 17 47.66	W 104 18 42.82
	2962.00	4.98	272.08	2955.12	-7.12	6.73	-140.35	1.39	471627.81	547953.54	N 32 17 47.68	W 104 18 42.92
	3056.00	4.68	285.67	3048.79	-7.02	6.80	-148.25	0.63	471627.89	547945.63	N 32 17 47.67	W 104 18 43.01
	3150.00	4.58	285.79	3142.48	-6.50	6.06	-155.80	0.13	471627.15	547938.08	N 32 17 47.67	W 104 18 43.10
	3246.00	4.44	287.98	3238.19	-8.10	5.85	-163.32	0.22	471626.74	547930.56	N 32 17 47.67	W 104 18 43.18
	3341.00	4.38	287.99	3332.91	-5.87	5.39	-170.81	0.08	471626.48	547923.28	N 32 17 47.68	W 104 18 43.27
	3436.00	4.13	269.09	3427.65	-5.71	5.21	-177.83	0.26	471626.30	547916.25	N 32 17 47.68	W 104 18 43.35
	3532.00	5.98	272.84	3523.27	-5.92	5.40	-188.09	1.98	471626.49	547907.80	N 32 17 47.68	W 104 18 43.45
	3627.00	6.24	275.23	3617.73	-6.87	6.12	-196.17	0.38	471627.21	547897.72	N 32 17 47.67	W 104 18 43.57
	3721.00	6.27	275.22	3711.17	-7.83	7.05	-206.37	0.03	471628.14	547887.52	N 32 17 47.68	W 104 18 43.69
	3816.00	5.99	276.96	3805.63	-8.73	8.12	-216.48	0.35	471629.21	547877.43	N 32 17 47.69	W 104 18 43.80
	3910.00	5.78	279.84	3899.13	-10.15	9.52	-225.97	0.40	471630.61	547867.92	N 32 17 47.70	W 104 18 43.91
	4006.00	5.41	282.65	3994.68	-11.99	11.34	-235.13	0.46	471632.43	547858.76	N 32 17 47.72	W 104 18 44.02
	4101.00	5.19	283.85	4089.27	-14.03	13.35	-243.68	0.26	471634.44	547850.22	N 32 17 47.74	W 104 18 44.12
	4195.00	7.13	277.82	4182.72	-15.87	15.16	-253.58	2.17	471636.25	547840.31	N 32 17 47.76	W 104 18 44.24
	4290.00	7.46	277.15	4276.98	-17.47	16.73	-265.54	0.36	471637.82	547828.35	N 32 17 47.77	W 104 18 44.38
	4385.00	8.81	275.87	4371.22	-18.83	18.05	-277.27	0.71	471639.14	547816.63	N 32 17 47.79	W 104 18 44.51
	4480.00	8.52	274.62	4465.58	-19.85	19.04	-288.25	0.33	471640.13	547805.65	N 32 17 47.80	W 104 18 44.64
	4574.00	8.06	274.87	4559.01	-20.73	19.89	-298.51	0.49	471640.96	547795.38	N 32 17 47.81	W 104 18 44.78
	4669.00	5.86	277.19	4653.50	-21.79	20.93	-308.32	0.33	471642.02	547785.58	N 32 17 47.82	W 104 18 44.87
	4764.00	8.58	268.56	4747.94	-22.29	21.40	-318.57	1.24	471642.49	547775.33	N 32 17 47.82	W 104 18 44.99
	4859.00	8.58	265.57	4842.32	-21.78	20.84	-329.43	0.38	471641.93	547764.47	N 32 17 47.82	W 104 18 45.12
