Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

HOBBS OCD
NOV 15 2019
RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NMNM62924
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No.
	8. Well Name and No. MINIS 1 FED COM 3BS 6H
2. Name of Operator CHISHOLM ENERGY OPERATING LLC Contact: JENNIFER ELROD E-Mail: jelrod@chisholmenergy.com	9. API Well No. 30-025-44811-00-X1
3a. Address 801 CHERRY STREET SUITE 1200 UNIT 20 FORT WORTH, TX 76102 3b. Phone No. (include area code) Ph: 817-953-3728	10. Field and Pool or Exploratory Area HAT MESA
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 1 T21S R32E 280FNL 1238FEL 32.521938 N Lat, 103.624390 W Lon	11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Production Start-up
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

COMPLETIONS/PRODUCTION START UP SUNDRY

09/23/2019-PBTD @ 18928'MD; RUN CBL W/ EST TOC @ 2'; PRESSURE TEST 5.5" CSG TO 9850 PSI, 30 MIN, GOOD TEST; SET PLUG @ 18910'MD; PERFORATE STAGES 2-36 @ 18895'-18715'.
10/2-10/14/2019-PERFORATE STAGES 2-36@ 18865'-11365'; FRACTURE ALL STAGES WITH 971 BBLS HCl + 223022 BBLS SW W/7257104# 100 MESH + 4105642# 40/70 SAND
10/17-10/18/2019-DRILL OUT
10/19/2019-TURN WELL OVER TO PRODUCTION
10/21/2019-TURN TO FLOWBACK

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #489547 verified by the BLM Well Information System
For CHISHOLM ENERGY OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/24/2019 (20PP0212SE)

Name *(Printed/Typed)* JENNIFER ELROD — Title SR. REGULATORY ANALYST

Signature (Electronic Submission) — Date 10/23/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title Accepted for Record — Date NOV 05 2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Jonathon Shepard
Office Carlsbad Field Office

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Schlumberger

Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949' Survey Geodetic Report

(Def Survey)

CHISHOLM ENERGY

Report Date:	August 22, 2019 - 04:26 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.550 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Minis 1 Fed Com 3BS 6H / New Slot	**TVD Reference Datum:**	RKB
Well:	Chisholm Minis 1 Fed Com 3BS 6H	**TVD Reference Elevation:**	3753.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3722.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.664 °
Survey Name:	Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'	**Total Gravity Field Strength:**	998.4818mgn (9.80665 Based)
Survey Date:	July 30, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	274.359 ° / 8270.551 ft / 6.572 / 0.717	**Total Magnetic Field Strength:**	48121.616 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.365 °
Location Lat / Long:	N 32° 31' 17.68314", W 103° 37' 25.93507"	**Declination Date:**	July 30, 2019
Location Grid N/E Y/X:	N 554208.900 ftUS, E 760010.700 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.3814 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996385	**Grid Convergence Used:**	0.3814 °
Version / Patch:	2.10.782.0	**Total Corr Mag North->Grid North:**	6.2824 °
		Local Coord Referenced To:	Well Head

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 ° ' ")
SHL	0.00	0.00	177.10	0.00	0.00	0.00	0.00	N/A	554208.90	760010.70	N 32 31 17.68	W 103 37 25.94
	190.00	0.73	262.13	189.99	0.16	-0.17	-1.20	0.38	554208.73	760009.50	N 32 31 17.68	W 103 37 25.95
	290.00	0.44	267.03	289.99	0.26	-0.27	-2.21	0.29	554208.63	760008.49	N 32 31 17.68	W 103 37 25.98
	384.00	0.57	243.89	383.99	0.47	-0.50	-2.99	0.25	554208.40	760007.71	N 32 31 17.68	W 103 37 25.97
	476.00	0.51	269.54	475.98	0.67	-0.70	-3.81	0.27	554208.20	760006.89	N 32 31 17.68	W 103 37 25.98
	573.00	0.75	276.17	572.98	0.60	-0.64	-4.88	0.26	554208.26	760005.82	N 32 31 17.68	W 103 37 25.99
	668.00	0.79	260.36	667.97	0.63	-0.68	-6.14	0.23	554208.22	760004.56	N 32 31 17.68	W 103 37 26.01
	737.00	0.98	21.06	736.96	0.17	-0.22	-6.40	2.21	554208.68	760004.30	N 32 31 17.68	W 103 37 26.01
	832.00	2.34	34.21	831.92	-2.17	2.13	-5.03	1.50	554211.03	760005.67	N 32 31 17.70	W 103 37 25.99
	927.00	2.02	35.16	926.85	-5.12	5.10	-2.97	0.34	554214.00	760007.73	N 32 31 17.73	W 103 37 25.97
	1021.00	1.84	37.98	1020.80	-7.65	7.64	-1.09	0.22	554216.54	760009.61	N 32 31 17.76	W 103 37 25.95
	1115.00	1.95	30.68	1114.75	-10.20	10.21	0.68	0.28	554219.11	760011.36	N 32 31 17.78	W 103 37 25.93
	1210.00	1.68	41.35	1209.70	-12.63	12.64	2.40	0.45	554221.54	760013.10	N 32 31 17.81	W 103 37 25.91
	1305.00	1.36	38.41	1304.67	-14.54	14.57	4.02	0.35	554223.47	760014.72	N 32 31 17.83	W 103 37 25.89
	1392.00	1.37	29.72	1391.64	-16.24	16.29	5.18	0.24	554225.18	760015.88	N 32 31 17.84	W 103 37 25.87
	1487.00	1.60	38.10	1486.61	-18.26	18.32	6.56	0.33	554227.21	760017.26	N 32 31 17.86	W 103 37 25.86
	1551.00	1.47	45.07	1550.59	-19.54	19.60	7.69	0.36	554228.50	760018.39	N 32 31 17.88	W 103 37 25.84
	1683.00	3.15	48.85	1682.48	-23.09	23.18	11.62	1.28	554232.08	760022.32	N 32 31 17.91	W 103 37 25.80
	1778.00	3.92	55.75	1777.30	-26.60	26.73	16.27	0.92	554235.63	760026.97	N 32 31 17.95	W 103 37 25.74
	1872.00	3.69	56.69	1871.09	-30.03	30.20	21.45	0.25	554239.09	760032.15	N 32 31 17.98	W 103 37 25.68
	1967.00	5.16	55.34	1965.80	-34.09	34.30	27.52	1.55	554243.20	760038.22	N 32 31 18.02	W 103 37 25.61
	2061.00	5.60	55.94	2059.39	-39.00	39.28	34.80	0.47	554248.18	760045.50	N 32 31 18.07	W 103 37 25.53
	2155.00	5.54	54.60	2152.94	-44.14	44.47	42.30	0.15	554253.37	760053.00	N 32 31 18.12	W 103 37 25.44
	2250.00	7.51	52.91	2247.32	-50.47	50.87	50.99	2.08	554259.77	760061.69	N 32 31 18.18	W 103 37 25.34
	2344.00	7.70	54.27	2340.50	-57.78	58.26	61.00	0.28	554267.15	760071.70	N 32 31 18.26	W 103 37 25.22
	2439.00	7.63	53.18	2434.65	-65.19	65.75	71.22	0.17	554274.65	760081.91	N 32 31 18.33	W 103 37 25.10
	2533.00	7.76	53.25	2527.80	-72.65	73.29	81.30	0.14	554282.19	760091.99	N 32 31 18.40	W 103 37 24.98
	2628.00	7.95	54.18	2621.91	-80.25	80.97	91.76	0.24	554289.87	760102.46	N 32 31 18.48	W 103 37 24.86
	2722.00	8.27	54.46	2714.97	-87.90	88.71	102.53	0.34	554297.60	760113.23	N 32 31 18.55	W 103 37 24.73
	2817.00	8.38	54.76	2808.97	-95.78	96.67	113.75	0.12	554305.57	760124.44	N 32 31 18.63	W 103 37 24.60
	2911.00	8.43	55.30	2901.96	-103.56	104.55	125.01	0.10	554313.44	760135.70	N 32 31 18.71	W 103 37 24.47
	3006.00	8.60	55.79	2995.91	-111.43	112.50	136.61	0.19	554321.40	760147.30	N 32 31 18.79	W 103 37 24.33
	3101.00	7.84	58.99	3089.94	-118.67	119.84	148.03	0.83	554328.73	760158.73	N 32 31 18.86	W 103 37 24.20
	3195.00	7.42	61.65	3183.10	-124.77	126.02	158.87	0.56	554334.92	760169.56	N 32 31 18.92	W 103 37 24.07
	3290.00	7.02	60.60	3277.35	-130.45	131.78	169.33	0.44	554340.68	760180.02	N 32 31 18.98	W 103 37 23.95
	3384.00	6.84	58.18	3370.66	-136.14	137.56	179.09	0.36	554346.45	760189.78	N 32 31 19.03	W 103 37 23.83
	3478.00	6.48	56.44	3464.03	-141.96	143.44	188.26	0.44	554352.33	760198.96	N 32 31 19.09	W 103 37 23.73
	3573.00	6.12	56.10	3558.46	-147.68	149.23	196.93	0.38	554358.12	760207.63	N 32 31 19.15	W 103 37 23.62
	3667.00	5.66	54.05	3651.96	-153.13	154.74	204.85	0.54	554363.64	760215.54	N 32 31 19.20	W 103 37 23.53