	4953.00	6.01	284.13	4935.75	-20.87	19.92	-339.67	0.61	471641.01	547754.23	N 32 17 47.81	W 104 18 45.24
	5047.00	5.41	284.54	5029.28	-19.97	19.00	-348.98	0.64	471640.09	547744.92	N 32 17 47.80	W 104 18 45.35
	5144.00	5.15	282.07	5096.00	-19.27	18.28	-355.10	0.52	471639.37	547736.80	N 32 17 47.79	W 104 18 45.42
	5142.00	5.10	259.43	5123.89	-18.88	17.88	-357.57	0.88	471638.97	547736.33	N 32 17 47.79	W 104 18 45.45
	5237.00	4.87	258.61	5218.54	-17.38	16.34	-365.51	0.48	471637.43	547728.39	N 32 17 47.77	W 104 18 45.54
	5332.00	6.16	258.57	5313.12	-15.61	14.57	-374.30	1.57	471635.68	547719.60	N 32 17 47.75	W 104 18 45.64
	5424.00	5.72	258.89	5404.62	-13.78	12.71	-383.84	0.48	471633.80	547710.27	N 32 17 47.74	W 104 18 45.75
	5519.00	4.32	251.37	5499.26	-11.75	10.65	-391.67	1.83	471631.74	547702.23	N 32 17 47.72	W 104 18 45.84
	5614.00	6.34	254.46	5593.84	-9.22	8.10	-400.12	2.15	471629.19	547693.79	N 32 17 47.69	W 104 18 45.94
	5710.00	6.12	259.04	5689.27	-8.88	5.71	-410.25	0.57	471628.80	547683.66	N 32 17 47.67	W 104 18 46.08
	5805.00	5.27	259.10	5783.80	-5.09	3.92	-419.51	0.89	471625.01	547674.40	N 32 17 47.65	W 104 18 46.17
	5900.00	4.97	262.29	5878.43	-3.74	2.55	-427.87	0.44	471623.64	547666.04	N 32 17 47.63	W 104 18 46.27
	5994.00	6.45	271.05	5971.96	-3.32	2.10	-437.18	1.82	471623.19	547656.73	N 32 17 47.63	W 104 18 46.37
	6089.00	6.47	272.65	6066.36	-3.69	2.44	-447.86	0.19	471623.53	547646.05	N 32 17 47.63	W 104 18 46.50
	6184.00	5.81	270.46	6160.83	-4.00	2.73	-457.86	0.94	471623.82	547636.06	N 32 17 47.64	W 104 18 46.62
	6279.00	4.08	269.44	6255.48	-4.03	2.73	-465.88	1.61	471623.82	547626.03	N 32 17 47.64	W 104 18 46.71
	6374.00	5.81	271.48	6350.13	-4.15	2.82	-474.07	1.83	471623.91	547619.85	N 32 17 47.64	W 104 18 46.80
	6469.00	6.83	272.01	6444.57	-4.49	3.14	-484.35	0.87	471624.23	547609.58	N 32 17 47.64	W 104 18 46.92
	6563.00	5.20	268.61	6538.07	-4.80	3.23	-494.04	1.57	471624.32	547599.88	N 32 17 47.64	W 104 18 47.04
	6658.00	6.44	268.79	6632.57	-4.41	3.01	-503.67	1.31	471624.10	547590.25	N 32 17 47.64	W 104 18 47.15
	6752.00	6.50	270.06	6725.97	-4.34	2.90	-514.26	0.17	471623.99	547579.88	N 32 17 47.64	W 104 18 47.27
	6846.00	4.42	285.27	6819.54	-4.07	2.61	-523.19	2.28	471623.70	547570.73	N 32 17 47.64	W 104 18 47.3.