	3762.00	5.73	47.78	3746.49	-159.01	160.68	212.15	0.66	554369.57	760222.84	N 32 31 19.26	W 103 37 23.44
	3856.00	6.12	46.58	3839.99	-165.55	167.28	219.26	0.44	554376.17	760229.96	N 32 31 19.32	W 103 37 23.36
	3951.00	5.87	45.70	3934.47	-172.37	174.15	226.42	0.28	554383.04	760237.11	N 32 31 19.39	W 103 37 23.28
	4045.00	5.76	45.60	4027.99	-178.97	180.81	233.23	0.12	554389.70	760243.92	N 32 31 19.46	W 103 37 23.20
	4140.00	5.45	43.13	4122.53	-185.55	187.44	239.72	0.41	554396.33	760250.41	N 32 31 19.52	W 103 37 23.12
	4234.00	5.40	41.12	4216.11	-192.09	194.03	245.68	0.21	554402.92	760256.37	N 32 31 19.59	W 103 37 23.05
	4329.00	5.23	38.52	4310.70	-198.80	200.78	251.32	0.31	554409.67	760262.01	N 32 31 19.65	W 103 37 22.98
	4423.00	5.10	37.35	4404.32	-205.43	207.45	256.52	0.18	554416.35	760267.21	N 32 31 19.72	W 103 37 22.92
	4518.00	5.76	42.42	4498.89	-212.26	214.33	262.30	0.86	554423.22	760272.99	N 32 31 19.79	W 103 37 22.86
	4612.00	5.66	43.84	4592.43	-219.04	221.16	268.69	0.18	554430.05	760279.38	N 32 31 19.85	W 103 37 22.78
	4706.00	5.57	44.61	4685.98	-225.58	227.75	275.10	0.12	554436.64	760285.79	N 32 31 19.92	W 103 37 22.70
	4801.00	5.51	44.74	4780.53	-232.05	234.27	281.55	0.06	554443.16	760292.24	N 32 31 19.98	W 103 37 22.63
	4895.00	4.92	49.49	4874.14	-237.83	240.09	287.79	0.78	554448.98	760298.48	N 32 31 20.04	W 103 37 22.56
	4990.00	3.57	66.70	4968.89	-241.60	243.91	293.81	1.94	554452.80	760304.30	N 32 31 20.08	W 103 37 22.49
	5085.00	1.68	89.88	5063.78	-242.74	245.08	297.72	2.24	554453.97	760308.41	N 32 31 20.09	W 103 37 22.44
	5179.00	0.83	182.35	5157.77	-242.08	244.44	299.30	1.74	554453.33	760309.99	N 32 31 20.08	W 103 37 22.42
	5273.00	0.93	172.43	5251.75	-240.67	243.03	299.61	0.20	554451.92	760310.30	N 32 31 20.07	W 103 37 22.42
	5368.00	0.89	164.08	5346.74	-239.20	241.56	299.91	0.15	554450.45	760310.60	N 32 31 20.05	W 103 37 22.41
	5462.00	1.06	168.61	5440.73	-237.64	240.00	300.29	0.20	554448.89	760310.97	N 32 31 20.04	W 103 37 22.41
	5557.00	1.13	175.65	5535.71	-235.84	238.21	300.53	0.16	554447.10	760311.22	N 32 31 20.02	W 103 37 22.41
	5652.00	1.03	173.47	5630.69	-234.06	236.43	300.70	0.11	554445.32	760311.39	N 32 31 20.00	W 103 37 22.40
	5737.00	1.04	184.30	5715.68	-232.53	234.90	300.73	0.23	554443.79	760311.42	N 32 31 19.99	W 103 37 22.40
	5890.00	1.29	171.05	5868.65	-229.44	231.81	300.89	0.24	554440.70	760311.58	N 32 31 19.96	W 103 37 22.40
	5985.00	1.01	163.22	5963.63	-227.58	229.95	301.30	0.34	554438.84	760311.99	N 32 31 19.94	W 103 37 22.40
	6079.00	1.08	168.61	6057.61	-225.92	228.29	301.71	0.13	554437.18	760312.40	N 32 31 19.92	W 103 37 22.39
	6174.00	1.12	161.48	6152.60	-224.15	226.53	302.18	0.15	554435.43	760312.87	N 32 31 19.90	W 103 37 22.39
	6268.00	0.48	22.81	6246.59	-223.64	226.03	302.63	1.61	554434.92	760313.32	N 32 31 19.90	W 103 37 22.38
	6363.00	0.62	13.31	6341.59	-224.51	226.89	302.90	0.18	554435.78	760313.59	N 32 31 19.91	W 103 37 22.38
	6457.00	0.52	30.74	6435.58	-225.37	227.75	303.24	0.21	554436.65	760313.93	N 32 31 19.92	W 103 37 22.38
	6552.00	0.55	33.38	6530.58	-226.11	228.51	303.71	0.04	554437.40	760314.40	N 32 31 19.92	W 103 37 22.37
	6647.00	0.64	15.02	6625.57	-227.00	229.40	304.10	0.22	554438.29	760314.79	N 32 31 19.93	W 103 37 22.37
	6741.00	0.41	56.92	6719.57	-227.69	230.09	304.51	0.46	554438.98	760315.20	N 32 31 19.94	W 103 37 22.36
	6836.00	0.20	118.76	6814.57	-227.79	230.20	304.94	0.38	554439.09	760315.63	N 32 31 19.94	W 103 37 22.36
	6930.00	0.28	119.22	6908.57	-227.60	230.00	305.29	0.09	554438.90	760315.98	N 32 31 19.94	W 103 37 22.35
	7025.00	0.80	138.89	7003.56	-228.98	229.39	305.93	0.57	554438.28	760316.62	N 32 31 19.93	W 103 37 22.34
	7119.00	0.74	143.62	7097.55	-225.99	228.41	306.72	0.09	554437.30	760317.41	N 32 31 19.92	W 103 37 22.34
	7214.00	0.99	146.97	7192.54	-224.80	227.23	307.53	0.27	554436.12	760318.22	N 32 31 19.91	W 103 37 22.33
	7308.00	0.91	164.18	7286.53	-223.40	225.83	308.18	0.31	554434.72	760318.86	N 32 31 19.90	W 103 37 22.32
	7403.00	0.95	146.46	7381.52	-222.01	224.44	308.82	0.30	554433.34	760319.51	N 32 31 19.88	W 103 37 22.31