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7320.00	6.28	265.83	7291.70	0.93	-2.50	-584.45	1.28	471818.59	547529.48	N 32 17 47.59	W 104 18 47.86
	7414.00	5.38	268.75	7385.21	1.54	-3.14	-573.95	0.99	471817.95	547519.97	N 32 17 47.58	W 104 18 47.97
	7509.00	5.12	272.27	7479.81	1.80	-3.23	-582.82	0.59	471817.88	547511.30	N 32 17 47.58	W 104 18 48.07
	7604.00	5.87	271.17	7574.38	1.31	-2.98	-591.71	0.80	471818.13	547502.21	N 32 17 47.58	W 104 18 48.17
	7698.00	6.08	280.37	7667.87	0.29	-1.97	-601.42	1.04	471819.12	547492.51	N 32 17 47.59	W 104 18 48.29
	7793.00	9.07	273.93	7762.03	-1.17	-0.55	-613.84	3.27	471820.54	547480.09	N 32 17 47.60	W 104 18 48.43
	7888.00	8.84	268.66	7855.90	-1.55	-0.20	-628.44	0.97	471820.89	547485.49	N 32 17 47.61	W 104 18 48.60
	7981.00	7.33	263.76	7948.00	-0.78	-1.01	-641.32	1.59	471820.08	547452.60	N 32 17 47.60	W 104 18 48.75
	8037.00	6.40	261.24	8003.59	0.06	-1.87	-647.96	1.75	471819.22	547445.97	N 32 17 47.59	W 104 18 48.83
	8089.00	5.83	237.82	8035.42	1.17	-2.98	-651.05	8.03	471818.11	547442.88	N 32 17 47.58	W 104 18 48.87
	8100.00	7.23	214.88	8066.23	3.57	-5.40	-653.45	9.80	471815.69	547440.48	N 32 17 47.58	W 104 18 48.89
	8132.00	9.73	207.81	8097.88	7.82	-9.45	-655.85	8.49	471811.64	547438.08	N 32 17 47.52	W 104 18 48.92
	8163.00	11.91	213.33	8128.33	12.60	-14.44	-658.83	7.83	471808.65	547435.10	N 32 17 47.47	W 104 18 48.96
	8195.00	14.50	210.12	8159.48	18.82	-20.67	-662.65	8.41	471800.42	547431.28	N 32 17 47.41	W 104 18 49.00
	8227.00	16.64	208.10	8190.30	26.31	-28.18	-666.82	6.90	471592.92	547427.11	N 32 17 47.33	W 104 18 49.05
	8258.00	19.40	205.40	8219.78	34.87	-36.74	-671.12	9.30	471584.35	547422.81	N 32 17 47.25	W 104 18 49.10
	8290.00	22.51	202.17	8249.66	45.33	-47.22	-675.71	10.36	471573.87	547418.22	N 32 17 47.14	W 104 18 49.15
	8322.00	25.82	200.56	8278.85	57.52	-59.42	-680.47	10.55	471561.67	547413.48	N 32 17 47.02	W 104 18 49.21
	8353.00	30.25	198.80	8306.21	71.24	-73.15	-685.34	14.59	471547.95	547408.60	N 32 17 46.89	W 104 18 49.27
	8385.00	33.43	198.67	8333.39	87.22	-89.14	-690.73	9.94	471531.95	547403.20	N 32 17 46.73	W 104 18 49.33
	8416.00	36.03	187.94	8358.87	103.97	-105.91	-696.27	8.49	471515.19	547397.66	N 32 17 46.58	W 104 18 49.39
	8447.00	39.52	196.95	8383.37	122.07	-124.03	-701.96	11.43	471497.08	547391.97	N 32 17 46.38	W 104 18 49.46
	8479.00	42.70	196.63	8407.47	142.19	-144.17	-708.04	9.96	471476.94	547385.90	N 32 17 46.18	W 104 18 49.53
	8511.00	45.05	196.58	8430.54	163.42	-165.42	-714.37	7.34	471455.69	547379.56	N 32 17 45.97	W 104 18 49.60
	8543.00	47.33	196.82	8452.69	185.53	-187.55	-720.97	7.13	471433.58	547372.97	N 32 17 45.75	W 104 18 49.68