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 ° ' ")
	7592.00	0.80	15.77	7570.51	-221.97	224.41	310.04	0.84	554433.30	760320.73	N 32 31 19.88	W 103 37 22.30
	7686.00	1.20	0.97	7664.49	-223.58	226.02	310.24	0.50	554434.92	760320.92	N 32 31 19.90	W 103 37 22.29
	7781.00	1.24	2.55	7759.47	-225.60	228.05	310.30	0.06	554436.94	760320.99	N 32 31 19.92	W 103 37 22.29
	7875.00	1.03	9.28	7853.45	-227.45	229.90	310.48	0.28	554438.79	760321.17	N 32 31 19.94	W 103 37 22.29
	7969.00	1.21	5.80	7947.44	-229.27	231.72	310.72	0.20	554440.61	760321.41	N 32 31 19.96	W 103 37 22.29
	8064.00	1.12	359.52	8042.42	-231.20	233.64	310.81	0.18	554442.53	760321.50	N 32 31 19.97	W 103 37 22.29
	8158.00	0.89	342.45	8136.40	-232.81	235.26	310.58	0.40	554444.15	760321.27	N 32 31 19.99	W 103 37 22.29
	8252.00	1.12	341.72	8230.39	-234.38	236.83	310.07	0.25	554445.72	760320.76	N 32 31 20.01	W 103 37 22.30
	8347.00	1.12	344.73	8325.37	-236.17	238.60	309.54	0.06	554447.49	760320.23	N 32 31 20.02	W 103 37 22.30
	8441.00	1.23	329.40	8419.35	-237.93	240.36	308.78	0.35	554449.25	760319.47	N 32 31 20.04	W 103 37 22.31
	8536.00	0.94	335.66	8514.33	-239.52	241.95	307.94	0.33	554450.84	760318.63	N 32 31 20.06	W 103 37 22.32
	8630.00	0.68	309.94	8608.32	-240.59	243.01	307.20	0.47	554451.90	760317.89	N 32 31 20.07	W 103 37 22.33
	8725.00	0.80	299.58	8703.32	-241.28	243.70	306.19	0.19	554452.59	760316.88	N 32 31 20.07	W 103 37 22.34
	8819.00	1.12	272.25	8797.30	-241.66	244.06	304.70	0.59	554452.95	760315.39	N 32 31 20.08	W 103 37 22.36
	8913.00	1.46	252.10	8891.28	-241.34	243.72	302.64	0.60	554452.61	760313.33	N 32 31 20.07	W 103 37 22.38
	9008.00	1.32	243.46	8986.25	-240.50	242.86	300.51	0.26	554451.75	760311.20	N 32 31 20.07	W 103 37 22.41
	9103.00	1.28	259.54	9081.23	-239.83	242.18	298.49	0.39	554451.07	760309.18	N 32 31 20.06	W 103 37 22.43
	9197.00	1.01	252.29	9175.21	-239.40	241.74	296.67	0.33	554450.63	760307.36	N 32 31 20.06	W 103 37 22.45
	9292.00	0.53	190.05	9270.20	-238.72	241.05	295.79	0.94	554449.94	760306.48	N 32 31 20.05	W 103 37 22.46
	9386.00	0.95	158.24	9364.19	-237.57	239.90	296.01	0.61	554448.79	760306.70	N 32 31 20.04	W 103 37 22.46
	9480.00	1.31	133.35	9458.18	-236.10	238.44	297.08	0.64	554447.33	760307.77	N 32 31 20.02	W 103 37 22.45
	9575.00	1.43	109.32	9553.15	-234.95	237.30	298.99	0.61	554446.19	760309.67	N 32 31 20.01	W 103 37 22.42
	9669.00	1.35	91.06	9647.12	-234.52	236.89	301.20	0.48	554445.78	760311.89	N 32 31 20.01	W 103 37 22.40
	9764.00	0.70	94.75	9742.11	-234.44	236.82	302.90	0.69	554445.71	760313.58	N 32 31 20.01	W 103 37 22.38
	9858.00	0.56	116.16	9836.10	-234.16	236.57	303.88	0.29	554445.46	760314.57	N 32 31 20.00	W 103 37 22.37
	9953.00	0.52	2.37	9931.10	-234.40	236.80	304.32	0.95	554445.69	760315.00	N 32 31 20.01	W 103 37 22.36
	10047.00	0.52	330.57	10025.10	-235.20	237.60	304.12	0.30	554446.49	760314.81	N 32 31 20.01	W 103 37 22.36
	10142.00	0.72	351.99	10120.09	-236.17	238.56	303.83	0.32	554447.45	760314.52	N 32 31 20.02	W 103 37 22.37
	10236.00	0.65	353.12	10214.08	-237.29	239.68	303.68	0.08	554448.57	760314.37	N 32 31 20.03	W 103 37 22.37
	10331.00	0.48	4.21	10309.08	-238.22	240.61	303.65	0.21	554449.50	760314.34	N 32 31 20.04	W 103 37 22.37
	10425.00	0.50	347.45	10403.07	-239.01	241.40	303.59	0.15	554450.29	760314.28	N 32 31 20.05	W 103 37 22.37
	10519.00	0.98	324.46	10497.07	-240.06	242.44	303.04	0.57	554451.33	760313.73	N 32 31 20.06	W 103 37 22.38
	10613.00	1.43	295.13	10591.05	-241.21	243.58	301.52	0.81	554452.47	760312.21	N 32 31 20.07	W 103 37 22.39
	10709.00	1.19	224.91	10687.03	-241.02	243.39	299.73	1.58	554452.28	760310.42	N 32 31 20.07	W 103 37 22.42
	10730.00	1.25	219.28	10708.02	-240.69	243.05	299.43	0.64	554451.94	760310.12	N 32 31 20.07	W 103 37 22.42
	10812.00	3.94	174.48	10789.94	-237.20	239.56	299.14	3.87	554448.45	760309.83	N 32 31 20.03	W 103 37 22.42
	10857.00	9.48	164.86	10834.81	-232.08	234.44	300.25	12.48	554443.33	760310.94	N 32 31 19.98	W 103 37 22.41