	8575.00	49.55	195.48	8473.92	208.53	-210.56	-727.59	7.43	471410.55	547368.35	N 32 17 45.53	W 104 18 49.76
HL Crossing	8577.07	49.69	195.48	8475.26	210.04	-212.08	-728.01	6.94	471409.03	547365.93	N 32 17 45.51	W 104 18 49.76
	8608.00	51.70	195.43	8493.58	231.80	-233.85	-733.97	6.94	471387.48	547359.97	N 32 17 45.30	W 104 18 49.83
	8654.00	56.40	194.19	8521.76	269.13	-271.21	-743.89	10.01	471349.90	547350.05	N 32 17 44.93	W 104 18 49.95
	8702.00	60.70	192.47	8546.80	308.94	-311.05	-753.31	9.47	471310.07	547340.63	N 32 17 44.53	W 104 18 50.06
	8749.00	63.43	191.39	8568.81	349.54	-351.67	-761.89	8.15	471289.45	547332.05	N 32 17 44.13	W 104 18 50.16
	8797.00	66.32	189.84	8589.19	392.23	-394.38	-769.89	6.89	471226.75	547324.05	N 32 17 43.71	W 104 18 50.25
	8844.00	69.65	188.26	8608.81	435.23	-437.41	-776.73	7.74	471183.73	547317.21	N 32 17 43.28	W 104 18 50.33
	8891.00	72.66	187.78	8621.99	479.28	-481.45	-782.94	8.48	471139.69	547311.01	N 32 17 42.85	W 104 18 50.40
	8938.00	74.35	188.66	8635.33	523.84	-526.05	-789.38	4.02	471095.09	547304.56	N 32 17 42.41	W 104 18 50.48
	8986.00	78.18	189.58	8648.74	569.85	-572.07	-796.77	8.15	471049.07	547297.17	N 32 17 41.95	W 104 18 50.57
	9033.00	82.42	189.00	8654.66	615.53	-617.78	-804.25	9.15	471003.37	547289.70	N 32 17 41.50	W 104 18 50.65
	9081.00	85.52	188.28	8659.70	662.70	-664.97	-811.42	8.63	470958.18	547282.53	N 32 17 41.03	W 104 18 50.74
	9175.00	91.29	187.99	8662.32	755.64	-757.95	-821.71	8.15	470883.21	547269.24	N 32 17 40.11	W 104 18 50.89
	9238.00	99.83	186.26	8661.70	817.98	-820.31	-833.61	2.38	470800.86	547260.34	N 32 17 39.49	W 104 18 50.99
	9338.00	88.17	188.79	8663.41	914.84	-917.21	-846.14	1.78	470703.97	547245.81	N 32 17 38.53	W 104 18 51.18
	9431.00	88.51	185.68	8666.17	1008.99	-1011.40	-860.09	3.29	470609.78	547233.88	N 32 17 37.60	W 104 18 51.30
	9528.00	89.20	183.38	8668.06	1103.65	-1108.08	-867.59	2.53	470515.11	547226.38	N 32 17 36.67	W 104 18 51.39
	9621.00	89.11	182.37	8669.47	1198.51	-1200.95	-872.36	1.07	470420.25	547221.59	N 32 17 35.73	W 104 18 51.45
	9716.00	89.77	181.86	8670.39	1293.43	-1295.88	-875.88	0.88	470325.33	547218.09	N 32 17 34.79	W 104 18 51.49
	9810.00	89.28	179.80	8671.17	1387.40	-1389.88	-877.31	2.15	470231.36	547216.84	N 32 17 33.86	W 104 18 51.50
	9908.00	89.54	179.32	8672.18	1483.40	-1485.85	-878.65	0.88	470135.38	547217.30	N 32 17 32.91	W 104 18 51.50
	10000.00	89.68	179.59	8672.80	1577.39	-1579.84	-875.76	0.32	470041.39	547218.19	N 32 17 31.98	W 104 18 51.49
	10098.00	89.77	179.94	8673.28	1673.39	-1675.84	-875.37	0.38	469945.40	547218.58	N 32 17 31.03	W 104 18 51.48
	10191.00	89.71	178.95	8673.69	1768.39	-1770.83	-874.45	1.04	469850.42	547219.50	N 32 17 30.09	W 104 18 51.47