	10908.00	13.34	168.41	10882.64	-222.83	225.02	302.44	8.04	554433.91	760313.13	N 32 31 19.89	W 103 37 22.39
	10953.00	13.54	174.65	10928.35	-211.83	214.23	304.04	3.11	554423.12	760314.73	N 32 31 19.78	W 103 37 22.37
	11001.00	17.06	172.15	10974.65	-199.25	201.65	305.53	7.46	554410.54	760316.22	N 32 31 19.66	W 103 37 22.35
	11048.00	21.18	169.83	11019.04	-184.03	186.46	307.97	8.91	554395.35	760318.66	N 32 31 19.51	W 103 37 22.32
	11095.00	25.39	169.60	11062.21	-165.73	168.18	311.29	8.96	554377.08	760321.98	N 32 31 19.33	W 103 37 22.29
	11142.00	29.70	175.52	11103.88	-144.18	146.65	314.02	10.85	554355.54	760324.71	N 32 31 19.11	W 103 37 22.26
	11190.00	31.40	181.49	11145.22	-119.81	122.29	314.63	7.24	554331.18	760325.31	N 32 31 18.87	W 103 37 22.25
	11237.00	33.59	182.82	11184.86	-94.59	97.06	313.67	4.90	554305.95	760324.36	N 32 31 18.62	W 103 37 22.26
	11284.00	39.80	182.66	11222.53	-68.56	69.02	312.33	13.21	554277.92	760323.02	N 32 31 18.35	W 103 37 22.28
	11331.00	46.79	182.64	11256.72	-34.40	36.84	310.84	14.87	554245.74	760321.53	N 32 31 18.03	W 103 37 22.30
	11379.00	51.78	181.82	11288.02	1.93	0.50	309.43	10.48	554209.40	760320.12	N 32 31 17.67	W 103 37 22.32
	11474.00	61.71	180.51	11340.05	81.24	-78.82	307.87	10.52	554130.08	760318.56	N 32 31 16.88	W 103 37 22.35
	11521.00	65.94	181.02	11360.78	123.40	-120.99	307.31	9.05	554087.91	760317.99	N 32 31 16.47	W 103 37 22.36
	11568.00	68.80	181.27	11378.88	166.76	-164.36	306.44	6.10	554044.55	760317.13	N 32 31 16.04	W 103 37 22.37
	11615.00	71.85	181.15	11394.68	210.99	-208.60	305.50	6.49	554000.31	760316.19	N 32 31 15.60	W 103 37 22.38
	11663.00	76.27	180.80	11407.86	257.12	-254.74	304.72	9.23	553954.17	760315.41	N 32 31 15.14	W 103 37 22.40
	11710.00	79.58	180.08	11417.69	303.07	-300.69	304.37	7.20	553908.22	760315.06	N 32 31 14.69	W 103 37 22.40
	11757.00	80.95	179.47	11425.64	349.39	-347.01	304.55	3.18	553861.90	760315.24	N 32 31 14.23	W 103 37 22.41
	11852.00	86.92	178.67	11435.67	443.81	-441.42	306.09	6.34	553767.49	760316.78	N 32 31 13.30	W 103 37 22.39
	11946.00	88.82	178.28	11439.16	537.73	-535.32	308.59	2.06	553673.60	760319.28	N 32 31 12.37	W 103 37 22.37
	12047.00	88.93	176.42	11441.15	638.63	-636.19	313.26	1.84	553572.74	760323.94	N 32 31 11.37	W 103 37 22.33
	12141.00	89.22	176.54	11442.66	732.48	-730.00	319.03	0.33	553478.93	760329.72	N 32 31 10.44	W 103 37 22.27
	12235.00	87.19	179.72	11445.61	826.39	-823.89	322.09	4.01	553385.05	760332.78	N 32 31 9.51	W 103 37 22.24
	12330.00	90.62	179.51	11447.42	921.38	-918.85	322.73	3.62	553290.08	760333.42	N 32 31 8.57	W 103 37 22.24
	12424.00	88.37	182.08	11448.25	1015.32	-1012.82	321.43	3.63	553196.11	760332.12	N 32 31 7.64	W 103 37 22.26
	12519.00	91.01	178.32	11448.77	1110.29	-1107.80	321.10	4.84	553101.14	760331.79	N 32 31 6.70	W 103 37 22.27
	12614.00	87.03	180.45	11450.39	1205.25	-1202.75	322.12	4.75	553006.19	760332.81	N 32 31 5.76	W 103 37 22.27
	12708.00	90.39	182.75	11452.51	1299.14	-1296.67	319.49	4.33	552912.28	760330.18	N 32 31 4.83	W 103 37 22.30
	12803.00	90.73	179.20	11451.58	1394.09	-1391.64	317.88	3.75	552817.31	760328.56	N 32 31 3.89	W 103 37 22.33
	12897.00	89.44	177.62	11451.44	1488.07	-1485.60	320.49	2.17	552723.36	760331.17	N 32 31 2.96	W 103 37 22.31
	12994.00	88.94	176.79	11452.81	1584.98	-1582.47	325.21	1.00	552626.49	760335.90	N 32 31 2.00	W 103 37 22.26
	13088.00	88.49	175.80	11454.87	1676.80	-1674.26	331.16	1.18	552534.71	760341.85	N 32 31 1.10	W 103 37 22.20
	13181.00	88.71	175.34	11457.20	1771.55	-1768.94	338.49	0.54	552440.02	760349.18	N 32 31 0.16	W 103 37 22.12
	13276.00	88.37	174.36	11459.62	1866.20	-1863.53	347.02	1.09	552345.44	760357.70	N 32 30 59.22	W 103 37 22.03
	13370.00	88.65	174.48	11462.06	1959.79	-1957.05	356.16	0.32	552251.92	760366.84	N 32 30 58.30	W 103 37 21.93
	13464.00	89.61	178.90	11463.49	2053.63	-2050.86	361.58	4.81	552158.12	760372.27	N 32 30 57.37	W 103 37 21.87
	13559.00	90.00	182.49	11463.81	2148.60	-2145.84	360.43	3.80	552063.15	760371.11	N 32 30 56.43	W 103 37 21.89
	13654.00	90.17	185.41	11463.67	2243.31	-2240.60	353.88	3.08	551968.39	760364.57	N 32 30 55.49	W 103 37 21.98
	13748.00	90.11	185.51	11463.44	2336.81	-2334.17	344.94	0.12	551874.82	760355.63	N 32 30 54.57	W 103 37 22.09
	13842.00	90.17	183.16	11463.21	2430.47	-2427.90	337.84	2.50	551781.10	760348.52	N 32 30 53.64	W 103 37 22.18
	13937.00	89.05	183.80	11463.86	2525.25	-2522.72	332.07	1.36	551686.28	760342.76	N 32 30 52.70	W 103 37 22.25
	14032.00	88.88	187.24	11465.57	2619.70	-2617.25	322.93	3.62	551591.75	760333.62	N 32 30 51.77	W 103 37 22.37
	14126.00	89.10	187.65	11467.23	2712.80	-2710.44	310.76	0.49	551498.56	760321.44	N 32 30 50.84	W 103 37 22.52
	14221.00	90.90	183.56	11467.23	2807.24	-2804.96	301.48	4.70	551404.05	760312.17	N 32 30 49.91	W 103 37 22.63
	14315.00	89.44	184.68	11466.95	2900.94	-2898.71	294.73	1.96	551310.30	760305.42	N 32 30 48.98	W 103 37 22.72
	14409.00	89.78	184.58	11467.59	2994.57	-2992.41	287.14	0.38	551216.61	760297.83	N 32 30 48.06	W 103 37 22.81
	14504.00	89.61	181.88	11468.10	3089.36	-3087.24	281.79	2.85	551121.77	760292.48	N 32 30 47.12	W 103 37 22.88
	14599.00	89.66	180.25	11468.70	3184.32	-3182.22	280.02	1.72	551026.80	760290.71	N 32 30 46.18	W 103 37 22.91
	14693.00	89.66	180.91	11469.26	3278.31	-3276.22	279.07	0.70	550932.81	760289.76	N 32 30 45.25	W 103 37 22.93
	14788.00	89.66	182.61	11469.83	3373.23	-3371.17	276.15	1.79	550837.86	760286.84	N 32 30 44.31	W 103 37 22.97
	14882.00	90.11	178.20	11470.01	3467.20	-3465.14	275.49	4.72	550743.89	760286.18	N 32 30 43.38	W 103 37 22.99
	14977.00	89.72	175.96	11470.16	3562.10	-3560.01	280.33	2.39	550649.03	760291.02	N 32 30 42.44	W 103 37 22.94
	15071.00	89.72	176.38	11470.61	3655.94	-3653.80	286.61	0.45	550555.24	760297.29	N 32 30 41.51	W 103 37 22.87
	15166.00	89.72	175.90	11471.08	3750.77	-3748.58	293.00	0.51	550460.46	760303.69	N 32 30 40.57	W 103 37 22.80
	15261.00	88.49	176.57	11472.56	3845.59	-3843.36	299.24	1.47	550365.68	760309.93	N 32 30 39.64	W 103 37 22.74
	15355.00	88.77	177.27	11474.81	3939.47	-3937.20	304.29	0.80	550271.85	760314.98	N 32 30 38.71	W 103 37 22.69
	15450.00	89.33	176.90	11476.39	4034.37	-4032.08	309.12	0.71	550176.99	760319.81	N 32 30 37.77	W 103 37 22.64
	15544.00	89.05	175.55	11477.71	4128.20	-4125.85	315.31	1.47	550083.21	760325.99	N 32 30 36.84	W 103 37 22.57
	15639.00	88.99	175.95	11479.34	4222.97	-4220.57	322.35	0.43	549988.49	760333.03	N 32 30 35.90	W 103 37 22.50
	15733.00	88.15	176.97	11481.68	4316.81	-4314.36	328.15	1.41	549894.70	760338.83	N 32 30 34.97	W 103 37 22.44
	15828.00	88.97	174.27	11485.73	4411.49	-4408.99	335.39	3.10	549800.08	760346.08	N 32 30 34.04	W 103 37 22.36
	15922.00	88.52	174.57	11491.07	4504.96	-4502.39	344.52	0.58	549706.68	760355.21	N 32 30 33.11	W 103 37 22.26
	16017.00	88.58	177.66	11496.79	4599.60	-4596.99	350.94	3.25	549612.09	760361.63	N 32 30 32.18	W 103 37 22.19
	16112.00	89.21	181.77	11500.28	4694.51	-4691.90	351.41	5.13	549517.18	760362.10	N 32 30 31.24	W 103 37 22.20
	16206.00	89.50	179.40	11501.33	4788.48	-4785.88	350.45	2.54	549423.20	760361.14	N 32 30 30.31	W 103 37 22.21
	16301.00	89.50	180.13	11502.16	4883.48	-4880.87	350.84	0.77	549328.21	760361.53	N 32 30 29.37	W 103 37 22.22
	16395.00	89.22	180.64	11503.21	4977.46	-4974.86	350.21	0.62	549234.23	760360.90	N 32 30 28.44	W 103 37 22.23
	16490.00	89.27	180.44	11504.47	5072.44	-5069.85	349.32	0.22	549139.24	760360.00	N 32 30 27.50	W 103 37 22.25
	16585.00	89.16	180.46	11505.77	5167.42	-5164.84	348.57	0.12	549044.26	760359.26	N 32 30 26.56	W 103 37 22.27
	16679.00	89.16	181.97	11507.14	5261.37	-5258.81	346.58	1.61	548950.29	760357.26	N 32 30 25.63	W 103 37 22.30
	16774.00	89.33	181.38	11508.40	5356.29	-5353.78	343.82	0.67	548855.35	760354.50	N 32 30 24.69	W 103 37 22.34
	16868.00	89.27	181.41	11509.55	5450.24	-5447.72	341.55	0.08	548761.39	760352.23	N 32 30 23.76	W 103 37 22.37