	10285.00	89.74	178.65	8674.14	1862.37	-1864.81	-872.48	0.32	469756.45	547221.47	N 32 17 29.16	W 104 18 51.45
	10379.00	89.68	178.55	8674.62	1958.35	-1958.78	-870.18	0.12	469682.49	547223.77	N 32 17 28.23	W 104 18 51.42
	10474.00	90.11	177.70	8674.79	2051.30	-2053.73	-867.07	1.00	469587.55	547226.88	N 32 17 27.29	W 104 18 51.39
	10569.00	90.60	177.51	8674.21	2146.23	-2148.65	-863.10	0.55	469472.64	547230.85	N 32 17 26.35	W 104 18 51.34
	10664.00	90.69	177.48	8673.14	2241.14	-2243.55	-858.95	0.10	469377.75	547235.00	N 32 17 25.41	W 104 18 51.29
	10758.00	90.72	177.75	8671.98	2335.08	-2337.46	-855.04	0.29	469283.85	547238.91	N 32 17 24.48	W 104 18 51.25
	10853.00	90.77	177.39	8670.74	2429.98	-2432.37	-851.01	0.38	469188.95	547242.94	N 32 17 23.54	W 104 18 51.20
	10947.00	90.48	177.67	8669.74	2523.90	-2526.27	-846.98	0.44	469095.05	547246.99	N 32 17 22.61	W 104 18 51.15
	11042.00	90.17	179.24	8669.21	2618.87	-2621.24	-844.40	1.88	469000.10	547249.55	N 32 17 21.67	W 104 18 51.12
	11136.00	90.80	180.92	8668.42	2712.86	-2715.23	-844.53	1.91	468908.11	547249.42	N 32 17 20.74	W 104 18 51.13
	11231.00	90.63	180.89	8667.23	2807.84	-2810.21	-846.03	0.18	468811.14	547247.92	N 32 17 19.80	W 104 18 51.14
	11324.00	90.52	179.85	8666.30	2903.20	-2903.20	-846.63	1.12	468718.18	547247.32	N 32 17 18.88	W 104 18 51.15
	11419.00	90.40	179.68	8665.54	2995.82	-2998.20	-846.24	0.22	468623.17	547247.71	N 32 17 17.94	W 104 18 51.15
	11513.00	90.69	181.18	8664.64	3089.81	-3092.19	-846.95	1.83	468528.19	547247.00	N 32 17 17.01	W 104 18 51.15
	11608.00	90.66	179.96	8663.52	3184.79	-3187.17	-847.89	1.28	468434.21	547246.08	N 32 17 16.07	W 104 18 51.17
	11703.00	90.03	179.68	8662.95	3279.79	-3282.17	-847.59	0.73	468339.22	547246.35	N 32 17 15.13	W 104 18 51.18
	11798.00	90.03	180.74	8662.90	3374.79	-3377.17	-847.94	1.12	468244.23	547246.01	N 32 17 14.19	W 104 18 51.17
	11893.00	89.68	181.32	8663.16	3469.77	-3472.15	-849.65	0.72	468149.26	547244.30	N 32 17 13.25	W 104 18 51.19
	11988.00	89.46	180.40	8663.89	3564.75	-3567.14	-851.08	0.99	468054.28	547242.87	N 32 17 12.31	W 104 18 51.20
	12084.00	89.83	179.90	8664.48	3660.74	-3663.14	-851.33	0.85	467958.29	547242.62	N 32 17 11.36	W 104 18 51.21
	12177.00	89.66	179.35	8664.90	3753.74	-3756.13	-850.72	0.82	467865.31	547243.23	N 32 17 10.44	W 104 18 51.20
	12272.00	89.71	179.97	8665.42	3848.74	-3851.13	-850.16	0.85	467770.32	547243.79	N 32 17 9.50	W 104 18 51.19
	12367.00	89.71	179.81	8665.90	3943.74	-3946.13	-849.81	0.38	467675.33	547244.14	N 32 17 8.56	W 104 18 51.19
	12462.00	89.80	180.03	8666.31	4038.74	-4041.13	-849.51	0.45	467580.34	547244.44	N 32 17 7.62	W 104 18 51.19
	12557.00	89.71	179.61	8666.71	4133.74	-4136.12	-849.21	0.45	467485.35	547244.74	N 32 17 6.68	W 104 18 51.18