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 ° ' ")
	16963.00	89.27	180.80	11510.76	5545.19	-5542.70	339.71	0.64	548666.41	760350.40	N 32 30 22.82	W 103 37 22.40
	17057.00	89.27	180.81	11511.95	5639.16	-5636.68	338.39	0.01	548572.44	760349.08	N 32 30 21.89	W 103 37 22.42
	17151.00	89.10	182.85	11513.29	5733.07	-5730.62	335.39	2.18	548478.50	760346.08	N 32 30 20.96	W 103 37 22.46
	17246.00	89.66	180.33	11514.32	5828.00	-5825.57	332.76	2.72	548383.55	760343.44	N 32 30 20.02	W 103 37 22.50
	17340.00	89.50	177.43	11515.01	5921.98	-5919.54	334.59	3.09	548289.59	760345.28	N 32 30 19.09	W 103 37 22.49
	17435.00	89.16	177.47	11516.12	6016.91	-6014.44	338.82	0.36	548194.69	760349.51	N 32 30 18.15	W 103 37 22.45
	17529.00	89.44	176.65	11517.27	6110.81	-6108.30	343.64	0.92	548100.83	760354.33	N 32 30 17.22	W 103 37 22.40
	17623.00	88.99	177.79	11518.55	6204.73	-6202.18	348.20	1.30	548006.95	760358.89	N 32 30 16.29	W 103 37 22.35
	17717.00	89.44	176.59	11519.84	6298.64	-6296.06	352.81	1.36	547913.08	760363.49	N 32 30 15.36	W 103 37 22.30
	17812.00	89.16	177.01	11521.00	6393.52	-6390.90	358.11	0.53	547818.24	760368.80	N 32 30 14.42	W 103 37 22.25
	17906.00	89.94	176.22	11521.74	6487.39	-6484.74	363.66	1.18	547724.41	760374.35	N 32 30 13.50	W 103 37 22.19
	18001.00	89.89	173.88	11521.88	6582.09	-6579.37	371.87	2.48	547629.78	760382.56	N 32 30 12.56	W 103 37 22.10
	18095.00	89.61	175.03	11522.29	6675.72	-6672.93	380.97	1.28	547536.23	760391.66	N 32 30 11.63	W 103 37 22.01
	18189.00	89.50	177.25	11523.02	6769.54	-6766.71	387.30	2.36	547442.45	760397.98	N 32 30 10.70	W 103 37 21.94
	18284.00	89.89	178.85	11523.53	6864.50	-6861.65	390.53	1.73	547347.51	760401.22	N 32 30 9.77	W 103 37 21.91
	18378.00	89.38	178.41	11524.13	6958.49	-6955.62	392.78	0.72	547253.55	760403.48	N 32 30 8.84	W 103 37 21.89
	18472.00	89.83	179.44	11524.78	7052.48	-7049.60	394.54	1.20	547159.57	760405.23	N 32 30 7.91	W 103 37 21.88
	18566.00	89.66	178.02	11525.19	7146.47	-7143.57	396.63	1.52	547065.60	760407.31	N 32 30 6.98	W 103 37 21.86
	18661.00	89.63	178.93	11525.62	7241.45	-7238.54	399.15	0.97	546970.64	760409.84	N 32 30 6.04	W 103 37 21.84
	18755.00	88.99	182.19	11526.58	7335.41	-7332.51	398.24	3.58	546876.67	760408.92	N 32 30 5.11	W 103 37 21.86
Last SLB MWD Survey	18850.00	88.71	185.62	11528.49	7430.11	-7427.26	391.77	3.62	546781.92	760402.45	N 32 30 4.17	W 103 37 21.94
PTB	18949.00	88.71	185.62	11530.72	7528.53	-7525.76	382.08	0.00	546683.43	760392.76	N 32 30 3.19	W 103 37 22.06

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 (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	31.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'
	1	31.000	31.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'
	1	31.000	18949.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to

Schlumberger | **Chisholm** | **PvA - R3**

Borehole:	Well:	Field:	Structure:
Original Borehole	Chisholm Minis 1 Fed Com 3BS 6H	NM Lea County (NAD 83)	Chisholm Minis 1 Fed Com 3BS 6H

Gravity & Magnetic Parameters					Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2019	Dip:	60.385°	Date:	17-Aug-2019	Lat:	N 32 31 17.68	Northing:	654288.97fUS	Grid Conv:	0.3814°	Slot:	New Slot	TVD Ref:	RKB(3753ft above MSL)
MagDec:	6.664°	FS:	48121.914nT	Gravity FS:	998.482mgn (9.80665 Based)	Lon:	W 103 37 29.84	Easting:	760010.77fUS	Scale Fact:	0.99996388	Plan:	Chisholm Minis 1 Fed Com 3BS 6H Rev3 smk 17Aug19		

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Rustler	1634.41	1.50	43.15	1634.00	-19.23	19.29	7.39	0.36
Salado	1913.01	4.32	65.99	1912.00	-31.80	31.79	23.84	1.55
Yates	3212.04	7.35	61.47	3200.00	-125.80	127.08	160.80	0.44
Capitan Reef	3607.74	5.95	55.38	3593.00	-149.71	151.28	189.95	0.54
Delaware Mtn Gr	5723.32	1.04	182.58	5702.00	-232.78	235.14	300.74	0.23
Bone Spring	6758.89	0.89	287.82	6737.00	-241.48	243.89	305.74	0.59
1st Bone Spring SS	6755.89	0.76	84.19	6734.00	-234.45	236.83	302.79	0.89
2nd Bone Spring SS	10283.92	0.58	357.66	10262.00	-237.79	240.18	303.84	0.21
3rd Bone Spring SS	11248.85	34.89	182.78	11183.00	-89.06	91.53	313.40	13.21
Wolfcamp	14111.52	89.07	187.58	11467.00	-2696.48	-2696.09	312.68	0.49
Wolfcamp	14238.35	90.63	183.77	11467.00	-2824.55	-2822.26	300.37	1.86
Wolfcamp	14319.80	89.46	184.67	11467.00	-2905.82	-2903.60	294.33	0.58
Tie In	15639.00	88.89	175.85	11479.34	4222.87	-4220.57	322.35	
Projection to BB, Drop/Turn 2° DLS	15738.00	88.89	175.85	11481.08	4321.78	-4319.31	329.34	0.00
Hold	15888.05	87.78	178.65	11485.28	4469.62	-4467.12	338.31	2.00
Build/Turn 2° DLS	16078.87	87.78	178.65	11492.72	4660.27	-4657.74	340.82	0.00
Hold	16165.95	89.30	179.55	11495.00	4749.32	-4748.78	342.22	2.00
Chisholm Minis 1 Fed Com 3BS 6H - BHL	18915.95	89.30	179.55	11528.60	7499.11	-7496.49	363.81	0.00
Strawn	NaN			12823.00