	12650.00	89.43	180.93	8667.41	4228.73	-4229.12	-849.65	1.45	467392.36	547244.30	N 32 17 5.76	W 104 18 51.19
	12745.00											

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	15868.00	90.43	179.57	8674.24	7444.40	-7446.76	-838.97	0.47	464175.02	547256.98	N 32 16 33.92	W 104 18 51.05
	15963.00	90.54	179.81	8673.44	7539.39	-7541.76	-838.45	0.28	464080.03	547257.50	N 32 16 32.98	W 104 18 51.04
	16057.00	90.75	179.76	8672.38	7633.39	-7635.75	-838.10	0.23	463986.05	547257.85	N 32 16 32.05	W 104 18 51.04
	16153.00	90.29	180.92	8671.51	7729.38	-7731.74	-838.87	1.30	463890.06	547257.28	N 32 16 31.10	W 104 18 51.04
	16248.00	89.80	179.49	8671.43	7824.37	-7826.74	-837.01	1.59	463795.08	547256.94	N 32 16 30.16	W 104 18 51.05
	16344.00	90.09	179.31	8671.52	7920.37	-7922.74	-838.00	0.38	463699.09	547257.94	N 32 16 29.21	W 104 18 51.04
	16439.00	90.26	180.06	8671.23	8015.37	-8017.73	-835.48	0.81	463604.10	547258.47	N 32 16 28.27	W 104 18 51.03
	16534.00	89.74	179.27	8671.23	8110.37	-8112.73	-834.93	1.00	463509.11	547259.02	N 32 16 27.33	W 104 18 51.03
	16629.00	89.77	179.80	8671.64	8205.36	-8207.73	-834.15	0.56	463414.13	547259.79	N 32 16 26.39	W 104 18 51.02
	16724.00	89.48	179.59	8672.26	8300.36	-8302.72	-833.65	0.38	463319.14	547260.30	N 32 16 25.45	W 104 18 51.01
	16818.00	89.28	179.77	8673.28	8394.36	-8396.71	-833.12	0.29	463225.15	547260.82	N 32 16 24.52	W 104 18 51.00
	16912.00	88.97	182.82	8674.71	8488.30	-8490.67	-835.25	3.26	463131.21	547258.70	N 32 16 23.59	W 104 18 51.03
	17007.00	88.34	185.16	8676.12	8583.04	-8585.42	-841.86	2.49	463036.47	547252.09	N 32 16 22.66	W 104 18 51.11
	17101.00	89.20	191.86	8677.31	8675.93	-8678.35	-855.60	6.92	462943.54	547238.35	N 32 16 21.74	W 104 18 51.27
	17133.00	89.08	189.09	8677.80	8707.38	-8709.82	-861.36	8.04	462912.08	547232.59	N 32 16 21.43	W 104 18 51.33
	17165.00	89.26	189.15	8678.26	8738.96	-8741.42	-866.43	0.59	462860.49	547227.52	N 32 16 21.11	W 104 18 51.39
	17196.00	89.31	188.39	8678.65	8769.58	-8772.05	-871.16	2.46	462849.85	547222.79	N 32 16 20.81	W 104 18 51.45
	17227.00	89.40	187.50	8678.99	8800.27	-8802.75	-875.44	2.89	462819.16	547218.51	N 32 16 20.51	W 104 18 51.50
	17259.00	89.31	186.28	8679.35	8832.03	-8834.52	-879.28	3.82	462787.39	547214.67	N 32 16 20.19	W 104 18 51.54
	17291.00	89.37	185.38	8679.72	8863.85	-8866.35	-882.53	2.82	462755.56	547211.42	N 32 16 19.88	W 104 18 51.58
	17321.00	89.28	184.57	8680.08	8893.73	-8896.23	-885.13	2.72	462725.68	547208.82	N 32 16 19.58	W 104 18 51.61
	17353.00	89.66	183.58	8680.37	8925.64	-8928.15	-887.40	3.31	462693.77	547206.55	N 32 16 19.27	W 104 18 51.64
	17385.00	89.25	182.79	8680.69	8957.58	-8960.10	-889.18	2.78	462661.82	547204.77	N 32 16 18.95	W 104 18 51.68
	17416.00	89.31	182.33	8681.07	8988.54	-8991.07	-890.57	1.50	462630.86	547203.39	N 32 16 18.64	W 104 18 51.68
	17448.00	89.57	180.83	8681.38	9020.53	-9023.05	-891.45	4.76	462598.88	547202.50	N 32 16 18.33	W 104 18 51.69
	17479.00	89.54	180.06	8681.62	9051.52	-9054.05	-891.69	2.49	462567.88	547202.26	N 32 16 18.02	W 104 18 51.69
	17511.00	89.40	179.17	8681.92	9083.52	-9086.05	-891.48	2.82	462535.89	547202.48	N 32 16 17.70	W 104 18 51.69
	17574.00	89.51	177.02	8682.52	9148.49	-9149.01	-889.38	3.42	462472.93	547204.57	N 32 16 17.08	W 104 18 51.68
	17669.00	89.08	174.58	8683.68	9241.24	-9243.74	-882.42	2.61	462378.21	547211.53	N 32 16 16.14	W 104 18 51.58
	17764.00	89.28	174.19	8685.04	9335.80	-9338.27	-873.13	0.46	462283.69	547220.82	N 32 16 15.21	W 104 18 51.47
	17859.00	89.74	174.32	8685.86	9430.34	-9432.79	-863.62	0.50	462189.18	547230.33	N 32 16 14.27	W 104 18 51.36
	17954.00	89.94	174.22	8686.12	9524.89	-9527.31	-854.14	0.24	462094.68	547239.81	N 32 16 13.34	W 104 18 51.25
	18048.00	90.00	174.58	8686.17	9618.47	-9620.87	-844.98	0.39	462001.12	547248.98	N 32 16 12.41	W 104 18 51.15
	18143.00	90.29	175.08	8685.93	9713.11	-9715.48	-836.40	0.61	461906.51	547257.54	N 32 16 11.48	W 104 18 51.05
	18238.00	90.17	175.88	8685.55	9807.83	-9810.18	-828.92	0.85	461811.82	547265.03	N 32 16 10.54	W 104 18 50.96
	18332.00	89.91	176.40	8685.48	9901.63	-9903.97	-822.59	0.82	461718.04	547271.38	N 32 16 9.61	W 104 18 50.89
	18428.00	89.84	177.89	8685.61	9997.52	-9999.84	-817.64	1.34	461622.18	547278.31	N 32 16 8.68	W 104 18 50.83
Final Survey	18489.00	90.03	180.17	8685.63	10058.50	-10060.82	-816.50	4.07	461581.20	547277.45	N 32 16 8.08	W 104 18 50.81
HL Crossing	18571.89	90.03	180.17	8685.58	10141.39	-10143.71	-816.75	0.00	461478.32	547277.20	N 32 16 7.24	W 104 18 50.82
Projection To Bit	18580.00	90.03	180.17	8685.58	10149.50	-10151.82	-816.77	0.00	461470.21	547277.18	N 32 16 7.16	W 104 18 50.82

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	31.000	1/98.425	17.500	13.375 NAL_MWD_1.0_DEG-Depth Only	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft
	1	31.000	31.000	Act Sins	17.500	13.375 NAL_MWD_1.0_DEG-Depth Only	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft
	1	31.000	465.000	Act Sins	17.500	13.375 NAL_MWD_1.0_DEG	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft
	1	465.000	1935.000	Act Sins	12.250	9.825 NAL_MWD_1.0_DEG	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft
	1	1935.000	9290.000	Act Sins	8.750	0.000 NAL_MWD_1.0_DEG	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft
	1	9290.000	18580.000	Act Sins	8.500	0.000 NAL_MWD_1.0_DEG	Asteroid 20-29 Fed Com WC A 1H / Chisholm Asteroid 20-29 Fed Com WC A 1H MWD Surveys 0ft